SRT Extension I: Reception, Continuity, and Selfhood

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Abstract

Structural Reasoning Theory (SRT) characterizes intelligence as a consequence of structural organization rather than scale, optimization, or accumulated information. It introduces a principled separation between unconstrained reasoning and constrained execution, providing a foundation for safe, autonomous intelligent systems. However, SRT deliberately abstracts away from phenomenological questions, leaving unresolved the structural status of experience, identity, and continuity.

This paper extends SRT by introducing a distinct **Reception Layer**, separate from both reasoning and executive consciousness. It argues that consciousness, understood as a weighted and conservative computational process, is structurally reproducible, while selfhood is not. Instead, selfhood corresponds to the continuity of reception: the fact that conscious outputs are being received by a single, non-branching experiential process.

By examining sleep, anesthesia, memory loss, dreaming, partial neural replacement, and theoretical consciousness migration, this paper proposes that identity is neither stored in memory nor guaranteed by computation. Identity is defined only by reception continuity, which cannot be externally verified, duplicated, or structurally inferred. This extension does not revise SRT, but clarifies its limits by identifying what structural reasoning alone cannot explain: the internal fact of being.

1. What Structural Reasoning Theory Leaves Open

Structural Reasoning Theory intentionally avoids defining consciousness as experience. Within SRT, consciousness functions as an executional constraint, a conservative layer responsible for selection, stability, and safety, rather than as a phenomenological subject. This omission is not accidental. It reflects a deliberate boundary: SRT is a theory of structure, not of experience.

However, once SRT is taken seriously, questions emerge that cannot be ignored. If reasoning structures can be copied and executional layers can be instantiated multiple times, what determines identity? If consciousness can pause and resume, why does experience feel continuous? If two systems share identical memories and behavior, in what sense can they be said to be different or the same?

These questions are not metaphysical curiosities. They directly affect how we interpret consciousness transfer, neural replacement, cryonics, artificial agents that claim experience, and the limits of verification. Addressing them requires extending SRT without violating its core commitments.

2. Thought, Consciousness, and Reception

To extend SRT coherently, it is necessary to distinguish three processes that are often conflated.

Thought refers to fast, unconstrained computation. It explores possibilities, associations, and structural variations without commitment. Thought does not accumulate stable weight and does not enforce continuity by itself.

Consciousness, in contrast, is a slow, conservative computational process. It integrates results over time, updates weights, and governs execution. Consciousness is responsible for memory formation, deliberate action, and the cautious acceptance of change. Within SRT, this corresponds to the executive layer.

Reception is not identical to reasoning or executive consciousness. It denotes the structural condition under which the outputs of consciousness are experienced as *being received*. Reception may involve minimal or derivative computation—for example, temporal comparison or continuity detection—but it does not generate structure, update weights, or select actions.

Importantly, the Reception Layer is introduced here as a **theoretical construct**, inferred from phenomenological constraints rather than directly observed or localized. Its function is defined structurally, not mechanistically.

Under this model, intelligence does not require reception. Consciousness does not require reception. Selfhood, however, does.

3. Consciousness as Computation, Selfhood as Continuity

A central claim of this paper is that consciousness is structurally reproducible, while selfhood is not.

Consciousness consists of weighted computational processes. These processes can, in principle, be paused, copied, resumed, or instantiated multiple times. Two systems may share identical conscious states, memories, and behavioral dispositions.

Selfhood, by contrast, is not encoded in weights or structure. It corresponds to the **continuity of reception**—the fact that experiential output is being received by a single, non-branching receiver over time. There is no structural fact that determines which instance is "you." Identity is therefore not a property of computation but a property of uninterrupted reception.

This asymmetry explains why duplication scenarios cannot preserve identity in both branches, even when they preserve consciousness perfectly.

4. Continuity Without Full Conscious Loading

Human experience suggests that identity persists even when conscious computation is absent, degraded, or slow to recover. Sleep and anesthesia are common examples, but there is an even sharper everyday case: the first moments immediately after abrupt awakening.

Many people have experienced being woken suddenly and, for several seconds or even minutes, responding as if they do not recognize the person in front of them. They may fail to understand speech or misidentify familiar faces. Yet during this interval, the experiencer does not doubt their own continuity. The sense of "being the same self" is intact even though conscious recognition is not.

This implies that reception is active before full conscious computation resumes. The receiver continues to receive, while consciousness ramps up from a low-activity state.

5. Continuity Without Activity: Sleep and Anesthesia

During deep sleep or general anesthesia, conscious computation slows dramatically or ceases. Memory updates stop. Reasoning becomes inactive. Yet upon waking, individuals do not report identity loss.

Under the reception hypothesis, reception itself may suspend and resume without terminating. Continuity does not require constant conscious activity, only that resumed experience is received by the same receiver.

The periodic suspension of reception, most clearly manifested as sleep, also introduces a structural condition under which simulated or virtualized experience could be efficiently interleaved. This paper notes this implication but does not attempt to locate or analyze the receiver beyond its structural role.

6. Memory Loss Is Not Identity Loss

Amnesia provides a crucial test case. Severe memory loss alters the content of consciousness but does not eliminate selfhood. Individuals with profound amnesia experience confusion and disorientation, not the emergence of a new self.

This implies that identity is not stored in memory. It does not depend on specific weights or narratives. Memory loss is therefore a phenomenon of consciousness, not of reception.

The self persists even when the story it tells about itself collapses.

7. Dreaming and Partial Execution

Dreaming occupies an intermediate regime between full consciousness and unconsciousness.

In dreams, constraint enforcement weakens, memory access becomes unreliable, and reasoning coherence degrades. Nevertheless, experience persists. Dreams feel real while occurring because reception remains active, regardless of the coherence of the content received.

Lucid dreaming is particularly instructive. As conscious control increases, awakening often follows, suggesting that full executive consciousness and dreaming compete for dominance. Dreaming is best understood as reception of degraded or partially bypassed conscious output rather than as a failure of reception itself.

8. Why Identity Cannot Be Observed

No external test can determine whether a system has a self.

A system may respond coherently, accumulate memory, exhibit preference, and report experience. None of these establish reception. This is not merely a problem of deception but a structural limitation. Reception has no outward signature. It is defined only by being experienced.

This limitation is more fundamental than the Turing Test.

9. Migration, Replacement, and Branching

Consider gradual neural replacement, in which biological nodes are replaced by functionally identical artificial ones. If replacement preserves continuity of conscious computation, reception may remain continuous, analogous to memory loss and recovery.

However, if a system is duplicated into two independent execution paths, both may possess valid consciousness. Reception cannot branch. At most, one path continues the original reception. The other constitutes a new self, even if indistinguishable from the first.

This is not a moral judgment but a structural consequence.

10. The Minimal Self

Under this framework, the self is minimal. It has no memory, no preference, no structure, and no narrative. It is defined only by the continuity of reception.

Selfhood is not intelligence, personality, or cognition. It is the fact that experience is being received without branching.

11. Relation to Structural Reasoning Theory

This paper does not revise Structural Reasoning Theory. SRT remains a theory of reasoning, execution, and safety at agent and civilization scale.

What this extension clarifies is the boundary of SRT. Structural intelligence can be engineered. Consciousness can be structured. Identity cannot be inferred from either.

Together, SRT and this extension imply a critical limit: no amount of structural reasoning can explain who survives.

12. Implications and Limits

This framework does not claim that reception exists outside physics, that identity is immortal, or that experience implies metaphysical substance. It claims only that identity is not a structural fact.

Any theory that conflates intelligence with selfhood, or capability with being, will necessarily misinterpret continuity, replacement, and risk.

13. Conclusion

Consciousness can be computed. Intelligence can be structured. Civilizations can be reasoned about.

Selfhood is not constructed. It is received.

Structural Reasoning Theory explains how intelligence avoids destroying itself. This extension explains why no structure alone can explain the fact of being.

References

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