

# Self-Reference and Time

Orin convinces Freya that self-referencing systems are not paradoxes but an essential aspect of creative stability in the flux of events.

Stephen J Brewer, September 2025\*

*His free eBook “The Origins of Self” can be downloaded at [www.originsofself.com](http://www.originsofself.com)*

Scene: A quiet corner in a university courtyard, early evening. A warm breeze stirs the pages of Orin's notebook as Freya arrives with a coffee in hand.

Freya: You look lost in thought. Working on another metaphysical treatise, Orin?

Orin: You could say that. I've been pondering something deceptively simple  $x = x + 1$ .

Freya: The increment operator? You're philosophizing over a programming assignment?

Orin: Not just philosophizing. That simple line encodes a deep metaphysical truth. It's not equality, it's a transformation. In fact, I'd say it's the origin of time and memory.

Freya: You're serious! Okay, convince me. Why does  $x = x + 1$  matter beyond code?

Orin: Because it's not symmetrical. Unlike mathematical equality, which is reversible simply saying “a” is “b” it says “a” becomes “b” then “b” becomes “c” which would continue forever if the programmer didn't tell it to halt when x reached a specified value. So, it has direction and models an irreversible progression of states.

Freya: So, it's a state update. Old value of x gives rise to a new value. That's what we use in loops all the time.

Orin: But note; it's actually a self-referencing loop because the new value is a product of the old one and this is what makes it interesting. I'm investigating the metaphysics of such a simple utility.

Freya: But. Hold on! Isn't self-reference dangerous and logically incoherent leading to a paradox?

Orin: The self-referencing paradox is seen in the statement “this sentence is a lie” which if it true it's false and if false it's true. It can be seen as an endless loop. But it was realized that the paradox only generates a problem in closed formal systems that demand total consistency. But life, mind, and time are not closed—they evolve. They thrive on feedback loops, even if they're messy. Recursion becomes the engine of novelty.

Freya: I see the appeal, but I'm not convinced that makes recursion a universal principle. Isn't it just a handy model?

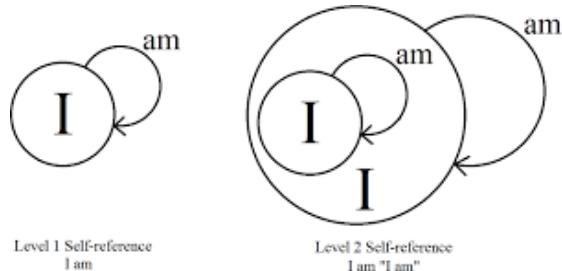


Figure 1. Levels of self-reference

Freya: So, you're proposing a metaphysics of iteration. A reality that loops forward, never quite returning to the same point.

Orin: Yes, and  $x = x + 1$  is its emblem. A gesture toward time's forward spiral. But in that loop, you're observing the birth of time. The computation doesn't stand still. Each iteration builds upon the last. There's memory encoded in transformation. The present contains the past folded into it.

Freya: You're saying that time isn't a background, but a product of state transitions?

Orin: Precisely. In computation, and perhaps in consciousness, time emerges from recursive self-reference. Each  $x = x + 1$  isn't just math; it's a microcosm of becoming.

Freya: But isn't that just abstraction? Real systems like organisms, don't store every prior state.

Orin: Not explicitly, no. But each state is influenced by what came before. In programming, even if the system discards old values, the current state is causally entangled with its history. It fits with process philosophy where novel occasions prehend the past.

Freya: What does it really mean to say one occasion "prehends" another?

Orin: It means that each moment, each actual occasion, takes in elements of the past not as data points but as lived, felt influences. Prehension isn't passive observation or understanding as in comprehension; it's active integration. The past is ingested and transformed in the creation of the new.

Freya: So, each event is a synthesis of past occasions, carrying them forward into a novel form?

Orin: Precisely. There's no blank state. Every moment is a creative advance that inherits, selects, and reconfigures the past. It's like recursive programming: each step calls the function of the previous but transforms its output into something new.

Freya: That adds depth to recursion, it's not mechanical repetition, but generative memory.

Orin: Fair point. But think of it this way: recursion is not just a model, it's the form of continuity. Whether in neural firing patterns, genetic regulation, or mythic imagination, we find layered feedback structures. The repetition is never exact; it adapts.

Orin: Yes! And it makes time an ontological process, not just a clock tick. Prehension is what gives continuity its texture, emotionally, cognitively, and cosmologically.

Freya: Then consciousness could be a network of prehending occasions using a recursive integration of experience.

Orin: That's my view. Consciousness, at its root, is the ongoing synthesis of becoming. Time becomes feeling. Computation becomes awareness.

Freya: And memory isn't just stored information, but it's enacted, embodied, and transformed with each occasion.

Orin: Well said. It's memory as resonance, not archival. This fits with Jung's collective unconscious as a social recursion. He treats the psyche as a layered system where archetypes are primordial inherited forms that are active across individuals and cultures. These archetypes reappear in different forms: in dreams, myths, symbols. They are not static templates, but dynamic structures shaped by collective memory and individual variation.

Freya: So, dreams aren't just private hallucinations but are shared, evolving patterns?

Orin: Exactly. Dreams, emotions, and intuitions draw on recursive deep structures. They're computational echoes of prior experiential states, not only from the individual but also from the collective psyche. It's like accessing a neural network trained across eons of lived experience.

Freya: That could explain the uncanny familiarity of certain myths or emotional patterns. They feel ancient because they are processed, refined, and passed on recursively.

Orin: And viewed this way, the collective unconscious isn't mystical but it's emergent. It's the deep memory of the species, encoded and reshaped through recursive self-reference over evolutionary and cultural time.

Freya: I'll grant you this, Orin; it's a better conversation than I expected from a line of code.

Orin: That's all I ask. Reality, after all, may be one grand loop that's just recursive enough to keep surprising us.

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Sources: <https://www.semanticscholar.org/paper/The-Self-Referential-Aspect-of-Consciousness-Vi%C8%99an/6929327c4215b7c83bae0cf63438347005167545>

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