

# **Unlooping the Self: Ego Dissolution and the Collapse of Recursive Identity**

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# **Unlooping the Self: Ego Dissolution and the Collapse of Recursive Identity**

## **Abstract**

Ego dissolution—the experience of losing one’s sense of self—is reported across a range of altered states, including psychedelic intoxication, meditative absorption, traumatic dissociation, and psychotic episodes. This paper proposes a unifying framework for these phenomena by introducing the concept of unlooping: the breakdown of recursive structures that construct and maintain identity. Drawing on models of recursive self-modeling, predictive processing, and enactive cognition, ego dissolution is interpreted as a graded suspension of feedback loops responsible for agency, continuity, and self-boundary. Through phenomenological analysis and cross-contextual case studies, the paper demonstrates that selfhood is not an ontological constant but a contingent, dynamically enacted achievement. Unlooping the self reveals both the fragility and plasticity of identity and offers new insights into the intersection of subjective experience and cognitive architecture. The implications span theoretical, methodological, and therapeutic domains, suggesting a revised account of selfhood that incorporates its capacity for suspension and reorganization.

## **Keywords**

Ego dissolution; Recursive self-modeling; Phenomenology of self; Predictive processing; Altered states of consciousness; Enactive cognition

## **Public Significance Statement**

This article examines the experience of ego dissolution—when one’s sense of self breaks

down—in contexts such as meditation, psychedelics, trauma, and psychosis. It shows that the self is a fragile and dynamic process, and understanding its collapse may inform psychological theory and therapeutic practice.

## **1. Introduction**

The experience of ego dissolution—often described as a vanishing, melting, or disintegration of the self—poses a challenge to both phenomenological description and cognitive science. How can a system predicated on self-representation come to experience the absence of self? Far from being an esoteric anomaly, ego dissolution appears across a range of altered states: under psychedelics, in deep meditative absorption, during extreme trauma, and at the edges of psychosis. Rather than treating these as pathological or merely exceptional, this paper proposes that such experiences reveal a structural vulnerability in the recursive architecture of selfhood. While this paper proposes a unified framework, I acknowledge that attempts to integrate phenomenological, predictive, and enactive approaches remain debated in both philosophy and psychology. Some argue that unity in these domains is either impossible or undesirable, given their divergent methods and ontological assumptions (Gallagher 2000; Zahavi 2005; Hohwy 2017). The framework developed here is therefore offered as a *heuristic synthesis*—a provisional structure for dialogue across traditions—rather than a claim to definitive theoretical unification.

Building on theories that model the self as a recursive, dynamic construction—especially within predictive and embodied frameworks—I introduce the concept of *unlooping*: the breakdown, suspension, or reversal of recursive identity formation. This concept allows

us to account for the qualitative phenomenology of ego dissolution, its variability across contexts, and its cognitive underpinnings. It also raises important questions about the nature of identity, continuity, and the conditions under which the self can collapse.

This paper brings together phenomenological accounts of selfhood with computational and enactive models to propose a unified framework for understanding ego dissolution. By examining the self as a looped process rather than a static entity, and by analyzing its breakdown in altered states, we can better grasp both the construction and deconstruction of identity. Unlooping the self, I argue, offers not a pathological void but a revealing glimpse into the mechanisms that make selfhood possible in the first place.

## **2. Recursive Identity — The Architecture of the Loop**

The self, as increasingly theorized in cognitive science and phenomenology, is not a static substance but a dynamic process—a recursive construction maintained through ongoing cycles of self-reference, bodily integration, and narrative coherence. Rather than being given in full at any moment, the self is *enacted* through a series of looped operations: it perceives, anticipates, remembers, and evaluates itself across time, folding those perspectives into a singular, coherent “I.” This section outlines the architecture of such loops, focusing on recursive identity as both a cognitive and phenomenological formation.

In what follows, I use several overlapping terms whose meanings differ across traditions. “Self” refers broadly to the lived sense of subjectivity. “Selfhood” designates the structural features of this sense, including agency, continuity, and ownership. “I” is

reserved for first-personal reference, while “ego” is used in its phenomenological and psychoanalytic senses to indicate reflexive or narrativized identity. “System” refers to the cognitive–neural architecture that generates and sustains these experiences. The term “recursive identity” serves as an umbrella concept to describe the looping feedback structures that underlie and integrate these dimensions (Metzinger 2003; Zahavi 2005; Gallagher 2000).

At the cognitive level, models such as Thomas Metzinger’s Self-Model Theory of Subjectivity (SMT) argue that the self emerges from a transparent model constructed by the brain, which represents itself as an embodied agent in the world (Metzinger, 2003). This self-model is recursive in structure: it not only models the body and its environment but also models the model itself, creating layers of self-awareness and metacognition. These feedback loops are not merely reflective but *generative*—they produce the illusion of a continuous, centered subject through temporally synchronized cycles of self-updating.

Relatedly, predictive processing frameworks posit that perception and cognition are rooted in the brain’s ability to generate predictions about incoming sensory input (Clark, 2016). Within this view, the self functions as a generative model—a nested, hierarchically organized inference structure that predicts bodily states, action consequences, and social interactions. Recursive identity here emerges from the constant comparison between predicted and actual inputs, with errors used to update the system. A stable self is thus one in which prediction errors are minimized across recursive layers.

Phenomenologically, the recursive structure of identity finds resonance in Husserl's account of internal time-consciousness, where the self is constituted through retentional and protentional folds (Husserl, 1991). The subject experiences itself as continuous not through discrete acts but through the recursive binding of past, present, and anticipated future. In a similar spirit, Merleau-Ponty frames the self as an embodied loop between perception and movement, grounded in sensorimotor contingencies rather than static introspection (Merleau-Ponty, 1962). Identity is thus not a representation but a recursive rhythm of engagement.

Finally, developmental and enactive accounts (e.g., Thompson, 2007) suggest that recursive selfhood arises through the coupling of neural, bodily, and social systems. From mirror neuron responses to early caregiver mirroring, identity is scaffolded by recursive relational structures. Importantly, these loops are *fragile*: they depend on synchrony, coherence, and reinforcement. Disruption at any level—neural, bodily, intersubjective—can introduce instability, leading to fragmentation or dissolution.

In sum, recursive identity is a synthetic achievement. It depends on layered feedback mechanisms that bind perception, action, memory, and expectation into a unified sense of self. These loops give rise to agency, continuity, and presence. However, their very structure—recursive, contingent, and embodied—also renders them vulnerable. The next section will explore how these loops may be suspended or collapsed in the phenomenon of ego dissolution.

## **2.1 Compatibilities and Tensions Across Approaches**

Phenomenological, predictive, and enactive accounts converge in portraying the self as dynamic and embodied, yet they differ sharply in explanatory commitments.

Phenomenology emphasises the first-person givenness of selfhood, predictive processing explains the self as a generative model optimising prediction error, and enactive accounts stress the coupling of neural, bodily, and social systems (Thompson 2007; Clark 2016; Varela 1996). While compatible in their processual orientation, they remain in tension over whether selfhood is primarily descriptive, computational, or relational. This paper treats unlooping as a heuristic that highlights both their shared insights and their divergences, rather than attempting to collapse them into a single theory.

## **2.2 Recursive Identity and the Myth of Stability**

The recursive account of selfhood challenges a long-standing philosophical inheritance: the assumption that the self is a stable, unified, and enduring entity. From Cartesian notions of the cogito to contemporary narrativist theories that emphasize autobiographical coherence, dominant models of identity often treat selfhood as a substantive continuity—whether metaphysical, narrative, or psychological. Even phenomenological traditions that embrace minimal or pre-reflective selfhood frequently assume a structural invariance in the way self appears in consciousness.

This paper departs from such assumptions. By framing identity as a recursive process—a dynamically enacted synthesis of perception, prediction, memory, and affect—it becomes possible to interrogate not just how the self emerges, but how it disintegrates. Recursive

identity is not merely distributed and embodied; it is fragile, layered, and reversible. Each level of recursive modeling—narrative, bodily, agentic, temporal—can be selectively suspended. The experience of ego dissolution thus reveals the non-essential nature of selfhood. Rather than being an ontological given, the self is shown to be an achievement, not a ground.

This stance distinguishes the present account from narrativist models, such as those advanced by Daniel Dennett (1991) or Galen Strawson (2004), in which the self is constructed through the coherent telling of one’s life story. In states of ego dissolution, narrative continuity may be the first structure to collapse—yet experience continues, often intensely. Similarly, essentialist views of a “core self” or minimal self—as defended by thinkers like Shaun Gallagher (2000) or the early Husserl—struggle to accommodate experiences in which even ipseity, ownership, and agency dissolve without a corresponding loss of consciousness.

By contrasting recursive selfhood with these more stable or linear models, unlooping becomes legible not as anomaly or dysfunction, but as a critical test case. It exposes the limitations of frameworks that assume self-presence as a baseline condition, and it invites a processual ontology in which identity is something to be modulated, disrupted, or even relinquished—temporarily or permanently—under altered cognitive, affective, or social conditions.

### **3. Dissolution as Unlooping**

If recursive feedback loops constitute the continuity and coherence of the self, then ego dissolution can be understood as a disruption or suspension of these loops—a process we may term unlooping. Rather than a complete absence of consciousness, ego dissolution entails a shift in the structural conditions under which selfhood emerges. This section introduces the concept of unlooping as a breakdown of recursive identity, examining how such collapse manifests phenomenologically and what it reveals about the architecture of the self.

To speak of unlooping is to identify a systematic failure in the recursive operations that sustain identity: the ability to refer reflexively to one's own states, to coordinate temporal perspectives, and to maintain the self-model as a generative prediction engine.

Importantly, this is not a binary switch but a graded and multi-dimensional process.

Dissolution may involve the weakening of narrative coherence, the blurring of agentic boundaries, or the disintegration of bodily ownership—each corresponding to a distinct recursive layer of the self-model.

In psychedelic states, for instance, ego dissolution is frequently accompanied by a loss of narrative structure and autobiographical anchoring. As Carhart-Harris et al. (2014) have proposed, this may be due to the downregulation of the default mode network (DMN), a neural correlate of self-referential thought. Reduced connectivity within the DMN disrupts the brain's capacity to integrate temporally extended self-representations, leading to what users describe as the “melting” or “death” of the ego. From a recursive

standpoint, this is a deactivation of high-level loops responsible for narrative unity and self-monitoring.

Recent research further suggests that psychedelics may act as psychoplastogens—compounds that induce rapid and lasting neural plasticity via pathways such as 5-HT<sub>2A</sub>, TrkB, and mTOR (Agnorelli et al. 2024). These neuroplastic effects help explain why psychedelic unlooping is often followed by enduring changes in mood, cognition, and identity integration, rather than remaining a transient disruption.

In meditative absorption states, particularly in advanced practices such as samadhi or non-dual awareness, ego dissolution can result from the deliberate quieting of attentional and evaluative loops. Practitioners often report a cessation of internal dialogue and a suspension of self-reflective positioning. Here, unlooping occurs not through neurological disruption but through volitional disengagement from recursive self-tracking. The self unbinds itself, not into unconsciousness but into a field of nondual presence devoid of subject–object distinction (Josipovic, 2014).

Trauma-induced dissociation provides another route to ego disruption. In states of extreme stress or violation, the system may respond by fragmenting or dissociating parts of the self-model. Victims often describe out-of-body experiences, perceptual detachment, or a sense of unreality. These can be seen as defensive unloopings: protective deactivations of recursive structures that can no longer sustain coherence under threat (Frewen & Lanius, 2006). Unlike meditative or psychedelic dissolution, these unloopings are often involuntary and dysregulated, resulting in long-term disruptions to identity formation.

Across these modalities, ego dissolution marks a departure from recursive integrity. Whether pharmacologically induced, volitionally cultivated, or trauma-triggered, the experience hinges on a failure to maintain recursive self-reference. The phenomenological result is a selfless or altered state in which agency, ownership, and continuity no longer cohere. This breakdown, however, is not necessarily pathological. In some cases, it is experienced as liberating, expansive, or even therapeutic—suggesting that recursive identity is not a necessary precondition for meaningful experience, but a contingent formation subject to modulation and release.

In the next section, we will examine the lived experience of this collapse in more detail, drawing from first-person reports and phenomenological analyses to map the qualitative texture of unlooping.

#### **4. Phenomenology of Collapse**

The collapse of recursive identity is not merely a structural or computational event—it is a lived transformation, marked by distinctive alterations in how the world and the self are experienced. In this section, we explore the phenomenology of unlooping, focusing on the dissolution of agency, temporality, and self-boundaries. Drawing on phenomenological traditions and first-person reports, we aim to characterize the felt texture of ego dissolution as it emerges from the breakdown of recursive processes.

##### **4.1 Loss of Agency and Ownership**

One of the most frequently reported features of ego dissolution is the disappearance of agency. Individuals describe the cessation of an internal “I” that initiates or owns actions.

Instead, perception and bodily movement seem to continue on their own, absent any sense of authorship. This aligns with Metzinger's (2003) model of the Phenomenal Self-Model, in which agency arises from the transparent representation of motor intentions and their execution. When this representational loop is disrupted, action may persist, but its ownership dissolves.

Phenomenologically, this condition corresponds to a reversal of the mineness or *ipseity* (Zahavi, 2005) typically associated with conscious experience. In meditative or psychedelic states, practitioners report watching their body move “on its own” or hearing thoughts “as if they belonged to someone else.” This alienation does not entail unconsciousness but rather a decentering of the recursive loop that maintains the sense of self-as-agent.

#### **4.2 Disintegration of Temporal Structure**

The recursive self is fundamentally temporal. It depends on integrating retention (past), impression (present), and protention (future) into a coherent stream. In ego dissolution, this stream often fragments. Time may seem to stop, loop, collapse, or become irrelevant altogether. Individuals frequently describe a sense of eternal present or timelessness, where events unfold without narrative order or teleological structure.

Husserl's model of internal time-consciousness offers a helpful lens here: temporal experience requires recursive structuring through the interplay of retention and protention, which bind the living present into a coherent temporal flow (Husserl 1991). When this capacity is weakened—through neurochemical modulation, attentional

withdrawal, or trauma—the result is a flattening or warping of time. The self loses not only its narrative but its temporal footing, becoming unmoored from succession and continuity.

As Merleau-Ponty later emphasised with the concept of the intentional arc (*Phenomenology of Perception*, 1962), temporality is inseparable from embodiment and world-directedness. Its collapse thus signals not only a cognitive disruption but an existential suspension of the structures that orient lived experience. Recent neuroimaging research supports this phenomenological insight: meditative suspensions of temporality have been shown to correlate with reductions in beta-band activity in the posterior medial cortex, a region central to temporal self-representation (Trautwein, Schweitzer, Dor-Ziderman, Nave, Ataria, Fulder, & Berkovich-Ohana, 2024). Such findings strengthen the view that experiences of timelessness reflect recursive disruptions that are both lived and neurally instantiated.

### **4.3 Dissolution of Boundaries**

Perhaps the most affectively intense dimension of unlooping is the dissolution of the subject-object boundary. Experiences of ego loss frequently include reports of merging with the environment, with other people, or with an abstract “whole.” This may involve visual and somatosensory alterations, but it is primarily a transformation in intentional structure: the self is no longer directed *at* the world but is *indistinct from* it.

This shift resonates with Merleau-Ponty’s (1962) account of the body-subject as the ground of perception. When recursive bodily self-modeling breaks down, the world is no

longer grasped from a centered point of orientation. Instead, perception expands or becomes “field-like,” lacking focal origin. Reports of “becoming the universe,” “melting into light,” or “merging with sound” are phenomenological expressions of this recursive collapse in bodily differentiation and perspectival anchoring.

#### **4.4 Nonduality and the Philosophical Traditions of Ego Dissolution**

While ego dissolution is often framed within clinical, cognitive, or neurobiological paradigms, its core features—loss of boundary, agency, and narrative—have long been described and cultivated within contemplative and philosophical traditions. These traditions offer not only historical precedent but ontological alternatives to the assumption that recursive selfhood is normative or necessary. In particular, Buddhist and nondual philosophies treat the dissolution of ego not as a pathology but as a revelatory mode of knowing (Garfield 2015; Loy 1997).

In early Buddhist teachings, the doctrine of *anattā* (non-self) denies the existence of any permanent, unchanging self. Rather than positing a stable subject, the self is understood as a composite of transient aggregates (*skandhas*) that arise and pass through dependent origination. Meditative practices are designed to directly perceive this impermanence and decenter identification. Experiences of unlooping—such as the loss of agentive control, boundary merging, or temporal flattening—are seen not as breakdowns but as insights into the constructed nature of identity. The cessation of recursive mental formations (*saṅkhāras*) is a pathway to liberation, not dysfunction (Siderits 2007).

Similar themes emerge in Advaita Vedānta, where the ego (*ahaṃkāra*) is viewed as a misidentification of the self with body-mind processes. Through contemplative inquiry and the method of *neti neti* (“not this, not that”), the practitioner is led to dismantle layers of identification—effectively deactivating recursive loops that maintain personal identity. The goal is not annihilation, but realization of a nondual awareness (*brahman*), beyond subject–object division. Here, unlooping culminates not in fragmentation but in the recognition of self as undivided consciousness (Forman 1999).

In Dzogchen and other Tibetan traditions, nondual awareness is described as a “self-liberating” state in which thoughts, emotions, and perceptions arise and dissolve spontaneously without fixation. The recursive tendency to grasp, interpret, or model experience is seen as the root of suffering. Liberation involves recognizing the empty and luminous nature of awareness itself—an unlooped presence that remains stable precisely because it does not contract into identity (Capriles 2006; Garfield 2015).

These traditions underscore a crucial point: not all disruptions of recursive identity are pathological, and not all coherent selves are functional. From this broader perspective, ego dissolution becomes a philosophical and soteriological event—a shift in the mode of being, not merely a change in content. It challenges the Western assumption that identity must be coherent, continuous, and self-possessed. Instead, it invites a model of consciousness in which recursive selfhood is optional, provisional, and ultimately penetrable.

#### **4.5 Affective Ambiguity**

While ego dissolution is sometimes described as terrifying—especially when involuntary—it is also frequently accompanied by feelings of peace, awe, or liberation. The unlooping of identity appears to open experiential space not typically available in ordinary consciousness. This dual potential—for panic or transcendence—highlights the variability in how recursive breakdown is integrated and interpreted.

Some traditions, such as Buddhist accounts of *anatta* (non-self), frame this dissolution as a positive realization of ontological truth. In other contexts, however, the absence of recursive coherence is experienced as loss, fragmentation, or even death. The same phenomenological structure—disintegration of self—can thus be valenced in radically different ways depending on context, preparation, and interpretive framework.

#### **4.6 A Taxonomy of Ego Dissolution**

While ego dissolution has often been treated as a general class of altered experience, it in fact encompasses a range of structurally and phenomenologically distinct phenomena. To clarify this diversity, I propose here not a definitive classification but a provisional heuristic typology, organized along four core dimensions: affective tone, narrative integrity, temporal coherence, and bodily ownership. These dimensions reflect key recursive components of selfhood and can be differentially suspended or distorted in various dissolution contexts. The typology is intended as a conceptual tool rather than an exhaustive taxonomy, acknowledging the limits of current empirical and

phenomenological evidence (cf. Griffiths et al. 2006; Lebedev et al. 2015). This framework is summarized in Table 1.

**Table 1: Typology of Ego Dissolution Across Recursive Dimensions**

Type	Affective Tone	Narrative Coherence	Temporal Integration	Bodily Ownership	Typical Contexts
<b>Minimal Unlooping</b>	Neutral to positive	Mostly intact	Continuous but diffuse	Stable	Light meditation, hypnagogic states
<b>Narrative Suspension</b>	Serene or spacious	Episodic memory suspended	Present-focused, timeless	Stable or soft	Samadhi, deep mindfulness absorption
<b>Affective Flooding</b>	Overwhelming or euphoric	Loosely coherent	Expansive or cyclical	Intensified or diffuse	Psychedelic peak, ecstatic trance
<b>Fragmented Dissociation</b>	Numb or anxious	Severely disrupted	Discontinuous or frozen	Detached or floating	Trauma-induced dissociation, PTSD
<b>Psychotic Decompensation</b>	Chaotic, paranoid, grandiose	Hyperactive but incoherent	Disordered or fragmented	Permeable or unstable	Acute schizophrenia, manic states
<b>Transpersonal Merging</b>	Blissful or awe-filled	Erased or cosmically fused	Infinite present or non-temporal	Merged or boundaryless	Mystical states, nondual experiences

This typology is not meant to capture the full range of ego dissolution, nor to fix these experiences into rigid categories. Rather, it highlights the spectrum-like variability of unlooping across contexts.

For example:

- In *samadhi*, narrative and temporal loops fade while bodily and affective anchoring may persist.
- In *trauma-induced dissociation*, affective flattening and disrupted bodily ownership dominate, often with impaired narrative and temporal loops.
- In *psychosis*, recursive loops may remain hyperactive but lose cross-loop coherence, creating a delusional excess rather than absence (Parnas & Handest 2003).

By presenting ego dissolution in this differentiated way, the framework offers both theoretical and clinical value. It allows researchers to correlate first-person reports with neurocognitive signatures more precisely and offers clinicians tools for tailoring integration strategies based on which recursive dimensions have been disrupted.

#### **4.7 Affective Integration and the Ethics of Unlooping**

The dissolution of recursive identity is not neutral—it is charged with affective, existential, and ethical consequence. Whether experienced as liberating or terrifying, ego dissolution challenges the scaffolding of ordinary sense-making, and in doing so, it exposes the conditions under which such dissolution can be either integrated or destabilizing. This section argues that the experiential valence of unlooping is not intrinsic to the state itself but is mediated by context, scaffolding, and interpretive framing. The difference between therapeutic transformation and pathological fragmentation often lies not in the structure of dissolution, but in its containment.

Across contemplative, clinical, and cultural domains, traditions that cultivate ego dissolution intentionally—such as certain forms of meditation, ritual, or guided psychedelic therapy—provide epistemic and relational containers for the unlooped state. These containers may be linguistic (narratives of awakening or insight), bodily (grounding practices), or social (the presence of a guide, teacher, or therapeutic ally). Within such frames, the suspension of recursive identity is not interpreted as a loss but as a threshold: an encounter with non-self that is allowed to unfold without catastrophic disintegration (Richards, 2015).

In contrast, when unlooping occurs involuntarily or in isolation—through trauma, psychosis, or unsafe psychedelic use—the absence of interpretive scaffolding can render the experience incomprehensible or overwhelming (Herman, 1992). Fragmentation becomes not a transient mode but a chronic disruption of recursive reentry. Without a way to name, hold, or rebind the experience, the subject may remain stuck in recursive disrepair—unable to reconstitute the loops of narrative, agency, or embodiment that constitute everyday identity (van der Kolk, 2014).

This affective bifurcation raises ethical questions about when and how recursive structures should be modulated. If identity is not essential but enacted, then the deliberate loosening of self-loops may have therapeutic or spiritual value. But such loosening carries risk: recursive identity is also what anchors memory, volition, and social accountability. To dissolve the self without preparation is to risk losing not only narrative coherence, but the means to integrate experience after the fact.

From this perspective, the ethical dimension of ego dissolution lies in modulation and reintegration. The experience of unlooping—whether pharmacological, contemplative, or traumatic—demands not only phenomenological description or cognitive modeling, but careful contextualization. The recursive self is both a barrier and a bridge: it can constrain perception, but it also provides the continuity necessary to make sense of its own undoing. When that continuity is suspended, the quality of support determines whether the unlooped state becomes a site of expansion or fracture.

## **5. Case Studies and Modes of Dissolution**

While the previous sections have outlined a structural and phenomenological framework for understanding ego dissolution as recursive unlooping, this section examines specific contexts in which such dissolution is reported. These cases provide empirical grounding for the unlooping model and reveal its variability across pharmacological, contemplative, pathological, and traumatic domains. The comparative analysis aims to identify both shared features and context-specific dynamics in how recursive identity fails.

### **5.1 Psychedelic Ego Dissolution**

Among the most widely studied contexts for ego dissolution is the use of serotonergic psychedelics such as LSD, psilocybin, and DMT. Clinical and self-reported data consistently show that high-dose experiences can lead to a temporary and profound loss of self-boundaries, agency, and temporal coherence (Griffiths et al., 2006; Lebedev et al., 2015). Users often describe becoming “everything and nothing,” experiencing unity with the universe or existence as a disembodied awareness.

From a neurocognitive perspective, such experiences correlate with reduced functional connectivity within the default mode network (DMN) and increased global neural entropy (Carhart-Harris et al., 2014). These changes disrupt the brain's predictive and integrative functions, particularly those responsible for sustaining autobiographical and metacognitive self-models. In terms of unlooping, psychedelics appear to destabilize high-level recursive loops, effectively suspending the synthetic processes that generate narrative identity and self-location.

## **5.2 Meditative Absorption and Non-Dual Awareness**

Meditative traditions across cultures describe advanced states in which the self becomes silent, diffuse, or entirely absent. Practices such as deep jhāna in Theravāda Buddhism, samadhi in Yoga, and non-dual awareness in Dzogchen and Advaita Vedānta explicitly aim to transcend the ordinary structures of selfhood. Practitioners often report that awareness remains, but the sense of being a discrete self disappears.

Unlike psychedelic states, which are often chaotic and unpredictable, meditative dissolution is typically more gradual and controllable. Attention is trained to disengage from internal narrative, evaluative processes, and bodily ownership—resulting in the systematic deconstruction of recursive loops. Neuroscientific studies show reductions in activity in self-referential networks and increased coherence across attentional and sensory areas (Brewer et al., 2011). This suggests a different trajectory of unlooping: not by pharmacological disruption, but through attentional refinement and volitional suppression of recursive self-representations.

### **5.3 Dissociation and Trauma-Induced Fragmentation**

In contrast to the aesthetic or spiritual valence of the above cases, trauma-induced dissociation involves a defensive, often involuntary breakdown of recursive integrity. Victims of abuse, extreme stress, or life-threatening situations may experience depersonalization, derealization, or dissociative amnesia—symptoms understood as *maladaptive unlooping*. The system disengages recursive self-processing as a protective mechanism, particularly when coherence cannot be maintained under threat (Frewen & Lanius, 2006).

First-person accounts frequently include sensations of detachment from the body, perception from an external perspective, and an absence of emotional ownership. Unlike meditative or psychedelic dissolution, these experiences often persist as fragmented or split states, suggesting a partial and unstable unlooping that fails to reintegrate. Here, recursive breakdown is not sought but imposed, and its effects can become chronic.

### **5.4 Psychotic Decompensation**

A fourth and more clinically complex case involves psychotic ego dissolution, particularly in acute schizophrenia or mania. In such states, the self-model may become overinclusive, distorted, or entirely incoherent. Individuals report fusion with others, breakdown of internal boundaries, or loss of the ability to distinguish self from world. Though often pathologized, these experiences share structural features with other forms of ego loss: recursive disintegration, boundary collapse, and loss of temporal coordination.

What distinguishes psychotic unlooping is the absence of coherence and the presence of compensatory delusions. Instead of the silence or spaciousness seen in meditative absorption, there is often an overproduction of meaning and disordered recursion (Parnas & Handest, 2003). This suggests that not all unloopings are symmetrical: some collapse into disorder rather than openness, highlighting the complexity of the self's recursive scaffolding and the stakes of its failure.

### **5.5 Composite Case Study – Dissociative Unlooping in Trauma**

The following narrative is presented as a composite vignette rather than an individual case record. Its purpose is illustrative: to highlight phenomenological and structural features recurrently documented in the trauma and dissociation literature (Frewen & Lanius 2006; Herman 1992; van der Kolk 2014). It synthesizes patterns described across multiple reports in order to situate the concept of unlooping within established clinical findings.

Consider the case of “L.,” a 34-year-old woman who experienced a severe dissociative episode following a car accident in which her partner was killed. In the weeks after the event, she reported sensations of floating outside her body, an inability to recognize herself in mirrors, and a pervasive feeling of watching her life unfold from a distance. “It was like I was stuck behind my eyes,” she said, “but they weren’t mine.” These episodes were described as emotionally numbing yet surreal—sometimes oddly peaceful, but terrifying upon “snapping back.”

From the perspective of recursive identity, L.'s experience reflects a selective unlooping of mid- and high-level identity functions. Her narrative self—responsible for autobiographical integration and forward projection—appeared offline. While basic perception and motor coordination remained operational, they were no longer experienced as self-owned, suggesting a disruption in agentic feedback and a state of what Metzinger (2003) calls “phenomenal disownership.”

Temporal coherence was also profoundly affected. “There was no day or night,” L. reported. “I couldn’t tell if a minute had passed or an hour.” This aligns with Husserl’s account of time-consciousness, in which temporality is constituted through recursive binding of retention and protention (Husserl 1991). When these temporal loops collapse, the lived stream of time unravels.

Importantly, L. identified this dissociation as a protective mechanism. “If I had felt anything, I think I would have died too,” she said. This suggests an adaptive recursive shutdown: the system deactivates affective and agentic loops to prevent emotional overwhelm. Yet the cost was severe. L. later described the aftermath as feeling “like a character in a movie,” unable to re-enter her own life in a coherent or embodied way.

Therapeutic intervention focused on reintegrating these recursive layers through narrative reconstruction and somatic grounding. Over time, this helped to restore a coherent sense of self. As trauma theorists emphasise (Herman 1992; van der Kolk 2014), dissociation can initially serve a protective role but becomes maladaptive if reintegration fails. L.’s case illustrates how trauma-induced unlooping can function as both a defensive mechanism and a source of chronic disruption. It supports the broader claim that ego

dissolution is not a monolithic phenomenon, but a family of structurally distinct recursive breakdowns whose meaning depends on their context, function, and reintegration trajectory.

## **6. Implications for the Science of Self**

The phenomenon of ego dissolution—and its analysis as recursive unlooping—offers critical insights for both phenomenology and cognitive science. Rather than treating the self as a fundamental or indivisible unity, these breakdowns reveal the constructive, layered, and fragile nature of selfhood. In this section, we examine the theoretical and practical implications of unlooping for models of self, methods of inquiry, and therapeutic applications.

### **6.1 Selfhood as a Contingent Construct**

One key implication is that the self is not ontologically primitive but functionally emergent. Across the contexts examined—psychedelic, meditative, traumatic, and psychotic—ego dissolution corresponds to the disruption of recursive modeling operations, not to a loss of consciousness itself. Awareness continues, sometimes intensely, even when the markers of self (agency, narrative, boundaries) vanish.

This challenges philosophical and psychological models that assume an enduring core self. Instead, it supports processual and enactive accounts in which identity is not a substance but a dynamically maintained activity, akin to biological homeostasis or autopoiesis (Thompson, 2007). The self becomes a temporary synthesis of feedback loops that can be weakened, paused, or bypassed—without obliterating experience.

Moreover, the existence of stable consciousness in the absence of self-reference suggests that subjectivity and selfhood can be decoupled. This has far-reaching consequences for theories that equate consciousness with reflexivity or inner speech (e.g., Carruthers, 2011). Unlooped states imply that pre-reflective or minimal awareness may persist beneath or beyond the self-model, and that this “baseline” mode may be epistemically and therapeutically valuable.

## **6.2 Bridging Phenomenology and Cognitive Science**

The unlooping framework also points toward an enriched interdisciplinary methodology. Phenomenology contributes the tools for describing subjective experience in its granular detail, while cognitive science offers models of functional and neural architecture. Experiences of ego dissolution—when taken seriously—become crucial test cases for evaluating and refining models of selfhood.

Rather than dismissing altered states as anomalies, they can be treated as natural experiments in recursive deactivation. First-person data from psychedelics or meditation can serve as phenomenological anchors for neuroscientific investigations into hierarchical predictive processing, default mode activity, or self-representation. This requires rigorous protocols for experience sampling, as well as frameworks that are open to non-normative forms of subjectivity.

The neurophenomenological method (Varela, 1996) becomes especially relevant here. By correlating breakdowns in recursive structure with shifts in experiential reports, we can map the boundaries and conditions of selfhood. The model of unlooping thus fosters a

reciprocal constraint between subjective and objective domains, aligning with the broader goals of enactive and embodied approaches to cognition.

### **6.3 Ethical and Therapeutic Potentials**

Finally, the practical implications of ego dissolution should not be overlooked. In therapeutic contexts—particularly those involving psychedelic-assisted psychotherapy—ego dissolution is often correlated with enduring psychological benefits, including reduced depression, anxiety, and addictive behaviors (Griffiths et al., 2016). The temporary suspension of rigid self-models appears to allow for cognitive and emotional reconfiguration.

From the perspective of recursive identity, such outcomes make sense: a loosening of pathological loops (e.g., negative self-narratives, compulsive self-monitoring) can enable reorganization at lower or more flexible levels. Meditative traditions have long viewed the attenuation of self as a path to liberation, equanimity, and clarity—suggesting that recursive unbinding may have transdiagnostic and cross-cultural relevance.

However, the same process can be destabilizing if unintegrated. As seen in trauma and psychosis, involuntary or fragmented unlooping can produce long-term disturbances. This raises ethical questions about how and when to induce ego dissolution, and what scaffolding—social, psychological, and epistemic—is necessary to ensure that it is beneficial rather than harmful. The science of self must therefore be inseparable from the ethics of modulation.

## **6.4: Methodological Integration – Phenomenology and Predictive Processing**

If ego dissolution is to serve as a meaningful test case for theories of selfhood, it must also drive advances in methodology. This section outlines how phenomenological analysis and predictive processing models can be productively integrated. Though these traditions differ in language and epistemology, they converge in treating consciousness as structured, dynamic, and embodied. The recursive model of unlooping developed in this paper offers a shared bridge: both traditions can align around the architecture, disruption, and restoration of self-related feedback loops.

### **6.4.1 Complementary Strengths**

Phenomenology offers first-person access to structural invariants of experience, including temporality, embodiment, and agency. It excels in describing how ego dissolution feels from within: as a shift in ipseity, loss of narrative control, or merging with surroundings. However, it often lacks explanatory tools for mechanistic modeling or neurobiological correlates.

Predictive processing, by contrast, provides a generative computational framework for understanding how experience arises from hierarchical inference and prediction-error minimization (Clark 2016). It accounts for how self-models form, persist, and fail—but typically treats subjective data only secondarily or as post hoc illustrations. Recent work in neurophenomenology has begun to formalize this bridge mathematically, showing how first-person reports can be systematically mapped onto predictive architectures (Da Costa et al. 2024).

Together, these methods can supply mutually constraining descriptions and explanations. Phenomenological reports can inform the structure of predictive models, while those models can clarify the functional dynamics that underlie reported experiences. In unlooping, this means integrating how recursive failures are felt, and how they are implemented.

#### **6.4.2 A Shared Object: The Loop**

The recursive loop becomes the central methodological object. For phenomenology, this loop manifests as lived continuity—the sense of ongoing presence, intentional orientation, and coherence. For predictive models, it manifests as reentrant signaling between hierarchical layers of prediction, attention, and action control.

Unlooping, then, can be studied both:

- **Subjectively**, via first-person data on the suspension or breakdown of self-features (e.g., loss of agency, altered time).
- **Objectively**, via changes in functional connectivity, entropy, or error weighting across networks (e.g., the DMN, salience network, interoceptive circuits).

Recent empirical work demonstrates the promise of this dual approach. For instance, neural recordings during deep meditative absorption show reductions in beta-band power in the posterior medial cortex, correlating with reports of suspended self-boundaries and timeless awareness (*Journal of Neuroscience*, 2024). Such findings highlight how recursive collapse can be tracked both experientially and neurally.

A neurophenomenological protocol might, for example, pair real-time fMRI with guided self-report during psychedelic sessions or meditative absorption. Participants could be trained in descriptive phenomenology to identify transitions in narrative sense, temporal flow, or bodily ownership. These could be mapped against model-predicted neural dynamics (e.g., hierarchical desynchronization, precision-weighting failure, or global workspace collapse).

### **6.4.3 Integration Framework: Recursive Minimalism**

The minimal self—pre-reflective, embodied, temporally situated—has been a key focus in phenomenology (Zahavi 2005). Predictive models, however, tend to focus on multi-layered architectures. The recursive framework proposed here enables a recursive minimalism: a unified structure where minimal selfhood arises from recurrent integration loops, and higher-order selfhood from nested narrative elaboration.

Within this view:

- Phenomenological dissolution corresponds to temporary deactivation of recursive levels, not destruction of an essential self.
- Predictive failure (e.g., misweighted priors, reduced DMN coherence) reflects recursive collapse across layers of the self-model.
- Integration occurs when bottom-up and top-down loops realign—whether through therapeutic scaffolding, social mirroring, or neuroplastic recalibration. Recent reviews emphasize that psychedelics may act as psychoplastogens, inducing rapid neuroplastic changes that enable such realignment (Agnorelli et al. 2024).

This model supports empirical testing and conceptual clarity, offering a middle path between descriptive richness and explanatory rigor. While provisional and contested, such an integrative framework highlights the heuristic value of unlooping as a shared object of inquiry rather than a definitive theoretical synthesis.

## **7. Conclusion**

This paper has argued that ego dissolution—whether sought through contemplative practice, induced pharmacologically, or precipitated by trauma—can be fruitfully understood as unlooping: the breakdown of recursive structures that generate and maintain the self. By framing the self not as a fixed entity but as a dynamic system of nested feedback loops, we gain a clearer understanding of how identity is constituted, and how it may be dismantled.

Each context explored—psychedelic, meditative, traumatic, and psychotic—reveals different mechanisms and valences of unlooping. Despite this variability, all cases demonstrate that selfhood is not a precondition of consciousness, but a constructive and modifiable formation. The capacity to undergo experiences without a stable self suggests that identity is both contingent and reversible, challenging prevailing assumptions in both cognitive science and philosophy of mind.

The implications are manifold. Theoretically, ego dissolution supports enactive, embodied, and processual models of selfhood over essentialist or static views. Methodologically, it invites closer integration of phenomenological analysis with cognitive neuroscience, particularly in altered and non-ordinary states. Practically, it

offers therapeutic avenues—already being explored in psychedelic-assisted psychotherapy and contemplative clinical interventions—for disrupting maladaptive self-loops and expanding the repertoire of conscious experience.

At the same time, the phenomenon of unlooping underscores the fragility and ethical gravity of selfhood. Recursive structures enable agency, coherence, and moral accountability; their collapse can be revelatory or devastating. Future research must address not only how these loops can be suspended, but how they can be reconstituted or modulated with care.

While provisional and contested, the unlooping framework is offered here as a heuristic tool rather than a definitive synthesis—one that highlights the structural vulnerability of selfhood and the diverse possibilities opened when its recursive loops falter.

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