From Dissonance to Resonance: The Transformation of the Self Through the Alteration of Core Beliefs

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Posted Date: 10 October 2025

doi: 10.20944/preprints202510.0776.v1

Keywords: Resonance-Inference Model (RIM); core beliefs; predictive processing; self-organization; transformation

 doi:10.20944/preprints202510.0776.v1

Article

From Dissonance to Resonance: The Transformation of the Self Through the Alteration of Core Beliefs

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Abstract

This paper introduces the Resonance-Inference Model (RIM) as an integrative meta-theory to explain the mechanisms of profound and sustainable personal transformation. It addresses the fundamental question of how maladaptive core beliefs, which create a state of inner dissonance, can be lastingly changed. We conceptualize core beliefs as high-precision hyper-priors within a hierarchical generative model of the self, based on Karl Friston's free energy principle. Psychopathology is framed as a state of chronically elevated free energy, manifesting as a stable, yet painful, attractor landscape. The RIM synthesizes six theoretical pillars—predictive processing (Friston), the self-pattern theory (Gallagher), synergetics (Haken et al.), affect logic (Ciompi), spatiotemporal neuroscience (Northoff), and consistency theory (Grawe)—into a coherent, multi-level framework. It argues that therapeutic change is a synergetic phase transition from dissonance to resonance, a more adaptive and energetically favorable state. This process requires multi-level interventions that destabilize the old attractor and facilitate the consolidation of a new one. Furthermore, we extend the model to include a vertical, spiritual dimension, conceptualizing Viktor Frankl's "will to meaning" as a master-prior capable of initiating a global reorganization of the self-pattern through downward causation. The RIM thus provides a unified, process-based, and neuroscientifically grounded blueprint for psychotherapy and personal change.

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Public Significance Statement

Many people feel stuck in negative patterns like anxiety or self-doubt, finding that willpower alone is not enough to create lasting change. This paper presents a new, unified scientific model that explains why these patterns are so persistent: they are not character flaws but deeply ingrained, self-stabilizing systems in our brain and body. By integrating cutting-edge insights from neuroscience, psychology, and philosophy, our model provides a "blueprint" for understanding how profound personal transformation actually works. It shows how we can move from a state of inner conflict and suffering ("dissonance") to one of coherence, meaning, and well-being ("resonance"). This research offers a scientifically grounded path and renewed hope for anyone seeking to overcome deeply rooted psychological challenges and achieve sustainable personal growth.

The Architecture of the Self: From Phenomenological Patterns to Predictive Priors

The yearning for profound change is one of the most fundamental human experiences. Many people feel trapped in painful patterns, governed by invisible forces that limit their potential and undermine their well-being. At the center of these patterns are our core beliefs—deeply ingrained, often unconscious assumptions about ourselves and the world that shape our entire reality. This paper answers the question of whether and how a sustainable transformation of these fundamental beliefs is possible. It argues that change is not only possible but can be systematically facilitated

 doi:10.20944/preprints202510.0776.v1

through a deep understanding of the underlying mechanisms. The path leads from a state of inner dissonance—a chronic conflict between our needs and our beliefs—to a state of resonance, in which the self achieves a coherent and life-affirming harmony with itself and the world. The key to this understanding is the Resonance-Inference Model (RIM), an integrative meta-model that synthesizes insights from neurobiology, phenomenology, and systems theory into a comprehensive blueprint for change. To this end, Shaun Gallagher's phenomenological "Self-Pattern Theory" is taken as a starting point and integrated into the comprehensive framework of Karl Friston's Free Energy Principle (FEP) to show how core beliefs function as supreme guiding principles (hyper-priors) and how they can be systematically reorganized.

Gallagher's "Self-Pattern Theory" as a Dynamic Gestalt Model

In his "Self-Pattern Theory of Self," Shaun Gallagher posits that the self is not a singular, immutable entity or substance (Gallagher, 2013). Instead, he conceptualizes it as a "real pattern"—a dynamic, recursively self-organizing collection of processes that together form a "dynamic gestalt" (Leidig, 2025a). This pattern is constituted by a multitude of interacting aspects (Gallagher, 2013), including:

- Minimal embodied aspects (the feeling of being a body)
- Minimal experiential aspects (the feeling of having experiences)
- Affective aspects (emotional dispositions and moods)
- Intersubjective aspects (the constitution of the self in social relationships)
- Psychological-cognitive aspects (memory, beliefs)
- Narrative aspects (the stories we tell about ourselves)
- Extended and situated aspects (the embedding in an environment with tools, possessions, and social structures).

This model of the self is analogous to a "Pattern Theory of Emotion," as proposed by Gallagher for the phenomenon of compassion (Gallagher, Raffone & Aglioti, 2024). There, an emotion is also described not as a single state but as a dynamic pattern of physiological, cognitive, and affective factors in a reciprocal relationship (Gallagher, Raffone & Aglioti, 2024). Analogously, the self is the emergent pattern that arises from the complex interplay of its constituent parts. Gallagher explicitly rejects a fixed, a priori hierarchy of these self-pattern components, viewing them as interacting on a single plane (Leidig, 2025a).

The Special Role of the Narrative Self: Interface and Meaning-Making

Although Gallagher rejects a formal hierarchy, he attributes a special role to the narrative self-pattern for processes of change and the constitution of identity (Gallagher, 2000; Leidig, 2025a). The narrative self is not just another aspect among many; it functions as a superordinate, interpretive instance. It weaves the diverse experiences of the other self-pattern components—affects, actions, social interactions—into a more or less coherent story, thereby giving them their deeper meaning and their place in personal identity (Gallagher, 2022). It builds the crucial bridge between the minimal self, anchored in immediate experience, and a temporally extended, diachronic identity that encompasses past, present, and future.

Narratives are inextricably linked to actions. They are not only retrospective explanations but also prospective frameworks that shape intentions, guide actions, and evaluate them. This capacity for "narrative authorship," as David Velleman calls it, enables an agent to steer their actions and give them meaning (Velleman, 2007).

The apparent inconsistency in Gallagher's theory—rejecting a hierarchy while simultaneously emphasizing the narrative component—can be resolved by distinguishing between an ontological and a functional level. Ontologically, the components may interact as equals. Functionally, however, the narrative pattern assumes a unique role: it is the primary interface for conscious access to and

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modification of the abstract, high-level organizing principles of the self. It functions as a meta-organizer and communicator of the self's implicit overall structure.

The Self as a Generative Model in the Free Energy Principle (FEP)

The Free Energy Principle (FEP), formulated by Karl Friston, offers a formal framework for understanding the function of the brain and mind (Friston, 2010). It posits that every biological system strives to maintain its existence by minimizing the difference between its predictions about the world and the actual sensory signals. This difference is termed "prediction error" or, in information-theoretic terms, "surprise" (or its upper bound, "free energy"). To achieve this, the brain creates an internal "generative model" of the world, which continuously generates predictions about the causes of its sensory impressions (Friston, 2010).

Within this framework, Gallagher's entire "self-pattern" can be understood as the phenomenological correlate of this very generative model (Leidig, 2025a). What we experience as our "self" is the complex, hierarchical model that our brain uses to predict and understand the world and our place in it. This model is hierarchically structured: at the lower levels, fast, concrete sensory data are processed, while at the upper, deeper levels, abstract, temporally stable concepts and rules are located, which provide the context for the lower levels.

Core Beliefs as a Priori Priors: The Unconscious Architects of Reality

"Core beliefs" can be conceptualized in the FEP model as the most abstract, stable, and often unconscious assumptions or "priors" at the top of the hierarchical generative model (Leidig, 2025a). In the terminology of *Hierarchical Predictive Coding (HPC)*, these deepest convictions are also referred to as *hyper-priors*. Their function is to contextualize the entire system and to control the reliability (precision) of various information sources. They represent generalized, context-free rules about the self, the world, and others, which the system has extracted from a multitude of experiences over long periods.

These priors exert their powerful influence through the mechanism of "active inference" (Friston et al., 2016). The system can minimize prediction errors in two ways:

1. *Perceptual Inference (Perception):* It can adapt its predictions (i.e., its internal states) to the sensory data. A core belief as a high-precision hyper-prior, however, directs this process from the top down. Incoming sensory signals that contradict the hyper-prior generate prediction errors. However, the high precision of the prior dampens the precision of these ascending prediction errors (*Precision Weighting*). Contradictory evidence is thus dismissed as irrelevant "noise," actively reinterpreted, or not even allowed to update the deeper beliefs.
2. *Active Inference (Action):* It can change the world through actions so that the sensory data better match the predictions. An individual with the core belief "I am not enough" will unconsciously act in ways that create situations or choose behaviors that confirm this feeling of inadequacy (e.g., by taking on overwhelming tasks or avoiding situations where they might receive positive feedback). This is a form of self-fulfilling prophecy that stabilizes the system by aligning the world with the internal model (Friston, 2010).

The emotional intensity with which a core belief is felt to be "true" corresponds in the FEP to the *precision* of the prior. High precision means that the system assigns a high degree of confidence to this prior. It is considered very reliable and is therefore difficult to revise with new, contradictory evidence (prediction errors). This precision weighting is the central mechanism by which hyper-priors control the flow of information in the brain.

The statement attributed to Kurt Lewin, "Reality is what has effects," finds its formal equivalent here (Lück, 2021). The "holding-as-true" of a core belief is an attribution of truth that appears plausible in light of even higher beliefs. From the system's perspective, this perceived and assigned truth shapes the individual's reality by the powerful action of the beliefs as hierarchical priors. A core belief is treated as "true" by the system if it effectively minimizes prediction errors, i.e., if it "works" to keep

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the system in a state of low surprise. This holds true regardless of whether this state is phenomenologically experienced as painful. A maladaptive core belief thus creates a painful but stable and predictable reality for the system because it works best to avoid dissonance. Psychopathology can thus be understood as a state in which a system is trapped in its own self-created reality because it offers the greatest predictability.

The Energetics and Dynamics of Being: Integrating Affect, Motivation, and Self-Organization

To fully understand the emergence, maintenance, and alteration of core beliefs, an integration of motivational, affective, and system-dynamic perspectives is required. The theories of Grawe, Ciompi, and Haken/Tschacher/Schiepek provide the crucial building blocks for this.

Grawe's Consistency Theory: The Content of the Uppermost Priors

While the FEP provides a formal process model, Klaus Grawe's Consistency Theory fills it with psychological content. Grawe's four basic psychological needs—(1) attachment, (2) orientation and control, (3) self-esteem enhancement and protection, and (4) pleasure gain and displeasure avoidance—can be interpreted as the content specification of the most fundamental, evolutionarily anchored priors of the generative model (Grawe, 2004; Leidig, 2025a). They define the "preferred states" that an organism must seek to ensure its survival and well-being, thereby minimizing surprise in the long run.

Grawe's concept of "inconsistency experience"—the discrepancy between the goals arising from basic needs and perceived reality—corresponds to the phenomenological correlate of a high prediction error or high free energy (Grawe, 2004; Leidig, 2025a). Chronic suffering arises when core beliefs systematically prevent the satisfaction of these basic needs, thus creating a permanent state of inconsistency.

Ciompi's Fractal Affect Logic: The Energetic Engine of the System

While Gallagher's Pattern Theory describes the structural anatomy of emotions as dynamic patterns, Luc Ciompi's theory of fractal affect logic provides the corresponding physiology and energetics (Ciompi, 1997). It explains how these patterns become powerful forces that organize our entire system. Ciompi posits that affects are not secondary accompaniments to cognition but its primary organizers. They are holistic, psycho-physical energy states that force thinking into specific "logics" (e.g., a logic of fear that filters everything through the lens of threat) (Ciompi, 1997). Such a "feeling-thinking-behaving program," as Ciompi calls it, is the dynamic manifestation of the very emotion patterns described by Gallagher.

Here, the Resonance-Inference Model unfolds its full integrative power by building a bridge to the other theoretical pillars. Such a "logic of shame" (Ciompi), from a synergetic perspective (Haken & Schiepek, 2010), forms an emotionally distressing but highly stable attractor landscape that threatens to enslave all further tendencies and impulses of thought, feeling, and behavior. The function of this attractor can be explained by the Free Energy Principle (Friston, 2010): it creates a massive "perception bias" that distorts reality in such a way that it permanently confirms the core narrative of shame. This mechanism is paradoxically "optimal" as it minimizes prediction errors and protects the system from the even greater surprise of a complete collapse of the self-model. It offers a pseudo-satisfaction of the basic need for orientation and control (Grawe, 2004), whereby the experience of inconsistency is reduced in the short term, while other needs are violated in the long term. Neurobiologically, this rigid attractor manifests as a "frozen" spatiotemporal pattern in the brain's activity (Northoff, 2018).

In the synthesis of these theories, the information-theoretic "free energy" of the FEP is equated with the phenomenologically experienced "emotional tension" described by Ciompi (Leidig, 2025a). A high prediction error is not just an abstract quantity; it feels aversive—as anxiety, shame, anger, or

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sadness. This affective energy is the drive that motivates the system to minimize the error. Affects act as "operators" that dynamically modulate the precision of priors and sensory data. Anxiety, for example, increases the precision (the weight) of threat-relevant predictions, leading to heightened attention to potentially dangerous stimuli. The "fractal" principle states that these affect-logical patterns repeat themselves in a self-similar manner at all levels of the system—from the dynamics of neural networks to individual thought loops to familial and societal interaction patterns (Ciompi, 2004; Ciompi & Tschacher, 2021).

Synergetics (Haken/Tschacher/Schiepek): The Form of Change

Synergetics, developed by Hermann Haken and applied to psychology by Wolfgang Tschacher and Günter Schiepek, provides the formal description of the dynamics of change processes in complex, self-organizing systems (Haken & Schiepek, 2010). A stable core belief with its associated patterns of thought, feeling, and behavior is conceptualized here as a stable "attractor" in the state space of the psychic system (Leidig, 2025a; Schiepek & Tschacher, 1997). Like a ball in a valley, the system repeatedly rolls back into this dominant pattern.

From this perspective, psychological disorders correspond to rigid, "sub-critical" states of order. The attractor is so deep and stable that the system loses its flexibility and adaptability. Therapeutic change is modeled as a "phase transition": to leave the old, maladaptive attractor, the system must first be destabilized. This is achieved by increasing a "control parameter"—in the psychological context, this corresponds to the input of energy in the form of new information or emotional activation that increases the prediction error (Haken & Schiepek, 2010). The system is thereby brought to the "edge of chaos" (a state of criticality), a highly unstable but also creative state in which new, adaptive patterns (new, healthier attractors) can form (Leidig, 2025a).

The synthesis of these three theories reveals a triad of change: Grawe's model provides the reason for the dissonance (inconsistency through need violation). Ciompi's model explains why this dissonance becomes energetically relevant (it is experienced as aversive affective tension that compels action). Finally, synergetics describes the formal dynamics of how this energy can destabilize the existing system and lead to a new state of order. By integrating these levels, the RIM provides a multidimensional explanation of why change is necessary and how it formally occurs—a depth that one-dimensional models cannot achieve.

The Neuronal Stage: Core Beliefs in the Spatiotemporal Landscape of the Brain

The models described so far find their neurobiological basis in Georg Northoff's theory of spatiotemporal brain dynamics. This approach offers a bridge between the abstract principles of inference and the concrete processes in the brain by showing how high-level beliefs (hyper-priors) profoundly shape the spatiotemporal dynamics of neural activity.

Northoff's Spatiotemporal Brain Dynamics as a Neurobiological Foundation

Northoff's approach posits that mental states—including the experience of self—are inextricably linked to the brain's intrinsic, spontaneous activity and its specific spatiotemporal organization (Northoff, 2018). The brain is not a passive stimulus-response machine; its continuous resting activity generates a neural "basic melody." External stimuli are not written on a "blank slate" but modulate this already existing intrinsic dynamics. The spatiotemporal structure of this activity—the complex interplay of oscillations, connectivity, and topographical patterns over time—is considered the "common currency" of brain and mind. It is the level at which neural and phenomenal states intertwine and mutually condition each other (Northoff, Wainio-Theberge & Evers, 2020).

Neuronal Correlates of Core Beliefs: The Control of Spatiotemporal Dynamics

Within the spatiotemporal framework, it can be precisely described how core beliefs, as hyper-priors, organize brain activity at the temporal, spatial, and structural levels:

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- *Modulation of Temporal Dynamics:* Hyper-priors are located at the highest levels of the neural hierarchy and are reflected in the slowest, most stable frequency patterns of brain activity. This hierarchical structure leads to a *separation of temporal scales*: the slow rhythms of the hyper-priors generate a superordinate context that sets the initial conditions for the faster processes at the lower levels. This "temporal depth" of the generative model is the prerequisite for forward-looking planning (*planning as inference*), which goes beyond a purely reflexive reaction. This ability to make predictions about both the content ('what') and the timing ('when') of future events is a fundamental aspect of this anticipatory processing (Auksztulewicz et al., 2025). Strong, rigid hyper-priors (e.g., in trauma) can thus control the phase transitions of faster neural attractors and keep the cortical dynamics trapped in a rigid or chaotic state.
- *Control of Spatial Dynamics through Precision Weighting:* The central mechanism by which hyper-priors control the spatial propagation of information is the *precision weighting* of prediction errors (Fiorenza et al., 2025). High precision of the hyper-prior (high confidence in the belief) leads to a top-down modulation of the postsynaptic excitability of the prediction error units, which are typically located in the superficial layers of the cortex (*superficial pyramidal cells*). By dampening the precision of these errors, their potential to update the deeper layers (*deep pyramidal cells*), which encode the priors, is massively reduced. The spatial propagation of new, contradictory information is thus severely restricted in the cortical network. Neurophysiologically, this modulation is realized by *neuromodulators* such as dopamine, serotonin, or acetylcholine, which control the synaptic gain and thus the weight of incoming information. A hyper-prior that, for example, assigns low interoceptive precision in depression leads to the ignoring of bodily signals, and the dynamics become more dominated by internal top-down expectations.
- *Shaping of Neuronal Architecture:* Hyper-priors also determine the structural connectivity of the generative model. They function as structural priors that define how many layers and factors the model has, which is reflected in the functional anatomy of the brain. Fundamental distinctions (e.g., between "what" and "where" processing pathways) can be understood as a manifestation of hyper-priors about the basic structure of the world, leading to functional segregation and parallel processing streams.
- *Influence on Stability and Metacognition:* Strong hyper-priors can restrict the system's dynamic repertoire and keep it trapped in a particular *attractor* (*stuck state*), which reduces adaptability. This correlates with the synergetic model of a pathologically stable attractor. Furthermore, hyper-priors also include *beliefs about beliefs*, which is the neural basis for *metacognition* and mental acts such as the targeted control of attention.

Northoff's model thus provides the crucial bridge from the abstract to the concrete: it shows how the information-theoretic principles of the FEP and psychological patterns are anchored in the fundamental, measurable spatiotemporal dynamics of the brain.

An Integrative Model of Disorder: The Core Belief "I Am Not Enough"

The synergetic combination of the six theoretical building blocks offers a decisive advantage over traditional, often one-dimensional models of disorder. Established and effective approaches such as Cognitive Behavioral Therapy (CBT), Acceptance and Commitment Therapy (ACT), Motivational Interviewing (MI), or Schema Therapy have developed valuable methods for identifying and changing core beliefs, based on principles like cognitive restructuring, defusion, the resolution of ambivalence, or working with emotional modes. However, these approaches primarily focus on the phenomenological, cognitive, or behavioral level. A truly comprehensive model of disorder must explain *why* these interventions work, but also why they sometimes reach their limits. It must reveal the deeper, systemic anchorings of the disorder, which—as the following analysis shows—extend across all levels of human existence. The theoretical superiority of the integrative approach presented here lies in the fact that it not only describes the different levels of a disorder but also explains their dynamic interplay as a self-organizing system. The strength of the model lies in its dialectical architecture, in which each theory answers a question posed by the previous one, thus

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creating a logically compelling chain of explanation from the abstract information-theoretic principle to the concrete, lived experience (Leidig, 2025b). A core belief like "I am not enough" is therefore not an isolated cognitive error or a mere symptom, but a fundamental organizing principle that manifests itself at all levels—from neural dynamics to the lived narrative—and is stabilized by their interaction. This multidimensional perspective is essential for understanding the persistence of such disorders and for developing equally holistic strategies for change.

The core belief "I am not enough" is a prototypical example of a maladaptive prior that creates a self-stabilizing system of suffering. The following table (1) analyzes its manifestations on the six theoretical levels.

Theory (Level)	Maladaptive Manifestation of the Core Belief "I am not enough"
Friston (Inference)	The core belief functions as a high-precision prior that interprets all incoming social signals (e.g., praise) as prediction errors and explains them away with subsequent inferences ("They don't really mean it") to protect the highest prior. Active inference leads to avoidance behavior or excessive effort to prevent anticipated negative evaluation, which paradoxically confirms the prior.
Gallagher (Phenomenology)	The narrative self-pattern is characterized by a repetitive story of failure, inadequacy, and anticipation of rejection. Other parts of the self (e.g., the intersubjective) are "colonized" by

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	this negative narrative, leading to a sense of alienation and a fragmented experience of self.
Haken et al. (Synergetics)	The psychic system is trapped in a deep, stable attractor. This state has high resilience to positive disturbances (new experiences). Even small triggers (e.g., minimal criticism) cause the system to quickly and reliably "fall" into a state of self-devaluation and withdrawal.
Ciompi (Affect Logic)	The chronic anticipation of failure generates a permanently high level of free energy, which is experienced as an aversive basic mood (e.g., shame, anxiety, depressed mood). This affective coloring organizes thinking according to a "logic of worthlessness," in which all cognitions are filtered and linked in a way that supports the feeling of inadequacy.
Grawe (Motivation)	The core belief leads to a chronic violation of the basic needs for self-esteem enhancement and often also for attachment (through

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	withdrawal) and control (through experienced helplessness). The resulting massive experience of inconsistency is the motivational source of the suffering.
Northoff (Neurobiology)	The state manifests in an altered spatiotemporal dynamic of the brain's resting-state activity. A rigid, impoverished pattern with reduced variability and connectivity is observed, especially in networks associated with self-reflection and reward (e.g., a "frozen" dynamic in the cortical midline structures).

A Synergetic Transformation Strategy: Overcoming "I Am Not Enough"

An effective strategy for change must simultaneously address all six levels to leverage the synergetic effects that enable sustainable transformation. The transformation of a deeply ingrained core belief is not a linear repair process but a non-linear phase transition that encompasses the entire system and is based on the fundamental neurobiological fact of neuroplasticity. Unconscious priors reveal themselves indirectly through their effects: recurring emotional reactions, behavioral patterns, and the narrative patterns in which they manifest (Gallagher, 2022). The narrative self serves as a crucial tool for making these implicit patterns accessible to conscious reflection.

Established approaches such as Cognitive Behavioral Therapy (CBT) and Schema Therapy offer valuable tools for this. However, the Resonance-Inference Model (RIM) and the interventions based on it (RIC/RIT) go a decisive step further: they provide a meta-model that explains why and how these techniques work at a deeper, systemic level and integrates them into a holistic strategy.

The process can be divided into three overlapping phases: destabilization, exploration, and reconsolidation.

1. Destabilization: The first phase aims to deliberately destabilize the old, rigid attractor ("I am not enough"). Where CBT employs "cognitive restructuring" by treating a belief as a hypothesis, the RIM reveals the deeper mechanism: methods like the Socratic dialogue are targeted procedures to generate massive *prediction errors* (Friston, 2010). These errors act as a synergetic *control parameter* that increases the "emotional temperature" of the system, leading it into an unstable

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but creative state of *criticality* (Leidig, 2025a; Haken & Schiepek, 2010). This process is highly charged energetically, as the confrontation with inconsistency (Grawe, 2004) generates a high level of aversive *affective tension* (Ciompi, 1997)—the system resists change.

2. Exploration: In the second phase, the client uses this state of high instability to try out new patterns of thinking, feeling, and behaving. Here, techniques such as *cognitive defusion* from ACT, which helps the client to distance themselves from their thoughts, come into play. In the RIM, this is understood as a reduction in the precision of the old prior. At the same time, *active inference* (Friston, 2010) is used to conduct targeted behavioral experiments that provide new, positive evidence for an alternative self-image. These "exception experiences" are woven into a new, more coherent story in the *narrative self* (Gallagher, 2022), which is aligned with the client's personal values (*Committed Action* in ACT). The crucial element here is *emotional correction* (Ciompi, 1997): the new experiences must not only be understood cognitively but also experienced affectively as positive and safe to reduce the precision of the old prior and increase that of the new one.
3. Reconsolidation: In the third phase, the system stabilizes in a new, adaptive *attractor*. The new core belief (e.g., "I am valuable as I am") gains precision and, through repeated application and positive feedback loops, becomes the new, unconscious basis for perception and action. The consistent satisfaction of *basic needs* (Grawe, 2004) leads to a state of *consistency* and well-being. At the neurobiological level (Northoff, 2018), this process correlates with a reorganization of the *spatiotemporal brain dynamics*: the rigid, "frozen" patterns give way to increased flexibility and connectivity. By making these levels explicit, RIT/RIC enables an intervention that is superior to established methods because it does not just treat individual symptoms but readjusts the fundamental organizational dynamics of the self.

A Clinical Application Example: The Neuroscientifically Grounded Method of Judson Brewer

The theoretical superiority and practical relevance of this integrative approach can be impressively demonstrated by the work of neuroscientist and psychiatrist Dr. Judson Brewer. His method for treating addiction and deeply ingrained habits represents a paradigm shift: away from the ineffective "willpower model," which relies on the failure-prone prefrontal cortex, toward an approach based on the fundamental mechanism of reward-based learning. Brewer's work is a clinically validated case study of the principles of the RIM in action (Brewer, 2017, 2021; Brewer et al., 2013).

The Habit Loop as a Maladaptive Attractor: Brewer describes addiction and habits as a "habit loop," consisting of a trigger, a behavior, and a reward. In the vocabulary of synergetics, this is a classic, self-stabilizing maladaptive attractor. The system has learned that a certain behavior (e.g., smoking under stress) temporarily reduces free energy (the aversive feeling of stress) and therefore repeatedly returns to this pattern (Brewer, 2017; Brewer et al., 2013).

Mindfulness as a Control Parameter for Generating Prediction Errors: Brewer's core intervention consists of guiding the patient to mindfully tune into the experience during the behavior and to ask themselves, "What am I really getting from this?". This intervention is a brilliant practical application of the FEP. It forces the system to compare the prediction ("Smoking relaxes me") with the actual sensory data ("tastes like chemicals, makes me anxious"). The resulting discrepancy is a massive prediction error. This error acts as a synergetic control parameter that destabilizes the system and corrects the reward value (the precision of the prior) of the behavior downward—a process Brewer calls "disenchantment" (Brewer, 2017; Brewer et al., 2013).

The "Bigger Better Offer" as a New, Adaptive Attractor: The decisive step toward sustainable change is finding a "Bigger Better Offer" (BBO). Instead of fighting the old habit, a new behavior is established that is intrinsically more rewarding (e.g., the feeling of curiosity or self-care instead of smoking). From the perspective of the RIM, this is the establishment of a new, deeper, and energetically more favorable attractor. The brain, as an efficiency-oriented system, naturally prefers

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the behavior with the higher reward value, which facilitates and stabilizes the phase transition to the new state (Brewer, 2017, 2021).

Empirical Validation of Superiority: The clinical efficacy of this approach, based on the core principles of the RIM, is impressive. Brewer's digital therapeutics show significantly better results than traditional methods. Particularly telling is the "Number Needed to Treat" (NNT) for the app "Unwinding Anxiety," which is 1.6. In comparison, the best psychiatric medications for treating anxiety disorders have an NNT of 5.2. This means that the probability of significantly helping a patient with this intervention, based on the principles of self-organization and inference, is more than three times higher (Brewer, 2021). Brewer's work thus provides empirical proof that a deep understanding of the systemic dynamics of the mind, as described by the RIM, leads to superior clinical outcomes.

The following table (2) summarizes this exemplary transformation strategy across the six theoretical levels:

Theory (Level)	Exemplary Transformation Strategy to Overcome "I Am Not Enough"
Friston (Inference)	**Goal:** Lower the precision of the old prior and build a new one. **Method:** Targeted generation of prediction errors through behavioral experiments (Active Inference) that provide positive evidence. Cognitive restructuring (Socratic dialogue) for the conscious re-evaluation of the old prior's reliability.
Gallagher (Phenomenology)	**Goal:** Create a new, more coherent self-narrative. **Method:** Narrative reconstruction—consciously rewriting the life story with a focus on competencies, successes,

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	and positive attachment experiences. Integration of "exception experiences" from behavioral experiments into the new narrative.
Haken et al. (Synergetics)	**Goal:** Destabilize the old attractor and enable a phase transition. **Method:** Increase the "emotional temperature" (control parameter) through confrontation with anxiety-provoking situations in a safe setting. Focus on small, positive fluctuations (initial successes) to enable their amplification and pave the way for the transition to a new, adaptive attractor.
Ciompi (Affect Logic)	**Goal:** Establish new feeling-thinking-behaving programs. **Method:** Cultivate positive affects through resource activation and pleasure training. Mindfulness exercises to step out of the automatic affect-logical reaction and increase the space between stimulus and response. Emotional correction

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	through positive relationship experiences (therapist-client relationship).
Grawe (Motivation)	**Goal:** Satisfy the violated basic needs. **Method:** Concrete planning and implementation of activities that strengthen self-worth (e.g., hobbies, experiencing competence), promote positive social bonds, and increase the sense of control and self-efficacy. The therapy itself provides a secure attachment experience.
Northoff (Neurobiology)	**Goal:** Reorganize neural dynamics toward more flexibility and complexity. **Method:** Through the interventions mentioned above (esp. mindfulness, new experiences, emotional regulation), the rigid spatiotemporal structure is broken up. The brain is trained to return to a "critical," more adaptable state, which manifests in increased variability and re-balanced connectivity of the resting-state networks.

 doi:10.20944/preprints202510.0776.v1

The Spiritual Dimension: Vertical Resonance as a Catalyst for Transformation

After outlining the systemic anchoring and the transformation strategy on the horizontal levels of the self-pattern, the analysis now turns to the vertical dimension, which can act as the ultimate catalyst for profound change. Gallagher's original theory posits a horizontal interaction of the self-pattern components and rejects an explicit hierarchy (Leidig, 2025a). The present analysis extends this model by a crucial vertical dimension: the spiritual self-pattern component. This is not understood as another co-equal building block but as a superordinate, transcendent dimension that permeates and aligns the entire self-pattern (Leidig, 2025a). The inspiration for this extension is largely drawn from Viktor Frankl's logotherapy, which posits the "will to meaning" as the deepest motivational force in humans (Frankl, 2018; Sprakties, 2023).

Within the framework of the Free Energy Principle (FEP), this "will to meaning" can be conceptualized as the highest, superordinate "master-prior" of the human system (Leidig, 2025c). A master-prior is the most fundamental assumption that our brain generates about the world and our place in it. It functions as the primary top-down control that gives direction and significance to all subordinate predictions—from bodily sensations to social behaviors. While the basic needs described by Grawe (2004) function as evolutionarily anchored first-order priors that orient the system toward survival and well-being, the spiritual master-prior offers a teleological orientation toward meaning that can establish a superordinate coherence even when basic needs are frustrated (Leidig, 2025a).

The powerful effect of this spiritual prior is evident in its ability to destabilize maladaptive attractor landscapes. A system trapped in a rigid, painful pattern (e.g., depression) operates on the basis of core beliefs that minimize prediction errors in the short term but block need satisfaction in the long term. The activation of a spiritual master-prior—finding a superordinate meaning in life—introduces a new, powerful organizational dynamic. Frankl's concept of the "defiant power of the spirit" can be understood as "active inference par excellence": a conscious act of revising the master-prior, in which the individual adopts an attitude that allows them to derive meaning even from unchangeable suffering (so-called "attitudinal values") (Frankl, 2018; Leidig, 2025b, 2025c). Such a prior enables the system to endure high free energy (aversive tension, suffering) by embedding it in a larger horizon of meaning that relativizes the immediate dissonance (Leidig, 2025a).

An "existential vacuum," as described by Frankl (2018), corresponds in the FEP model to a state in which a coherent master-prior is lacking, leading to chronically high free energy, inner emptiness, and dissonance (Leidig, 2025c). The decisive turning point, the breakthrough from a maladaptive state, is made possible by what the Resonance-Inference Model calls "vertical resonance": the conscious or unconscious connection with this deepest, spiritual part of the self (Leidig, 2025b). This resonance acts as the ultimate control parameter that initiates a global reorganization of the entire self-pattern through "downward causation" (Leidig, 2025b). The spiritual prior stabilizes the system during the chaotic phase transition and paves the way to a new, more adaptive, and meaning-filled attractor state. The narrative self is the crucial interface that allows the individual to rewrite the story of their life in accordance with this transcendent horizon of meaning (Leidig, 2025a).

Conclusions

The synthesis of the six theoretical frameworks presented, culminating in the Resonance-Inference Model, allows for a profound and multidimensional understanding of the human psyche. It shows that core beliefs do not function as isolated cognitions but as high-level priors in a hierarchical, predictive system based on the minimization of free energy. These priors are anchored in the fundamental spatiotemporal dynamics of the brain, are energized by affective processes, and stabilize in synergetic attractor states.

The model demonstrates its superior explanatory power by not only confirming the effectiveness of established therapeutic methods (such as CBT or the mindfulness-based approaches of Brewer) but also by locating their mechanisms of action for the first time at a deeper, systemic level. The extension of Gallagher's model by a vertical, spiritual dimension, inspired by Viktor Frankl's

 doi:10.20944/preprints202510.0776.v1

logotherapy, proves to be crucial for understanding profound transformation. Conceptualized as a "master-prior," the "will to meaning" gives the system a superordinate, teleological orientation that can initiate a global reorganization of the entire self-pattern through downward causation (Leidig, 2025b).

A maladaptive core belief like "I am not enough" is therefore not a simple thinking error but a comprehensive organizing principle of the entire psycho-physical system. An effective transformation thus requires an equally integrated strategy that addresses all levels to destabilize the system and enable its transition to a new, healthier, and more consistent state of order. This integrative approach overcomes the traditional separation of mind and brain, feeling and thinking, individual and environment, and points the way to a coherent science and practice of psychological change based on the principles of self-organization.

Disclosure of AI Assistance: The abstract and public significance statement were generated with the assistance of the AI tool ChatGPT (OpenAI, GPT-4o, as of October 2025). All generated content was reviewed and edited by the author, who remain solely responsible for the final version

Conflicts of Interest: There are no known conflicts of interest associated with this article.

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