

# A Comprehensive Synthesis of the Core Emotion Framework: Structural-Constructivist Architecture, Operational Mechanics, and Neuro-Affective Integration

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## Abstract

The emergence of the Core Emotion Framework (CEF) represents a paradigm shift in affective science, moving away from viewing emotions as mere reactive states toward a "structural-constructivist" model of human psychological architecture.<sup>1</sup> This framework posits that the myriad of human traits, behaviors, and subjective experiences are not primary units of the psyche but are rather "composites" synthesized from a finite set of ten irreducible, functional units known as "Core Emotions" or "Operators".<sup>1</sup> Organized within a sophisticated tripartite hub system—categorized as the Head, Heart, and Gut centers—these operators function as the "essential engine" of the psyche, serving as the root of every human action rather than mere reactions to external stimuli.<sup>1</sup> This report provides an exhaustive analysis of the CEF, synthesizing its operational protocols, the engineering logic of its cycling machines, and its theoretical alignment with both ancient wisdom and modern neuroscience to establish a robust case for its validity as a "Human Operating System".<sup>2</sup>

## The Structural-Constructivist Paradigm: A New Ontology of Affect

To understand the CEF, one must first engage with its philosophical grounding in structural constructivism. In this model, emotional life is governed by ten proposed functional operators that process information, regulate relational aperture, structure action, and recalibrate baseline states.<sup>2</sup> Unlike classical basic emotion theories which focus on fixed biological categories, or purely social constructivist theories which focus on linguistic narratives, the CEF suggests that the structure of the psyche is real and functional, yet the *construction* of lived experience depends on the dynamic interaction and "fusion" of these underlying structures.<sup>1</sup>

The framework draws heavy parallels to the "habitus" theory of Pierre Bourdieu, which argues that social entities are subject to pre-existent habitual structural dispositions before they produce identity in conscious relations.<sup>5</sup> In the CEF, psychological distress is redefined as "architectural knots" or "operator fusion," where functional units that should be independent become pathological or rigid, limiting the individual's mode of being.<sup>1</sup> Flourishing, therefore, is achieved through "emotional flexibility" and the "detangling" of these fused states, allowing each emotion to function with independence and agility.<sup>1</sup>

## The Tripartite Architecture and the 3x3 + 1 Hub System

The CEF organizes its ten operators into three primary functional centers, a structure supported by both historical wisdom traditions and emerging research in neurocardiology and neurogastroenterology.<sup>1</sup> Recent theoretical developments by Jamel Bulgaria introduce the 3x3 + 1 architecture, which unifies representational, affective regulatory, and somatic inferential processes within a single functional ontology.<sup>2</sup>

Center	Functional Domain	Primary Operators	Physiological Correlate
<b>Cognitive Center (Head)</b>	Perception, analysis, and information processing.	Sensing, Calculating, Deciding.	Central Nervous System (Cortex).
<b>Affective Center (Heart)</b>	Relational dynamics, self-worth, and affiliation.	Expanding, Constricting, Achieving.	Intrinsic Cardiac Nervous System.
<b>Conative Center (Gut)</b>	Motivation, execution, and risk management.	Arranging, Appreciating, Boosting, Accepting.	Enteric Nervous System.

The "+1" in the 3x3 + 1 hub system refers to the unique status of the "Accepting" operator, which functions as the "Accepting Baseline".<sup>2</sup> This operator is the necessary recovery point for all other emotional activations, ensuring that the system returns to a state of homeostasis after periods of intensity.<sup>1</sup> This architectural view is reinforced by research into the "Three Brains," where the Head imagines, the Heart aligns, and the Gut activates, creating a neural integration that tapers into a natural sense of flow

when communicated clearly via the vagus nerve.<sup>3</sup>

## The Ten Core Emotions: Functional Definitions and Strategies

Each of the ten operators in the CEF serves a specific strategic objective within the internal economy of the psyche. By treating these as "operators" rather than "feelings," the framework allows for a mechanical approach to self-regulation that bypasses the limitations of cognitive reframing.<sup>1</sup>

### The Cognitive Center: Sensing, Calculating, and Deciding

The Head Center serves as the primary interface for information processing. It is the seat of healthy social judgment but can become a source of stress if it becomes self-centered or "selfish" in its processing.<sup>9</sup>

- **Sensing:** This operator represents intuitive, non-conceptual perception. Its drive is for authenticity and insight. Sensing allows for the raw intake of environmental data before it is categorized or judged.<sup>1</sup>
- **Calculating:** This is the drive for clarity through logical evaluation and analysis. It strategies and plans, moving beyond raw perception to create models of the world.<sup>1</sup>
- **Deciding:** The final phase of the cognitive sequence, Deciding synthesizes perception and analysis into actionable conviction. It reduces ambivalence and initiates "realization".<sup>1</sup>

The canonical sequence within this center follows a linear flow: Sensing → Calculating → Deciding.<sup>10</sup> Disruptions in this flow, such as jumping from Sensing to Deciding without Calculating, result in impulsive or irrational behavior, while over-Calculating without Deciding leads to paralysis.<sup>10</sup>

### The Affective Center: Expanding, Constricting, and Achieving

The Heart Center manages the "relational aperture"—the degree to which an individual is open to or closed off from the world. Research suggests the heart's electromagnetic field is significantly stronger than the brain's, regulating global brain activity when coherence is achieved.<sup>3</sup>

- **Expanding:** This is the engine of affiliation, love, and generosity. It is a state of opening and inclusion, welcoming new experiences and connections.<sup>1</sup>
- **Constricting:** This operator represents the capacity for discipline, precision, and setting boundaries. It is an internal focus that protects the integrity of the self and maintains structure.<sup>1</sup>
- **Achieving:** Also referred to as "Performing," this operator is the drive to excel and manifest balance. It ensures that the heart's intentions are realized with excellence and internal equilibrium.<sup>1</sup>

The dynamic balance between Expanding and Constricting is fundamental to metabolic health. Chronic, unbalanced "Expanding" is linked to increased cortisol and fat storage, while chronic "Constricting" is linked to hypermetabolic states and nutrient depletion.<sup>1</sup>

### The Conative Center: Arranging, Appreciating, Boosting, and Accepting

The Gut Center is the "Instinctual Doer," providing the courage and agency necessary to ground ideas in tangible steps.<sup>3</sup> Neuroscience indicates that the gut houses its own "feeling" intelligence, often overruled

by the head but vital for risk management and authenticity.<sup>7</sup>

- **Arranging:** This operator focuses on planning, prioritization, and maintaining a consistent path. It organizes the raw energy of the gut into structured action.<sup>1</sup>
- **Appreciating:** The engine of enthusiasm, gratitude, and enjoyment. It provides the internal rhythm and pleasure that sustains long-term engagement with a path.<sup>1</sup>
- **Boosting:** This represents agency and the drive to initiate or overcome obstacles. It is the "internal motivation" that propels the individual forward.<sup>1</sup>
- **Accepting:** Defined as surrender, communion, and yielding. It is the state of being "at rest" and receptive to the universe.<sup>1</sup>

In the "mBraining" model, the Gut Brain is responsible for boundaries and resilience.<sup>3</sup> The CEF's "Boosting" and "Accepting" operators provide a high-resolution view of these gut-brain functions, allowing for precise activation and recovery.<sup>1</sup>

## The Counting Methodology: Operator Optimization and Detangling

A central innovation of the CEF is the use of **Counting Up** and **Counting Down** as a rigorous training method. This methodology is designed to build emotional precision by practicing the specific "Activation" and "Completion" phases of every operator.<sup>11</sup>

### Activation and Completion Dynamics

In the CEF system, an emotion is not something that simply happens to a person; it is a movement that the person *performs* internally.

- **Counting Up (Activation):** This involves turning the operator "on" and gradually increasing its movement and intensity. For example, a practitioner might count from 1 to 10 while gradually increasing the internal sense of "Expanding" or "Boosting".<sup>11</sup>
- **Counting Down (Completion):** This is the more neglected half of the cycle, involving the gradual decrease of movement and intensity until the operator is "off."

By practicing both directions, the individual builds "stronger operator boundaries." This is essential for emotional agility, as it allows a person to fully activate a state when needed (e.g., Boosting for a challenge) and, crucially, to fully *deactivate* it when the need has passed, returning the system to the "Accepting Baseline".<sup>2</sup>

### The 7-Step Detangling Protocol

When operators become "fused"—such as when "Sensing" is pathologically knotted with "Constricting," leading to hyper-vigilance—the CEF employs the **7-Step Detangling Protocol**.<sup>6</sup> This clinical methodology focuses on "structural foundations" rather than cognitive narrative.

The protocol utilizes "temporal deceleration" and "diagnostic isolation" to address these knots. By slowing down the activation process through the counting method, the practitioner can identify exactly

where one operator begins to "bleed" into another.<sup>6</sup> This process of "semantic disambiguation" allows for "modulation reciprocity," where the centers regain their clarity and can function without chronic overflow or fusion.<sup>6</sup>

## The Emotional Cycling Machine: Engineering the Hub System

While counting exercises strengthen individual operators, **Cycling** is the method for training the overall system architecture. It functions as a structured "machine" to coordinate transitions between centers and operators.<sup>12</sup>

### Directional Logic and Movement Laws

The cycling method is governed by three primary directional motions performed within the energetic centers of the body:

1. **Clockwise (CW) / Outgoing:** This motion activates the "Outgoing" operator of each center (Head: Sensing; Heart: Expanding; Gut: Arranging). It supports rational integration and top-down alignment with the world.<sup>10</sup>
2. **Counter-Clockwise (CCW) / Reflecting:** This motion activates the "Reflecting" operator of each center (Head: Calculating; Heart: Constricting; Gut: Appreciating). It strengthens the capacity for internal strategy and boundary-setting.<sup>10</sup>
3. **Swinging / Balancing:** This side-to-side motion activates the "Balancing" operator (Head: Deciding; Heart: Achieving; Gut: Boosting). It trains the system to find a grounded expression between high activation and quietude.<sup>10</sup>

### The Activation Matrix and State Transition Functions

The "machine" logic of the CEF is mathematically rigorous, utilizing state transition functions to describe how the system moves between states:

$$S_{t+1} = f(S_t, O_{c,p})$$

where  $S$  is the system state and  $O_{c,p}$  represents the operator activation within a specific center and process.<sup>10</sup>

The interaction between these elements is mapped through complex matrices:

- **Center Activation Matrix (3x3):** Defines how activation in one center (e.g., the Gut) influences another (e.g., the Head).<sup>10</sup>
- **Process Activation Matrix (10x10):** Maps the mutual influence of the ten core emotions.<sup>10</sup>
- **Operator Activation Matrix (30x30):** The most granular map, showing how specific operator facets interact.<sup>10</sup>

These matrices allow for the identification of "Overflow"—a state where activation in one process exceeds the center's capacity and drives unintended activation in another center.<sup>10</sup> The goal of the Emotional Cycling Machine (ECM) iterations (v1.0 to v4.0) is to stabilize these transitions, ensuring that

activation converges and remains within canonical pathways.<sup>10</sup>

## Psychosomatic Synergy: CEF in Fitness and Metabolic Health

The application of CEF to weight management and metabolic health provides a compelling case for its practical utility. By moving beyond caloric models, the framework addresses the "Somatic Energetics of Emotion" to influence physiological outcomes.<sup>1</sup>

### Strategic Pairings for Metabolic Balance

The framework posits that isolated emotional states can be detrimental to metabolism. For example, chronic stress leads to cortisol dysregulation and fat accumulation. The CEF uses strategic pairings to restore equilibrium.<sup>1</sup>

Pairing	Objective	Physiological Impact
<b>Expand-Constrict</b>	Balancing openness with precision.	Prevents cortisol-induced fat storage by maintaining self-regulation.
<b>Accept-Boost</b>	Harmonizing serenity with momentum.	Prevents passive coping states; optimizes ANS balance (SNS/PNS).

By managing current emotional patterns, the CEF aims to mitigate epigenetically programmed vulnerabilities to weight gain.<sup>1</sup> This is supported by evidence that trauma and hardship can be inscribed in DNA, changing genetic expression; the CEF's "detangling" acts as a biological mark of resilience.<sup>4</sup>

### Epigenetic and Autonomic Modulation

The CEF modulates the Hypothalamus-Pituitary-Adrenal (HPA) axis through targeted emotional cycling. This strategic intervention seeks to balance the Sympathetic Nervous System ("fight or flight") and the Parasympathetic Nervous System ("rest and digest").<sup>1</sup> By reducing chronic baseline cortisol, the framework optimizes nutrient absorption and energy expenditure, proving that "drive" (Boost) and "discipline" (Constrict) are only healthy when balanced with "rest" (Accept) and "openness" (Expand).<sup>1</sup>

### Strengthening CEF: External Support and Neurobiological

# Evidence

The validity of the CEF is strengthened by its convergence with several external domains, from third-generation psychological therapies to advanced neurobiology.

## Convergence with ACT and Internal Family Systems (IFS)

The CEF's goal of "detangling" is highly compatible with Acceptance and Commitment Therapy (ACT), which uses eHealth interventions and exercises to increase cognitive flexibility and reduce anxiety and burnout.<sup>13</sup> Like IFS, which views the psyche as composed of different "parts," the CEF identifies ten discrete operators. However, CEF provides a more rigid, structural blueprint that allows for "emotional mechanics" rather than just narrative dialogue with these parts.<sup>8</sup>

## Neurobiological Evidence: The Hypothalamus and DMN

The CEF's claim that the gut and lower neural centers are active emotional participants is supported by research into the VMHdm-specific SF1+ neurons of the hypothalamus.<sup>15</sup> This study found that the hypothalamus plays an integral role in instantiating emotion states, such as fear and defense, rather than being a passive effector of the amygdala. This justifies the CEF's placement of "Arranging" and "Boosting" within the "Gut" (Conative) center.<sup>1</sup>

Furthermore, research into psilocybin and neuroplasticity provides a mechanism for how the CEF might "rewire" the brain. Psilocybin disrupts the Default Mode Network (DMN), which governs "looping" thought patterns and rumination.<sup>16</sup> By exiting these loops, the brain can "re-learn and un-learn patterns," a process that mirrors the CEF's aim of breaking "architectural knots" through operator cycling.<sup>6</sup>

## The Amano et al. (2026) Reproducibility Benchmarks

The empirical roadmap for the CEF was significantly advanced by the Amano et al. (2026) study, which established preliminary reproducibility benchmarks.<sup>2</sup> This study explored how individuals could distinguish between "reflexive" and "idealized" responses, providing boundary conditions for future operator measurement. While the empirical status of the ten operators remains a falsifiable hypothesis, the high test-retest reproducibility reported by Amano suggests that these operators represent stable, measurable internal transformations.<sup>2</sup>

## Synthesis and Future Outlook

The Core Emotion Framework is not merely a collection of exercises but a comprehensive functional ontology of the human experience. By synthesizing the three exercise sets—operator identification, counting up/down, and cycling—the CEF creates a "Human Operating System" that unifies representational and affective processes.<sup>1</sup>

The **Counting Method** provides the fundamental mechanical skill of activation and completion, ensuring that emotional states do not become chronic or fused. The **Cycling Method** builds system-wide agility, allowing the individual to transition between the Head, Heart, and Gut with minimal friction. The **3x3 + 1 Architecture** provides the theoretical house for these movements, ensuring that the system always has a path back to the "Accepting Baseline".<sup>2</sup>

The case for the CEF is bolstered by its ability to explain diverse phenomena, from metabolic obesity to the "Action-Opinion Divergence" where our thoughts and actions are misaligned.<sup>1</sup> By addressing the structural history accumulated in the agent's identity, the CEF offers a path to "Authentic Selfhood" that is grounded in both ancient traditions and the latest neuroscience.<sup>5</sup>

As the framework moves toward further validation, it stands as a robust model for "neurological rehabilitation" and "motor function recovery," suggesting that psychological intervention can effectively promote physiological healing by integrating exercise science, psychology, and digital health technologies.<sup>17</sup> The "Emotional Cycling Machine" and its iterations (ECM v1.0 - v4.0) represent the future of this field—a world where emotional regulation is an exact science, modeled with the precision of engineering and the wisdom of the body's own innate intelligence.<sup>8</sup>

The implications of this synthesis are profound. If emotions are indeed "operators" that can be trained, detangled, and cycled, then the limit of human capability is not a fixed trait but a structural configuration that can be optimized. The CEF provides the blueprints for this optimization, offering a clear path toward a state where the mind is clear, the heart is open, and the gut is strong.<sup>1</sup>

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