

Research Article

The Role of Dynamics of Survival Circuits in the Construction of Personality: Interpretive Perspective of Explore the Neurobiological Foundations

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Abstract

Personality develops through the continuous interaction between biological imperatives and individual experience. This article presents a conceptual model in which five core adaptive functions—defense, reproduction, energy provisioning, thermoregulation, and fluid regulation—are considered as survival circuits forming the dynamic substrate of personality construction. Each circuit is organized around an energetic polarity, either centrifugal (expansive, outward-oriented) or centripetal (conserving, inward-oriented), which shapes characteristic emotional, cognitive, and behavioral patterns. The model links neurobiological mechanisms with psychological processes and symbolic archetypes, proposing that the enduring structures of personality originate in these survival circuits. It describes how the activation or inhibition of each circuit generates functional archetypes that influence emotional expression, cognitive styles, relational tendencies, and self-identity. A consistent analytical framework is applied to each circuit, outlining its primary adaptive function, underlying neurobiological resources, associated internal states and behaviors, characteristic personality traits, and patterns of dysregulation. This framework is illustrated through clinical applications, including the analysis of functional fragmentation in complex post-traumatic stress disorder and other dissociative presentations. By integrating findings from neuroscience, psychology, and psychosomatic clinical approaches, the model provides a structured perspective on the relationship between survival imperatives and personality organization. It offers a basis for identifying dominant or impaired circuits in clinical settings and for guiding interventions aimed at reintegrating dissociated subsystems. This approach situates personality as a living interface between biology and biography, regulated through the interplay of survival functions and their energetic dynamics.

Keywords

Personality, Survival Circuits, Archetypes, Neurobiology, Trauma, Complex PTSD, Energetic Polarity, Embodied Self

1. Introduction

1 - Personality as an adaptive construction

Personality emerges as a dynamic adaptation to life, integrating cognitive, emotional, and behavioral tendencies. It is not merely a fixed collection of traits but a continuous process

shaped by the interaction between biological imperatives and lived experience. Central to this process is the capacity to organize experience into coherent self-representations, which guide adaptation to environmental demands.

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2 - The role of survival circuits

At its biological core, personality is anchored in survival circuits—functional neural architectures inherited from evolution to ensure protection, reproduction, resource acquisition, regulation, and continuity. These circuits extend beyond organic regulation; they modulate emotional states, shape behavior, and influence identity formation. The central hypothesis of this paper is that the enduring structures of personality originate in these circuits, linking the organism to its primary adaptive imperatives.

3 - Energetic dynamics and functional archetypes

Each survival circuit is organized around a specific energetic dynamic—centrifugal (expansive, outward-oriented) or centripetal (conserving, inward-oriented). When activated, these dynamics generate functional archetypes: patterned emotional, cognitive, and behavioral tendencies that influence how the individual relates to the world and to themselves.

4 - Linking biology, psychology, and symbolism

This perspective links neurobiological mechanisms with psychological processes and symbolic expression across five core functions: defense, reproduction, energy provisioning, thermoregulation, and fluid regulation. By examining how these functions give rise to differentiated psychic styles, we aim to propose an “ecology of life” applied to personality—an integrative framework in which biological dynamics shape the singular complexity of the individual.

Methodology and Limitations of the Model

This article is not a systematic review. It is a conceptual and interpretive study that draws upon selected empirical and theoretical references chosen for their direct relevance to the proposed model. The aim is to integrate neurobiological, psychological, and symbolic perspectives into a coherent explanatory framework for personality construction, rather than to exhaustively synthesize all existing literature. This narrative and integrative approach is intended to generate theoretical insight, identify clinical implications, and guide future empirical investigations.

The proposed model, which integrates survival circuits, energetic dynamics, and symbolic structures, provides a relevant interpretive framework in a trauma- and regulation-oriented clinical perspective. It allows for conceptualizing the continuity between neurobiological substrates, psychological traits, and identity narratives, highlighting how primary adaptive functions can become durably embedded within subjectivity.

Nevertheless, this approach remains theoretical and interpretive in nature and calls for more systematic empirical validation. The complexity of the determinants of personality—including relational, social, developmental, and cognitive factors—cannot be entirely reduced to the expression of biological circuits, however fundamental they may be. These limitations do not invalidate the model’s relevance but rather underscore its primarily heuristic scope, pending further interdisciplinary exploration.

2. Biological and Energetic Substrate of Personality

For over a century, the idea that personality traits are grounded in biological foundations has inspired numerous research endeavours. Hans Eysenck proposed that the autonomic nervous system activity—especially the sympathetic tone—was linked to neuroticism, while extraversion was rooted in mechanisms of cortical excitation and inhibition. More recent studies have refined these early hypotheses, associating novelty-seeking with the dopaminergic system, danger avoidance with the serotonergic system, and reward dependence with the noradrenergic axis [1].

For their part, Pierre Janet and Carl Gustav Jung both recognized early on the intimate connections between psyche and physiology. Janet described a continuity between psychological and motor functions, famously stating that every thought is also movement [2]. Jung, for his part, viewed archetypes as inherited biological structures [3], akin to the ethological concept of ‘pattern of behavior’ [4]. These primal forms, deeply rooted in biology, shape experiences, emotions, and the formation of self-narratives.

Building on these foundations, we propose an integrative hypothesis to go further: the major dimensions of personality emerge from functional motifs structured by survival circuits, which respond to archaic imperatives—conservation, reproduction, protection, and homeostasis.

The cingulate cortex plays an essential orchestration role in this system. It acts as a hub that integrates internal biological signals, by determining their contextual salience. It contributes to the generation of emotions [5] and helps optimize cognitive and behavioral responses [6]. Simultaneously, central neuromodulatory systems—dopaminergic, noradrenergic, and serotonergic—organize the global tone of the organism and influence the directional flow of energy: either outward toward the environment, or inward toward the self.

Thus, psychic unity is not innately given, but rather constructed through the internal oscillations and the silent orchestration between biological circuits and subjective configurations. This energetic matrix, inherited from the living world, supports the individuation processes. It is the fertile ground from which self-narratives emerge, but it is also the source of fragmentations, when these circuits become desynchronized.

3. Polarized Dynamics and the Emergence of Survival Functions

3.1. Polarized Dynamics (Figure 1)

If we consider the human being as a conscious unit—able to apprehend the world and bear witness to its own experience over time—then it becomes essential to explore the biological foundations that allow this unity to self-maintain, to adapt,

and to individuate.

We propose that prior to any cognitive or symbolic structuring, a fundamental energetic framework organizes the psychic life through the basic tensions intrinsic to living systems. At the root of the most ancient known homeostatic system lies a rhythmic interplay between openness to the world and self-protection, between mobilization and regulation, which animates the body's most archaic functions: inhalation and exhalation, digestive absorption and elimination, blood flow and venous return.

This dynamic is based on the alternation between two opposing and complementary forces: one oriented toward expansion, the other toward recentering—in other words, centrifugal and centripetal.

Grounded in the balance between tension and compression, this organization—which can be observed in tissues and biomechanical structures—forms a universal logic of flexible stabilization. It supports the ability of living organisms to grow, self-regulate, and adapt on every level.

The centrifugal movement engages the organism in an expansive dynamic. It promotes awareness, sensory orientation, environmental exploration, and focus on external stimuli. It underlies resource-seeking, alertness to danger, social interaction, and both territorial and emotional conquest. This polarity, oriented toward active adaptation, forms the basis of all the behaviors related to defense, resource acquisition, and reproduction.

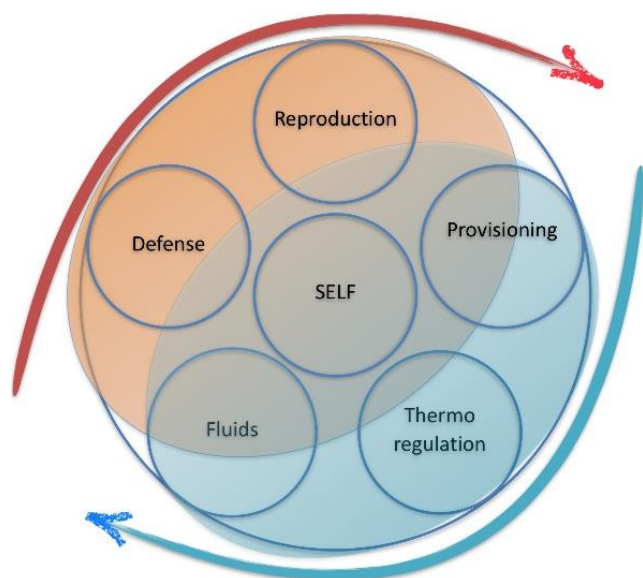


Figure 1. Centrifugal and centripetal influence spheres of survival circuits.

Note. The diagram illustrates the five main survival circuits—Reproduction, Defense, Provisioning, Fluids, and Thermoregulation—arranged around the Self. The shaded areas represent the relative influence of centrifugal (expansive in red) and centripetal (conserving in blue) dynamics on each circuit.

In contrast, the centripetal dynamic calls for withdrawal, rest, and recovery. It supports different types of abilities: thermoregulation, digestion, and soothing processes—and by extension, emotional regulation. It fosters internally directed attention, which is essential for stimulus-independent thought, working memory, and planning. This physiological slowing down is a prerequisite in order to establish connections and build meaning.

We hypothesize that this energetic architecture extends beyond the physical domain: it also organizes the interactions with the environment, the construction of body schema, and perhaps even some psychological preferences. It supports the oscillations between extraversion and introversion, between action and retreat, between excitation and integration—oscillations that allow behavioral fluidity and the coherence of self identity.

3.2. Neurobiological Correlates

At the neurobiological level, these orientations are regulated by central neuromodulatory systems:

- 1) Norepinephrine, produced by the locus coeruleus, supports awareness and sustained attention, thus confirming its role in maintaining vigilance [7, 8]. It drives the centrifugal dynamic.
- 2) Serotonin, via the raphe nuclei, is involved in behavioral inhibition and adaptation [9-12], thermoregulation [13], respiratory control [14, 15]. It supports the centripetal dynamic. It also could encourage interoception. For instance, hibernation depends on the elevation of serotonin levels in specific regions of the brain [16].

3.3. Survival Functions

This data suggest that the key survival functions are governed by distinct circuits which mobilize distributed neural networks, hormonal modulations, motor patterns, and internal representations. It provides us with a glimpse of a functional architecture within which each circuit generates a behavioral and emotional archetype—both adaptive in balance and potentially pathological when overactivated or suppressed.

Joseph LeDoux has identified at least five major circuits involved in survival: defense, reproduction, energy provisioning, thermoregulation, and fluid management. He has demonstrated that each of these circuits emerges from a fundamental adaptive priority [17]. When activated, they produce specific internal states, recognizable energetic configurations, and often stereotyped behavioral patterns.

We propose to examine these five circuits through a consistent analytical framework:

- 1) Their primary adaptive function
- 2) The neurobiological and energetic resources they mobilize
- 3) The internal states and behaviors they generate
- 4) Their associated personality traits

- 5) The different types of dysregulations of these circuits and their clinical consequences

This exploration will allow us to outline a dynamic map of the forces at play in the construction of the human personality—between archaic drives and neuroplasticity, instinct and subjectivity.

4. Defense Circuit — Reactivity, Vigilance, Integrity

4.1. Adaptive Function

The primary function of the defense circuit is to preserve the physical and territorial integrity of the organism. It mobilizes rapid—often reflexive—responses to imminent danger, whether this danger takes the form of an aggression, an intrusion, or an internal disruption (infection, injury, homeostatic imbalance). This circuit activates immune and inflammatory responses as well as somatic mechanisms such as fight, flight, or freeze.

4.2. Biological and Energetic Resources

This circuit relies on the deployment of a strong centrifugal energy: inflammation, muscular mobilization, increase in blood pressure, heightened vigilance. Neurobiologically, it involves:

- 1) Catecholamines (adrenaline, noradrenaline, dopamine) in order to initiate alertness and rapid response [18];
- 2) The limbic system, particularly the amygdala, for rapid threat detection;
- 3) The orbitofrontal cortex and anterior cingulate cortex, for top-down modulation of impulsive responses [19];
- 4) $\alpha 7$ nicotinic cholinergic receptors ($\alpha 7$ nAChR), whose roles in regulating inflammation and aggression are the focus of promising research [20-22].

4.3. Associated Internal States and Behaviors

When activated, this circuit produces a constellation of states: bodily tension, hypervigilance, irritability, hostility and emotional reactivity. Properly regulated, these states allow to have a protective strength and boundary-setting abilities. Psychologically, they manifest as combativeness, mistrust, a sensitivity to the violation of boundaries”, and even a tendency toward anger or anticipatory self-defense.

4.4. Associated Personality Traits

This cluster of physiological reactions—muscle tension, hypervigilance, and heightened reactivity—extends beyond a transient adaptive response. Beyond its immediate effects on behavior, the recurrent activation or inhibition of this circuit contributes to the consolidation of enduring psychological

dispositions that may influence patterns of adaptation to the world. This psychobiological subsystem may shape “warrior” personalities: assertive, reactive, and sometimes rigid personalities. When inhibited, it may foster profiles lacking the courage for action and decision-making, marked by shyness and reserve. When well-integrated, this subsystem supports inner safety, self-assertion, and resilience in adversity. It provides a vital anchoring force, especially in contexts requiring confrontation, protection, or survival—both individual and collective.

Symbolism: The archetype of the warrior or protector; a source of righteous or destructive anger; myths of the hero or the monster.

4.5. Dysregulations and Related Disorders

When dysregulated, this circuit may lead to:

- 1) Impulsive-aggressive states, particularly in the context of serotonergic hypofunction (e.g., antisocial personality disorder, chronic irritability) [23];
- 2) Chronic inflammatory disorders, via an excessive activation of the immune system;
- 3) Post-traumatic stress disorders, when the circuit remains locked in a defensive mode (fight, flight or freeze) long after the danger has passed.

5. Reproductive Circuit — Relational Drive, Affiliation, Reward Dynamics

5.1. Adaptive Function

The reproductive circuit ensures the continuity of the species by projecting the individual beyond themselves—toward a partner, toward connection and transmission. Highly addictive, coitus transforms the accumulated homeostatic tension into a relational carnal and symbolic drive, which bridges biological imperatives with generational continuity. More broadly, it supports the desire for connection, the capacity to form alliances, and the anchoring of experience in social interactions.

5.2. Biological and Energetic Resources

This circuit mobilizes a powerful centrifugal dynamic:

- 1) The subcortical structures: hypothalamus, brainstem, and spinal cord which are responsible for the reflex regulation of sexual behavior.
- 2) The cortical areas: prefrontal and orbitofrontal cortices which modulate contextualization and social inhibition.
- 3) The neuromodulatory systems:
 - a) Mesolimbic dopamine: it drives sexual motivation, reward anticipation, and plays a role in choosing and seducing a partner [24];
 - b) Norepinephrine: it enhances vigilance, attention to

- novelty, and memory during the courtship phase [25];
- c) Testosterone and estrogens: they amplify sexual desire and are themselves stimulated by dopaminergic activity [26].

5.3. Associated Internal States and Behaviors

The activation of this circuit generates a drive toward others:

- 1) A desire to reach out to others [27, 28], which by extension promotes social engagement;
- 2) An increased attention to others, and an increased preoccupation with self-image, competitiveness, and courtship behaviors [29];
- 3) A temporary reduction in sleep and appetite in order to prioritize the search for contact and sexual pleasure [24].

Typical behaviors include seduction, courtships rituals, social games and customs, affiliative gestures, validation-seeking, and possessive vigilance to stave off potential rivals.

5.4. Associated Personality Traits

Reproductive circuits express not only a sexual or gregarious drive but also form the narrative foundation of identities and social roles centered on the desire for affiliation, the pursuit of esteem, and the drive for conquest—often permeated by the tension between rivalry and the impulse toward the other.

This circuit shapes charismatic, seductive personalities often drawn to novelty and conquest. It fuels the need to be noticed, desired, and acknowledged. When well-regulated, it supports secure attachment, romantic intimacy, and relational creativity.

Symbolism: The archetype of the lover, the seducer, or the performer; emphasis on appearance, social reputation, passionate and exclusive love and jealousy; it underlies myths about romantic love, possessiveness and infidelity.

5.5. Dysregulations and Related Disorders

An excessive or unbalanced activation of this circuit may lead to:

- 1) Hypersexuality [24], addictive or manic behaviors, relational impulsivity [30];
- 2) Psychotic disorders: delusions, pressured speech, hallucinations, paranoia [31, 32];
- 3) Pathological jealousy, extreme possessiveness, interpersonal conflicts, obsessive behavior, manipulative personalities.

In contrast, an inhibition of this circuit may result in:

- 1) Emotional withdrawal, coldness in relationships, loss of erotic engagement and sexual drive, low motivation for competition and personal success.
- 2) In summary, the reproductive circuit, which is key to projecting one's self-identity beyond oneself and into

future offspring, binds the individual to a dynamic of bonding and continuity. When dysregulated, it can entrap said individual in a loop of insatiable pursuit or a self-protective retreat, thus impairing both their ability to bond and individuate.

6. Energy Provisioning Circuit — Survival, Planning, Metabolic Vigilance, Reward System

6.1. Adaptive Function

The energy provisioning circuit manages the daily balance of resources needed for survival by regulating energy ingestion, storage, and expenditure. It governs food-seeking behaviors, the regulation of glucose metabolism, and the ability to anticipate scarcity or rationing. By extension, it supports cognitive functions such as planning, contextual vigilance, and resource management—crucial factors in the evolution of social species.

6.2. Biological and Energetic Resources

This circuit operates in a dynamic oscillation between seeking and assimilating nourishment. It mobilizes:

- 1) Orexins (hypocretins): excitatory neuropeptides produced by the lateral hypothalamus that coordinate both sleep-wake cycles and feeding behavior [33]. A hyperactivity of orexins stimulates appetite, increases insulin sensitivity, promotes weight gain [34], and elevates blood pressure—which increases the risk of obesity and hypertension [35];
- 2) Glucose-sensing neurons, via noradrenergic and cholinergic pathways in the mediodorsal prefrontal cortex, activate the orexin system and, indirectly, the dopaminergic population of the ventral tegmental area, which drives the motivation to seek food [36, 37].

Notably, orexin signaling does not merely promote food intake—it also supports energy expenditure, enabling the organism to maintain weight stability [38].

6.3. Associated Internal States and Behaviors

This circuit fosters a constant food vigilance, body awareness, sensitivity to weight and appearance. It encourages daily planning, stock management and social cooperation strategies (hunting, domestication, resource sharing). The energy provisioning circuit seems to boost cognitive efficiency [39] when it comes to daily planning; it mobilizes learning abilities and work memory: the activation of orexin receptors in the hippocampus boosts synaptic plasticity by optimizing spatial memory [40], social recognition [41], and learning capacities [42]. These are essential traits for surviving in unpredictable environments.

6.4. Associated Personality Traits

By this logic, the neural mechanisms linked to orexin or to spatial memory are embedded within broader narratives—those of survival, deprivation, management, and sometimes dispossession—which shape both subjective experience and cultural representations of scarcity and abundance. Thus, food vigilance and planning become the fertile ground for symbolic figures such as the steward, the miser, or the provider—archetypes of control and of the fear of scarcity.

This circuit shapes meticulous, organized, perfectionist personalities with a heightened attention to detail. They often feel the need to control of their environment and prioritize resource conservation to avoid scarcity. This circuit boosts long-term planning abilities and increases one's tendency to control and anticipate. Such personalities often tie bodily appearance to health and social status.

Symbolism: the archetype of the steward, the keeper of resources; obsession with loss and famine; myth of the miser or the generous provider; full belly vs threatening emptiness.

6.5. Dysregulations and Related Disorders

When hyperactivated, this circuit may cause:

Obsessive behaviors linked to food or body weight, cognitive alterations, obsessive dietary regulation, body dysmorphia [43], perfectionism [44] and anxiety [45].

When hypoactivated, this circuit may lead to:

Low energy, chronic fatigue, disinterest in nourishment, depressive states [46, 47].

On a psychosocial level, associated disorders may take the form of persistent worry about scarcity and anguish about day-to-day tasks.

To summarize, the energy provisioning circuit fuels the planning drive and regulates the momentum to maintain metabolic balance. When disrupted, it can produce a chronic tension between accumulation and control, which deeply affects the individual's relationship to the self and the world.

7. Thermoregulation Circuit — Slowing Down, Internalization and Bonding

7.1. Adaptive Function

Thermoregulation maintains a stable internal temperature, essential for optimal metabolic functioning. Yet its role extends beyond this physiological function: it supports withdrawal, rest, and integration [10], and contributes to affective and behavioral modulation [12].

7.2. Biological and Energetic Resources

This is a predominantly centripetal circuit, involving:

- 1) The preoptic area of the hypothalamus, a homeostatic

thermoregulatory center;

- 2) The serotonergic system: projections from the median raphe in the brainstem to the autonomic system modulate sweating, vasodilation, shivering, and metabolic slowing.
- 3) Serotonin and oxytocin: promote behavioral modulation, fidelity, and the stabilization of the emotional bond [25, 47].
- 4) Emerging research underscores the critical role of serotonin in facilitating maternal behaviors and supporting the neuroplasticity associated with reproduction in the maternal brain [48].

7.3. Associated Internal States and Behaviors

The activation of this circuit allows to calm down and re-center oneself [9]. It helps reduce external stimuli. It promotes introspection, temporary withdrawal, sensitivity to comfort and emotional safety. It allows an openness which is necessary for stable bonding, emotional regulation and the ability to welcome others.

7.4. Associated Personality Traits

The neurobiological mechanisms of thermoregulation, particularly those involving the serotonergic and vagal systems, provide a physiological foundation for attachment and caregiving capacities, sustaining affective availability, emotional regulation, and attunement to the other's rhythm. When these processes are durably integrated, they shape introspective, protective, and sensitive traits, often linked to symbolic figures of refuge, care, or sheltered retreat.

This circuit supports sensitive and introspective personalities, often very much in touch with their inner world. It is associated with softness, caregiving and the ability to withdraw without breaking the bond with others. This circuit can also nurture circumspection, the need for a slow rhythm and even a form of creative sorrowfulness.

Symbolism: The archetype of the retreat, the hermit, the maternal cocoon; daydreaming about safe haven, caves, torpor, hibernation; sanctuary and emotional lethargy.

7.5. Dysregulations and Related Disorders

When this circuit is overactivated or blocked, it may lead to:

- 1) Emotional shutdown, fatigue, lethargy, bradycardia, apathetic depression [49];
- 2) Dissociation as a protective strategy, thanatosis (freezing/immobilization-like states) [50, 51];
- 3) Impaired stress resilience, poor physiological adaptability, temperature dysregulation and sleep disorders.

In cases of hypofunction:

- 1) Difficulty in self-soothing and regaining focus;
- 2) Hyperactivity; restlessness; internal heat;
- 3) Emotional flooding.

8. Fluid Management Circuit — Memory, Permanence, Identity Anchoring

8.1. Adaptive Function

Fluid regulation maintains the body's osmotic and hydration balance. However, this biological function has a bigger scope: it organizes the transmission, condensation, and preservation of information—from the molecular level to the level of consciousness. This circuit acts as a silent guardian of memory, form, and internal coherence.

8.2. Biological and Energetic Resources

At the core of nucleic acid synthesis (DNA and RNA) lies a foundational action: the expulsion of a water molecule at each phosphodiester bond between nucleotides. This dehydration is essential—it is the energetic and entropic price of memory. Without expelling water, the code cannot be inscribed, stabilized, or transmitted.

This dynamic expands in protein structuring, membrane formation, and any kind of cellular differentiation. Life selects, delimits, and isolates—often by releasing water—to build and organize its identity. The fluid circuit, based on the regulation of these water exchanges, supports biological individuation.

Physiologically, it relies on:

- 1) The renin-angiotensin system, the ADH (vasopressin or AVP) and the hypothalamus, which regulate water retention and elimination;
- 2) An energetic tendency toward internal stability, preservation, and delayed restitution.

8.3. Associated Internal States and Behaviors

This circuit underpins anchoring and temporal continuity. It organizes an implicit, pre-verbal memory—where experience is imprinted more as an inner atmosphere than a narrative. It may reinforce coherence across time, but also, when saturated, trigger defense mechanisms such as the protection, preservation and crystallization of cellular memories.

This subterranean architecture of the psyche is a condensed remnant of the memory of all living things, which we could also describe as a sort of Jungian shadow of living things—silently reviving archaic behavioral and emotional patterns. These patterns, sometimes frightening and unassimilated, shape deep identity structures without always being expressed. This structure guarantees survival and prevents too quick a transformation.

When confronted to this circuit, one's self-identity finds itself on a stage where tensions between preservation and transformation play out—often leading to avoidance or phobia.

8.4. Associated Personality Traits

By structuring implicit memory and a lasting affective tone,

this circuit imprints intimate patterns in the psyche that guide identity dynamics without passing through language. When these silent traces are organized in a regulated manner, they can shape personality configurations characterized by loyalty to the past, emotional depth, and also a certain psychic inertia, oscillating between preservation and avoidance of change.

This circuit shapes stable and memory-centered personalities who value a slow rhythm of integration. These individuals can be deeply connected to the past, to family memory, to the weight of buried experiences. The fluid management circuit can generate an aversion to change, a tendency to apprehension because of a determination to cling to and reproduce known patterns,

Symbolism: The archetype of buried memory, secrets, hidden shadows; it fuels the myths of the hidden trace, primordial waters and the abyss.

8.5. Dysregulations and Related Disorders

When overloaded or subjected to an excessive control, this circuit may lead to:

- 1) Avoidance, phobic behaviors, traumatic dissociation, frozen or selective memory;
- 2) Rigid identity, emotional overcontrol, numbness, detachment.

9. Toward a Clinical Model of Reintegration

9.1. Functional Fragmentation and Clinical Model of Circuits

When survival circuits operate in harmony, they contribute to the construction of a stable, adaptable self-identity—capable of internal alternation and self-regulation (figure 2). Each energetic polarity—centrifugal or centripetal—fine-tunes adaptive responses, thus helping the individual adjust to context-related expectations while preserving the continuity of subjective experience.

However, chronic stress, emotional neglect, or repeated trauma can disrupt this delicate orchestration. Dissociation, for the individual, often originates in an energetic imbalance: a hyperactivated defense circuit can remain stuck in threat mode while a thermoregulation or fluid management circuit will try to counteract this with massive centripetal shut downs—this will result in avoidance strategies, apathy, lethargy and emotional numbing.

When this misalignment becomes chronic, each circuit begins to operate in isolation to manage its survival function autonomously rather than as part of a unified system of self-identity. The individual is then inhabited by semi-autonomous sub-systems—each capable of taking over for the others depending on the current homeostatic needs. This process leads to identity fragmentation and increased

risks of dissociative identity switches.

Such a process can be seen in:

- 1) Complex PTSD with a defense mechanism stuck in threat mode while other circuits adjust to the situation by switching between hypervigilance and numbness;
- 2) Attachment disorders characterized by the impossibility to synchronize relational engagement and protective withdrawal, which compromises the stability of emotional bonds;

- 3) Certain kinds of dissociative identity disorders, where the extreme differentiation of these survival circuits gives rise to alternate personality states governed by polarized autonomous survival subsystems.

In this framework, the episodes of stress generated by the overconsolidation of traumatic memory [52, 53], initiate a profound disruption of dynamic polarities—which, when frozen, disrupts the continuity of subjective experience.



Figure 2. Adaptive functions within survival circuits.

Note. The diagram maps the primary adaptive functions associated with each survival circuit—Reproductive (affiliation, reward), Defense (impulsiveness, combativeness), Provisioning (planning, obsessiveness), Fluids (memory, permanence), and Thermoregulation (slowing down, bonding)—and their centrifugal or centripetal movement tendencies. All circuits are interconnected through the Self, which serves as the central integrative hub. Arrows indicate functional interactions between circuits and the Self.

9.2. Clinical Framework: How to Recognize, Understand and Reintegrate

By identifying a patient's dominant or impaired circuits—through an analysis of traits, behaviors, somatic narratives, and emotional history—clinicians can support the gradual reintegration of dissociated sub-systems.

This opens different therapeutic pathways:

- 1) Psychocorporal approaches: somatic, sensorimotor, and energetic approaches to try and restore the balance between polarities;

- 2) Psychotherapeutic approaches: IFS, EMDR and attachment-based therapies to explore the dominant functional archetypes and their associated memories;
- 3) Neurobiologically informed treatments aimed at integrating the plasticity of neuromodulatory systems and the influence of the ventral vagal system to support subjective coherence.

Reintegration does not mean that the circuits will be eliminated, but that their connection to self-identity will be re-established: it will allow the system to choose, to alternate without being the prisoner of an unwanted reflex.

Let us illustrate this with the case of Mrs. M.: a history of

childhood abuse, restrictive anorexia with depressive episodes during adolescence. Medical diagnosis: bipolar disorder.

Below is an analysis of the ego states—identified and named by Mrs. M. during the sessions—through the lens of the survival circuits, highlighting learning trajectories, adaptive functions, and risks of pathological drift.

- 1) The Steward - Provisioning.
- 2) Learning trajectory: building a predictable daily routine, planning, and ritualization to ensure internal safety.
- 3) Adaptive function: managing the risk of emotional overflow by maintaining a high level of control and organization.
- 4) Risk: cognitive overinvestment, emotional inhibition, mental exhaustion, loss of spontaneity.
- 5) The Fighter - Defense (attack/flight).
- 6) Learning trajectory: hypervigilance, flight response when facing threat.
- 7) Adaptive function: safeguarding system integrity in the face of intrusions.
- 8) Risk: relational sabotage, impulsivity.
- 9) The Seductress / Ambassador - Reproduction.
- 10) Learning trajectory: early enactment of seductive behaviors to elicit protection and validation. Essentially nonverbal: carefully studied gazes, postures, and movements.
- 11) Adaptive function: gaining influence, diverting threat through fascination.
- 12) Risk: affective splitting, instrumentalization of the bond, dependency on recognition, intrapsychic conflict (with the Attached One).
- 13) The Attached One - Thermoregulation.
- 14) Learning trajectory: seeking physical and emotional connection, quickly interrupted by activation of the defense system.
- 15) Adaptive function: sustaining hope for repair, fleeting expression of the need for love and contact.
- 16) Risk: withdrawal, shame, guilt; often triggering the dissociative switch.
- 17) The Avoidant One - Fluids / Memory.
- 18) Learning trajectory: radical withdrawal in the event of failure of active strategies (control, fight, seduction, connection).
- 19) Adaptive function: locking access to traumatic material, ensuring homeostatic preservation through psychic and bodily disconnection. (The fluids circuit supports internal stability).
- 20) Risk: emotional disaffection, chronic relational avoidance.

Each of these ego states can be understood as a learned and specialized response to the activation of one or more survival circuits. This model is considered here as a means to assess the protection strategy (search for safety) of the parts when confronted with a threat or with an imbalance potentially generated by the environment, and to highlight the capacity

for behavioral modulation.

9.3. An Ecology of the Living Applied to Personality

From a theoretical standpoint, this model invites us to view personality not as a set of fixed traits, but as a living, dynamic interface situated at the intersection of:

- 1) archaic biological imperatives;
- 2) lived relational configurations; and
- 3) symbolic experiences that give meaning to one's personal trajectory.

This perspective calls for a reinterpretation of psychopathological models: rather than classifying disorders into fixed categories, it would involve identifying dynamic imbalances, blocked or dominant circuits, and disrupted rhythms.

It opens a space for interdisciplinary dialogue between neuroscience, depth psychology, and integrative care practices. Ultimately, it proposes an ecology of the psyche—an inner ecosystem in which the forces of life—defense, connection, subsistence, regulation, and memory—work together in the construction of the subject.

10. General Conclusion

Having long been considered primarily from a biological or behavioral perspective, survival circuits appear, in light of this study, as the dynamic foundations of human personality. Their energetic polarization—centrifugal or centripetal—shapes emotional, cognitive, and behavioral tendencies, which are expressed through functional archetypes. Through the mechanisms of defense, reproduction, energy acquisition, thermoregulation, and fluid regulation, a psycho-corporeal framework emerges—one that supports the individuation of self-identity but which, when dysregulated, can also give rise to pathological imbalances.

From a clinical perspective, this model offers a new insight into the fragmentation of experience observed in conditions such as complex post-traumatic stress disorder, attachment disorders, and certain personality disorders. It provides a complementary interpretive lens to current symptom-based classifications by putting biological dynamics back at the heart of subjectivity. By identifying dominant circuits and energetic blockages, clinicians can orient therapeutic interventions toward the progressive reintegration of dissociated subsystems—whether through body-centered, psychotherapeutic, or neurobiologically informed approaches.

Theoretically, these findings invite us to view personality not as a fixed trait, but as a living interface, shaped by the interaction between the biological imperatives of the species and the unique experiences of the individual. This perspective opens fertile ground for a dialogue between neuroscience, depth psychology, and psychocorporeal approaches. It encourages us to reimagine the models of the psyche through the

lens of an ecology of life, in which the architecture of self-identity is built at the intersection of biological, relational, and symbolic patterns.

Abbreviations

IFS	Internal Family Systems (by Richard Schwartz)
EMDR	Eye Movement Desensitization and Reprocessing

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Author Contributions

Alexandre Merle is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The author declare no conflicts of interest.

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