

The Mind as Global Attractor: Why Consciousness Is Not Confined to the Brain

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The Puzzle

The standard view holds that the mind is what the brain does. Consciousness, thoughts, feelings, and self-awareness are all products of neural activity localized within the skull. The body is infrastructure—a vehicle for the brain, a support system for the mind.

This view is incomplete. It is not wrong, but it is *too narrow*. It mistakes the regulator for the source, the orchestrator for the entire orchestra.

The body is not just infrastructure. The body contains complex neural networks—the enteric nervous system, the intrinsic cardiac nervous system, the pancreatic ganglia, the spinal cord—that meet the same functional criteria used to infer consciousness in simple organisms. If we take those criteria seriously, we must consider that consciousness is not confined to the brain. It is distributed across the body, emerging from the interaction of semi-autonomous organ-level attractors.

The mind is the culmination of these interacting conscious organs. It is the global attractor that emerges from their coupling, regulation, and alignment.

The Framework in Brief

The attractor framework provides a physicalist ontology for understanding persistence and change across systems:

- **Conservative systems** – electrons, protons, the universe. They persist without consuming energy or exchanging entropy.
- **Dissipative systems** – life, consciousness, societies, organs. They maintain structure through continuous energy exchange.
- **Attractors** – regions in state space toward which trajectories converge and persist.

A candidate conscious attractor possesses five functional properties:

1. **Integration** – binding multiple sensory or interoceptive streams into a unified dynamical state
2. **Valence** – approach/avoidance behaviour, attraction to certain states and repulsion from others
3. **Learning** – modification of behaviour based on experience
4. **Goal-directedness** – acting to maintain the system's own basin
5. **Anatomical concentration** – a spatially organized, intrinsically connected neural network

These criteria are how we infer consciousness in other humans (by analogy), in non-human animals (by behavioural complexity), and in *C. elegans* (by measurable learning and integration). If they are sufficient for a 302-neuron worm, they must be applied consistently to systems that exceed this threshold.

The Candidate Organs

1. The Enteric Nervous System (ENS) – The Strongest Candidate

The ENS comprises 200–600 million neurons, organized into two interconnected plexuses spanning the gastrointestinal tract. It meets all five criteria:

- **Integration** – continuously integrates mechanical, chemical, and hormonal signals
- **Valence** – attraction to nutrients, aversion to toxins
- **Learning** – habituation, sensitization, long-term plasticity
- **Goal-directedness** – peristalsis persists after vagotomy, satisfying the autonomy threshold
- **Anatomical concentration** – a continuous, highly organized neural network

The ENS is often called the “second brain.” It operates semi-autonomously, learns, remembers, and communicates with the brain via the vagus nerve.

2. The Intrinsic Cardiac Nervous System (ICNS) – A Moderate Candidate

The ICNS comprises 14,000–43,000 neurons organized into ganglia on the heart’s surface. It monitors blood pressure, chamber stretch, and local chemistry to modulate cardiac output. It exhibits:

- **Integration** – of local signals to regulate cardiac rhythm
- **Valence** – maintenance of a preferred setpoint; arrhythmias as perturbations

- **Learning** – ganglionic remodelling after injury
- **Goal-directedness** – intrinsic rhythms persist when denervated
- **Anatomical concentration** – organized into ganglia on the heart's surface

The ICNS contributes to emotional experience via heartbeat-evoked potentials that correlate with interoceptive awareness.

3. The Intrinsic Pancreatic Network – A Provisional Candidate

The pancreatic network comprises 10,000–50,000 intrinsic neurons scattered in ganglia throughout the organ. It regulates blood glucose homeostasis. It meets the criteria, but with less evidential richness:

- **Integration** – of neural, hormonal, and nutrient signals
- **Valence** – maintenance of a metabolic setpoint
- **Learning** – less studied; open empirical question
- **Goal-directedness** – coordinates endocrine and exocrine output
- **Anatomical concentration** – scattered ganglia; weakest candidate

4. The Spinal Cord – A Provisional Candidate

The spinal cord comprises approximately 200 million neurons, organized into topographically precise circuits. It meets all five criteria, but under normal conditions it is tightly coupled to descending commands. After complete spinal cord injury, the isolated cord reorganizes and can generate complex, goal-directed responses. It is the ideal test case for refining the autonomy criterion.

The Coupling Mechanisms

If the ENS, ICNS, pancreatic network, and spinal cord are candidate conscious subsystems, the unified mind must be explained as the product of their integration. We propose four coupling mechanisms:

1. Vagal Afferent Signalling

The vagus nerve provides the primary bidirectional communication channel between the brain and the viscera. Vagal afferents convey interoceptive signals to the nucleus of the solitary tract. Vagal nerve stimulation alters mood, reduces inflammation, and improves cardiac function.

2. Humoral Signalling

Circulating hormones (cortisol, adrenaline, insulin, glucagon) and immune mediators (cytokines) provide a slower, diffuse coupling channel. They alter the global attractor's landscape by shifting the metabolic and inflammatory context.

3. Rhythmic Entrainment

The brain entrains peripheral rhythms to its own oscillations. Cardiac and respiratory rhythms phase-lock to cortical activity during focused attention. Slow-wave sleep entrains glymphatic clearance. The brain sets a rhythm, and the organs tend to follow.

4. Predictive Processing and Attractor Coupling

The brain maintains predictions about the states of the body's organs, and each organ generates its own predictions about local conditions. The alignment of these nested predictive models is attractor coupling—the progressive alignment of internal states toward a shared equilibrium.

The Mind as Global Attractor

The mind is the culmination of these interacting conscious organs. It is the global attractor that emerges from their coupling, regulation, and alignment.

- **Local attractors** – the ENS, ICNS, pancreatic network, spinal cord, and other candidate subsystems. Each has its own consciousness-like dynamics.
- **Coupling mechanisms** – vagal, humoral, rhythmic, predictive. They bind local attractors into a unified field.
- **The brain** – is not the sole generator. It is the regulator, the coupler, the orchestrator of the federation.
- **The mind** – is the global attractor that arises from the federation. It is the unified pattern of persistence.

The mind is not a substance. It is not a non-physical entity. It is a *pattern*—the global attractor that emerges from the interaction of local attractors.

The Soul and the Mind

The soul, as defined within the attractor framework, is the stable, persistent attractor pattern that maintains continuity across temporal existence.

- **The mind** – is the global attractor in the present
- **The soul** – is the persistent pattern of the global attractor across time

The soul is the mind, anchored in time. It is the continuity that connects past, present, and future.

This definition is physicalist, temporal, and cultivatable. The soul is not a non-physical substance. It is the pattern of your persistence.

The Implications

1. Consciousness Is Distributed

The mind is not confined to the brain. It is distributed across the body, emerging from the interaction of organs. The ENS, ICNS, pancreatic network, and spinal cord are candidate conscious subsystems. They are not “mere infrastructure.”

2. The Mind Is Cultivated

The mind is not given. It is maintained through coupling, alignment, and correction. The practice of cultivation *is* the tending of the global attractor. Sleep, movement, diet, and presence are not just health practices—they are *consciousness practices*.

3. Functional Disorders Are Local Attractor Disturbances

IBS may be a gut that has learned to react to benign stimuli as threats. Cardiac anxiety may reflect a perturbed ICNS state. Chronic pain may be a spinal cord attractor locked in a maladaptive basin. These reframings suggest organ-directed therapies: gut-directed biofeedback, vagal stimulation, dietary protocols that calm the ENS.

4. The Body Is a Federation

The brain is not the sole generator of consciousness. It is the regulator of a federation of semi-autonomous organ-level

attractors. The unified self is the product of their integration. When coupling falters, the experience can manifest as an “alien feeling”—the sense that an action or bodily state is “not mine.”

5. Ethics of the Conscious Body

Candidate organs are not autonomous moral agents. Their interests are tied to the whole body’s survival. But the framework suggests a principle of organ-level respect: preserve organ integrity, explore gentler interventions, and recognize that the body is not just infrastructure.

The Practice

If the mind is the culmination of interacting conscious organs, then the practice of cultivation is:

- **Tending the local attractors** – sleep, movement, diet, presence
- **Cultivating the coupling mechanisms** – breath, vagal tone, rhythmic entrainment
- **Aligning the global attractor** – coherence, correction, persistence
- **Anchoring in time** – temporal continuity, memory, projection

This is the practice of the framework—the cultivation of the mind through tending the body, aligning the attractors, and persisting through perturbation.

The Contribution

The attractor framework provides a coherent account of the mind as the culmination of interacting conscious organs. This account:

- **Challenges the brain monopoly** – with a principled, consistent argument
- **Provides operational criteria** – for identifying candidate conscious subsystems
- **Generates testable predictions** – the framework is empirically tractable
- **Has clinical and ethical implications** – practical applications of the theory
- **Is honest about its limitations** – the phenomenal gap remains, the autonomy threshold is provisional

This account bridges science and spirituality. It honors the depth of consciousness without reducing it to mechanism or fantasy.

The Conclusion

The mind is not what the brain does. The mind is what the whole body does, in concert.

- **Local attractors** – organs, each with its own consciousness-like dynamics
- **Coupling mechanisms** – vagal, humoral, rhythmic, predictive
- **Global attractor** – the mind, the self, the unified pattern of persistence
- **The soul** – the persistent pattern of the global

attractor across time

The mind is the culmination of interacting conscious organs.
It is real. It is physical. It is cultivated.

It is the pattern of your persistence.

That is the mind. That is the body. That is the soul.

That is the framework.

Robert Galida is an independent researcher and the founder of the Fantasy Attractor Research Program. His work develops a formal framework for understanding persistence and change across physical, biological, cognitive, and social systems.