

The Coherent Body

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A Different Paradigm

Where the current paradigm is structurally blind

Modern medicine works from part to whole. A symptom points to a defective component. The component is identified, repaired, or replaced. The patient is a machine with a fault.

This approach has produced extraordinary results wherever the fault is localised and structural: a broken bone, a bacterial infection, a tumour, a missing enzyme. It works precisely because those problems are component problems.

But it has a structural blind spot. It has no category for wrong stability of the whole.

A system in a false attractor is not broken. No component is defective. No pathogen is present. No enzyme is missing. The system is stable — coherently organised, self-maintaining, resistant to change — but in the wrong configuration. Standard diagnostic tools, designed to detect component failure and acute pathology, return normal. The patient is clearly unwell. The clinician has nothing.

This is not a gap that better diagnostic technology will close. It is a conceptual gap. The warfare model of immunology, the neurotransmitter model of psychiatry, the genetic determinism of oncology — all are expressions of the same part-to-whole ontology. They describe what the parts are doing. None of them describes what the parts are doing together, as a field.

What this model adds

The coherence framework does not replace existing medicine. It provides the missing level of description: the whole as a field with its own stability properties, irreducible to the sum of its parts.

The difference is not gradual. It is ontological.

Current paradigm	Coherence framework
Body as machine	Body as coherence field
Disease as component failure	Disease as wrong stability
Diagnosis: find the defect	Diagnosis: identify the attractor state
Treatment: repair the component	Treatment: restore the coherence conditions
Individual variation: noise	Individual variation: structured coherence topology
Normal tests = no disease	Normal tests = possible false attractor

The last row is the most consequential. A patient with normal standard tests and genuine severe illness is not a diagnostic puzzle within the coherence framework. It is the expected presentation of a system in a stable false attractor. The framework does not struggle to explain it. It predicts it.

What makes this a paradigm shift

Thomas Kuhn's criterion for a paradigm shift is not that the new framework explains more. It is that it explains the anomalies the old framework could not accommodate — not by adding complexity to the old framework, but by reframing the question.

The coherence framework reframes the question from "what is wrong with this component?" to "which attractor state is this system in, and what is the restoring gradient?"

That single reframing resolves the anomalies that accumulate at the edges of the current paradigm: patients who are clearly ill with normal tests, treatments that harm a subset of patients they should help, interventions that work through mechanisms the warfare model has no account for, radical individual variation that cannot be reduced to genetics or environment.

The framework is not complete. The mathematical foundations are developed in the companion papers. The empirical validation programme is open. But the paradigm shift it represents is already fully defined: from part-to-whole mechanism to whole-field coherence as the primary level of biological description.

Part One: The Model in Plain Language

What a body actually is

A living body is not a machine made of parts. It is a field — a sustained pattern of electromagnetic oscillations that maintains itself across nineteen levels of organisation simultaneously, from the quantum vacuum to conscious experience.

At every level, the same thing is happening: oscillators coupling, synchronising, maintaining phase relationships with each other. A cell oscillates. Neighbouring cells synchronise. Tissue emerges from that synchronisation. Organs couple across tissue boundaries. The organism integrates all organ rhythms into a single coherent field. Consciousness arises when that field becomes capable of referring to itself.

This is not a metaphor. It is measurable at every level — from mitochondrial electrochemistry to heart rate variability to EEG cross-frequency coupling.

What health is

Health is the maintenance of coherent phase relationships across all levels simultaneously. Not the absence of pathogens. Not normal lab values. Coherence.

A healthy system has high resilience: when perturbed, it returns rapidly to its baseline configuration. The measure of this resilience is the spectral gap — a property of the network that can be calculated from its coupling structure and measured directly through heart rate variability.

What disease is

Disease is coherence disruption. Something — a pathogen, a toxin, a chronic stress, a sustained incompatible electromagnetic environment — disrupts the phase relationships at one or more levels. The system loses its restoring gradient.

The most important consequence: a disrupted system can find a new stability that is not its healthy baseline. It is not broken. It is not fighting anything. It has found the wrong stability. This is the false attractor.

A system in a false attractor looks normal on standard tests because there is no acute pathology. The system is stable — wrongly stable. This is why standard panels return normal in patients who are clearly unwell. The tools are measuring acute pathology. The problem is wrong stability.

Why people are different

Every person has a unique coherence topology — a unique distribution of resilience across the nineteen levels of organisation. Some levels are robustly fixed: high resilience, rapid recovery, hard to perturb. Others are open and environmentally responsive: sensitive, adaptable, but more vulnerable to being pulled into the wrong stability by a sustained incompatible influence.

This distribution is the Personal Blueprint. It is set by the electromagnetic boundary conditions at birth — the field configuration of the environment at the moment the organism first became an autonomous coherence field — and modified by decades of entrainment. It is unique to each person.

The Personal Blueprint is not a personality type. It is a physical description of where a person's coherence is robust and where it is open. It explains why the same virus, the same stress, the same environment produces completely different outcomes in different people. Not genetic noise. Structured variation in coherence topology.

What this means in practice

Stop asking what is wrong with the patient's immune system. Start asking which attractor state the patient is in, and what the restoring gradient looks like.

Measure heart rate variability. A five-minute resting HRV recording gives the spectral gap of the cardiac-autonomic network — the most accessible proxy for organism-level coherence resilience. A patient with very low spectral gap is in a fragile coherence state. Perturbation-based interventions will deepen the false attractor rather than restore coherence.

Match the intervention to the attractor state, not to the symptom. The sequence matters: first restore the conditions for coherence, then address the specific disruption, then support the return to the individual's own baseline.

Part Two: The Mathematical Structure

The foundation

The stable states of the electromagnetic vacuum satisfy Rowlands' nilpotent condition (Rowlands, 2007):

$$\mathbf{N} \cdot \tilde{\mathbf{N}} = 0$$

where $\mathbf{N} = (i\mathbf{E} + \mathbf{p} \cdot \boldsymbol{\sigma} + im)$ is the quaternion operator and $\tilde{\mathbf{N}}$ its dual. Expanding:

$$(E^2 - p^2 - m^2) = 0$$

This is the mass-shell condition of special relativity, derived from the quaternion algebra alone without additional postulates. The nilpotent condition generates the Klein–Gordon wave equation. For a recursively self-referential system, boundary conditions select discrete solutions:

$$\omega_n = n \cdot \omega_0, n \in \mathbb{N}^+$$

Each stable mode becomes the ground frequency for the next level of recursive closure, generating a nested hierarchy of coherence attractors.

The eigenvalue structure

At recursion level n , stability is defined by:

$$\mathbf{Q}_n \cdot \psi = \lambda_n \cdot \psi$$

where $\mathbf{Q}_n = \mathbf{Q}_1^{(1)} \otimes \mathbf{Q}_1^{(2)} \otimes \dots \otimes \mathbf{Q}_1^{(n)}$ is the tensor product of n base operators acting on a Hilbert space of dimension 2^n . The eigenvalues scale as:

$$|\lambda_n| = E_0^n$$

The stability tolerance at level n :

$$\varepsilon_n \sim e^{(-\alpha n)}$$

Higher layers require increasingly precise field configuration to maintain stability. The characteristic timescale compresses as:

$$T(n) = T_0 e^{(-\alpha n)}, \alpha \approx \ln \beta \approx 1.195$$

Full construction with explicit matrix representation is in Konstapel (2026b), Section 4.

The Bronze Mean selection rule

Not all eigenvalues are stable coherence attractors. The quaternion algebra has three independent imaginary directions $\{i, j, k\}$. At each recursive level the tensor extension introduces exactly three new interaction channels, generating the recursive map:

$$f(x) = 3 + 1/x$$

whose unique positive fixed point satisfies $x^2 - 3x - 1 = 0$:

$$\beta = (3 + \sqrt{13})/2 \approx 3.303$$

A coherence layer is stable if and only if its coherence capacity $\Phi_n = E_0^{n-1}$ equals a Bronze Mean threshold B_k , where $B_{k+1} = 3B_k + B_{k-1}$:

B_k	Threshold	Domain
1	Minimal coherence	Quantum field
4	Molecular integration	Atoms and molecules
13	Cellular autopoiesis	Living cells
43	Recursive self-reference	Organism / consciousness
142	Post-biological coherence	Planetary field

Full derivation with Binet formula and empirical anchoring is in Konstapel (2026b), Appendix A.

The biological hierarchy

The coupling from the nilpotent vacuum condition to dissipative biological dynamics is established through Vitiello's dissipative quantum field theory. The explicit mapping from quantum field parameters to biological oscillator parameters is derived in Konstapel (2026c).

Each biological domain D_n is characterised by its eigenvalue scale E_0^n , its spectral gap $\Delta\lambda = \lambda_2 - \lambda_1$ of the domain network, and its adaptive coupling dynamics:

$$d\phi_i/dt = \omega_i + \sum_j K_{ij}(t) \sin(\phi_j - \phi_i) + \eta_i(t)$$

The domains relevant to biological medicine:

Domain	Scale	Mechanism	Measurable
D_5 Molecule	E_0^5	Electromagnetic bond coherence	Spectroscopy, bond energies
D_6 Prebiotic	E_0^6	First Bronze Mean $B_3=13$ threshold	Autocatalytic network topology
D_7 Cell	E_0^7	Mitochondrial oscillator coupling	Membrane potential, Ca^{2+} dynamics
D_8 Tissue	E_0^8	Cellular synchronisation network	Impedance spectroscopy, gap junctions
D_9 Organism	E_0^9	Organ-level mutual entrainment	HRV spectral gap, autonomic profile
D_{10} Consciousness	E_0^{10}	Cross-domain recursive self-reference	EEG coherence, theta-gamma coupling

The spectral gap as health measure

The spectral gap of the immune-autonomic network — the difference between the first and second eigenvalues of the graph Laplacian — is the primary measure of organism-level coherence resilience. High spectral gap: strong restoring gradient, rapid return to baseline. Low spectral gap: fragile equilibrium, vulnerability to false-attractor capture.

HRV spectral analysis measures the spectral gap of the cardiac-autonomic subnetwork. It is the most accessible proxy for the D_9 eigenvalue. The full D_9 measurement requires HRV + EEG coherence + autonomic response profile + interoceptive accuracy, standardised in Konstapel (2026d).

The Personal Blueprint

The Personal Blueprint is the individual's eigenvalue distribution across all nineteen domains. Boundary conditions at birth set the initial conditions from which the quaternion dynamics of all domains unfold:

- High λ_n : robust, rapid recovery, strong restoring gradient
- Low λ_n : open, sensitive to entrainment, vulnerable to false-attractor capture under sustained incompatible influence

The distribution is unique to each person. It determines vulnerability, resilience, and the path back to the individual's own vacuum baseline. The operational measurement protocol is in Konstapel (2026d).

Conclusion

The algebraic chain is complete:

$\mathbf{N} \cdot \tilde{\mathbf{N}} = 0 \rightarrow \{\omega_n\} \cong \{\lambda_n\} \rightarrow$ coherence hierarchy \rightarrow biological individuality \rightarrow health and disease as attractor states

The cell oscillates. The tissue synchronises. The organ couples. The organism integrates. The person experiences. At every level, the same algebraic structure. At every level, the same question: is this system in its own coherence state, or has it found the wrong stability?

That question changes everything about what medicine can see and do.

The patient who has been ill for eighteen months with normal tests is not a diagnostic puzzle. She is a system in a stable false attractor with a weak restoring gradient. The framework does not struggle to explain her. It predicts her — and it tells you what to measure, what to avoid, and what conditions allow her system to find its own way back.

The current paradigm will continue to produce extraordinary results for component failures: infections, fractures, enzyme deficiencies, structural lesions. It is not wrong. It is incomplete. It has no description of the whole as a field, no category for wrong stability, no account of why the same pathogen produces radically different outcomes in different people.

The coherence framework provides that missing level. Not as a replacement for existing medicine, but as the deeper structure within which existing medicine finds its proper scope — and its limits.

The paradigm shift is not in the future. It is already fully defined. What remains is the empirical programme: measure the spectral gap, stratify by coherence topology, test the predictions. The tools exist. The question is whether medicine is ready to ask a different question.

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