

The Hard Problem of Life

*Consciousness, Organisation, and the Continuity of Living Form in
Similarity Theory*

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dimensional form, and biological life is consciousness acquiring the power to
organise, preserve, and redirect that form across time.”*

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Abstract

The origin of biological life is commonly approached through chemistry, thermodynamics, information theory, and evolutionary dynamics. These disciplines explain many of the mechanisms by which matter can become self-maintaining, bounded, adaptive, and heritable. Yet a deeper ontological question remains: how can matter presumed to be wholly non-conscious become a unified living being that preserves itself, acts upon its surroundings, and maintains identity through continual material change? This paper calls that question the hard problem of life, by analogy with David Chalmers’s hard problem of consciousness. Similarity Theory responds by rejecting the premise that consciousness first appears inside living matter. It treats consciousness as ontologically primary and matter as its stable dimensional expression. On this account, organisation does not create consciousness; organisation is an advanced expression of consciousness. A living organism is a higher-order organising unity that coordinates lower-level conscious structures without erasing them. The paper develops distinctions among elemental, organising, substrate, and hosted consciousness; interprets physical law as the stable structural condition of a conscious dimensional order; and uses the Frames of Time to explain how identity persists through transformation. Biological death is consequently understood as the dissolution or withdrawal of a particular organising unity, not the conversion of conscious matter into ontological emptiness. The proposal does not replace empirical origin-of-life research. It instead offers a metaphysical framework within which scientific descriptions of self-organisation, autopoiesis, and causal hierarchy can be interpreted without requiring consciousness to emerge from an absolutely non-conscious foundation.

Keywords: Similarity Theory; hard problem of life; consciousness; organisation; autopoiesis; thermodynamics; identity; emergence; Frames of Time

Author’s note. This paper develops the Similarity Theory account of consciousness and living organisation. “Higher” and “lower” consciousness refer here to differences in integration, agency, reflective capacity, and relational organisation—not to moral worth or physical size.

THE HARD PROBLEM OF LIFE

A SIMILARITY THEORY RESPONSE

Life is not consciousness entering matter.
Matter is consciousness taking dimensional form,
and biological life is consciousness acquiring the power
to organise, preserve and redirect that form across time.

ALL IS CONSCIOUSNESS

Nothing is without consciousness.
Everything exists as an expression
of consciousness at a level
appropriate to its organisation
and relation.

SUBSTRATE AND HOSTING

Larger conscious structures
provide the substrate within
which more differentiated
consciousness can live
and evolve.

Earth as Planetary
Consciousness
(substrate)

ORGANISATION IS ADVANCED CONSCIOUSNESS

Higher organising consciousness coordinates lower-level
conscious structures into unified, adaptive and
self-maintaining identities.

ATOMS & PARTICLES
Elemental
Consciousness

MOLECULES
Molecular
Consciousness

CELLS
Cellular
Consciousness

ORGANISMS
Organismic
Consciousness

HUMANS
Reflective
Consciousness

SAND GRAINS
Elemental Consciousness
within a larger form

THERMODYNAMICS AND DIMENSIONAL ORDER

Physical laws are the structural conditions
of this dimension. They are not opposed
to consciousness; they are expressions
of the higher organising consciousness
through which the dimension exists.

FRAMES OF TIME

Every frame of time is a conscious state.
When a new frame arises, the previous one
is not destroyed. It remains within the lineage
of transformation, preserving continuity
across change.

DEATH IS THE DISSOLUTION OF A PARTICULAR ORGANISING UNITY, NOT THE EXTINCTION OF CONSCIOUSNESS.
Constituent consciousnesses continue in new relations and transformations.

Figure 1. Conceptual overview of elemental, organising, substrate, and hosted consciousness in Similarity Theory. Conceptual illustration developed by the author with generative AI assistance.

1. Introduction: From Mechanism to Ontology

The sciences of life have made extraordinary progress in describing the mechanisms by which organisms maintain themselves. Molecular biology explains replication, gene expression, and cellular repair. Biochemistry describes metabolic pathways and energy exchange. Evolutionary theory explains adaptation across generations. Thermodynamics clarifies the energetic conditions under which local order can be preserved in open systems. Research on autopoiesis and self-organisation examines how bounded systems can continually produce and renew the components that sustain their own identity (Varela, Maturana, & Uribe, 1974).

These achievements are substantial, but they do not by themselves settle every philosophical question raised by life. A complete account of chemical pathways may explain how a cell operates without yet explaining why those operations constitute a unified living being rather than a transient chemical arrangement. The unresolved issue is not a missing molecular reaction. It concerns the ontological status of the unity that acts, persists, and preserves itself through continual change.

This paper uses the expression hard problem of life for that deeper question. The phrase is deliberately analogous to Chalmers's hard problem of consciousness: the problem of explaining why physical processing should be accompanied by subjective experience at all (Chalmers, 1995, 1996). The hard problem of life is related but distinct. It asks how matter presumed to be non-living and non-conscious can become a bounded, self-maintaining, purposive-seeming identity.

Similarity Theory argues that both problems are intensified by the same metaphysical starting point: the assumption that matter is fundamentally non-conscious and that consciousness appears only after matter has reached a sufficient degree of complexity. If this assumption is reversed, the problem changes. The central question is no longer how consciousness enters matter, but how consciousness differentiates itself into increasingly integrated levels of material, biological, organismic, and reflective organisation.

2. What Science Explains—and What It Leaves Open

Biological life is ordinarily recognised through a family of capacities rather than a single universal criterion. Living systems maintain boundaries, exchange matter and energy, regulate internal conditions, respond to environmental change, reproduce or participate in reproductive lineages, and undergo Darwinian evolution. Not every organism displays each capacity independently, but together these features distinguish organisms from ordinary non-living structures.

Origin-of-life research seeks plausible transitions from geochemistry to chemistry capable of heredity, autocatalysis, compartmentalisation, and evolution. Kauffman (1993) examined how self-organising networks might generate ordered behaviour without central control. Walker and Davies (2013) proposed that life may involve a transition in causal architecture in which information acquires context-dependent control over the matter in which it is instantiated. These approaches help explain how living organisation differs dynamically from simpler chemistry.

Thermodynamics also removes a persistent misconception. Organisms do not violate entropy. They maintain local organisation by exchanging energy and matter with their environment, thereby participating in broader irreversible processes. Schrödinger (1944) famously asked how organisms preserve order, while Prigogine (1978) showed how organised dissipative structures can arise and persist in systems maintained far from equilibrium.

Similarity Theory accepts these scientific descriptions. Its disagreement is not with the mechanisms they identify, but with the inference that mechanism alone exhausts ontology. To say that a system is self-organising describes a pattern of relations. It does not automatically tell us what sort of reality is capable of sustaining organisation, why a unity is more than a convenient label applied by an observer, or how identity persists when its material components are continually replaced.

3. The Similarity Theory Starting Point

Similarity Theory begins with consciousness as ontologically primary. Consciousness is not treated as a late product manufactured by biological complexity. It is the fundamental condition through which existence, recognition, relation, structure, and experience become possible.

Matter is therefore not defined as an entirely separate, unconscious substance. It is consciousness expressed through stable dimensional form. This does not mean that every physical object thinks, imagines, or deliberates. Human reflective consciousness is one highly developed mode of consciousness, not the definition against which every other form must be measured.

An atom may express consciousness through persistence, relation, interaction, and structural response. A molecule introduces a more complex relational unity. A cell adds boundary maintenance, metabolism, internal regulation, and adaptive responsiveness. An animal adds coordinated perception and agency. A human adds reflective self-recognition, conceptual thought, and moral evaluation. The difference is therefore not consciousness versus no consciousness; it is consciousness organised through different degrees of integration, agency, memory, self-maintenance, and reflexivity.

This position must be distinguished from the claim that stones or atoms possess miniature human minds. Similarity Theory does not project human psychology downward. It proposes that consciousness has multiple modes of expression, and that reflective awareness is an advanced organisation of a more elemental conscious reality.

4. Organisation as Advanced Consciousness

The central claim of this paper is that organisation does not create consciousness from unconscious ingredients. Organisation is itself an advanced expression of consciousness.

Consider the human body. It contains trillions of cells and vastly larger numbers of molecules and atoms. These components participate in their own processes and relations, yet the person is not merely an accidental heap of constituents. The person exists as a higher organising unity. The “I” is not another object hidden behind the organs. It is the organising consciousness through which perception, memory, intention, movement, repair, and continuity are coordinated into one living identity.

The same principle applies at simpler levels. An ant organises the tissues, cells, molecules, and atoms of its body into one mobile and responsive being. The ant is a more advanced organising consciousness than any individual molecule within it, although its embodiment depends upon those molecules. The lower-level constituents do not become unconscious when incorporated into the organism. They enter a wider relational order.

The higher organising consciousness therefore neither erases nor merely aggregates the lower consciousnesses. It coordinates them. This is important because a simple aggregation model inherits the familiar combination problem: why should many elementary centres automatically become one unified subject? Similarity Theory does not answer by claiming that enough small consciousnesses numerically add up to a larger one. It proposes that a higher-order organising identity establishes coherence across them.

This distinction makes the theory hierarchical without making it reductive. A molecule cannot be fully explained by listing isolated atoms while ignoring their relations. A cell cannot be fully explained by listing molecules while ignoring the organisation that maintains a boundary and regulates exchange. Likewise, a person cannot be exhausted by an inventory of body parts. At each level, the relational unity is real because it constrains, coordinates, and preserves the behaviour of its constituents.

5. Elemental, Organising, Substrate, and Hosted Consciousness

Similarity Theory benefits from distinguishing several roles that consciousness may occupy within a nested reality.

5.1 Elemental consciousness

Elemental consciousness is consciousness expressed through basic existence, persistence, relation, and structural responsiveness. Atoms, molecules, minerals, and other material structures belong to this category. Their consciousness is not reflective or organismic, but neither are they ontologically empty.

5.2 Organising consciousness

Organising consciousness coordinates lower-level structures into a unified identity with capacities that none of the constituents possesses independently. Cells, organisms, and perhaps larger natural systems display differing degrees of such organisation. The defining feature is not physical size but the power to preserve a coherent pattern, regulate relations, and act as one.

5.3 Substrate consciousness

A conscious structure can provide the material or environmental basis through which another consciousness becomes embodied. The human body is the immediate substrate of personal organismic consciousness. Earth is a broader substrate for terrestrial organisms. Sand can provide a physical substrate for an ant colony, while the colony reorganises that material into tunnels and chambers.

5.4 Hosted consciousness

Hosted consciousness is a conscious identity that lives within, upon, or through a broader conscious structure. Human beings are hosted by Earth, even though human reflective agency may exceed the planet's mode of awareness in particular respects. Greater physical scale does not automatically imply greater reflective complexity. The relationship between host and hosted being is therefore functional and relational rather than a simple ladder of size.

These categories overlap. A human being is an organising consciousness in relation to the body's constituents, a hosted consciousness in relation to Earth, and a substrate for microbial communities living within the body. Reality is not a flat field of equal objects. It is a nested ecology in which consciousness organises, hosts, supports, constrains, and transforms other consciousness.

6. Thermodynamics as a Condition of Dimensional Organisation

The claim that consciousness is fundamental must not be framed as though consciousness were an additional physical force competing with gravity, electromagnetism, or thermodynamics. Similarity Theory does not propose that organisms maintain themselves by violating physical law. It proposes that

physical law is itself one of the stable structural expressions of the dimensional order in which organisms exist.

Thermodynamics describes how energy, entropy, equilibrium, and irreversible processes behave within this dimension. Similarity Theory asks a prior metaphysical question: why does reality exhibit stable, intelligible, and enduring regularities at all? Its answer is that the laws of this dimension are conditions established and sustained by a higher organising consciousness through which the dimensional field is constituted.

This is an interpretive rather than interventionist claim. It does not predict exceptions to thermodynamic equations or insert a hidden energy source into biological systems. Physics describes the regularities through which dimensional reality operates; Similarity Theory interprets the existence and stability of those regularities as manifestations of a deeper conscious order.

The distinction matters methodologically. Scientific explanation works within the laws and measures their consequences. Metaphysical explanation asks what those laws imply about the nature of reality. Confusing the two would either force science to answer questions outside its method or force metaphysics to compete with experimental physics on inappropriate terms.

7. Frames of Time and the Continuity of Identity

Life is not defined only by the matter present at a single moment. Organisms persist while their material composition changes. Cells divide and die, molecules enter and leave, memories are revised, and relationships alter. Yet a person recognises a lineage connecting the present self with earlier states.

Similarity Theory explains this continuity through the Frames of Time. Every frame is a conscious state of reality. When a new frame arises, the preceding frame is not reduced to absolute nothingness. It remains ontologically preserved within the lineage of transformation from which the new state emerged.

This should not be imagined as a physical archive containing duplicate copies of every moment. Preservation means that an earlier state remains real as a necessary relation within the history of the present. The current being is intelligible only through the sequence of transformations that produced it.

A melody offers a useful analogy. No individual note is the melody, and the notes do not sound simultaneously. Yet the melody retains identity because the relation among successive notes is preserved. Rearrange the same sounds and the melody changes. Likewise, an organism remains itself not because every material component is fixed, but because an organising consciousness preserves relational continuity through successive frames.

Identity is therefore neither a static substance nor a verbal convenience. It is an organised lineage: continuity through transformation. The “same” organism is the continuing relation among its preserved states, coordinated by the organising consciousness that carries its pattern forward.

8. Death as the Dissolution of an Organising Unity

Similarity Theory requires a careful distinction between biological death and ontological extinction. When a person dies, the body does not suddenly become composed of absolutely non-conscious substance. Atoms and molecules remain. Chemical reactions continue. Some cells remain active for limited periods, microorganisms continue their processes, and decomposition establishes new relations between the body and its environment.

What ends is a particular level of integrated organisation. The organism no longer regulates itself as the same unified biological identity. The higher organising consciousness no longer coordinates the body in its former manner, and the lower-level conscious structures begin participating in different processes and systems.

Biological death can therefore be understood as the ending, withdrawal, or dissolution of a specific organismic unity, rather than the extinction of consciousness from its material constituents. Death remains real because a particular identity and form of organisation have ceased. The claim does not minimise loss or pretend that nothing changes. It rejects only the idea that death converts conscious reality into ontological emptiness.

The fate of personal consciousness beyond bodily death is a further question concerning identity, continuity, and transformation. It is not necessary to settle that wider question in order to make the narrower point defended here: there is no absolutely dead matter in Similarity Theory. There are only changing levels and relations of conscious organisation.

9. The Sand Analogy

Imagine a beach. Each grain of sand expresses elemental consciousness appropriate to its material existence. The grains relate through pressure, gravity, movement, temperature, and contact.

A sandcastle introduces a new level of organisation. It is made from the same grains, but they have entered a coherent arrangement with boundaries, proportions, and a temporary identity. The castle possesses no independent reflective mind, yet it is more than a random pile because an organising consciousness has established relations that make the whole recognisably one structure.

A city represents a still more complex organisation. Materials become roads, buildings, electrical systems, institutions, and places of memory. Human beings live within it, alter it, and are altered by it. The sand and stone did not become conscious only when they entered the city. They were never without consciousness. What changed was the level of organisation and the range of relations through which consciousness could be expressed.

Biological life should be understood similarly. An organism is not unconscious material that mysteriously awakens. It is consciousness organised into a bounded, self-maintaining, adaptive, and temporally continuous identity.

10. Relation to Physicalism, Panpsychism, and Idealism

Similarity Theory shares with idealist traditions the claim that consciousness is ontologically fundamental. It shares with panpsychist approaches the refusal to derive experience from a wholly non-experiential foundation. It differs, however, from any view that imagines reality as a collection of independent microscopic minds whose aggregation alone produces larger subjects.

The theory places relation and organisation at the centre. Lower-level consciousnesses remain real, but a higher organising consciousness is not reducible to their sum. The whole acquires causal and structural significance by coordinating relations among its components. This approach is closer to a nested ontology of conscious unities than to a flat distribution of identical mental particles.

Against reductive physicalism, Similarity Theory argues that a complete description of physical function does not automatically explain why a unified subject exists. Against substance dualism, it does not divide reality into two ontologically alien substances. Consciousness and matter are not

separate realms that must later interact; matter is consciousness expressed under dimensional conditions.

The proposal is therefore monistic but non-reductive. It treats physical description as valid within its domain while denying that the externally measurable structure of a system exhausts the consciousness through which that structure exists and is organised.

11. Objections, Limits, and a Research Programme

A serious metaphysical proposal must identify what it has not yet explained. Similarity Theory offers a coherent reframing of the hard problem of life, but several questions require further development.

11.1 Boundary conditions

The theory must specify more precisely when a relational structure constitutes a distinct organising consciousness. Not every temporary arrangement is an organism, and not every aggregate possesses a unified identity. Candidate criteria may include persistence, internal constraint, self-maintenance, causal integration, memory, and the capacity to preserve a boundary across changing conditions.

11.2 Degrees of consciousness

Terms such as higher and lower must be operationally clarified. In this paper they refer to organisation, integration, agency, reflexivity, and relational range. They do not imply that physically larger structures are automatically more conscious, nor that less reflective entities lack value.

11.3 Empirical status

The ontological primacy of consciousness is not a conventional laboratory hypothesis in the same manner as a biochemical reaction pathway. Nevertheless, the framework can guide empirical questions. Researchers can investigate how causal control shifts across organisational levels, how biological systems preserve identity despite material turnover, and whether measures of integration, autonomy, or downward constraint distinguish genuine unities from aggregates.

The relevant scientific programme would not seek a supernatural force. It would examine the signatures of organising unity: where higher-level patterns exert stable constraints upon lower-level dynamics and preserve coherent identity through time.

11.4 Explanatory modesty

Similarity Theory does not claim to have solved the empirical origin of life. It does not specify the first replicator, the earliest metabolism, or the geochemical pathway by which biological organisation began on Earth. Those questions belong to scientific investigation. The theory instead addresses the metaphysical interpretation of such transitions and rejects the assumption that the emergence of biology must also be the emergence of consciousness from absolute absence.

12. Conclusion

The hard problem of life arises when reality is divided into two absolute categories: dead, unconscious matter and living, conscious beings. Once this division is accepted, some extraordinary bridge is required. Matter must cross from complete ontological emptiness into agency, self-maintenance, experience, and identity.

Similarity Theory rejects the initial division. Consciousness is elemental, while matter is its stable dimensional expression. Organisation does not manufacture consciousness; it is an advanced mode through which consciousness coordinates consciousness. Biological life introduces a distinctive form of organisation: bounded self-maintenance, adaptation, agency, and continuity across time.

A living being is therefore neither a machine assembled from dead parts nor a mysterious spirit inserted into matter. It is an organising consciousness expressed through a nested field of lower-level conscious structures, hosted within broader conscious environments, and preserved through a lineage of changing frames.

The hard problem consequently changes form. The question is no longer how consciousness appears inside dead matter, because no matter is absolutely dead. The remaining question is how consciousness differentiates itself into increasingly integrated levels of existence, organisation, identity, and reflective relation.

That question does not end science. It gives scientific discovery a wider philosophical horizon.

Core Proposition

Life is not consciousness entering matter. Matter is consciousness taking dimensional form, and biological life is consciousness acquiring the power to organise, preserve, and redirect that form across time.

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