

Ontological and Epistemological Foundations of Universal Coherence (UC)

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Note:
This essay is part of the conceptual line initiated in *Elocuencia: la emoción de Coherencia Universal*.

Abstract:

This work presents the ontological and epistemological foundations of the conceptual framework of Universal Coherence (UC), understood as a structural and dynamic principle that makes it possible to describe and analyze the organization of heterogeneous phenomena—physical, cognitive, emotional, symbolic, ethical, and spiritual—without reducing them to a single discipline or to a single explanatory level. UC is not proposed as a closed doctrine or a totalizing theory, but rather as an architecture of relational reading that identifies patterns of coherence among diverse dimensions of experience and reality. Ontologically, UC is conceived as an underlying condition of organization—not as a substance nor as an external agent—that enables the existence, relation, stabilization, and transformation of organized forms. “Order” thus emerges as internal coherence: a relation among components that sustains form, reduces noise, and generates shareable meaning. Epistemologically, it prioritizes the reading of relations over the accumulation of data or signs, distinguishing the phenomenon (or “source” of meaning/form) from its models, symbols, or narratives (“containers”). A recurrent bias is identified—the “container error”—consisting in confusing the descriptive vehicle with what it seeks to reveal; the methodological correction reverses the priority: attend first to the meaning-producing relation. Central constructs are defined, such as Universal Coherence (UC) (a multiscale organizing principle with effects of clarity and “fruit”), the Emotion of Universal Coherence (EUC) (a lived structural dynamism that drives integration), and eloquence (multidimensional coherent expression). The framework emphasizes a pragmatic-ethical criterion of “fruit” (stability without violence, reduction of internal friction) and positions itself as a heuristic tool for integrating diversity without reductive collapse.

Keywords:
universal coherence; relational epistemology; structural ontology; container error; structuring emotion; systems theory; interdisciplinary integration.

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1. Introduction and purpose of the conceptual framework

This study adopts Universal Coherence (UC) as its conceptual framework, understood as a structural and dynamic principle that makes it possible to describe and analyze the organization of heterogeneous phenomena—physical, cognitive, emotional, symbolic, ethical, and spiritual—without reducing them to a single discipline or to a single explanatory level. In this proposal, UC is not formulated as a closed doctrine nor as a totalizing theory, but rather as an architecture of relational reading⁽¹⁾ that seeks to identify patterns of coherence among diverse dimensions of experience and reality.

Operationally, the framework proposes that when multiple layers of a phenomenon “enter into phase⁽²⁾”—that is, when the form of attention, language, emotion, action, and relational configuration align harmoniously—a field of coherence emerges: internal dispersion decreases, the phenomenon’s legibility increases, and a meaningful integration becomes possible among elements that, when considered in isolation, appear disconnected or contradictory.

1.1. Contextualizing the problem: disciplinary fragmentation and the need for integration

In the contemporary landscape of knowledge, disciplinary fragmentation⁽³⁾ constitutes one of the greatest obstacles to an integral understanding of reality. The natural sciences, cognitive sciences, psychology, ethics, philosophy, and spiritual traditions operate with conceptual frameworks, methodologies, and languages that are often incommensurable, generating epistemic silos that hinder the articulation of complex phenomena spanning multiple levels (for example, the interaction among neurophysiological processes, emotional experience, and ethical judgments in a moral decision). This compartmentalization not only limits each discipline’s explanatory capacity, but also perpetuates reductionisms—whether physicalist (everything reduces to the physical), psychologistic (everything to the subjective), or culturalist (everything to the symbolic).

In response to this fragmentation, there arises a need for integrative frameworks that do not collapse diversity into a single explanatory plane, but rather preserve the richness of each dimension while revealing their interconnections. Universal Coherence (UC) is proposed precisely as a response to this demand: an organizing principle that operates through cross-cutting relational patterns, enabling movement between levels without losing specificity or imposing artificial uniformity.

1.2. Operational definition of Universal Coherence (UC)

Operationally, UC is defined as the structural principle by which multiscale coherence⁽⁴⁾ manifests in complex phenomena. It is not a static property nor an external causal force, but rather an emergent condition observable when the different layers of a phenomenon (physical, cognitive, emotional, relational, ethical, symbolic) manage to align in a shared phase state. This alignment is

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(2) Strogatz (2003) describes phase synchronization in systems as a basis for emergent order. Strogatz, S. (2003). *Sync: The emerging science of spontaneous order*. Hyperion Books.

(3) Balietti, Mäs, & Helbing (2015) mathematically show how disciplinary fragmentation limits scientific progress, without a significant inverse effect. Balietti, S., Mäs, M., & Helbing, D. (2015). *On disciplinary fragmentation and scientific progress*. *PLOS ONE*, 10(3), e0118747.

(4) Bar-Yam (2004) proposes a mathematical framework for strong emergence in complex systems, capturing multiscale variety and its implications in subsystems. Bar-Yam, Y. (2004). *A mathematical theory of strong emergence using multiscale variety*. *Complexity*, 9(6), 15–24. <https://doi.org/10.1002/cplx.20029>

recognized by its concrete effects: greater perceptual and conceptual clarity, structural stability without rigidity, practical directionality (the capacity to generate coherent action), and the generation of shareable meaning among observers or participants.

In pragmatic terms, UC is validated by its “fruit”: the capacity to reduce internal friction (emotional or cognitive dissonances), to promote relational stability without symbolic violence or imposition, and to facilitate evolutionary transitions rather than destructive ruptures.

1.3. Scope and limits of the framework: a non-totalizing heuristic

The Universal Coherence framework does not aim to replace the specialized explanations of each discipline nor to offer an exhaustive ontology of reality. Its scope is strictly a non-totalizing heuristic⁽⁵⁾: it serves as an architecture of reading and an analytical tool to identify patterns of coherence in interdisciplinary or transdimensional phenomena, facilitating integration without reductive collapse.

Among its explicit limits are:

- It does not replace empirical evidence in domains where rigorous quantitative methods are required (e.g., biomedicine, experimental physics).
- Its analogies (e.g., “entering into phase,” structural resonance) are metaphorical and heuristic, not literal nor ontologically committed.
- It does not constitute a closed predictive theory, but rather an open framework subject to refinement, validation, and contextual application.

This humble positioning⁽⁶⁾ allows UC to function as an interdisciplinary bridge without claiming hegemony, inviting its complementary use alongside existing approaches.

(5) Lammin (2017) develops a non-totalizing approach inspired by Laruelle’s non-philosophy, avoiding the hypostatization of identities and enabling an open, non-decisional articulation of relational experience. Lammin, H. E. (2017). *Staging community: A non-philosophical presentation of immanent social experience* [Doctoral dissertation]. University of Greenwich. <https://gala.gre.ac.uk/id/eprint/23409/1/Hannah%20Lammin%202017.pdf>

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2. Ontological assumptions

The ontological assumptions of Universal Coherence (UC) constitute the very foundation of the framework, by defining what is meant by “organization” in a deep and non-reductionist sense. Far from positing a substantial entity or an external agentive cause, these assumptions seek to reveal the structural condition that enables the existence and dynamics of complex forms across multiple dimensions. In this way, the framework avoids both rigid materialism and any form of dualism or vitalism that introduces mysterious agents. Instead, UC is presented as a relational principle⁽⁷⁾ that emerges from the internal interactions among components, enabling diversity neither to dissolve into chaos nor to be forced into artificial uniformity. The central elements of this ontological assumption are detailed below.

2.1. UC as an underlying principle of organization, not a substance or external agent

UC is proposed as an underlying principle of organization: not as a “substance” nor as an external “agent,” but as the structural condition that makes it possible for organized forms to exist and for those forms to relate, stabilize, and transform

2.2. Order as internal coherence: relation, stabilization, and transformation of forms

From this assumption, “order” is not conceived as rigid imposition, but as internal coherence⁽⁸⁾: a relation among components (or levels) that makes it possible to sustain form, reduce noise⁽⁹⁾, and generate shareable meaning.

Organization does not arise from an imposing force or from a pre-established hierarchy, but from the emergence of relational patterns⁽¹⁰⁾ that maintain structural integrity without suppressing the inherent diversity of the elements involved.

2.3. Implications: noise reduction and the generation of shareable meaning

This ontological principle underlies the very possibility that heterogeneous phenomena (physical, cognitive, emotional, ethical, symbolic, and spiritual) can coexist, interact, and evolve without collapsing into a single reductive plane. Noise reduction enables greater legibility of the phenomenon, while the generation of shareable meaning facilitates meaningful integration among observers or participants, without imposing artificial uniformity.

(7) Wildman (2006) argues that in relational ontology, relations are ontologically more fundamental than entities themselves, avoiding primary substances and external agents. Wildman, W. J. (2006). *An introduction to relational ontology*. Boston University.

(8) Belisle & Dixon (2021) extend Relational Density Theory to show how internal coherence emerges in self-organizing networks, merging relational classes and generating stability without rigid hierarchies. Belisle, J., & Dixon, M. (2021). *Coherence and the merging of relational classes in self-organizing networks: Extending Relational Density Theory*. *Journal of Contextual Behavioral Science*, 20, 1–10. <https://doi.org/10.1016/j.jcbs.2021.02.001>

(9) Roli, Kauffman, & Villani (2024) emphasize the constructive role of noise and error in complex systems, where reduction (or management) enables reorganization, novelty emergence, and meaning-making at higher levels. Roli, A., Kauffman, S., & Villani, M. (2024). *On the positive role of noise and error in complex systems*. *Systems*, 12(9), 338. <https://doi.org/10.3390/systems12090338>

(10) Barad (2007) proposes a relational ontology (agential realism) in which the emergence of patterns arises from intra-actions, not from pre-existing entities, enabling organization without external agents or imposed uniformity. Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.

3. Epistemological assumptions

3.1. Priority of relational reading over the accumulation of data or signs

UC proposes an epistemology oriented toward the reading of relations⁽¹¹⁾ rather than the accumulation of signs or data. This approach prevents knowledge from being reduced to a mere collection of isolated facts or quantitative indicators, prioritizing instead attentive observation of the interconnections that generate meaning and form in the phenomenon.

3.2. Key distinction: phenomenon (“source” of meaning/form) vs. models/containers

This implies clearly distinguishing between:

- The phenomenon (or “source” of meaning/form).
- The models, symbols, narratives, or frameworks that describe it (its “containers”).

The source⁽¹²⁾ represents the dynamic and relational reality of the phenomenon itself, whereas the containers are descriptive vehicles (theories, rituals, discourses, symbolic systems) that attempt to capture it or express it.

3.3. The “container error”: a recurrent bias and its methodological correction

The proposal warns of a recurrent bias: the “container error”⁽¹³⁾, understood as the confusion between the vehicle (model/ritual/theory/discourse) and what the vehicle seeks to carry or reveal. This error is frequent in reductionist or dogmatic approaches, where the container ends up being absolutized and mistaken for the very source of the phenomenon.

The methodological correction consists in recognizing this bias and avoiding treating the descriptive vehicle as ultimate reality.

3.4. Inverting the priority: attend first to the meaning-producing relation

The inversion of priority⁽¹⁴⁾ is the corrective key: first attend to the relation that produces meaning and generates form, and only afterwards choose or construct the most suitable framework/container as a functional vehicle.

In this way, UC’s epistemology becomes relational and pragmatic: it does not seek to accumulate isolated “truths,” but to read patterns of coherence that make it possible to integrate diverse dimensions without forcing them into a single language or explanatory level.

(11) Walsh, Böhme, & Woiwode (2020) propose a relational epistemology in which knowledge arises from contingent, situated relations, prioritizing interconnections over isolated entities or mere data accumulation. Walsh, Z., Böhme, J., & Woiwode, C. (2020). *Towards relational transformative agency: A relational approach to living systems and social-ecological transformations*. *Sustainability Science*, 15(6), 1593–1607. <https://doi.org/10.1007/s11625-020-00845-4>

(12) Korzybski (1933) introduces the foundational distinction “the map is not the territory”: the map (model/container) is never the dynamic reality (source/territory), helping prevent semantic confusions. Korzybski, A. (1933). *Science and sanity: An introduction to non-Aristotelian systems and general semantics*. Institute of General Semantics.

(13) Korzybski (1933) resonates with the “map is not the territory” principle and points to a common bias in which representation (container) is absolutized and confused with the revealed reality (source). Korzybski, A. (1933). *Science and sanity: An introduction to non-Aristotelian systems and general semantics*. Institute of General Semantics. (Classic reference for the “map is not the territory” principle.)

(14) Barad (2007) reverses epistemic priorities by emphasizing relational intra-actions as primary producers of meaning and form, prior to any descriptive model or container. Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.

This approach invites us to suspend immediate identification with any particular container—whether scientific, philosophical, spiritual, or cultural—and to prioritize the observation of the emergent relations that sustain the phenomenon.

4. Central constructs and working definitions

To ensure conceptual consistency, this framework defines the following constructs (as analytical categories):

4.1. Universal Coherence (UC)

Conceptual definition: an underlying structural principle through which reality can be organized into legible, resonant, and translatable patterns across levels⁽¹⁵⁾ (e.g., emotional–cognitive–ethical–symbolic), enabling the integration of diversity without collapsing it into a single plane.

Distinctive feature: UC is recognized by its form-effects: clarity, structural stability, practical directionality, and the capacity to engender shared meaning (the “fruit” criterion).

4.2. Emotion of Universal Coherence (EUC)

Conceptual definition: an internal dynamism that drives the emergence of coherence; it is not equivalent to “rhetoric” nor to mere superficial affectivity, but rather to a lived (subjective) structural force that guides the integration of levels and pushes expression outward.

In this perspective, emotion is not treated only as psychological “content,” but as a structuring component of intelligibility⁽¹⁶⁾: it can precede cognitive elaboration and condition the way a phenomenon is organized, remembered, and translated.

4.3. Eloquence

Conceptual definition: a structural quality⁽¹⁷⁾ through which coherence (and EUC) becomes clearly perceptible when different coherent expressions converge into a resonant and shared form.

It is not limited to a communicative skill; it refers to a capacity for coherent manifestation.

4.4. Coherent Expressions (EC)

Conceptual definition: particular manifestations (physical, cognitive, emotional, symbolic, ethical, or spiritual) that reveal a pattern of coherence, configuring a legible “phenomenon.”

An EC is not equivalent to an academic discipline (for example, the “physical” is not exhausted by physics as a science). EC functions as a cross-cutting category⁽¹⁸⁾ for analyzing coherence and dissonance across levels.

(15) Venegas-Aravena (2024) describes how multiscale entropy production generates coherent and emergent patterns readable across levels, enabling integration without reduction in complex systems. Venegas-Aravena, P. (2024). *The multiscale principle in nature (Principium luxuriæ): Linking multiscale thermodynamics to living and non-living complex systems*. *Fractal and Fractional*, 8(1), 35. <https://doi.org/10.3390/fractalfract8010035>

(16) Tyng, Amin, Saad, & Malik (2017) show how emotion modulates cognitive processes (perception, attention, memory) and acts as an integrating component that precedes and structures intelligibility in neural networks. Tyng, C. M., Amin, H. U., Saad, M. N. M., & Malik, A. S. (2017). *The influences of emotion on learning and memory*. *Frontiers in Psychology*, 8, 1454. <https://doi.org/10.3389/fpsyg.2017.01454>

(17) Lissack & Letiche (2004) conceptualize coherence as a structural quality that binds complexity, enabling perceptible and resonant manifestations without imposing uniformity. Lissack, M. R., & Letiche, H. (2004). *Converging on coherence: Gaining perspective on organizations and their study*. Emergent Publications.

(18) Barad (2007) proposes cross-cutting categories in relational ontology (agential realism), where manifestations emerge from intra-actions across levels without reducing them to fixed disciplinary entities. Barad, K. (2007). *Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning*. Duke University Press.

5. Pragmatic-ethical criteria and preliminary conclusions

5.1. The “fruit” criterion: clarity, stability without violence, reduction of internal friction

The “fruit” criterion⁽¹⁹⁾ constitutes the fundamental pragmatic and ethical validation of Universal Coherence (UC). It is not a conventional empirical test nor a logical-formal criterion, but rather a lived and observable indicator: the presence of perceptual and conceptual clarity, structural stability without rigidity, and a significant reduction of internal friction (emotional, cognitive, or relational dissonances).

A phenomenon or coherent expression produces “fruit” when it generates:

- Clarity (increased legibility of the phenomenon and its interconnections).
- Stability without violence (integrity that is not sustained through suppression or imposition).
- Reduction of internal friction (decrease of noise, conflicts, or relational wear).

This criterion is not arbitrary subjectivity: it is recognized by its shareable effects and by what can be observed and measured over time (e.g., greater capacity for coherent action, less emotional dispersion, greater shared meaning among participants). It functions as an ethical compass: a coherence that generates symbolic violence, oppression, or fragmentation is not true UC, but merely an appearance of order.

5.2. Positioning of the framework as a heuristic tool for integration without reductionism

Universal Coherence is explicitly positioned as a heuristic tool, not as a totalizing theory nor as a substitute for specialized disciplinary frameworks. Its purpose is to serve as an architecture of relational reading that facilitates the integration of heterogeneous dimensions (physical, cognitive, emotional, ethical, symbolic, and spiritual) without collapsing them into a single explanatory plane.

This humble positioning⁽²⁰⁾ recognizes:

- The relative validity of each discipline within its own domain.
- The impossibility of exhaustive reduction without loss of richness.
- The need for complementary frameworks for complex phenomena.

UC does not seek hegemony, but complementarity: it offers a lens for identifying transversal

(19) James (1907), in his pragmatic theory of truth, evaluates ideas by their practical “fruits”: clarity, ethical usefulness, and reduction of internal conflict in lived experience, aligning with a non-formal criterion observable in shareable effects. James, W. (1907). *Pragmatism: A new name for some old ways of thinking*. Longmans, Green, and Co. (or modern editions).

(20) Muyskens, Ang, & Kerr (2025) conceptualize epistemic humility as a relational stance that recognizes the relative validity of diverse perspectives, avoiding hegemony and promoting complementary integration without reductionism in complex contexts such as the clinical encounter. Muyskens, K., Ang, C., & Kerr, E. T. (2025). *Relational epistemic humility in the clinical encounter*. *Journal of Medical Ethics*. Advance online publication. <https://doi.org/10.1136/jme-2024-110241>

patterns of coherence, enabling movement between levels without imposing artificial uniformity or denying specificities.

5.3. Implications and outlook: preview of operational modules

The implications of the framework are both theoretical and practical. Theoretically, it invites us to rethink the organization of reality from emergent relations rather than from substances or external agents. Practically, it opens pathways for applications in interdisciplinary contexts: socio-organizational dynamics, educational processes, resolution of ethical conflicts, or even cosmological explorations and collective consciousness.

This essay focuses on the ontological and epistemological foundations. Subsequent essays will develop the operational tools⁽²¹⁾:

- The Universal Scale of Limited Precision (UC Scale), with its asymptotic center, modes of use, fractality, and Coherent Scaling Law.
- The model of 16 simultaneous structural functions $S(i)$, as a minimal basis for coding and analyzing coherent manifestations.
- The step-by-step protocol for measuring and validating coherence in real contexts.

These tools will make it possible to move from conceptualization to concrete application, always under the “fruit” criterion and with heuristic caution.

⁽²¹⁾ Parviainen & Koski (2021) discuss epistemic humility in institutional contexts, where pointing toward future operational tools (such as protocols or scales) helps move from theoretical foundations to concrete applications, while maintaining heuristic caution and openness to refinement. Parviainen, J., & Koski, A. (2021). *Towards an institutional account on epistemic humility and arrogance*. Social Epistemology Review and Reply Collective. <https://social-epistemology.com/2021/09/14/towards-an-institutional-account-on-epistemic-humility-and-arrogance-jaana-parviainen-and-anne-koski/>

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