Aviplestos

The Structural Tendency Toward the Not-Yet

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Working Paper — Preprint — Vietnam 2026b
Not peer-reviewed. Comments welcome.

Abstract

This paper describes an observation about the structure of existence: every entity, at every level of reality accessible to observation, exhibits a tendency toward configurations it does not yet occupy. This tendency — designated *Aviplestos* — is not a force, not an emotion, and not a teleological drive. It is a single structural vector: the tendency of an entity to lean toward the gap of highest gradient available to it under its current conditions, where the gradient terrain itself is shaped by the energy conditions, internal and external, under which the entity exists. The vector is fully reversible: when the conditions shift, the terrain reshapes, and the lean follows. The paper describes the gap as a relational feature of default existence, traces the epistemological consequences of this relational status, and anchors the observation alongside convergent accounts from the philosophical tradition, the contemplative traditions, and several well-established scientific mechanisms within which the same structural ground is recognisable. It then explores Aviplestos in cognitive development and socialization, introducing the concept of *gap substitution*, and explores structural implications across physics, biology, and psychology. The argument is presented as a personal observation by its author developed into a structural hypothesis: a description of a phenomenon perceived in reality, offered for scrutiny rather than asserted as established. *Aviplestos* is the companion paper to *The Synthetic Principle* (Huỳnh Mai Phúc, 2026a): where the Synthetic Principle describes *what* operates — the mechanism by which integration generates configurations irreducible to their components — the present paper describes *toward what* the operation tends, the directional condition under which integration is engaged. The two are not independent dimensions but two aspects of one operation.

Keywords: Aviplestos, ontological tendency, gap, gradient, structural tendency, directionality, gap substitution, synthesis, Synthetic Principle, philosophy of nature, epistemology, methodology.

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1. Introduction

1.1 Position Within the Research Programme

This paper is the second reading of a research programme whose first reading is *The Synthetic Principle* (Huỳnh Mai Phúc, 2026a). *The Synthetic Principle* describes the mechanism of ontological generation: the process by which discrete elements, integrated under conditions of sufficient complexity, generate configurations whose properties are irreducible to those of their components, and through which the successive levels of reality — from subatomic particles to consciousness — have come into being.

The present paper addresses a question that the *Synthetic Principle* deliberately leaves open: what dynamic feature of entities accounts for the fact that integration proceeds toward configurations not yet occupied rather than remaining at rest? Why does synthesis happen at all, rather than entities holding indefinitely at their current configurations?

The answer proposed here is not a causal explanation. It is a description of a structural feature of entities as such — a feature the author has observed across physical, biological, cognitive, and methodological domains, and which is here given the name *Aviplestos*.

The relationship between the two papers can be stated precisely, and it must be stated in the terms the corpus now uses rather than the terms an earlier framing reached for. The two are not separate dimensions standing at right angles — not a movement "between levels" set beside a movement "within a level," as though each owned an independent axis of one space. They are two questions asked of a single operation: the Synthetic Principle answers *what* operates, and the present paper answers *toward what* the operation tends. The Synthetic Principle describes the mechanism by which discrete elements integrate into configurations whose properties are irreducible to their components; the present paper describes the directional condition under which that integration is engaged at all — the lean of an entity toward the gap of highest gradient available to it under its conditions. The two are aspects of one operation seen from two sides, not independent coordinates: synthesis does not operate without something for it to lean toward, and the lean is not the integrating but the direction the integrating takes. Aviplestos is what makes synthesis reachable; the Synthetic Principle is what synthesis does when reached.

There is a boundary between the two papers that must be marked precisely, because it has been a source of confusion. *The Synthetic Principle* notes that the question of which configuration emerges from a given set of elements is shaped by environmental conditions and is not internal to the synthesis mechanism — and it gestures toward the present paper for the directional part of that account. The present paper supplies only one component of what that gesture covers: the *vector*, the lean toward the gap of highest gradient. It does not supply an account of which configurations persist once leaned toward, nor of how, among

the gradients present in a region, one comes to stand as the outcome. The latter is the account of *Potentamis and Fasaion* (Huỳnh Mai Phúc, 2026f); the present paper observes the lean and refers the coming-to-stand of the direction to that paper (§2.5). Aviplestos is the lean, not the account of how the lean's direction is established and held. This distinction is developed in Sections 2.4 and 2.5 and held throughout.

The present paper is one component of an interconnected system of articulations. It describes the directional condition under which synthesis is engaged; it does not articulate the mechanism of synthesis itself — that articulation is in *The Synthetic Principle*. It does not articulate how that mechanism operates when capacities meet, such that one configuration comes to stand as the outcome — and, in particular, how the direction this paper observes is itself established as such an outcome among the gradients present in a region; that articulation is in *Potentamis and Fasaion* (Huỳnh Mai Phúc, 2026f), and the relation is developed in §2.5. It does not articulate the cognitive procedure by which a cognizing entity arrives at observations of this directionality — that articulation is in *The Ontonoetic Pattern* (Huỳnh Mai Phúc, 2026c). It does not articulate the resolution-dependent character of articulation itself — that articulation is in *Patterns and Cognition* (Huỳnh Mai Phúc, 2026d). It does not articulate the passage of the mechanism through the regions within which directionality-aware cognition arises — that articulation is in *The Passage of Becoming* (Huỳnh Mai Phúc, 2026e). Reading the present paper in isolation captures only one aspect of an interconnected articulation. The system is the context within which the present paper makes sense. Each component holds open questions that other components address.

Neither paper in the pair is foundational to the other. They are two observations of the same phenomenal field, made from two different angles. The conceptual development here assumes familiarity with the *Synthetic Principle*'s account of substrate-neutral ontological levels; readers unfamiliar with that account may read it first, or may treat the necessary material as accepted for the purposes of the present argument.

1.2 A Note on What This Paper Is

This paper is a description. It describes a phenomenon that its author has observed in reality: that every entity, at every level of reality accessible to observation, exhibits a structural tendency toward what it does not yet have.

The author does not claim that this observation is the only possible observation of this phenomenon, nor that the terminology introduced here is the only adequate terminology. Other observers — in other traditions, at other times, from other positions — have described what appears to be the same phenomenon under different names and with different emphases. Section 4 of this paper acknowledges several such descriptions.

The paper does not attempt to refute, replace, or supersede any existing framework. It does not claim that its observation is more fundamental than any other. It claims only that the observation is genuine — that the phenomenon described is real — and that the description offered here captures a structural feature of that phenomenon that existing descriptions do not make explicit: *the gap*.

Two claims, distinguished. This paper makes two claims that should not be conflated.

The first is a **personal observation**: the author has observed, across the domains of reality accessible to him — physical, biological, cognitive, methodological — that entities exhibit a tendency toward configurations they do not yet occupy. This claim is grounded in direct observation and reflection. Its scope is the set of phenomena the author has examined; its warrant is the structural consistency the author has perceived across them. The first claim does not depend on the second; if the second claim turns out to be false, the first remains a record of what the author has observed.

The second is a **structural claim with universal scope**: the form of the tendency described — an entity, a configuration not yet occupied, a vector leaning from the one toward the other — is proposed to be a structural feature present within every phenomenon involving entities in interaction, at every level of reality. This claim extends beyond what any single observer has directly examined. It is offered as a hypothesis open to empirical and conceptual challenge. A single well-attested counterexample of an entity in interaction that exhibits no such tendency would falsify the universal scope. The first claim would survive such a falsification; the second would not.

The distinction matters because the two claims have different epistemic statuses and bear different burdens. The first is a phenomenological report; the second is a structural hypothesis. The paper proceeds by developing the first into the conceptual scaffolding of the second — but the second is offered for scrutiny, not asserted as already established.

Whether this description is best characterised as a proposition, a claim, an assertion, or something else entirely is a question for the reader. The author offers it as a personal observation, grounded in the structural evidence presented below.

1.3 Terminology: Aviplestos

The term *Aviplestos* /a.vi'ples.tos/ is a composite coined for this paper, combining elements from Latin and Greek:

- **Avi-** (from Latin *aviditās*): an intense reaching directed toward an object.
- **-plestos** (from Greek *πληστός*, verbal adjective from *πίμπλημι*, "to fill"): pertaining to filling.

Together, *Aviplestos* designates the structural tendency of any entity toward configurations it does not yet occupy — the intense vector toward filling, irrespective of whether that filling is ever completed.

A note on the morpheme *-plestos*. The familiar Greek adjective ἄπληστος ("insatiable") is formed by prefixing the alpha-privative (ἀ-, "not") to the same root. The privative form has been deliberately set aside here. The reason is structural: whether the gap can or cannot be exhaustively filled is a contingent property of particular gaps and particular entities — it is not part of the definition of *Aviplestos*. The phenomenon this paper describes is the **vector toward filling**, not the **(im)possibility of completion**. Aviplestos is operative whether the entity's reach is in principle completable or in principle not. Reserving the bare form *-plestos* keeps the question of completability open and locates it where it belongs: in the empirical investigation of specific cases, not in the definition of the structural tendency.

Aviplestos is a non-standard composite, blending Latin and Greek morphemes. The author takes responsibility for this coinage and does not claim that it functions as an independent lexical unit in either classical language. Existing terms in natural languages — *greed*, *desire*, *craving*, *wanting* — carry connotations specific to human psychology, morality, or social evaluation. *Aviplestos* is intended to operate at a level prior to these connotations: it names a structural feature of entities, not a psychological state of persons.

1.4 Methodology Note

The articulation offered here did not emerge through engagement with the philosophical literature on motivation, drive theory, or philosophy of action. It emerged from direct reflection on a question I found myself unable to set aside: why entities, observed across the levels accessible to me, exhibit a persistent tendency toward configurations not yet occupied. The question prompted the articulation; what I record here is what the articulation became.

To pursue the question, I drew on three sources. The first was direct observation of the tendency at scales I can attend to without instrumentation — my own cognitive activity directed toward unanswered questions, the integration of elements in daily life, the structure of movement through configurations of work, relationship, and inquiry. The second was descriptions of the tendency at scales I cannot attend to directly: accounts that physics, chemistry, and biology have produced of gradient-following and exploration behaviour at scales from particle to organism, alongside descriptions in contemporary commentary, journalism, and imaginative works. I treat such descriptions as observation mediated through the cognitive activity of others. The third source — engaged with only after the present articulation was complete — consists of named frameworks: formalized articulations by other cognizing entities of how the phenomenon I observe has been articulated before. Aristotle, Spinoza, Schopenhauer, Bergson, Heidegger, Friston, and the

figures discussed in Sections 4.1–4.3 entered this account through post-hoc comparison, not through prior reading.

The references discussed in Section 4 are offered not as sources of influence but as independent points of contact: places where other cognizing entities, working from different positions on the same reality, arrived at configurations the present account also identifies. Whether such convergences constitute evidence for the universality of the pattern, or represent the projection of a pattern observed at some scales onto descriptions provided at others, is a question this paper does not resolve.

A qualification regarding Buddhist concepts treated in Section 4.2: my exposure to those concepts has been through indirect cultural transmission — religious broadcasts, family discussion, social media — rather than through direct study of Buddhist philosophical texts. The convergences noted in §4.2 are therefore between the present articulation and Buddhist concepts as they appear in popular cultural circulation, not as a scholar of the tradition would engage with them. A specialist may identify nuances I have missed.

Two further qualifications concern Section 4.3. First, my exposure to the Darwinian account of natural selection has been through passive cultural circulation — general schooling, popular science as it filters into common knowledge — rather than through study of evolutionary biology as a discipline; the recognition recorded in §4.3 is of the structural ground in natural selection as it appears in common understanding, not as a specialist would frame it. Second, I encountered what physics calls the fluctuation-dissipation relation for the first time during the composition of the present paper, through ordinary-language description rather than through its mathematical formulation. The recognition recorded in §4.3 is therefore of the structural ground in the phenomenon as described in ordinary language; it is not an engagement with the relation as physicists state it, and a physicist may find the ordinary-language description imprecise. I cite no technical source for it, because I have engaged none.

This paper is written from a position I have committed to: not centering on human perspective as a privileged vantage point. I am a human cognizing entity using human language; this commitment cannot be perfectly executed. What I can do is name the commitment, attempt to maintain it through deliberate effort, and acknowledge that the resulting articulation may slip toward human-centered framing at points I have not noticed. The commitment is the position, not the achievement of it.

A note on the composition of this paper. The named frameworks and convergences that appear here as independent points of contact — Aristotle, Spinoza, Schopenhauer, Bergson, Heidegger, Friston, Ibn al-Haytham, Aryabhata, and the convergences with natural selection, the fluctuation-dissipation relation, and prediction-error minimisation discussed in §4.3 — were identified through discussion with an AI system after my philosophical

articulation was complete. I did not recognize these convergences from prior reading; the AI system surfaced them as I described my thinking, and I then verified each through direct reading before deciding which to include. The drafting of certain passages was also AI-assisted, with my review and approval of the final wording. The philosophical content — the observations, the structural distinctions, the conceptual moves — is mine; the assignment of specific historical or philosophical reference points to that content, and the prose drafting of some passages, is AI-assisted.

This articulation is written under a prerequisite stated in the Stachoria (Huỳnh Mai Phúc, 2026g, §0): that an observer determine, and declare, the region of conditions from which the observation is made, before any account built upon it has value. The gradient terrain toward which an entity leans is shaped by the energy conditions under which the entity exists — that is, by a region of conditions; which gap carries the steepest gradient is read within that region, and shifts when the region shifts. Honest determination of the region one is reading from is therefore the prerequisite of every claim that follows.

2. The Observation: Gap and Vector

2.1 The Central Proposition

The observation at the centre of this paper can be stated in a single sentence:

Any entity always tends toward something it does not have.

This is not a normative claim. It does not say that entities *should* tend toward what they lack, or that this tendency is *good*. It is a descriptive claim about the structure of existence: that to exist is to be in a state of incompleteness relative to configurations that are available but not yet occupied, and that this incompleteness is not a deficiency to be remedied but a permanent structural feature of being an entity at all.

The proposition applies at every level of reality accessible to observation. A particle in a potential-energy gradient tends toward a lower-energy configuration it does not yet occupy. A bacterium in a nutrient gradient tends toward a concentration it has not yet reached. A conscious agent tends toward knowledge, experience, or understanding it does not yet possess. A philosophical inquirer tends toward questions not yet asked.

In each case, the structure is the same: an entity, a configuration not yet occupied, and a tendency leaning from the one toward the other. The entity need not be conscious of the tendency. The tendency need not be experienced as desire, craving, or wanting. It need not be experienced at all. It is a structural feature of the entity's relation to its environment — a vector, in the mathematical sense: a quantity with both magnitude and direction.

2.2 The Gap

The proposition implies the existence of something toward which entities tend: a set of configurations not yet occupied. This paper calls that set *the gap*.

The gap is not a single object. It is an open set — a collection of configurations, states, relations, and possibilities that an entity does not currently instantiate. For a particle, the gap is the set of lower-energy configurations available given its current constraints. For a cell, the gap is the set of metabolic states, environmental positions, and reproductive possibilities not yet realised. For a conscious agent, the gap is the set of knowledge, experience, and understanding not yet acquired. For a philosophical inquirer, the gap is the set of questions not yet asked.

On the ontological status of the gap. The gap is neither a substance nor a fiction, and it is not something that comes into being. It is default existence at the ontological level of the entity, understood specifically in the relational sense: the differential between the entity's current configuration and the configuration space made available by the constraints governing its level. Three readings must be carefully distinguished. The gap is not (i) a modal fact in the

sense of possible-worlds Platonism — un-occupied configurations do not exist as abstract entities in a realm of possibility; nor is it (ii) an actual fact — un-occupied configurations do not subsist as alternative entities alongside the actual one. It is (iii) a relational fact: only the entity's current configuration and the structural constraints defining its level's configuration space exist; the gap is the differential between them. A hydrogen atom's gap is not a set of ghostly alternative atoms; it is the structural fact that, given the constraints governing atomic states, configurations other than the current one are not ruled out by the level's constraints. The gap obtains by virtue of the configuration space being structurally what it is — by virtue of the constraints permitting a range wider than the current configuration — irrespective of whether any observer represents it or any entity moves through it. This relational reading commits only to the structural reality of the constraint-space within which the entity is situated; it carries no commitment to the substance of un-occupied configurations.

The gap is therefore relative to ontological level, but not relative to observer. The configuration space of a given level is structurally given by the constraints operating at that level. The set of ontological levels itself is generated through synthesis (Huỳnh Mai Phúc, 2026a) — each new level brings its own default-existing configuration space into reality as the level comes into being — but within any level that has come into being, the gap is default existence, not generated existence.

As a structural relation, the gap is objectively real but lacks causal efficacy in the substance sense. Its closest analogue in the natural sciences is the **gradient**: a gradient is not a thing that pushes or pulls, nor is it produced by the system — it is the structural feature in terms of which the dynamics of entities within the field are described. *Aviplestos* is to the gap what motion-along-the-gradient is to the gradient itself: the dynamic aspect of a structural relation that is already there.

The gap has a critical property that follows from this relational status: *it cannot be observed directly.* One does not perceive the gap as an object in the world. One perceives only the actions by which an entity leans toward — or fills — some portion of the gap, and infers the gap's existence from those actions. This is structurally analogous to the observation of a black hole: a black hole cannot be seen directly; its existence is inferred from the behaviour of matter and radiation in its vicinity — the bending of light, the acceleration of nearby objects, the emission of radiation from the accretion disk. The gap, like the black hole, is known only through its field of influence — though, as with the gradient analogue above, the gap is itself not a causally efficacious entity but a structural relation through which the dynamics of an entity become legible.

On the multiplicity of gaps and the role of environment. The gap, as an open set of configurations not yet occupied, is not singular. An entity at any moment stands in relation to many configurations it does not occupy — many lower-energy states a particle could fall

to, many concentrations a bacterium has not yet reached, many states of knowledge a conscious agent could acquire. These configurations form not a single target but a landscape. Which configurations within this landscape are accessible from the entity's current position, and how steeply the gradient leans toward each, depends on the conditions in which the entity finds itself: the field structure constraining a particle, the chemical and energetic landscape surrounding a cell, the social and material context surrounding a cognitive agent. The conditions do not generate the gap — the gap is structurally given by the level's configuration space — but they shape the gradient terrain: which gaps are reachable, and which among them the gradient leans toward most steeply. The same elements under different conditions present different terrains: hydrogen and oxygen integrating into water, hydrogen peroxide, hydronium, or other configurations, depending on the conditions of integration. Aviplestos is the lean toward the gap of highest gradient in the current terrain; which configuration that is depends on the conditions, and changes when the conditions change.

Deacon (2011) has argued that absence — what is *not* present — can be constitutive of phenomena: that the constraints imposed by what is missing shape the dynamics of what is present. The concept of the gap shares this structural insight but differs in one respect. Deacon treats absence as causally efficacious — as exerting a kind of causal influence on present configurations. The present account makes a weaker and more precise claim: the gap is not causally efficacious in itself. It is a structural description of the relation between an entity's current configuration and the configurations available to it. Aviplestos — the lean toward the gap — is the dynamic aspect; the gap itself is the structural condition that makes Aviplestos legible.

2.3 The Epistemological Reversal

The standard account of wanting, lacking, or striving follows a particular epistemological order: first, there is a lack; then, the entity recognises the lack; then, the entity acts to fill it. *Lack → recognition → action.*

The observation presented here reverses this order. In the phenomena observed by the author, the sequence is: an entity leans toward something; and the act of leaning is what makes the gap legible as a gap. *Action → recognition.*

This reversal is not a minor adjustment. It has a structural consequence: it means that the gap is not a precondition for action but a post hoc description of what the action reveals. Entities do not first perceive a gap and then act; they lean, and through their leaning, a gap becomes nameable. The water does not "perceive" the lower ground before flowing downhill; the flowing is what reveals the gradient. The child does not "perceive" the unknown before asking a question; the asking is what constitutes the boundary of the known.

This reversal does not deny that conscious agents can and do represent their gaps explicitly — a scientist can articulate what she does not know and design experiments to fill that specific gap. But even this explicit representation is downstream of a prior, unreflective tendency toward the not-yet: the tendency that made the question possible in the first place. The epistemological reversal claims that this unreflective tendency is structurally prior to any reflective representation of the gap.

2.4 Aviplestos as Vector

Given the gap as structural condition and the epistemological reversal as the order in which the gap becomes legible, Aviplestos can now be defined with precision:

Aviplestos is the structural tendency of any entity to lean toward the gap of highest gradient available to it under its current conditions — the vector from current state toward the not-yet-occupied, observable not through direct perception of the gap but through the entity's leaning.

Three clarifications are necessary. First, Aviplestos is not a force in the physical sense. It does not add energy to a system or alter the fundamental equations governing the system's behaviour. It is a description of the directionality exhibited by entities within the constraints already governing them. Second, Aviplestos is not an emotion, a desire, or a psychological state. It operates at levels of reality — subatomic, molecular, cellular — where no psychology exists. At the cognitive level, Aviplestos may be experienced as desire, curiosity, or ambition, but these experiences are domain-specific manifestations, not the thing itself. Third, Aviplestos is not teleological. It posits no destination toward which entities are drawn, and it selects nothing and eliminates nothing. The gap is an open set, not a fixed target; the entity leans toward the gap of highest gradient under present conditions, and when those conditions change, the lean changes. The direction of Aviplestos is local, conditional, and reversible — never global, predetermined, or final.

A note on descriptive language. The discussion below sometimes uses comparative terms — *more differentiated*, *steeper*, *higher gradient* — to indicate direction or degree. These are intended descriptively, not evaluatively. They mark which configurations are leaned toward under which conditions; they do not suggest that the configurations leaned toward are *better*, *more advanced*, or *more optimal* — these would be human evaluations smuggled in alongside structural observation. The terms *higher entropy* and *lower-energy configuration* are retained as technical terms with their defined meanings in thermodynamics and mechanics; they are not evaluations. Where the language slips toward evaluation despite this disclaimer, the reader is invited to read the slip as a feature of writing within human cognitive limits, not as a feature of the structure being described.

One vector, many terrains. Aviplestos is a single vector — the lean toward the gap of highest gradient. What varies across cases is not the vector but the **gradient terrain**: the configuration of gaps and their relative gradients, shaped by the energy conditions, internal and external, under which the entity exists. The same vector, operating across different terrains, produces what appear to be different tendencies but are in fact one tendency leaning across different landscapes.

Consider a quantity of water. Where the water rests, in what system, under what energy conditions — these determine the gradient terrain, and the terrain determines which gap has the highest gradient.

In a closed system near thermodynamic equilibrium, with no sustained external energy input, the gradient terrain slopes toward lower-energy configurations. Water flows downhill; heat transfers from warmer regions to cooler; the system leans toward the lower-energy gap because, under these conditions, that gap is where the gradient is steepest. An observer, looking back, names the resulting configuration "equilibrium." But nothing has been removed: raise the temperature, introduce a sustained energy flow, and the terrain reshapes — the vector leans elsewhere. The configurations not currently leaned toward were never ruled out; they were simply not, under those conditions, the gaps of highest gradient.

In an open system far from equilibrium, sustained by a continuous flow of energy, the energy throughput reshapes the gradient terrain. Now the gap of highest gradient may be a configuration of more differentiated internal organisation — a convection cell, a chemical oscillation. The system leans toward it, not because it "seeks" differentiation, but because, under sustained energy flow, that configuration is where the gradient is steepest. Remove the energy flow and the terrain reverts; the vector leans back toward the lower-energy configuration. The differentiated configuration was never "selected" and the equilibrium configuration was never "eliminated" — each is simply where the gradient leans under its respective conditions.

In an information-processing system, the gradient terrain is the landscape of prediction error. The system leans toward the model-state that most reduces the discrepancy between its predictions and the signals it receives — the gap of highest gradient in this terrain. Change the environment, and the terrain of prediction error reshapes; the vector leans toward a different model-state. Here too, nothing is removed: model-states not currently leaned toward remain available, to be leaned toward again should the terrain shift back.

Across all three, the structure is identical: one vector (the lean toward the gap of highest gradient), one terrain-shaping condition (the energy conditions, internal and external, that determine which gaps carry which gradients), and full reversibility (change the conditions, reshape the terrain, and the vector leans anew). What an observer names "stable" is not a

configuration that won a competition by removing its rivals; it is a configuration that the gradient continues to lean toward because the conditions shaping the terrain have not changed. Stability is the persistence of conditions, read backward as if it were the persistence of a chosen state.

This is the deepest point at which the present account separates itself from teleology. There is no endpoint the entity is built to reach, and no rivals the entity removes along the way. There is a terrain, shaped by conditions; a vector, leaning toward the steepest available gap; and a reversal of the lean whenever the terrain shifts. "Optimal," "adapted," "equilibrium," "stable" — these are labels an observer applies, after the fact, to the configuration the gradient happens to be leaning toward. They are read backward, as results, not forward, as goals. The optimality is in the observer's evaluation; the lean is in the structure.

The cognitive terrain and the question "Why not?" The cognitive terrain admits of a further scope worth naming. When the lean is turned upon the methods of inquiry themselves, its characteristic linguistic form is the question *"Why not?"* — not as a rhetorical challenge but as a genuine methodological orientation. When a boundary is encountered — a limit of current knowledge, a conventional assumption, a disciplinary consensus — the lean at this meta-scope does not ask "Is this boundary valid?" (which accepts the boundary as the frame of reference) but "What lies across it?" (which treats the boundary as a gap not yet leaned toward). This orientation has been operative in consequential transitions across cultures. When Ibn al-Haytham, in early-eleventh-century Cairo, considered whether vision might be the eye receiving light from objects rather than emitting rays toward them, the question explored a configuration the inherited Euclidean–Ptolemaic terrain had not leaned toward. When Aryabhata, in late-fifth-century India, considered whether the apparent diurnal motion of the stars might be the Earth's rotation rather than the sphere's, the question opened a configuration the dominant cosmological terrain had not entered. What distinguishes productive from unproductive expressions of this orientation is not the opening of the question but the subsequent discipline of empirical and conceptual testing. "Why not?" is the opening lean of inquiry; it is a necessary but not sufficient condition of genuine discovery.

2.5 How the Direction Is Established: Aviplestos and Potentamis–Fasaion

The direction the entity leans is not given in advance of anything. This point is easily lost, because the vector can be named — "the lean toward the gap of highest gradient" — as though the gap leaned toward were fixed prior to the leaning. It is not. Within a single region of conditions — a single Stachoria (Huỳnh Mai Phúc, 2026g) — more than one gradient is present at once, each a gap of some steepness available under the conditions then holding. These coexisting gradients are not inert alternatives waiting to be chosen among; within the region they meet, and the gap of highest gradient is the one that comes

to stand. The direction of the lean, at any moment, is that standing gap. The vector does not carry its direction into the region from outside; the direction is what is established when the gradients present within the region meet under the conditions holding there.

That meeting, and the coming-to-stand of one configuration as its outcome, is the matter of the companion paper on Potentamis and Fasaion (Huỳnh Mai Phúc, 2026f), which describes how, when capacities meet within a region of conditions, a configuration comes to exist as the outcome and establishes the order that holds thereafter. The relation between the two papers is therefore not that of two mechanisms side by side. Aviplestos observes *that* an entity leans toward the gap of highest gradient; Potentamis and Fasaion describes *how* that direction is established — as the outcome of the interaction among the gradients present in the region. The one is the observation of the direction; the other is the account of how the direction comes to stand. This is the same relation the Synthetic Principle bears to Potentamis and Fasaion — *what* to *how* — read here at the establishing of direction rather than at the generating of a configuration.

The order of derivation must not be reversed by this. Aviplestos is an observation in its own right: that entities lean is something observed directly, not inferred from the account of interaction. Potentamis and Fasaion does not furnish a premise from which the lean is deduced; it furnishes the account of how the leaning that is observed comes about. What Aviplestos observes, Potentamis and Fasaion shows the operation of — not the other way around.

Two features of the lean already stated fall out of this relation rather than standing in tension with it. That the lean is reversible (§2.4) and that the gap leaned toward "selects nothing and eliminates nothing" are exactly what the outcome-character of a Fasaion requires: the gradient of highest steepness comes to stand under the conditions then holding, but the gradients not leaned toward are not removed — they remain present in the region, simply not, under those conditions, the gap of highest gradient. Change the conditions, and a different gradient stands, and the lean follows it. The reversibility of the vector and the condition-dependent standing of a Fasaion are one fact, read at two places: the configuration that stands is the outcome the interaction produces under the conditions holding, and it stands only for as long as those conditions continue to hold it.

3. Epistemological Constraints

3.1 The Observer's Irreducible Limitation

Any attempt to identify the gap of an entity other than oneself encounters an irreducible limitation: the observer does not have direct access to the internal states of the observed entity. The observer can perceive the entity's behaviour — its actions, its motions, its emissions — but cannot perceive the gap itself, because the gap is, by definition, what is *not* present in the entity's current configuration.

This limitation applies universally. A physicist studying a dissipative structure can measure the system's current configuration and its transitions but cannot directly observe the configurations not yet occupied toward which the system leans — only the leaning itself is observable. A biologist studying bacterial chemotaxis can measure run lengths and tumble frequencies but cannot directly observe what the bacterium has not yet occupied — only the directional bias of its motion. A psychologist studying human motivation can measure behaviour and self-report but cannot directly access the gap that the subject leans toward.

The limitation is not a contingent deficiency of current instruments or methods. It is a structural feature of the observation relation itself: to observe a gap would require perceiving what is absent, and perception, by its nature, operates on what is present.

3.2 Method of Inference

If the gap cannot be observed directly, how can it be studied? The method available is inference from the direction of the entity's leaning. By analysing the direction in which an entity absorbs information, energy, or material — the vector of its intake — the observer can reason backward to the gap toward which the entity currently leans.

This method is structurally identical to the method by which astrophysicists study black holes: not by observing the black hole itself but by observing the behaviour of matter and radiation in its vicinity and inferring the properties of the black hole from that behaviour. The method yields genuine knowledge — the existence and approximate direction of the lean — but the knowledge is always inferential, never direct. It carries irreducible uncertainty: the observer's model of the entity's gap is always an approximation, never a perfect replica of the gap itself.

3.3 The Self-Referential Structure

There is a further structural feature of the epistemological situation that deserves explicit statement. The effort to understand Aviplestos — to reduce the gap between what the observer currently knows about this phenomenon and what there is to know — is itself an instance of Aviplestos. The inquiry into the gap is itself a leaning toward a gap. The attempt

to reduce the error in one's model of another entity's gap is itself the observer's own lean toward a gap in its own configuration.

This self-referential structure does not invalidate the inquiry. It does, however, place a constraint on any claim to completeness: no description of Aviplestos can be final, because the act of describing it is itself an expression of the tendency it describes. The description is always partial — not because the describer lacks skill or resources, but because the structural condition of being an entity with gaps includes the gap between one's current description and the phenomenon being described.

3.4 The Case of the Photon: Epistemic Silence Is Not Ontological Absence

A foreseeable objection to the universal scope of Aviplestos concerns entities in minimal interaction: a photon propagating through empty space, interacting with nothing, apparently leaning toward nothing. If Aviplestos is claimed to be a structural feature present within every phenomenon involving entities, what is the photon's gap? What is it leaning toward?

The response requires distinguishing two claims that have already been separated in Section 1.2 and that bear different burdens here.

The first is the **ontological claim**: every entity, as such, stands in the structural relation that this paper calls *the gap* — the differential between its current configuration and the configurations available to it. This claim is structural and does not require observability. A photon in vacuo, on this claim, stands in such a relation even when no observer has access to it. The claim is open to challenge on conceptual grounds — by showing that the structural relation does not in fact obtain for some class of entities — but it is not refuted by the absence of observational data.

The second is the **epistemological claim**: where an entity is in observable interaction, *Aviplestos* — the lean through the gradient terrain — manifests through leaning that an observer can detect and from which the entity's gap can be inferred. This claim is observable and is testable against any case in which an entity in interaction is observed to exhibit no such tendency.

The photon-in-vacuo objection bears on the first claim, not the second. The objection asks: in the absence of interaction, is there still a gap? The structural answer is yes — the photon retains a configuration space — but the epistemological answer is that this gap is not currently observable. This is *epistemic silence*: the absence of evidence available to the observer. It is not *ontological absence*: the nonexistence of the structural relation in the entity. The distinction is identical in form to the case of a black hole in a region devoid of matter and radiation — undetectable, but not therefore nonexistent.

This separation has a methodological cost worth stating openly. The ontological claim, when defended this way, becomes locally unfalsifiable for entities in non-interaction: there is no observation that could refute it for such cases. This is not a defect to be hidden but a structural feature of the claim's scope. The claim is offered as a structural hypothesis whose evidential support comes from entities in interaction; its extension to entities in non-interaction is a conceptual extension by structural continuity, not an independently testable assertion. A reader who declines to grant this extension is welcome to read the universal scope as restricted to "every entity in interaction" without disturbing the substantive content of the paper.

4. Aviplestos and Other Observations of the Same Phenomenon

The phenomenon described in this paper has been observed by others. What follows is not a comparative analysis — not an argument that Aviplestos is superior to or more fundamental than these other observations — but an acknowledgement that multiple observers, working from different positions and at different times, have described what appears to be the same structural feature of reality, or have produced accounts within which that feature is recognisable.

The methodological status of the references in this section is established in Section 1.4: the figures and mechanisms discussed below were not influences on the present articulation but were examined after it was complete. The function of this section is not to situate the present account within an intellectual lineage but to acknowledge that the phenomenon has been observed before, and to clarify how the present account relates to each prior observation.

4.1 Observations from the Philosophical Tradition

Aviplestos and Aristotle's dynamis converge on the observation that entities are constituted in part by their orientation toward what they are not yet. The Aristotelian framework, particularly in its treatment of rational potentialities (Met. Θ.2, 1046b5, where rational agents are said to have power for either of contraries), already accommodates open potentialities for some classes of entity. The two observations differ not in the openness of potentiality but in two respects: first, Aviplestos describes a structural feature recognisable at every ontological level, whereas dynamis is articulated within the framework of substantial form; second, Aviplestos is explicitly decoupled from telos — the orientation is toward whatever gap carries the highest gradient under current conditions, not toward a predetermined actuality. Aristotle's observation and the present observation are recognisably co-observations of the same phenomenon, made under different framing assumptions.

Aviplestos and Spinoza's conatus converge on the observation of a tendency operative in all entities. Conatus, particularly in its application to thinking beings, already contains both persistence and extension: striving to persevere in being and, at the same time, striving toward more adequate ideas and extended power of acting (Ethics III, prop. 6–12). The two observations differ not in opposing persistence to extension — conatus already contains both — but in two respects: first, Aviplestos is articulated at substrate-neutral universal scope, applying to entities whose mode of being is not addressed within the Spinozistic framework (subatomic, chemical, dissipative); second, the present description is explicitly non-evaluative, where Spinoza's account is embedded in an ethics of adequate cognition. The two are co-observations made under different framing assumptions.

Schopenhauer (1818/1969) observed the phenomenon and described it as *Will* — a blind, purposeless striving that underlies all phenomena. Schopenhauer's observation emphasises the *suffering* generated by this striving: Will is the source of dissatisfaction, and the only release is the cessation of willing. The present observation does not share this evaluation. Aviplestos is not a source of suffering unless the entity judges its incompleteness as a deficiency. Aviplestos, as described here, is neither good nor bad; it is a structural feature of existence. The author's personal stance — which the reader is free to reject — is that this feature is better affirmed than lamented.

Bergson (1907/1911) observed the phenomenon in the domain of life and described it as *élan vital* — a creative impulse driving biological evolution toward configurations not previously occupied. Bergson's observation is close to Aviplestos in its emphasis on the tendency toward the not-yet, but its scope is limited to the biological domain, and it invokes a special vital force. Aviplestos is recognisable at every level — physical, biological, cognitive — and does not invoke a vital force distinct from the structural tendencies already present in physical systems.

Heidegger (1927/1962), in *Sein und Zeit*, described Dasein — the entity that we ourselves are — as constituted by structures of *Sein-zum* ("being-toward"): being-toward-the-world, being-toward-others, and most prominently being-toward-death. On Heidegger's account, Dasein is not first a self that then takes up attitudes toward what it is not yet; rather, the very being of Dasein is its projection toward possibilities it does not yet inhabit. This observation has direct affinity with Aviplestos at the cognitive level, and Heidegger's analysis of how the structure of being-toward is constitutive of Dasein anticipates the present claim that the lean toward the not-yet is not an attribute *of* the entity but is partly *what* the entity is. The present observation differs in scope: Heidegger restricts his analysis to Dasein, while the structural ground Aviplestos names is recognisable at every ontological level. Heidegger's account, on the present reading, is a precise description of that ground as it manifests in the entity capable of explicit relation to its own being.

4.2 Observations from the Contemplative Traditions

The contemplative traditions have observed this phenomenon with particular precision and have developed sophisticated terminologies for distinguishing its manifestations.

The Buddhist tradition distinguishes between *taṇhā* — craving rooted in the ego, directed toward the maintenance and aggrandisement of the self — and *chanda* — wholesome desire, the aspiration toward action, development, and service. Buddhism identifies *taṇhā* as the source of suffering and prescribes its cessation; *chanda* is preserved as the motivational basis for the path toward liberation.

The observation presented here does not adopt the evaluative framework of either concept. What interests the author is a structural observation: figures regarded as having attained liberation — the Buddha, the saints, the sages — are described in their own traditions as continuing to act: walking, teaching, serving, responding. If they had no lean toward anything — no tendency toward configurations not yet occupied — they would be inert. The fact that they continued to act is, on the present account, evidence that the structural ground was operative in them — not in the form of *taṇhā* (ego-directed craving) but in a form their traditions describe as purified, redirected, or universalised. The lean was not eliminated; its direction was refined — from the narrow (self) to the broad (all sentient beings, all existence).

4.3 The Structural Ground Within Known Scientific Mechanisms

A clarification must precede this section, because the convergences it records differ in kind from those in §4.1 and §4.2. The mechanisms discussed below — natural selection, the fluctuation-dissipation relation, and prediction-error minimisation — are not rival articulations of the same observation, as the philosophical figures were. They are well-established scientific accounts of specific phenomena at specific levels. What this section records is that within each of these mechanisms, the same structural ground that Aviplestos names is recognisable.

This requires a careful statement of what is and is not being claimed. Aviplestos does not generalise over these mechanisms; it does not encompass them; it is not a higher framework of which they are instances. Each mechanism is a complete account of its own phenomenon, with its own internal logic, and the present paper neither extends nor corrects any of them. The claim is narrower and runs in the opposite direction: within each mechanism, one can recognise a structural ground — a vector leaning toward the gap of highest gradient, a terrain shaped by conditions, reversibility when the conditions shift — that also appears in the others and at other levels. The relation runs from the mechanisms inward to the ground they share, not from Aviplestos outward to mechanisms it would govern. Aviplestos is the name for the ground, found within them; it is not a category that contains them.

In each case below, three things are held separate: the mechanism's own vocabulary; the structural ground recognisable within it; and the label an observer applies, after the fact, to the result.

Natural selection. The Darwinian account (its vocabulary: variation, selection, adaptation) describes how, in a population under environmental conditions, heritable variants that leave more descendants become more frequent. Within this account the structural ground is recognisable: organisms lean toward the configurations of highest gradient in the current environmental terrain, and "adaptation" is the label an observer applies, afterward, to the

configuration the population currently occupies. The reversibility is visible in the historical record. In the classic case of moths whose darker forms became more frequent as industrial soot reshaped the terrain, and whose lighter forms returned as the soot cleared, the lean shifted when the terrain shifted. The lighter forms were never eliminated in principle; under the soot-darkened terrain they were simply not the configurations of highest gradient, and they returned when the terrain returned. "Natural selection" is the mechanism's name for its own operation; the lean along a shifting gradient is the structural ground within it; "adaptation" is the retrospective label, mistaken for a goal when it is read as one.

The fluctuation-dissipation relation. (The status of this example is qualified in §1.4: I encountered this relation for the first time during the composition of the present paper, through ordinary-language description rather than its technical formulation. What follows is recognition of the structural ground in the phenomenon as described in ordinary language, not engagement with the relation as physicists state it.) In a system at thermal equilibrium, random fluctuations continually arise and dampen. Within this phenomenon the structural ground is recognisable: under the energy conditions of equilibrium, the gradient terrain slopes toward the uniform configuration, and the system leans toward it — fluctuations dampen not because they are removed but because, under equilibrium conditions, the uniform configuration is the gap of highest gradient. Change the conditions — sustain an energy flow — and the same system leans toward differentiated configurations instead (the dissipative-structure case of §6.1). "Equilibrium" is the label an observer applies to the configuration the system leans toward under equilibrium conditions; it is not a state that prevailed by removing fluctuations. The reversibility is intrinsic: the same system, under shifted conditions, leans elsewhere.

Prediction-error minimisation. Friston's (2010) Free Energy Principle (its vocabulary: prediction, error, free energy) describes biological systems adjusting their internal models to reduce the discrepancy between prediction and sensory signal. Within this account the structural ground is recognisable: the system leans toward the model-state of highest gradient in the terrain of prediction error, and "accuracy" is the label an observer applies, afterward, to the model the system currently holds. The reversibility is visible when the environment shifts: a model that reduced error under prior conditions no longer does, and the system leans toward a different model. The prior model is not eliminated; under the changed terrain it is simply not the model-state of highest gradient. "Prediction-error minimisation" is the mechanism's name; the lean along the error-gradient is the structural ground; "accuracy" is the retrospective label.

What these three share is not membership in a category called Aviplestos. It is that each, examined closely, exhibits the same structural ground: a vector leaning toward the gap of highest gradient, a terrain shaped by conditions, reversibility when conditions shift, and a

retrospective label that observers are tempted to read as a goal. Aviplestos is the name for that ground — found within these mechanisms, not imposed upon them. That the same ground is recognisable in a biological mechanism, a physical relation, and a cognitive principle is the reason the present paper proposes it as structural rather than domain-specific. It is also why the paper claims no more than recognition: the ground is in the phenomena; the name is the author's.

5. Aviplestos in Cognitive Development and Socialization

5.1 The Substitution of the Gap

At the cognitive level, Aviplestos — the lean toward the not-yet-known — is observable in its most vivid form in the open-ended questioning of children: the recursive *"why?"* that, left undisturbed, generates an expanding frontier of inquiry from any starting point. The observation presented here is that this tendency is not cultivated by education but is structurally present in cognitive agents from the start.

As socialization occurs, a psychological phenomenon is often recorded in many individuals: a sense of displacement, a feeling of disorientation, or an uncomfortable heaviness when striving to fulfill the expectations set by family and society. Under the structural lens of this paper, this phenomenon of being "lost" does not signify the disappearance or decline of the capacity to lean. Aviplestos — as defined — is an ontological vector that cannot be extinguished. The feeling of disorientation emerges when the gradient terrain is reshaped from outside: the lean is detached from the entity's endogenous epistemic gaps and redirected toward gaps that originate in external structures, because those external structures have reshaped the terrain so that the externally-defined gaps now carry the steepest gradient.

This process can be described as a *substitution of the gap*. The endogenous epistemic gaps (the entity's curiosity about the mechanisms of the world) are displaced as the steepest gradient by gaps that originate in educational and social structures. This reshaping of the terrain operates through at least three mechanisms.

The first mechanism is the premature closed answer. When a child's question is met with a definitive answer presented as terminal — *"Because that's how it is"* — the answer does not satisfy the gap but flattens the gradient toward further inquiry in that direction. The question is not answered; its gradient is flattened. The child learns not that the question has been resolved but that the terrain in that direction has gone flat. The endogenous gap remains, but the gradient toward it has been lowered relative to other directions.

The second mechanism is social cost imposed on questioning. In contexts where questions challenging consensus are met with ridicule, low evaluation, or exclusion, the terrain is reshaped so that the gradient toward such questions is lowered by the cost attached to them, while the gradient toward compliant directions is raised. The lean follows the reshaped terrain — not because the endogenous gap has vanished, but because, in the reshaped terrain, it is no longer the steepest gradient.

The third mechanism is the assessment system. When assessment raises the gradient toward reproduction of known answers and lowers the gradient toward generation of new questions, the entity's lean follows: from exploration (the lean toward the not-yet-known)

toward reproduction (recapitulation of the known). The grading system is, in the terms of this paper, an engineered gradient terrain. The entity still leans, still reaches; the lean is now toward the gap between a grade of 8 and a 10, because the terrain has been shaped so that this gap carries the steepest gradient.

The same pattern continues into adult socialization. Society continuously reshapes the terrain: the accumulation of resources, rungs on a status ladder, standards of physical appearance, professional milestones. Individuals who lean toward wealth or appearance are exercising the same vector as the questioning child; the terrain has been reshaped so that these gaps now carry the steepest gradient. They remain entities leaning toward a gap; what has changed is which gap the terrain makes steepest. And because the lean is reversible, a later reshaping of the terrain — through crisis, encounter, or deliberate reorientation — can return the steepest gradient to endogenous inquiry.

5.2 Alternative Accounts

The observation of gap substitution coexists alongside current psychological frameworks that address related phenomena, and the present paper acknowledges their explanatory contributions.

First, working memory limitations (Cowan, Baddeley) constrain the number and complexity of questions a developing cognitive agent can maintain simultaneously. Some questions are not asked not because the terrain has been reshaped but because they exceed the agent's current cognitive load capacity.

Second, executive function development (Diamond) constrains the capacity for inhibition of immediate answer-seeking. Holding a question open requires the ability to inhibit acceptance of a satisfactory answer. If executive function is insufficiently developed, the question does not arise — not because of substitution but because the cognitive architecture does not yet support it.

Third, Dweck's (2006) distinction between fixed and growth mindsets identifies a belief structure — the belief that abilities are fixed rather than developable — that can lower the gradient toward inquiry independently of external substitution. A fixed mindset does not redirect the lean from outside; it flattens the terrain from within.

This paper does not contradict or attempt to replace these models. Aviplestos provides a description of the structural vector — the lean toward the not-yet — that serves as the substrate on which these developmental and psychological constraints operate. It describes the entity's directionality across a gradient terrain, clarifying the orienting structure beneath both endogenous open-ended questioning and behaviour leaning toward substituted gaps.

6. Structural Implications

If we accept the structural ground that Aviplestos names as a valid descriptive lens, it provides a heuristic for reinterpreting phenomena across several scientific domains. Often, existing frameworks map a phenomenon up to a certain boundary and remain ambiguous about what happens beyond it. Reading these phenomena through the lens of vector-and-terrain allows the apparently anomalous to be brought into structural view.

The three sub-sections that follow examine domains in which existing frameworks describe phenomena up to the point of stable configurations but remain ambiguous about what occurs beyond those configurations. In each case, the vector-and-terrain reading offers a structural account.

6.1 Post-Stability Transitions in Dissipative Structures

The theory of dissipative structures (Prigogine & Stengers, 1984) describes how systems far from thermodynamic equilibrium, maintained by external energy flow, can transition to configurations of more differentiated internal organisation. The framework describes the emergence of such configurations and the conditions under which they are stable. It remains ambiguous, however, on whether a stable dissipative configuration is a terminal attractor — a configuration at which the system rests indefinitely under constant driving — or a configuration through which the system passes.

Viewed through the structural ground that Aviplestos names, the ambiguity reframes. A stable dissipative configuration is not an endpoint the system has reached. It is the gap toward which the gradient currently leans, under the current energy conditions. Its stability is the persistence of those conditions, not the removal of alternatives. The configuration space is not exhausted by the configuration currently occupied; other gaps remain, not leaned toward only because, under current conditions, they are not the gaps of highest gradient. Should the gradient terrain shift — through gradual internal accumulation, through drift in a driving parameter, or because several gaps of comparable gradient are accessible — the vector leans toward a different configuration. The system does not "leave" a state it was "trying" to maintain; the terrain shifts, and the lean follows.

This reframing maps onto observable phenomena. In a Bénard convection cell maintained under nominally constant external driving, transitions from steady rolls to oscillating patterns, or from periodic to quasi-periodic regimes, can occur. Under the present reading these are not the system departing from a state it sought; they are the gradient terrain offering gaps of comparable or shifting gradient, and the vector leaning among them. The configuration an observer called "stable" was where the gradient leaned; it was never where a competition ended.

6.2 Exploration Under Satiation in Bacterial Chemotaxis

Classical models of bacterial chemotaxis (Berg, 2004) describe exploration — the alternation between running and tumbling — as a response to chemical gradients. In uniform environments, adaptation mechanisms return the cell's behaviour to a baseline. Kussell and Leibler (2005) have shown that stochastic phenotype switching can maintain exploration in uniform environments as a strategy for coping with future fluctuations. In an environment uniformly saturated with nutrients and devoid of fluctuation, these frameworks might expect exploration to attenuate over evolutionary time, as its cost is not offset by benefit.

The structural ground Aviplestos names suggests a different reading. Even where the chemical gradient is flat — where the nutrient terrain offers no gap of differential concentration — the spatial terrain is not flat: there remain spatial configurations the organism does not currently occupy. The vector leans toward these spatial gaps. A basal rate of exploration would persist not as a residual survival mechanism but as the lean toward spatial configurations not yet occupied. With respect to nutrient concentration, the saturated environment is a configuration already occupied; with respect to spatial position, configurations not yet occupied remain, and the gradient toward them is not zero. The organism leans toward the spatial gap because, in the spatial terrain, it is a gap of nonzero gradient — independent of nutrient utility. This reading predicts that even in strains long evolved in uniform environments, where stochastic switching confers no advantage, a basal exploration would not vanish; the spatial terrain continues to offer gaps regardless of the nutrient terrain's flatness.

6.3 Voluntary Exit from Flow States

Flow theory (Csikszentmihalyi, 1990) posits an optimal state of experience characterised by complete absorption and intrinsic reward. Csikszentmihalyi's concept of complexification describes individuals seeking extended challenges after achieving flow — understood as seeking to maintain flow at an extended level, not to leave it.

The structural ground Aviplestos names offers a reading of a phenomenon flow theory does not centrally address: the voluntary departure from flow. Cognitive agents sometimes leave states of mastery — where prediction is accurate and performance fluent — to engage unfamiliar domains of high uncertainty, knowing this disrupts the flow state. Under the present reading, this is not a failure to maintain flow. In the agent's gradient terrain, the un-mastered domain is a gap; under certain conditions, the gradient toward that gap exceeds the gradient toward maintaining the current mastered state. The agent leans toward the un-mastered domain — not because it values difficulty over comfort, but because, in that terrain, the un-mastered gap is the gap of higher gradient. The lean is reversible: under different conditions — fatigue, threat, scarcity — the gradient toward the

secure, mastered state would exceed the gradient toward the unfamiliar, and the vector would lean back. What flow theory frames as a stable optimum is, under the present reading, where the gradient leans when conditions favour it; it is not a state the agent is built to remain in.

7. Toward a Formal and Empirical Programme

The preceding sections have applied the vector-and-terrain reading as a descriptive lens to reinterpret phenomena across cognitive development, physics, biology, and psychology. A robust structural description should ultimately possess generative capacity. The structural implications discussed in Section 6 — the post-stability transitions in dissipative structures, the basal exploration in satiated bacteria, the voluntary exit from flow states — are not merely exercises in reinterpretation. They point toward specific, measurable boundaries in reality.

While the present paper remains within the bounds of phenomenological description and philosophical observation, the implications derived here have the potential to be translated into formal models and testable hypotheses. The persistence of basal exploration in chemotaxis under conditions where stochastic switching confers no advantage, or the statistical dependence of flow-exit on the relative gradients of mastered and un-mastered domains, could be formalized and subjected to empirical testing to distinguish the vector-and-terrain reading from homeostatic or strictly adaptationist models. The substitution of the gap in cognitive development could similarly be operationalized: environments in which the three terrain-reshaping mechanisms identified in Section 5.1 are reduced should produce measurably different patterns of preserved open-ended inquiry, even after controlling for working memory capacity, executive function development, and mindset orientation.

That formalization and empirical translation, however, require a different methodological apparatus than the one employed here. The present paper concludes its work by establishing the conceptual foundation and the descriptive geometry of Aviplestos. The formalisation of these concepts, and their translation into a rigorous empirical research programme, will be the subject of subsequent work.

The question of how falsifiability should be specified across the substrate-neutral scope of Aviplestos — given that empirical conditions for falsification differ structurally across ontological levels — is the subject of a separate methodological work in this research programme.

8. Conclusion

8.1 Summary

This paper has described an observation: that every entity, at every level of reality accessible to observation, exhibits a structural tendency toward configurations it does not yet occupy. This tendency has been given the name *Aviplestos* and has been described as a single vector — the lean toward the gap of highest gradient — operating across gradient terrains shaped by the energy conditions, internal and external, under which an entity exists, and fully reversible as those conditions shift. The paper has introduced the concept of *the gap* — the open set of configurations not yet occupied within an entity's level-relative configuration space — and has argued that the gap is default existence at the entity's ontological level, objectively real but lacking causal efficacy, known only through the leaning and not through direct observation. It has been careful to distinguish three things that are easily conflated: the vector (Aviplestos, the lean); the structure of reality within which configurations persist or shift as conditions hold or change (which the paper observes but does not own); and the labels an observer applies afterward — "stable," "optimal," "adapted," "equilibrium" — which are retrospective evaluations, not goals the vector is drawn toward. The paper has anchored the phenomenon alongside observations by Aristotle, Spinoza, Schopenhauer, Bergson, Heidegger, and the Buddhist tradition, and has recognised the same structural ground within three well-established scientific mechanisms — natural selection, the fluctuation-dissipation relation, and prediction-error minimisation — being careful to claim that the ground is found within these mechanisms, not that Aviplestos encompasses them. By applying the vector-and-terrain reading, the paper explored structural implications across physics, biology, and psychology, and established a bridge toward future formalization.

8.2 Limitations

Two limitations deserve explicit acknowledgement.

First, as noted in Section 7, Aviplestos has been described here in conceptual and analytic terms. It has not been given a mathematical formulation. A formal representation — whether in the language of dynamical systems, information theory, or category theory — is a necessary future step to expose the framework to precise empirical evaluation. The present paper is offered as the conceptual foundation on which such formalisation can be built.

Second is the inherent limitation identified in Section 3.3: any description of Aviplestos is itself an instance of Aviplestos. The inquiry into the gap is itself a leaning toward a gap. This self-referential structure means that no description can be final — not as a rhetorical humility, but as a structural consequence of the phenomenon being described. The present

paper is offered as one observation from one position. The gap between this observation and the phenomenon it describes remains open. It always will.

References and Convergences

Programme Components

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Points of Ontological Convergence

The works listed below are not foundations on which the framework was built, but points at which the completed articulation was found to converge with the thought of others — identified and compared only after the theoretical framework was complete.

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