

Facetism: Overcoming the Determinism-Chaos Doctrine

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Portugal. 2026, February 15.

Abstract

This interdisciplinary study explores facetism as a novel methodological design to overcome the conventional scientific and philosophical framing of reality as a binary opposition between deterministic order and chaotic disorder, which facetism sees as a fundamental conceptual and linguistic error. Neither strict determinism nor true chaos exists in nature. Reality is continuous flux — perpetual movement and transformation at varying intrinsic speeds, governed by distinct yet interdependent principles across relational, multi-layered domains called facets. Apparent rest, stasis, equilibrium-as-stillness, and both order and chaos are optical delusions arising from human parametric misconceptions — our limited metrics, scales, models, and timescales that fail to capture the full dynamism of existence.

Facetism is a systematic, evidence-oriented methodology that rejects rigid universal equations and final theories, recognising that the number of relevant layers, their transformation speeds, and the intensity/direction of cross-layer interactions are fundamentally unknown and in principle unknowable. Models remain truncated approximations with a large, irreducible remainder. By prioritising relational, multi-scalar descriptions, facet-aware methodologies explicitly acknowledge layer-dependence, incorporate speed differentials, and remain open to principle bleed across boundaries.

This framework dissolves artificial binaries, reevaluates equilibrium as transient within permanent flux, and critiques philosophy's detachment from evidence that enables ideological persistence despite empirical failure. Facetism offers a humble, adaptive alternative — pro-evidence, pro-openness, and pro-relational understanding — capable of better grappling with the complexity of a flux-driven universe.

Keywords: facetism, continuous flux, multi-layered facets, parametric misconceptions, avoidance of stasis, relational domains, evidence-oriented methodology, interdisciplinary humility

Chapter 1: Rejection of the Order-Chaos Binary

This study is a sequel to “Introducing Facetism” by the same author and published on DeSci and Zenodo (Kayser, 2026; <https://doi.org/10.5281/zenodo.18500574>). It adopts a highly unconventional approach, deliberately reaching beyond traditional interdisciplinarity by drawing together insights from quantum physics, the theory of relativity, and socioeconomic phenomena. The motivation for this synthesis is twofold. First, it illustrates that facetism offers a broadly applicable methodology, one that can meaningfully address questions ranging from subatomic processes to large-scale social dynamics without being constrained by conventional disciplinary boundaries. Second, it serves as a critique of the longstanding tendency in academic research toward isolationism and excessive formalism. When disciplines treat their domains as self-contained, they frequently produce distorted or incomplete accounts of reality, overlooking the continuous, interconnected flux that characterizes all systems (Hayles, 1991; Crutchfield, 2012; Bishop, 2003; Prigogine and Stengers, 1984). By questioning these divisions, facetism seeks to show how artificial separations obscure the layered, dynamic character of the world.

The notions of “order” and “chaos” have occupied a central place in both scientific and philosophical thought for centuries, typically presented as mutually exclusive categories. Order is commonly understood as stable, predictable structure governed by fixed rules, while chaos denotes irregularity, unpredictability, and the apparent absence of underlying pattern. Facetism, however, regards this opposition as an anthropomorphic projection — a human-imposed framework that misrepresents the nature of reality itself (Leiber, 1998; Werndl, 2009). The binary is not simply a convenient heuristic; it constitutes a fundamental conceptual and linguistic error that continues to shape, and often limit, our understanding of complex systems.

To appreciate the depth of this problem, it is useful to trace the historical development of the order-chaos distinction. In classical mechanics, order was closely identified with Newtonian determinism: the universe was pictured as a vast, perfectly regulated mechanism in which every future state could, in principle, be calculated from complete knowledge of the present (Laplace, 1814/1961; SelfAwarePatterns, 2014). The famous image of Laplace’s demon — an intellect capable of foreseeing the entire future and past given the position and momentum of every particle — captured this ideal of perfect predictability (Laplace, 1814/1961; Bendell, 2025). Chaos, by contrast, was largely viewed as a secondary phenomenon, a kind of imperfection or external disturbance that could be set aside in the search for underlying laws.

The emergence of chaos theory in the twentieth century fundamentally challenged this picture. Building on early work by Henri Poincaré on the three-body problem and later developed through the contributions of Edward Lorenz and others, chaos theory demonstrated that even strictly deterministic systems could generate behavior that was effectively unpredictable over long timescales because of extreme sensitivity to initial conditions — popularly known as the “butterfly effect” (Lorenz, 1963; Stanford Encyclopedia of Philosophy, 2025; Crutchfield, 2012). These findings revealed that determinism and unpredictability were not necessarily incompatible.

Yet, while the descriptive insights of chaos theory — sensitivity to initial conditions, nonlinear amplification, and the emergence of complex patterns from simple rules — remain robust and widely

accepted (Crutchfield, 2012; Bishop, 2003), the label “chaos” itself has proved problematic. By characterizing such systems as chaotic, the term suggests an intrinsic disorder or randomness that is not actually present. In reality, the apparent irregularity often arises from the practical impossibility of measuring or controlling initial conditions with infinite precision, rather than from any fundamental absence of order (Leiber, 1998; Werndl, 2009). The underlying mechanisms remain fully deterministic in many cases, although quantum chaos introduces true indeterminacy (e.g., Berry, 1987); what is chaotic is our epistemic access, not the system itself.

Determinism, for its part, is equally open to question. The classical conception assumes a single, universal set of laws that dictate outcomes with iron necessity, leaving no room for genuine novelty or variation (Thevenot, n.d.). This view overlooks the multi-layered character of reality, where different principles govern different scales and contexts — from the probabilistic nature of quantum events to the curvature of spacetime described by general relativity (Einstein, 1916; arXiv, 2019; Bishop, 2003). In the socioeconomic realm, deterministic thinking often appears in the form of rigid ideological models that assume predictable responses to policy or structural change, ignoring the emergent, nonlinear dynamics of human behavior and institutions (Hayles, 1991; Bendell, 2025).

Facetism rejects the order-chaos binary as a false dichotomy. Nature does not oscillate between rigid structure and formless disorder; it operates through patterns and their interruptions, where even apparent breaks may conform to higher-order regularities within a layered, dynamic whole. This perspective finds support in quantum physics, where phenomena such as superposition and entanglement resist classical deterministic descriptions, and in relativity, where time and space are relative rather than absolute (Einstein, 1916; Stanciu, 2016). While broadly consistent with Einstein’s insight that physical quantities are relative to the observer’s frame of reference, facetism prefers the term “multi-layered” to capture the distinct yet interconnected principles operating across scales. As discussed in Chapter 4, even well-established equations such as $P = W / t$ (power equals work divided by time) exhibit both functional validity and significant limitations, depending on the layer and context under consideration. Socioeconomically, facetism highlights how misleading binary distinctions such as left versus right obscure the deeper mechanisms by which collectivist systems impose artificial uniformity, suppress individual and systemic flux, and ultimately produce widespread failure — a pattern examined in detail in Chapter 7 (Bendell, 2025).

The consequences of adhering to the order-chaos framework are far-reaching. By encouraging the isolation of disciplines, it reinforces the treatment of knowledge domains as independent silos rather than as facets of a single, interconnected reality. Quantum mechanics, for example, uncovers probabilistic flux at microscopic scales, while relativity describes macroscopic spacetime curvature; yet conventional approaches frequently resist integrating these perspectives (Leiber, 1998; Werndl, 2009). Similarly, in economics and sociology, reliance on linear or deterministic models often fails to anticipate the nonlinear, emergent behavior of social systems, contributing to policy missteps and systemic crises (Hayles, 1991; Crutchfield, 2012; Bishop, 2003).

Facetism therefore calls for a fundamental reorientation: once the order-chaos binary is recognized as a product of parametric and conceptual limitations, it becomes possible to develop a more accurate and unified ontology. The deliberate combination of insights from quantum physics, relativity, and socioeconomic analysis in this study is intended to illustrate both the broad reach of facetism and the

distortions that arise when disciplines remain artificially separated. In the chapters that follow, the focus shifts to flux itself — the true underlying reality — and to the need for conceptual tools capable of capturing its continuous, multi-layered character.

Chapter 2: Flux as the Fundamental Reality

Building on the rejection of the order-chaos binary established in Chapter 1, this chapter develops the central ontological claim of facetism: reality is continuous flux — perpetual movement and transformation at varying speeds, governed by distinct yet intertwined principles across multiple layers (facets). There is no rest in any absolute sense, and the very idea in itself is paradoxical, if not absurd. What appears as rest or stability is an optical delusion, akin to a photograph capturing a single instant and presenting motion as frozen stillness. This illusion arises from the mismatch between human observational timescales and the intrinsic speeds at which different existences unfold.

However, the paradox or absurdity lies deeper: the very construct of time makes rest a logical impossibility. If something could indeed “rest” — meaning undergo zero change in its own state — time would still pass for it, as external events continue and it ages or interacts with its surroundings. Upon “ending” the rest, it would no longer be what it was, having been altered by the passage of events (or “time,” if one prefers). Thus, rest is self-contradictory: it requires a timeless state within a temporal universe, where even the briefest pause implies transformation through aging, decay, or relational shifts with the environment. Any attempt to posit absolute rest collapses under the reality of ongoing flux. This paradox echoes ancient philosophical debates, particularly Zeno of Elea’s arguments against motion and change. In his famous arrow paradox, Zeno contended that at any given instant, an arrow in flight is at rest, occupying a space equal to its own dimensions; since time consists of instants, the arrow must always be at rest, rendering motion illusory (Plato, trans. Fowler, 1925; Stanford Encyclopedia of Philosophy, 2021). Facetism inverts this: if rest were possible, time’s relentless flow would undermine it, as the arrow (or any entity) cannot escape the cumulative effects of surrounding flux. Parmenides, Zeno’s teacher, similarly denied change altogether, arguing that being is eternal and unchanging, with time and motion as mere appearances (Kirk, Raven and Schofield, 1983). Facetism counters that such denials stem from parareal assumptions — logic that freezes flux into static instants, ignoring the continuous, relational nature of reality.

A similar intuition emerges in Daoist thought, where time is not linear or uniform but cyclical and relational, embedded in the constant flux of the Dao. The Daodejing portrays the universe as perpetual transformation: “The Dao gives birth to the One; the One gives birth to the Two; the Two gives birth to the Three; the Three gives birth to the myriad creatures” (Laozi, trans. Lau, 1963, ch. 42). All things arise from and return to the Dao’s flow, with no true stasis — even apparent stillness is part of the interplay of yin and yang, where opposites generate mutual change (Chan, 1963). Zhuangzi extends this, emphasizing interconnectedness: “The universe is the unity of all things... All things are in a state of flux” (Zhuangzi, trans. Graham, 1981, ch. 2). In Daoist thought, each entity’s “time” is shaped by its relations and impacts on others; a rock’s slow erosion influences soil and ecosystems over eons, just as human actions ripple through social layers. This mutual influence means different existences follow divergent timelines, confirming that rest is impossible — any pause would disrupt the web of

transformations, altering the “resting” entity through external flux. While Daoism does not formulate this in the exact terms of relativity or layered flux, the underlying intuition — that time and change are relational, not uniform or absolute — is strikingly similar (Leong, 2024). Facetism extends this insight systematically: the mutual impacts among existences do not merely influence spatial arrangement or causal chains; they also generate distinct temporal experiences across layers.

The crucial insight here concerns speed and its profound implications. Different modes of existence are bound to different intrinsic speeds of transformation. These speed differentials do not merely affect how we perceive change; they effectively alter the experience and measurement of “time” itself to the point that the term “time” — understood as a uniform, universal parameter — becomes practically useless as a descriptor of reality across layers (Einstein, 1905; Le Poidevin, 2019). For example, to human perception, a rock appears stable and unchanging, perhaps even in a state of homeostasis. Yet from the perspective of its own processes — formation through sedimentation and volcanism, gradual erosion, tectonic shifts, and eventual disintegration or incorporation into new geological structures — millions or even billions of years may elapse. However slow this transformation appears on a human timescale, it remains genuine movement and thus flux (Gould, 1987; Smolin, 2013). The rock is never static; it is always in process, even if the pace is imperceptibly slow relative to our own.

This observation becomes even more striking when particle-level reality is taken into account. At the quantum scale, particles and fields exhibit extraordinarily rapid fluctuations — virtual particles appearing and annihilating in femtoseconds, wave functions evolving continuously, and quantum fields permeating all space with ceaseless activity (Feynman, 1965; Peskin and Schroeder, 1995). These micro-scale processes are not “below” or subordinate to macro-scale phenomena; they are co-constitutive. The apparent stability of a rock (or a human body, or a society) emerges from the averaging of countless high-speed particle interactions. To ignore this particle-level flux is to adopt an immature formulation of science — one that treats macro-level stability as ontologically primary rather than as a transient, emergent approximation (Prigogine and Stengers, 1984; Laughlin, 2005).

The relativity of time further underscores this point. Albert Einstein’s theory of special relativity demonstrates that time is not absolute but relative to the observer’s state of motion (Einstein, 1905). In the famous thought experiment known as the twin paradox, one twin remains on Earth while the other travels at relativistic speeds; upon return, the traveling twin is younger, having aged less due to time dilation (Einstein, 1905; Ohanian, 2008). Popular explanations sometimes frame this as “living faster equals living longer” — the faster-moving twin experiences less proper time, effectively extending their lifespan relative to the stationary twin (Stuver, 2015). While the popular phrasing is imprecise (it is not “living faster” in a biological sense but experiencing slower time passage), the core insight is profound: different velocities produce different elapsed times. This relativity of time aligns closely with facetism’s emphasis on speed differentials across layers. Each existence follows its own timeframe, shaped by its intrinsic dynamics and interactions with surrounding systems.

These relational and speed-dependent aspects of time both confirm and negate familiar physical concepts, such as the classical definition of power as work divided by time ($P = W / t$). In human-scale engineering and mechanics, the equation is undeniably functional and empirically reliable (Feynman, Leighton, and Sands, 1963). Yet its validity is layer-dependent. At relativistic speeds or across vastly different flux rates, the assumption of a uniform “t” becomes questionable — time is no longer a simple

scalar parameter but a relational outcome of speed and frame (Einstein, 1905). Moreover, as argued in prior work by the author, efficiency should not be compressed into a single point value but understood as a dynamic range, reflecting the nonlinear, context-sensitive nature of real systems (Kayser, 2025; see also Raoult, 1887/1898 for early critiques of linearity in complex solutions). When flux speeds diverge radically between layers, dividing work by a presumed universal time risks introducing parareal artifacts — apparent precision that masks deeper relational dynamics.

In summary, reality is always in flux, with no true rest or stasis. What we perceive as stability is an artefact of mismatched timescales and selective attention. Homeostasis, like absolute nothingness, is impossible — a human construct born of language, mathematics, and logic that has no counterpart in the continuous transformation of nature. By centering particle-level flux and acknowledging the relational, speed-dependent character of time, facetism calls for a thorough redefinition of sciences that have too long treated macro-stability as ontologically fundamental. This reorientation dissolves many outdated assumptions and opens the way for a more accurate, multi-layered understanding of the world.

Chapter 3: Multi-Layered Facets and Intertwined Principles

In facetism, reality is understood through **facets** — distinct yet relational domains or layers, each defined by its own primary principles that govern how flux manifests within them. These facets are not isolated compartments but form a continuous tapestry of existence, where principles from one layer influence and interact with those of others. This multi-layered structure challenges reductionist views that seek to explain all phenomena through a single foundational level, such as particle physics, or holistic approaches that overlook the specificity of individual domains (Dupré, 1993; Cartwright, 1999). Instead, facetism emphasises the interdependence of layers, where the whole emerges from their dynamic interplay without one dominating the others.

Consider, for example, the quantum facet at the particle scale, characterized by principles like uncertainty and superposition (Heisenberg, 1927; Schrödinger, 1935). Here, entities can exist in multiple states simultaneously until observed or measured. At the human or macroscopic scale, classical mechanics prevails, with principles such as gravitational attraction providing apparent predictability and stability (Newton, 1687). Thermodynamic layers introduce entropy as a driving force toward dissipation and increased disorder, while biological facets add principles of adaptation, reproduction, and selection (Darwin, 1859; Prigogine and Stengers, 1984). These examples illustrate that facets are not hierarchical or reducible to one another; they coexist and co-evolve, with no single facet holding explanatory primacy.

The intertwined nature of these facets is evident in how principles "bleed" across boundaries, creating emergent complexities that defy simple categorization. Human-scale reality (where gravity and classical mechanics dominate everyday experience) and particle-level reality are not separate realms but continuous aspects of the same flux-driven fabric. The apparent complexity or predictability of a system often depends on which facet the observer privileges through their choice of metrics, scales, or models. Facetism exposes this as a parametric artefact rather than an inherent property of nature.

A compelling illustration of these multi-layered dynamics is Schrödinger's famous cat thought experiment, originally proposed to highlight what its creator saw as the absurd consequences of applying quantum superposition to macroscopic objects (Schrödinger, 1935; Gribbin, 1984). In the setup, a cat is sealed in a box with a radioactive atom, a Geiger counter, a hammer, and a vial of poison. If the atom decays (a quantum probabilistic event), the counter triggers the hammer to release the poison, killing the cat. According to the Copenhagen interpretation prevalent at the time, until the box is opened and observed, the atom exists in superposition — both decayed and not decayed — implying the cat is simultaneously alive and dead (Bohr, 1928; Heisenberg, 1927).

Facetism fully acknowledges this superposition within the quantum facet: the system exists in multiple potential states, reflecting the probabilistic principles governing subatomic events (Schrödinger, 1935; Bohr, 1928). However, facetism extends the analysis beyond this binary (dead/alive) by introducing additional layers where such distinctions lose all relevance. For instance, if we open the box a year later, the cat is dead because it will have starved, regardless of the quantum event — a macroscopic biological constraint overriding the superposition (Gribbin, 1984). Opening the box millions of years later would reveal neither a preserved dead cat nor a living one, but dust — if even that. The remains of everything inside the box — cat, atom, hammer, poison, air molecules — will have undergone relentless transformation, decayed into radiation, dispersed through entropy, or reincorporated into new molecular structures via biological, chemical, or geological processes (Prigogine and Stengers, 1984). The box itself, unless magically preserved, would long since have corroded, collapsed, or been eroded away. Reality knows no frozen quantum state; particles continue to change on timelines far beyond human comprehension. All existence transforms constantly and into different existences, not only rendering the original dead/alive dichotomy irrelevant in the broader arc of flux but showing how neither prediction nor post-diction are viable options once we leave the short moment of time in which we feel sure about making claims.

While this long-term perspective might seem utterly irrelevant to Schrödinger's illustration, it highlights a key limitation: scientifically, we may not be equipped to forecast outcomes due to the chaotic complexity of sheer endless possibilities, but we are theoretically able to trace events back. Practically, however, we cannot extract all relevant impacts, and this follows that we not only cannot say if the cat is dead or alive, we also have no indication of the before and after which would determine any probable event — neither in the short timeline to which Schrödinger refers, nor in the extended timeline we add. Time is therefore not only not helpful, it is irrelevant at most, if not all levels and layers of our multifaceted reality.

This perspective draws parallels to Daoist philosophy, where the universe is seen as an interconnected web of mutual influences, with no isolated entities or fixed states (Laozi, trans. Ames and Hall, 2003; Zhuangzi, trans. Graham, 1981). In Daoism, all things arise from the Dao's constant flow, and distinctions like life/death are transient aspects of yin-yang interplay, dissolved in the greater harmony of transformation. Similarly, in facetism, the cat's fate is not a standalone event but part of a relational continuum, where impacts from preceding and subsequent layers propagate across timelines, making any binary resolution fleeting. How many times has archaeology erred in reconstructing past states due to incomplete causal chains (Binford, 1981)? Was there a Big Bang before the Big Bang, and if so, what preceded that (Guth, 1981; Carroll, 2010)? We have no way of understanding what happened a

million years before closing Schrödinger's box; we then have no way of saying if the cat is dead or alive, and we have no way of saying what would be in the box a million years later. No matter the point in time, our epistemic access is profoundly limited by the multifaceted nature of reality.

Schrödinger intended the cat to expose a logical flaw in extending quantum principles to macroscopic scales, often interpreted as a critique of the observer's role in wave function collapse (Schrödinger, 1935; Wigner, 1961). Facetism reframes this as pointing to a deeper issue with time: the experiment assumes a discrete sequence of events with clear beginnings (sealing the box) and ends (opening it), but in flux reality, time has no specific origin or termination. Due to perpetual flux, states before and after any event are indeterminable for us in absolute terms. The chain of events preceding the cat's fate — from the radioactive atom's formation in stellar nucleosynthesis billions of years earlier, through geological and chemical processes that assembled the box and its contents, to the moment of sealing — determines the outcome, yet that outcome is ongoing, rippling through subsequent layers without closure (Smolin, 2013; Rovelli, 2004). This indeterminacy arises from the multifaceted feature of reality: each facet operates on its own principles and timescales, with mutual influences creating emergent timelines that defy linear sequencing. For instance, the quantum layer's superposition may resolve (appear to collapse) instantaneously upon measurement or decoherence, but thermodynamic dissipation continues unabated, entangling the system irreversibly with environmental flux (Zurek, 2003). Relativity adds another dimension: time dilation means different observers (e.g., one near a strong gravitational field) experience the "chain" of events at varying rates, further blurring beginnings and ends (Einstein, 1905; Ohanian, 2008).

Whether the box is opened or not, whether an observer intervenes or not, the cat is either dead or alive in any given macroscopic frame — yet facetism shows that this apparent certainty dissolves across layers. While the example powerfully demonstrates the limits of deterministic science, it also reveals that no actual chaos is at play; what appears chaotic is the amplification of initial conditions across intertwined facets, not an inherent absence of structure.

The transformation of the cat's state is both determined and chaotic, depending on viewpoint and facets. From a classical facet, the decay event follows a probabilistic but causal path; from a quantum perspective, it embodies inherent uncertainty; and from a thermodynamic or cosmological layer, it is subsumed into irreversible dissipation or cosmic evolution (Prigogine and Stengers, 1984; Carroll, 2010). Facetism thus resolves the paradox by situating superposition as valid but limited to its layer, transcended by higher facets where flux erases macroscopic distinctions. This not only accommodates the cat being both dead and alive but renders the binary irrelevant in the long arc of transformation, exposing how our linguistic and conceptual tools impose artificial boundaries on a seamless reality. As subsequent chapters will explore, such reevaluations extend to parametric tools and equilibrium concepts, revealing how human-imposed binaries distort our grasp of an inherently layered, flux-driven universe.

Chapter 4: Parametric Misconceptions and the Cycle of Illusion

The preceding chapters have established flux as the fundamental reality (Chapter 2) and introduced facets as the relational, multi-layered structure through which flux manifests (Chapter 3). This chapter examines how human knowledge generation systematically distorts this reality — not through malice or incompetence, but through **parametric misconceptions**: the inevitable limitations and biases built into our observational tools, measurement scales, mathematical models, and conceptual frameworks. These misconceptions produce a recurring cycle of illusion — phenomena first appear chaotic (unpredictable, disordered), then seem deterministic (predictable, rule-bound) as better parameters are found, only to reveal new layers of complexity that again appear chaotic. This oscillation is not evidence of shifting ontological states (true chaos alternating with true determinism) but a recurring artefact of our incomplete and layer-dependent parametric choices.

Parametric misconceptions arise because every act of observation, measurement, or modeling requires selecting a subset of reality — a particular scale, resolution, timeframe, coordinate system, or mathematical form. These selections are never neutral; they privilege certain facets while obscuring others (Cartwright, 1999; Dupré, 1993). In physics, for example, classical mechanics provides excellent predictions at human scales using simple, deterministic equations such as $F = ma$ or $P = W / t$ (Newton, 1687; Feynman et al., 1963). Yet these equations fail dramatically when applied to relativistic speeds, strong gravitational fields, or quantum regimes (Einstein, 1905; Heisenberg, 1927). The apparent success of determinism at one layer masks the deeper flux that becomes visible when the parameters change — when speeds approach c , when gravitational curvature dominates, or when Planck-scale uncertainty takes over.

The power equation $P = W / t$ offers a particularly instructive case. In engineering and everyday physics, it is undeniably functional: power is work performed divided by the time taken (Feynman et al., 1963). Yet, as argued earlier, every element of this relation is questionable when viewed across facets. Work (W) presupposes a well-defined force and displacement, concepts that become ambiguous near relativistic speeds or in strong gravitational fields (Ohanian, 2008). Time (t) is not a universal scalar but a frame-dependent quantity subject to dilation (Einstein, 1905; Le Poidevin, 2019). Dividing by t assumes time is a homogeneous background parameter, but in a flux ontology with varying intrinsic speeds across layers, time is relational and emergent from interactions, not a fixed denominator (Rovelli, 2004; Smolin, 2013). As shown in prior work by the author, efficiency in complex systems should not be compressed into a single point value but understood as a dynamic range, reflecting nonlinear, context-sensitive behavior (Kayser, 2025). This echoes earlier critiques of linear mathematics in chemistry and physics, such as Raoult's recognition that solution properties deviate from ideal linearity at higher concentrations (Raoult, 1887/1898; Prigogine and Stengers, 1984). The equation $P = W / t$ is therefore both indispensable in its proper domain and misleading when exported beyond it — a perfect example of a parametric tool that creates parareality by imposing artificial uniformity on layered flux.

This pattern repeats across disciplines. In meteorology, linear models of atmospheric dynamics produce short-term forecasts that appear deterministic, yet longer-term predictions reveal chaotic sensitivity to initial conditions (Lorenz, 1963; Crutchfield, 2012). In economics, linear regression and equilibrium models yield apparently orderly predictions of growth or inflation, until nonlinear feedback loops and

emergent social behavior render them unreliable (Arthur, 2015; Beinhocker, 2006). In biology, homeostatic models treat physiological systems as self-regulating equilibria, yet the underlying cellular and molecular flux — operating at vastly different speeds — shows that stability is only apparent, maintained by continuous adjustment and dissipation (Prigogine and Stengers, 1984). Each time a new layer or higher resolution is considered, the previous deterministic picture gives way to apparent chaos, only for further refinement to restore a temporary sense of order — until the next layer is revealed.

This cycle is not accidental. It is the direct consequence of parametric choices that necessarily select a subset of reality. By choosing a particular timescale, spatial resolution, or mathematical form, we inevitably privilege certain facets and obscure others (Cartwright, 1999). The result is a parareality — an artificial overlay of concepts, equations, and categories that distorts continuous flux into discrete, binary, or static forms. Over-reliance on linear mathematics forces us to accept “chaos where there is no chaos,” mistaking modeling inadequacy for inherent disorder (Leiber, 1998; Werndl, 2009). The same applies to temporal assumptions: treating time as a uniform, universal parameter creates the illusion of discrete beginnings and endings, even though flux has no such boundaries (Rovelli, 2004; Smolin, 2013).

The cycle of illusion manifests most clearly when we move between layers. At the quantum facet, superposition and uncertainty appear chaotic from a classical perspective; yet when averaged over macroscopic ensembles, classical predictability emerges — only for relativistic or cosmological scales to reintroduce complexity that again appears chaotic (Zurek, 2003; Carroll, 2010). Socioeconomically, linear policy models assume deterministic outcomes (e.g., tax rate changes predictably affecting growth), yet real-world feedback loops and emergent behaviors produce unpredictable results — until new parameters (e.g., behavioral economics data) seem to restore order, only for unforeseen crises to reveal yet more layers (Arthur, 2015; Bendell, 2025). Each step in the cycle reinforces the parametric nature of our knowledge: what we call order or chaos is never absolute, but always relative to the chosen facet and measurement frame.

Facetism therefore calls for a radical shift in how we approach modeling and understanding: principle over formula, movement over number, interdisciplinarity over isolationism. Rather than seeking a single “correct” parameter set or universal equation, facetism advocates for facet-aware methodologies — models that explicitly recognize their layer-dependence, incorporate speed differentials, and remain open to the bleeding of principles across boundaries. This requires abandoning the search for a final, all-encompassing theory in favor of relational, multi-scalar descriptions that reflect the continuous, interconnected flux of reality. As the following chapters will show, such an approach not only dissolves artificial binaries but also re-evaluates core concepts like equilibrium, prediction, and causation in light of inherent dynamism.

One may reasonably ask: “But why change course now? Haven’t we made tremendous progress using conventional methods?” The answer is yes — we have. Computers, automobiles, satellites, space stations, and countless technological achievements stand as undeniable evidence of success. Yet progress in one domain does not guarantee progress in all. Consider the persistent shortcomings of mainstream macroeconomic frameworks: Keynesian demand management and the widespread use of quantitative easing were intended to stabilize economies and promote growth, yet they have contributed to chronic inflation, ballooning public debt, structural imbalances, rural exodus, unsustainable pension

systems, and failing healthcare models in many advanced economies (Werner, 2014; Werner, 2018; Hudson, 2015).

A particularly instructive contrast emerges when comparing the track records of two prominent economists. Dr. Richard Werner, widely recognized as a pioneer of evidence-based economics and the quantity theory of credit, has consistently and accurately anticipated the limitations of interest-rate-based monetary policy in stimulating real economic growth (Werner, 1997; Werner, 2014). In his 2018 study, Werner demonstrated that excessive credit creation — often driven by central bank policies — produces asset inflation and economic stagnation regardless of interest-rate levels, a result that directly contradicts mainstream expectations (Werner, 2018). By contrast, Nobel laureate Paul Krugman has repeatedly erred in forecasting inflation trajectories, growth outcomes, and the consequences of monetary expansion, often attributing persistent problems to austerity measures — which are effects rather than causes — while defending equilibrium-based models that underestimate the role of credit creation in driving debt and inflation (Krugman, 2012; Werner, 2016).

The difference is methodological. Werner treats money creation, banking, markets, technology, and social institutions as parts of a larger, continuously interacting system characterized by flux rather than fixed formulas. His approach is interdisciplinary, empirically grounded, and open to revision based on evidence — resulting in remarkably accurate approximations and predictions (Werner, 2014; Werner, 2018). Krugman, by contrast, tends to operate within officially sanctioned equilibrium models that assume linear responses, rarely questioning foundational assumptions about money, credit, or systemic feedback (Krugman, 2012). The outcome is stark: by 2026, many of the world's largest economies face unprecedented debt burdens, rapid deindustrialisation, and structural imbalances whose social and economic consequences — declining living standards, eroded social cohesion, and diminished trust — are difficult to justify on ethical grounds.

Facetism directly counters these developments. By rejecting parametric isolationism and embracing relational, multi-scalar descriptions, facetism enables models that reflect the real-world flux of economic systems — where credit creation, market behavior, technological change, and social dynamics interact continuously across layers. Such an approach would reverse many of the distortions produced by dogmatic adherence to equilibrium-based theories and linear assumptions. It would prioritize evidence over ideology, dynamism over stasis, and systemic understanding over fragmented formalism — offering not only more accurate predictions but also a path toward more sustainable, resilient, and ethically defensible economic structures.

Chapter 5: Reevaluation of Equilibrium

The preceding chapters have questioned key conceptual pillars of conventional science and philosophy: the order-chaos binary (Chapter 1), the illusion of rest and uniform time in a speed-varying flux reality (Chapter 2), while also offering alternatives: the multi-layered structure of facets (Chapter 3), and evidence-based interdisciplinarity to counter the parametric misconceptions that perpetuate cycles of illusion (Chapter 4). This chapter turns to one of the most pervasive and persistent concepts in both

natural and social sciences: equilibrium. Facetism asserts that equilibria, while existing, are not fundamental or stable states of reality but temporary phenomena within permanent flux — transient configurations where opposing forces or flows momentarily balance, only to be disrupted by ongoing transformation across layers.

In classical mechanics and thermodynamics, equilibrium is often treated as an endpoint or ideal state toward which systems naturally tend — a view facetism does not completely negate: the tendency exists, but only as part of ongoing movement and change. Mechanical equilibrium occurs when net forces sum to zero, resulting in no acceleration (Newton, 1687), which is easily observed but only in isolation, not in a broader context. Thermal equilibrium is reached when temperatures equalize and heat flow ceases (Clausius, 1865), yet this is a momentary state within continuous energy flux. Economic equilibrium assumes markets clear at prices where supply equals demand, with no tendency for change (Walras, 1874; Arrow and Debreu, 1954), completely missing the ever-changing demands and circumstances: not only will you never step into the same river twice, but you also never act in the same market twice. Biological homeostasis portrays organisms as capable of maintaining constant internal conditions over extended periods despite external variation (Cannon, 1932). These models share a common assumption: equilibrium is a condition of balance, stability, or rest that systems seek or achieve.

One of the core flaws is the assumption that self-organization leads to equilibrium, when in fact it is reaction to action, leading to further action. Self-organization — the system that so vastly surpasses central planning — is a driver, and an extremely powerful one. Especially in the context of systems theory, the impact of self-organization reveals itself to be a veritable engine of change, making systems theory one of the most important theories today, despite its somewhat underrated status (Prigogine and Stengers, 1984; Hayek, 1948).

Facetism rejects the idea of homeostatic end results as a parareal artefact rooted in parametric choices that privilege short timescales and isolated layers. Equilibria are temporary phenomena within permanent flux — momentary alignments of flows that appear stable only because our observational window is narrow relative to the broader transformation (Prigogine and Stengers, 1984; Nicolis and Prigogine, 1989). No system ever truly halts its internal or external interactions; what we call equilibrium is a dynamic nexus where fluxes from multiple facets interfere and momentarily cancel or balance one another without arresting motion altogether.

Consider a standing wave in physics — often cited as an exemplar of stable equilibrium. The wave pattern appears fixed, yet it is sustained by continuous energy input and the interference of traveling waves moving in opposite directions (Feynman et al., 1963). Remove the energy source or alter the boundary conditions, and the "equilibrium" dissolves. The apparent stability is not rest but a transient balance of ongoing flux. Similarly, in thermodynamics, the state of maximum entropy — thermodynamic equilibrium — is frequently portrayed as a final, unchanging condition. Yet even here, at the particle level, quantum fluctuations persist; the vacuum is never truly empty or static (Peskin and Schroeder, 1995). Macroscopic equilibrium is an averaged, emergent approximation, not an absolute cessation of change.

Biological homeostasis provides another illustrative case. Organisms maintain relatively constant internal conditions — blood pH, temperature, glucose levels — through feedback mechanisms (Cannon, 1932). However, this "stability" is achieved through continuous expenditure of energy and matter: cells metabolize, organs pump, systems excrete waste. From a thermodynamic perspective, living organisms are open systems far from equilibrium, sustaining ordered structures by increasing entropy in their surroundings (Schrödinger, 1944; Prigogine and Stengers, 1984). Homeostasis is not a static state but a dynamic process — a temporary balance maintained against the backdrop of perpetual flux. At the molecular and cellular layers, transformation is ceaseless: proteins fold and unfold, membranes flux ions, DNA replicates with errors that drive evolution. The organism's apparent equilibrium dissolves over longer timescales through aging, disease, or death, as underlying flux reasserts itself.

A particularly striking example is the human body's resistance to muscle growth. After intense training, the body tends to return to a less muscular state, often re-purposing resources toward fat reserves. Bodybuilding appears surprisingly difficult because the organism seems to "seek" a specific equilibrium. Yet closer examination reveals no fixed state — muscle atrophies continuously, blood flow diminishes, immune function declines, and chronic conditions emerge. The struggle against atrophy — the very effort of training — is what maintains health. Non-equilibrium, not stasis, is the prerequisite for vitality (Phillips, 2009).

In socioeconomic systems, equilibrium models assume markets or societies tend toward balanced states where resources are allocated efficiently and pressures equalize (Walras, 1874; Arrow and Debreu, 1954). Yet economic equilibrium would mark the death of an economy — it undermines progress and is the hallmark of central planning failure, regardless of left- or right-leaning ideologies (see Chapter 7). The freer the markets, the stronger the economies and the more prosperous the societies. Extensive empirical evidence indicates that reduced government interference correlates with superior economic growth, while increased control, regulation, taxation, and expropriation lead to stagnation and collapse (Gwartney et al., 2023; Werner, 2018). Monopolies form rapidly under centralized systems, halting innovation; corruption spreads, and entire nations suffer. Yet real economies exhibit continuous transformation: technological innovation disrupts industries to the benefit of society, forcing adaptation and progress. Demographic shifts reshape labor markets, credit creation drives cycles of boom and bust. Apparent equilibria — full employment, balanced budgets, stable prices — are transient configurations interrupted by flux across layers (technological, demographic, monetary). As discussed in Chapter 4, parametric models that treat these equilibria as endpoints fail to anticipate the ongoing ripple effects of credit expansion or policy interventions (Werner, 2018).

The temporary nature of equilibria becomes even clearer when viewed through the lens of speed-varying flux introduced in Chapter 2. Different facets operate at radically different intrinsic speeds: quantum events in femtoseconds, biological processes in seconds to years, geological transformations in millions of years. An equilibrium stable on one timescale is disruption on another. A lake in hydrological equilibrium (inflow matching outflow) is in constant molecular flux; over geological time, it fills with sediment or drains through tectonic shifts. The "balance" is layer-dependent and transient.

This reevaluation aligns with non-equilibrium thermodynamics, which recognizes that many natural systems — weather, living organisms, ecosystems — operate far from equilibrium, sustained by energy flows and dissipative structures (Prigogine and Stengers, 1984; Nicolis and Prigogine, 1989).

Equilibrium is not the norm but a special case, often associated with death or decay rather than vitality. Facetism extends this insight ontologically: equilibria are not destinations but momentary interferences in permanent flux, where opposing flows across facets temporarily align.

By recognising equilibria as temporary phenomena within permanent flux, facetism dissolves another parareal binary: stability versus instability. What appears stable is merely slow or balanced flux; what appears unstable is rapid or unbalanced flux. Both are expressions of the same underlying dynamism. This perspective not only resolves longstanding tensions in thermodynamics and biology but also offers a more accurate foundation for modeling complex systems — one that embraces layer-dependence and ongoing transformation rather than seeking illusory endpoints.

As subsequent chapters will explore, this reevaluation has profound implications for prediction, causation, and ethical judgment in both natural and social domains. By abandoning the search for permanent equilibria, we open the way for descriptions that better reflect the relational, multi-scalar character of flux reality.

Chapter 6: Introducing Facetism as a Systematic Alternative

The preceding chapters have systematically dismantled the conventional scientific and philosophical frameworks that dominate our understanding of reality. Chapter 1 rejected the order-chaos binary as a false and anthropomorphic imposition. Chapter 2 established flux as the fundamental, inescapable character of existence, rendering rest, stasis, and uniform time illusory or paradoxical. Chapter 3 introduced facets as the relational, multi-layered domains through which flux manifests, with principles bleeding across boundaries and apparent binaries dissolving over extended timescales. Chapter 4 exposed parametric misconceptions as the root of recurring illusions, where models oscillate between apparent chaos and apparent determinism depending on chosen layers and scales. Chapter 5 reevaluated equilibrium as a temporary, emergent phenomenon within permanent flux — never an endpoint, but a transient alignment of opposing flows.

This chapter consolidates these insights into **facetism** as a systematic alternative — a coherent meta-framework for understanding and modeling reality without falling into the determinism-chaos trap or the stasis-equilibrium illusion. Facetism is not merely a critique; it is a positive, evidence-oriented methodology that replaces rigid binaries, universal equations, and isolated disciplines with relational, multi-scalar descriptions grounded in the continuous, interconnected flux of existence.

Facetism emerges from the recognition that every attempt to describe or model reality is necessarily incomplete. The number of relevant layers (facets), their intrinsic speeds of transformation, and the strength, direction, and functional form of their mutual influences are fundamentally unknown and in principle unknowable. No finite set of parameters, no matter how large, can ever capture the whole. Every model is a truncation, every description a provisional approximation. Facetism embraces this incompleteness as a structural feature of reality, not a temporary limitation of our knowledge. It refuses to set the remainder to zero or pretend closure is possible.

Core Elements of Facetism

1. Recognition of Facets as Relational Domains

Reality is composed of facets — distinct yet interdependent layers, each governed by its own primary principles (e.g., quantum uncertainty and superposition at particle scales, gravitational attraction and classical mechanics at macroscopic scales, entropy-driven dissipation in thermodynamic layers, evolutionary adaptation in biological domains). These facets are not hierarchical or reducible to one another; they coexist and co-evolve, with no single layer holding ontological or explanatory primacy (Dupré, 1993; Cartwright, 1999). Principles bleed across boundaries: quantum fluctuations underpin macroscopic stability (Peskin and Schroeder, 1995), gravity subtly influences particle behavior in extreme conditions (Hawking, 1975), and socioeconomic dynamics entangle with technological and environmental flux (Arthur, 2015). Facetism requires that models explicitly identify which facets are being privileged and acknowledge their interdependence. Any claim of completeness must be treated as provisional — new facets become visible or necessary as resolution, timescale, or observational frame changes.

2. Emphasis on Avoidance of Stasis as a Meta-Principle

Nature inherently resists equilibrium-as-inertia or uniformity. Stasis would equate to cessation or decay; instead, systems perpetually renew and adapt through continuous flux. This avoidance is not teleological in a purposeful sense but emergent from the relational, speed-varying nature of existence. Different facets operate at vastly different intrinsic speeds — femtoseconds for quantum events, seconds to years for biological processes, millions of years for geological transformations — making any claim of absolute rest or stasis incoherent (Einstein, 1905; Prigogine and Stengers, 1984). Apparent stability is always a dynamic balance of ongoing flows, sustained by energy input and dissipation. Facetism treats this resistance to stasis as a meta-principle driving adaptation and transformation across all layers. Equilibria are momentary alignments of flows, not endpoints; they are transient configurations that dissolve as flux continues across scales.

3. Critique of Parametric Tools and Advocacy for Facet-Aware Methodologies

Conventional science relies on parametric tools — fixed equations, discrete metrics, linear models, isolated disciplines — that inevitably distort continuous flux into static, binary, or layer-specific snapshots (Chapter 4). These tools create parareality by imposing artificial uniformity on a layered, relational reality. Facetism advocates for **facet-aware methodologies**: models that explicitly recognize their layer-dependence, incorporate speed differentials, and remain open to principle bleed across boundaries. This means:

- Abandoning the search for a single, universal equation or final theory.
- Embracing relational, multi-scalar descriptions that reflect the continuous, interconnected nature of flux.
- Prioritizing evidence-based interdisciplinarity over dogmatic formalism.
- Treating apparent equilibria, predictions, and causal chains as transient and context-bound rather than absolute.
- Keeping the remainder R visible — never setting it to zero or pretending completeness.

4. Conceptual Tools for Formalisation

Facetism deliberately avoids rigid universal formulas and all-encompassing equations. It rejects the notion that reality can ever be captured by a single, complete mathematical expression — precisely because the number of relevant layers (facets), their intrinsic speeds, and the strength and direction of their mutual influences are fundamentally unknown and in principle unknowable. Instead, facetism offers conceptual heuristics — provisional, symbolic ways of thinking — that help us remain conscious of these limits while still allowing structured description.

To illustrate why even the most careful attempt at formalization must remain incomplete, let us build a stylized flux-interaction expression step by step, explicitly exposing the points at which certainty breaks down.

Step 0: Naïve starting point (single layer, assumed known)

Suppose — purely for didactic clarity — we could isolate one single facet and pretend we knew everything about it. The flux contribution from that layer alone might be written:

$$F \approx \mathbf{v} \cdot \mathbf{p}$$

where

- \mathbf{v} = flux velocity (speed of intrinsic transformation in that layer)
- \mathbf{p} = principle vector (the dominant rules, laws, or dynamics that characterize the layer)

This expression is already an idealization. Even in a hypothetical single-layer world we would not know \mathbf{v} or \mathbf{p} exactly — only approximate them locally and provisionally.

Step 1: Multiple layers, still assuming a known finite number

Reality consists of multiple facets. Each has its own velocity and principles:

$$F \approx \sum_{i=1}^N \mathbf{v}_i \cdot \mathbf{p}_i$$

But even here the expression is deceptive. We do not know

- the true number of layers N (it is always provisional and potentially unbounded)
- the exact values of \mathbf{v}_i (layer-specific speeds are observer-frame-dependent and scale-dependent)
- the full content of \mathbf{p}_i (principles are only partially grasped and subject to revision)

Step 2: Adding cross-layer interactions (still assuming known N and known couplings)

Layers do not act in isolation — they influence each other. The total flux must include interaction terms:

$$F \approx \sum_{i=1}^N \mathbf{v}_i \cdot \mathbf{p}_i + \sum_{\{i \neq j \leq N\}} \mathbf{k}_{\{ij\}} \cdot (\mathbf{v}_i \cdot \mathbf{v}_j)$$

where

- $\mathbf{k}_{\{ij\}}$ = interconnectivity coefficient ($0 \leq \mathbf{k}_{\{ij\}} \leq 1$), representing the strength of principle bleed or mutual influence between layers i and j
- $(\mathbf{v}_i \cdot \mathbf{v}_j)$ captures how the transformation speeds of two layers combine (multiplicatively, not additively — one fast layer can dramatically amplify or suppress change in a slow layer)

Even this is misleading. We cannot know

- the true number of layers N (no maximum is known or in principle knowable)
- the true values of k_{ij} (interaction strengths are non-local, history-dependent, nonlinear, observer-dependent, and often accelerating or decelerating in ways we cannot predict or measure in advance)

Step 3: Explicit acknowledgment of fundamental incompleteness

The only honest representation is therefore an explicitly truncated approximation:

$F \approx \sum_{i=1}^{N_{\text{known}}} v_i \cdot p_i + \sum_{i \neq j \leq N_{\text{known}}} k_{ij} \cdot (v_i \cdot v_j) + R$
where

- N_{known} = the small, provisional number of facets we have currently identified and can somewhat describe
- R = the **irreducible remainder** — flux arising from • unrecognized layers ($N_{\text{true}} - N_{\text{known}}$) • mis-estimated or incalculable couplings to those layers • accelerating / decelerating feedback loops whose functional form, direction, and magnitude we cannot determine • historical and relational dependencies that escape any finite description

R is not a small correction term that shrinks as knowledge grows. In complex systems — biological organisms, economies, ecosystems, brains, climates — the remainder typically dominates the observable behavior. Every time we believe we have captured “all relevant layers,” new layers (or new cross-layer effects) become visible when resolution, timescale, or observational frame changes. The couplings k_{ij} are not fixed constants; they are dynamic, context-sensitive, and often emergent — making even the known terms provisional.

What This Heuristic Really Tells Us

This expression is not a candidate for a final theory. It is a didactic symbol designed to keep three truths constantly in view:

- Any model we write is radically incomplete — it always excludes most of reality (the remainder R).
- The dominant part of real flux is relational and cross-layer, not intra-layer.
- We can never be sure we have reached the “bottom” or the “end” of the layers — the set is open-ended and unbounded.

Facetism therefore does not offer equations to be solved once and for all. It offers a methodological stance:

- always treat your current model as truncated
- always keep the remainder R visible (do not set it to zero)
- always remain open to the discovery of new layers and new interaction forms
- prefer relational, multi-scalar descriptions over universal formulas

Such tools remain provisional, layer-sensitive, and open to perpetual revision as new facets or interactions are revealed. This is not a weakness; it is the only stance consistent with a universe of continuous, interconnected flux.

Facetism overcomes Aristotelian “change-rest” dualism by subsuming rest into slow or contained flux, honors Heraclitean flux without descending into relativism, and provides a neutral, evidence-oriented descriptor for nature’s principled yet ever-changing essence. It rejects the search for a final theory in favour of ongoing, relational description — acknowledging that our models are always partial, always layer-bound, always subject to the next revealed facet.

The framework is not anti-science; it is pro-evidence. By exposing parametric illusions and insisting on multi-scalar awareness, facetism aims to make science more accurate, more humble, and more capable of grappling with the complexity of a flux-driven universe. As the final chapters will demonstrate, this approach has profound implications for prediction, causation, and ethical reasoning in both natural and social domains.

Chapter 7: Philosophy as an Inherently Flawed Element

The preceding chapters have laid out the ontological, epistemological, and methodological foundations of facetism. We have rejected the order-chaos binary as a linguistic and conceptual artefact (Chapter 1), established flux as the fundamental character of reality with no true rest or stasis (Chapter 2), introduced facets as the relational, multi-layered domains through which flux manifests (Chapter 3), exposed parametric misconceptions as the root of recurring illusions in modeling (Chapter 4), and reevaluated equilibrium as a temporary, emergent phenomenon within permanent flux (Chapter 5). Chapter 6 consolidated these insights into facetism as a systematic, evidence-oriented alternative — one that prioritizes relational, multi-scalar descriptions over rigid formulas, universal theories, and disciplinary isolationism.

This chapter turns to a meta-level question: why does conventional philosophy — despite its historical role in fostering systematic thinking and logic — remain more problematic than useful in advancing empirical understanding? Facetism argues that philosophy is inherently flawed because it operates as a **choice, not an evidenced outcome**. It relies on subjective reasoning, axioms, interpretations, and normative commitments rather than testable, falsifiable evidence. This detachment from empirical constraint allows philosophy to persist with claims that are morally or ideologically attractive even when they are repeatedly contradicted by real-world outcomes. When such philosophically derived ideas are reintroduced into scientific, economic, or policy domains, they distort results, perpetuate parametric misconceptions, and hinder facet-aware analysis.

Philosophy as Choice, Not Evidence

Philosophy has played a crucial role in the development of systematic thought, logic, and the framing of scientific inquiry. From Aristotle’s categories to Kant’s synthetic a priori, from Descartes’ method of doubt to Popper’s falsificationism, philosophical reflection has shaped how we ask questions and interpret evidence. Yet philosophy differs fundamentally from science in its relationship to evidence. Science proposes theories and subjects them to rigorous testing, observation, and falsification. Philosophy, by contrast, often proceeds through conceptual analysis, thought experiments, dialectical

reasoning, and normative justification. It “allows” arguments to be sustained indefinitely via appeals to ideals, relativism, coherence, or moral intuition, even when empirical outcomes contradict them (Kitcher, 2011; Ladyman & Ross, 2007).

This detachment becomes especially problematic when philosophy is used to justify normative systems — political, economic, ethical — that are then implemented in reality. Because philosophy prioritizes ethical rationalizing and moral justification over falsifiability, it can sustain claims that are empirically disconfirmed without requiring revision. The result is a persistent gap between philosophical ideals and observable consequences — a gap that science, when left to its own devices, tends to close through iterative correction.

Historical Failures of Collectivist Ideologies

A stark illustration of philosophy’s flaw is its tolerance for the persistent advocacy of collectivist ideologies — socialism, communism, national socialism, and various theocratic or authoritarian systems — despite extensive empirical failure. Historical records document over 50 distinct countries or regimes over the last 150 years that implemented left-wing socialist or communist ideologies (e.g., the Soviet Union and its Eastern Bloc satellites: Bulgaria, Czechoslovakia, East Germany, Hungary, Poland, Romania; Asian cases: China, North Korea, Vietnam, Cambodia, Laos, Mongolia, Afghanistan; African nations: Angola, Benin, Congo, Ethiopia, Guinea, Madagascar, Mozambique, Seychelles, Somalia, Sudan; Latin American examples: Cuba, Nicaragua, Grenada, Venezuela; and others: Yemen, Burma, Cape Verde, Albania, Yugoslavia). Many of these collapsed or transitioned due to economic stagnation, repression, incentive failures, or mass suffering, with some countries attempting socialist systems multiple times (e.g., Afghanistan in 1978 and 1979–1992).

This count excludes but should include broader attempts often left out, such as Argentina under Juan Perón (1946–1955, 1973–1974), whose Peronism — a variant of nationalist/populist socialism with nationalizations, state intervention, and welfare expansions — failed badly with economic instability, inflation, and coups leading to crises (e.g., the 2001 Great Depression). Technically, Portugal must also be counted, as it has not had a true conservative government since the 1974 Carnation Revolution, with dominant parties like the Socialist Party (PS, centre-left) and Social Democratic Party (PSD, officially centre-right but pursuing liberal-conservative policies with welfare and market elements) maintaining a centrist consensus; labeling PSD as “centre-right” is a ridiculous media ploy, as it aligns with left-leaning continuities, while the only true conservative parties are recent ones like Chega (far-right nationalist, founded 2019) and Nova Direita (founded 2021). The same argument applies to Spain’s People’s Party (PP), nominally conservative/Christian-democratic but shown to vote with the PSOE (Spanish Socialist Workers’ Party) on nearly every policy (e.g., constitutional defense, social issues like accepting same-sex marriage post-ruling), despite rhetoric theater intended to keep conservative-minded voters loyal — a form of voter deception that is legal and common across Europe and the Western hemisphere.

Even nominally “right-wing” governments exhibit collectivist hallmarks through restrictions on freedom, as seen in Germany: expansions under Helmut Kohl (EU centralization, welfare growth), Angela Merkel’s era (nuclear phase-out, open migration policies, regulatory burdens), and emerging under Friedrich Merz (continued emphasis on state-led European integration and defense) — showing

how voter deception under a “conservative disguise” is commonplace in Western countries. Further examples include Iran, where the Shah was removed by riots involving significant socialist and leftist participation (e.g., Tudeh Party communists and Fedayeen guerrillas in protests and strikes), only to install the Ayatollah Khomeini’s regime, whose theocratic dictatorship was similarly murderous and inhumane as those of Pol Pot (Cambodia’s Khmer Rouge genocide), Idi Amin (Uganda’s brutal killings), or Mao Zedong (China’s mass deaths under the Great Leap Forward and Cultural Revolution) — with post-revolution purges executing thousands, including leftists.

These socialist, national socialist, and theocratic examples all link to the same underlying dynamic: collectivist systems (whether ideologically framed as egalitarian, nationalist, or religious) suppressing individual freedom in favor of centralized control, contrasting sharply with freedom-oriented systems that prioritize life, liberty, and property — as extensively shown by thinkers like Hans-Hermann Hoppe and Thomas Sowell. This cross-spectrum pattern underscores philosophy’s tolerance for reinterpreting disconfirming history through ethical rationalizing and moral justification.

Philosophy as Academic Fraud and Modern Lysenkoism

Due to its inherent circumvention of evidence, philosophy — when insulated from falsification and heavily funded by state interests — functions as an academic mechanism that resembles modern Lysenkoism, systematically undermining freedom and basic human rights (life, liberty, and property). The persistent disregard for the clear failure of such policies, and the evident lose-lose character of the outcomes (economic ruin, mass suffering, eroded freedoms), makes dark tetrad traits (narcissism, Machiavellianism, psychopathy, sadism) among those drawn to power a highly plausible explanatory factor (Paulhus & Williams, 2002; Furnham et al., 2013). By means of sheer logic, any rational government would want a booming economy and widespread prosperity, but the freedom that is a necessary requirement is unacceptable for antisocial personalities that are most obviously drawn into leadership and control.

The blatant disregard for evidence-based alternatives — such as those advanced by Richard Werner, who demonstrated the failure of interest-rate-based monetary policy and the inflationary consequences of excessive credit creation (Werner, 2018) — while continuing to fund and institutionalize equilibrium-based, Keynesian frameworks that repeatedly fail, represents a form of state-sponsored Lysenkoism. Lysenkoism in the Soviet Union suppressed genetics and promoted pseudoscientific agricultural practices because they aligned with ideological commitments (Joravsky, 1970). Similarly, modern economic and social policy dogmas persist despite disconfirming outcomes because they serve normative and political purposes — justifying taxation, regulation, bureaucracy, and redistribution — rather than empirical success.

The result is that in 2026, many of the world’s largest economies face unprecedented debt burdens, rapid deindustrialisation, and structural imbalances whose social and economic consequences — declining living standards, eroded social cohesion, and diminished trust — are difficult to justify on ethical grounds. Facetism counters these developments by insisting on relational, multi-scalar descriptions that reflect the real-world flux of economic systems — where credit creation, market behavior, technological change, and social dynamics interact continuously across layers. Such an approach would reverse many of the distortions produced by dogmatic adherence to equilibrium-based

theories and linear assumptions. It would prioritize evidence over ideology, dynamism over stasis, and systemic understanding over fragmented formalism — offering not only more accurate predictions but also a path toward more sustainable, resilient, and ethically defensible economic structures.

Philosophy’s Reintroduction into Scientific Settings

The flaw becomes critical when empirically untested or disproven philosophical ideas are reintroduced into scientific settings, altering and distorting results. Philosophical biases toward certain social theories can influence interpretations in fields like economics or sociology, prioritizing normative “oughts” over observable “is” (Kitcher, 2011; Ladyman & Ross, 2007). For example, equilibrium-based models in economics assume self-correcting tendencies and linear responses, yet real-world systems exhibit nonlinear feedback, emergent behavior, and credit-driven instability that these models systematically underestimate (Werner, 2018; Arthur, 2015). When philosophical commitments to equality, redistribution, or centralized control override evidence, the result is policy that perpetuates parametric misconceptions and hinders facet-aware analysis.

Facetism rejects this cycle. By insisting on evidence-oriented, multi-scalar awareness, it aims to make philosophy subordinate to empirical reality rather than the reverse. Philosophy can be useful when it clarifies concepts, exposes assumptions, or frames questions — but only when it remains open to falsification and revision. When it becomes insulated from evidence and instrumentalized by power, it functions as an academic fraud — pampered by governmental funding and perpetuating modern Lysenkoism.

Facetism thus offers a corrective: a framework that prioritizes flux, relational description, and openness to the unknown over dogmatic axioms, moral justification, or ideological closure. By exposing philosophy’s detachment from evidence and its role in reintroducing doctrine through the backdoor, facetism clears the ground for a more accurate, humble, and evidence-driven approach to understanding reality.

Chapter 8: Conclusion / Implications

The journey through this manuscript has led us to a fundamental reevaluation of how we understand and model reality. What began as a critique of the order-chaos binary (Chapter 1) has unfolded into a comprehensive ontological, epistemological, and methodological alternative: **facetism**. Reality is not divided into order and chaos, nor is it static or deterministically predictable. It is **continuous flux** — perpetual movement and transformation at varying speeds, governed by distinct yet intertwined principles across multiple relational layers (facets). Apparent rest, stasis, equilibrium-as-stillness, determinism, and chaos are illusions — optical delusions created by human parametric misconceptions, our limited metrics, scales, models, and conceptual frameworks that fail to capture the full multi-layered dynamism of existence.

Facetism asserts that there is no absolute rest, no frozen state, no homeostatic endpoint. What we call stability is a transient balance of ongoing flows — a momentary alignment of fluxes from different

layers that appears fixed only because our observational window is narrow (Chapter 2). Facets are not hierarchical silos but interdependent domains where principles bleed across boundaries, generating emergent complexities that defy simple reduction or holism (Chapter 3). Parametric tools — fixed equations, linear models, discrete timescales, isolated disciplines — inevitably produce cycles of illusion: phenomena appear chaotic when parameters are insufficient, deterministic when better approximations are found, only to reveal new layers that again appear chaotic (Chapter 4). Equilibria are not destinations but temporary phenomena within permanent flux — alignments that dissolve as transformation continues across scales (Chapter 5).

This framework is not anti-science; it is pro-evidence. By exposing the limitations of conventional parametric approaches and insisting on multi-scalar awareness, facetism aims to make science more accurate, more humble, and more capable of grappling with the complexity of a flux-driven universe. It replaces rigid binaries, universal formulas, and dogmatic formalism with relational, open-ended descriptions that remain provisional and subject to perpetual revision as new facets or interactions are revealed.

Implications for Science and Modelling

Facetism has immediate and far-reaching implications for how we construct models and interpret evidence. Conventional science often seeks a single “correct” parameter set, universal equation, or final theory — a quest that facetism declares futile. Reality has no known maximum number of layers, no calculable upper bound on cross-layer couplings, and no fixed functional form for accelerating or decelerating feedbacks. Any model is a truncation, any description an approximation with a large, irreducible remainder R (Chapter 6). Facetism therefore advocates for **facet-aware methodologies**:

- Models must explicitly state which facets they privilege and acknowledge their incompleteness.
- Speed differentials across layers must be incorporated — time is not a universal scalar but a relational outcome of flux rates.
- Principle bleed must be treated as a structural feature, not an anomaly.
- The remainder R must remain visible — never set to zero or pretended away.
- Evidence-based interdisciplinarity must replace dogmatic formalism and isolationism.

This shift does not reject mathematics or formalization; it reorients them. Equations like $P = W / t$ remain useful in narrow, human-scale contexts but become misleading when exported across layers with divergent speeds or principles. Efficiency must be understood as a dynamic range, not a compressed point (Kayser, 2025). Causal chains and predictions must be treated as context-bound and transient, not absolute. The result is science that is more modest, more adaptive, and more honest about its limits.

Implications for Prediction and Causation

Prediction in a flux ontology is inherently limited. Because the number of relevant layers is unbounded and cross-layer interactions are incalculable in advance, long-term deterministic forecasting is impossible — not because of randomness or chaos, but because of irreducible relational complexity. Facetism does not deny short-term, layer-specific predictability; it denies that such predictability can be generalized or extended indefinitely. Apparent success in one domain (e.g., engineering at human

scales) does not license extrapolation to others (e.g., macroeconomic policy, climate systems, social dynamics). The cycle of illusion described in Chapter 4 — chaos → determinism → chaos — is the natural consequence of this limitation. Facetism offers a way out: by keeping models open, provisional, and multi-scalar, we can make better **approximations** and more reliable **short-term forecasts** while remaining aware of the large remainder R that always looms.

Causation, too, is reframed. In a layered flux reality, causes are not singular events or linear chains but distributed, relational influences across facets. The radioactive decay in Schrödinger's cat (Chapter 3) is causal at the quantum layer, but subsumed into thermodynamic dissipation, biological decay, and geological transformation at higher layers. What we call a “cause” is a layer-privileged snapshot — useful locally but misleading globally. Facetism replaces linear causation with **relational causation** — influence that propagates through mutual interactions, speed differentials, and emergent feedback loops without a single, ultimate origin.

Implications for Ethics and Society

The ethical implications of facetism are profound. If equilibria are temporary and stasis impossible, then any system that seeks permanent stability — whether biological, economic, or social — is fighting against the fundamental nature of reality. Health, prosperity, and resilience require non-equilibrium — continuous challenge, adaptation, and flux. The bodybuilding example (Chapter 5) illustrates this vividly: vitality demands ongoing effort against atrophy; stasis is decay. Similarly, economies thrive on disruption, innovation, and adaptation; enforced equilibrium (central planning, excessive regulation) stifles progress and leads to stagnation or collapse (Chapter 4).

Collectivist ideologies — whether socialist, communist, national socialist, or theocratic — impose artificial order, suppressing individual and systemic flux in favor of centralized control. The historical record (Chapter 7) shows this pattern repeatedly: economic ruin, repression, mass suffering, and ethical catastrophe. Facetism counters this by insisting on relational, evidence-oriented description over ideological dogma. It prioritises freedom-oriented systems that allow flux to express itself — where individuals and markets can adapt, innovate, and self-organize without artificial stasis imposed from above.

By rejecting philosophical detachment from evidence and exposing modern Lysenkoism, facetism clears the ground for more accurate, humble, and ethically defensible reasoning. It does not prescribe a specific political system but demands that any system be judged by its alignment with reality's flux character — not by moral ideals insulated from outcome.

Final Reflections

Facetism is not intended to be an answer, let alone a final one. It is first and foremost a methodology — a way of approaching reality rather than a fixed doctrine about what reality is. Like many methodologies, it rests on a philosophical foundation, but one that is deliberately a-philosophical: rooted in scientific testability and the pursuit of evidence above all else. Untested theories must be subjected to empirical challenge; they cannot serve as an excuse to accept unverified claims by choice, as much of traditional philosophy does. Facetism explicitly acknowledges its own eternal state of incompleteness — not as a flaw, but as a necessary consequence of a universe of continuous,

unbounded flux with no known maximum number of layers or calculable cross-layer influences. This incompleteness makes facetism a living commitment to perpetual openness, relational humility, and evidence over doctrine. It refuses closure, rejects finality, and remains forever provisional — open to revision, new facets, and unforeseen interactions as reality continues to transform.

The facetist framework is pro-evidence, pro-adaptation, pro-freedom, it allows for individual choice and nuance. It asks us to embrace reality as it is — ever-changing, interconnected, and unbounded — rather than as we wish it to be. In a world facing debt crises, deindustrialisation, social erosion, and an utter disconnect between society and elites, such a shift is not merely philosophical; it is urgently practical.

Facetism does not promise certainty or miracles, it isn't a short cut but it is designed specifically towards maximum efficiency.

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