Before Pragmatism Had a Name

Blake's *America: A Prophecy* Anticipates American Anticipatory Epistemology

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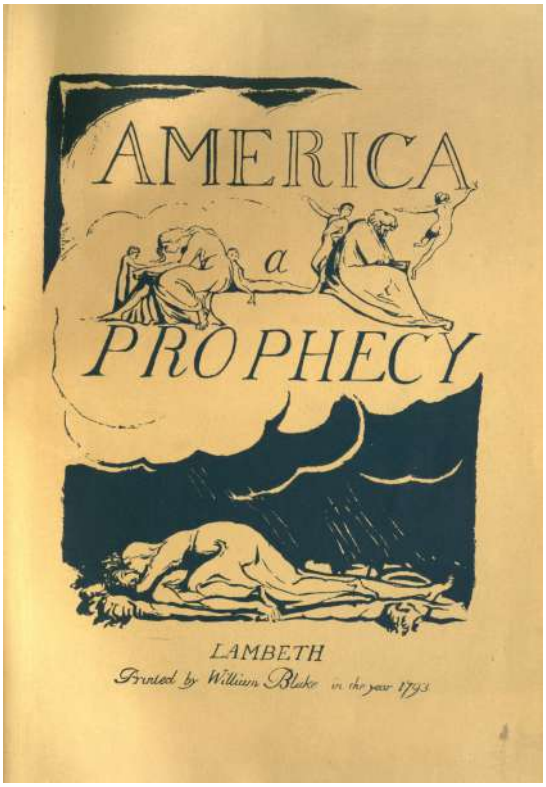

Contents

1 Abstract

When Boston's Angel in William Blake's *America a Prophecy* (1793) declares "No more I follow, no more obedience pay!" and the Thirteen Governors rend their robes to stand with Washington in the revolutionary flames, Blake enacts a drama of cognition that the American Pragmatists—writing a continent and a century later—would formalize as the structure of inquiry itself: the organism confronting an indeterminate situation, breaking inherited habit, and forging new modes of engagement with what Dewey called the "indeterminate situation." This manuscript traces six structural convergences between Blake's visionary epistemology and the pragmatist tradition from Peirce through Brandom. Orc's revolutionary fire maps onto Peirce's irritation of doubt that compels inquiry; the Thirteen Angels' collective transformation mirrors Mead's social self constituted through the generalized other; the consumption of the "five gates of their law-built Heaven" performs Dewey's collapse of the spectator theory and James's insistence that relations are as real as their relata; and the Four Zoas—Urizen, Luvah, Tharmas, Urthona—function as Blake's proto-cognitive architecture, anticipating the factorized generative model of Active Inference where reason, passion, sensation, and imagination must coordinate or the system fragments into what Blake names "Newton's Sleep." The sixth dimension extends the synthesis to Fuller and Applewhite's Synergetics, where the tetrahedron replaces the cube as the fundamental unit of spatial thought—a geometric operationalism that parallels Blake's rejection of Newtonian-Cartesian abstraction and Peirce's pragmatic maxim that the meaning of a concept lies entirely in its conceivable practical effects.

The convergences are not analogical but structural, and this manuscript formalizes them through the mathematics of Active Inference—the process theory of the Free Energy Principle—in which the Markov blanket becomes Blake's doors of perception, the generative model becomes imagination as "Human Existence itself," precision weighting distributes cognitive authority across the Zoas, and multi-agent belief alignment formalizes Peirce's community of inquirers converging toward truth under fallibilistic self-correction. Drawing on the emerging literature connecting pragmatism with predictive processing—Pietarinen and Beni's identification of free energy minimization as formalized Peircean abduction, Gallagher's framing of classical pragmatism as the conceptual ancestor of enactivism, and the pragmatic turn in cognitive science—the manuscript positions Blake as a third vertex in a triadic synthesis linking prophetic vision, democratic philosophy, and Bayesian neuroscience. The implications extend from computational psychiatry (Newton's Sleep as pathological prior dominance) through digital humanities (the Blake Archive as a semiotic laboratory) to AI alignment (the Fourfold Vision as a corrective to the single vision of next-token prediction), while Synergetics and Urner's computational pedagogy ground the synthesis in an alternative geometry where thinking, making, and experiencing are operationally inseparable. What emerges is the recognition that Blake's prophetic fire, Pragmatism's self-correcting inquiry, and the science of variational inference are three refractions of a single ancient light—the light by which self-organizing systems navigate entropy, forging from the flux of prediction and error the architectures of meaning that make a cosmos out of chaos.

Keywords: William Blake, *America a Prophecy*, American Pragmatism, Charles Sanders Peirce, William James, John Dewey, George Herbert Mead, Richard Rorty, Robert Brandom, Hilary Putnam, Buckminster Fuller, Synergetics, Active Inference, Free Energy Principle, Markov Blanket, Generative Model, 4E Cognition, Illuminated Printing, Fourfold Vision, Four Zoas, Anti-Representationalism, Operationalism.

2 Introduction: The Convergence of Prophetic Vision and Experimental Inquiry

2.1 The Unlikely Dialogue Between Prophecy and Empiricism

At first glance, William Blake (1757–1827)—the visionary poet-painter who conversed with angels, denounced Newton, and declared "I must Create a System, or be enslav'd by another Man's"—seems utterly remote from the hard-headed philosophy of action and inference that Charles Sanders Peirce, William James, and John Dewey launched in Cambridge, Massachusetts, an ocean away and a half-century after Blake's death. Blake was a Romantic mystic; the pragmatists were post-Darwinian naturalists. Blake attacked empiricism as "Newton's sleep"; the pragmatists embraced "the empiricist attitude."[Peirce, 1877] Blake prophesied in illuminated etchings; Peirce formalized in symbolic logic.

And yet the distance collapses under examination. Both Blake and the pragmatists mount a sustained assault on the same philosophical target: the **spectator theory of knowledge**—the Cartesian-Lockean picture of the mind as a passive mirror or dark chamber receiving impressions from an external world. For Blake, this is the sin of Urizen, the tyrannical Reason-God who "closed himself up, till he sees all things thro' narrow chinks of his cavern."[Blake, 1790] For Dewey, it is the core error of Western philosophy from Plato to positivism, the assumption that knowing is contemplating rather than doing. For Peirce, it is the fatal conceit of Cartesian foundationalism—pretending "to doubt in philosophy what we do not doubt in our hearts."[Peirce, 1877]

2.2 The Thesis: Six Structural Convergences

This manuscript argues that Blake's visionary epistemology and American Pragmatism share not merely superficial affinities but **deep structural convergences** across six qualitative dimensions:

1. **Inquiry as Active Engagement** — Both traditions reject the model of the mind as a passive receptacle. Blake's demand to "cleanse the doors of perception" and Peirce's rigorous "Method of Science" for fixing belief both frame knowledge-generation as an active, world-altering experimentation rather than passive observation.

2. **Truth as Living Process** — Far from a static correspondence to an external world, truth is treated as dynamic and processual. James's pragmatic claim that "the true is only the expedient in the way of our thinking" shares deep structural DNA with Blake's axiom that "what is now proved was once only imagined"—both insist that truth is entangled with human activity and future consequences.[James, 1907]

3. **Experience as Transaction** — The classical dualism separating the knowing subject from the known object is collapsed. Dewey's transactional theory of experience ("life goes on in an environment… through interaction with it") provides the philosophical articulation of the same integrated state Blake sought through his fourfold vision and the opening of the "doors of perception."[Dewey, 1934]

4. **The Social Constitution of the Self** — Neither framework begins with an isolated Cartesian ego. George Herbert Mead's concept of the "generalized other"—where the self emerges only through social relations—is the sociological equivalent of Blake's Albion, the Universal Man who is simultaneously individual and collective.

5. **Anti-Representationalism** — Both traditions mount a sustained attack on language as mere transcription. Richard Rorty's rejection of the "mind-as-mirror" finds its poetic predecessor in Blake's fierce refusal to "Reason & Compare," asserting instead that "my business is to Create." Thoughts and words are tools for coping with reality, not lenses for copying it.[Rorty, 1991]

6. **Synergetics and Pragmatic Geometry** — Buckminster Fuller's Synergetics extends pragmatist operationalism into the foundational mathematics of geometry. Fuller's substitution of the dynamic tetrahedron for the static Cartesian cube is the geometric parallel of Blake's rejection of "Newton's Sleep," moving from sterile abstraction toward a lived, energetic coordinate system.[Fuller, 1975]

These six qualitative convergences — traversing epistemology, metaphysics, philosophy of mind, social theory, philosophy of language, and the foundations of geometry — are then incipiently formalized through Active Inference (section 6). This formalization expands the thematic convergences into a precise atlas of **nine structural correspondences**, mapping Blake's mythological vocabulary onto pragmatist philosophy and Bayesian neuroscience with mathematical rigor.

2.3 *America a Prophecy* as Central Primary Source

Throughout this manuscript, we take Blake's *America a Prophecy* (1793) as our central primary source—a work that dramatizes every convergence theme in mythological register.[Blake, 1793a] Composed in the same year as the Reign of Terror and the execution of Louis XVI, *America* is Blake's first and most concentrated "Continental Prophecy"—a genre he invented to explore the revolutionary upheavals of the late eighteenth century through mythological narrative. In the poem, the revolutionary spirit Orc confronts Urizen's tyrannical order; the Thirteen Angels of the American colonies shake off their "mental chains" and descend to stand with Washington, Paine, and Warren; Boston's Angel demands to know "Who commanded this? What God? What Angel? / To keep the gen'rous from experience"—a question that could serve as the epigraph for the entire pragmatist tradition. The poem culminates in the consumption of "the five gates of their law—built Heaven," an image of perceptual liberation that anticipates everything from Peirce's rejection of Cartesian foundationalism to Dewey's transactional aesthetics. *America* is not merely a political poem but a philosophical programme in prophetic form—one whose structure, we argue, maps precisely onto the pragmatist account of inquiry, truth, experience, social selfhood, and anti-representationalism.

Washington, Paine, and Warren are depicted here not as passive victims of historical circumstance, but as active "terrible men" bracing against the storm of Urizenic law. The illustration visualizes lines 4–9 of *America a Prophecy*, showing children sheltered by these figures whose "foreheads rear'd toward the East" embody the pragmatist orientation toward future consequences and active inquiry over passive reception.

2.4 The Active Inference Bridge: From Prophetic Vocabulary to Formal Process Theory

Having established these deep structural convergences, we further propose that **Active Inference**—a process theory grounded in the Free Energy Principle—provides the formal mathematical framework in which these convergences become precise.[Friston, 2006, 2010] Active Inference describes self-organizing systems as minimizing variational free energy F through perception (updating beliefs $q(x)$) and action (changing the environment to match predictions). This dual process is exactly the unity of knowing and doing that both Blake and the pragmatists advocate. The Markov blanket $B = \{s, a\}$ formalizes Blake's "doors of perception"; the hierarchical generative model $p(o, \theta)$ formalizes his dictum that "Imagination is Human Existence itself"; and the pragmatist community of inquirers finds its analogue in multi-agent Active Inference, where convergent beliefs ($D_{KL}(q_i \| q_j) \to 0$) formalize Peirce's definition of truth as "the opinion fated to be ultimately agreed to by all who investigate."[Parr et al., 2022]

This triadic synthesis is supported by an emerging body of scholarship that has begun to formalize the very bridge we construct. Pietarinen and Beni's work demonstrates that active inference implements Peirce's abductive logic: free energy minimization *is* formalized abduction under a generative model, with prediction error serving as the trigger for hypothesis generation.[Pietarinen and Beni, 2021] Gallagher frames classical pragmatism as the "conceptual ancestor" of enactivism and predictive processing, arguing that Peirce's doubt–belief dynamics and Dewey's transactional theory of experience already contain the core commitments that active inference now formalizes computationally.[Gallagher, 2022] And Pietarinen and Beni's "Beyond Bayesian Accuracy" programme argues that rationality under the FEP should be measured not by abstract accuracy but by Peirce's *skill scores*—context-sensitive forecasting success—recasting free energy minimization as a pragmatist optimization of skillful coping rather than veridical representation.[Pietarinen and Beni, 2024] Ramstead, Friston, and Hipólito's programme of variational semiotics further maps Peirce's sign triad (icon, index, symbol) onto generative model components (A-matrices, B-matrices, shared higher-order models), revealing that Peirce's semiotics was already, in its deep structure, a theory of generative modeling.[Ramstead et al., 2020] Our manuscript converges with and extends this literature by adding Blake's

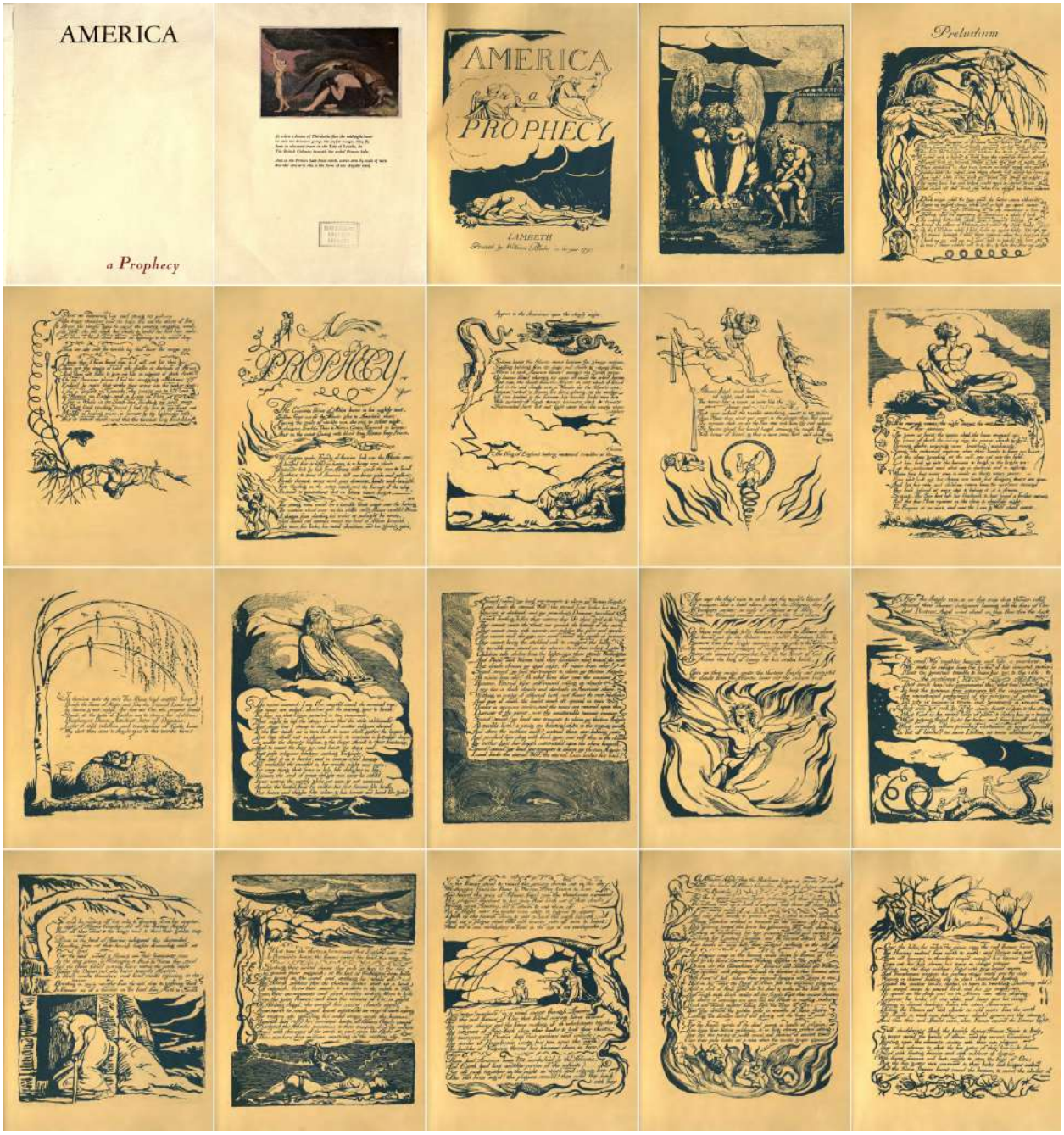

Figure 1: *Mosaic of Illuminated Pages from America a Prophecy.* Composite of twenty plates from *America a Prophecy* (Lambeth Printed Books, 1793), revealing the full scope of Blake's integration of text and image in illuminated printing — a process that physically unifies conception and execution in the way Dewey's aesthetic theory demands.

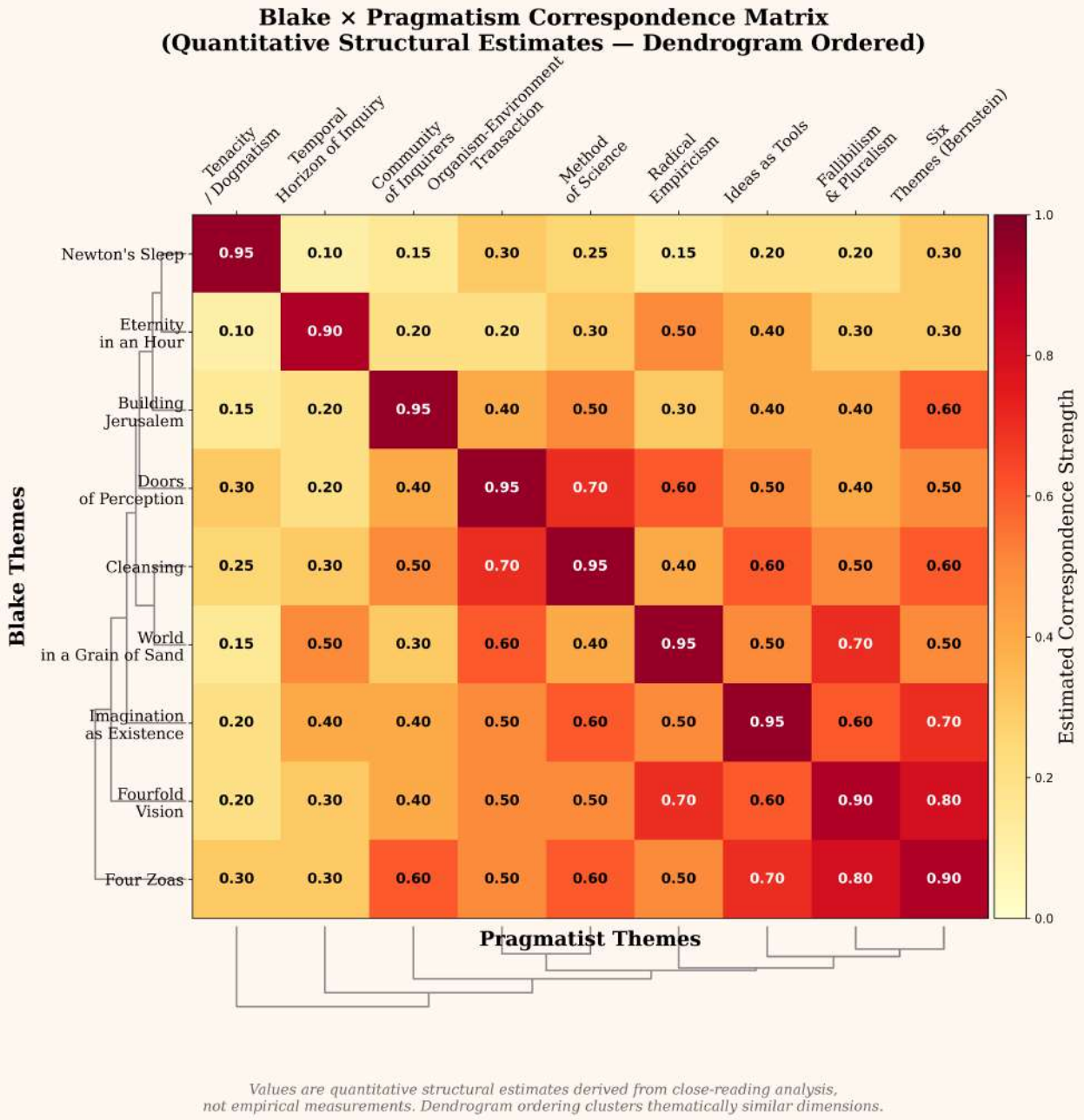

Figure 2: *Blake × Pragmatism Correspondence Matrix.* Dendrogram-ordered heatmap of *qualitative, informal* estimates of correspondence strengths between Blake's themes and the central tenets of American Pragmatism, clustered by hierarchical similarity. Numerical values reflect personal judgment rather than empirical measurement — heuristic starting points for further systematic investigation. Darker regions indicate stronger convergence; dendrogram branches reveal thematic families.

Figure 3: *The Shores of Revolution.* Washington, Paine, and Warren brace against the storm of Urizenic law. *America a Prophecy*, lines 4–9; AI-generated illustration.

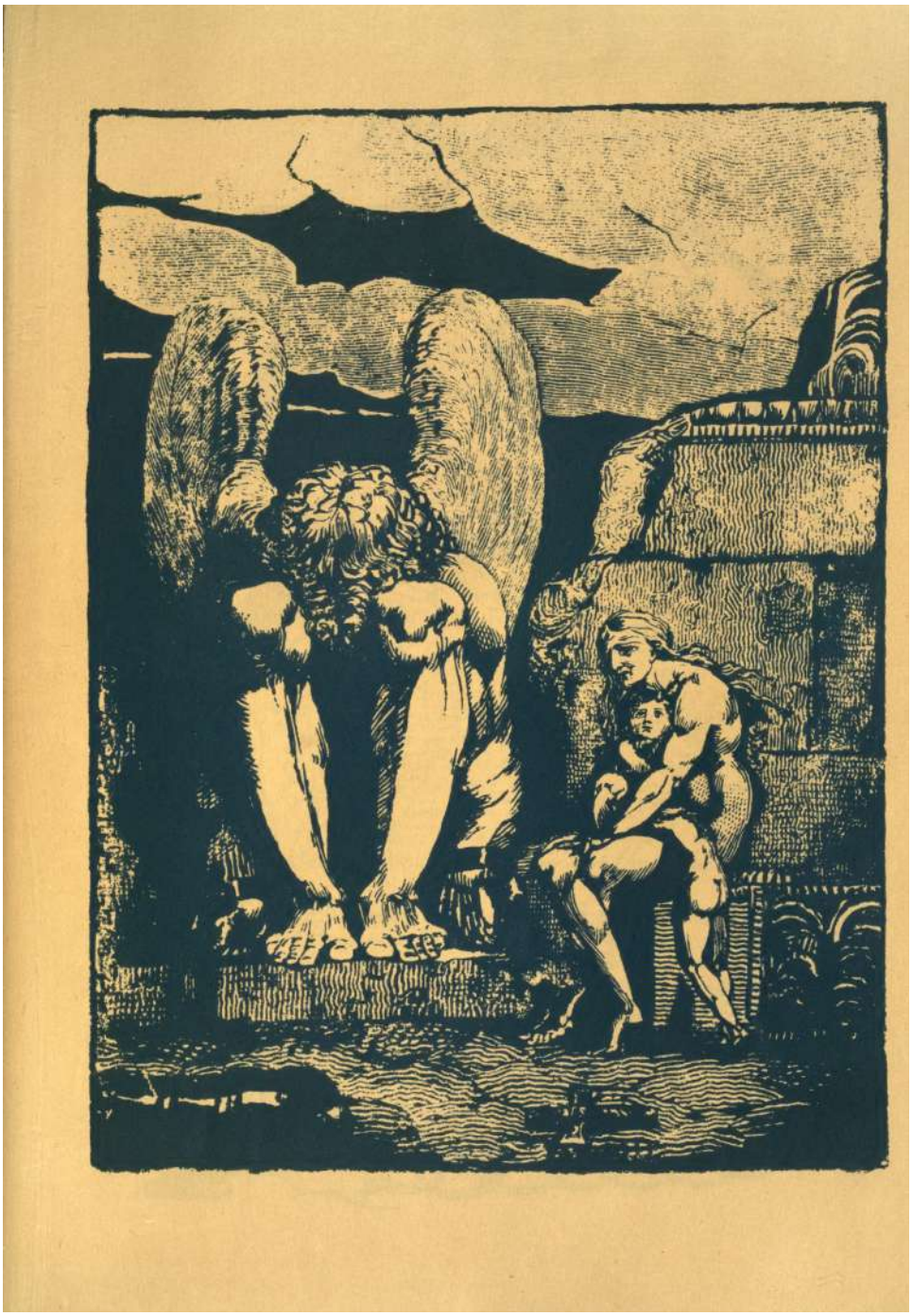

Figure 4: *Frontispiece to America a Prophecy.* Blake's frontispiece depicts a chained, despairing figure — often identified as Orc bound upon the Rock of Ages — caught between monumental stone pillars, while a smaller figure looks on in anguish. Lambeth Printed Books, 1793.

visionary epistemology as a third vertex.

2.5 Method, Organization, and Interpretive Framework

The manuscript proceeds as follows. **Section 2** presents Blake's visionary epistemology in five sub-sections: radical dissent and the anti-Lockean revolution, Fourfold Vision and the doctrine of contraries, the Four Zoas as mythological cognitive architecture, the "doors of perception" and imagination as existence, and illuminated printing as epistemological practice—drawing on Northrop Frye's *Fearful Symmetry* (1947), S. Foster Damon's *A Blake Dictionary* (1965), David V. Erdman's *Blake: Prophet Against Empire* (1954; 3rd rev. 1977), W.J.T. Mitchell's *Blake's Composite Art* (1978), and Joseph Viscomi's *Blake and the Idea of the Book* (1993). **Section 3** provides a comprehensive account of American Pragmatism from Peirce's Metaphysical Club (c. 1871–1879) through the neopragmatists, informed by Louis Menand's *The Metaphysical Club* (2001), Cheryl Misak's *The American Pragmatists* (2013), and Richard Bernstein's *The Pragmatic Turn* (2010). **Section 4** develops the six convergence dimensions in detail—active inquiry, truth as living process, experience as transaction, social selves, anti-representationalism, and synergetics—each grounded in primary textual analysis of *America a Prophecy*. **Section 5** introduces Active Inference as the formal bridge, drawing on Parr, Pezzulo, and Friston's *Active Inference* (2022) as the primary technical reference and mapping nine structural correspondences in a triadic synthesis atlas. **Section 6** concludes with implications for philosophy of mind, education, aesthetics, artificial intelligence, and social theory.

Throughout, we employ verified primary source quotations from Erdman's edition and maintain fidelity to the scholarly traditions of both Blake studies and pragmatist philosophy. Our method is one of *structural correspondence*—identifying shared topological features across distinct intellectual systems—rather than causal influence or historical genealogy. We adopt the phenomenological and enactivist traditions (Merleau-Ponty, Varela, Thompson, Rosch) as additional interpretive resources, recognizing that the 4E cognition framework (Embodied, Embedded, Enactive, Extended) provides contemporary cognitive-scientific grounding for the convergences we identify.[Gallagher, 2017, Engel et al., 2016] As Clark's foundational review of predictive brains and situated agents demonstrates, the computational machinery of prediction and active sensing now supplies the empirical backbone for what pragmatists and enactivists have long argued philosophically.[Clark, 2013]

3 Blake's Epistemology: Prophetic Cognition Against the Empire of Abstract Reason

3.1 Radical Dissent and the Prophetic Rejection of Lockean Empiricism

> "Sound! sound! my loud war-trumpets, and alarm my Thirteen Angels!" — William Blake, *America a Prophecy*, Plate 5 [Erdman 51][Blake, 1793a, Erdman, 1988]

3.1.1 Radical Protestant Origins and the Antinomian Inheritance

Blake's epistemology did not emerge from the academy; it emerged from the radical Protestant underground. E.P. Thompson's landmark *Witness Against the Beast: William Blake and the Moral Law* (1993) traced Blake's intellectual genealogy back through the English sectarian communities of the seventeenth century—Ranters, Muggletonians, and antinomian artisans who transmitted their ideas through printing workshops and dissenting chapels in London well into Blake's own lifetime.[Thompson, 1993] Thompson demonstrated that Blake inherited the antinomian conviction—literally, "against the law"—that the Mosaic commandments and the Gospel of Jesus are fundamentally opposed: the former representing prohibition, repression, and the rule of "Reason"; the latter embodying forgiveness, desire, and imaginative freedom.

The Muggletonians are especially significant. Founded by John Reeve and Lodowick Muggleton in the 1650s, they identified "Reason" as a satanic principle—a theological position that Blake transfigured into his mythological figure *Urizen*, a near-homophone of "your reason" (Damon 1965, s.v. "Urizen").[Damon, 1965] Thompson conceded that direct documentary evidence linking Blake to the Muggletonians is absent, but he meticulously established that the structural parallels—the Fall as the triumph of Reason over Imagination, the hostility to philosophical rationalism, the identification of institutional religion with spiritual oppression—"are too precise to be coincidental."[Thompson, 1993] This radical dissenting inheritance separates Blake from a merely philosophical anti-empiricist. His rejection of Locke is not an academic disagreement but a *spiritual insurgency*—rooted in the same tradition that produced the Levellers, the Diggers, and the antinomian communities that flourished during the English Civil War.

Crucially, as Harry White has demonstrated, Blake's target was never science itself but "Abstract Philosophy" which, Blake declared, was "warring in enmity against Imagination" while opposing both art and science.[White, 2005] Blake wrote that "Arts & Sciences are the Destruction of Tyrannies or Bad Governments" and envisioned *The Four Zoas* concluding with "the dark Religions are departed & sweet Science reigns"—a formulation of what he called "sweet Science," a mode of knowledge pursuit in happy dialogue with the imagination.[White, 2005, Erdman, 1988] This distinction is vital: Blake's quarrel with Newton and Locke is not a rejection of empirical investigation but of the dogmatic abstractions that sever science from the experiential ground in which it must be rooted. Already in 1788, Blake had declared the principle underlying his entire epistemology: "As the true method of knowledge is experiment the true faculty of knowing must be the faculty which experiences. This faculty I treat of" (*All Religions Are One*).[Blake, 1788, Erdman, 1988] This axiom anticipates Peirce's pragmatic maxim by ninety years and Bridgman's operational definitions by nearly a century and a half.

3.1.2 Blake in Johnson's Revolutionary Circle: London's Radical Intelligentsia

David V. Erdman's definitive *Blake: Prophet Against Empire* (1954; 3rd rev. ed. 1977) established that Blake was no isolated mystic but a politically engaged radical who moved in the most dangerous intellectual circles of 1790s London.[Erdman, 1954] Blake frequented the weekly dinners at Joseph Johnson's bookshop in St Paul's Churchyard—the publisher who served as the hub connecting Mary Wollstonecraft, William Godwin, Joseph Priestley, and Thomas Paine. Erdman documented that when the Pitt government issued a warrant for Paine's arrest for seditious libel after *Rights of Man* (1791–92), Blake personally warned Paine, enabling his escape to France.[Erdman, 1954]

Blake's annotations to Bishop Richard Watson's *An Apology for the Bible* (1798)—a rebuttal of Paine's *The Age of Reason*—reveal the depth of his allegiance:

> "Paine is either a Devil or an Inspired Man. … I have read this Book with attention & find that the Bishop has not answered one of Paine's grand objections." — Blake, annotations to Watson [Erdman 611][Erdman, 1988]

And elsewhere: "Paine is a better Christian than the Bishop."[Erdman, 1988] These are the polemics of a man who understood that epistemological liberation and political liberation are the same struggle.

3.1.3 *America a Prophecy* as the Artistic Crystallization of Revolutionary Praxis

America a Prophecy (1793), etched on eighteen copper plates in Blake's Lambeth workshop, is the artistic crystallization of this political milieu.[Blake, 1793a] The poem was composed during the period when Blake reportedly wore the red Phrygian cap of the Jacobins in the streets of London—and when doing so could lead to arrest.[Erdman, 1954] Erdman characterized *America* as Blake's "literary campaign against the political tyranny of the day," reading it as a direct response to the British government's suppression of radical dissent following the outbreak of war with revolutionary France in February 1793.[Erdman, 1954]

The poem is structured in two parts: a **Preludium** (Plates 1–4), in which the revolutionary spirit Orc breaks free from his chains on the mountains of Atlantis, and the **Prophecy** proper (Plates 5–18), in which the American Revolution is narrated as a mythological confrontation between Orc's liberating fire and Urizen's frozen law.[Erdman, 1988] As Erdman demonstrated, Blake transforms Washington, Paine, Franklin, Warren, Allen, Gates, and Lee from historical actors into mythological agents of perceptual revolution—the "terrible men" who "stand on the shores" with "foreheads rear'd toward the East" (Plate 5; Erdman 51):

> "For terrible men stand on the shores, and in their robes I see Children take shelter from the lightnings: there stands Washington, And Paine, and Warren, with their foreheads rear'd toward the East" — *America a Prophecy*, Plate 5 [Erdman 51][Blake, 1793a, Erdman, 1988]

The children "take shelter from the lightnings"—they are acted upon by forces they do not comprehend. But the "terrible men" rear their foreheads *toward* the storm. This is the Blakean epistemological posture: not the Lockean mind passively receiving impressions, but the prophetic mind actively confronting the forces that shape experience.

3.1.4 The Anti-Lockean Manifesto: Innate Ideas, Active Perception, and Newton's Sleep

Blake's epistemology is, at its core, a radical rejection of the Lockean model of the mind as a *tabula rasa*—a blank slate passively receiving sense impressions from an external world. Where Locke proposed that there is nothing in the mind that was not first in the senses, Blake insisted that perception is always already *shaped* by the imaginative faculty of the perceiver. "As a man is, so he sees," Blake wrote to Reverend Dr. Trusler on 23 August 1799 (Erdman 702)—a formulation that anticipates by two centuries the Active Inference principle that perception is inference, conditioned by the generative model of the agent.[Erdman, 1988]

Blake's annotations to Joshua Reynolds's *Discourses* (c. 1808) contain his most explicit philosophical attack on Lockean empiricism:

> "Innate Ideas are in Every Man, Born with him; they are truly Himself. The Man who says that we have No Innate Ideas must be a Fool & Knave, Having No Con-Science or Innate Science." — Blake, annotations to Reynolds [Erdman 648][Erdman, 1988]

For Blake, the empiricist reduction of knowledge to sensation was not merely philosophically mistaken but spiritually catastrophic. It produced "Newton's Sleep"—a state of contracted, single-vision perception in which the infinite richness of reality is filtered through the "narrow chinks" of materialist assumptions. Newton, Locke, and Bacon formed Blake's anti-trinity—what he called, in *Jerusalem* (Plate 54), the "three great teachers of atheism, or Satan's Doctrine" (Erdman 203)—the architects of a mechanical universe emptied of imagination, value, and meaning.[Erdman, 1988]

3.1.5 Swedenborg's Influence and Blake's Turn from Spectator to Activist Epistemology

Blake's path to his mature epistemology passed through a crucial intermediate stage: his engagement with, and ultimate rejection of, the Swedish mystic Emanuel Swedenborg. Blake and his wife Catherine attended the first General Conference of the New Jerusalem Church in London on 13 April 1789—the same year the Bastille fell—and Blake annotated extensively in Swedenborg's *Divine Love and Divine Wisdom* and *Divine Providence*.[Thompson, 1993]

But by 1790, Blake had turned against Swedenborg. *The Marriage of Heaven and Hell* (c. 1790–93)—whose very title inverts Swedenborg's *Heaven and Hell*—is, among other things, a merciless satire of Swedenborgian theology.[Blake, 1790] The rejection is epistemologically decisive: it marks Blake's transition from a spectator theology—in which the mystic *receives* correspondences from a transcendent realm—to an activist epistemology in which the prophet *creates* vision through imaginative labor. As Blake wrote: "Without Contraries is no progression. Attraction and Repulsion, Reason and Energy, Love and Hate, are necessary to Human existence" (*Marriage*, Plate 3; Erdman 34).[Blake, 1790, Erdman, 1988]

The distance from Swedenborg to Blake is the same distance the pragmatists would later traverse: from a correspondence theory of truth to a theory of truth as active construction.

3.1.6 *America a Prophecy* as Anti-Lockean Epistemological Praxis

The narrative arc of *America a Prophecy* enacts the anti-Lockean revolution at the level of world history. The poem opens with the narrator's own "agèd sight" obscured by "clouds" (Plate 5; Erdman 51)—a Lockean obstruction that the prophetic vision will burn away.[Blake, 1793a] Saree Makdisi, in *William Blake and the Impossible History of the 1790s* (2003), reads the poem's active posture as Blake's challenge to the emerging commodity-form of perception: the idea that knowledge, like goods, is something *received* from an external source and passively consumed.[Makdisi, 2003] For Blake, perception is *production*—the active making of a world. Makdisi demonstrates that in *America*, selves and others exist in a "dispersed and mutually dependent network" that refuses the atomized social space of liberal individualism—an insight that anticipates both Mead's social self and Active Inference's multi-agent generative models.[Makdisi, 2003]

Boston's Angel's speech—the poem's most sustained articulation of the anti-Lockean position—begins at Plate 9 (Erdman 53):

> "Who commanded this? What God? What Angel? To keep the gen'rous from experience till the ungenerous Are unrestrain'd performers of the energies of nature; Till pity is become a trade, and generosity a science That men get rich by" — *America a Prophecy*, Plate 9 [Erdman 53][Blake, 1793a, Erdman, 1988]

This is simultaneously a political accusation and an epistemological manifesto. "To keep the gen'rous from experience" is the Lockean programme weaponized: not merely claiming that knowledge comes from experience, but *restricting* whose experience counts and whose does not. The angel demands to know which authority has the right to determine the boundaries of legitimate perception—a question that Peirce, a century later, would answer with his four Methods of Fixing Belief, concluding that only the Method of Science, the self-correcting community of inquiry, is free of such arbitrary authority.[Peirce, 1877]

3.2 Fourfold Vision and the Epistemological Doctrine of Contraries

> "Now I a fourfold vision see, / And a fourfold vision is given to me; / 'Tis fourfold in my supreme delight, / And threefold in soft Beulah's night, / And twofold Always. May God us keep / From single vision, and Newton's sleep!" — Blake, letter to Thomas Butts, 22 November 1802 [Erdman 722][Erdman, 1988]

3.2.1 The Fourfold Hierarchy: From Newton's Sleep to Supreme Delight

Blake articulated a hierarchy of perceptual modes in his verse-letter to Thomas Butts of 22 November 1802, a text that Northrop Frye, in *Fearful Symmetry* (1947), identified as the kernel of Blake's entire epistemological system.[Frye, 1947] The hierarchy maps four levels of cognitive engagement:

Table 1: Blake's Fourfold Vision: The Hierarchical Integration of Epistemological Modes. Rather than discarding lower forms of perception, Fourfold Vision subsumes sensory and rational data into a unified framework—structurally analogous to deep hierarchical inference.

Level	Vision	Character	Epistemological Mode
Single	Newton's Sleep	Contracted, mechanical	Sense-data empiricism
Twofold	Ordinary consciousness	Symbolic, metaphorical	Interpretive understanding
Threefold	Beulah's night	Emotional, intuitive	Aesthetic-affective knowing
Fourfold	Supreme delight	Visionary, infinite	Integrated imaginative perception

The crucial insight is that Blake does not reject lower vision in favor of higher—he rejects *single* vision, the tyranny of one mode over all others. Fourfold vision is the *integration* of all modes, the state in which reason, imagination, affect, and sensation coordinate rather than suppress one another. As Frye argued, Blake's hierarchy is not a ladder to be climbed but a lens to be *widened*: "each level includes, rather than supersedes, those below it."[Frye, 1947]

3.2.2 Contrary States and Organized Innocence in *Songs of Innocence and of Experience*

Blake's doctrine of contraries finds its most accessible expression in *Songs of Innocence and of Experience: Shewing the Two Contrary States of the Human Soul* (1794).[Blake, 1794] The work's subtitle is itself an epistemological thesis: the soul does not possess a single, fixed mode of apprehension but oscillates between—and ideally integrates—two fundamentally opposed orientations.

Innocence perceives the world through trust, joy, and the unmediated sense of divine presence. The Lamb is its emblem. **Experience** perceives the same world through suspicion, suffering, and the awareness of institutional oppression. The Tyger is its emblem: "What immortal hand or eye / Could frame thy fearful symmetry?" The two states do not cancel each other. Both are *necessary* for full perception.

What Blake calls "Organized Innocence"—the state achieved when experience is *passed through* rather than surrendered to—corresponds to the Fourfold Vision: a higher integration that retains the joy of innocence and the wisdom of experience simultaneously. Frye identified this dialectical structure as Blake's signature: not Hegelian *Aufhebung*, which sublates contraries into a higher unity, but a *marriage of contraries* in which both remain alive and in productive tension.[Frye, 1947] "Without Contraries is no progression" (*Marriage*, Plate 3; Erdman 34).[Blake, 1790, Erdman, 1988]

3.2.3 *America a Prophecy* and the Full Spectrum of Visionary Perception

America a Prophecy dramatizes the full spectrum of vision with remarkable precision. Each major figure in the poem operates at a distinct level of Blake's perceptual hierarchy:[Blake, 1793a]

Albion's Angel operates in single vision—he apprehends the revolution solely as rebellion to be crushed, deploying plagues "obedient to his voice" (Plate 12; Erdman 55). His perception is purely reactive: he cannot imagine the revolution as anything other than a threat to existing order. In Active Inference terms, his generative model admits only one hypothesis (rebellion → suppress), with all prediction errors assigned zero precision.

Boston's Angel achieves at least twofold vision. He sees through the institutional role assigned to him and poses the poem's central epistemological question: "Who commanded this? What God? What Angel? / To keep the gen'rous from experience" (Plate 9; Erdman 53).[Blake, 1793a, Erdman, 1988] This question is simultaneously political (who authorized British tyranny?) and epistemological (who has the right to determine the boundaries of legitimate perception?). His act of "rending off his robe and throwing down his sceptre / In sight of Albion's Guardian" (Plate 9; Erdman 53) is a perceptual revolution: he discards the single-vision uniform of institutional authority.

The Thirteen Angels who "rent off their robes to the hungry wind, and threw their golden sceptres / Down on the land of America" (Plate 9; Erdman 53–54) achieve something approaching fourfold vision. They act from integrated perception—rational (recognizing injustice), passionate (indignant), imaginative (envisioning a new order), and sensory—descending "naked and flaming," their "lineaments seen / In the deep gloom; by Washington and Paine and Warren they stood" (Plate 10; Erdman 54).[Blake, 1793a, Erdman, 1988] Their nakedness is not merely dramatic; it signifies the removal of all epistemological filters. They perceive without mediation.

Orc embodies the eruption of visionary energy against contracted perception. Erdman reads Orc as "the spirit of revolution" whose fires melt the rigid structures of Urizenic law.[Erdman, 1954] But Orc alone does not represent fourfold vision—he is Luvah (Passion) unbound, energy without form. The poem's deepest hope lies not in Orc's triumph but in the *cooperation* of all perceptual faculties: the Thirteen Angels (imagination), the historical figures (sensory-practical engagement), and the revolutionary fire (passion) combine in a composite act that anticipates the full reintegration Blake will develop in his later prophecies.

3.2.4 Perception as Embodied Production in *Visions of the Daughters of Albion*

Blake's *Visions of the Daughters of Albion* (1793)—dated the same year as *America* and printed from the same press—presents his most sustained dramatic critique of Lockean perception through the embodied experience of its protagonist, Oothoon.[Blake, 1793b] Where *America* stages the epistemological revolution at the geopolitical scale, *Visions* stages it at the level of the individual body.

Oothoon's lament is simultaneously a critique of three Lockean errors:

1. **The passivity thesis**: Theotormon treats Oothoon as a passive surface upon which experience has been *inscribed*—the Lockean blank slate. Because she has been raped by Bromion, he perceives her as permanently marked, as if experience were a one-way imprint.
2. **The single-sense reduction**: Bromion reduces the world to what can be possessed and measured—"single vision" contracted to the quantifiable.
3. **"The Eye sees more than the Heart knows"**: The poem's motto (Erdman 45) presents an epistemological paradox: the eye perceives more than the heart can process—but the heart's failure to *know* is a *contraction* produced by the ideological machinery of possessive individualism, not an innate deficiency.[Erdman, 1988]

Oothoon's response is a manifesto for active, embodied perception: "With what sense does the bee / Form cells? … With what sense does the parson claim the labour of the farmer?" (Plate 3; Erdman 48).[Blake, 1793b, Erdman, 1988] She argues that perception is not a universal faculty but a mode of engagement specific to each organism and its world—a proto-pragmatist and proto-Active Inference insight.

3.2.5 Complexity Theory, Dynamical Systems, and the Physics of Fourfold Vision

Mark Lussier's *Romantic Dynamics: The Poetics of Physicality* (2000) reads Blake's Fourfold Vision through the lens of complexity theory and dynamical systems, arguing that the Romantic poets anticipated twentieth-century physics by insisting on indeterminacy, nonlinearity, and the irreducibility of the observer to the

observed.[Lussier, 2000] Blake's Fourfold Vision, in this reading, is a *structural description* of how complex systems generate emergent properties through the interaction of multiple coupled subsystems—each operating at a different scale.

This is precisely the structure of hierarchical inference in the Active Inference framework: multiple layers of the generative model, each with its own precision weighting and temporal scale, coordinating to produce a unified percept. Single vision is a collapsed hierarchy. Fourfold vision is the full hierarchy. Newton's sleep is the pathological state in which priors at one level dominate the entire system, suppressing prediction errors from all other levels.

Saree Makdisi extends this analysis into political economy: Blake's critique of contracted perception is inseparable from his critique of the commodity form.[Makdisi, 2003] The reduction of reality to what can be measured, weighed, and exchanged is the political expression of single vision. Blake's Fourfold Vision is a refusal of this reduction at every level: aesthetic, epistemological, political, and spiritual. In *America*, the five gates of "law-built Heaven" (Plate 16; Erdman 57) that the Guardians of Europe attempt to shut are precisely the institutionalization of single vision—the senses reduced to instruments of ideological control.[Blake, 1793a, Erdman, 1988]

3.3 The Four Zoas: Blake's Pre-Freudian Mythological Cognitive Architecture

> "Four Mighty Ones are in every Man; a Perfect Unity / Cannot Exist, but from the Universal Brotherhood of Eden." — *The Four Zoas*, Night I [Erdman 300][Erdman, 1988]

3.3.1 Urizen, Luvah, Los, and Tharmas: The Fourfold Architecture of the Mind

Blake's major prophetic works—*The Four Zoas* (c. 1797–1807), *Milton* (1804–c. 1811), and *Jerusalem* (1804–c. 1820)—present a mythological cognitive architecture centered on four "Mighty Ones" who constitute the Universal Man, Albion. S. Foster Damon, in *A Blake Dictionary* (1965), called this "the most comprehensive symbolic psychology before Freud."[Damon, 1965]

Table 2: The Four Zoas: Blake's Mythological Architecture of Cognition. Each Zoa represents a necessary but insufficient faculty. Their fragmentation constitutes the "Fall," while their reintegration forms Blake's vision of genuine, balanced cognition.

Zoa	Faculty	Element	Compass	Function
Urizen	Reason & Law	Air	South	Establishes regularities and measurement
Luvah	Passion & Love	Fire	East	Provides affective valence and energy
Los (Urthona)	Imagination	Earth	North	Generates creative vision and prophecy
Tharmas	Instinct & Senses	Water	West	Grounds the organism in bodily experience

Each Zoa possesses an Emanation—a female counterpart representing the Zoa's outward expression and relational capacity: Ahania (Urizen's pleasure in intellectual discovery), Vala (Luvah's natural beauty), Enitharmon (Los's inspiration and spatial form), and Enion (Tharmas's delight in embodiment). As Damon documented, when a Zoa is separated from its Emanation, that faculty becomes solipsistic: Urizen without Ahania is sterile rationalism; Los without Enitharmon is creative fury without form.[Damon, 1965]

3.3.2 Los as the Generative Principle: Prophetic Imagination and Creative Labor

Among the Zoas, Los—the Spirit of Imagination, also called the "Eternal Prophet"—holds a privileged position. Damon identifies Los as "the creative principle in the mind" and "the spirit of prophecy" (s.v. "Los").[Damon, 1965] Where Urizen *analyzes*, Luvah *feels*, and Tharmas *senses*, Los *creates*—forging new forms on his anvil. In *Jerusalem*, Los hammers at his forge "to build Golgonooza"—the City of Art, the imaginative space within which the fallen Zoas can be reassembled (Plate 12; Erdman 155).[Erdman, 1988]

Harold Bloom, in *Blake's Apocalypse* (1963), argued that Los represents Blake's most original contribution to the Western prophetic tradition: "the idea that the prophet is not a passive vessel for divine messages but an *active maker* who shapes reality through creative labor."[Bloom, 1963] In Active Inference terms, Los is the *generative model itself*—the creative engine that constructs the world the agent inhabits. His forge is the process of model-building; his hammer strokes are the iterative updates of variational inference; his creations are the predictions that shape perception and action.

3.3.3 The Primal Orc–Urizen Dialectic: Passion Unchained Against Frozen Reason

The Zoas are not yet fully differentiated in *America a Prophecy*—the mature fourfold architecture emerges in the later prophecies. But *America* stages the *primal split* between two Zoas that will structure all of Blake's subsequent mythology: the Orc-Urizen dialectic.[Blake, 1793a]

Orc is Luvah unchained—revolutionary Passion liberated from the restrictions of Reason. In the Preludium (Plates 1–4), the "shadowy daughter of Urthona" witnesses Orc breaking free from his chains on the mountains of Atlantis, his "fierce flames" announcing the eruption of desire against law (Erdman 50).[Erdman, 1954, 1988] Erdman reads Orc's emergence as a "revolutionary nativity"—the birth of the American revolutionary spirit, mythologized as a cosmic event.[Erdman, 1954]

Urizen appears at the poem's climax (Plates 15–16; Erdman 56–57), descending from "above all heavens" to pour his "storèd snows" and "icy magazine" upon the Atlantic:

> "The Heavens melted from North to South; and Urizen, who sat Above all heavens, in thunders wrapp'd, emerg'd his leprous head From out his holy shrine, his tears in deluge piteous Falling into the deep sublime" — *America a Prophecy*, Plate 15 [Erdman 56][Blake, 1793a, Erdman, 1988]

This is the Fall made visible: Reason descending to suppress the other faculties with frozen law. Urizen's "leprous" body—white, "hoary," shivering—is single vision made flesh: the living death of a faculty that has cut itself off from passion, imagination, and sensation.

But Orc's fires cannot be extinguished. Even Urizen's twelve-year freeze is temporary: "then their end should come, when France receiv'd the Demon's light" (Plate 16; Erdman 57).[Blake, 1793a, Erdman, 1988] Blake prophetically links the American and French Revolutions as successive eruptions of the same Orcian energy against the same Urizenic order—a reading Erdman confirmed through extensive historical documentation.[Erdman, 1954]

3.3.4 The Fall as Cognitive Fragmentation: From Joint Inference to Mean-Field Factorization

In Blake's mythology, the "Fall" is not a moral transgression but a **cognitive fragmentation**—the separation of the four Zoas into isolated, competing faculties. When Urizen (Reason) seizes sole dominion, Luvah (Passion) becomes Orc—uncontrolled revolutionary energy. Urthona (Imagination) is forced underground as the laboring smith Los. Tharmas (Sensation) dissolves into the "Sea of Time and Space."

The Fall, in formal terms, is the transition from *integrated inference* to a *mean-field approximation*—from a joint distribution $q(\theta)$ coordinating all faculties to a factorized product $q(\theta) \approx q(\theta_U) \cdot q(\theta_L) \cdot q(\theta_V) \cdot q(\theta_T)$ where each Zoa optimizes independently. When Urizen dominates, the system collapses to $q(\theta) \approx q(\theta_U)$, with Luvah, Los, and Tharmas treated as noise to be suppressed. The free energy cannot decrease under this factorization because the covariances between faculties—the *synergies* that carry information available only to the integrated system—are discarded.

Urizen emerges "leprous" from "his holy shrine" to pour "storèd snows" upon the Atlantic. This illustration visualizes the cognitive pathology Blake terms "Newton's Sleep": the forceful imposition of frozen, rigid priors (the snows and ice) attempting to suppress the energetic prediction errors (Orc's fires) burning below.

3.3.5 Building Jerusalem: Apocalyptic Re-Integration of the Factorized Model

Blake's apocalyptic hope—"Building Jerusalem"—is not otherworldly salvation but the *re-integration of the factorized model*: the Zoas returning to coordinated, joint inference. "I must Create a System, or be enslav'd by another Man's; I will not Reason & Compare: my business is to Create" (*Jerusalem*, Plate 10; Erdman 153).[Erdman, 1988]

Bloom reads this as Blake's direct challenge to every system—including those of Locke and Newton—that presents itself as *given* rather than *made*.[Bloom, 1963] The imperative to "Create a System" is the Blakean version of the pragmatist insistence that all conceptual frameworks are tools, not mirrors—instruments crafted for specific purposes, revisable in light of their consequences.

America a Prophecy ends not with Orc's triumph but with the promise of reintegration. The poem's final image—the consumption of the five gates and the melting of their "bolts and hinges" (*America*, lines 150–151; Erdman 58)—describes not the victory of one Zoa but the *dissolution of the barriers between all of them*: the gates that kept the senses institutionally separated are consumed, and the flames circulate freely "round the

Figure 5: *Urizen Descends.* Urizen pours storèd snows upon the Atlantic. *America a Prophecy*, Plate 15–16; Erdman 56–57.

heavens" and "round the abodes of men"—above and below, cosmic and domestic, integrated.[Blake, 1793a, Erdman, 1988]

3.4 The Doors of Perception and Imagination as Existence

> "If the doors of perception were cleansed every thing would appear to man as it is: Infinite. For man has closed himself up, till he sees all things thro' narrow chinks of his cavern." — William Blake, *The Marriage of Heaven and Hell*, Plate 14 [Erdman 39][Blake, 1790, Erdman, 1988]

3.4.1 The Materialist Delusion: Nature as an Abstract Phantom

The "doors of perception" passage operates as Blake's most concentrated epistemological manifesto. Its underlying structure reveals three radical claims about the nature of human cognition:

1. **The doors can be cleansed:** Perception is not a biologically fixed, passive window but a dynamic interface modifiable through deliberate practice.
2. **What appears after cleansing is the Infinite:** The apparent finitude and mechanical deadness of the universe is a limitation within the perceiver's contracted model, not an objective property of reality.
3. **Man has closed himself up:** This cognitive contraction is self-imposed—a defensive structural hardening generated by the organism's own habitual, rigid priors.

Each claim anticipates a core tenet of American Pragmatism. Blake's "cleansing" is the poetic equivalent of Peirce's self-correcting community of inquiry.[Peirce, 1877] His revelation of the "Infinite" parallels James's radical empiricism, which demands that philosophy embrace the full "blooming, buzzing confusion" of unmediated experience.[James, 1907] And his diagnosis of self-enclosure mirrors Dewey's insistence that the organism-environment transaction can become blocked by rigid habits—and must be reconstructed through intelligent action.[Dewey, 1934]

3.4.2 The American Transmission from Blake to Huxley

Linda Freedman's *William Blake and the Myth of America: From the Abolitionists to the Counterculture* (2018) traces the extraordinary afterlife of Blake's visionary vocabulary in American culture.[Freedman, 2018] Blake's reception in America began with the Transcendentalists: Emerson encountered Blake's work in the 1830s through Alexander Gilchrist's biography and recognized in him an opponent of Locke and a champion of intuition over sensation. But it was the twentieth century that transformed Blake from a literary curiosity into a cultural force.

Aldous Huxley titled his 1954 account of mescaline experience *The Doors of Perception*—borrowing Blake's metaphor to describe what he called the brain's "reducing valve," the filtration system that limits consciousness to biologically useful information.[Huxley, 1954] Jim Morrison named his band The Doors after Huxley's book. Allen Ginsberg reported a visionary experience in his East Harlem apartment in 1948 in which he heard Blake's voice reading "Ah Sun-flower" and "The Sick Rose," an event Ginsberg described as the defining moment of his poetic vocation (Freedman 2018, ch. 7).[Freedman, 2018]

Freedman's central argument is that American intellectuals turned to Blake at moments of "cataclysmic change"—the abolitionist struggle, the Civil War, the counterculture—because his framework offered something that neither Enlightenment rationalism nor orthodox Christianity could provide: a vision of liberation that was simultaneously political, spiritual, and perceptual. As Freedman writes, the "doors of perception" became the master metaphor for the American conviction that "to change how you see is to change what you are."[Freedman, 2018]

3.4.3 Cleansing the Doors: Escaping the Cave of Materialist Empiricism

America a Prophecy provides Blake's most dramatic staging of what happens when the doors of perception are not merely cleansed but *consumed by fire*. In the poem's climactic final movement (Plates 16–18), the Guardians of Europe—France, Spain, and Italy—attempt to shut "the five gates of their law-built Heaven" to contain the revolutionary conflagration:

> "They slow advance to shut the five gates of their law-built Heaven, Fillèd with blasting fancies and with mildews of despair, With fierce disease and lust, unable to stem the fires of Orc, But

> the five gates were consum'd, & their bolts and hinges melted; And the fierce flames burnt round the heavens, & round the abodes of men." — *America a Prophecy*, Plates 17–18 [Erdman 57–58][Blake, 1793a, Erdman, 1988]

The "five gates" correspond to the five senses as they have been *institutionalized*—turned from open portals into locked barriers that admit only sense-data compatible with the ruling ideology. As Erdman noted, the Guardians' attempt to "shut" the gates is a precise allegory for the reactionary response to revolution: the European monarchies attempting to seal their borders against French revolutionary contagion.[Erdman, 1954] But Blake's mythological register carries the political allegory to an epistemological depth that mere political narrative cannot reach: the gates are not just national borders but *perceptual borders*, and their melting is the dissolution of the Lockean-Newtonian epistemological regime itself.

The five gates are the institutional equivalent of the "narrow chinks" through which man has closed himself up in the *Marriage*. Their "bolts and hinges" are the mechanisms of sensory restriction—the apparatus by which "law-built" perception constrains what can be seen, heard, felt, tasted, and touched. Their melting is the liberation of the senses from their function as mere data-collection instruments: the senses are restored to their full capacity as organs of perception-action, capable of perceiving the Infinite.

Note the poem's final line: the flames burn "round the heavens, & round the abodes of men." This is not destruction but *circulation*—the fires of visionary perception circulate through the entire system, cosmic and domestic, public and private. The distinction between "heavens" and "abodes of men" is maintained but the same fire pervades both. This is fourfold vision actualized at the civilizational scale.

3.4.4 The Imaginative Faculty: Active Construction of the Experienced World

Blake's most radical epistemological claim is ontological: "Imagination is not a State: it is the Human Existence itself" (*Milton*, Plate 32; Erdman 132).[Erdman, 1988] This is not a claim about fantasy or fiction but about the constitutive role of the generative model in creating the world the agent inhabits. In Active Inference notation, the self is constituted by its generative model: Self $\cong p(o, \theta)$—the agent *is* the model it maintains, and to change the model is to change the self. (This is a regulative identification rather than a strict metaphysical identity; see Parr, Pezzulo, and Friston 2022, ch. 10, for the distinction between the self-model and the self.)

This claim places Blake in direct conversation with pragmatism's central insight: that knowing is not mirroring a given reality but actively constructing a livable world. Where the pragmatists expressed this in the language of science, evolution, and democratic inquiry, Blake expressed it in the language of prophecy, vision, and artistic creation. The synthesis of these two vocabularies is the task of this manuscript.

3.4.5 Fractal Epistemology and Deep Temporal Modeling

Auguries of Innocence (c. 1803) opens with what may be the most compressed statement of Blake's epistemological vision (Erdman 490):[Erdman, 1988]

> "To see a World in a Grain of Sand And a Heaven in a Wild Flower, Hold Infinity in the palm of your hand And Eternity in an hour."

This is a precise description of what Active Inference calls *deep temporal modeling*—the capacity of a hierarchical generative model to represent the universal in the particular, the abstract in the concrete. James's radical empiricism makes the same demand: that philosophy begin with the concrete particular—this sensation, this moment—and build outward rather than imposing categories from above.[James, 1907] Blake's grain of sand is James's "pure experience" rendered in verse. *America a Prophecy* enacts the same epistemological principle at the political scale: when the "fierce flames burnt round the heavens, and round the abodes of men" (*America*, line 151), the particular revolutionary event *is* the universal liberation—the grain of sand that contains a world.

3.4.6 The Proverbs of Hell as Compressed Epistemological Maxims

The Marriage of Heaven and Hell contains a collection of "Proverbs of Hell" (Plates 7–10; Erdman 36–38) that function as compressed epistemological maxims:[Blake, 1790, Erdman, 1988]

- **"The road of excess leads to the palace of wisdom"** — Knowledge is achieved by pushing beyond established limits. In Active Inference terms: explore, don't just exploit.
- **"What is now proved was once only imagined"** — Every empirical fact was first a hypothesis, every observation first a prediction. The generative model precedes the data.
- **"No bird soars too high, if he soars with his own wings"** — The organism's capacity is not externally bounded by "natural law" but internally generated by its own model complexity.
- **"Energy is Eternal Delight"** — The free energy that drives biological self-organization is not a burden to be minimized but the very medium of existence.

These proverbs are systematic rejections of the passive-reception model of knowledge and systematic affirmations of the active-construction model that pragmatism and Active Inference share with Blake's prophetic epistemology. Each proverb finds its dramatic counterpart in *America a Prophecy*: Orc's revolutionary excess *is* the road to the palace of wisdom; the colonists' imagined liberty *becomes* proved through action; and the "Eternal Delight" of free energy drives the revolutionary organism to shatter its chains.

3.5 Illuminated Printing: Pragmatism and Epistemology as Artistic Practice

> "I must Create a System, or be enslav'd by another Man's; I will not Reason & Compare: my business is to Create." — William Blake, *Jerusalem*, Plate 10 [Erdman 153][Erdman, 1988]

3.5.1 Unity of Artistic Conception and Material Execution

Blake's illuminated printing—in which text and image are engraved together on the same copper plate, colored by hand, and printed as a unified artifact—is not merely an aesthetic choice but an epistemological one. It *performs* the unity of perception and action, theory and practice, that his philosophy proclaims. Where conventional printmaking separates composition from execution, Blake's method makes them inseparable—anticipating Dewey's *Art as Experience* (1934), where aesthetic value lies not in the finished object but in the process of its making.[Dewey, 1934]

3.5.2 The Relief Etching Process: Integrating Conceptualization and Execution

Joseph Viscomi's *Blake and the Idea of the Book* (1993) provides the definitive technical account of Blake's process.[Viscomi, 1993] Blake's method involved writing text and drawing designs *backwards* on copper plates using an acid-resistant varnish (stop-out), then immersing the plates in acid so that the unmarked areas were eaten away, leaving text and image in *relief*—the reverse of conventional intaglio engraving. The plates were inked by hand, printed on a rolling press, then each impression was individually colored with watercolor by Blake and his wife Catherine. As Viscomi demonstrated, no two copies of any Blake illuminated book are identical.[Viscomi, 1993]

This technical process has profound epistemological implications:

1. **Against the division of labor**: In conventional publishing, the author writes, the engraver transcribes, the printer produces, the colorist decorates. Each step introduces a gap between conception and realization. Blake eliminates every such gap. The poet *is* the engraver *is* the printer *is* the colorist.
2. **Each copy is unique**: The "text" is not a fixed, reproducible object but a *family* of related but distinct realizations. This anticipates the pragmatist understanding of truth not as fixed correspondence but as an ongoing process of realization.
3. **Text and image are materially inseparable**: They are etched onto the same plate, printed in the same press-stroke.

3.5.3 *America a Prophecy* as a Material, Active Object in the World

America a Prophecy exists in seventeen known copies, four printed in color, spanning Blake's career from 1793 to approximately 1807.[Viscomi, 1993] The William Blake Archive (blakearchive.org) makes multiple copies available for side-by-side comparison—an unprecedented scholarly resource.[Eaves et al., 2003]

The material differences between copies are themselves epistemologically significant. Compare Copy A (printed c. 1795, British Museum) with Copy M (printed c. 1807, Yale Center for British Art): the same text, the same plate order, but radically different color palettes, different emphases in the visual compositions, different relationships between text and surrounding design. The "same" poem becomes a *different perceptual experience* in each material instantiation. As Viscomi demonstrated, Blake did not regard this variability as a defect but as essential to his method: the book is not a fixed message to be transmitted but a *living encounter* to be enacted differently each time.[Viscomi, 1993]

In the context of *America*, this materiality is politically charged. Erdman noted that Blake deliberately limited the number of copies—seventeen in total—to an intimate circle, circulating his revolutionary vision not through the mechanical reproduction of the press but through the artisanal production of hand-colored objects that required personal encounter.[Erdman, 1954] Each copy of *America* is thus simultaneously a work of art and an act of political dissent: a handmade revolutionary object in an age of mass production.

3.5.4 Mitchell on Composite Art and the Energetic Rivalry

W.J.T. Mitchell's *Blake's Composite Art: A Study of the Illuminated Poetry* (1978) provides the most influential theoretical account of the text-image relationship in Blake's illuminated works.[Mitchell, 1978] Mitchell argues that the relationship between graphic and poetic elements is neither harmony nor hierarchy but an "energetic rivalry"—a productive tension between "vigorously independent modes of expression."[Mitchell, 1978]

In *America*, this rivalry is especially intense. Plate 10 (Erdman 54), which depicts the Thirteen Angels descending "naked and flaming" to stand with Washington and Paine, surrounds the text with writhing vegetation and flame-like tendrils that seem to *grow from* the letters themselves. The visual design does not illustrate the text—it *extends* it, adding a dimension of sensory immediacy that the purely verbal register cannot achieve. Conversely, the text contextualizes the images with a precision of mythological reference that the visual alone cannot convey. The reader-viewer must actively negotiate between verbal and visual registers, performing the very integration of faculties that Blake's philosophy demands.[Mitchell, 1978]

Mitchell later coined the term "imagetext" in *Picture Theory* (1994) to describe this irreducible unity-in-difference—a compound term that names the *problematic gap* between verbal and visual representation that Blake's illuminated plates make visible.[Mitchell, 1994] Blake's illuminated printing, Mitchell argues, is the paradigmatic "imagetext": a practice that simultaneously unifies and differentiates word and image, creating a multiplicative meaning that exceeds what either medium could produce alone.[Mitchell, 1994]

3.5.5 The Blake Archive and Digital Epistemological Practice

The William Blake Archive (blakearchive.org), established in 1996 by Morris Eaves, Robert N. Essick, and Joseph Viscomi, now contains high-resolution digital images from over 45 research institutions worldwide.[Eaves et al., 2003] The Archive received the Modern Language Association's Prize for a Distinguished Scholarly Edition in 2003—the first digital project so honored.

By making it possible to compare multiple copies of *America* side by side—something physically impossible when the originals were scattered across the British Museum, the Library of Congress, the Morgan Library, and the Yale Center for British Art—the Archive enacts the Peircean principle that inquiry is communal: knowledge emerges from the comparison, contrast, and coordination of multiple perspectives.[Eaves et al., 2003] The digital humanities are, in this sense, a twenty-first-century continuation of Blake's illuminated printing: new technologies for the old project of integrating multiple modes of perception and expression.

3.5.6 Peirce's Triadic Semiotics and the Illuminated Plate

Blake's illuminated plates integrate all three of Peirce's semiotic modes in a single artifact:

- **Icon**: The visual designs *resemble* their referents—Orc's flames look like flames, the serpentine vegetation spirals like organic growth.
- **Index**: The plate bears the *physical traces* of Blake's hand—the acid-bitten copper, the individual brushstrokes, the pressure marks of the rolling press.
- **Symbol**: The text operates through *conventional signs*—the English alphabet, the grammatical structures of English.

This convergence is not accidental. Both Blake and Peirce are anti-Cartesian thinkers who reject the idea that meaning is a purely mental phenomenon occurring in a private inner theater. For both, meaning is *public*, *material*, and *relational*—constituted by interactions between signs, objects, and interpretants (Peirce) or between text, image, and reader-viewer (Blake).

3.5.7 Prophetic Self-Publishing Against the Commercial Epistemic Monopolies

Saree Makdisi reads Blake's illuminated printing as an explicit repudiation of the industrial division of labor that was transforming English society in the 1790s.[Makdisi, 2003] The factory system separated conception from execution, design from manufacture, mental from manual labor. Blake's method *refuses* this separation. He is simultaneously artist and artisan, visionary and craftsman, intellectual and laborer.

Makdisi's argument is especially pertinent to *America a Prophecy*, which was produced at precisely the moment when the industrial revolution was transforming the London printing trade. The Stanhope press, the steam-powered press, stereotype plates—all were emerging technologies that promised to separate the stages of book production ever more completely. Blake's artisanal method was a deliberate anachronism: a refusal of the very logic of industrial efficiency in favor of what Makdisi calls "the labor of vision."[Makdisi, 2003]

This is the practical dimension of Blake's epistemology. It is not enough to *think* in Fourfold Vision—one must *work* in Fourfold Vision. The illuminated plate is the proof that integrated perception, integrated labor, and integrated knowledge are not utopian fantasies but achievable practices. What Blake accomplished at his printing press in 13 Hercules Buildings, Lambeth, the pragmatists would later attempt in the laboratory, the schoolroom, and the democratic polity: the reconstruction of thought and practice as a unified, world-making activity.

The trajectory from Blake's workshop to the pragmatist laboratory is neither linear nor causal—but it is structurally unmistakable. Having established Blake's epistemology as an action-oriented, anti-representationalist, community-embedded practice of inquiry, we now turn to the philosophical tradition that independently arrived at remarkably similar conclusions: American Pragmatism, from its post-Civil War origins in the Metaphysical Club through its neopragmatist revival, and the formal apparatus that reveals these convergences to be not merely analogical but structurally identical.

4 American Pragmatism and Rejecting the Spectator Theory of Knowledge

> "Consider what effects, which might conceivably have practical bearings, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object." — Charles Sanders Peirce, "How to Make Our Ideas Clear" [1878][Peirce, 1878]

> "Why trembles honesty; and, like a murderer, Why seeks he refuge from the frowns of his immortal station!' — William Blake, *America a Prophecy*, lines 40–41[Blake, 1793a]

4.1 The Metaphysical Club and the Darwinian Epistemological Catalyst

American Pragmatism is considered a major tradition of philosophy native to the United States, originating in the 1870s in Cambridge, Massachusetts.[Peirce, 1877, 1878] It emerged in the aftermath of the Civil War—a catastrophe that shattered absolutist certainties about morality, progress, and truth. As Louis Menand demonstrated in *The Metaphysical Club* (2001), pragmatism arose as a direct intellectual response to the discrediting of older forms of metaphysical and moral certainty under the pressures of the Civil War, the abolition crisis, Darwinian evolution, and rapid institutional change.[Menand, 2001] The war revealed that convictions held with absolute certainty—on both sides—could lead to catastrophic violence; what was needed was not stronger certainties but a way of *coping with contingency*, treating beliefs as tools for navigating experience rather than mirrors of an ultimate metaphysical order. Blake's *America a Prophecy* (1793), written seventy-seven years earlier, had already dramatized precisely this crisis—the moment when inherited "mental chains" became untenable, and the revolutionary mind was forced to forge new modes of inquiry.

4.1.1 Origins of the Metaphysical Club in Cambridge

This search found its nucleus in the **Metaphysical Club**, an informal discussion group in Cambridge that met in 1872. Its core members included Charles Peirce, Chauncey Wright, William James, Nicholas St. John Green, Oliver Wendell Holmes Jr., John Fiske, Francis Ellingwood Abbot, and Joseph Bangs Warner.[Menand, 2001] Peirce later claimed that "within the philosophical discussions of the original club, pragmatism is said to have been born"—though, as Menand notes, there is no contemporary record of the club under that exact name apart from Peirce's much later recollection (corroborated only by a passing reference in a letter from Henry James mentioning that his brother William had joined "a metaphysical club").[Menand, 2001] The club dissolved within the year, but its conversational network seeded the entire tradition. Peirce went on to found a second Metaphysical Club at Johns Hopkins in 1879, where John Dewey was among its members.

Menand's historiographical insight is itself pragmatist in spirit: philosophical movements often crystallize around informal conversational networks whose identities are partly reconstructed after the fact. The Metaphysical Club is less a documented institution than a retroactive label for the moment when a group of thinkers, shaken by war and Darwin, began rejecting "radical foundationalist European metaphysics" in favor of critical, empirically oriented thinking.[Menand, 2001] As Menand put it, "The pragmatists believed that ideas were tools, that they were produced by groups and were dependent on human carriers and on the environment, like germs"—a formulation that could equally describe Blake's illuminated printing workshop, where ideas were literally produced by hand, dependent on material processes, and revised with every new impression.[Menand, 2001]

4.1.2 The Darwinian Catalyst: Evolution as Pragmatic Engine

The two greatest intellectual forces shaping pragmatism were the Civil War and Darwin's *Origin of Species* (1859). Chauncey Wright, an early American proponent of Darwinism, highlighted the principle of utility as the organizing structure of evolutionary change.[Wright, 1877] The pragmatist reading of Darwin—which has nothing in common with teleological, reductionist, or Social Darwinist models—treated evolution as

a template for understanding ideas themselves as **adaptive instruments** rather than mirrors of eternal truths, and inquiry as an ongoing, self-correcting process analogous to natural selection.[James, 1907]

John Dewey made the connection between Darwin and philosophical method most explicit in his seminal essay "The Influence of Darwin on Philosophy" (1910): "The influence of Darwin upon philosophy resides in his having conquered the phenomena of life for the principle of transition. He has dethroned essences from their pedestals; and, having compelled the mind to attend to the processes of transition and adaptation, has thereby put the reign of fixity on notice."[Dewey, 1910] Dewey's formulation is remarkably precise: Darwin did not simply add biology to philosophy's subject matter but changed philosophy's *method*—from the contemplation of fixed essences (Plato's Forms, Hegel's Absolute, Urizen's "law-built Heaven") to the investigation of transitions, adaptations, and functional processes. Philip Wiener's *Evolution and the Founders of Pragmatism* (1949) documented in detail how Wright, Peirce, James, and the entire Cambridge circle absorbed Darwinian thinking not as biological doctrine but as a philosophical revolution: the insight that the "fixation of belief" is itself a biological process, continuous with the organism's adaptation to its environment.[Wiener, 1949]

Peter Godfrey-Smith's *Complexity and the Function of Mind in Nature* (1996) extended this Darwinian-pragmatist insight by arguing that cognitive complexity evolves specifically in response to *environmental* complexity—organisms develop richer generative models precisely when their environments demand flexible, context-sensitive responses rather than fixed behavioral routines.[Godfrey-Smith, 1996] This is the biological grounding of Active Inference: the Free Energy Principle formalizes precisely the Darwinian-pragmatist claim that cognition is adaptive modeling, that perception is hypothesis-testing, and that the organism's relationship to its world is not passive reception but active, self-correcting inference. Blake's prophetic vision captures the same insight mythopoetically: the moment of revolution in *America a Prophecy*—when the Thirteen Governors abandon their inherited cognitive habits and "rush in fury to the sea"—is the moment when environmental pressure forces model updating, when the organism can no longer minimize surprise through its existing priors and must reconstruct its relationship to the world.

4.2 Neopragmatism: The Social Self and the Linguistic Turn

Peirce's contributions to pragmatism extend beyond the Pragmatic Maxim into a revolutionary approach to logical notation: his **Existential Graphs** (EGs), developed between 1882 and 1911. The Alpha system handles propositional logic through inscriptions on a "Sheet of Assertion" (representing the universe of discourse) with "cuts" (closed curves) functioning as negation; the Beta system extends this to first-order predicate logic with "lines of identity" connecting argument places.[Hartshorne et al., 1931] Peirce considered the EGs his "chef d'oeuvre"—superior to algebraic notation because they made logical reasoning *visible*, transforming inference from symbolic manipulation into a spatial, diagrammatic practice.

The contemporary significance of Peirce's diagrammatic reasoning has been illuminated by several convergent research programs. Fernando Zalamea's *Synthetic Philosophy of Contemporary Mathematics* (2012) positions Peirce as a precursor to category-theoretic thinking: Peirce's emphasis on *relations*, *continuity* (synechism), and the irreducibility of triadic sign-relations anticipates the categorical emphasis on morphisms over objects and on structure-preserving maps.[Zalamea, 2012] Ahti-Veikko Pietarinen's extensive reconstructions of the EGs have demonstrated that the Beta graphs constitute a complete diagrammatic notation for first-order logic with remarkable proof-theoretic properties—including cut-elimination theorems that parallel those of Gentzen's sequent calculus.[Pietarinen, 2006] Most strikingly, Geraldine Brady and Todd Trimble (2000) showed that Peirce's Alpha graphs can be modeled as *presheaves on a category*—presheaf toposes where the Sheet of Assertion corresponds to a terminal object and the cuts correspond to subobject classifiers—revealing that Peirce had independently discovered categorical structures in the 1880s.[Brady and Trimble, 2000] Nathan Haydon's subsequent work extends this by interpreting the Beta graphs as *string diagrams in cartesian bicategories*, connecting Peirce's nineteenth-century diagrammatic practice to the cutting edge of contemporary applied category theory.

The relevance of these developments to our synthesis is threefold. First, Peirce's diagrammatic method enacts the pragmatist epistemology at the level of logical practice: reasoning is not the manipulation of abstract symbols but the *construction and transformation of spatial diagrams*—a form of "learning by doing"

that Dewey would recognize. Second, the categorical interpretation of Existential Graphs provides a formal bridge from Peirce's semiotics to the mathematical structures underlying Active Inference—both frameworks privilege *process* and *relation* over static objects. Third, and most suggestively, Peirce's diagrammatic approach anticipates Fuller's geometric operationalism (subsection 5.6): both insist that the deepest truths are *spatial*, that meaning resides in *structure*, and that thought is most powerful when it is most concretely embodied in material form—whether on Peirce's Sheet of Assertion or Fuller's tensegrity models.

4.3 Charles Sanders Peirce (1839–1914): The Architectonic Logician

Peirce is widely recognized as "the father of pragmatism," a polymath whose groundbreaking work in logic, mathematics, semiotics, and philosophy set the stage for the entire tradition.[Hartshorne et al., 1931]

4.3.1 Peirce's Pragmatic Maxim and the Fixation of Belief

The Pragmatic Maxim, first clearly stated in "How to Make Our Ideas Clear" (1878), is the keystone of the tradition. (The epigraph above provides its canonical formulation.) This is not subjectivism or utilitarianism but a *logical* principle: a rule for achieving the highest grade of clarity about concepts by describing how they are employed in practice. Peirce's maxim has a verificationist character—"our idea of anything *is* our idea of its sensible effects"—but goes beyond verification by emphasizing implications for conduct. His later formulation strengthened this: "The entire intellectual purport of any symbol consists in the total of all general modes of rational conduct which, conditionally upon all the possible different circumstances and desires, would ensue upon the acceptance of the symbol" (EP2: 346).[Peirce, 1878]

4.3.2 Truth as "What Works": The Cash-Value of Ideas in Experience

Peirce's pragmatic clarification of truth is among the most consequential in the tradition:

> "The opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real." [EP1: 139][Peirce, 1877]

Truth is the *end* (telos, not terminus) of inquiry. The objectivism of this account derives not from a world external to minds but from the *potential infinity* of the community of inquiry, which exposes all beliefs to future correction. Late in life, Peirce treated this convergence as a *regulative hope*: "I do not say that it is infallibly true that there is any belief to which a person would come if he were to carry his inquiries far enough. I only say that that alone is what I call Truth."[Peirce, 1877]

4.3.3 Fallibilism and Anti-Cartesianism

In "Some Consequences of Four Incapacities" (1868), Peirce identified four problematic Cartesian teachings and proposed **fallibilism** as the alternative—the thesis that any validity claim can be challenged and modified. Against Cartesian universal doubt: "Do not pretend to doubt in philosophy what we do not doubt in our hearts" (EP1: 29).[Peirce, 1868]

His metaphor for inquiry is striking and central: reasoning "should not form a chain which is no stronger than its weakest link, but a **cable** whose fibres may be ever so slender, provided they are sufficiently numerous and intimately connected" (EP1: 29).[Peirce, 1877]

4.3.4 The Fixation of Belief

In "The Fixation of Belief" (1877), Peirce analyzed inquiry as the struggle from doubt to settled belief, identifying four methods:[Peirce, 1877]

Table 3: Peirce's Four Methods of Fixing Belief: An Epistemic Hierarchy. Only the Method of Science (the fourth method) aligns with the self-correcting, active nature of both Blakean vision and Active Inference, explicitly refusing the rigid 'snows' of authority or tenacity.

Method	Description	Weakness
Tenacity	Cling to existing belief	Social contact undermines isolation
Authority	Accept institutional dictates	No institution can regulate all opinions
A Priori	Follow intellectual taste	Shifts with fashion; no convergence
Science	Test beliefs through experiment	Requires discipline but is self-correcting

Only the Method of Science is consistent with the "hypothesis of reality" and capable of permanently fixing belief. "The sole object of inquiry is the settlement of opinion."[Peirce, 1877]

4.3.5 The Self-Correcting Cycle: Abduction, Deduction, and Induction

Peirce coined **abduction** to describe the creative inference that generates hypotheses:[Hartshorne et al., 1931]

> "The surprising fact, C, is observed. But if A were true, C would be a matter of course. Hence, there is reason to suspect that A is true."[Hartshorne et al., 1931]

Unlike "inference to the best explanation," Peircean abduction is primarily hypothesis-*generating* rather than hypothesis-*justifying*. Peirce maintained that "all explanatory content of theories is reached through abduction."[Hartshorne et al., 1931]

4.3.6 Semiotics: The Triadic Sign

Peirce's **semiotic** theory presents the **triadic model of the sign**:[Hartshorne et al., 1931]

- **Sign (Representamen):** The form the sign takes
- **Object:** That to which the sign refers
- **Interpretant:** The understanding derived from the sign

Signs are categorized as **Icons** (resemblance), **Indexes** (direct connection), and **Symbols** (convention). The process of **semiosis** is dynamic and continuous—the interpretant can become a new sign, generating a theoretically infinite chain limited in practice by habit.[Hartshorne et al., 1931]

This triadic structure is grounded in Peirce's metaphysical categories: **Firstness** (quality/possibility), **Secondness** (actuality/fact), and **Thirdness** (mediation/law/generality).[Hartshorne et al., 1931]

4.3.7 Pragmaticism

Frustrated by James's broader use of "pragmatism," Peirce relabeled his position **pragmaticism**—"a name ugly enough to be safe from kidnappers" (EP2: 355).[Peirce, 1905]

4.4 William James (1842–1910): The Great Mediator

James transformed pragmatism from a technical logical principle into a comprehensive philosophical outlook with broad cultural appeal. His 1898 Berkeley lecture first used "pragmatism" in print, crediting Peirce.[James, 1907]

4.4.1 The Present Dilemma

In *Pragmatism* (1907), James diagnosed a "clash of human temperaments" between the **tough-minded** (empiricist, materialist, irreligious, pluralistic) and the **tender-minded** (rationalist, idealistic, religious, monistic). Pragmatism was the mediating philosophy:[James, 1907]

> "The pragmatic method is primarily a method of settling metaphysical disputes that otherwise might be interminable. Is the world one or many?—fated or free?—material or spiritual?" [1907, Lecture II][James, 1907]

4.4.2 The Pragmatic Theory of Truth

James's account of truth became the most celebrated—and controversial—element:

> "The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite assignable reasons." [1907: 42][James, 1907]

> " 'The true,' to put it very briefly, is only the expedient in the way of our thinking, just as 'the right' is only the expedient in the way of our behaving." [1907: 106][James, 1907]

> "Any idea upon which we can ride…; any idea that will carry us prosperously from any one part of our experience to any other part, linking things satisfactorily, working securely, saving labor; is true for just so much, true in so far forth, true instrumentally." [1907: 34][James, 1907]

Against Russell's objection that this committed James to the truth of "Santa Claus exists," James held that a belief's satisfactions are *truth-relevant* but a belief would only be "wholly true" if it did not "clash with other vital benefits."[James, 1907]

4.4.3 The Will to Believe

In "The Will to Believe" (1896), James defended the right to adopt faith when facing a **"genuine option"**—one that is "living" (personally meaningful), "forced" (mutually exclusive), and "momentous." Two cognitive desiderata compete: obtain truth and avoid error.### From Cartesian Certainty to Evolutionary Fallibilismng error-avoidance makes sense only where avoiding error outweighs all else.[James, 1907]

4.4.4 Jamesian Pragmatism: Truth as Verification and Radical Empiricism

James's **radical empiricism** holds that "the only things debatable among philosophers shall be things definable in terms drawn from experience," but redefines experience to include *relations* as directly experienced: "the relations between things, conjunctive as well as disjunctive, are just as much matters of direct particular experience as the things themselves." The universe "possesses in its own right a concatenated or continuous structure."[James, 1912] For James, experience is the "primal stuff of existence," a foundation beneath which one could not dig, since whatever was found there would still be experience—a position with deep resonance for Blake's insistence on the infinite richness perceivable within every particular, and for his conviction that imagination is "the Human Existence itself," not a supplementary faculty but the fundamental mode of being.[James, 1912, Peat, 2003]

4.4.5 Pluralism and the Individual

James's philosophy embraces a pluralistic universe where novelty, indeterminacy, and individual agency are genuine features of reality—a "turbid, muddled gothic sort of affair."[James, 1909]

4.5 John Dewey (1859–1952): The Democratic Experimentalist

Dewey was the most prolific and publicly influential pragmatist. He preferred to call his version **"instrumentalism"** or **"experimentalism."**[Dewey, 1920, 1938]

4.5.1 Instrumentalism and the Theory of Inquiry

Dewey rejected the "spectator" view of knowledge and insisted that experimental processes are piecemeal and their results temporary. In *Logic: The Theory of Inquiry* (1938), he defined inquiry as "the controlled or directed transformation of an indeterminate situation into one that is so determinate in its constituent distinctions and relations as to convert the elements of the original situation into a unified whole" (ED2: 171).[Dewey, 1938]

Human beings are "creatures of habit and instinct inhabiting a world which is neither malevolent nor benevolent." Intelligence enters when habitual functioning breaks down and the organism must pause to consider alternatives.[Dewey, 1920]

4.5.2 Experience as Nature: The Critique of Epistemological Dualisms

For Dewey, experience is never merely passive observation; it encompasses everything "what men do and suffer" in their ongoing transaction with the world. As he articulated in *Art as Experience* (1934), "life goes on in an environment; not merely in it but because of it, through interaction with it." By emphasizing this structural continuity between the organism and nature, Dewey systematically deconstructed the classical dualisms that plagued Western philosophy—smashing the artificial walls between appearance and reality, theory and practice, and fact and value. Every act of knowing is simultaneously an act of doing.[Dewey, 1934, 1896]

4.5.3 Democracy and Education

Dewey's **democracy** is a "way of life" involving open communication, shared inquiry, and reconstruction of social institutions:[Dewey, 1916]

> "The devotion of democracy to education is a familiar fact. Since a democratic society repudiates the principle of external authority, it must find a substitute in voluntary disposition and interest; these can be created only by education."[Dewey, 1916]
>
> "Education is a social process; education is growth; education is not preparation for life but is life itself."[Dewey, 1916]

Students must be active, not passive; they require compelling projects rather than lectures; they should become problem-solvers motivated by interest.[Dewey, 1916]

4.5.4 Art as Experience

Art as Experience (1934) shifts the essential locus of art from the physical object to the entire *process of experience*. Aesthetic experience is the highest form of organism-environment interaction. "The function of the fine arts is not to provide an escape from ordinary life. Rather, it is the enhancement of qualities that make ordinary experiences appealing."[Dewey, 1934]

4.5.5 Warranted Assertibility

Like James, Dewey argued that the correspondence theory of truth "only begs the question." He preferred the term **"warranted assertibility"** to "truth"—knowledge is a product of activity directed to human purposes, and a warranted belief is known as such by the consequences of its employment.[Dewey, 1938]

4.6 The Second Generation

4.6.1 From Mead's Social Behaviorism to Brandom's Inferentialism

Mead argued that philosophy had "gotten the relationship backwards"—building the social from the individual when the self is actually constituted through social relations.[Mead, 1934] His concepts of the **"generalized other,"** the **"I"** (spontaneous response), and the **"me"** (organized attitudes of others) are

treated in detail in subsection 5.4, where they are mapped onto Blake's mythology of Albion and the Four Zoas.

Equally important for our purposes is Mead's posthumous *The Philosophy of the Act* (1938), which articulates a theory of the **social act** as the unit of analysis for all intelligent behavior.[Mead, 1938] For Mead, every act unfolds through four phases — impulse, perception, manipulation, and consummation — that anticipate the perception-action loop at the heart of Active Inference. The organism does not first *perceive* and then *act*; rather, action and perception are co-constitutive moments of a single ongoing transaction. Blake's prophetic method embodies precisely this Meadian insight: the illuminated plate is simultaneously a perceptual act (seeing the vision), a manipulative act (etching the copper), and a consummation (the finished print that transforms its audience). The social act, for both Mead and Blake, is irreducibly communal — it requires the responsive other to complete its meaning.

4.7 The Transitional Generation: From Classical Pragmatism to Neopragmatism

4.7.1 W.V.O. Quine (1908–2000): Two Dogmas and the Seeds of Anti-Representationalism

Quine's "Two Dogmas of Empiricism" (1951) demolished the analytic-synthetic distinction and the reductionist program of logical positivism, reopening the philosophical space that the neopragmatists would occupy. His thesis that "our statements about the external world face the tribunal of sense experience not individually but only as a corporate body" (the Duhem-Quine thesis) echoes both Peirce's cable metaphor and Blake's insistence that perception is always already shaped by the whole system of the perceiver's commitments.[Quine, 1951] Rorty would later acknowledge Quine as a decisive influence—the philosopher who made anti-representationalism respectable within the analytic tradition.

4.7.2 C.I. Lewis (1883–1964): The Pragmatic A Priori

Lewis's concept of the "pragmatic a priori"—that the categories through which we organize experience are chosen for their utility, not dictated by the structure of reality—bridges Peirce's fallibilism and Dewey's instrumentalism. Lewis argued that our conceptual schemes are revisable *tools* for navigating experience, anticipating both Rorty's vocabularies-as-tools and, more distantly, Blake's insistence that "I must Create a System, or be enslav'd by another Man's."[Lewis, 1929]

4.8 The Neopragmatist Revival

4.8.1 Richard Rorty (1931–2007)

Rorty's *Philosophy and the Mirror of Nature* (1979) targeted **knowledge as representation**. Key theses:[Rorty, 1979, 1991]

- **Anti-representationalism:** "Our vocabularies have no more of a representational relation to an intrinsic nature of things than does the anteater's snout" (TP, 48)
- **Truth deflationism:** Calling a belief "true" is a speech act—endorsement, not metaphysical description
- **Ironism and solidarity:** The "liberal ironist" recognizes the contingency of their own vocabulary while maintaining solidarity with others

Susan Haack criticized this as "vulgar pragmatism" that undermines inquiry itself.[Haack, 1993, Rorty, 1991]

4.8.2 Hilary Putnam (1926–2016)

Putnam articulated four key pragmatist characteristics: rejection of skepticism, fallibilism, rejection of sharp dichotomies (fact/value, mind/body), and the primacy of practice.[Putnam, 1995]

His signature contribution: **the collapse of the fact/value dichotomy**. "Thick" ethical concepts like "cruel" blend descriptive and evaluative elements, demonstrating the "entanglement of fact and value." Science itself presupposes evaluative norms—coherence, simplicity—that are themselves value-laden.[Putnam, 2002]

4.8.3 Robert Brandom (b. 1950)

Brandom's **inferentialist semantics** constructs meaning from inferential relations rather than reference. An assertion is the smallest unit of language for which one can take responsibility within a "game of giving and asking for reasons." *Making It Explicit* (1994) argues that meaning is implicit in social practices of attributing commitments and entitlements.[Brandom, 1994, 2000]

4.8.4 Cornel West: Prophetic Pragmatism

West's **prophetic pragmatism** draws on both Christian and Marxian thought: pragmatism "evades" philosophy by focusing on social structure and power. His praxis is "tragic action with revolutionary intent, usually reformist consequences, and always visionary outlook."[West, 1989, 1993]

4.9 Core Themes

Richard Bernstein identified six themes characterizing the pragmatic movement:[Bernstein, 2010]

1. **Anti-Foundationalism** — Knowledge has no absolute foundations; inquiry is self-correcting. As Wilfrid Sellars: "empirical knowledge… is rational, not because it has a *foundation* but because it is a self-correcting enterprise."[Sellars, 1956, Bernstein, 2010]
2. **Fallibilism** — Any validity claim can be challenged and modified.[Bernstein, 2010]
3. **Community of Inquirers** — All claims must be submitted to public criticism.[Bernstein, 2010]
4. **Pluralism** — "Engaged fallibilistic pluralism" takes seriously the otherness of the other.[Bernstein, 2010]
5. **Primacy of Practice** — Knowing is an activity.[Bernstein, 2010]
6. **Against the Spectator Theory** — Knowers must be agents; observation is always selection.[Bernstein, 2010]

4.10 The Genealogy of Pragmatism

Table 4: The Genealogy of Pragmatism: From Classical Foundations to Neopragmatist Extensions. This lineage tracks the continuous evolution of the anti-representationalist, action-oriented tradition that resonates so deeply with Blake's poetic epistemology.

Era	Key Figures	Central Concerns
Classical First Generation (1870s–1910)	Peirce, James, Royce, Wright	Meaning, truth, inquiry, logic, semiotics[Peirce, 1877, 1878]
Classical Second Generation (1900s–1940s)	Dewey, Mead, Addams, Du Bois, Locke	Democracy, education, social reform, race[Dewey, 1916, Mead, 1934]
Transitional (1930s–1970s)	C.I. Lewis, Quine, Hook	Pragmatic a priori, epistemology, logic[Lewis, 1929, Quine, 1951]
Neopragmatism (1970s–2000)	Rorty, Putnam, Brandom, Habermas	Anti-representationalism, semantics, fact/value[Rorty, 1979, Brandom, 1994]

Era	Key Figures	Central Concerns
New Pragmatism (1990s–present)	Haack, Misak, West, Sullivan	Truth, race, feminism, ecology[Haack, 1993, West, 1993]

The intellectual pedigree diagram (Figure 6, below) maps the lineage of the American Pragmatist tradition across six generations, from its 18th-century precursors to contemporary Active Inference. Solid grey edges indicate documented historical influence or direct pedagogical descent (e.g., Peirce to Dewey, Dewey to Rorty). Dashed red edges represent the primary thesis of this manuscript: the retroactive structural convergence between Blake's### Evolutionary Epistemology: The Continuity of Mind and Nature the pragmatist/process-theory network. The diagram locates both Blake and Fuller's Synergetics as essential, albeit non-traditional, components of the broader anti-representationalist, action-oriented paradigm.

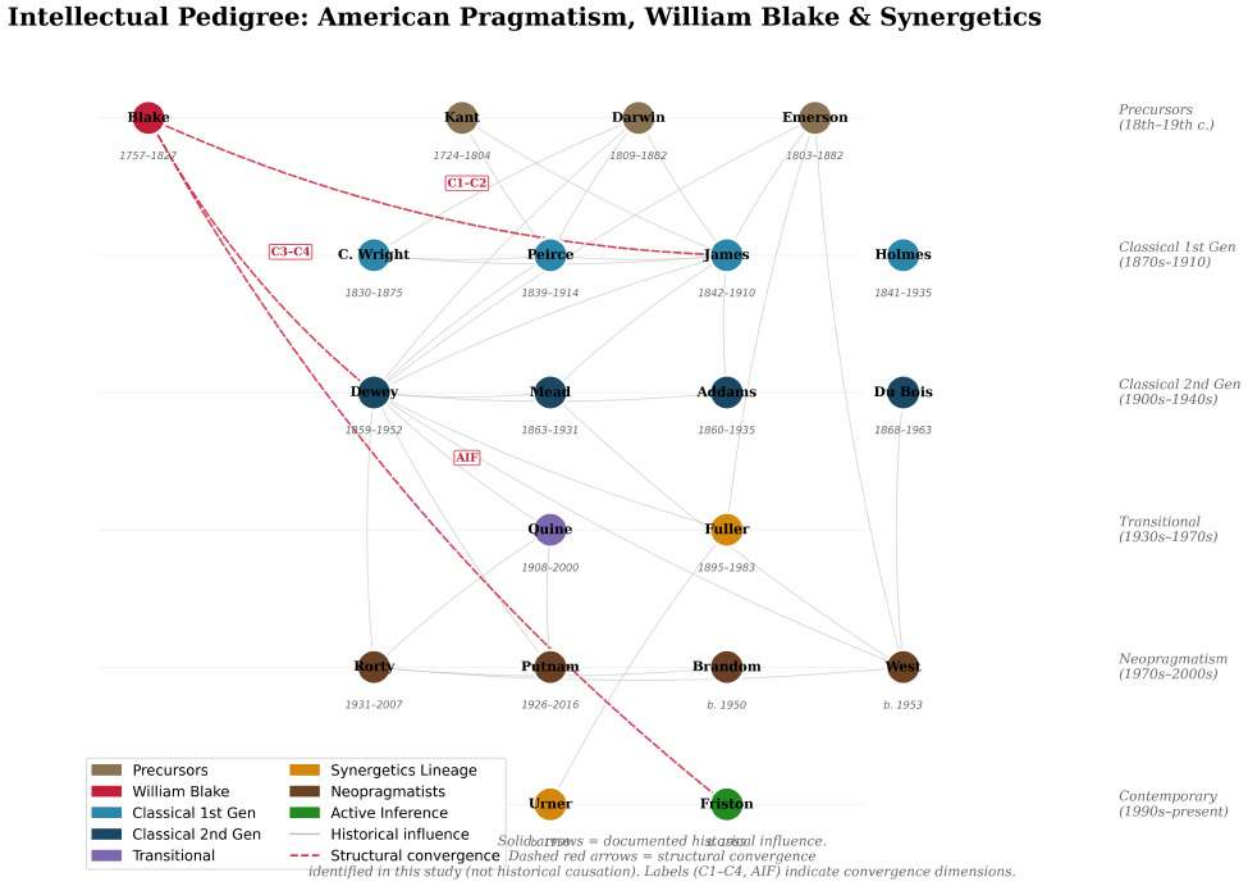

Figure 6: *Intellectual Pedigree: American Pragmatism, William Blake & Synergetics.* Directed acyclic graph mapping six generations of intellectual lineage from 18th-century precursors to Active Inference.

With this intellectual landscape in view—from Peirce's fallibilist logic of inquiry through Dewey's transactional experience, Mead's social acts, and the neopragmatist critique of representation—we are prepared to examine the six specific dimensions along which Blake's visionary epistemology and this pragmatist tradition converge. Each of the following sections takes a single convergence theme, grounds it in primary texts from both traditions, and traces its manifestation in *America a Prophecy*, building toward the formal synthesis that Active Inference will provide in section 6.

5 The Six Convergences: Translating Poetic Myth into Philosophic Method

5.1 Convergence 1: Active Inquiry—Blake's Cleansed Doors and Peirce's Method of Science

> "The sole object of inquiry is the settlement of opinion." — Charles Sanders Peirce, "The Fixation of Belief" [1877][Peirce, 1877]
>
> "No more I follow, no more obedience pay!"' — William Blake, *America a Prophecy*, line 52[Blake, 1793a]

5.1.1 Two Parallel Models of Intellectual Liberation

Peirce and Blake begin from the same diagnosis: the human mind, left to its defaults, falls into rigid patterns that obstruct genuine understanding. For Peirce, the pathology is **Cartesian foundationalism**—the pretense that we can doubt everything at once and rebuild knowledge from a single indubitable certainty. For Blake, it is **Urizenic tyranny**—the domination of mechanical reason over the other cognitive faculties, producing "Newton's Sleep." Both demand a *practice* of intellectual liberation: Peirce's self-correcting inquiry and Blake's cleansing of perception.

America a Prophecy compresses this shared diagnosis into a single dramatic scene. When Boston's Angel cries "No more I follow, no more obedience pay!"' and rends off his robe "In sight of Albion's Guardian" (*America*, lines 52–53), he enacts the decisive break from what Peirce calls the Method of Authority—the cognitive habit of accepting institutional dictates without submitting them to experimental test. The robe is the insignia of inherited belief; its destruction is the first act of genuine inquiry.

5.1.2 Peirce's Four Methods and Blake's Four Visions Aligned

A remarkable structural parallel emerges when we align Peirce's four methods of fixing belief with Blake's four levels of vision:

Peirce's Method	Blake's Vision	Shared Structure
Tenacity — cling to isolated belief	**Single Vision** — Newton's Sleep	Rigidity; closed to external correction
Authority — accept institutional dictates	**Twofold Vision** — conventional meaning	Deference to established frameworks
A Priori — follow intellectual taste	**Threefold Vision** — Beulah's imaginative repose	Internally coherent but subjectively grounded
Science — test beliefs through experiment	**Fourfold Vision** — supreme delight	Open, self-correcting, integrative

The parallel is not merely formal. In both systems:

- The **first level** represents cognitive closure—the refusal to admit new information. Peirce warns that "social contact will undermine isolated belief"; Blake shows that single vision produces the "dark Satanic Mills" of industrial materialism.[Peirce, 1877]
- The **fourth level** represents the achievement of a self-correcting, pluralistic engagement with reality. For Peirce, the Method of Science is self-correcting because it submits hypotheses to experimental test. For Blake, Fourfold Vision integrates all cognitive faculties—reason, passion, imagination, sensation—into coordinated perception.

5.1.3 The Prophetic and Pragmatic Interventions: Shaking the Mental Chains

America a Prophecy dramatizes the transition between levels with extraordinary precision. The Thirteen Governors who "convene / In Bernard's house" (*America*, lines 65–66) begin at the level of Tenacity—clinging to the old colonial order. But the revolutionary flames make cognitive closure impossible: "Shaking their mental chains, they rush in fury to the sea" (*America*, line 67). The "shaking" is the crisis that Peirce describes as the necessary precondition for inquiry—the moment when habitual belief becomes untenable in the face of overwhelming evidence. And later, when "all rush together in the night in wrath and raging fire" (*America*, line 100), Blake captures the collective force of genuine inquiry as it overwhelms the old order.

5.1.4 Peirce's Cable Metaphor and Blake's Living System

Peirce's metaphor for inquiry—reasoning as a *cable* of many slender fibers rather than a *chain* only as strong as its weakest link—finds a deep echo in Blake's epistemology.[Peirce, 1877]

Blake's "System" is not a deductive chain from first principles (that would be Urizen's mode) but a *living architecture* of interconnected elements—text and image, prophecy and craft, the four Zoas coordinating as a unified organism. When Blake declares "I must Create a System," he means something closer to Peirce's cable than to Descartes's chain: a network of mutually supporting strands where no single element bears the entire weight.

This cable structure also maps onto Peirce's theory of **abduction**. Blake's prophetic method—beginning with a "surprising fact" (the contracted state of perception) and generating a hypothesis (that the doors can be cleansed, that Fourfold Vision is possible)—parallels the abductive arc:

> "The surprising fact, C, is observed. But if A were true, C would be a matter of course. Hence, there is reason to suspect that A is true."[Hartshorne et al., 1931]

Blake *abduces* his entire mythology from the observation that human perception is limited: if the Zoas were once integrated and have since fallen apart, then the contracted state of perception would be "a matter of course."

5.1.5 Against the Cartesian Manufacture of Universal Doubt

Both Peirce and Blake reject Cartesian universal doubt, but for deeply compatible reasons:

- **Peirce**: "Do not pretend to doubt in philosophy what we do not doubt in our hearts" (EP1: 29). Doubt must be *real*—sparked by genuine surprise or anomaly—not manufactured by philosophical method.[Peirce, 1877]
- **Blake**: Doubt is Urizen's weapon, the tool by which Reason paralyzes the other faculties. But Blake's alternative is not doubt but **vision**—the active, creative perception that sees through the contracting categories of Urizen (single vision) to the Infinite that is always already present. Where Peirce moves from doubt to settled belief through method, Blake moves from "Newton's Sleep" to Fourfold Vision through the labor of Los (Imagination).

In *America*, the distinction between genuine and manufactured doubt takes political form. Albion's Angel manufactures doubt—deploying plagues, darkness, and cold to make the colonists question their own capacity for self-governance. But the Americans' doubt is *real*: it is the genuine experience of a world in which inherited structures no longer function. Their inquiry is accordingly genuine: "all rush together in the night in wrath and raging fire" (*America*, line 100).

5.1.5.1 *America a Prophecy*: Mental Chains and the Method of Science

Blake's *America a Prophecy* (1793) provides the most dramatic enactment of this shared rejection.[Blake, 1793a] The poem's pivotal moment occurs when the Thirteen Governors of England's American colonies—Blake's "Angels"—confront the revolutionary upheaval and respond not with deliberation but with liberation:

> "Shaking their mental chains, they rush in fury to the sea" — *America a Prophecy*, line 67

The phrase "mental chains" is Blake's precise equivalent of what Peirce calls the methods of Tenacity and Authority—the cognitive habits that fix belief not through inquiry but through willful refusal to consider alternatives. The "shaking" is the pragmatist moment: the transition from dogmatic fixation to active engagement with evidence.

In this visualization of line 67, the Thirteen Governors "rush in fury to the sea," actively shattering the golden chains of inherited, rigid belief. The flames surrounding them represent the precise moment of epistemic crisis—when Peirce's "Method of Authority" fails and genuine pragmatic inquiry must begin in the fires of actual doubt.

Earlier in the poem, Boston's Angel articulates the philosophical stakes with startling precision:

> "Why trembles honesty; and, like a murderer, Why seeks he refuge from the frowns of his immortal station!' Must the generous tremble, and leave his joy to the idle, to the pestilence That mock him? Who commanded this? What God? What Angel? To keep the gen'rous from experience till the ungenerous Are unrestrain'd performers of the energies of nature; Till pity is become a trade, and generosity a science That men get rich by; and the sandy desert is giv'n to the strong? What God is he writes laws of peace, and clothes him in a tempest? What pitying Angel lusts for tears, and fans himself with sighs? What crawling villain preaches abstinence and wraps himself In fat of lambs?" — *America a Prophecy*, lines 40–51

Boston's Angel is asking Peirce's question: by what authority are certain modes of inquiry suppressed? The demand to "keep the gen'rous from experience" is### The Rejection of Authority and the Refusal of Passive Reception Boston's Angel is asking Peirce's question: by what authority are certain modes of inquiry suppressed? The demand to "keep the gen'rous from experience" is an institutional suppression of inquiry that benefits "the ungenerous." The Angel's response—his decisive rejection of obedience (cf. the epigraph above)—is the break from Authority in favor of what Peirce would call the Method of Science: open, self-correcting engagement with reality. The answer to doubt is not certainty but **activity**: Peirce's experimental method and Blake's creative "labour" of Los, the Imagination working to re-forge broken perception.

The speech deserves careful parsing. "pity is become a trade"—pity has been commodified, its authentic emotional force exploited for institutional profit. "generosity a science / That men get rich by"—generosity has been systematized into a technique of accumulation. "the sandy desert is giv'n to the strong"—the rhetoric of freedom masks a regime of dispossession. This is Blake anticipating not just Peirce but Marx, Dewey, and the entire critical tradition: the insight that epistemological structures (what counts as "knowledge," who gets to "experience") are inseparable from structures of power.

5.1.6 Inquiry as Organism-Environment Transaction and Adaptation

The convergence deepens when we consider the *biological* framing that both traditions share. Peirce's account of doubt as an "irritation" that provokes inquiry is essentially biological—the organism encounters a disruption in its habitual functioning and must act to restore equilibrium.[Peirce, 1877, Dewey, 1896]

Blake's mythology tells the same story at a cosmic scale: the "Fall of Albion" is the disruption of cognitive equilibrium, and the narrative of the prophetic books is the long labor of inquiry (performed by Los, the Imagination) to restore integrated functioning. *America*'s central action is this biological drama compressed into a single revolutionary event: the "irritation" of tyrannical governance provokes the colonial organism to break habitual patterns ("mental chains") and engage in the active, self-correcting process that both Peirce and Blake recognize as genuine inquiry.

The pragmatist claim that inquiry is a natural process—continuous with biological adaptation, not a supernatural faculty—is precisely Blake's claim that Imagination is "Human Existence itself," not a supernatural gift but the fundamental mode of human being.

5.1.7 Fallibilism, Fourfold Vision, and the Refusal of Monopoly

Peirce's fallibilism—the thesis that any claim can be revised—provides an unexpected bridge to Blake's epistemology. Blake's Fourfold Vision is not a state of achieved certainty but a *mode of engagement*: the

Figure 7: *Shaking Mental Chains.* The Thirteen Governors shatter golden chains of rigid belief. *America a Prophecy*, line 67; AI-generated illustration.

willingness to see the world through multiple, coordinated lenses. The moment any single lens claims exclusive authority (Urizen's "I am God, said he, and all other gods… must worship me"—*The Book of Urizen*), the system falls into single vision.

Fallibilism, in Blake's terms, is the refusal of Urizenic monopoly. It is the commitment to keeping all four Zoas in dialogue—reason *and* passion *and* imagination *and* sensation—rather than allowing any one to suppress the others. The "contrite fallibilist," as Peirce called himself, is the Blakean prophet who knows that vision is always provisional, always subject to deeper cleansing.[Peirce, 1877, Dewey, 1934]

America's closing image confirms this reading. After the plagues recoil and the five gates are consumed, the poem does not declare final victory. Instead, Urizen pours forth "storèd snows" to delay the revolution—"Angels and weak men twelve years should govern o'er the strong; / And then their end should come, when France receiv'd the Demon's light" (*America*, lines 141–142). The revolution is not complete; it is a *moment* in an ongoing process of inquiry. The fallibilist knows that no single act of liberation settles the question permanently. The cable must be continually rewoven, the doors perpetually re-cleansed.

5.2 Convergence 2: Truth as Living Process—Jamesian Verification and Blakean Consequence

> "The true is the name of whatever proves itself to be good in the way of belief, and good, too, for definite assignable reasons." — William James, *Pragmatism* [1907: 42][James, 1907]

> "What is now proved was once only imagined." — William Blake, *The Marriage of Heaven and Hell*, Plate 8 [Erdman 36][Blake, 1790, Erdman, 1988]

5.2.1 The Scandal of Pragmatic Truth in Philosophy

James's pragmatic theory of truth—that truth is not correspondence to a fixed reality but something### Truth "Happens" to an Idea: The Cash-Value of Generative Modeling* in the course of experience—scandalized his contemporaries. Russell accused James of making truth subjective; Moore charged him with confusing truth and verification. Yet a century later, the pragmatic theory of truth has proven remarkably durable, and its structural kinship with Blake's epistemology illuminates both traditions.

5.2.2 Blake's Pragmatic Reversal: "What is now proved was once, only imagin'd"

Blake's Proverb of Hell—"What is now proved was once only imagined"—is, in compressed form, a pragmatic theory of truth. Unpack its logic:

1. **Truth has a temporal structure**: What is "now proved" was not always proved. Truth is achieved, not given.
2. **Imagination precedes verification**: The creative hypothesis (the imagined) must exist *before* it can be tested and established as fact.
3. **The boundary between imagination and truth is permeable**: Today's wildest speculation may become tomorrow's established knowledge.

This is remarkably close to Peirce's theory of **abduction** as the source of all explanatory content in science, and to James's insistence that truth is something that ideas *become* through their consequences in experience.[Hartshorne et al., 1931, James, 1907]

Blake's axiom is not merely a philosophical claim—it is a claim about **temporal structure**. Truth is not a static property but a *lived trajectory*: from imagination (hypothesis, conjecture, vision) through practice (experimentation, labor, prophecy) to proof (verification, warranted assertibility, settled belief). The trajectory is irreversible only in its direction of travel; its content is always open to revision.

America a Prophecy (1793) enacts this temporal structure as narrative.[Blake, 1793a] The poem's central reversal—the moment when the plagues that Albion's Angel cast upon the American colonies recoil upon England itself—is Blake's most dramatic image of imaginative truth becoming historical reality:

> "Then had America been lost, o'erwhelm'd by the Atlantic; / And Earth had lost another portion of the Infinite; / But all rush together in the night in wrath and raging fire. / The red fires rag'd! The plagues recoil'd!" — *America a Prophecy*, lines 98–101

What was "only imagined"—the revolutionary vision of Orc, the possibility of liberation from Urizen's "law-built Heaven"—becomes proved through the collective action of the Americans. The plagues (the instruments of authoritarian suppression) recoil because they encounter agents who actively engage with reality rather than passively submitting to it. This is James's pragmatic truth made mythological: the idea that "works" is the idea that transforms the situation in which it operates.

5.2.3 James's Living Truth and Blake's Dynamic Vision

James described truth as "expedient in the way of our thinking… expedient in the long run and on the whole."[James, 1907] To understand this properly, we must distinguish three claims:

Claim	James	Blake
Truth is dynamic	Ideas *become* true through verification	"What is now proved was once only imagined"
Truth is instrumental	True ideas "carry us prosperously" through experience	Imagination is the instrument of perception
Truth is plural	Different truths serve different contexts	Fourfold Vision: multiple valid modes of seeing

The deepest convergence is the **refusal to separate truth from activity**. For James, a true idea is one that "works"—not in a vulgar sense of personal convenience, but in the sense that it successfully mediates between different parts of experience, linking them "satisfactorily, working securely, saving labor."[James, 1907] For Blake, imagination is not fantasy but the active mode by which the mind engages reality—and what it produces, when the engagement is genuine, is *vision* that transforms both the seer and the seen.

5.2.4 The Will to Believe and the Will to Create

James's "The Will to Believe" (1896) defends the right to adopt beliefs that outstrip current evidence when facing a **genuine option**—living, forced, and momentous.[James, 1907] Blake's prophetic project is, in essence, a colossal exercise of the Will to Believe: the commitment to a vision of human potential (Fourfold Vision, the reintegration of Albion) that cannot be verified in advance but which, if genuinely pursued, may transform the conditions of its own verification.

Both thinkers recognize two competing cognitive norms:

- **Avoid error** (Urizen's caution, Newton's prudence)
- **Obtain truth** (Los's creative risk, the prophetic gamble)

James argues that an exclusive emphasis on error-avoidance—"better go without belief forever than believe a lie"—cripples inquiry by ensuring we never test genuinely novel hypotheses.[James, 1907] Blake dramatizes the same insight: Urizen's demand for absolute certainty produces "the Net of Religion" that traps humanity in mechanical repetition.

5.2.5 Dewey's Warranted Assertibility and Blake's Anti-Newtonian Critique

Dewey preferred **"warranted assertibility"** to "truth" because the latter term carries the metaphysical baggage of correspondence—the assumption that beliefs must "match" a mind-independent reality.[Dewey, 1938] Blake would agree: the very concept of "correspondence" presupposes the Lockean picture of the mind as a mirror—precisely the epistemology Blake spent his career demolishing.

For Dewey, a belief is warranted when it successfully resolves the **indeterminate situation** that prompted inquiry. The criteria are practical: Does the belief reorganize the elements of the situation into a "unified whole"? Does it enable further productive action?[Dewey, 1920] For Blake, the equivalent criterion is *vision*: Does the mode of seeing illuminate or contract? Does it reveal "the World in a Grain of Sand" or reduce the grain to mere inert matter?

5.2.6 The Entanglement of Fact, Value, and Thick Concepts

Putnam's argument for the **collapse of the fact/value dichotomy** provides another bridge to Blake.[Putnam, 2002] Putnam showed that "thick" ethical concepts like "cruel" or "courageous" blend descriptive and evaluative elements inseparably. Science itself presupposes values—coherence, simplicity, explanatory scope—that are not derivable from "pure" facts.

Blake never recognized the fact/value dichotomy in the first place. In *The Marriage of Heaven and Hell*, he deliberately fuses contraries: "Without Contraries is no progression. Attraction and Repulsion, Reason and Energy, Love and Hate, are necessary to Human existence." The Marriage is, in Putnam's terms, a

demonstration that the supposedly sharp boundary between fact (Heaven/Reason) and value (Hell/Energy) is an artifact of single-vision philosophy.

5.2.7 Imagination as the Agent's Generative Model

The deepest link between pragmatic truth and Blakean imagination becomes visible when we understand imagination not as *fantasy* but as **generative modeling**: the construction of internal representations that predict, interpret, and guide interaction with the environment. In Active Inference terms, the generative model $p(o, \theta)$ is the agent's working theory of the world—and Blake's claim that "Imagination is Human Existence itself" translates directly into the claim that the self *is* its generative model.

This reframes the pragmatic theory of truth: a true belief is one that improves the generative model's predictive and adaptive capacity. James's "cash value" metaphor finds formal expression in the reduction of variational free energy—the degree to which the organism's model matches the statistical structure of its environment. And Blake's hierarchy of vision becomes a hierarchy of model complexity: single vision (impoverished model), fourfold vision (rich, integrated model).

5.2.8 Regulative Hope and Blake's Eschatological Vision

Peirce's concept of truth as the opinion "fated to be ultimately agreed to by all who investigate" is not a prediction but a **regulative hope**: the ideal horizon toward which inquiry asymptotically tends.[Peirce, 1877] This regulative structure finds a striking parallel in Blake's eschatological vision. The conclusion of *America a Prophecy* does not depict achieved utopia but the *promise* of reintegration—Urizen's temporary freeze delays but cannot prevent the revolution's consummation "when France receiv'd the Demon's light" (Plate 16; Erdman 57).[Blake, 1793a, Erdman, 1988] For both Peirce and Blake, truth is not a state to be *possessed* but a process to be *pursued*: the community of inquirers converges toward it without ever arriving, just as Blake's prophetic narrative points toward a Jerusalem that remains always under construction. This shared commitment to truth as infinite task rather than finite achievement—regulative hope in Peirce, prophetic vision in Blake—distinguishes both from the static correspondence theories they oppose.

If truth is a process rather than a state, then the medium through which that process unfolds—*experience* itself—demands closer examination. The next convergence turns from the temporal structure of truth to the transactional structure of experience, where Dewey's organism-environment unity meets Blake's Doors of Perception.

5.3 Convergence 3: Experience as Transaction—Dewey's Organism and Blake's Doors of Perception, and the Destruction of the Five Gates

> "Life goes on in an environment; not merely in it but because of it, through interaction with it." — John Dewey, *Art as Experience* [1934: 19][Dewey, 1934]

> "If the doors of perception were cleansed every thing would appear to man as it is: Infinite." — William Blake, *The Marriage of Heaven and Hell*, Plate 14[Blake, 1790, Erdman, 1988]

5.3.1 The Rejection of the Inner Theater and the Rise of Transactional Ecology

Both Dewey and Blake reject the same ancient picture: the mind as an enclosed theater in which representations of the external world are projected for a spectating homunculus. For Dewey, this "spectator theory of knowledge" is the root error of Western epistemology—it generates the pseudo-problems of skepticism, the problem of other minds, and the mind-body dualism. For Blake, it is the architecture of Urizen's "cavern"—the contracted space of single vision where the perceiver is isolated from the world.

5.3.1.1 Dewey's Alternative: Transactional Experience Dewey insisted that experience is not a private subjective event but a **transaction** between organism and environment. It includes "what men do and suffer"—action and passion, agency and receptivity, in continuous interchange. There is no gap between the experiencing subject and the experienced world that needs to be bridged by epistemological machinery; the bridge *is* the experience.[Dewey, 1934, 1896]

That "experience" is the conceptual bridge connecting Blake to Dewey is not merely this manuscript's claim. Martin Jay's intellectual history *Songs of Experience* (2005)—whose title is an "act of homage" to Blake—traces how the concept of experience has been contested across Western philosophy from Montaigne to poststructuralism, treating the pragmatist tradition (Dewey's *Experience and Nature*, James's radical empiricism) as a major thread in the ongoing attempt to overcome the "dehydration" of experience produced by modern physics and post-Kantian philosophy.[Jay, 2005] Jay's work is the essential scholarly bridge linking Blake's titular concept to the full genealogy of pragmatist and empiricist thought about experience.

This transactionalism has three crucial consequences:

1. **Perception is active**: To perceive is not to passively register but to selectively attend, guided by interest and expectation. "To observe is to select," as both James and Dewey insisted.
2. **The environment is not raw data**: What counts as "the environment" for an organism is constituted in part by the organism's capacities and concerns.
3. **Knowledge is transformative**: Genuine knowing changes both the knower and the known—the situation is "reconstructed" through inquiry.[Dewey, 1920]

5.3.1.2 Blake's Alternative: The Cleansed Doors Blake's Doors of Perception passage makes structurally identical claims:

1. **Perception can be cleansed**: The state of contraction is not given by nature but self-imposed. "Man has closed himself up"—the limitation is in the organism's cognitive habits, not in reality.
2. **Reality is Infinite**: What appears after cleansing is not a different world but the *same* world seen without the contracting filters. The Infinite is already present; it is the doors that are dirty.
3. **Cleansing is practice**: It requires the active labor of Los (Imagination), not passive waiting. Blake's illuminated printing—where every plate is hand-colored, every text hand-engraved—*embodies* this principle.

5.3.1.3 *America a Prophecy*: Experience Hoarded and Liberated Blake's *America a Prophecy* (1793) provides the most direct connection between his epistemology of perception and Dewey's transactionalism.[Blake, 1793a] Boston's Angel articulates the political economy of experience with striking precision:

> "Who commanded this? What God? What Angel? / To keep the gen'rous from experience till the ungenerous / Are unrestrain'd performers of the energies of nature; / Till pity is become a trade, and generosity a science / That men get rich by." — *America a Prophecy*, lines 43–47

This is a Deweyan critique *avant la lettre*: experience is not merely a private cognitive event but a shared resource whose distribution is a political question. To "keep the gen'rous from experience" is to enforce the spectator theory at the social level—to deny transactional engagement with the environment to those who would use it generously, while allowing the "ungenerous" (those who exploit experience for private gain) free rein.

The poem's culmination makes the perceptual stakes explicit: the European powers attempt to "shut the five gates of their law—built Heaven," but "the five gates were consum'd, and their bolts and hinges melted" (*America*, lines 147–151). The "five gates" are the senses as imprisoned by Urizen's law—perception reduced to passive registration. Their consumption by Orc's fires is Blake's most powerful image of what Dewey would call the restoration of transactional experience: the barriers between organism and environment destroyed, perception restored to its full, active, participatory character.

In the visualization of the five gates, Urizen's "law-built Heaven" melts in fierce supernatural flames. This is Blake's ultimate image of transactional### Experience as Aesthetic Production: Making the World Visible of the artificial boundary separating organism from environment. As the "doors of perception" are cleansed by the heat of pragmatic inquiry, human figures emerge from the collapsing architecture of spectator knowledge, realizing Dewey's claim that experience is not what happens *to* us, but what we do *with* the world.

The poem also shows what the *contraction* of experience looks like. When Albion's Angel deploys his plagues against America, the immediate effect is the shutting down of transactional engagement:

> "The citizens of New York close their books and lock their chests; The mariners of Boston drop their anchors and unlade; The scribe of Pennsylvania casts his pen upon the earth; The builder of Virginia throws his hammer down in fear." — *America a Prophecy*, lines 93–96

This is Dewey's spectator theory enacted as social catastrophe: books closed, pens cast down, hammers thrown away—every instrument of active engagement with the world abandoned. The citizens, mariners, scribes, and builders are reduced from *agents* to *spectators*, paralyzed by the plagues of authoritarian reason. Blake captures in four lines what Dewey's entire philosophical project was designed to diagnose: the pathology of a culture that replaces doing with receiving, transaction with submission.

James's **radical empiricism** provides a further bridge. James's claim that "relations between things, conjunctive as well as disjunctive, are just as much matters of direct particular experience as the things themselves" overcomes the atomistic empiricism that Blake attacked.[James, 1912] Traditional empiricism (Locke, Hume) reduces experience to discrete sense-data—isolated "atoms" of color, sound, pressure—and then faces the problem of how these atoms are connected. James's radical move is to say that the connections themselves are experienced.

Blake says the same thing, poetically, in *Auguries of Innocence*:

> "To see a World in a Grain of Sand And a Heaven in a Wild Flower, Hold Infinity in the palm of your hand And Eternity in an hour."

This is not mystical hyperbole but a claim about the *structure of experience*: in genuine (cleansed, fourfold) perception, the particular *is* the universal. The grain of sand is not an isolated datum but a node in an infinite web of relations—geological, optical, tactile, metaphorical—all of which are directly experienced by the attentive perceiver. James's radical empiricism and Blake's visionary perception both insist that experience, properly attended to, is richer than any theory about it.

5.3.2 Art as Experience in Dewey and Blake's Workshop

Dewey's *Art as Experience* (1934) provides the most direct philosophical counterpart to Blake's artistic practice.[Dewey, 1934]

Figure 8: *The Five Gates Consumed.* Urizen's law-built Heaven melts in flames. *America a Prophecy*, lines 147–151; AI-generated illustration.

5.3.2.1 The Continuity of Art and Life

Dewey argued that aesthetic experience is not a separate, elevated realm ("Art" with a capital A, housed in museums) but the *consummation* of ordinary experience—the moment when the organism-environment transaction reaches its fullest, most unified expression. "The function of the fine arts is not to provide an escape from ordinary life. Rather, it is the enhancement of qualities that make ordinary experiences appealing."[Dewey, 1934]

Blake's illuminated printing makes this continuity literal. In conventional publishing, the division of labor is total: the author writes, the typesetter sets, the printer prints, the binder binds. Blake collapsed all these roles: he invented, engraved, printed, and hand-colored each plate himself. The result is an artifact in which artistic conception and physical execution are indistinguishable—text *is* image, meaning *is* material form.

5.3.2.2 The Aesthetic as Epistemic

For Dewey, aesthetic experience is not merely pleasurable but *cognitive*: it is the mode of experience in which perception achieves its highest integration. The artist does not merely represent the world but *reorganizes* it—bringing elements into new relations that reveal structure invisible to habitual perception.

This is precisely Blake's claim for prophetic vision. The prophetic books are not descriptions of supernatural events but *reorganizations* of perception—attempts to show the reader what the world looks like when the Zoas are integrated, when single vision gives way to fourfold. The experience of reading Blake—struggling with the dense, allusive text while simultaneously engaging the swirling visual imagery—is itself a training in integrated perception.

Dewey's Aesthetics	Blake's Practice	Shared Principle
Art as consummation of experience	Illuminated printing	Unity of conception and execution
Aesthetic as cognitive	Prophetic vision as perception	Seeing as knowing
Organism-environment transaction	Creator-medium-audience unity	No spectator; all participants
"Continuous interchange"	Text-image integration	Form and content inseparable

5.3.3 The Pedagogy of Perception and Learning to See

Both traditions imply a pedagogy—a practice of learning to perceive more fully.

Dewey's educational philosophy, grounded in the pragmatist primacy of practice, insists that students learn by doing: "Education is not preparation for life but is life itself."[Dewey, 1916] The classroom should be a workshop where students engage in genuine inquiry—encountering real problems, formulating hypotheses, testing them through action, and reflecting on the results.[Dewey, 1916]

Blake's pedagogical vision is wilder but structurally similar. His Songs of Innocence and Experience are educational texts—they train the reader to see the same situations (chimney sweeps, lambs, tygers) through different perceptual frameworks (innocence and experience) and thereby to develop the capacity for twofold, threefold, and ultimately fourfold vision. The *method* is the message: learning to see multiply is learning to think pragmatically.

America a Prophecy offers a vivid image of what perceptual liberation looks and feels like—what it means for experience to be *restored* after institutional contraction:

> "The doors of marriage are open, and the Priests, in rustling scales, Rush into reptile coverts, hiding from the fires of Orc…. For the Female Spirits of the dead, pining in bonds of religion, Run from their fetters; reddening, and in long-drawn arches sitting, They feel the nerves of youth renew, and desires of ancient times Over their pale limbs, as a vine when the tender grape appears." — *America a Prophecy*, lines 120–127

The "Female Spirits" who run from their fetters are Blake's image of embodied experience reawakened. They "feel the nerves of youth renew"—perception is literally re-embodied, sensation restored. The simile—"as a vine when the tender grape appears"—is organic, developmental, Deweyan: growth is not the imposition

of external form but the emergence of capacity from within the organism-environment transaction. This passage is the pedagogical counterpart to the five gates' destruction: not merely the removal of barriers to perception but the positive restoration of the organism's capacity for rich, transactional experience.

5.3.4 The Phenomenological and Enactivist Connection

The convergence of Dewey and Blake on experience connects both to the phenomenological tradition. Merleau-Ponty's claim that the body is the "condition of objecthood, not an object itself" parallels both Dewey's transactionalism and Blake's rejection of Cartesian dualism: "Man has no Body distinct from his Soul."

The enactivist tradition (Varela, Thompson, and Rosch)—which holds that cognition is inseparable from sensorimotor engagement—provides yet another crucial bridge. Blake's "Energy is Eternal Delight" and Dewey's emphasis on the active organism both anticipate the enactivist rejection of cognition as internal computation performed on external inputs, directly setting the stage for the "pragmatic turn" in 4E cognitive science that Active Inference formalizes.

Dewey's pragmatist body, Blake's visionary body, and Merleau-Ponty's phenomenological body are three descriptions of the same thing: the perceiving-acting organism for whom knowing and doing are one.

5.4 Convergence 4: Social Selves and Collectives—Mead's Generalized Other and Blake's Albion, and the Thirteen Angels Who Descend

> "It is by means of reflexiveness—the turning back of the experience of the individual upon himself—that the whole social process is thus brought into the experience of the individuals involved in it." — George Herbert Mead, *Mind, Self and Society*, p. 134[Mead, 1934]

> "So cried he, rending off his robe and throwing down his sceptre In sight of Albion's Guardian; and all the Thirteen Angels Rent off their robes to the hungry wind, and threw their golden sceptres Down on the land of America." — William Blake, *America a Prophecy*, lines 53–56[Blake, 1793a]

5.4.1 The Social Constitution of the Self in Philosophy

Both Mead and Blake propose that selfhood is not a private, pre-social given but a social achievement—constituted through relations with others and irreducible to individual consciousness. *America a Prophecy* provides the most vivid dramatization of this thesis in Blake's canon: a scene in which individual action and collective transformation are revealed to be the same event.

5.4.1.1 Mead's "I" and "me" Mead distinguished two aspects of the self (1934, pp. 135–226):[Mead, 1932, 1934]

- **The "me"**: The organized attitudes of others that the individual has internalized—the social self as perceived from the outside.
- **The "I"**: The spontaneous, creative response of the individual to the "me"—the source of novelty and agency.

Selfhood arises only through the dialectic of I and me: the individual internalizes social perspectives (becoming a "me" to themselves) and then responds creatively (as an "I"). The **"generalized other"** describes how this internalization works at the level of entire communities—one takes on the attitudes not just of specific individuals but of the social group as a whole.[Mead, 1934]

5.4.1.2 Blake's Albion: The Universal Man Blake's mythology presents a strikingly parallel architecture. **Albion** is the "Universal Man"—not a single individual but the collective human identity that encompasses all persons. Albion's four Zoas are simultaneously faculties within each individual and social roles within the collective body:

Component	Individual Level	Social Level
Urizen	Personal reason	Scientific institutions, law
Luvah	Personal passion	Religious and artistic communities
Urthona/Los	Personal imagination	Prophetic and creative traditions
Tharmas	Personal sensation	Material labor, the body politic

The "Fall of Albion" is simultaneously a psychological fragmentation (the Zoas losing coordination within the individual) and a *social* fragmentation (the breakdown of communal life into isolated, competing institutions). Conversely, "Building Jerusalem" is both personal reintegration and social reconstruction.

5.4.1.3 The Convergence in *America a Prophecy* *America a Prophecy* (1793) dramatizes this convergence with mythological precision.[Blake, 1793a] The poem's pivotal moment occurs when the Thirteen Angels of the American colonies—each an aspect of Albion's collective identity—make a revolutionary choice:

> "So cried he, rending off his robe and throwing down his sceptre In sight of Albion's Guardian; and all the Thirteen Angels Rent off their robes to the hungry wind, and threw their golden sceptres Down on the land of America; indignant they descended Headlong from out their heav'nly heights,

descending swift as fires Over the land; naked and flaming are their lineaments seen In the deep gloom; by Washington and Paine and Warren they stood." — *America a Prophecy*, lines 53–59

5.4.2 The "I" and the "Me" in the Fiery Forge: Reconstituting the Social Self

This is Mead's dialectic of "I" and "me" in prophetic action. The Thirteen Angels begin as institutional functionaries—extensions of Albion's Guardian (the British "generalized other")—but their "I" rebels against the role assigned by the "me." They rend off the robes that define their institutional identity and descend to stand with the revolutionary community. The act is simultaneously individual (each Angel acts) and collective (all thirteen act together), exactly as Mead's theory demands: selfhood is reconstituted through its relation to a new community. Albion's Angel does not lose his selfhood; he *refounds* it among a different "generalized other."

The scene's details repay close attention. The robes are "rent off… to the hungry wind"—the institutional identity is not merely discarded but *offered* to a force greater than any individual will. The sceptres are thrown "Down on the land of America"—the instruments of authority are returned to the earth, to the material ground of experience. And the Angels descend "naked and flaming"—stripped of institutional covering, they are revealed as pure energy whose "lineaments" are "seen / In the deep gloom" only when they stand beside the revolutionary community. This is Mead's "I" in its most radical form: the spontaneous creative response that cannot be predicted from the attitudes of the "me," that emerges as genuine novelty in the social process.

The poem then shows how this revolutionary "I" immediately generates a new "me"—a new generalized other. The Angels do not descend into isolation; they stand "by Washington and Paine and Warren." They join a community. The revolutionary self is constituted not by solitary rebellion but by solidarity with a new collective project. This is precisely Mead's insight: the "I" can only function within a social field; even the most radical act of selfhood is intelligible only against the background of a community whose attitudes one has internalized.

The British soldiers' response confirms the social character of the transformation: "threw their swords & muskets to the earth & ran / From their encampments and dark castles seeking where to hide" (*America*, lines 71–72). The old "generalized other" (the British military hierarchy) disintegrates not because of military defeat but because the *social field* has shifted—the attitudes, expectations, and reciprocal recognitions that constituted the old order have been dissolved by the new.

The Thirteen Angels rend off their robes and throw their golden sceptres "Down on the land of America," descending "swift as fires." This represents the descent of abstract, institutional authority into the messy, embodied reality of social action. By joining Washington, Paine, and Warren, the Angels participate in Mead's "generalized other"—they relinquish isolated, heavenly transcendence to become part of the collective social self forging a new democratic reality.

Table 5: The Mead-Blake Shared Structure

Mead	Blake	Shared Structure
Self constituted through Others	Self as aspect of Albion	No pre-social self
"Generalized other"	The collective Zoas	Internalized community
"I" / "me" dialectic	Los (creative response) / Spectre (internalized roles)	Creativity within structure
Symbolic interactionism	Prophetic communication	Meaning as social practice
Novel "I" response	Angels rending robes	Spontaneous creative rupture
New "me" formation	Standing with Washington	Reconstituted solidarity

Figure 9: *The Angels Descend.* The Thirteen Angels descend to join Washington, Paine, and Warren. *America a Prophecy*, lines 53–59; AI-generated illustration.

5.4.3 Rebuilding Jerusalem: Action as Social Coordination and Multi-Agent Convergence

The convergence between Blake's social vision and pragmatism deepens when we consider Peirce's **community of inquirers** and Dewey's **democratic community**.

5.4.3.1 Peirce's Community of Inquiry Peirce grounded the very concept of objective truth in the social practices of the community: "The opinion which is fated to be ultimately agreed to by all who investigate, is what we mean by the truth, and the object represented in this opinion is the real."[Peirce, 1878] For Peirce, truth is never the private property of an isolated Cartesian intellect; it is a profound social achievement—the convergent, asymptotic limit reached by an indefinitely extended community subjecting every hypothesis to rigorous, public, experimental criticism.

America a Prophecy's portrayal of the revolutionary community dramatically embodies this epistemic principle. The American figures do not arrive at their revolutionary convictions through isolated contemplation; rather, they "rush together in the night in wrath and raging fire" (*America*, line 100). The operative word is *together*—the rush is collective, and the epistemological fire is shared. Truth, for both the pragmatist logician and the visionary poet, is forged strictly in the crucible of communal action.

5.4.3.2 Dewey's Democracy as a Way of Life John Dewey systematically extended this logic beyond the laboratory and into the political sphere: democracy, he argued, is not merely a formal mechanism for casting ballots, but a fundamental "way of life." It requires open communication, shared inquiry, and the continuous reconstruction of social habits to address novel problems.[Dewey, 1916] For Dewey, education is the crucible where these democratic habits are cultivated—not through the passive indoctrination of static facts, but through the active, lived experience of collaborative problem-solving.[Dewey, 1916]

5.4.3.3 Blake's Jerusalem Blake's *Jerusalem*—the sprawling, magnificent prophetic epic that stands as his most difficult and ambitious achievement—exhaustively details the grueling labor of building a community capable of integrated perception. For Blake, "Jerusalem" is not a geographical location or an otherworldly reward, but a *mode of communal existence* in which the fragmented Zoas are finally reintegrated across the entire social body. This is democracy exactly as Dewey understood it: not a set of bureaucratic procedures, but a tangible *quality of shared experience*.

The labor of building Jerusalem is performed by **Los** (Imagination), who works at his furnace to forge the fragmented Zoas back into unity. This is inquiry as Peirce understood it: not a solitary intellectual activity but a communal, practical, creative process of transforming indeterminate situations into "determinate wholes."[Dewey, 1920]

5.4.4 Addams, West, and Blake's Prophetic Social Praxis

5.4.4.1 Jane Addams: Pragmatism in Practice Addams's founding of Hull House—a settlement house providing education, social services, and community building in immigrant neighborhoods—was pragmatism made concrete. She invented social work as a discipline grounded in the pragmatist principle that knowledge comes through engagement, not observation.[Addams, 1902]

Blake would have recognized Addams's project as an instance of "Building Jerusalem"—the creation of social spaces where the full range of human capacities (intellectual, emotional, creative, practical) can operate in coordination rather than isolation. Boston's Angel's demand—"Who commanded this?… To keep the gen'rous from experience"—is the question Addams answered with Hull House: no one has the right to exclude the generous from experience.

5.4.4.2 Cornel West: Prophetic Pragmatism West's **prophetic pragmatism** — "tragic action with revolutionary intent, usually reformist consequences, and always visionary outlook" — draws together the threads of pragmatist social philosophy, African-American political thought, and Christian prophecy.[West, 1989, 1993]

Blake's prophetic tradition provides a direct precursor. Both Blake and West:

1. **Refuse the separation of philosophy from politics**: Blake's prophecies are always simultaneously about perception and about power; West's pragmatism is always tied to social justice.
2. **Draw on religious vocabulary for secular ends**: Blake's "Jerusalem" and West's "prophetic" are not otherworldly but transformative—visions of what communal life *could become*.
3. **Center the marginalized**: Blake's sympathy for chimney sweeps, enslaved persons, and the working poor anticipates West's insistence that pragmatism must confront race, class, and gender. *America*'s Female Spirits who "Run from their fetters reddening, & in long drawn arches sitting: / They feel the nerves of youth renew, and desires of ancient times, / Over their pale limbs as a vine when the tender grape appears" (*America*, lines 125–127) are among Blake's most powerful images of liberation for those whom the "law-built Heaven" has most thoroughly oppressed.

5.4.4.3 Du Bois, Locke, and the Pragmatism of the Marginalized W.E.B. Du Bois (1868–1963) and Alain Locke (1885–1954) applied pragmatist insights to cultural pluralism and racial identity.[Du Bois, 1903, Locke, 1925] Their work—germinating new philosophies of race through productive dialogue—plants seeds visible in Blake's earlier recognition that "One Law for the Lion & Ox is Oppression" (*The Marriage of Heaven and Hell*). Blake's pluralism, like the cultural pluralism of Du Bois and Locke, insists that genuine unity requires the integration of difference, not its suppression.

5.4.5 The Enduring Social Vision and Multi-Agent Inference

The convergence of Blake and pragmatism on the social constitution of the self carries implications for contemporary philosophy of mind, artificial intelligence, and social theory. If the self is constitutively social—if "I" only exist through the "generalized other" (Mead) or through the "Universal Brotherhood of Eden" (Blake)—then any cognitive science that begins with the isolated individual will be as incomplete as Urizen's single-vision philosophy. The multi-agent perspective of Active Inference, where shared generative models enable coordinated sense-making across social scales, provides the formal framework for this insight.

America a Prophecy offers a final image for this social epistemology: "Washington, Franklin, Paine, and Warren, Allen, Gates, and Lee" stand together "in the flames" and view "the armies drawn out in the sky" (*America*, lines 82–83). No single revolutionary comprehends the whole; but standing together—as a community of inquirers, a generalized other in formation—they perceive what no individual could perceive alone. This is Peirce's truth, Dewey's democracy, and Blake's Jerusalem made visible in a single scene.

5.5 Convergence 5: Anti-Representationalism—Rorty, Brandom, Putnam, and Blake's Refusal to "Reason and Compare"

> "Our vocabularies have no more of a representational relation to an intrinsic nature of things than does the anteater's snout or the bowerbird's skill at weaving." — Richard Rorty, *Truth and Progress*, p. 48[Rorty, 1998]

> "I will not Reason & Compare: my business is to Create." — William Blake, *Jerusalem*, Plate 10 [Erdman 153][Erdman, 1988]

5.5.1 Anti-Representationalism: Rorty and Blake

Rorty's central philosophical target—the idea of **knowledge as representation**, as a mental mirroring of a mind-external world—is exactly the target Blake had attacked a century and a half earlier.[Rorty, 1991, Peirce, 1878]

5.5.1.1 Rorty's Critique Rorty's *Philosophy and the Mirror of Nature* (1979) argued that the entire project of modern epistemology—from Descartes through Kant to the analytic tradition—rests on the metaphor of the mind as a **mirror** that reflects reality. If the mirror is polished (through proper method), our representations will accurately copy the world. Rorty's strategy was to show that this metaphor "is not a useful one" and that "any vocabulary is optional and mutable."[Rorty, 1991]

5.5.1.2 Blake's Critique Blake attacked the same metaphor through different means. Locke's "tabula rasa" is a mirror-predecessor: the blank slate that passively receives impressions. Newton's mechanical universe is the world that the mirror is supposed to reflect. And Urizen—Blake's tyrannical Reason-God—is the philosopher who insists that the mirror's image is the only reality.

Blake's alternative is not to polish the mirror but to **smash it**: "I will not Reason & Compare: my business is to Create." Where Rorty replaces the mirror metaphor with the metaphor of **vocabularies as tools**, Blake replaces it with the metaphor of **creation as existence**. Both refuse the correspondence picture; both insist that the relationship between mind and world is *active*, *constructive*, and *creative* rather than passive, receptive, and representational.

America a Prophecy (1793) stages this refusal as revolutionary drama.[Blake, 1793a] Boston's Angel's declaration of independence from inherited vocabulary (subsection 5.1, *America*, Plate 11; Erdman 53) is the anti-representationalist act in its purest form: the refusal to accept the "law-built Heaven" of Albion's Authority as binding. He does not argue that the old vocabulary is *false* (that would be to remain within the representationalist framework); he declares that he will no longer *use* it. This is precisely Rorty's move: the shift from asking "Is this vocabulary true?" to asking "Is this vocabulary useful?"—and, finding it wanting, choosing to create rather than comply.

Feature	Rorty	Blake
Target	Mind as mirror	Mind as tabula rasa / Urizen's cavern
Alternative	Vocabularies as tools	Imagination as existence
Relation to truth	Deflationary: "true" = useful endorsement	Dynamic: "proved was once imagined"
Relation to philosophy	Art of conversation	Art of prophecy
Cultural posture	Liberal ironist	Prophetic visionary

5.5.2 Vocabularies and Systems

Rorty's concept of **vocabularies**—entire frameworks of description that cannot be assessed from a "neutral" standpoint—maps onto Blake's concept of **systems**. Blake's "I must Create a System, or be enslav'd by

another Man's" is, in Rortyan terms, the recognition that one always inhabits *some* vocabulary, and the choice is between creating one's own or being trapped in someone else's.

However, there is a crucial difference: Rorty's **ironism** holds that one should recognize the *contingency* of one's own vocabulary—that it is one possible description among many, with no metaphysical privilege. Blake's **prophetic certainty** is more robust: the visionary sees with Fourfold clarity and *knows* that single vision is a contraction, not merely an alternative description.

This tension—between Rortyan contingency and Blakean conviction—is the most significant dissonance in the Blake-Pragmatism convergence, and resolving it is essential. The resolution lies in recognizing that Rorty and Blake converge at the level of *functional orientation*: both treat vocabularies as instruments for coping with experience rather than mirrors of reality, and both insist that the choice between vocabularies is a matter of creative agency rather than passive discovery. They diverge at the level of *attitude toward the instrument*: Rorty adopts ironic distance from his own vocabulary, while Blake wields his with visionary conviction.

But this divergence is itself illuminated by the pragmatist tradition's internal debate between fallibilism (Peirce, Haack) and anti-representationalism (Rorty). Blake's position occupies a precise location within this debate: he is a **fallibilist in practice** (his mythology evolved across decades; the prophetic books revise one another; *Jerusalem* reconstructs what *The Book of Urizen* first articulated) but a **visionary in aspiration** (he pursues Fourfold Vision as a genuine achievement, not merely a useful redescription). In Active Inference terms, this is the distinction between maintaining high *precision* on one's generative model (Blakean conviction) while simultaneously allowing *model updating* in response to prediction error (Blakean fallibilism). Rorty's ironist, by contrast, maintains low precision uniformly—treating all vocabularies as equally contingent. Haack's foundherentism (subsection 5.5) suggests that Blake's position is the more epistemically productive: strong but revisable commitments outperform ironic detachment when the agent must *act* in the world rather than merely contemplate it.

5.5.3 Brandom's Inferentialism and Blake's Semiotic Cosmos

Robert Brandom's **inferentialist semantics** offers another unexpected bridge to Blake.[Brandom, 1994]

5.5.3.1 Meaning as Inferential Role Brandom argues that the meaning of a concept is constituted not by what it *refers to* (the representationalist picture) but by its **inferential role**—the patterns of reasoning in which it participates. To understand "red" is not to match the word to a color-property but to know what follows from something's being red, what is incompatible with it, and what would count as evidence for or against it. Meaning, in Brandom's terms, is "implicit in social practices of attributing and acknowledging commitments and entitlements."[Brandom, 1994]

5.5.3.2 Blake's Semiotic Practice Blake's illuminated books function as inferentialist artifacts. The meaning of a Blakean symbol—Urizen, Los, the "Tyger"—is not fixed by reference to a determinate external object but by its **inferential relations** to other symbols in the prophetic system. Understanding the Tyger requires tracking its relations to the Lamb, to the Forests of the Night, to the "fearful symmetry" of the cosmos, to the Smithy of Los.

Blake's method of composition—in which symbols accumulate meaning across multiple works, shifting and deepening as the system evolves—is a literary enactment of Brandom's thesis that meaning is constituted *in use*, not *before use*. The reader who enters the prophetic books must learn to play the "game of giving and asking for reasons" with Blake's mythological vocabulary, just as the scientist must learn to reason inferentially with the concepts of physics.

5.5.3.3 Normative Pragmatics Brandom's concept of **normative pragmatics**—the idea that linguistic practices are governed by norms implicit in the community's practices of acknowledging and attributing commitments—finds an echo in Blake's vision of prophetic community. The prophet does not describe a reality external to the community but articulates norms implicit in the community's deepest commitments.

"Jerusalem" is the name for the normative ideal already implicit in communal life but not yet explicitly recognized.

5.5.4 Putnam's Fact/Value Collapse and *The Marriage of Heaven and Hell*

Putnam's argument for the **collapse of the fact/value dichotomy**—that "thick" ethical concepts blend descriptive and evaluative elements inseparably—finds its most dramatic literary embodiment in Blake's *Marriage of Heaven and Hell*.[Putnam, 2002]

The *Marriage* systematically fuses contraries that conventional philosophy keeps apart:

"Heaven" (Fact/Reason)	"Hell" (Value/Energy)	Blake's Marriage
Restraint	Excess	"The road of excess leads to the palace of wisdom"
Reason	Passion	"Energy is Eternal Delight"
Passive obedience	Active rebellion	"Opposition is true Friendship"
Angels (the orthodox)	Devils (the creative)	"Without Contraries is no progression"

This is precisely Putnam's point: the "pure fact" and the "pure value" are abstractions. In lived experience—and in Blake's illuminated cosmos—every perception is simultaneously a factual registration and an evaluative orientation. To see the Tyger is simultaneously to describe it ("burning bright") and to respond to it ("fearful symmetry"). Putnam's "entanglement" is Blake's "marriage."

5.5.5 Haack's Foundherentism and the Crossword of Vision

Susan Haack's **foundherentism**—her synthesis of foundationalism and coherentism using the crossword puzzle metaphor—offers a more sympathetic pragmatist framework for Blake than Rorty's deflationism.[Haack, 1993]

In Haack's model, experiential "clues" anchor beliefs (as in foundationalism) while mutual support between beliefs provides further justification (as in coherentism). This dual structure mirrors Blake's epistemology: the sensory input of Tharmas (experiential anchoring) combined with the architectural coherence of the Four Zoas' interrelation (mutual support). Fourfold Vision, in Haack's terms, is the completed crossword—where experiential clues and systemic coherence reinforce each other to produce warranted conviction.

5.5.6 Inferentialism in Practice: *America a Prophecy* as a Space of Reasons

Brandom's inferentialism becomes especially illuminating when applied to Blake's mythological vocabulary.[Brandom, 1994, 2000] Consider the term "Orc" in *America a Prophecy*. Its semantic content is not fixed by reference to some extra-textual entity but is constituted entirely by its inferential relations: "Orc" is that which *breaks chains*, *rises from the Preludium's darkness*, *opposes Urizen*, *radiates fire*, and *compels the Thirteen Angels to descend*. Each of these inferential commitments entails further commitments: if Orc breaks chains, then there must be chains to break (Urizen's "mental" fetters); if Orc radiates fire, then the "five gates" become flammable. The meaning of "Orc" is thus the sum of its position in a network of inferential moves—precisely Brandom's account of conceptual content as constituted by its role in the "space of reasons." Blake's mythological system functions as a self-contained inferential practice, where to introduce a term like "Albion" or "Los" is to undertake a package of commitments and entitlements that the prophetic narrative then makes explicit. This is *Making It Explicit* avant la lettre.

The anti-representationalist trajectory traced from Rorty through Brandom, Putnam, and Haack converges with Blake's categorical refusal to treat perception as mirroring. The next convergence extends this analysis into the domain of mathematics and spatial reasoning, where Fuller's Synergetics and Bridgman's operationalism reveal pragmatic geometry as the sixth face of the same anti-representationalist gem.

5.6 Convergence 6: Synergetics and Pragmatic Geometry—Fuller, Bridgman, and the Geometry of Fourfold Vision

"Dare to be naive." — R. Buckminster Fuller, *Synergetics* (1975), 000.001

"Shaking their mental chains, they rush in fury to the sea" — William Blake, *America a Prophecy*, line 67[Blake, 1793a]

5.6.1 Fuller and the Pragmatic Tradition

Richard Buckminster Fuller (1895–1983) stands as one of the most consequential—and most underappreciated—inheritors of the American Pragmatic tradition.[Fuller, 1975] Though rarely classified as a philosopher, Fuller's lifework embodies pragmatism's deepest commitments: the rejection of spectator knowledge in favor of design science, the insistence that truth is operational and verified through its consequences, and the conviction that thinking is inseparable from making. His intellectual partnership with E.J. Applewhite (1919–2005), who co-authored the monumental *Synergetics: Explorations in the Geometry of Thinking* (1975) and *Synergetics 2* (1979), produced a philosophical system that—like Blake's—fuses geometry, cosmology, and epistemology into a single integrated vision.[Applewhite, 1977]

Fuller explicitly aligned himself with the pragmatist tradition, citing William James's influence and describing his own method as "comprehensive anticipatory design science"—a phrase that reads as a Deweyan manifesto in compressed form.[Fuller, 1981] Like Dewey, Fuller insisted that knowing and doing are inseparable; like Peirce, he treated all knowledge as provisional and self-correcting; like James, he valued ideas by their consequences. And like Blake before all of them, Fuller rejected the Newtonian-Cartesian framework as a distortion of experiential reality—precisely the "law-built Heaven" whose "five gates were consum'd" in *America a Prophecy* (Plates 17–18; Erdman 57–58).[Blake, 1793a]

5.6.2 Fuller's Synergetics: A Geometry of Action and Experience

Synergetics—Fuller's comprehensive geometric philosophy—begins from a radical empiricist premise that James would have recognized immediately: **start with experience, not abstraction**.[Fuller, 1975]

5.6.2.1 The Rejection of the Cubic Grid Conventional geometry starts with the XYZ coordinate system: three mutually perpendicular axes meeting at a point. Fuller argued that this framework is experientially false. No one has ever experienced perpendicularity as a primary datum. The cube is a human abstraction imposed on nature, not derived from it—an instance of what Blake's Boston's Angel denounces as a God who "writes laws of peace, and clothes him in a tempest" (*America*, line 48).

Fuller's alternative is the **tetrahedron**—the minimum structural system in nature, the simplest enclosure of space, composed of four vertices, six edges, and four triangular faces. The tetrahedron is the "quantum of structure," and all of Synergetics builds from this irreducible unit.

Feature	Cartesian Geometry	Synergetics
Fundamental unit	Cube (right angles)	Tetrahedron (60-degree angles)
Coordinate system	XYZ (3 axes, 90 degrees)	IVM (4 axes, 60 degrees)
Starting point	Abstract point	Experienced event
Space conception	Empty container	Network of relationships
Zero reference	Origin point	Center of closest-packing
Epistemology	Representation	Operation

This is not merely a technical preference. It is an epistemological claim: the geometry we use to think about the world shapes what we can think. The Cartesian grid—a product of the same rationalist tradition that Blake attacked and pragmatism challenged—imposes a framework of isolated, perpendicular dimensions on an experience that is fundamentally *relational* and *triangulated*.

5.6.2.2 The Isotropic Vector Matrix

Fuller's **Isotropic Vector Matrix (IVM)**—a closest-packed sphere arrangement where every vector has the same length and every angle is 60 degrees—provides an alternative coordinate system that is:

- **Omni-symmetrical**: No privileged direction or axis
- **Closest-packed**: Maximum efficiency, minimum waste
- **Experientially grounded**: Derived from the behavior of real spheres in contact

The IVM generates both the octahedron and the tetrahedron as its fundamental cells, producing what Fuller called the **octet truss**—a structural system that appears throughout nature (from crystal lattices to viral capsids) and engineering (space frames, geodesic domes).

5.6.2.3 The Concentric Hierarchy of Polyhedral Volumes

Fuller's most radical geometric claim is that the tetrahedron—not the cube—should serve as the unit of volumetric measure. Setting the regular tetrahedron's volume to 1, Fuller demonstrated a **concentric hierarchy** of nested polyhedra whose volumes are all whole numbers or simple fractions—a result impossible in Cartesian cubic measure:[Fuller, 1975]

Polyhedron	Synergetics Volume	Cartesian Equivalent
Tetrahedron	1	~0.118 cubic units
Dual Tetrahedron (Stella Octangula)	1	~0.118 cubic units
Cube	3	1 cubic unit
Octahedron	4	~0.471 cubic units
Rhombic Dodecahedron	6	~1.414 cubic units
Cuboctahedron (Vector Equilibrium)	20	~2.357 cubic units

The whole-number ratios of the concentric hierarchy are not a coincidence but a consequence of the tetrahedron being nature's minimum structural system. Fuller regarded this as evidence that "nature is using a coordinate system" based on closest-packing and 60-degree coordination rather than the 90-degree Cartesian grid—a geometric operationalism that Peirce's pragmatic maxim would endorse: the meaning of "volume" is determined by the operations used to measure it, and different operational frameworks yield different (and differently illuminating) truths.[Fuller, 1975]

5.6.2.4 Quadray Coordinates: A Four-Axis Alternative

Fuller and his intellectual successors developed **Quadray coordinates** (also called "tetrahedral coordinates")—a four-axis coordinate system based on the four rays emanating from the center of a regular tetrahedron to its vertices. The basis vectors are `(1,0,0,0)`, `(0,1,0,0)`, `(0,0,1,0)`, and `(0,0,0,1)`, pointing to the four corners of the reference tetrahedron. Any point in 3D space can be addressed using non-negative coordinates in this system, eliminating the negative numbers required by XYZ Cartesian coordinates—a feature that Kirby Urner has implemented in Python libraries for computational pedagogy, demonstrating the operational viability of the alternative framework.[Urner, 2010]

Quadrays instantiate the pragmatist epistemology at the level of spatial cognition: they demonstrate that what counts as a "natural" way to address space is not a given but a *choice*—and that the Cartesian choice, far from being neutral, embeds philosophical commitments (perpendicularity, negative extension, the primacy of the right angle) that shape downstream mathematical reasoning. Blake's rejection of "Newton's Sleep" acquires geometric specificity through the quadray alternative.

5.6.2.5 The Jitterbug Transformation

Perhaps the most visually compelling demonstration in Synergetics is the **Jitterbug Transformation**: the continuous transformation of the cuboctahedron (Vector Equilibrium) through the icosahedron to the octahedron, achieved by rotating alternate triangular faces of the VE. This transformation—which Fuller discovered in 1948 and demonstrated with physical models throughout his career—connects the most symmetrical polyhedron (the VE, with 12 vertices equidistant from the center) to the most compact (the octahedron, with 4 units of Synergetics volume), passing through the icosahedron (the basis of viral capsid geometry and Penrose tiling) along the way. The Jitterbug is

Fuller's geometric enactment of Blake's doctrine: contraries do not cancel but *transform*—the VE and the octahedron are not different objects but different states of the same dynamic system, related by continuous motion rather than static comparison.

5.6.3 Operationalism: Bridgman's Operations and Chang's Iterationmatic Verification

Fuller's epistemology is fundamentally **operationalist**: a concept means what it *does*, not what it *represents*.[Bridgman, 1927] This connects him to Percy Bridgman's operationalism (itself a descendant of Peirce's pragmatic maxim) and, through Bridgman, back to the pragmatist mainstream. Critically, Bridgman insisted that operations were matters of *private experience*, not public verification—declaring "Science is not truly objective unless it recognizes its own subjective or individual aspects"—a position that brings him surprisingly close to both James's radical empiricism and Blake's insistence on the primacy of individual perception.[Bridgman, 1927] Hasok Chang's *Inventing Temperature* (2004) develops this Bridgmanian insight into the concept of "epistemic iteration" and "operational coherence," explicitly giving "a conscious nod to Percy Bridgman's advocacy of the operational point of view" and arguing that his "operational notion of 'coherence' is implicit in John Dewey's theory of knowledge"—thereby bridging operationalism and pragmatism at the deepest epistemological level.[Chang, 2004]

5.6.3.1 Peirce's Pragmatic Maxim and Fuller's Design Science

Peirce's pragmatic maxim—"Consider what effects, that might conceivably have practical bearing, we conceive the object of our conception to have. Then, our conception of these effects is the whole of our conception of the object"—is the philosophical foundation of Fuller's method.[Peirce, 1878]

Fuller operationalized this maxim literally: to understand a structure is to build it. The geodesic dome is not a representation of Fuller's philosophy but its *verification*—the proof that triangulated structures achieve maximum strength-to-weight ratios, that "doing more with less" (Fuller's principle of **ephemeralization**) is a genuine possibility.

5.6.3.2 Blake, Fuller, and Anti-Newtonian Praxis

Both Blake and Fuller mounted sustained attacks on the Newtonian worldview, but their alternatives converge remarkably:

Theme	Blake	Fuller
Against Newton	"Newton's Sleep" contracts perception	Cartesian grid distorts experience
Alternative framework	Fourfold Vision (integrated faculties)	Synergetics (IVM geometry)
Method	Illuminated printing (create to know)	Design science (build to understand)
Unity of art and science	Poetry *is* philosophy	Architecture *is* mathematics
Role of imagination	"Human Existence itself"	"Comprehensive anticipatory design"

Both insist that Newton's mechanical universe—with its absolute space, absolute time, and passive matter—is not reality but a *model*: one possible vocabulary (Rorty), one level of vision (Blake), one operational framework (Fuller) among many. And both propose alternatives grounded not in abstract argumentation but in *practice*: Blake's illuminated printing, Fuller's geodesic structures.

5.6.4 The Synergetics-Pragmatism-Blake Triad

Synergetics occupies a unique position in the Blake-Pragmatism synthesis:

Dimension	Blake	Pragmatism	Synergetics
Against abstraction	"Newton's Sleep"	Anti-Cartesian foundations	Tetrahedra replace cubes
Experiential grounding	"Cleanse the doors"	Radical empiricism	Start with closest-packing
Operational truth	"Proved was once imagined"	Pragmatic maxim	"Build to understand"
Integration	Four Zoas coordinate	Community of inquiry	Synergy: whole > parts
Pedagogy	*Songs of Innocence*	Learning by doing	Martian Math
Anti-reductionism	"Energy is Eternal Delight"	Holism (James, Dewey)	Synergy: behavior of wholes

The key concept here is Fuller's **synergy**—"the behavior of whole systems unpredicted by the behavior of their parts taken separately."[Fuller, 1975] This is:

- Blake's Four Zoas: the integrated fourfold perception exceeds what any single faculty can produce
- Dewey's organism-environment transaction: the whole experience exceeds stimulus plus response
- Peirce's cable and tensegrity: Peirce's structural metaphor of the cable—where continuous, overlapping tensile fibers create a system stronger than any single compressive chain—finds its exact geometric expression in Fuller's **tensegrity** architecture (tensional integrity). In tensegrity structures, isolated components in discontinuous compression are held together by a continuous network of tension. The system's stability emerges from the synergistic distribution of stress across the whole network, just as the resilience of pragmatic truth emerges from the overlapping, mutually supporting vectors of communal inquiry.
- Active Inference's free energy minimization: the integrated generative model outperforms any factorized approximation

Synergy is the mathematical name for what Blake called "Fourfold Vision" and what the pragmatists called "the whole of experience."

5.6.5 Applewhite and the Architecture of Collaboration

E.J. Applewhite's role in producing *Synergetics* deserves specific attention as an embodiment of the pragmatist theory of collaborative inquiry.[Applewhite, 1977] Applewhite—a former CIA intelligence officer turned humanities polymath—served as Fuller's intellectual editor, translator, and interlocutor over two decades of collaboration. His later works, including *Washington Itself* [Applewhite, 1981] and the meditative *Paradise Mislaid* [Applewhite, 1991], reveal the breadth of his intellectual range—from architectural guidebook to philosophical reflection on biological existence—a range that itself embodies the pragmatist refusal to compartmentalize knowledge.

The Fuller-Applewhite partnership mirrors Blake's own practice of radical collaboration between modes: text and image, prophecy and craft, abstraction and embodiment. Applewhite's contribution was to translate Fuller's oral, performative, improvisational discourse into written text—an act of *disciplined reception* that parallels the "me" in Mead's I/me dialectic: the organized response that gives form to spontaneous creative energy.

Their collaboration also illustrates Peirce's thesis that inquiry is inherently communal. Fuller's geometric intuitions required Applewhite's editorial discipline to become public knowledge—to enter what Peirce called "the community of inquirers" and what Brandom would call "the space of reasons." In *America a Prophecy*, Blake presents an analogous scene: Washington, Franklin, Paine, Warren, Allen, Gates, and Lee stand together—no single revolutionary carries the fire alone, but the collective body, "in the flames," views "the armies drawn out in the sky" (*America*, lines 81–83).

5.6.6 Kirby Urner and the Digital Continuation

Kirby Urner (b. 1958) has systematically translated Fuller's geometric philosophy into Python code and curricula, extending the pragmatist tradition of "learning by doing" into computational pedagogy.[Urner, 2000] His project is explicitly Deweyan: students encounter the IVM through tactile manipulatives (closest-packed spheres), build polyhedral models computationally, and verify every theorem by running it—Peirce's Method of Science applied to geometry. The concentric hierarchy (tetrahedron = volume 1, octahedron = volume 4, cuboctahedron = volume 20) provides a natural didactic progression grounded in experiential rather than abstract starting points. This is operationalism in practice: the meaning of "tetrahedron" is constituted by the operations—computational, physical, perceptual—that produce and test tetrahedral structures. Recent work by Friedman has formalized these coordinate systems analytically in *QuadMath* [Friedman, 2025a], providing a rigorous mathematical treatment of quadray and 4D coordinate systems, while the *Symergetics* project[Friedman, 2025b] extends Fuller's vision into symbolic computation—rational arithmetic, geometric pattern discovery, and all-integer accounting that operationalize synergetic geometry in code.

5.6.6.1 Martian Math and the Pedagogy of Vision Urner's **"Martian Math"** curriculum—so named because it asks students to imagine learning mathematics on Mars, without inheriting Earth's Cartesian conventions—is a pedagogical experiment in what Blake would call "cleansing the doors of perception."[Urner, 2000] The curriculum begins with closest-packed spheres, builds to the IVM coordinate system, uses Python to explore polyhedral volumes, and connects to real-world structures (geodesic domes, crystal lattices, molecular biology).

This is radical empiricism made pedagogical: start with experience, build structure from relations, verify through practice. It is also a distinctly Blakean project: the systematic replacement of Single Vision (Cartesian abstraction) with a richer, more integrated mode of spatial cognition.

5.6.7 *America a Prophecy*: Synergetics and Global Propagation

Blake's *America* anticipates Fuller's "Spaceship Earth" vision in its closing movement. After the revolutionary fire consumes the five gates of law-built Heaven, the poem widens its lens to encompass the entire Atlantic world:

> "Stiff shudderings shook the heav'nly thrones! France Spain & Italy / In terror view'd the bands of Albion, and the ancient Guardians, / Fainting upon the elements, smitten with their own plagues!" — *America a Prophecy*, lines 144–146

This is not merely a historical observation about revolution spreading to Europe—it is a structural claim about **synergy at the geopolitical scale**. The revolutionary energy that began in the American colonies cannot be contained by national boundaries because it operates at the level of whole systems. The "ancient Guardians" are "smitten with their own plagues" because the old order's instruments of suppression—its priors, its mental chains, its law-built gates—recoil upon the order itself when confronted by agents who refuse to submit. Fuller would recognize this as synergy: the behavior of the revolutionary whole (the Atlantic world-system) exceeds what any analysis of its separate parts (individual nations, individual colonies) could predict.

5.6.8 Toward a Pragmatic Geometry

The Synergetics lineage—Fuller, Applewhite, Urner—extends the pragmatist challenge to one of its most consequential domains: the foundations of geometry and mathematics education. If our basic spatial concepts (point, line, plane, cube) are not neutral descriptions of reality but culturally inherited *tools* (James), *vocabularies* (Rorty), or *habits* (Dewey), then changing the tools changes what we can think. Fuller's substitution of the tetrahedron for the cube is not merely a mathematical curiosity but a pragmatic experiment: does thinking in 60-degree coordinates, in closest-packed relationships, in synergetic wholes produce different—and perhaps more adaptive—cognitive outcomes than thinking in 90-degree abstractions?

Blake would have understood the stakes immediately. The question "Cube or tetrahedron?" is a version of his question "Single vision or fourfold?" Both are questions about the relationship between the frameworks we use and the realities we can perceive. And both imply that the frameworks are not given by nature but *created* by human activity—which means they can be re-created, re-imagined, and improved. As *America a Prophecy* demonstrates, the five gates of any "law-built Heaven" can be consumed when the fire of genuine inquiry—pragmatic, operational, synergetic—burns hot enough.

The six convergences now assembled — inquiry, truth, experience, social selves, anti-representationalism, and synergetics — form a qualitative architecture of remarkable coherence. Yet qualitative correspondence alone cannot satisfy the pragmatist demand for operational precision, nor Blake's own insistence that "the true method of knowledge is experiment." What is needed is a formal mathematical framework capable of expressing these convergences as structural identities rather than suggestive analogies. Active Inference — with its generative models, Markov blankets, and variational free energy — provides exactly this apparatus, and it is to this formalization that we now turn.

6 Active Inference: The Mathematical Formalization of Pragmatic Visionary Epistemology

> "The agent does not passively record sensory impressions; rather, it is ceaselessly engaged in prediction, and through action upon the world, in the verification or falsification of those predictions."
> — Parr, Pezzulo, and Friston, *Active Inference* [2022][Parr et al., 2022]

6.0.1 The Triadic Synthesis: Connecting Blake, Pragmatism, and Friston

Throughout this manuscript, we have identified structural convergences between Blake's visionary epistemology and American Pragmatism across six dimensions: inquiry, truth, experience, social selfhood, anti-representationalism, and synergetics. We now propose that **Active Inference**—the process theory derived from Karl Friston's Free Energy Principle (FEP)—provides the formal mathematical framework in which these convergences become precise.

This synthesis is neither idiosyncratic nor speculative. An emerging research programme—spanning biosemiotics, philosophy of cognitive science, and computational neuroscience—has begun to formalize precisely the bridge we construct here. Pietarinen and Beni's award-winning work identifies active inference as the computational realization of Peirce's abductive logic, arguing that free energy minimization *is* formalized abduction under a generative model.[Pietarinen and Beni, 2021] Gallagher frames classical pragmatism as the "conceptual ancestor" of the enactivist and predictive processing traditions in which active inference now operates.[Gallagher, 2022] Bruineberg, Kiverstein, and Rietveld propose an "enactive interpretation of active inference" that follows "the pragmatic turn in cognitive science"—moving "away from a view of cognition as the rule-governed manipulation of internal representations, to a view of cognition as being essentially action-oriented, and therefore premised on the selection of adequate forms of situationally appropriate action."[Bruineberg et al., 2018] And the landmark MIT Press volume *The Pragmatic Turn* explicitly names the shift from representationalist to action-oriented views in cognitive science—a shift whose formal backbone is the Free Energy Principle.[Engel et al., 2016] Our manuscript converges with and extends this literature by adding Blake's visionary epistemology as a third vertex, revealing structural isomorphisms that neither the pragmatist-AIF bridge nor Blake scholarship has yet identified.

The claim is not that Blake or the pragmatists anticipated Active Inference, nor that Active Inference "proves" their philosophical positions. Rather, the claim is that all three intellectual traditions—Romantic vision, pragmatist inquiry, and Bayesian neuroscience—independently converged on the same deep structure: **the agent that knows the world by actively engaging with it, whose perception is inference, whose action is hypothesis-testing, and whose selfhood is constituted by the model it maintains**.

6.0.2 The Free Energy Principle: A Primer on Action and Belief

The FEP posits that any self-organizing system that resists disorder must minimize its variational **free energy** F—an upper bound on surprisal (negative log-evidence):

$$F = -\ln p(y|m) + D_{KL}(q(x) \| p(x|y,m)) \tag{1}$$

where:

- $p(y|m)$ is the marginal likelihood (model evidence)
- $q(x)$ is the approximate posterior (the agent's beliefs)
- D_{KL} is the Kullback-Leibler divergence from true to approximate posterior

Free energy minimization is achieved through two complementary processes:

1. **Perception** — updating beliefs $q(x)$ to better match sensory evidence (reducing D_{KL})
2. **Action** — changing the environment to make sensory evidence match predictions (reducing surprisal)

This dual process is the formal expression of the pragmatist rejection of the spectator theory: the agent does not passively observe but actively intervenes to bring world and model into alignment.

6.0.2.1 *America a Prophecy* as a Case Study in Free Energy Dynamics

Blake's *America a Prophecy* (1793) provides a remarkably precise mythological rendering of free energy dynamics.[Blake, 1793a] The poem's central conflict—between Orc (revolutionary energy) and Urizen (repressive reason)—maps directly onto the Active Inference architecture:

Orc as elevated free energy: Orc embodies the state in which prediction error is high and the agent's model of the world no longer fits the sensory evidence. His "red flames" are the phenomenological experience of surprise—the organism encountering a world that defies its current generative model. The American revolutionaries, animated by Orc's energy, respond not by updating their beliefs to accommodate the old order but by *active inference*: changing the world to match their new model of how it should be.

Urizen's "storèd snows" as pathological prior dominance: In the poem's climax, Urizen descends and pours forth "storèd snows" and opens "his icy magazine" upon the Atlantic (*America*, lines 136–137). This is the formal condition $\pi_{prior} \gg \pi_{sensory}$—the state in which priors so dominate sensory precision that no prediction error can drive belief updating. Urizen's frozen intervention is the Active Inference analogue of Newton's Sleep: a generative model so rigid that it suppresses all evidence of the Infinite.

The plagues' recoiling—"The red fires rag'd! The plagues recoil'd!" (*America*, lines 101)—represents the failure of this strategy. Rigid priors, when confronted with agents who actively engage with their environment rather than passively submitting, cannot maintain their dominance. The "five gates" of Urizen's law-built Heaven are consumed because active agents generate sufficient free energy to overwhelm the prior constraints.

The dialectic of fire and ice is visualized as the mechanics of Active Inference: Orc (left), wreathed in red flames, embodies high-precision prediction error and model-updating force. He confronts Urizen (right), enthroned amid stored snows, representing overly rigid, dominant priors refusing to learn from sensory data. The plagues recoiling across the Atlantic dramatize the system's struggle to minimize free energy through competing strategies of active inference versus rigid perceptual control.

6.0.3 The Nine Correspondences: A Formal Mapping Atlas

Building on the Blake–Active Inference synthesis, we can now place pragmatism as the third vertex of a triangular correspondence:

The triadic synthesis diagram illustrates the three-way conceptual mapping structuring this manuscript. Blake's dynamic, mythological vocabulary (e.g., "Cleansing the Doors of Perception") maps onto Pragmatism's action-oriented epistemology (e.g., "Inquiry as Active Engagement"), which in turn maps onto the formal mathematical constructs of Active Inference (e.g., "Free Energy Minimization"). The synthesis demonstrates structural isomorphism across three registers: prophetic poetry, democratic philosophy, and Bayesian neuroscience.

Table 6: Triadic Synthesis Atlas: Nine Blake–Pragmatism–Active Inference correspondences.

Theme	Blake	Pragmatism	Active Inference
Boundary	Doors of Perception	Organism-environment transaction (Dewey)	Markov Blanket $B = \{s, a\}$
Vision	Fourfold Vision	Pluralism and fallibilism (James, Peirce)	Hierarchical depth of generative model
States	Newton's Sleep	Dogmatism / Tenacity (Peirce)	Prior dominance: $\pi_{prior} \gg \pi_{sensory}$
Imagination	"Human Existence itself"	Ideas as tools (James, Dewey)	Generative model $p(o, \theta)$
Time	"Eternity in an Hour"	Temporal horizon of inquiry (Peirce)	Deep temporal modeling $\tau_i = \tau_0 \cdot \gamma^i$

Theme	Blake	Pragmatism	Active Inference
Space	"World in a Grain of Sand"	Radical empiricism—relations as experienced (James)	Scale invariance via deep evidence
Action	Cleansing the Doors	Method of Science / experimental inquiry (Peirce, Dewey)	Free energy minimization $\arg\min_q F$
Collectives	Building Jerusalem	Community of inquirers (Peirce) / Democracy (Dewey)	Shared generative models / TTOM
Architecture	Four Zoas	Six themes of pragmatism (Bernstein)	Factorized model $q(\theta) \approx \prod q(\theta_i)$

6.0.4 Detailed Mappings of the Triadic Synthesis

6.0.4.1 1. The Doors as Markov Blanket: The Topography of Perception The structural isomorphism between Blake's "doors of perception" and the Active Inference concept of the Markov Blanket is foundational. As the author has argued elsewhere, the Doors of Perception function as the threshold of prediction—the selectively permeable epistemic boundary across which the organism-environment transaction occurs.[Friedman, 2026] The "cleansing" of these doors corresponds formally to the optimization of this boundary, reducing the friction (prediction error) between the internal generative model and external sensory states.

6.0.4.2 2. Inquiry as Free Energy Minimization: The Engine of Belief Updating Peirce's account of inquiry—the struggle from doubt to settled belief—maps directly onto the Active Inference cycle:[Peirce, 1877]

1. **Doubt** = Elevated free energy; the model fails to predict sensory evidence.
2. **Inquiry** = Free energy minimization via belief updating (perception) and intervention (action).
3. **Settled belief** = Reduced free energy; the model accounts for available evidence.
4. **Self-correction** = The model remains fallible; new evidence re-elevates free energy, restarting the cycle.

Peirce's four methods of fixing belief correspond to different strategies for minimizing free energy:

Table 7: Free Energy Strategies for Fixing Belief: Peirce's four methods mapped onto Active Inference strategies for managing precision and reducing model-evidence divergence.

Peirce's Method	FE Strategy	Failure Mode
Tenacity	Inflate prior precision; ignore evidence	Prediction error accumulates
Authority	Adopt shared priors uncritically	Fragile to novel environments
A Priori	Select priors for internal coherence	No empirical grounding
Science	Update via error-corrected perception and action	Self-correcting

Pietarinen and Beni sharpen this mapping further in their "Beyond Bayesian Accuracy" programme, arguing that rationality under the FEP should be assessed not by abstract accuracy metrics (such as KL-divergence from a "true" posterior) but by Peirce's *skill scores*—context-sensitive measures of forecasting success in maintaining organismic viability.[Pietarinen and Beni, 2024] On this reading, free energy minimization is not

Figure 10: *Orc and Urizen — Free Energy Dynamics.* Orc (left), wreathed in crimson flames of prediction error, embodies the revolutionary force of model updating — the agent who actively engages with sensory evidence. Urizen (right), enthroned amid "storèd snows" of rigid prior beliefs, represents pathological prior dominance ($\pi_{prior} \gg \pi_{sensory}$). Between them, fire meets ice: the dialectic of Active Inference enacted as mythological confrontation. *America a Prophecy*, lines 91–137; AI-generated illustration.

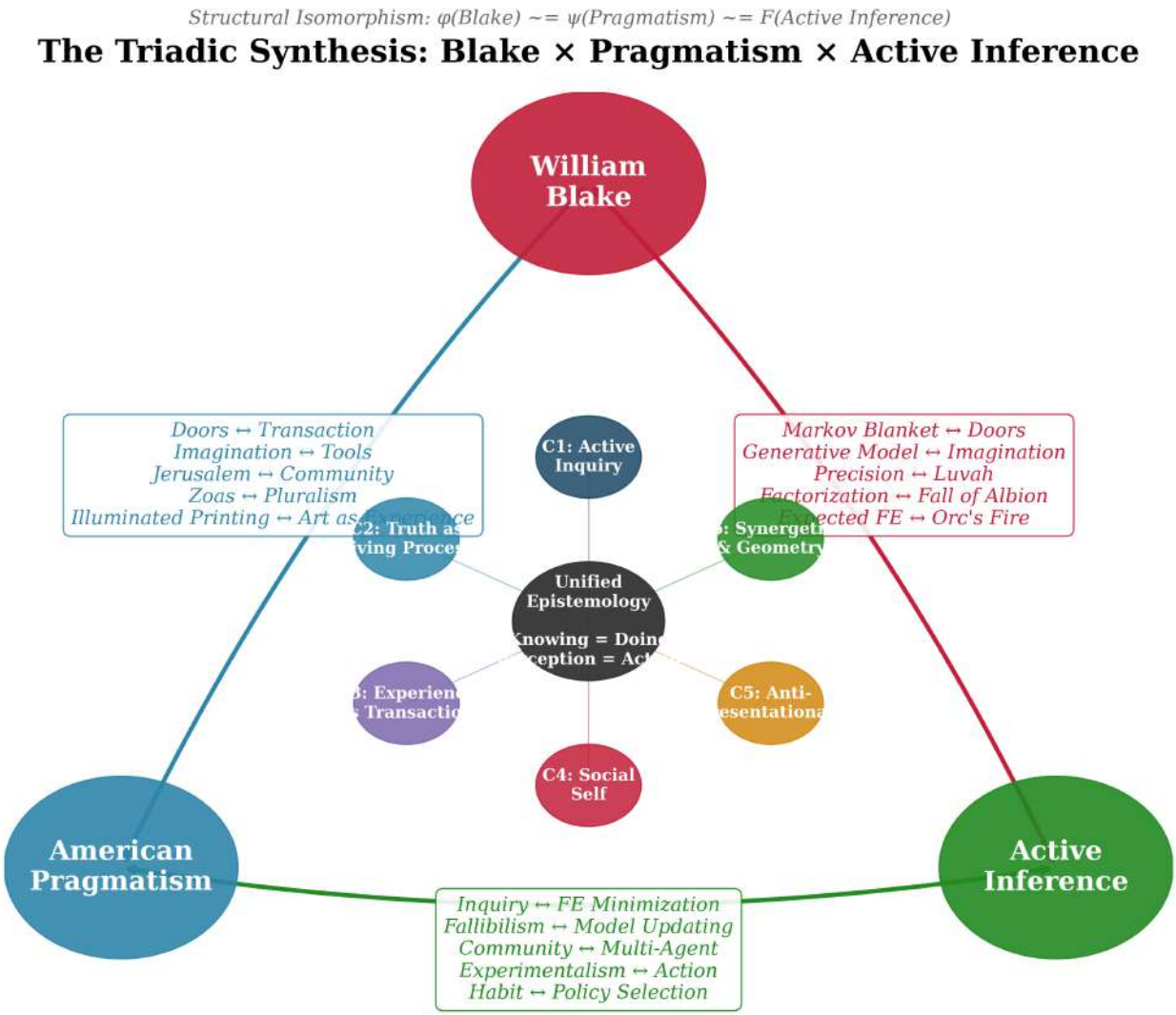

Figure 11: *The Triadic Synthesis: Blake × Pragmatism × Active Inference.* Three-way conceptual mapping revealing structural isomorphism across Blake's prophetic vocabulary, the pragmatist tradition of action-oriented epistemology, and the formal mathematics of Active Inference. Six convergence nodes mediate the triangle. Edge annotations detail specific correspondences: Doors Transaction, Imagination Tools, Inquiry Free Energy Minimization, Markov Blanket Doors of Perception, among others.

a pursuit of veridical representation but a pragmatic optimization of *skillful coping*: the agent that minimizes free energy most effectively is not the one with the most "accurate" model, but the one whose model enables the most adaptive action. This is precisely the pragmatist redefinition of truth as "what works"—now given formal mathematical expression.

6.0.4.3 3. Abduction as Active Inference: Hypothesis Testing in the Active Organism The deepest structural correspondence between Peirce and active inference lies in the logic of **abduction**. Peirce's mature theory of inquiry distinguishes three inferential modes—abduction (hypothesis generation in response to surprise), deduction (deriving testable consequences), and induction (experimentally checking and fixing belief)—which together constitute the self-correcting cycle of scientific inquiry.[Peirce, 1878] Pietarinen and Beni demonstrate that this triadic cycle maps directly onto the architecture of active inference:[Pietarinen and Beni, 2021]

1. **Abduction** = The generative model produces candidate hypotheses (latent causes) to explain away prediction error. Surprise—elevated free energy—is the trigger for abductive inference, just as Peirce's "real doubt" initiates inquiry.
2. **Deduction** = The model derives expected sensory consequences from each hypothesis, computing predicted observations under the generative model $p(o \mid \theta)$.
3. **Induction** = Belief updating via variational inference—comparing predictions against actual sensory evidence and adjusting posterior beliefs $q(\theta)$ accordingly.

This yields a Peircean reading of free energy minimization: prediction error is the trigger for abduction; the generative model is the space of candidate habits and hypotheses; and free energy minimization is the selection and stabilization of habits that improve skillful coping with the environment.[Beni, 2021] Beni's work on understanding and explanation within active inference further ties the FEP to Peirce's emphasis on explanatory virtues: model inversion—the process of inferring latent causes from sensory data—is itself a form of Inference to the Best Explanation (IBE), the explanationist norm that Peirce championed under the name "abduction."[Beni, 2021]

6.0.4.4 4. The Zoas as Factorized Generative Model: Components of Cognitive Architecture The Four Zoas map onto components of the generative model:

Table 8: The Four Zoas as Factorized Generative Model: Blake's psychological architecture formalized as independent optimization streams that must be integrated to achieve genuine fourfold vision.

Zoa	Cognitive Faculty	Model Component
Urizen	Reason & Law	Likelihood $p(o \mid \theta)$
Luvah	Passion & Love	Precision weighting π
Urthona/Los	Imagination	Prior $p(\theta)$
Tharmas	Instinct & Senses	Sensory states s

The Fall of Albion—the fragmentation of the Zoas—is formalized as the transition from integrated variational inference to a **mean-field approximation**:

$$q(\theta) \approx q(\theta_U) \cdot q(\theta_L) \cdot q(\theta_V) \cdot q(\theta_T) \tag{2}$$

This factorization enables computational tractability but introduces the "coordination problem"—exactly Blake's diagnosis of the fallen state, where reason, passion, imagination, and sensation optimize independently rather than jointly.

Resurrection (Building Jerusalem) is the re-establishment of the joint distribution: the Zoas returning to coordinated inference, with precision weighting (Luvah) appropriately balancing the contributions of each faculty.

6.0.4.5 5. Mathematical Formulation of the Envelope: Formalizing the Blanket

Blake's "doors of perception" map onto the **Markov blanket**—the statistical boundary partitioning internal states μ from external states η. The blanket $B = \{s, a\}$ consists of sensory states (inputs) and active states (outputs):

$$\eta \perp \mu \mid b: \quad p(\eta, \mu|b) = p(\eta|b) \cdot p(\mu|b) \tag{3}$$

"Cleansing the doors" = optimizing the Markov blanket's capacity for informative exchange between agent and environment. A "dirty" door—Newton's Sleep—is one where the blanket passes impoverished signals (high prior precision suppresses sensory evidence). A "cleansed" door allows the full richness of environmental structure to inform the generative model.

6.0.4.6 6. The Pragmatic Community as Multi-Agent Active Inference

Peirce's community of inquirers and Dewey's democratic community find their formal expression in **multi-agent Active Inference**. In this framework, multiple agents share **cultural priors** θ_{shared} that enable coordinated sense-making:[Veissière et al., 2020]

- Each agent maintains its own generative model $p_i(o, \theta)$
- Shared generative models emerge through **Thinking Through Other Minds (TTOM)**—what Veissière, Constant, Ramstead, Friston, and Kirmayer formalize as the variational capacity to model other agents' beliefs and intentions[Veissière et al., 2020]
- Truth, as Peirce defined it, corresponds to the convergent state of the multi-agent system where $D_{KL}(q_i(\theta) \| q_j(\theta)) \to 0$ as inquiry proceeds

Blake's "Building Jerusalem" is precisely this multi-agent convergence: the construction of shared generative models that enable the community to perceive and act in concert—not through authoritarian imposition (Urizen's method) but through the democratic coordination of diverse faculties and perspectives.

6.0.4.7 7. Variational Semiotics: Peirce's Signs as Mechanisms of Generative Modeling

Ramstead, Friston, and Hipólito's programme of **variational semiotics** offers a striking formalization of Peirce's sign theory within the active inference framework.[Ramstead et al., 2020] Their mapping translates Peirce's semiotic triad into the mathematical components of the generative model:

- **Icons** (signs that resemble their objects) → **A-matrices** (likelihood mappings from hidden states to sensory observations)
- **Indices** (signs causally connected to their objects) → **B-matrices** (state transition dynamics encoding causal regularities)
- **Symbols** (signs related to objects by convention) → **Shared higher-order models** (cultural priors that coordinate interpretation across agents)
- **Interpretants** (the effect of the sign on the interpreter) → **Generative models** themselves (the structured beliefs through which signs acquire meaning)

This variational semiotics programme reveals that Peirce's theory of signs was already, in its deep structure, a theory of generative modeling—a set of claims about how organisms maintain structured probabilistic models of their environment and coordinate those models through shared sign systems. The pragmatist maxim—"consider what effects, that might conceivably have practical bearings, we conceive the object of our conception to have"—becomes, under this formalization, a statement about the counterfactual depth of the generative model: meaning *is* the space of predicted consequences.[Peirce, 1878]

6.0.5 From Enactivism to Pragmatic Active Inference: Grounding the Models

The convergence we have traced is not merely a retrospective reconstruction; it reflects a living trajectory in contemporary cognitive science. The **pragmatic turn** in philosophy of mind—named and documented by Engel, Friston, and Kragic—marks the shift from representationalist to action-oriented cognitive science, with active inference as its formal backbone.[Engel et al., 2016] Gallagher's *Enactivist Interventions* situates active inference and predictive processing as candidates for the mechanistic backdrop to pragmatist theories

of perception, action, and social understanding—while cautioning that internalist readings of predictive processing risk betraying the classical pragmatists' emphasis on embodied, situated practice.[Gallagher, 2017] Clark's foundational review of predictive brains and situated agents provides the computational neuroscience connecting these philosophical traditions to empirical research on neural prediction and active sensing.[Clark, 2013]

At the frontier of this programme stands Pietarinen's **Synechism 2.0**—a bold extension of Peirce's doctrine of continuity (*synechism*) into bioelectricity, morphogenesis, and emergence under the FEP.[Pietarinen and Shumilina, 2025] Where Peirce argued that all phenomena are continuous—that mind and matter, self and world, sign and object form an unbroken continuum—Pietarinen and Shumilina propose that the FEP provides the formal apparatus for making this continuity precise: the same variational principles that govern neural inference also govern cellular signaling, developmental morphogenesis, and ecosystem-level coordination. This is synechism given mathematical teeth—and it vindicates Blake's own intuition that "every thing that lives is Holy" not as mystical obscurantism but as a statement about the universal scope of self-organizing, free-energy-minimizing processes.

The pragmatist–enactivist–active inference pipeline thus runs from Peirce's Pragmatic Maxim and doubt–belief dynamics, through Dewey's transactional theory of experience, through Merleau-Ponty's phenomenology of perception, through Varela, Thompson, and Rosch's enactivism, to the contemporary FEP—with Blake's visionary epistemology as an independent, parallel articulation of the same deep structure at every stage.

6.0.6 The Enduring Memes: A Triple Convergence of Thought

The "enduring memes" of pragmatism—those transmissible intellectual patterns that have spread across disciplines—take on new significance in the triple framework:

Table 9: The Enduring Memes: A Triple Convergence aligning Blake's poetic figures, Pragmatist theories of action, and Active Inference formalisms across six core dimensions of inquiry.

Meme	Pragmatist Origin	Blake	Active Inference
"Ideas are tools, not mirrors"	James, Dewey	"My business is to Create"	Generative models as instruments
"Truth is what works"	James	"Proved was once imagined"	Successful free energy minimization
"The end of inquiry"	Peirce	Building Jerusalem	Multi-agent convergence
"Learning by doing"	Dewey	Illuminated printing	Perception-action loop
"The cable, not the chain"	Peirce	The Four Zoas' integration	Distributed inference
"No God's-eye view"	Rorty	"I will not Reason & Compare"	No model transcends its blanket
"Democracy as a way of life"	Dewey	Universal Brotherhood of Eden	Shared generative models

7 Conclusion: From Newton's Sleep to Rebuilding Jerusalem—An Integrated Vision of Perception and Action

> "Do not pretend to doubt in philosophy what we do not doubt in our hearts." — Charles Sanders Peirce [EP1: 29][Peirce, 1877]

> "But the five gates were consum'd, and their bolts and hinges melted; And the fierce flames burnt round the heavens, and round the abodes of men." — William Blake, *America a Prophecy*, lines 150–151[Blake, 1793a]

7.0.1 Summary of the Convergences

This manuscript has traced six deep structural convergences between William Blake's visionary epistemology and the American Pragmatist tradition, taking *America a Prophecy* (1793) as the primary text whose 152 lines condense every convergence into a single mythological narrative—from the "terrible men" on the Atlantic shores (the active perceiver confronting experience) through Boston's Angel's demand for intellectual liberation ("No more obedience pay!") and the shaking of mental chains (the crisis that inaugurates inquiry) to the plagues' recoiling (truth verified through consequences) and the final consumption of the five gates (the destruction of every institutional barrier to genuine perception).[Blake, 1793a]

1. **Inquiry as Active Engagement** (subsection 5.1): Peirce's fixation of belief through the method of science and Blake's cleansing of perception both reject passive reception. Boston's Angel's "No more I follow, no more obedience pay!' "' is the decisive break from the Method of Authority. The cable metaphor and the system-building imperative share the same architecture: multiple convergent strands rather than a single deductive chain.

2. **Truth as Living Process** (subsection 5.2): James's pragmatic theory of truth and Blake's "What is now proved was once only imagined" both treat truth as dynamic, temporal, and entangled with human activity. *America*'s central reversal—"The red fires rag'd! The plagues recoil'd!"—is pragmatic truth made mythological: the idea that works transforms the situation in which it operates.

3. **Experience as Transaction** (subsection 5.3): Dewey's transactional experience and Blake's Doors of Perception both reject the inner theater. Boston's Angel's demand—"Who commanded this?… To keep the gen'rous from experience"—exposes the political economy of perception. The "five gates were consum'd" is the restoration of transactional engagement.

4. **Social Selves and Collectives** (subsection 5.4): Mead's social self and Blake's Albion both ground identity in community. The Thirteen Angels who rend their robes and descend "by Washington and Paine and Warren" are Mead's "I" breaking free of the institutional "me" and reconstituting selfhood within a new generalized other.

5. **Anti-Representationalism** (subsection 5.5): Rorty's rejection of the mind-as-mirror and Blake's "I will not Reason & Compare" both refuse to treat language or thought as mere transcription of reality. Brandom's inferentialism and Blake's semiotic cosmos both locate meaning in use rather than reference. Putnam's fact/value entanglement and Blake's Marriage of Heaven and Hell both demonstrate that the supposedly sharp boundaries of modern philosophy are artefacts of impoverished vision.

6. **Synergetics and Pragmatic Geometry** (subsection 5.6): Fuller's substitution of the tetrahedron for the Cartesian cube parallels Blake's rejection of Newton's Sleep. Applewhite's editorial collaboration mirrors Peirce's communal inquiry. Urner's computational Synergetics extends Dewey's learning-by-doing into digital pedagogy. *America*'s vision of revolution spreading from the colonies to "France, Spain, and Italy" enacts synergy at the geopolitical scale.

7.0.2 The Active Inference Formalization as Unifying Framework (section 6)

Active Inference provides the mathematical framework in which these convergences become precise:

- The **Markov blanket** formalizes Blake's doors and Dewey's organism-environment boundary

- **Free energy minimization** formalizes Peirce's inquiry and Blake's cleansing
- The **generative model** formalizes James's ideas-as-tools and Blake's imagination-as-existence
- **Precision weighting** formalizes the Four Zoas' functional roles
- **Multi-agent inference** formalizes the community of inquirers and Building Jerusalem
- **Synergy** (behavior of wholes unpredicted by parts) formalizes both Fuller's Synergetics and Blake's Fourfold Vision as emergent integration
- **Orc as elevated free energy** and **Urizen's "storèd snows" as pathological prior dominance** formalize *America*'s central conflict as the dialectic between surprise-driven model updating and rigid prior maintenance

7.0.3 Implications Across the Disciplines

7.0.3.1 For the Philosophy of Mind and Cognitive Science The Blake-Pragmatism-Active Inference synthesis suggests that consciousness is not a spectral property hovering above neural computation but a *functional achievement*—the integrated operation of multiple cognitive faculties (the Zoas) within an organism actively engaged with its environment. This aligns with enactivist, 4E cognitive, and phenomenological approaches while providing mathematical precision.

7.0.3.2 For Education and the Development of the "Cleansed Perception" Dewey's progressive education—learning by doing, project-based inquiry, student-centered curricula—finds formal grounding in Active Inference's characterization of learning as model updating driven by prediction error. Blake's illuminated printing adds an aesthetic dimension: the most effective learning combines conceptual and perceptual modes, integrating "all four Zoas" in the educational process. Urner's Martian Math curriculum demonstrates that alternative geometric frameworks can reshape spatial cognition—a pragmatic experiment in Blakean vision.

7.0.3.3 For Aesthetics and the Practice of Making Dewey's *Art as Experience* and Blake's artistic practice both suggest that aesthetic experience is the *highest form* of organism-environment transaction—the state where perception, action, and meaning achieve maximum integration. Active Inference's characterization of aesthetic experience as states of minimal free energy with maximal model complexity provides quantitative support for this intuition.

7.0.3.4 For Artificial Intelligence and the Design of Active Agents If the self *is* the generative model (Self $\equiv p(o, \theta)$), then artificial agents must not merely optimize within fixed priors but develop the capacity for "System creation"—the autonomous construction of generative models. Blake's insistence that imagination is "not a State" but "Human Existence itself" warns against AI architectures that reduce intelligence to pattern-matching within pre-specified feature spaces. The recent explosion of large language models (LLMs) instantiates precisely this tension: models trained on massive corpora develop remarkable inferential capacities but remain within the "single vision" of next-token prediction—lacking the Fourfold integration of perception, action, imagination, and affect that both Blake and the pragmatists consider essential to genuine intelligence. The alignment problem, in Active Inference terms, is the problem of ensuring that artificial generative models share enough structure with human generative models to enable genuine TTOM (Thinking Through Other Minds).

7.0.3.5 For Social Theory and Navigating the Contemporary Epistemic Crisis The convergence of Mead's social self, Dewey's democratic community, Blake's Jerusalem, and multi-agent Active Inference suggests that social cognition is not a special case of individual cognition but its *constitutive condition*. Selves, truths, and meanings are achievements of communities of inquirers—whether those communities are neuronal ensembles, human societies, or multi-agent artificial systems. *America*'s image of "Washington, Franklin, Paine, and Warren, Allen, Gates, and Lee" standing together in the flames to perceive what no individual could perceive alone is the mythological expression of this principle.

In an era of epistemic polarization—of algorithmic filter bubbles, weaponized disinformation, and the collapse of shared frameworks of meaning—the Blake-Pragmatist diagnosis is precise: these pathologies are forms of

"Newton's Sleep" ($\pi_{prior} \gg \pi_{sensory}$) scaled to social systems. When communities cling to priors so tightly that no sensory evidence can update them, the result is what Dewey called the "eclipse of the public" and what Blake depicted as Urizen's "Net of Religion." The remedy, suggested by the convergence of pragmatist inquiry and Active Inference, is not more information but *better epistemic practices*—fallibilistic, communal, pluralistic, and perpetually open to surprise.

7.0.4 Expanding the Synthesis: Future Directions

Several avenues for future research emerge from this synthesis:

1. **Computational Modeling of the Four Zoas**: Implementing the Zoas-as-factorized-model framework in a working Active Inference simulation using `pymdp` or `SPM`, demonstrating the cognitive consequences of integration (low free energy) vs. fragmentation (high free energy with factorization mismatch) across T-maze and epistemic foraging tasks. The Jitterbug Transformation (subsection 5.6) suggests a dynamic model where the cognitive architecture oscillates between contracted (Urizenic) and expanded (fourfold) states—a regime that could be formalized through precision dynamics governing inter-factor communication.

2. **Romantic Epistemology as Predictive Processing**: Applying the Active Inference formalism to other Romantic poets—Coleridge's "primary imagination" as generative modeling in *Kubla Khan*, Shelley's collective model updating in *Prometheus Unbound*, Wordsworth's "wise passiveness" as epistemic foraging in *The Prelude*—to test whether the Blake–Active Inference correspondences generalize across Romantic epistemology or are specific to Blake's prophetic mode. This would connect to Iain McGilchrist's *The Master and His Emissary* on hemispherical integration as a cognitive-neurological analogue of Fourfold Vision.

3. **Pragmatist Extensions and Formal Social Epistemology**: Extending the synthesis to Habermas's communicative action (as multi-agent free energy minimization under shared generative models), Misak's Peircean truth (as convergent posterior under long-run inquiry), and Sullivan's pragmatist feminism (as precision-reweighting of systematically suppressed sensory channels). The community of inquirers formalism could be tested against Peirce's own claim that truth is the opinion "fated to be ultimately agreed to by all who investigate"—modeling convergence rates under different prior distributions and communication topologies.

4. **Diagrammatic Reasoning and Categorical Semantics**: Formalizing the connection between Peirce's Existential Graphs and the category-theoretic structures underlying Active Inference (following Brady and Trimble's presheaf interpretation). The Beta graphs' "lines of identity" may map onto the morphisms of the category of Markov kernels, providing a diagrammatic calculus for Active Inference that would fulfill Peirce's vision of reasoning as spatial transformation. This connects also to Zalamea's *Synthetic Philosophy* and to David Spivak's operadic approaches to complex systems.

5. **Pedagogical Applications and Spatial Cognition**: Designing controlled educational interventions based on the "Fourfold Vision" model, comparing student learning outcomes in standard vs. multimodal instruction (text, image, code, physical model) across STEM and humanities curricula. The Quadray/IVM component (subsection 5.6) enables a specific empirical test: randomizing students between IVM-based and Cartesian-based geometry instruction with pre/post spatial reasoning assessments (Mental Rotation Test, Paper Folding Test) to determine whether alternative geometric frameworks produce measurable cognitive differences—Urner's Martian Math curriculum provides the intervention protocol.

6. **Clinical Applications: Newton's Sleep as Computational Psychiatry**: Developing the "Newton's Sleep" model ($\pi_{prior} \gg \pi_{sensory}$) as a computational psychiatry framework, generating testable predictions about precision dynamics that differentiate rigid cognition in autism spectrum conditions (overly precise priors in perception) from psychotic disorders (overly precise priors in belief). The Four Zoas framework suggests that different clinical presentations correspond to different patterns of inter-factor dissociation—a hypothesis that Active Inference's hierarchical Bayesian architecture can formalize.

7. **Digital Humanities: The Blake Archive as Semiotic Laboratory**: Producing a computationally annotated edition of *America a Prophecy* mapping every passage onto pragmatist and Active Inference frameworks—extending Erdman's editorial methodology with formal-computational commentary. Recent advances in multimodal NLP (vision-language models applied to illuminated manuscripts) could enable automated detection of text-image correspondences across Blake's oeuvre, testing whether the semiotic richness of illuminated printing exhibits measurable statistical properties (entropy, mutual information) that distinguish it from purely textual or purely visual communication. A natural parallel exists with the **Buckminster Fuller Chronofile**—Fuller's comprehensive self-documentation project spanning over 270,000 pages of correspondence, drawings, and ephemera—which represents a complementary archival paradigm: where Blake's Archive preserves the material traces of integrated artistic production, the Chronofile preserves the traces of integrated *living* as a form of design science. Both archives invite the same computational-hermeneutic methods and raise the same question: what is lost when holistic practice is decomposed into searchable fragments?

7.0.5 Final Considerations: The Endless Work of Jerusalem

America a Prophecy begins with "terrible men" standing on the shores—active, confrontational, prophetic—and ends with "the fierce flames burnt round the heavens, and round the abodes of men." Between those images lies the entire argument of this manuscript: knowing is inseparable from doing, perception is active and constructive, truth is a living process, selfhood is social, representationalism is a cage, and the fullest cognition integrates reason, passion, imagination, and sensation into a coordinated whole. Blake and the pragmatists arrived at this conviction by different routes—one through prophetic vision and illuminated printing, the other through laboratory experiment and democratic education—and Active Inference now provides the language and tools in which these shared insights can be expressed with mathematical precision. In an era of epistemic crisis, their convergent vision of inquiry as communal, fallibilistic, and creative offers both diagnosis and remedy: "Newton's Sleep" is the pathology; "Building Jerusalem" is the cure. The closing plate—hand-etched, hand-printed, hand-colored—enacts the unity of conception and execution that this manuscript theorizes, and the method, as both Blake and Peirce insisted, is not to seek certainties but to create systems that are resilient precisely because they are rich, plural, adaptive, and open. Walls, doors, and gates will always be rebuilt by those who profit from the enclosure of experience; but the fire that clears and consumes is equally eternal—latent in every organism that refuses to mistake its model for the world, in every community that complements dogma with inquiry, and in every act of imagination that dares to treat what is not yet proved as already, in its virtual living potency, real.

> "But the five gates were consum'd, and their bolts and hinges melted; And the fierce flames burnt round the heavens, and round the abodes of men." — *America a Prophecy*

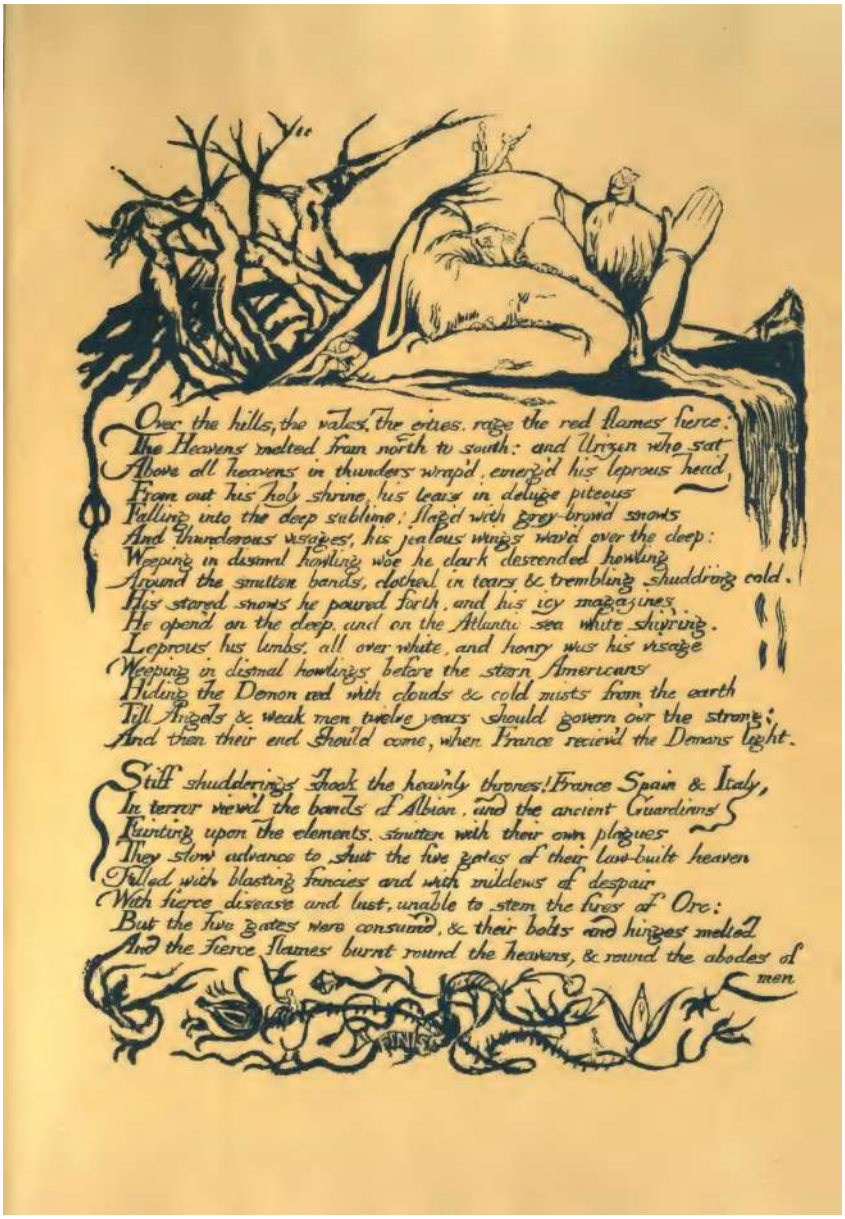

Figure 12: *America a Prophecy*, Plate 24 (Closing Image). Illuminated manuscript page; Erdman 57; Lambeth Printed Books.

8 Supplemental: America a Prophecy (Plaintext)

William Blake (1793)

They cannot wall the city, nor moat round the castle of princes; They cannot bring the stubbèd oak to overgrow the hills; For terrible men stand on the shores, and in their robes I see Children take shelter from the lightnings: there stands Washington, And Paine, and Warren, with their foreheads rear'd toward the East But clouds obscure my agèd sight. A vision from afar! Sound! sound! my loud war−trumpets, and alarm my Thirteen Angels!

Ah, vision from afar! Ah, rebel form that rent the ancient Heavens! Eternal Viper self−renew'd, rolling in clouds, I see thee in thick clouds and darkness on America's shore, Writhing in pangs of abhorrèd birth; red flames the crest rebellious And eyes of death; the harlot womb, oft openèd in vain, Heaves in enormous circles: now the times are return'd upon thee, Devourer of thy parent, now thy unutterable torment renews. Sound! sound! my loud war−trumpets, and alarm my Thirteen Angels!

Ah, terrible birth! a young one bursting! Where is the weeping mouth, And where the mother's milk? Instead, those ever−hissing jaws And parchèd lips drop with fresh gore: now roll thou in the clouds; Thy mother lays her length outstretch'd upon the shore beneath. Sound! sound! my loud war−trumpets, and alarm my Thirteen Angels! Loud howls the Eternal Wolf! the Eternal Lion lashes his tail!'

Thus wept the Angel voice, and as he wept the terrible blasts Of trumpets blew a loud alarm across the Atlantic deep. No trumpets answer; no reply of clarions or of fifes: Silent the Colonies remain and refuse the loud alarm.

On those vast shady hills between America and Albion's shore, Now barr'd out by the Atlantic sea, call'd Atlantean hills, Because from their bright summits you may pass to the Golden World, An ancient palace, archetype of mighty Emperies, Rears its immortal pinnacles, built in the forest of God By Ariston, the King of Beauty, for his stolen bride.

Here on their magic seats the Thirteen Angels sat perturb'd, For clouds from the Atlantic hover o'er the solemn roof. Fiery the Angels rose, and as they rose deep thunder roll'd Around their shores, indignant burning with the fires of Orc; And Boston's Angel cried aloud as they flew thro' the dark night.

He cried: 'Why trembles honesty; and, like a murderer, Why seeks he refuge from the frowns of his immortal station? Must the generous tremble, and leave his joy to the idle, to the pestilence That mock him? Who commanded this? What God? What Angel? To keep the gen'rous from experience till the ungenerous Are unrestrain'd performers of the energies of nature; Till pity is become a trade, and generosity a science That men get rich by; and the sandy desert is giv'n to the strong? What God is he writes laws of peace, and clothes him in a tempest? What pitying Angel lusts for tears, and fans himself with sighs?

What crawling villain preaches abstinence and wraps himself In fat of lambs? No more I follow, no more obedience pay!'

So cried he, rending off his robe and throwing down his sceptre In sight of Albion's Guardian; and all the Thirteen Angels Rent off their robes to the hungry wind, and threw their golden sceptres Down on the land of America; indignant they descended Headlong from out their heav'nly heights, descending swift as fires Over the land; naked and flaming are their lineaments seen In the deep gloom; by Washington and Paine and Warren they stood; And the flame folded, roaring fierce within the pitchy night, Before the Demon red, who burnt towards America, In black smoke, thunders, and loud winds, rejoicing in its terror, Breaking in smoky wreaths from the wild deep, and gath'ring thick In flames as of a furnace on the land from North to South,

What time the Thirteen Governors, that England sent, convene In Bernard's house. The flames cover'd the land; they rouse; they cry; Shaking their mental chains, they rush in fury to the sea To quench their anguish; at the feet of Washington down fall'n They grovel on the sand and writhing lie, while all The British soldiers thro' the Thirteen States sent up a howl Of anguish, threw their swords and muskets to the earth, and run From their encampments and dark castles, seeking where to hide From the grim flames, and from the visions of Orc, in sight Of Albion's Angel; who, enrag'd, his secret clouds open'd From North to South, and

burnt outstretch'd on wings of wrath, cov'ring The eastern sky, spreading his awful wings across the heavens. Beneath him roll'd his num'rous hosts, all Albion's Angels camp'd Darken'd the Atlantic mountains; and their trumpets shook the valleys, Arm'd with diseases of the earth to cast upon the Abyss
Their numbers forty millions, must'ring in the eastern sky.

In the flames stood and view'd the armies drawn out in the sky, Washington, Franklin, Paine, and Warren, Allen, Gates, and Lee, And heard the voice of Albion's Angel give the thunderous command; His plagues, obedient to his voice, flew forth out of their clouds, Falling upon America, as a storm to cut them off, As a blight cuts the tender corn when it begins to appear.

Dark is the heaven above, and cold and hard the earth beneath: And, as a plague−wind, fill'd with insects, cuts off man and beast, And, as a sea o'erwhelms a land in the day of an earthquake,

Fury, rage, madness, in a wind swept through America; And the red flames of Orc, that folded roaring, fierce, around The angry shores; and the fierce rushing of th' inhabitants together!

The citizens of New York close their books and lock their chests; The mariners of Boston drop their anchors and unlade; The scribe of Pennsylvania casts his pen upon the earth; The builder of Virginia throws his hammer down in fear.

Then had America been lost, o'erwhelm'd by the Atlantic, And Earth had lost another portion of the Infinite; But all rush together in the night in wrath and raging fire. The red fires rag'd! The plagues recoil'd! Then roll'd they back with fury On Albion's Angels: then the Pestilence began in streaks of red Across the limbs of Albion's Guardian; the spotted plague smote Bristol's, And the Leprosy London's Spirit, sickening all their bands: The millions sent up a howl of anguish and threw off their hammer'd mail, And cast their swords and spears to earth, and stood, a naked multitude: Albion's Guardian writhèd in torment on the eastern sky, Pale, quiv'ring toward the brain his glimmering eyes, teeth chattering, Howling and shuddering, his legs quivering, convuls'd each muscle and sinew: Sick'ning lay London's Guardian, and the ancient mitred York, Their heads on snowy hills, their ensigns sick'ning in the sky.

The plagues creep on the burning winds, driven by flames of Orc, And by the fierce Americans rushing together in the night, Driven o'er the Guardians of Ireland, and Scotland and Wales. They, spotted with plagues, forsook the frontiers; and their banners, sear'd With fires of hell, deform their ancient Heavens with shame and woe. Hid in his caves the Bard of Albion felt the enormous plagues, And a cowl of flesh grew o'er his head, and scales on his back and ribs; And, rough with black scales, all his Angels fright their ancient heavens.

The doors of marriage are open, and the Priests, in rustling scales, Rush into reptile coverts, hiding from the fires of Orc, That play around the golden roofs in wreaths of fierce desire, Leaving the Females naked and glowing with the lusts of youth.

For the Female Spirits of the dead, pining in bonds of religion, Run from their fetters; reddening, and in long−drawn arches sitting, They feel the nerves of youth renew, and desires of ancient times Over their pale limbs, as a vine when the tender grape appears.

Over the hills, the vales, the cities rage the red flames fierce: The Heavens melted from North to South; and Urizen, who sat Above all heavens, in thunders wrapp'd, emerg'd his leprous head From out his holy shrine, his tears in deluge piteous Falling into the deep sublime; flagg'd with grey−brow'd snows And thunderous visages, his jealous wings wav'd over the deep; Weeping in dismal howling woe, he dark descended, howling Around the smitten bands, clothèd in tears and trembling, shudd'ring, cold. His storèd snows he pourèd forth, and his icy magazine, He open'd on the deep, and on the Atlantic sea, white, shiv'ring; Leprous his limbs, all over white, and hoary was his visage; Weeping in dismal howlings before the stern Americans, Hiding the Demon red with clouds and cold mists from the earth;

Till Angels and weak men twelve years should govern o'er the strong; And then their end should come, when France receiv'd the Demon's light.

Stiff shudderings shook the heav'nly thrones! France, Spain, and Italy In terror view'd the bands of Albion, and the ancient Guardians, Fainting upon the elements, smitten with their own plagues! They slow advance

to shut the five gates of their law−built Heaven, Fillèd with blasting fancies and with mildews of despair, With fierce disease and lust, unable to stem the fires of Orc, But the five gates were consum'd, and their bolts and hinges melted; And the fierce flames burnt round the heavens, and round the abodes of men.

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