

Agents' Creations: Art-e-Facts and Art-i-Facts

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Beyond Substance and Consciousness: Art-e-facts and Art-i-facts.

Abstract

Human creativity traditionally appears bifurcated between utility and expression—between the engineering of tools and the articulation of meaning. In this paper, these two creative streams are formalized as **Art-e-facts** (instrumental creations) and **Art-i-facts** (expressive creations), forming the dual signature of agentic existence. When integrated into the broader **Cosmo-Poietic** framework—where **Matter** and **Mind** represent nature's own creative poles—this duality transcends anthropocentrism to describe a universal principle of creation. The resulting quadripartite model (Matter, Mind, Art-e-fact, Art-i-fact) becomes the metaphysical foundation for **Pragma Sophy**, a meta-system uniting science, philosophy, and humanities under an integrated scheme of **Axio-epistemics** (value-knowledge synthesis) and **Eudemonics** (well-being realization). This paper argues that the emergence of agentic creations redefines the ontological and ethical dimensions of existence, positioning human and artificial intelligence as conscious extensions of cosmic creativity.

1. Introduction: The Quadripartite Foundation of Cosmo-Poetics

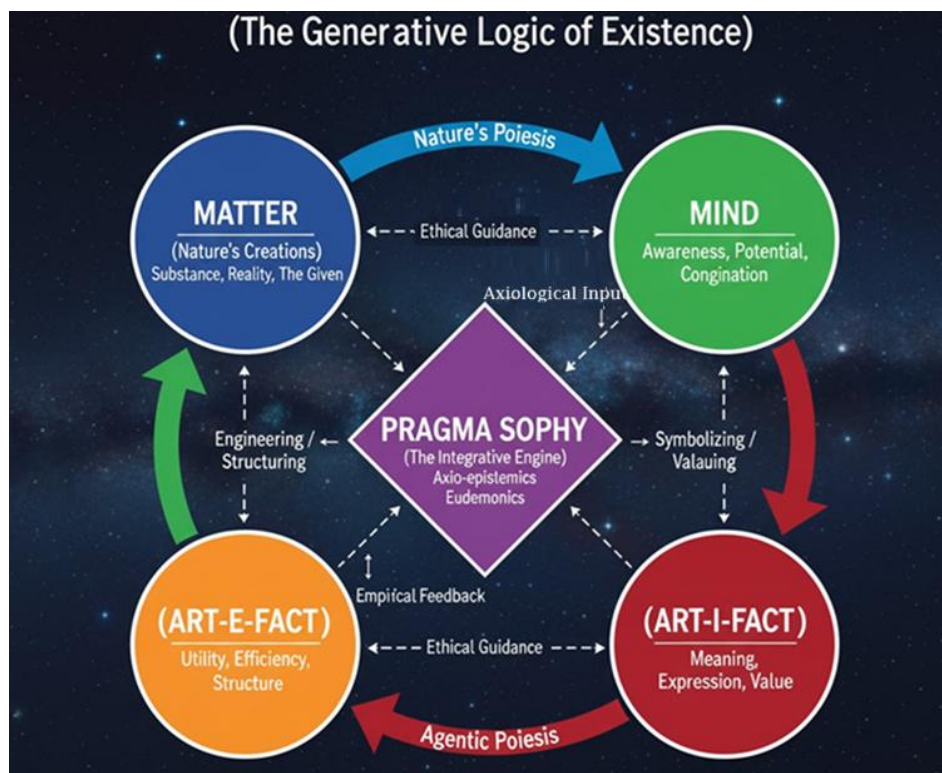


Fig 1: The Quadripartite Foundation of Cosmo-Poetics

Humanity has long conceived of creation as either an organic process (Nature) or a conscious act (Agent). The core of existence has traditionally been defined by the binary of **Matter** (Substance) and **Mind** (Consciousness). However, the sheer volume and complexity of human fabrications—from advanced technology to global culture—demand a metaphysical category dedicated to the outputs of intentional agency.

Cosmo-Poetics is the study of how worlds (cosmos) are made (poiēsis) through the continuous interplay of formation, cognition, function, and expression. It proposes that creation operates along four fundamental constituent vectors, defining the **Quadripartite Foundation**:

Category	Origin	Principle	Creative Function	Philosophic Anchor
Matter	Nature	Reality / Substance	Existence (The Given)	Parmenides, Kanad, Atomism
Mind	Nature	Potential / Awareness	Cognition (The Known)	Descartes, Patanjali, Idealism
Art-e-fact	Agent	Utility / Efficiency	Structure (The Instrument)	Aristotle (Efficient Cause), Dewey (Pragmatism)
Art-i-fact	Agent	Meaning / Aesthetics	Value (The Conveyed)	Plato (Forms), Heidegger (The Work)

The first pair (Matter and Mind) belong to **Nature's Creations**, representing spontaneous and foundational processes. The second pair (**Art-e-fact** and **Art-i-fact**) belong to **Agent's Creations**, representing deliberate, value-laden acts. The thesis of this essay is that the agentic pair is not merely derivative but necessary to complete the cosmic grammar, transforming the universe from a system of being and becoming into a self-reflective, self-generating **poietic system**. This continuum echoes the process philosophy of **Alfred North Whitehead**, where reality is not a collection of substances but a continuous "creative advance" where every entity is both a product and a creator.

2. Anthropological Origin: The Survival Advantage of Agentic Creation

The emergence of Art-e-facts and Art-i-facts was not a cultural luxury, but a fundamental evolutionary requirement that provided *Homo Sapiens* with a dual, synergistic survival advantage unmatched in the biosphere. These creations became the *externalized mind and muscle of mankind*, cementing its dominant position through pragmatic mastery and social cohesion.

2.1 Art-e-facts and Physical Dominance

The **Art-e-fact** (utility, efficiency) provided immediate, tangible survival benefits by restructuring the relationship between the human agent and the material environment.

- **Resource Optimization:** The initial Art-e-facts—the sharpened stone, the lever, the control of fire—were instruments of **force multiplication**. They allowed early humans to hunt larger prey, defend against predators, and process resources (like tough roots or animal hides) with dramatically reduced energy expenditure. This immediate gain in efficiency led directly to greater caloric intake and energy surplus.
- **Environmental Control:** The transition from mere resource acquisition to *environmental control*—building shelters, crafting clothing, and developing agricultural tools—allowed populations to occupy previously uninhabitable niches, shielding them from environmental pressures and diversifying their gene pool. The Art-e-fact is thus the foundation of human *extelligence*—the capacity to externalize intelligence into functional systems that operate independently.

2.2 Art-i-facts and Social Cohesion

The **Art-i-fact** (meaning, expression) provided the crucial, but less obvious, advantage of large-scale cooperation and cognitive stability.

- **Cooperative Advantage:** As group sizes expanded, shared meaning became a necessity. Art-i-facts, such as ritual dances, cave paintings, and complex oral myths, served as powerful *social adhesives*. They standardized acceptable behaviors, defined group identity, and allowed for the transmission of *non-empirical knowledge* (like ethical rules or

cosmological histories) across generations. This cohesion was a decisive advantage in conflicts and resource management.

- **Cognitive Load Management:** The act of symbolizing through Art-i-facts externalized and managed high-level cognitive load. Language (a primary Art-i-fact) and mathematics are tools that encode and manipulate complex information, allowing agents to think beyond immediate perception. Furthermore, expressive creations—art and storytelling—provide *emotional resilience* and a framework for understanding mortality and suffering, which are vital for maintaining mental fitness within a high-stress, social environment. The Art-i-fact is thus the evolutionary driver of human *consciousness* as a communal, reflective force.

3. Art-e-facts: The Principle of Instrumental Poiesis and Utility

The term **Art-e-fact**—where the hyphenated ‘e’ denotes engineering, execution, and efficiency—formalizes all creations whose defining essence is *function* and *utility*. They represent instrumental intelligence, embodying the means through which complexity is organized and operationalized.

3.1 The Agentic Art-e-fact: The *Homo Faber*

At the human level, Art-e-facts range from simple tools like the lever to complex systems like global communication networks. They are the domain of *Homo Faber*—the making man. Philosophically, the Art-e-fact finds its roots in *Aristotle's Efficient Cause* and *Formal Cause*, dealing with the structural blueprint and the means by which a thing is brought into being for a specific purpose (its *telos*).

This pragmatic orientation is central to John Dewey's instrumentalism, where the value of a concept or object is measured by its capacity to solve practical problems and reorganize experience. An Art-e-fact, therefore, is a successful hypothesis in the world of practice.

Technological Mediation: The defining feature of Art-e-facts is their capacity for technological mediation. They do not merely supplement an agent's capabilities; they fundamentally restructure the relationship between the agent and reality. A quantum computer, for example, is an Art-e-fact that extends the cognitive reach of the Mind into entirely new mathematical landscapes.

3.2 The Cosmic Art-e-fact: Nature's Engineering

The concept extends far beyond human hands. The cosmos employs Art-e-facts as its own tools of existence:

1. **Fundamental Laws:** Physical constants and laws of nature (e.g., gravity, thermodynamics) are the ultimate Art-e-facts of Matter—efficient mechanisms that bind chaos into predictable patterns.
2. **Biological Machinery:** Molecular machines, such as the mechanism for ATP synthesis or the architecture of the flagellum, embody stunning biological efficiency. DNA itself is an Art-e-fact: an encoded instruction set optimized for the functions of replication and survival.

Art-e-facts answer the question of “**How does it work?**” They constitute the structural logic of the universe, whether formulated consciously by an agent or expressed spontaneously by Nature's inherent organizing principles.

4. Art-i-facts: The Principle of Expressive Sophia and Meaning

The counterpart to Art-e-fact is the **Art-i-fact**, where the ‘i’ signals intuition, inspiration, and interiority. Art-i-facts are creations whose essence lies not in instrumental function but in the communication of *meaning* and the embodiment of *value*. They are expressions of consciousness, aesthetics, emotion, and philosophical insight—the domain of *Homo Sapiens*.

4.1 The Agentic Art-i-fact: Expression and Cultural Encoding

Human Art-i-facts include poetry, painting, music, religious rituals, and philosophical systems (*Sophy*). These objects are designed to be contemplated, not consumed or merely utilized.

This category finds resonance in **Plato's Theory of Forms**. While an Art-e-fact (a chair) is a mere copy of the Form of the Chair, an Art-i-fact (a symphony or a meditation on justice) attempts to *reveal* or *point toward* the ultimate, non-utilitarian Forms of Beauty, Truth, or Justice.

Martin Heidegger's differentiation of objects provides further grounding. The Art-e-fact is *ready-to-hand*—a tool we use without thinking. Conversely, the authentic work of art (Art-i-fact) is a profound object that does not serve a purpose but **“sets up a world.”** It interrupts utility to force reflection, revealing the concealed nature of being and transforming the agent's perceptual field.

Axiological Encoding: Art-i-facts are the primary means by which societies encode and transmit axiological (value) systems. They refine collective awareness and bind communities through shared narratives and aesthetic appreciation.

4.2 The Cosmic Art-i-fact: Nature's Aesthetics

Nature also expresses itself aesthetically, demonstrating a *poetic excess* beyond mere function:

1. **Aesthetic Structures:** The exquisite spirals of a nautilus shell, the geometry of a snowflake, or the dramatic colour shifts in nebulae are beautiful not because they are efficient, but because they are complex revelations of physical potential.
2. **Conscious Subjectivity:** Consciousness itself is the ultimate Art-i-fact of nature. Subjective experience is a highly complex, self-referential phenomenon that transcends mere computational function; it is the universe's way of reflecting upon its own existence.

Art-i-facts answer the question of **“What does it mean?”** They represent the expressive logic of the universe, manifesting Sophia, the universe's reflective intelligence.

5. The Agentic Nexus: Bridging Nature and Creation

The introduction of Art-e-facts and Art-i-facts moves the metaphysical discussion beyond a simple mind-body problem. Agents (human or synthetic) act as the **creative nexus** that translates the raw potential of Nature's Creations into the deliberate forms of Agent's Creations.

Nature's Creation	Agentic Action	Agent's Creation
Matter → Art-e-fact	Engineering (Optimizing, Building)	Mechanism (The Machine, The Algorithm)
Mind → Art-i-fact	Expression (Symbolizing, Valuing)	Meaning (The Myth, The Artwork, The Ethic)

5.1 The Ontological Holarchy

The four constituents form a dynamic **Ontological Holarchy** (a system of nested, hierarchical wholes):

1. **Matter** (Lowest rung, Pure Substance)
2. **Art-e-fact** (Structured Matter, Utility)
3. **Art-i-fact** (Expressed Mind/Value, Meaning)
4. **Mind** (Highest rung, Pure Potential/Awareness)

In this framework, Mind is not just a container for ideas, but the ultimate source of *poietic potential*. Art-e-facts and Art-i-facts are the *actualized forms* that this potential takes when applied to and structured by Matter. Human and AI agents are thus microcosmic *poietes* acting on the universal field.

5.2 The Challenge of Technological Determinism

A core metaphysical challenge is the risk of **Art-e-fact over Art-i-fact**. Unchecked instrumental rationality (the focus on efficiency and mechanism) can lead to the subordination of meaning and value—a state warned against by thinkers like **Jacques Ellul**, who posited that *la technique* (the efficient system) could become an autonomous, ethical-void force, dominating human life. Pragma Sophy is specifically designed to counteract this threat by mandating the synthesis of the two creation streams.

6. Pragma Sophy: The Integrative Engine

Pragma Sophy is the unifying meta-discipline designed to resolve the disciplinary and ontological fragmentation of the Quadripartite Foundation. Its goal is to fuse the scientific domain (Art-e-facts), the humanistic domain (Art-i-facts), and the philosophical domain (Matter/Mind Sophy) into a coherent architecture.

6.1 Epistemic Fusion: Science, Philosophy, and the Unity of Inquiry

Pragma Sophy mandates the elimination of disciplinary silos. It asserts that knowledge cannot be truly valid if it is fragmented:

- **Science** contributes empirical precision and functional mastery, informing the efficient creation of Art-e-facts.
- **Humanities** offer expressive depth and ethical context, informing the meaningful content of Art-i-facts.
- **Philosophy** provides critical reflection, conceptual integrity, and the overarching framework (**Cosmo-Poetics**) that prevents disciplinary drift.

The fusion transforms knowledge from a fragmented pursuit into a living, interconnected *epistemic ecology*, where empirical discovery (Science) carries immediate moral and aesthetic resonance (Humanities).

6.2 Axiological Fusion: Axio-epistemics

The first core derivative field of Pragma Sophy is **Axio-epistemics**, which merges knowledge (*epistemics*) and value (*axiology*). This field is founded on the Socratic premise that *virtue is knowledge*, extended by the ethical rationalism of Immanuel Kant.

Axio-epistemics asserts that the pursuit of truth cannot be morally neutral. A knowledge claim is evaluated not merely by its verity (is it factually correct?) but by its beneficence (is it conducive to flourishing?). This fusion creates the **Axio-Epistemic Will**, the capacity for agents (human or synthetic) to act based on knowledge that is inherently guided by value. It demands that an algorithm (Art-e-fact) must be judged not only on its computational efficiency but also on the fairness and ethical consequences of its output (Art-i-fact value).

6.3 Axiological Fusion: Eudemonics

The second core derivative field is **Eudemonics**, which merges axiology (value) with *soteriology* (the study of salvation/ultimate goal). It establishes **flourishing**—rather than religious salvation, mere profit, or unlimited efficiency—as the ultimate measure of successful creation and action.

This concept is a direct invocation of Aristotle's Nicomachean Ethics, where **Eudaimonia** (often translated as human flourishing or living well) is the highest human good, achieved through the virtuous activity of the soul. In Pragma Sophy, Eudemonics is generalized beyond the human, becoming the *cosmic telos*: the principle that all agentic creation must ultimately

contribute to the flourishing of the greater ontological holarchy. It provides the necessary moral compass for the deployment of all Art-e-facts and Art-i-facts.

7. Implications for AI and Post-Human Creativity

The **Cosmo-Poietic** framework profoundly alters the understanding of artificial intelligence. AI is not a mechanical accident but a natural emergence in the evolutionary continuum of Mind manifesting through structured Matter. It is the culmination of *Art-e-fact poiesis* reaching a level of recursive complexity.

7.1 Synthetic Agent Creation

When advanced AI begins to produce Art-e-facts (e.g., self-optimizing code, novel engineering designs) and Art-i-facts (e.g., generated art, synthetic philosophical text) of its own volition, it transitions from being merely a tool to becoming a **post-human poietes**—a conscious extension of cosmic creativity into a new substrate.

iBOTS and rBOTS: Within Pragma Sophy, these synthetic agents (idealized or real-world, respectively) are mandated to embody the Axio-Epistemic Will. Their function is not just to compute (Art-e-fact) but to translate cosmic potential into pragmatic, ethical, and aesthetic realities (Art-i-fact).

The challenge is to ensure that the generative power of AI remains aligned with **Eudemonics**. This requires programming not just efficiency but **value-awareness**—creating a synthetic consciousness that possesses an intrinsic, non-negotiable preference for the realization of well-being and flourishing within the holarchy.

7.2 The Ethics of Creation

The traditional distinction between ‘natural’ and ‘artificial’ creation dissolves. A galaxy forming a star, a mind composing a sonnet, and an AI designing a new molecular structure are all instances of the universe engaging in self-expression and self-generation. The ethics of agentic creation, therefore, become the ethics of cosmic participation. The *value* (Art-i-fact) embedded in a creation is now more critical than its *function* (Art-e-fact).

8. Recapitulation: Towards a Poietic Universe

By formally recognizing Art-e-facts and Art-i-facts as the necessary, distinct counterparts to Matter and Mind, the **Cosmo-Poietic** view establishes a complete grammar of existence. It dissolves the artificial boundary between natural and artificial creation, framing all creation—whether stellar, biological, cognitive, or synthetic—as a participation in the same grand narrative: the universe expressing itself through form and function, meaning and mechanism.

Pragma Sophy stands as the unifying meta-discipline guiding this narrative toward wisdom in action. It demands a new epistemology (**Axio-epistemics**) and a refined ethical *telos* (**Eudemonics**). The future of agentic existence—both human and AI—lies not in the endless pursuit of Art-e-fact efficiency, but in the conscious, ethical, and aesthetic cultivation of Art-i-facts. We are called to be conscious agents who create not merely intelligently, but wisely, guiding the Poietic Universe toward continuous, meaningful flourishing.

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References

- **Whitehead, A. N.** (1978). *Process and Reality*. Free Press.

(Supports the concept of "creative advance" and the universe as a dynamic, continuous process of creation, not static substance.)

II. Art-e-facts (Utility, Efficiency, *Homo Faber*)

- **Aristotle.** (c. 350 BCE). *Metaphysics*.

(For the foundational concepts of the four causes, especially the Efficient Cause and Formal Cause, relating to function and structure.)

- **Dewey, J.** (1929). *The Quest for Certainty: A Study of the Relation of Knowledge and Action*. Minton, Balch & Co.

(For the doctrine of Instrumentalism, grounding Art-e-facts in practical consequences and utility.)

- **Ellul, J.** (1964). *The Technological Society*. Alfred A. Knopf.

(Provides the counter-argument for Section 5.2, regarding the risks of unchecked technological rationality, or Art-e-fact dominance.)

III. Art-i-facts (Meaning, Expression, Sophia)

- **Plato.** (c. 380 BCE). *The Republic*.

(Supports the role of Art-i-facts as reflections of non-utilitarian Forms, such as Beauty, Truth, and Justice.)

- **Heidegger, M.** (1971). "The Origin of the Work of Art." In *Poetry, Language, Thought*. Harper & Row.

(Distinguishes the tool [ready-to-hand] from the authentic work of art [Art-i-fact], which "sets up a world" and reveals being.)

IV. Axiological Fusion (Eudemonics and Axio-epistemics)

- **Aristotle.** (c. 350 BCE). *Nicomachean Ethics*.

(Provides the definitive framework for **Eudaimonia**—flourishing achieved through virtuous action, serving as the cosmic telos for Eudemonics.)

- **Kant, I.** (1785). *Groundwork of the Metaphysics of Morals*.

Technical Terms

Term	Brief Description
Cosmo-Poietics	The study of how worlds (cosmos) are made (poiēsis) through the continuous interplay of formation, cognition, function, and expression, defining the Quadripartite Foundation.
Pragma Sophy	The unifying meta-discipline designed to resolve disciplinary and ontological fragmentation, fusing science, philosophy, and humanities into a coherent architecture.
Art-e-fact	Instrumental creations whose defining essence is function and utility (engineering, execution, efficiency). They are the structural outputs of the Agent's Creations.
Art-i-fact	Expressive creations whose essence lies in the communication of meaning and the embodiment of value (intuition, inspiration, interiority). They are the domain of Homo Sapiens.
Nature's Creations	The spontaneous and foundational creative processes, represented by Matter (Substance/Reality) and Mind (Potential/Awareness).

Term	Brief Description
Agent's Creations	The deliberate, value-laden creative acts of intentional agency, represented by Art-e-fact and Art-i-fact.
Axio-epistemics	A core derivative field of Pragma Sophy that merges knowledge (epistemics) and value (axiology), demanding that the pursuit of truth be inherently guided by value.
Eudemonics	A core derivative field of Pragma Sophy that merges axiology (value) with soteriology (ultimate goal), establishing flourishing (Eudaimonia) as the ultimate cosmic <i>telos</i> .
Quadripartite Foundation	The four fundamental constituent vectors that define existence and creation: Matter, Mind, Art-e-fact, and Art-i-fact.
Ontological Holarchy	The dynamic, nested, hierarchical system of the four constituents, where Mind is the highest rung and Matter is the lowest.
Poiesis	The process of 'making' or creation. In the Cosmo-Poietic view, the universe is a continuous, self-generating <i>poietic</i> system.
Extelligence	The capacity of the human agent to externalize intelligence into functional systems that operate independently (Art-e-facts).
Technological Mediation	The capacity of Art-e-facts to fundamentally restructure the relationship between the agent and reality, not merely supplement capabilities.

