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Information Censorship

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ABSTRACT

The concept of “information” permeates contemporary discourse, from physics and biology to computer science and philosophy, yet it remains remarkably elusive and multifaceted. Dominant conceptions often address distinct aspects without necessarily forming a unified ontological picture. Shannon information, for instance, foundational to communication theory, brilliantly quantifies uncertainty reduction, channel capacity, and the syntactic aspects of signal transmission, but deliberately excludes semantic content or meaning. Conversely, theories of semantic information attempt to incorporate meaning, truth-value, or relevance, but often grapple with issues of observer-dependency or context-specificity, struggling to achieve universal applicability. Furthermore, bold propositions like Wheeler’s “It from Bit” posit physical information as a fundamental constituent of reality itself, yet the precise ontological status of this “information”—what it is before it is observed or processed—often remains unclear or a subject of intense debate.

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A New Way of Seeing

Chapter 9: Information

Re-Founded

From Autaxic Distinctions and Relational Processing to Emergent Significance

Beyond

Shannon and Subjectivity—The Quest for an Ontologically Grounded Theory of Information

The

Ambiguity of “Information”: A Concept at the Crossroads

The concept of “information” permeates contemporary discourse, from physics and biology to computer science and philosophy, yet it remains remarkably elusive and multifaceted. Dominant conceptions often address distinct aspects without necessarily forming a unified ontological picture. **Shannon information**, for instance, foundational to communication theory, brilliantly quantifies uncertainty reduction, channel capacity, and the syntactic aspects of signal transmission, but deliberately excludes semantic content or meaning. Conversely, theories of **semantic information** attempt to incorporate meaning, truth-value, or relevance, but often grapple with issues of observer-dependency or context-specificity, struggling to achieve universal applicability. Furthermore, bold propositions like Wheeler’s “It from Bit” posit **physical information** as a fundamental constituent of reality itself, yet the precise ontological status of this “information”—what it is before it is observed or processed—often remains unclear or a subject of intense debate.

This conceptual fragmentation highlights a profound problem: the lack of a unified, ontologically deep framework capable of grounding these different facets of information and explaining its apparent, almost ubiquitous, role in structuring reality and enabling knowledge. If information is indeed fundamental, what is its origin? If it is merely descriptive, what is it describing? The autaxic framework confronts this ambiguity head-on.

The

Autaxic Proposition: Information as Emergent Relational Significance from Autaxys-Generated Distinctions

This chapter advances the core autaxic thesis regarding information: information is neither a fundamental, independent substance or entity, nor is it merely a subjective construct of observers. Instead, information, in its fullest sense, **emerges from objective, autaxys-generated distinctions (patterns of difference) that acquire relational significance and ultimately semantic content through their participation in complex, interacting autaxic systems.** Autaxys, as the universe's intrinsic generative principle ([Chapter 7](#)), provides the ontological ground for what Gregory Bateson famously termed “a difference which makes a difference.” By tracing the genesis of information from the most primordial operations of autaxys, this chapter aims to move beyond purely syntactic or purely subjective views, offering a path to re-found information on a more robust and comprehensive ontological basis. The value of this autaxic reinterpretation lies in its capacity to unify disparate notions of information and ground them in the same generative processes that give rise to particles, spacetime, and physical laws.

Building on the

Autaxic Generative Engine

The autaxic theory of information is not an ad-hoc proposal but flows directly from the principles of autaxys' “generative engine,” as detailed in [Chapter 8](#). Several components of this engine are particularly crucial for understanding the emergence of information:

Relational Processing (Dynamic I): This fundamental autaxic dynamic, involving the continuous creation, propagation, and transformation of distinctions and relations, forms the very raw material from which information is constituted. Information, at its core, is about discernible differences and their interrelations.

Spontaneous Symmetry Breaking (SSB) (Dynamic II): This is the primary mechanism by which autaxys generates the initial distinctions from an undifferentiated state of potentiality. Without SSB, there would be no differences to form the basis of information.

Conservation of Distinguishability (Meta-Logic II): This meta-logical principle ensures that once a distinction (a unit of proto-information) is formed and stabilized by autaxic processes, it possesses an ontological inertia. It persists and can participate in further relational processing, allowing for the accumulation and structuring of information.

Feedback Dynamics (Dynamic III) and Resonance (Dynamic IV): These operational dynamics are essential for selecting, stabilizing, and amplifying certain patterns of distinction over others, giving them the persistence and robustness necessary to function as reliable informational units within larger systems.

By leveraging these established autaxic mechanisms, we can construct a coherent narrative of information's emergence, from its most elementary form to its role in complex, meaning-making systems.

The

Genesis of Information in Autaxys: From Primordial Distinction to Patterned Difference

The autaxic framework posits a staged emergence of information, beginning with the most fundamental operations of its generative engine.

Stage 1: Autaxic Distinction—The Most Fundamental Form of Proto-Information. The very first step in the genesis of information is the creation of **distinction**. Within autaxys, this occurs primarily through the dynamic of **spontaneous symmetry breaking (SSB)**. As autaxys transitions from a state of undifferentiated potentiality (maximal symmetry) to states of lower symmetry, specific forms and differentiations emerge. The simplest outcome of such a break is the establishment of a difference: this configuration of autaxic activity (Pattern A) is *not* that configuration of

autaxic activity (Pattern B), or this region of autaxic potential now possesses a characteristic that another region lacks. This “A is not B” is the most basic, primordial “bit” of autaxic proto-information. These distinctions are initially “objective” in a crucial sense: they are real differentiations within the autaxic process itself, arising from its intrinsic dynamics, independent of any subsequent observation or interpretation by a complex observing system. They are features of autaxys’ self-patterning. The **principle of conservation of distinguishability (Meta-Logic II)** then plays a vital role by ensuring that these nascent distinctions, once stabilized by feedback and resonance, possess a degree of ontological inertia. They do not arbitrarily vanish but persist as identifiable units that can participate in further **relational processing**. Without this conservation, no stable informational structures could form.

Stage 2: Pattern Formation—Stabilized Configurations of Distinctions. Primordial distinctions, in isolation, represent only the most rudimentary form of information. The next stage involves the organization of these distinctions into **stable, reproducible patterns**. This is achieved through the ongoing **relational processing** within autaxys, guided by its dynamics of **feedback (positive and negative), resonance, and coherence establishment** (as detailed in Chapter 8). These dynamics selectively amplify and stabilize certain configurations of distinctions while damping others. The result is the emergence of persistent **autaxic process-patterns**—the entities we reinterpreted as “particles” in Chapter 11. Each such stable process-pattern (e.g., an electron-pattern, a photon-pattern) represents a higher order of information than a mere isolated distinction. It is not just “A is not B,” but “this specific, complex, self-sustaining configuration of autaxic activity exists, possessing a unique set of internal dynamics and relational affordances.” The internal structure of a process-pattern—its specific mode of autaxic activity, its symmetries, its internal resonances—constitutes a complex informational state. This “formative information” defines the pattern’s identity and its potential modes of interaction.

Stage 3: Relational Significance—“Differences that Make a Difference.” A stable pattern, while informationally richer than a simple distinction, does not yet possess “meaning” or “significance” in a deeper sense merely by existing in isolation. The crucial third stage in the autaxic genesis of information involves the acquisition of **relational significance**. This aligns closely with Gregory Bateson’s influential definition of information as “a difference which makes a difference.”¹ Within the autaxic framework, Bateson’s dictum is reinterpreted thus: a distinction or a pattern acquires *significance*—becomes “information” in a richer, more functional sense—when its presence, absence, or specific state **makes a discernible difference to the state, behavior, or evolution of other autaxys-generated patterns** within an interacting system. This significance is not an intrinsic property of the isolated pattern but arises entirely from its **relational context** and its **causal efficacy**—its capacity to influence and be influenced—within the broader network of autaxic interactions. The dynamic of **relational processing** is the mechanism by which these differences propagate through the autaxic system and “make a difference” to other parts of it. An autaxic pattern “informs” another when an interaction based on their respective distinctions leads to a change in the state or relational configuration of one or both. It is through this dynamic interplay that patterns acquire roles, influence outcomes, and thereby embody significance relative to the system in which they are embedded.

The

Nature of Autaxic Information: Objective Grounding, Relational Meaning

This three-stage emergence—from distinction to pattern to relational significance—allows autaxys to provide a nuanced account of information that bridges the gap between purely objective and purely subjective views.

Objectivity of Autaxic Information: Grounded in Real Distinctions and Causal Efficacy. Autaxic information, at the levels of fundamental distinctions and their direct causal consequences through relational processing, is **objective**. It is objective because it refers to real, efficacious differences in the configuration and dynamics of autaxys itself. The distinction between an electron-pattern and a photon-pattern, for example, is an objective difference in their underlying autaxic structure and generative history, leading to objectively different interaction potentials. When one pattern

influences another, that influence is a real transformation within the autaxic system. This contrasts with views that render all information radically observer-dependent or purely mental constructs. While complex observing systems (like humans) undoubtedly *interpret* and *assign higher-level meaning* to information, the autaxic framework posits that the underlying distinctions, the patterns formed from them, and their capacity to “make a difference” through interaction are intrinsic features of autaxic reality, existing prior to and independent of complex cognitive interpretation.

Relationality of Autaxic Information: Meaning Emerges from Context and Interaction. While the *existence* of distinctions and their causal efficacy is objective, the “meaning” or “semantic content” of an autaxic pattern is not an inherent, isolated property of that pattern. Instead, meaning emerges from its **web of relations with other patterns and the functional role it plays within a larger system of interactions**. A specific autaxic pattern (e.g., a particular sequence of distinctions) only acquires semantic content by virtue of how it correlates with, influences, or is interpreted by other patterns or systems of patterns. Consider the information encoded in a DNA sequence. The sequence of base pairs (A, T, C, G) represents a complex pattern of objective chemical distinctions. However, the “meaning” of a specific gene sequence (e.g., “code for hemoglobin protein”) is not intrinsic to the isolated DNA molecule. That meaning arises entirely from its relational context within a living cell: its interaction with RNA polymerase, ribosomes, transfer RNAs, and the entire cellular machinery that translates that sequence into a functional protein which then plays a role in the organism’s physiology. The same DNA sequence, isolated from this relational and functional context, would be a complex pattern of distinctions, but it would lack that specific biological meaning. The **principle of interactive complexity maximization (Meta-Logic V from Chapter 8)** is crucial here. It describes autaxys’ inherent tendency to generate systems with increasingly rich and complex relational structures. It is within these complex interactive networks that patterns acquire increasingly nuanced and layered relational significance, forming the basis for emergent semantic content.

Information Hierarchies: From Simple Distinctions to Complex Semantics. Autaxys thus generates a natural hierarchy of informational complexity, where each level builds upon the informational structures of the level below:

1. *Level 1: Primordial Distinctions:* The most basic form—“A is not B”—arising from **spontaneous symmetry breaking**. These are the fundamental “bits” of difference generated by autaxys.
2. *Level 2: Stable Process-Patterns:* Configurations of distinctions stabilized by **feedback, resonance, and coherence establishment** (e.g., “particles”). These patterns possess “formative information” in their structure and internal dynamics.
3. *Level 3: Relational Information:* Patterns of interaction and correlation *between* process-patterns, mediated by **relational processing**. This includes information about relative positions, motions, and states within a system.
4. *Level 4: Functional/Semantic Information:* This highest level emerges in highly complex, often adaptive, autaxic systems (e.g., biological organisms, cognitive systems, ecosystems, potentially even complex social or technological systems). Here, patterns and relational information acquire “meaning” or “purpose” relative to the persistence, goals, or functional organization of the larger system. This level is characterized by interpretation, representation, and context-dependent significance. Each new level in this hierarchy emerges as a result of autaxys’ capacity for **critical state transitions and the formation of emergent hierarchies (Dynamic V from Chapter 8)**, where new organizational principles and informational capacities arise from the complexification of underlying patterns and interactions.

Autaxys

vs. Other Information-Centric Ontologies: Clarifying Distinctions

The autaxic theory of information, by grounding information in a fundamental generative process, offers a distinct perspective compared to other prominent information-centric philosophies.

Autaxys is Not Panpsychism or Information Monism (in the usual sense). It is important to distinguish the autaxic framework from **panpsychism**, which posits consciousness or mind-like properties as fundamental and ubiquitous in all matter. Autaxys posits a generative *process* (autaxys itself, with its dynamics and meta-logic) as fundamental. Consciousness, if and when it arises, is viewed as an extraordinarily complex emergent pattern of autaxic activity, likely associated with Level 4 informational systems, not as a property inherent in primordial distinctions or simple patterns. Similarly, autaxys is distinct from many forms of **information monism**, such as Wheeler’s “It from Bit,” where “information” (often ill-defined ontologically, or treated as purely abstract bits) is seen as the ultimate “stuff” of reality. In autaxys, information (as patterned distinction and relational significance) is an *emergent product and descriptor* of autaxys’ generative activity; it is not the fundamental substrate itself. Autaxys is “Pattern from Process,” and information is a way of characterizing those patterns and the processes that generate and relate them. The ontological primacy rests with the generative process of autaxys, not with “information” as an independent primitive.

Autaxys and Shannon Information. Shannon’s mathematical theory of information is a powerful and indispensable tool for quantifying uncertainty reduction, communication channel capacity, and other syntactic aspects of signal transmission. The autaxic framework fully acknowledges its utility and views it as applicable to measuring certain aspects of how autaxys-generated distinctions are propagated, differentiated, and processed within specific contexts (e.g., the “channel capacity” of a particular mode of relational processing). However, autaxys provides the deeper ontological ground that Shannon theory deliberately abstracts away from. Shannon theory measures aspects of pattern transmission, but autaxys explains the *origin and nature* of the distinctions and patterns themselves, and, crucially, how they can acquire relational significance and semantic content beyond mere statistical properties.

Autaxys and Algorithmic Information Theory / Complexity. There are conceptual resonances between autaxys and algorithmic information theory, particularly concepts like Kolmogorov complexity (where the information content of a string is defined by the length of the shortest computer program required to generate it). Autaxys’ **principle of parsimony in generative mechanisms (Meta-Logic III from Chapter 8)** suggests that the universe’s observed complexity arises from the iterative application of a relatively simple set of autaxic generative rules (the “program” being autaxys’ intrinsic engine). However, autaxys aims to go further than merely measuring the complexity of an output pattern. It seeks to articulate the *actual generative rules and dynamics* of the “cosmic program” itself. While algorithmic complexity provides a measure of descriptive economy, autaxys focuses on the economy and power of the *generative process*.

Implications

of an Autaxic Theory of Information

Grounding information in autaxic process has several profound implications for our understanding of reality and scientific inquiry.

Reframing the Observer Problem in Physics. If information emerges from objective distinctions but acquires specific meaning and is actualized through relational interaction, the “observer problem” in quantum mechanics (Chapter 11) can be reframed. The “observer” (or measuring apparatus) is understood as a complex autaxic system. Its interaction with another quantum-scale autaxic system (the “observed”) forces a specific actualization of relational information from a spectrum of potentialities inherent in the combined system. This interaction changes the relational state of both. This perspective avoids radical subjectivism (where information only exists in a conscious mind) while fully acknowledging the participatory role of the observing system in defining the context for informational significance and in co-determining the outcome of a “measurement” event. The “collapse of the wavefunction” is reinterpreted as the autaxic system (observer + observed) settling into a new, definite, and mutually consistent relational state, where specific distinctions become manifest and informationally salient.

Understanding Emergence and Complexity. The growth of information—in the sense of structured complexity, hierarchical organization, and increasingly rich relational significance—is seen as a direct consequence of autaxys’ **principle of interactive complexity maximization (Meta-Logic V from Chapter 8)**, operating under the constraints of stability and coherence. New levels of information and meaning emerge at **critical state transitions** within the autaxic system, as new, more complex patterns and modes of interaction become possible and stable. This provides a framework for understanding emergence not as a mysterious leap, but as a natural outcome of autaxys’ fundamental generative tendencies.

A Foundation for Understanding Meaning, Purpose, and Value (Speculative Extension). While this monograph primarily focuses on the physical implications of autaxys, the autaxic theory of information lays a potential foundation for future autological inquiry into higher-order concepts. If meaning arises from relational significance within complex autaxic systems, it is conceivable that concepts like “purpose” could be understood naturalistically as system-maintaining or goal-achieving relational dynamics within highly evolved adaptive autaxic systems (like living organisms or conscious beings). Similarly, “value” might be interpretable as a measure of a pattern’s or process’s contribution to systemic coherence, stability, or the facilitation of further interactive complexity. These are explicitly speculative extensions, requiring much further development. However, the crucial point is that an autaxic theory of information, by grounding information in objective generative processes while allowing for emergent, context-dependent meaning, opens a path for a naturalistic understanding of these deeper aspects of existence, without resorting to dualism or non-physical vital forces.

Information

Re-Founded: A Coherent Expression of Autaxic Reality

Synthesizing the

Autaxic View of Information

The autaxic framework refounds information, liberating it from the confines of being either a purely abstract mathematical quantity, a fundamental but ontologically obscure “stuff,” or a wholly subjective mental construct. In autaxys, information is an emergent, multi-layered phenomenon, intrinsically linked to the universe’s generative core. Its journey begins with **primordial distinctions** born from spontaneous symmetry breaking, solidifies into **stabilized process-patterns** through feedback and resonance, acquires **relational significance** through interaction and causal efficacy, and ultimately blossoms into rich **semantic content** within complex, hierarchically organized autaxic systems. Information, in its fullest sense, is the discernible, efficacious, and meaningful face of autaxys’ ceaseless creativity.

The

Explanatory Power of Autaxic Information Theory

The strength of this autaxic re-founding of information lies in its capacity to provide a unified ontological source—autaxys and its generative engine—for both the “syntax” (the objective distinctions and patterns) and the “semantics” (the relational significance and context-dependent meaning) of information. It resolves ambiguities in prior theories by showing how these different facets of information can arise coherently from a single, underlying generative process. This view is fully consistent with, and indeed integral to, the broader autaxic framework for understanding particles, spacetime, mass-energy, and physical laws, contributing to a more integrated and parsimonious worldview.

Information as a Lens

on Autaxys Itself

Ultimately, the study of information, when re-founded autologically, becomes more than just an analysis of signals or meanings; it becomes a powerful tool for understanding the nature and workings of autaxys itself. The patterns of information generation, flow, transformation, and complexification observed throughout the universe are direct reflections of autaxys' intrinsic operational dynamics and its guiding meta-logical principles. To understand information in its deepest sense is to gain insight into the very “grammar” of creation, the inherent logic by which reality unfolds. Thus, information re-founded is not just a theory *about* something in the universe; it is a lens that reveals the generative heart *of* the universe.

10 The Architecture of Order

Notes - Chapter 9

The concept of information as “a difference which makes a difference” is famously attributed to Gregory Bateson, notably in his work *Steps to an Ecology of Mind* (1972). While autaxys reinterprets this within its own generative framework, Bateson's formulation captures the essence of relational significance.