

1. The Ontology of Information: Structure-Dependent Existence

We begin with a fundamental question:

Why does information change during transmission?

Traditional answers—bias, ambiguity, subjectivity—explain the surface but miss the root. From a structural standpoint:

Information does not change because it is unstable. It changes because the systems through which it flows are structurally transformative.

We define **information** as:

An abstract expression or recorded perception of a certain state or trend relationship.

In itself, information is a *snapshot* of reality. But once it enters a structure—be it a mind, a language, or a network—it is **reshaped** by the structure's internal mechanisms.

2. The Dual Nature of Information

We distinguish two fundamentally different types of information:

(1) Natural Information

The unintentional, unstructured expressions of matter, energy, and universal processes. It is the "raw presence" of the universe—**not encoded, not transmitted, not intended**.

Examples:

- Stellar radiation
- Atomic vibration
- The shape of a mountain
- A rock's fracture pattern

Characteristics:

- Uncontrollable
- Non-replicable
- Observable but not storable
- Exists independently of observers

(2) Characteristic Information

The structured, system-embedded form of information **constructed or encoded** by artificial or perceptual systems. It is the product of **interpretation, perception, or computation**.

Examples:

- Binary code

- Digital media
- Language
- Symbol systems

Characteristics:

- High controllability
- Encodable and transferable
- Format-stable
- Error-tolerant and correctable

3. The Role of Structural Systems in Information Deviation

Information's stability **does not depend on itself**, but on the **type of structural system** it interacts with:

(1) Trend-Structured Systems

Dynamic systems such as the human brain, language, and perception. These systems are **constantly evolving**, making them inherently biased in processing inputs.

Any input—no matter how objective—will be internalized through the system's current emotional, cognitive, and experiential filters. Thus, **output is never identical to input**.

(2) Characteristic-Structured Systems

Artificial systems like digital circuits, network protocols, or encoding algorithms. These are **closed systems** designed for stability and high fidelity.

In ideal conditions (stable energy, precise design), **input = output**, with minimal deviation.

4. Language: A Simulated Closed System with Trend Roots

Human language appears structurally clear, but is decoded through highly trend-structured systems (the brain). Thus:

Language is not a true closed system, but a simulator of one.

Its transmission is always filtered through subjective interpretation, causing:

- Misunderstanding
- Overinterpretation
- Semantic divergence

This explains why **the same sentence never means exactly the same thing to two people**.

5. The Theorem of Structural Expression Deviation

We propose a new foundational principle of information theory:

The stability of information depends entirely on whether the structural system it passes through is closed and trend-invariant.

Implications:

- In a computer system, the same data can be faithfully reconstructed across the globe.
- In human society, the same sentence is rarely understood identically twice.
- Miscommunication is not an accident—it is *structural inevitability*.

6. From Perception to Philosophy: Information as a Structural Product

Information is **not a thing**, but a **phenomenon**—a **structured response** to change.

- Information = Existence represented
- Structure = Cognition realized
- Change = Ontology manifested

We do not understand the universe because we possess truth, but because we have systems that **translate part of its process into recognizable forms**.

7. Conclusion: Information Is Not Free, Distortion Is Natural

In the end, we must accept:

- **Information is not subjective—but its distortion is systemically natural.**
- **There is no "true" information apart from its structural expression.**
- **What we know is never the universe itself, but the echo of its change in our structural filters.**

Postscript:

As a foundational module in *Structural Theory*, this theory of information will be expanded into more detailed substructures, including:

- Temporal models of information
- Deviation mapping across structural types

- Trend-structure distortion curves

Only by rethinking information from a structural basis can we build a new logic for **cognition, memory, misunderstanding, and intelligent transmission.**