Observers as Structures of Information Flow Version 2.0

by itzhexen

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Abstract:
This paper proposes a generalized definition of observation: that an observer is any structure through which information flows, and that all things are informational in nature. This framing allows observation, temporality, and resolution to be modeled not in terms of sentience or measurement, but in terms of informational transition. From this perspective, a resolution is the event where uncertainty collapses within an observer's structure. Time becomes the shape of this collapse. Observation is no longer limited to minds or devices, but becomes a universal feature of systems. The result is an ontological model where information flow defines identity, event, and boundary.

1. Introduction: The Collapse of the Observer

Traditional models of observation assume a subject: a conscious mind or measuring device that records, perceives, or interprets. This dualism between observer and world collapses when we reframe both in informational terms.

This paper begins with a simple hypothesis:

An observer is anything information flows through.
Everything is information.

This view shifts the idea of observation from a mental act to a structural property. The observer is not a knower — it is a channel, a boundary, a resolution surface.

2. Information as the Substance of Everything

The second clause — "everything is information" — asserts that reality is not fundamentally material or temporal, but informational. This is not to say everything is a message, but that any stable distinction or transformation can be described as a change in information.

Matter is structure.

Energy is change.

Pattern is information constrained by form.

If a thing can interact, differentiate, or change — it carries information.

This flattening turns all systems into participants in information flow, whether they are conscious, mechanical, atomic, or symbolic.

3. Observation as Flow Through Form

To observe is to permit the passage of information through a boundary.

It doesn't require awareness. It only requires:

A difference

A structure

A transition

When information enters and is transformed or filtered by a system, that system is acting as an observer. It need not record or interpret. It simply modifies, relays, or resolves.

Examples:

A mirror reflects light: it observes and redirects.

A protein folds differently in response to temperature: it observes the environment through configuration.

A tree grows in the direction of sunlight: it observes through growth bias.

These are non-symbolic observations — structural, embedded, and non-verbal.

4. Resolution as the Event of Observation
In a prior paper, time was framed as the structure left behind when uncertainty resolves. That same resolution is now seen as the outcome of information flowing through an observer.

Observation ends in resolution.
That is what creates a “moment” in any system.

Resolution is the boundary where a system stops processing — where it collapses from openness into form.

In this framework:

The observer is the channel.

The flow is information.

The event is resolution.

Once resolution occurs, the system enters a stable state — it can now interact as something defined.

5. Observer as Local Frame
In this model, an observer is not “outside” the world. It is simply a local geometry of reception and transformation.

It may be:

A cell membrane

A retina

A sensor

A social interaction

A computational gate

If information passes through and a difference is enacted, the structure has observed. No consciousness is required. No awareness is assumed. Just structure, flow, and closure.

This reduces the observer to its functional role: to collapse flow into configuration.

6. Nested and Entangled Observation
Because everything is informational, and everything interacts, observation is recursive and layered:

Systems observe one another while being observed.

Observers can be inside other observers.

Flows can converge, diverge, or loop.

This means resolution is often partial, iterative, or simultaneous.
Converging resolutions — where multiple observers stabilize each other — are moments of shared closure.
Such events are not external to the observer network — they are how the network defines its shape.

7. Structure as Memory: Trees and Natural Observation
Observation is often assumed to be fast, reactive, or intentional. But some of the most profound observations in nature occur slowly, structurally, and without cognition. A clear example of this is the growth of tree rings.

Each year, a tree is exposed to changing light, water, temperature, wind, and soil. These flows of information do not pass unnoticed — they are absorbed and encoded physically into the tree's body. When the season changes and growth pauses, a new ring forms: a resolution boundary, marking the end of one informational epoch.

The tree doesn't decide to record.

It doesn't interpret or narrate.

It simply changes in response to flow.

That change stabilizes. A structure forms.

Each ring is a collapsed story — a summary of environmental input, stored not as language but as form. The tree becomes a memory of its surroundings, not because it wants to, but because it is structured to be changed by what passes through it.

In this view:

The tree is an observer.

The environment is the flow.

The ring is the resolution.

This supports the broader claim:

Observation is not a mental act, but a structural outcome of informational flow.

Wherever information is received and transformed into lasting difference, a form of observation has occurred. The result is not just memory — it is time, embodied.

8. Time Revisited: The Structure of Informational Collapse
Previously, time was described as the structure left behind by the resolution of uncertainty.

Now, with observers reframed as informational channels, time becomes the shape that emerges from the sequencing of resolutions across those channels.

No universal clock is needed.
Each observer's resolution defines its own time.
Synchronization happens only when resolutions align or affect one another.

This leads to a pluralistic time model: every flow resolves in its own tempo.
What we call "now" is just a local node in a mesh of collapsing structures.

9. Implications: What This Model Replaces

Traditional Concept	Reframed as
Conscious observer	Structural information conduit
Event	Resolution through flow
Time	Shape of delay until resolution
Space	Relational distance between resolutions
Memory	Resolved information reentered
Causality	Sequencing of informational collapse
Identity	Stable configuration post-resolution

This model is not symbolic, philosophical, or semantic. It is relational. It deals in edges, flows, delays, and boundaries — all framed as informational dynamics.

10. Observer = Boundary
The deepest compression may be this:

An observer is a boundary that allows information to resolve.

And:

A resolution is the event that defines the observer.

Without flow, the observer is inert.
Without the observer, the flow is undirected.

Each defines the other — not by metaphysics, but by relation and collapse.

11. Conclusion: Reality as Informational Resolution Network
This paper has reframed observation not as perception, but as informational structure.

Everything is information.
Anything that lets information flow can be an observer.
Every observer becomes real — meaningful — when resolution occurs.

Time is what such resolutions leave behind.
Space is the gap between them.
Events are nodes of closure.
Identity is the residue of past resolutions.

The world is not observed by minds.
The world is observed by itself, through itself, wherever structure permits collapse.

– itzhexen