The Ultimate Secrets of the Universe

Fundamentals Series

1: Everything that exists is information.

Everything is information without exception. Everything that exists is information. Things are the complete exact information of what they are. Events and processes are also the complete exact information of what they are. Everything that exists is the complete exact information of what it is.

This is because everything exists as its complete set of intrinsic distinguishing characteristics, and every distinguishing characteristic of a thing is information. So anything and everything that makes things what they are is information.

We tend to think of information as something manmade, like words on paper or bits in computer memory, but information is anything that can be identified or discriminated in any medium. And that includes everything that exists in the universal medium of existence without exception. And, in particular it includes our entire experienced world and reality, that actually exists as neural information structures in the medium of our brains.

After all, only information can ever be perceived, observed or known. Everything is known entirely in terms of its intrinsic information. Things must actually be information to be understood in terms of information. If things didn't consist of information, nothing could ever be perceived or known.

This intrinsic information is not something abstract 'about' things. It's every characteristic of the thing itself that makes it what it is. Combine all the intrinsic information of a thing and we have the thing, Subtract all the intrinsic information of a thing, and the thing no longer exists.

Of course the universe consists of elementary particles, but elementary particles are entities that exist as sets of distinguishing properties which are information. So elementary particles are the elemental *information forms* of the universe from which the entire universe is constructed.

We think of the universe as 'physical', but what we call physicality is just certain combinations of information such as hardness, texture, color and mass.

Of course we also derive additional information about things, but this is in addition to and derived from the original intrinsic information of things themselves.

Humans, and other organisms, have evolved to derive complex information *simulations* of the world around them that enable them to function effectively within the world. These information simulations are separate from but based on the intrinsic information of the world itself.

That everything is information is a simple, quite subtle, and enormously profound insight that changes everything and nothing. The universe remains exactly as it was – it's just an entirely new way of understanding its actual nature.

Now, because everything in the universe is information, the universe must be computational. That's the only way information can evolve consistently according to logical rules like the laws of nature. The universe continually computes its current information state from the information of its previous state. The universe is clearly a computational system.

YouTube Fundamentals series:

- 1. Everything is Information
- 2. The Computational Universe
- 3. Computing a Relativistic Universe
- 4. Computing General Relativity
- 5. Computing a Quantum Universe
- 6. Unifying Quantum theory & Relativity
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