

The Zero-Balance Universe Hypothesis

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Abstract:

The "Zero-Balance Universe Hypothesis" proposes that our universe operates as a grand equation that equals zero. In this framework, every element of existence is counterbalanced by an opposing or complementary phenomenon. The balance is not only a physical reality but also a philosophical principle that may govern all layers of reality.

1. Core Principle:

The universe is a self-contained equation that always equals zero. For every physical entity or phenomenon, there exists an equal and opposite counterpart to maintain this cosmic equilibrium.

2. Foundations of the Hypothesis:

A. Matter and Antimatter:

Every particle has an antiparticle. Their interaction results in mutual annihilation and energy release, preserving balance. The known imbalance in observable matter and antimatter could imply that another domain or parallel universe contains the missing antimatter.

B. Energy and Gravity:

The positive energy present in matter, light, and radiation is counterbalanced by the negative energy of gravity. This concept aligns with theories by physicists like Stephen Hawking and Lawrence Krauss, who

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suggest that the total energy of the universe may be zero.

C. Black Holes and White Holes:

Black holes are regions where matter collapses beyond comprehension, absorbing everything. Their theoretical counterpart, white holes, emit matter and cannot be entered. Though unobserved, white holes are mathematically predicted and may exist in tandem with black holes to preserve informational symmetry.

D. Time and Anti-Time:

Time, as experienced in our universe, may have an opposite: anti-time or reverse-time. If CPT (Charge, Parity, Time) symmetry holds universally, then a mirror universe may exist where time flows backward, balancing our forward-moving timeline.

E. Existence and Non-Existence:

Philosophically, existence may only be defined through its counterpart -- non-existence. Just as light defines shadow and space defines void, being may require an opposite to hold meaning.

3. Implications:

- Origin of the Universe: The Big Bang could be interpreted as a zero-point fluctuation that split into balanced pairs: matter-antimatter, time-anti-time, energy-gravity.
- Dark Matter/Energy: These phenomena might be manifestations of the invisible half of the equation, maintaining universal balance.
- Consciousness: The observer and the observed may be entangled in a balance similar to existence and non-existence.

4. Future Exploration:

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- Experimental and observational studies on CPT symmetry.
- Mathematical modeling of white holes and anti-time universes.
- Investigations into quantum vacuum fluctuations and their implications for zero-sum cosmology.
- Philosophical inquiries into duality as a necessary condition for reality.

Conclusion:

The Zero-Balance Universe Hypothesis offers a unified lens through which the symmetry of existence can be appreciated. It bridges physics, cosmology, and philosophy, asserting that for every "something," there must always be a "counter-something," and together, they form a total of zero.

-- Muhammad Abrar