

**Main Text (Dialog Style):****Me:**

Lately, I've been contemplating a rather bold idea. What if the mechanism behind the appearance and disappearance of quantum events in the universe doesn't originate from "probability" or "vacuum fluctuations," but rather from a deliberate "information seeding mechanism"? For example—black holes.

**You:**

Black holes? You mean those ultimate gravitational traps from which not even light can escape?

**Me:**

Exactly. But I'm not thinking in terms of gravity—I'm thinking in terms of *trend structure*. We've discussed before that "trend factors" may be the most fundamental building blocks of the universe.

So where do those trend factors come from?

I suddenly have the feeling that black holes might be the wombs—the origin points—of these trend factors.

**You:**

That's an interesting angle. Go on.

**Me:**

We know black holes have two main characteristics:

1. They can swallow everything—matter and information alike.
2. They emit what we call *Hawking radiation*.

Traditionally, Hawking radiation is explained as a particle-antiparticle pair forming at the event horizon: one falls in, the other escapes. But that only explains the *escape* mechanism—not the *source*.

Here's my hypothesis:

What black holes absorb is the residual information from disintegrated trend structures; and what they emit is not conventional particles, but the *primitive form of trend factors*. In other words, Hawking radiation might be the broadcast of trend factors.

**You:**

So you're saying black holes are like *distributors* of trend factors across the universe? Like cosmic seeders?

**Me:**

Exactly. And this also helps explain another mystery:

Why do quantum fluctuations appear even in a perfect vacuum?

Traditional physics says "the vacuum has energy," but that sounds a bit hand-wavy. What if we reframe it:

The vacuum is filled with trend factors—released by distant black holes and spread across the cosmos.

Then, so-called "quantum fluctuations" are just localized aggregations or activations of these trend factors into temporary quantum states—before they disperse again.

**You:**

But how do you explain the energy source for those trend factors? Wouldn't that violate conservation of energy?

**Me:**

Not necessarily. A black hole is a "suction-release" system:

1. It absorbs the residual information from disintegrated structures;
2. Compresses that information into a primitive trend factor form;
3. Then emits them through some internal mechanism—what we observe as Hawking radiation.

In a sense, it's a cosmic-scale *recycling and reproduction system*.

**You:**

So, from the standpoint of your Trend Structure Theory:

- Trend factors are the smallest components of the universe;
- Black holes are compressors and emitters of trend factors;
- Quantum fluctuations are transient emergences of trend factor clustering;
- The vacuum isn't empty—it's the operational stage of these trend factors.

**Me:**

Exactly. And this leads to a deeper philosophical insight:

We've always asked, "Where did the universe come from?"

I now think the answer may be: the universe wasn't *built*—it was *seeded*.

Black holes are the *seeders*, trend factors are the *seeds*, quantum fields are *sprouting*, atoms are *branches*, and matter is the *forest*.

### **Conclusion:**

When we move beyond the linear mindset of "particles as the smallest units" and instead observe the universe through the lens of *structural trends*, we find that:

Black holes never "destroy" information; they serve as *reboot hubs* and *distribution centers* for all universal structures.

This perspective not only gives us a new interpretation of quantum emergence and vacuum fluctuation, but also redefines the black hole's place in the cosmological narrative.

Perhaps in the far future, with advanced enough technology, we won't just see black holes as devourers—but as cosmic gardeners, quietly sowing the seeds of reality.