Why Assign QFT Rules to Space When Only Energy Makes Them Real?

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https://www.quantamagazine.org/what-is-quantum-field-theory-and-why-is-it-incomplete-20220810/#comment-5962265786

A Comment on the Quanta Magazine podcast:
What Is Quantum Field Theory and Why Is It Incomplete?
https://www.quantamagazine.org/what-is-quantum-field-theory-and-why-is-it-incomplete-20220810/

04:11 — "[Faraday] said, … in modern language, that at every single point in the universe there are two vectors, two arrows."

Special relativity says empty space belongs equally to any inertial frame that wishes to use it. And this seems to be accurate to at least 1800 times the Planck energy. Defining the rules for field vectors as part of such a featureless, frame-independent space is like listening for the sound of one hand clapping, since only the addition of energy makes it real and gives it context.

There's a conundrum here. Faraday realized the physical world "knows" and encodes the rules for creating fields. He naturally assigned those rules to space itself, but his insights came long before Einstein informed the world of how just how incredibly blank and featureless a space without objects or energy could be.

So my question is this: If the rules that allow a vector to form have meaning only in the presence of that energy, why assign them, as Faraday naively did, to the most featureless component of our entire universe, flat space? Instead, why not make them part of the energy that must be present for those rules to have detectable meaning?

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