

Abstract Submitted
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Nature of Reality SUNIL THAKUR — Nothing, not even energy, is endowed with the powers of self-manifestation and needs a medium to manifest itself. Energy and matter remain unmanifested in the absence of each other. Even visible light manifests itself only for the moment it interacts with the matter. Since every physical entity needs a medium to manifest itself therefore its manifested form depends not just on its own properties but also on the properties of the observer, frame of reference of the observer, and method of observation. At any given time, properties of a physical entity are observer-independent and hence are absolute but manifested form of the entity is observer dependent and hence is always relative. Apparently, what is perceivable is relative. Relativity appears to be an inherent feature of the perceptible universe but only till we view space and time separately or measure space and time in different frames of reference. Distortion of space (or length contraction of Lorentz transformation) and time dilation are directly proportionate i.e. when space contracts, so does time in the same proportion and when space expands, time also expands in the same proportion and hence speed of energy reflected through speed of light must remain constant in all frames of reference. Relativity appears only when we measure space and time in different frames of reference; absolute emerges when we view objects as space-time structures. What is relative cannot be real and what is real is unperceivable. In this paper, I have explored nature of reality through fundamental concepts of physics.

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