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# Effects in time complete general relativity and describe an eternally evolving continuum

Can perspectives in time complete general relativity and eliminate singularities, the Big Bang and the infinitely accelerating expansion of the universe?

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In what promises to be a hotly debated paper, the paper's author, Capt. Joseph H. (Cass) Forrington, a Cum Laude graduate of the United States Merchant Marine Academy at Kings Point, New York, answers, "Yes".

"By deriving the Hubble constant as a  $2.2686 \cdot 10^{-18}$  acceleration in the rate of "proper" time, the rate we each experience in our personal, inertial frames of reference, rather than as an acceleration through space (or as due to an expansion of space), and adding that acceleration to the time elements of Einstein's Tensor, we complete General Relativity, eliminating Big Bangs and Crunches, infinite expansions (accelerating or not) and "Dark Energy". The acceleration manifests a time dilation gradient looking outward so older frames are also slower frames until a 1 s/s difference is reached, a "Limit of Relativity", at the Cosmological Horizon, where time appears to stop, the same effect we would see with a recessional velocity of  $c$ , which a Hubble constant of 70 Mps/sec indicates occurs at  $\sim 13.9+$  Gly, just beyond the currently accepted Cosmological Horizon at  $\sim 13.8$  Gly.

Looking inward into the galaxies, we see another 1 s/s Limit of Relativity at the event horizons of the MECOs (black holes) at the centers of the galaxies, where time also appears to stop. As the center of a MECO (Magnetic Eternally Collapsing Object) is empty space, this gives us an eternal spacetime (quantum) continuum evolving between two apparent Limits of Relativity. If we accept the 1 s/s Limit of Relativity as establishing the boundaries of our universe in all directions, and as the center of a MECO is empty space, and event horizons must recede when approached, the center of each MECO at the center of each galaxy is a branching of the universe into an infinity of other universes as the older frames at the cosmological horizon fade away.

Time evolves space (and the events therein) forward. This makes time the fundamental force of the universe. This is the evolution of space in situ in the forward direction of time, not a forward evolution in space. This is the Fundamental Direction of Evolution (FDE). When a time dilation gradient is introduced, we also see an evolution of events down the gradient, because to the outside observer the next instant manifests first in the faster frames. This is the Gravitational Direction of Evolution (GDE). This is why gravity only has one direction and why it overpowers the other forces so easily even though it appears to be so weak: it is an irresistible evolutionary force in time. The apparent curvature of motion of distant objects we observe from our inertial frames as the continuum evolves forward is a resultant of these two directions of evolution.

General Relativity describes how that evolution appears to an inertial observer due to the Lorentz transformations in a spherical dilation pit and under other, but not all, circumstances.

The paper shows how this gravitational evolution manifests kinetic energy which is translated into pressure and thermal energy at the focus of a spherical time dilation pit.

Galactic rotation velocities are explained by applying this view of the evolving spacetime continuum, eliminating "Dark Matter".

And, finally, the origin of spacetime is explained, which allows for the explanation provided for non-locality."

The paper, "General Relativity: Effects in Time as Causation", can be found in the *Journal of Cosmology*, Vol. 26, #21, at [http://journalofcosmology.com/JOC26/General Relativity and Effects in Time as Causation.pdf](http://journalofcosmology.com/JOC26/General_Relativity_and_Effects_in_Time_as_Causation.pdf)