

becomes lower. In short, while the movement of an object on the surface of water is assumed to be at the velocity of light which is free from gravity, the movement of an object in water is at the velocity less than that of light under the impact of gravity. And as it nears to the apex of the cone, the gravity gains in its impact. That is, the progress of time decreases in its extent. In this connection, the so-called phenomenon of fixed light velocity can be well understood when both the movement of an object on the water surface and that of a clock-hand on the dial are superposed. They both are in the weightless state free from gravity, and as the clock-hand varies in its extent of progress within the dial, light also varies in its extent of progress depending on whether it is in the inner side or the outer side of its circle. And yet, though they both differ in their moving distance, the clock-hand indicates the same passage of time. As they both are under the weightless condition, the cause of this difference could be nothing other than the difference of energy retained. Thus, light progresses over the longer distance in proportion to the amount of energy it retains, namely, the potential energy. In other words, it passes the longer lapse of time in proportion to its potential energy. On the contrary, when the potential energy is at zero, in other words, when it is at the center of the circle, time doesn't progress. As the potential energy decreases, the extent of time that progresses also decreases, and when the potential energy is lost, the time eventually ceases to progress. A rice cooker keeps adding heat energy thereby retains the potential energy of rice and increases time in its extent of progress, that is its duration of time, or a refrigerator deprives heat from foodstuffs thereby decreases their potential energy and reduces time in their extent of progress to keep their freshness. Those phenomena quite make sense when checked against the principle of time. As mentioned above, the unique nature of time was explained using the models of the clock-dial and three-dimensional cone full of water. Based on this, relation between energy and mass is to be explained in the next stage.

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