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Subjective Time Analysis by Zeno's Paradox

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ABSTRACT

The expansion of subjective time according to external time is required III. Zeno's arrow paradox analysis necessitates both of the two consecutive times to be compared in the extended intellectual time, like the mind distinguishing the two points within the same space. This relativity is necessary for motion perception, which is the change in space over time.

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I. ABSTRACT

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II. INTRODUCTION

In the arrow paradox, Zeno of Elea argues that change by motion is an illusion of our perception so the flying arrow is at rest, which result follows from the assumption that time is composed of moments. He says that if everything when it occupies an equal space is at rest, and if that which is in locomotion is always in a now, the flying arrow is therefore motionless. [1]

Perceiving motion is a must for distinguishing between two different space units. The external observer's at least two points of time along with the two points with which they create a dichotomy must also be included in a subjective time.

The human eye can sense wavelengths between 380 and 700nm. The observer does not perceive wavelengths under 380nm. Therefore, in order to observe the visible image within the moment, the objective and subjective times should have different frames of reference. A subjective time should include two separate points of the arrow.

In the relativity formula: $(\Delta S)^2 = (c\Delta t)^2 - (\Delta x)^2$

The smallest visible wavelength: 380 nm

$$(380nm)^2 = (2.99792458 \cdot 10^{17}nm/s)^2 T^2 - 0$$

Since the mental perception of the image reaching the retina at 380 nm intervals will be in points, $x = 0$

It should expand to minimum

$$T = 1.267543561753 \times 10^{-15} s.$$

If we define a moment as a point in time, the dimensionless, abstract value should correspond to a concrete time of approximately $1.267543561753 \times 10^{-15}$ seconds. In the extended time of consciousness, multiple points are observed in more than one dimensionless moment in external space. The quantitative frequency of 380 nm in the four-dimensional space-time ontologically creates the purple color perception by corresponding to only one point of space in the intellectually extended moment.

Zeno's argument that the observer can see a physical part of the arrow in a moment that cannot be measured objectively is not correct. The immeasurable moment should correspond to the immeasurable point. One point is not enough to create a perception of motion. The only solution to Zeno's paradox is when what the observer perceives as now corresponds to an expanded time in consciousness. In this case, the conscious, due to its geometry, can observe the dialectic in the space-time needed for its perception. The two points needed to create motion can only be observed because of a certain measurable expanded now in the conscious. The brain's topology experiences the four-dimensional space-time in a single moment by superposing it. The conscious, just like how it observes a point in space, becomes aware of consecutive moments over time. In a time unit when the mind should be

faster than its environment, it senses multiple consecutive time units and creates a sense of time. An archer's brain works like that of a person traveling close to speed of light and observing the motions of another person on earth in fast forward mode. Evolutionally, having more information compared to one's environment will be an advantage for the continuity of existence. Expansion of time provides more input.

III. CONCLUSION

Zeno's paradox cannot be solved with the absolute time approach. What is necessary for consciousness of time is that the subjective space-time should expand and encompass external space-times. What creates the sense of time is the relativity between the mind and the universe. The mind observes its object, which is a part of the universe, in the moment in relativity. And it observes the external space and his/her body as a part of it only for as long as it is faster.

REFERENCES

1. Aristotle physics, 239b.30