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LAYING THE GHOST OF TWIN PARADOX

ABSTRACT

Someone's true age is not written in his ID, but in his biomarkers. Aging process is not caused by time passing, but by thermodynamically laws. Entropy, extent of metabolic reaction, and temperature are Lorentz invariant, so these facts make twin paradox impossible because there is no way for one twin to age slower than the other even if the time in his frame is dilated. Entropy is the function of state, not time. So as much as standard thermodynamics concerns, the path between two points in space is equivalent to the path between two states. Whether the point B is reached by moving faster using the longer way (with time dilatation), or slower by using shortcut (without time dilatation), the state of the system after completing the road should be the same. This is supported by the fact that when two twins reach the same space-time point (point B) in which the state parameters are the same. If we use entropy as an age parameter, then both twins have the same entropy value and are exactly the same biological age. Therefore, the twin paradox is a logical mistake based on wrong first premise. Bergson symmetry is not necessary any more to explain the impossibility of twin paradox.

KEYWORDS

[twin paradox](#), [aging](#), [extent of the reaction](#), [entropy](#), [temperature](#), [Arrhenius equation](#), [special theory of relativity](#)

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