Both Twins Traveling Paradox FLORENTIN SMARANDACHE, University of New Mexico — Two twins T_1 and T_2 synchronize their clocks at the same location L, then both of them leave with the same uniform high speed v and on the same large distance d on opposite linear directions to the locations A and respectively B (of course $LA = LB = d$) on that planet. Each twin sees the other twin moving away from him with the relativistic speed $2v$, so each twin considers the other twin younger than him. The time dilation is the same in both twins' inertial reference frames. Here it is a forth symmetry. They stop there at A and respectively at B. Afterwards, the twin T_1 from A travels on a linear route back to B (passing through L) at a uniform high speed $2v$. Again, each twin sees the other twin traveling towards him with a speed $2v$. And again each twin considers the other twin being younger than him, since there is the same time dilation and same space contraction. Again one has a back symmetry. But, when the twin T_1 from A gets to B, he finds out that he is younger than the twin T_2 in B since he has traveled more that T_2.

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