

Thinking Like Einstein- Posted March 17, 2011 on "The Meditative Life," a blog for *Psychology Today*.

<https://www.psychologytoday.com/blog/the-meditative-life/201103/thinking-einstein>

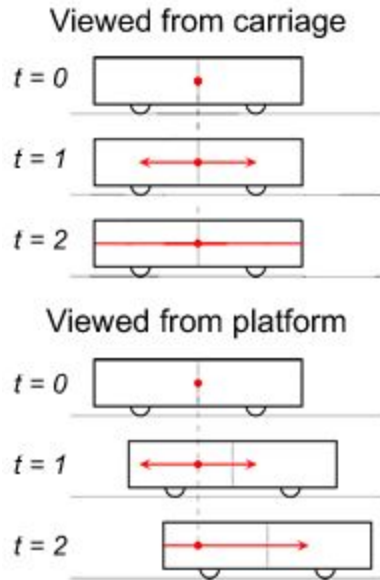
For perhaps the hundredth time, I try to think like Einstein. A burst of light is seen by two observers: one stationary on a platform, the other moving in a train. Assume the speed of light is the same for both observers. That's it, that's all you need to change forever our understanding of space, time, matter, and the universe. No Large Hadron Collider, no CERN, no Hubble Space Telescope, no footnotes, no academic appointment, just the clear light of one mind, and a friend or two to talk with while walking the Berner Oberland breathing in the pristine mountain air. How did he do it? How could Einstein think so clearly, so faithfully, when everyone else held fast to habits of mind that seemed so sensible and yet were ultimately so wrong.

We think of meditation as following the breath, but for Einstein meditation was following thought. He had learned how to see the burst of light expanding, traveling at the same speed for the two observers. To the moving observer on the train, the circle of light expanded equally on all sides. To the stationary one on the platform, the light expanded also, but in addition Einstein saw the movement of the train caused one side to meet the wave earlier than the other side. I mimic his thoughts, one-by-one, I think with him and, in this moment, what Einstein thought I think. His insight becomes mine. Our conclusions: simultaneity is relative. Moving clocks run slow. Lengths are foreshortened along the direction of motion. No laboratory is needed, only the mind and the amazing power of pure thought.

The Dalai Lama writes often about "analytic meditation." As he explained to Howard Cutler ([see PT, May 1, 2001](#)), "In analytic meditation, one brings about inner change through systematic investigation and analysis. In this way we can properly use

our human intelligence, our capacity for reason and analysis, to contribute to our happiness and satisfaction." Einstein's analytic meditation led to his theory of relativity; it has the possibility of changing our minds in ways that are truly profound.

As I work through each step inwardly from both points of view - stationary and moving - I encounter a paradox, a contraction. How can an object have different lengths? How can a clock (including the clock of my bodily processes) run differently when viewed from the two vantage points? How can my "now" be different than yours? All three are implied by Einstein's relativity theory. Surely one set of observations must be the True set. No, each has equal justification, no vantage point is privileged. Then I remember that I am assuming the universe looks like something without me or anyone around. I presume that it looks like something unto itself. This is not so. All of its attributes, even the most fundamental ones like extension and duration, are attributes as noted by an observer, real or imagined. We and the world are knit together by Einstein's thinking in ways that astonish me. It is so difficult not to reify the world, and instead to recognize that I am implicated everywhere and in every impression. The careful reasoning that leads



Einstein and the relativity of simultaneity

us to this conclusion is Einstein's gift, the fruit of his analytic meditation.

A second kind of meditation should then be joined to the first, says the Dalai Lama. Once we have, through analytic meditation, come to an insight or deeper understanding, then we should cease our analysis and begin the practice of "calm abiding." In this practice we still our reasoning, quiet the mind, and allow the full significance of the insight to sink in. We calmly abide with the insight and the feelings it evokes, in this case, the feeling of our persistent relationship with the universe: our co-dependence. We realize that the deeper coherence of the universe requires that each of us inhabits a lawful world of our own that may seem inconsistent with the worlds inhabited by others. Only at another more subtle level are these individualized worlds harmonized: difference and unity.

Once we internalize this difficult insight, we begin to swim, ungrounded, in a multiplicity of possible worlds. But that is okay. In the language of Francisco Varela, Evan Thompson, and Eleanor Rosch (*The Embodied Mind*), we learn to lay down the path

beneath our feet by walking. Instead of looking for security is stasis, we realize the groundlessness of material reality and find our way to security through movement instead, through processes that generate meanings. In Robert Kegan's classification of the stages of human epistemologies, he calls this final stage the "self-transforming mind." Only a very, very few ever make it to this level of meaning making. Einstein's analytic meditation and calm abiding can be a help getting there.

And now I'll return to the burst of light for the 101st time. Care to join me?