

What I do say is “The commonality of my Now and your Now whenever we are together requires that our Nows must coincide at each of two consecutive meetings.” “Commonality” or “coincide” mean only that our two private Now experiences happen at a common place and time, not that they are identical. Indeed, the personal experiences of different people are incomparable, except through the imperfect medium of language.

I agree with James Hartle on much in the paper he cites, but we have important differences. He takes spacetime to be objective and fundamental; I take it to be an abstract tool used by an agent to organize her experience. He uses the notion of a point in spacetime uncritically; I regard it as an approximate representation of an agent’s spatially and temporally extended experience. He takes an agent’s experience to be an objective property of the agent, like the contents of a register. I take an agent’s experience to be private and self-evident to that agent and to be the fundamental basis for her inference of an external world; the experience of each agent plays a special role for that—and only that—agent, analogous to the special role played by “the classical domain” in the quantum mechanics of Lev Landau and Evgeny Lifshitz.

Rudolf Peierls wrote to John Bell in 1980, “In my view, a description of the laws of physics consists in giving us a set of correlations between successive observations. By observations I mean . . . what our senses can experience. That we have senses and can experience such sensations is an empirical fact, which has not been deduced (and in my opinion cannot be deduced) from current physics.”² If “us” is expanded to “each of us,” then nobody has ever put QBism and CBism more concisely than that.

References

1. N. D. Mermin, *Nature* **507**, 421 (2014).
2. S. Lee, ed., *Sir Rudolf Peierls: Selected Private and Scientific Correspondence*, vol. 2, World Scientific, River Edge, NJ (2009), p. 807.

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Out of Ehrenfest’s closet

The article by Dirk van Delft on Paul Ehrenfest’s final years (PHYSICS TODAY, January 2014, page 41) offers fascinating insights into the life of

a remarkable man. It also offers a speculation as to why Martin Klein never wrote the second volume he had originally planned for his Ehrenfest biography. As Marty told me many years ago, he took a sabbatical in Leiden, the Netherlands, when he began his research for the biography, and he visited Ehrenfest’s widow, Tatiana, fairly often during that time.

At some point—after volume 1 had been written, I believe—Marty visited Tatiana again. During that visit she inadvertently opened a closet, and papers that she had kept hidden came tumbling out. It was my understanding that Marty abandoned the second volume because he did not have access to those papers, which he considered essential and which I assume are the letters acquired by the Boerhaave Museum. The article by van Delft offers abundant clues as to why Tatiana wanted to keep them secret.

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UN’s Basic Space Science Initiative: A follow-up report

Almost 20 years after I first wrote about the United Nations and European Space Agency workshops on space science (PHYSICS TODAY, July 1996, page 90), I feel obliged to provide an update on the continuing initiative, which seems to be unique and is raising interesting and uncommon questions. The United Nations Basic Space Science Initiative (BSSI) is a long-term effort to develop astronomy and space science through regional and international cooperation, particularly in developing nations. In addition to the UN and ESA, NASA and the Japan Aerospace Exploration Agency have also cosponsored workshops.

The idea for the BSSI was first discussed in 1986 in New York. Among the participants in that discussion were I. I. Rabi and Dorothy Michelson Livingston.

From 1991 to 2004, the workshops on basic space science addressed the status of astronomy in Asia, Latin America, and Africa. As a result of those workshops and with leadership from the National Astronomical Observatory of Japan, telescope facilities were inaugurated in 7 developing nations and planetariums were established in 20, with equipment donated by Japan.



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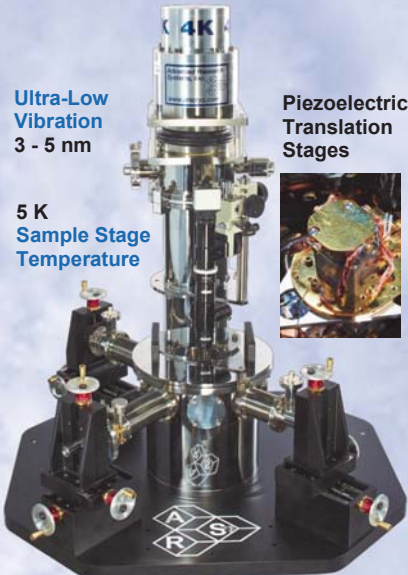



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