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On the Lorentzian route to Relativity

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We discuss pedagogical problems associated with the conventional approach in teaching relativity and the potential value of "Lorentzian route to relativity" for addressing these pedagogical problems. We think that Lorentzian approach may be valuable part of an introduction to relativity but the historical route should be followed up to its end. It must namely include Einstein's application of Occam's razor in reinterpreting Lorentz transformations kinematically and the discussion of the central role of the evolution from Lorentz's "local time" to relativity of simultaneity. We discuss also what Occam's razor is not and why it should not cut "too deeply or too permanently". Some misleading remarks in relativity text books concerning for example Kennedy Thorndike experiment and Trouton-Noble experiment indicate the not uncommon lack of awareness about the degree observational equivalence between prerelativistic (Lorentzian) and relativistic viewpoints as far as special relativistic experiments are considered. Keywords: neo-Lorentzian interpretation relativity simultaneity didactic teaching education Kennedy Thorndike Trouton Noble experiment

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