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A case study of conflicting realizations of continuity.

Oesterle, Susan (ed.) et al., Proceedings of the 38th conference of the International Group for the Psychology of Mathematics Education "Mathematics education at the edge", PME 38 held jointly with the 36th conference of PME-NA, Vancouver, Canada, July 15–20, 2014, Vol. 3. [s. l.]: International Group for the Psychology of Mathematics Education (ISBN 978-0-86491-360-9/set; 978-0-86491-363-0/v.3). 385-392 (2014).

Summary: I present a case study to illustrate conflicts between different 'realizations' of the concept of 'continuous function' held by a university first year student. *A. Sfard*'s [Thinking as communicating. Human development, the growth of discourses, and mathematizing. Cambridge: Cambridge University Press (2008; ME 2011d.00346)] commognitve framework is used in the analysis of a student's work on continuity. I point out how these conflicting realizations have arisen from the inconsistent definitions presented in textbooks and other mathematical resources. The study also points to the need of extending the notion of "commognitive conflict" in the framework.

Classification: I25 E45
Keywords: continuous functions; mathematical concepts; commognitive conflict; conflicting realizations; inconsistent definitions