Shared Mental Models as a Psychological Explanation for Converging Mental Representations of Place – the Example of OpenStreetMap

Maren Mayer[1], Daniel W. Heck[1], Franz-Benjamin Mocnik[2,3]

1: School of Social Sciences, University of Mannheim, Germany
2: Faculty of Geo-Information Science and Earth Observation (ITC), University of Twente, The Netherlands
3: Institute of Geography, Heidelberg University, Germany

People perceive the environment in various idiosyncratic ways, letting them conceptualize places differently. Representation in a data set and communication about places, however, create the need to reach agreement in the place a symbol or word represents. People have thus to integrate their views about a place. In this paper, we discuss how idiosyncratic views about places and their integration can be traced in OpenStreetMap. Then, we explore novel ways of how to model the integration processes of such idiosyncratic views by the means of psychological models. In particular, we explore the concept of Shared Mental Models. Such formal modelling and the corresponding better understanding of how people integrate their views about places improves the way we can make sense of collaborative shared data sets.

PLATIAL'19 – International Symposium on Platial Information Science
5–6 September 2019, University of Warwick, Coventry, UK
http://platial19.platialscience.net