

UCSB Geography Colloquium

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GROUNDING GEOGRAPHIC INFORMATION IN PERCEPTUAL OPERATIONS

Presented by

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Abstract:

Geographic information reflects ontological world views, just like any linguistic utterance. Furthermore, in comparison with spoken language, digital information is affected by the problem of reference to an even larger extent because of the loss of the context of speaking. How to refer to the phenomena underlying digital information in an inter-subjective way? I make a proposal about how to generate inter-subjective references based on the operations necessary to generate a dataset. These include cognitive constructions as well as perceptual operations, i.e., operations of the human attentional apparatus. Perceptual operations allow one to share a reference by focusing human attention on ‘Gestalts’ in the perceived space around the body. They also allow observers to make predications, i.e., to relate foci of attention in memory. I propose a kind of “practical constructivism” guided by a formal language. The idea is to describe data “bottom-up” in order to reconstruct the observation process, instead of presuming abstract ontological concepts. I will demonstrate the approach by reconstructing the concept of a road network junction, which underlies an important kind of geo data.

Short Bio:

Dr. Simon Scheider is currently a visiting scholar at UCSB, working with Prof. Krzysztof Janowicz on “place reference systems,” a project funded by the German Research Foundation. Dr. Scheider is a Research Associate at the University of Münster, Germany (MUSIL, <http://musil.uni-muenster.de>), developing semantic reference systems for describing geospatial data. He has worked in the area of spatial knowledge discovery at the Fraunhofer Institute for Intelligent Analysis and Information Systems in Bonn, Germany. He holds a doctorate in Geoinformatics from the University of Münster and a diploma in Applied Geography from the University of Trier, Germany. His publications can be found at <http://www.geographicknowledge.de>.