

Keynote: Places as Location Categories

The Placement Problem: Humans and Machines
Categorising Locations

Dr Clare Davies

Senior Lecturer
Department of Psychology
University of Winchester, UK

Email: clare.davies@winchester.ac.uk



Places are, as we know, fuzzy and hard to define. This is arguably due to place being an intuitive human notion—and computers don't do intuition. Yet some aspects of human cognition—particularly classification—have already been approximated quite usefully by computational models and machine learning tools. This is helpful because, as this talk will show, the way we think about geographic places may be closely related to the way that we think about categories of objects. To the extent that a given place may be definable as a fuzzy psychological category of individual locations (or vistas), we can make some progress. We can adapt existing models and tools to model and predict people's placement of a given location into one category or another.

However, of course, things are not that simple. Cognitive scientists still disagree on the structure and mechanisms of human categorisation and category-based decision making. Longstanding evidence also suggests that our mental categories are flexible, dynamic and socially influenced, changing with context—not static elements to capture and store in a database. Meanwhile, AI classification algorithms employ a multitude of statistical assumptions and approaches—which is best, and when? And of course, places themselves are inherently spatial, embodying important geographic rules and constraints. This talk will suggest an agenda of more specific interdisciplinary ~~headaches~~ research questions that we must address, to move forward towards usefully computing placement.