

Place-Based Knowledge Systems: Human and Machine

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To tackle the problem of representing places we need to consider what people know, and ask, about them. This paper first suggests a list of potential queries of a 'patial' GIS and points out that half of them are not directly spatial but semantic, vaguely specified, and rooted in people's sensory-motor (SM) experiences of places. Recent research into human semantic cognition has indicated both explicit and separate storage of SM aspects of each stored concept or category, alongside other key features of how semantic memory appears to work. A very recent computational model taken from the semantic memory research area is briefly reviewed, which holds some potential to be applied to places. If found to effectively reflect human place cognition, this could eventually form link a more humanly plausible semantic representation (probably informed by large-scale text sources) to spatial data in a GIS. Further necessary research is proposed.