**Grammaticalisation and Semantic Maps**

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Semantic Maps have offered linguists an appealing and empirically rooted methodology for describing recurrent structural patterns in how languages categorize conceptual space. They have also been argued to provide a route through which grammaticalisation processes operate. Although some researchers argue that semantic maps are universal and given (Haspelmath (2003) and Croft and Poole (forthcoming)) others provide evidence that there are no fixed nor universal maps (Cysouw (forthcoming)).

Here we take the position that semantic maps are a useful way to map out the grammatical evolution of a language (particularly the evolution of semantic structuring) but that this grammatical evolution is a consequence of distributed processes whereby agents shape and reshape their language. So it is a challenge to find out what these processes are and whether they indeed generate the kind of semantic maps observed for human languages. Semantic maps of different languages will be similar because the same evolutionary pathways are followed.

In our work, we have taken a design stance towards the question of the origins of linguistic structure. In our experiments we investigate the emergence of grammatical features in populations of autonomous artificial agents that play language games about situations they perceive through a sensori-motor embodiment. In past experiments, we have already shown how such a population could self-organize and develop a lexicon and a shared conceptual space for objects by playing locally situated "language games" (Steels, 2003). In this talk, we will present new experiments in which we investigate whether semantic maps for case markers could emerge through grammaticalisation processes without the need for an underlying universal conceptual space.

**References:**

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