

Cognitive Modelling and Conceptual Spaces

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Abstract

In this talk, I will present the rationale followed for the conceptualization and the following development the Dual PECCS system ([Lieto *et al.*, 2015], [Lieto *et al.*, 2016], [Lieto *et al.*, 2017]) that relies on the cognitively grounded heterogeneous proxytypes representational hypothesis [Lieto, 2019] [Lieto, 2014]). Such hypothesis allows to integrate exemplars and prototype theories of categorization [Frixione and Lieto, 2013] [Frixione *et al.*, 2014] and has provided useful insights in the context of cognitive modelling for what concerns the typicality effects in categorization. As argued in [Chella *et al.*, 2017] [Lieto *et al.*, 2018b] [Lieto *et al.*, 2018a] a pivotal role in this respect is played by the use of the conceptual spaces framework and by its integration with a symbolic knowledge representation layer. In addition, by using the Minimal Cognitive Grid introduced in [Lieto, 2021], I will show how the Dual PECCS system can be ranked in the functional vs structural continuum of artificial systems in both a quantitative and qualitative way.

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