Heterogeneous Proxytypes as a Unifying Cognitive Framework for Conceptual Representation and Reasoning in Artificial Systems

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Introduction

This talk presents the heterogeneous proxytypes hypothesis as a cognitively-inspired computational framework able to reconcile, in both natural and artificial systems, different theories of typicality about conceptual representation and reasoning that have been traditionally seen as incompatible. In particular, through the Dual PECCS system and its evolution, it shows how prototypes, exemplars and theory-theory like conceptual representations can be integrated in a cognitive artificial agent (thus extending its categorisation capabilities) and, in addition, can provide useful insights in the context of a computationally grounded science of the mind.

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