

# What theoretical horizon for cognition? Towards a categorical cognitive science

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## Abstract

Cognitive science was founded on the idea that an understanding of mind requires interdisciplinary approaches among specialist fields. However, after more than half a century since the cognitive revolution, the study of mind is as specialized as ever, which raises an existential question: What lies on the horizon for a theory of cognition—unification or dissolution? This question is approached by way of a parallel with the (meta-)mathematical field of category theory. A core principle is construction by universal (mapping) property: every instance of a structure is uniquely composed of a common constituent (map). This principle applies at the level of categories and at the meta-level of categories of other categories. The analogous view of cognitive science presented here is as a meta-theory employing this unifying principle: in the form of a slogan, Cognitive science is to mind as category theory is to mathematics.

Funding: JSPS KAKENHI Grant Number JP23K11797