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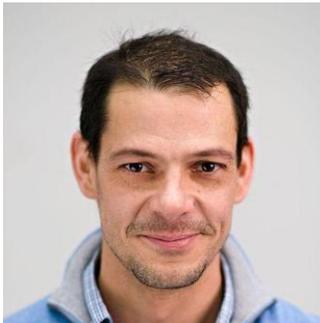
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A conceptual change is the building of an intra-individual distributed cognitive system
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Résumé de la conférence

In her book, The Origin of Concepts, Susan Carey describes cognitive development as including conceptual change as well as maturation and enrichment of core cognitive capacities. She describes conceptual change as a cognitive feat that involves relying on more than one core cognitive capacity. For instance, understanding natural numbers involves, among other core capacities, the mental magnitude system and the object tracking system. In this talk, I'll extend on this insight by arguing that conceptual change amounts to building new distributed cognitive systems within the mind; concepts acquired through conceptual change are inferential systems that distribute cognition to core cognitive capacities. This view has two consequences.
First, cognitive scientists have pointed out that cognition is distributed when people perform a cognitive task by relying on the inferential power not just of their own brain but also of external inferential devices such as cognitive artefacts (e.g. computers) or other people (e.g. experts).

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[résumé de la conférence de C. Heintz, suite]

Although the theory of distributed cognition has been mainly used to show how cognition can extend outside of the brain, its main explanatory strategy consists in identifying functional components and their connections. This same method can be used for understanding the specific reliance of concepts acquired through conceptual change on multiple core cognitive capacities.

Second, one aspect of the cognitive systems that develop with conceptual change is that they are not innately wired. Considering conceptual change as the construction of mental yet distributed cognitive systems enables redescribing the learning process of conceptual change. I will speculate that trust in the relevance of symbolic structures (e.g. the number list) and epistemic evaluations are key elements for building input-output relations between core capacities. Once these relations are systematized, the new cognitive system is built and thus the new concept acquired.

Lecture proposée

Heintz, C. (2013). Scaffolding on core cognition. Dans L. R. Caporael, J. R. Griesemer, & W. C. Wimsatt (Eds.), *Developing Scaffolds in Evolution, Culture, and Cognition* (p.209-228). MIT Press Scholarship.