

Does Eve need Adam?

Response to Guenther Knoblich, *The Social Interaction Challenge for Cognitive Science*
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Three claims:

1. "The main purpose of human perception, action, and cognition is to support social interaction."
2. "The social is not a specific knowledge domain within individual minds"
3. "The social ... is the key for understanding how individual minds work."

Doubts about the cohesion of social interactions' influence on cognition

Some ways in which the social influences individual cognition:

Loneliness undermines cognitive abilities ¹

Colour terms influence categorical perception of colour ²

Television can harm academic proficiency ³

...

Which social interactions matter for understanding cognition? Four features.

novelty Social interactions involve potentially novel and one-off goals

not pre-packaged, time constrained Social interactions do not depend on prior arrangement and may require exquisitely coordinated timing

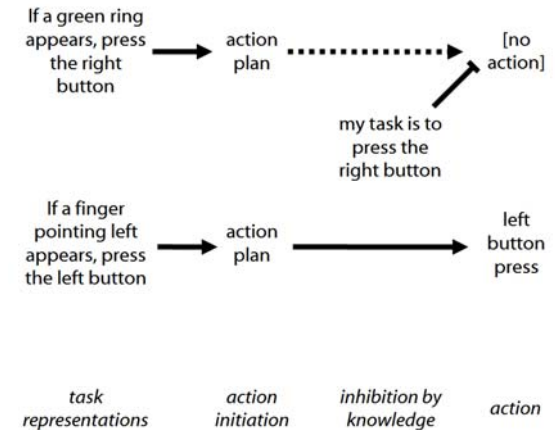
awareness of other agents Social interactions involve perception of, or belief about, others' involvement in a task rather than the mere fact of their presence.

no awareness of coordination needed Perception of, or belief about, another agent's involvement must have some effect on each agent's performance, but the agents need not intend it to have any effect and may be unaware of its effects.

Shared Task Representations

An agent has a shared task representation when:

- (i) she represents one or more rules characterising her own part in a task;
- (ii) she represents one or more rules characterising another agent's part in the task;
- (iii) all rules are represented in a functionally equivalent way: that is, the representations of rules in (i) and (ii) alike dispose her to act on these rules.



In what senses is cognition social?

- i. mechanisms for action planning are mechanisms for predicting others' actions; such mechanisms make no distinction between self and other
- ii. an ability to distinguish one's own role from other agents' roles is essential for executing one's own actions (because mechanisms for motor planning treat others' roles exactly as if they were one's own and so rely on inhibition)

References

1. Cacioppo, J.T., and Hawkley, L.C. (2009) Perceived social isolation and cognition. *Trends in Cognitive Sciences* 13, 447-454
2. Regier, T., and Kay, P. (2009) Language, thought, and color: Whorf was half right. *Trends in Cognitive Sciences* 13, 439-446
3. Scott, L.F. (1956) Television and School Achievement. *The Phi Delta Kappan* 38, 25-28