

‘Can the situated cognitive loop hypothesis be supported by the notion of self-consciousness?’

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The Developmental Paradox

Violation of expectation or Spontaneous Response False Belief Test (SR-FBT)

- False belief understanding at an earlier age: 15-month-olds (even 7-month-olds)
- No explicit verbal answer required
- False belief understanding inferred from their spontaneous behaviour
- When asked they answered incorrectly

Elicited Response False Belief Test (ER-FBT)

- Verbal predicative answer is demanded
- 3-year-olds typically give a wrong answer, 4-year-olds answer correctly

2 Possible Solutions to the Developmental Paradox

**Leon de Bruin and Lena Kästner:
Reconciliatory based solution by dynamic embodied cognition**

- Coupling/decoupling from one's environment
'Even very basic social capacities involve decoupling....the ER-FBT involves stronger offline processing than the SR-FBT' (2012)

2 Possible Solutions to the Developmental Paradox

Anna Ciaunica-Garrouy: The situated cognitive loop hypothesis

- Agrees that there is a failure in the dynamic interplay between coupling/decoupling/recoupling
- But disagrees that failure emerges because 4-year-olds involve stronger decoupling demands
- Rather it is because they have to verbally interact with the experimenters in certain time 'tell me *now*' (that generates a supplementary 'nonlinear' cognitive loop)

Back to the initial question

- “Can the situated cognitive loop hypothesis be supported by the notion of self-consciousness?”

Why self-consciousness?

- False belief tests are special forms of social cognition. In intersubjective situations we have to distinguish myself from other subject, and be able to ascribe other subjects the property of their own self-awareness.
- “...we should find that self-awareness and the awareness of other minds develop in parallel” (Musholt, 2012)
- Matching the third person perspective with the first person perspective
- Mirror neurons

Self-consciousness and intersubjectivity

- 9-12-month-olds: skills of shared intentionality, they perceive others as animate, goal-directed, intentional agents, they possess motivation to share emotions, experience and activities with others
- 18-24-month-olds: mirror self-recognition, child is aware that there is a third person information about the self; subject among other subjects
- 24-month-olds: others have mental states, and they may have different perspectives on the same world, but so far it is still implicit; theory-of-mind-in-action without concepts or conscious accessibility
- 4-year-olds: **explicit** theory of mind, distinguish between propositional attitudes and propositional content

Forms of Self-consciousness

Phenomenal (pre-reflective)

- We are able to distinguish between self and non-self.
- This distinction is tied with experience.
- Experience has a subjective value („miness“) that is implicit.
- Nonconceptual, immediate awareness of oneself mental and bodily states, but it does not mean that we understand them

(Zahavi 1998)

Explicit self-representation (reflected)

- Its object of observation is pre-reflective self-consciousness.
- Ability to think ‘I’ thoughts that are about oneself
- It is time enduring.

(Musholt 2012)

Self-consciousness in False Belief Tests

Spontaneous Response - FBT

- Pre-reflective
- Overt, here-and-now
- Coupled

Elicited Response - FBT

- Need to involve reflection:
“**I think** Sally will look...”
- Decoupled
- My “I” is different from Sally’s “I”
- Prediction to the future – where **will** Sally look
- **Explicit theory of mind**

Conclusion

- There is no need to involve reflective self-consciousness in SR-FBTs, since there is no verbal response demanded. (If there is a verbal response demanded, then infants fail to answer it correctly.)
- There is also no need to decouple since no prediction to the future is demanded, and mere observation of a situation is coupled.
- In ER-FBTs there is a verbal response demanded, so reflective self-consciousness and theory of mind are activated, therefore cognition is decoupled.
- If we accept all the statements above, then we can accept the situated cognitive loop hypothesis.
- **But SCLH still has to answer** why 3-year-olds answer incorrectly when 4-year-olds answer correctly in the same test with the same verbal and time demands if it is not because of their ability to decouple stronger (involve reflective self-consciousness and theory of mind).

Resources

- De Bruin, Leon; Kästner Lena. (2012). Dynamic Embodied Cognition. *Phenom Cog Sci.* 11: 541-563.
- Musholt, Kristina. (2012). Self-consciousness and Intersubjectivity. *Grazer Philosophische Studien.* 84:75-101.
- Tomasello, Michael et al. (2005). Understanding and Sharing Intentions: The Origins of Cultural Cognition. *Behavioral and Brain Sciences.* 28: 675-691.
- Zahavi, Dan. (1998). Phenomenological Consciousness and Self-awareness: a phenomenological critique of representational theory. *Journal of Consciousness Studies.* 5: 687-705.