

Language & Thought

A talk on *Magic Words: How language augments human computation* by Andy Clark

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Abstract

- Language is a tool: not only for communication,
⇒ also for thinking
- The Extended mind: Cognition is not only in the brain,
⇒ also in our tools
- No need for nativism: language introduces new concepts to us
in a prepackaged format

Supra-Communicative views on Language

“Vygotsky [...] pioneered the idea that language has a profound effect on cognitive development”

inner speech ⇒ eg., rehearsing steps to solve a problem

scaffolded action ⇒ reliance on external support
(tools, knowledge, skills etc.)

Dennett:

- speaking affects the behavior of others, but also of ourself!
- learning language means reprogramming the mind:
⇒ language as serial machine implemented on a connectionist architecture.

Just as books augment the intelligence of their readers:



Six ways in which language augments human computation

- memory augmentation
- environmental simplification
- coordination and the reduction of on-line deliberation

Six ways in which language augments human computation (continued)

- taming path-dependent learning
- attention and resource allocation
- data manipulation and representation

Mangrove forests



Meta-cognition: thinking about thinking

“Public language and the inner rehearsal of sentences would, on this model, act like the aerial roots of the Mangrove tree – the words would serve as fixed points capable of attracting and positioning additional intellectual matter, creating the islands of second-order thought so characteristic of the cognitive landscape of homo sapiens.”

The extended mind

Where does the mind end and the world begin?

- 'Internal' representations piggyback on external tools:
 - ⇒ 'internal code' is not universal nor a 'language of thought'
 - ⇒ why would we need a strict separation between data and process?
- Language is the crystallization of centuries of wisdom and thought:
 - ⇒ language crosses the boundaries between mind, body and world

Conclusion

- Language is a tool: not only for communication, also for thinking
- The Extended mind: Cognition is not only in the brain, also in our tools
- No need for nativism: language introduces new concepts to us in a prepackaged format

Bibliography



Andy Clark, *Magic words: How language augments human computation*, in *Language & Thought*, P. Carruthers and J. Boucher (eds.)