



Thought as conversation

Description

Cogitating, rehearsing ideas in the mind, is a highly advantageous byproduct of our ability to converse with one another. That is, the ability of human beings to think things through silently and privately has developed along with the human ability to communicate with one another in language.

Some theorists even assert that conversation comes first; followed by the ability to talk out loud to yourself as if in a conversation; followed by the even more sophisticated capacity to conduct the whole conversational process in private, and without vocalising. That's thinking.

This view prioritising conversation over thought runs counter to a straight information processing model, that assumes language developed as a means of expressing internal thoughts, as if language serves to articulate pre-formed thoughts.

The view with which I began of the social origins of thought aligns with psychologist Lev Vygotsky's (1896-1934) influential sociocultural theory, which argues that higher mental functions develop initially through social interaction and are later "internalized" as the cognitive processes of an individual.

Evidence for thought as conversation

Adopting Vygotsky's position, there are two bodies of evidence for this conjecture. One is the behaviour of very young infants who "think out loud" before they can verbalise privately and "internally." But there's the longer term development of the ability to think within humans and primates as species.

Apart from looking to species evolution, I think we can draw on cultural evidence for the primacy of conversation, e.g. via our affinity with the Socratic style in teaching and writing: A Q&A, conversational approach to developing and imparting knowledge. In Socratic mode, any speaker or writer can assume the role of two or more interlocutors and alternate their positions, as if in a conversation. We are primed for conversation, even when delivering monologues.

The primacy of conversation over abstract thought helps account for the lack of deliberative, “slow” thinking, in LLM-based AI. See [previous post](#). Due to the spontaneous nature of neural network processes, conversational AI generates responses in “fast” mode, i.e. responses to inputs and its predictions word by word of the next output in a sequence that resembles an appropriate response to a prompt.

Improv

A “fast thinking” response is like blurting out an instinctual response without actually “thinking”. To deliver communications instantly is a non-trivial human skill. We exercise this improv skill every time we speak. We applaud people who can “speak on their feet”. But we also denigrate rapid improvisation when we identify people who “say the first thing that comes into their heads” and deliver points of view that are borne of their unfettered biases.

It just so happens that, like an adept and intelligent human being, what conversational AI (following the GPT model) “blurts” out is the product of training and processes that match and in many cases exceeds the cognitive acuity of an adept human conversant.

If we take the view that thought is or is like conversation, might an AI that “talks to itself,” or to other models trained on different data simulate this deeper type of cognitive reflection? Such an AI might challenge assumptions, revise its own biases, or reach consensus or agreements to differ.

AI that talks to itself

I put this prospect to ChatGPT, which commended this approach to improved AI as a research theme, but highlighted technical challenges: the complexity of integrating and managing multiple AI agents; the need for revised training regimes that favour contributions to conversations “rather than merely replicating or amplifying existing biases or errors from the training data”; and the inability of AI to do what humans do.

Machines lack consciousness, emotions, and personal experiences that often inform human reflection and ethical reasoning. Any AI approximation of human thinking would still be a simulation, lacking these human elements.

I detect a note of caution trained into this response, as the prospect of AIs that talk to one another animates many apocalyptic AI scenarios.

Reference

- Vygotsky, Lev. *Thinking and Speech*. Cambridge, MA: MIT Press, 1962. Written in 1934. <https://www.marxists.org/archive/vygotsky/works/words/index.htm>

Note

- Featured image by ChatGPT: The banner image for your blog, crafted in the spirit of Russian Constructivism and inspired by the graphic you provided, is ready. It reflects a fantastical architectural structure that symbolizes the complexity of AI chatbot interactions.

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- Artificial Intelligence

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- conversation
- thought

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