Mindsponge

Thinking without language

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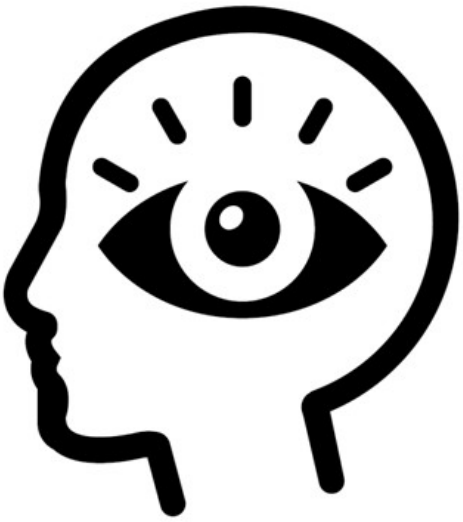
Can we think without language?

Two researchers from the University of Nevada – Christopher L. Heavey and Russell T. Hurlburt – think the answer is yes. They coined the term "unsymbolized thinking" in a study about the inner experience in 2008, which aims to examine the frequency of five common phenomena of inner experience: inner speech, inner seeing (a.k.a. images), unsymbolized thinking, feeling, and sensory awareness [1]. Specifically, unsymbolized thinking was defined by Heavey and Hurlburt as "a particular, definite thought without the awareness of that thought's being conveyed in words, images, or any other symbols". Using the Descriptive Experience Sampling method on ten randomly identified moments of inner experience from each of 30 selected participants, the researchers found that unsymbolized thinking was the second most frequent experience, with 25% of the collected samples. Moreover, half of the participants experienced unsymbolized thinking in at least a quarter of their samples.

The idea that humans can think without language is also supported by Evelina Fedorenko, a neuroscientist at MIT's McGovern Institute, and Rosemary Varley, a neuroscientist at University College London [2]. The available evidence indicates that the damage to a set of brain regions supporting linguistic processing adversely affects the person's ability to interpret and produce language, but not other thinking processes, such as logical and mathematical problem solving, music appreciation, navigation, etc. Moreover, the scientists also find that the brain regions robustly associated with linguistic activities are generally not active when the person involves in non-linguistic tasks, like arithmetic, storing information in working memory, listening to music, etc. [3].



Humans can think without language, illustrated by Arafat Uddin https://commons.wikimedia.org/wiki/File:Noun_Eye_1325498.svg

If humans can think without language, the mindsponge mechanism must take this idea seriously. Most studies using mindsponge as a theoretical framework until now have implicitly assumed that the processed information carries meanings expressed by language, leaving a blind spot in explaining non-linguistic mental processes [4-6]. Incorporating the idea of non-linguistic thinking into the mindsponge mechanism can improve its explanation power toward mental processes not involving language (e.g., feeling, logical problem-solving, navigation, motor control), but it certainly will require multiple systematically designed long-term projects to be fulfilled.

References

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