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Comment

Words as social tools: The old and the new. Bridging cognition and communication
Comment on "Words as social tools: Language, sociality and inner grounding in abstract concepts" by Anna M. Borghi et al.

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The grounding of abstract concepts (ACs) in sensorimotor experience is a challenge for the embodied cognition approach. A number of proposals addressing this issue have been made in the last years [e.g., 1,2]. Importantly, although Borghi et al. [3] claim that ACs are grounded in the linguistic system (p. 12), this is not the same grounding in bodily experience the embodied cognition is looking for [cf. 4]. Borghi et al.'s grounding refers to the inner speech necessary "to re-explain to ourselves word meaning" or "to prepare ourselves to ask the word meaning to others" (p. 40). This simply re-instantiates the Chinese room problem: words must be related to something different from other words in order to have meaning.

However, another potential grounding mechanism received less attention in WAT. The linguistic labels are less important for concrete concepts (CCs), since their learning relies more on perceptually available similarities across multiple instantiations, while for ACs linguistic labels are more important, serving as "a sort of "glue", keeping sparse experiences together" (p. 12). This view extends Barsalou's [5] proposal by highlighting the role of other people in ACs learning. Someone must provide a child with the label for very different experiences in order to create an AC in the child's mind. Thus, the difference between CCs and ACs is not a qualitative one, as both consist of labels and corresponding real-life experiences, but a quantitative one: in the structure of an AC the socially provided label has much higher weight. This approach implies a continuum between ACs and CCs with gradually increasing role of culture and social experience when moving toward an abstract pole.

It is important not to overlook the true novelty of WAT by focusing on the "words defined by other words" problem. By establishing a link between two cognitive mechanisms, namely the learning of ACs and social interactions, WAT bridges two different fields of research – cognitive and communicative studies. If others play an important role in formation of ACs via communication, then (embodied) communicative practices in a given community are directly related to ACs shared by members of that community. ACs, considered as the basis of high-level cognition, are taught by members of the community, and only their acquisition enables an individual to be a part of the community and to (inter)act efficiently in this community. In the play "Pygmalion" by G.B. Shaw (1912), it was not enough for

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flower girl Eliza to learn another pronunciation to become a duchess. She also had to change the content of her verbal communication and the ways to express herself. WAT opens a discussion about embodied mechanisms of socializing which encompass not only the development of abstract thinking in children but also integration into a different culture, or into a different social group within the same culture. Understanding embodied aspects of socializing or acquiring ACs, in terms of WAT has implications for education at all levels, as well as for organizational psychology and migrant integration.

Investigating the relationship between abstract thinking and communication is also promising for basic cognitive research on ACs. While for CCs their functional role is often obvious (e.g., tools or food), the functional role of ACs remains less clear. Consider the widely accepted idea of affordances [6]: The cognitive interaction between the physical structure of an object and the body of its perceiver results in specific priming of behaviours. This view can be extended to abstract concepts. If ACs are also tools, then their role in social reality might be similar to the role of CCs in physical reality. In neuroscientific research, the functional relevance of a particular brain area for concept comprehension is thoroughly investigated [7, p. 442]. The same problem can now be approached from another side by asking what the function of a given AC is, and what social practices are involved in its learning; based on this query, the functional relevance of particular neurocognitive systems might be predicted. This issue is closely related to the difficulty to classify ACs – it is clear that names of emotions have very different uses compared to, for example, scientific terms. Accordingly, different systems should be involved in understanding these two kinds of ACs. Establishing such a two-pronged approach to the classification of ACs is crucial for further progress in understanding abstract thought in general.

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