Learning and processing abstract concepts

Gabriella Vigliocco (Institute for Multimodal Communication, UCL)

I will present an overview of our work on the representation and learning of abstract concepts and words. It is generally assumed that abstract concepts are linguistically coded, in line with imaging evidence of greater engagement of the left perisylvian language network for abstract than concrete words. During development, learning of abstract words (e.g., mental states) is also taken to be based primarily on linguistic information (e.g., children would learn the meaning of abstract words making inferences from the meaning of co-occurring words). Our behavioural, imaging and developmental work, however, indicates that this is not the whole story as emotional associations also play a role. In particular, abstract words tend to be emotionally valenced and therefore engage emotion networks in their processing. Moreover, we have found that 6-9 years old children process abstract emotion words better than abstract words without emotional associations (whereas such a difference disappears after 10 years of age). Finally, we have shown that children with specific language impairments do not show greater difficulties with abstract words. On the basis of these findings, we have argued against views in which abstract words and concepts would be solely linguistically coded. I will close the talk sketching our hybrid model of semantics according to which better semantic representations develop by integrating experiential (sensory-motor, affective) and linguistic information.