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On the interaction between cognition and inflectional morphology.

While hypotheses on how language can affect cognition have been investigated extensively, the reverse prospect has remained largely unexplored. Indeed, if language and cognition can interact with each other, it seems likewise reasonable to wonder whether cognitive abilities common to human beings have somehow constrained language possibilities.

Inflectional morphology is the ideal testbed when it comes to exploring this link. In fact, inflection comprises a closed set of elements that are much more constrained with respect to the meaning they can encode than, for example, derivational morphology and more generally, lexical items. On this regard, inflection has never been observed to be used to encode oppositions concerning, for example, color or olfactory information. Instead, in many languages, inflectional means are very frequently used to express oppositions concerning concepts such as numerosity ('apple', singular vs 'apples', plural). Other attributes do not surface as frequently in inflectional markings, yet they are pervasive in natural languages. This is the case of animacy, that can ground grammatical gender systems as well as constrain the surfacing of grammatical number (Franzon et al. 2019, 2020).

Crucially, the concepts related to the inflectional oppositions are closely related to the information processed by the core knowledge systems. According to the core knowledge hypothesis, humans would be endowed with a set of cognitive mechanisms to represent the most relevant aspects of the environment such as inanimate and animate physical objects, places in the spatial layout with their geometric relationships, time and numbers (Spelke 2000; Carey 2009; Vallortigara et al. 2010).

In this talk, I will discuss the possibility that the information processed by these cognitive systems is so relevant that it is encoded into language grammars and shapes inflectional systems. I will show the different methodologies by which this topic can be investigated with particular reference to behavioral and event-related potential (ERP) studies on Italian grammatical gender and number systems (e.g., Arcara et al 2019; Zanini et al. 2020).

References

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