Mapping the body

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The human body is a universally shared domain of experience, yet the way it is segmented into parts greatly varies across languages and cultures of the world (e.g. Enfield et al. 2006; Majid 2010; Majid & Van Staden 2015; Devylder, 2016). To further understand the segmentation of the human body into parts across the variety of the world languages and cultures we ran two studies with a total of 120 speakers of three unrelated languages (French, Indonesian, and Japanese). More generally these two studies have broader theoretical and methodological implications in the study of linguistic and non-linguistic meaning and lead us to ask important questions about ways to interpret the unsystematic symmetry of language and cognition.

In Study 1, we compared the descriptions of 32 pictures showing people with photoshopped injuries on various parts of their body (e.g. a cut on the foot) by 30 speakers of the three studied languages (10 per language). This non-linguistic to linguistic experiment revealed interesting shared pattern and variations of body representation across cultures. For instance, French speakers never described a cut on the foot as a leg injury, whereas Indonesian participants collapsed the distinction. In contrast, speakers of all three languages marked a formal distinction when describing injuries affecting fingernails or toenails in contrast to the constructions used for all the other descriptions. To determine the existence of a hierarchical structure in the representation of the body and its parts (e.g. forearm is part of the arm) a hierarchical cluster analysis was performed within each language. The results of this analysis show interesting patterns: the Indonesian and Japanese participants make a clear distinction between parts of the upper and lower body, which they grouped together (e.g. arm vs. leg), in stark contrast with the French participants who seem to attribute a particular cognitive salience to joints (e.g. elbow & knee) which leads to a quite different architecture in the representation of their body.

Study 2 consists of an elaboration of the coloring task designed by Majid & Van Staden (2015). 90 participants (30 per language) were given a booklet containing pictures of a whole human body and asked to color-in the body part named on each page, using the list of terms provided by Study 1. The study confirmed some of the results from Majid & van Staden (ibid), but also revealed a number of interesting findings that remained unnoticed in the previous literature. For example, the fact that the Japanese term ashi could be written with two distinct characters (足 and 脚), or that there is a body part term in Indonesian (lengan) that exclude the [hand] segment as in French (bras) or Japanese (ude) were previously overlooked. We also found that the order of presentation of the stimuli had no effect on the performance of the participants, hence showing the robustness of lexicalization patterns in the three languages. Methodologically, these two studies draw attention to the pitfalls of using English as a metalanguage in semantic typology: to say that participants collapse the distinction between leg and foot implies to have already evidenced what those culturally loaded terms precisely refer to (and this has not yet been determined). We propose an alternative and more culturally neutral model for future research in the semantic typology of body representation.

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