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## **Sound symbolic implications for deictic words as a cognitively fundamental word class**

Diessel (2014) suggested that demonstratives constitute a universal and perhaps fundamental class of words alongside nouns and verbs, as there is no evidence that demonstratives evolved from content words. Deictic pointing is one of the most basic communicative devices in all cultures and deictic words are some of the most frequently used words in general, and unlike other closed class function words among the first words used by children (Diessel 2006). Basic description words (small/round/flat), basic nouns (mother/father) etc., crucial for describing the world in early childhood, are often affected by sound symbolism. Hence, heavy influence of sound symbolism could act as an indicator of the fundamental nature of concepts (Imai & Kita 2014). And thus, the sound symbolic behavior of deictic words could demonstrate their potential role as one of the cornerstones of human language.

Johansson (2014) selected 56 semantic oppositional concepts occurring in most languages. The phonetic values of the lexemes for each concept from 75 sampled languages were quantified according to different phonetic parameters. Using cluster analyses based exclusively on phonological composition, the deictic concepts were all found to be very salient and divided into three distinct groups; EGO (speaker-related), THIS-THAT-YOU-HERE (hearer-related) and THERE (other/away-related). Johansson & Carling (2015) compared spatial demonstratives from 30 contemporary and historical Indo-European languages with a reconstructed Proto-Indo-European deictic system (Beekes 1995). Although all of the languages used different systems than the Proto-Indo-European, 70 % of the forms correctly mapped higher-frequency sounds to proximal concepts and lower-frequency sounds to distal concepts. Thus, sound symbolism was reconstructed repeatedly. Johansson & Zlatev (2013) investigated possible motivations for sound symbolism in spatial demonstratives within 101 sampled languages. Six different predictions of phonemes mapped onto the proximal-distal dimension were formulated, based on (a) semiotic ground (iconic, indexical or combined), (b) speaker-centeredness, hearer-centeredness or both and (c) applicability to vowels, consonants or both. The results showed significant motivated ratios for the prediction based on vowel-frequency, which incorporated iconic factors, indexical factors, speaker and hearer.

The findings indicate that deictic words behave comparably to other fundamental concepts by using similar sound-meaning mappings, while also differing as they have no fixed denotations. Nouns and verbs may be the two most clearly universal word classes, but deictic words give them their essential internal and external relationships. This grounding, evident through sound symbolism, suggests that deictic words are a cognitively fundamental group of words in the cultural evolution of language.

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