

Perspective Taking in Signing about Space: Conflated Relative-Intrinsic Frame of Reference and Its Consequences for Conventionalization of Lexical Signs

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Several sign languages employ a conflated relative-intrinsic frame of reference in their spatial descriptions: signers talk about space and spatial configurations of objects by employing classifier constructions that show the location and orientation of the objects relative to each other (the intrinsic frame) while simultaneously importing the egocentric perspective of the signer (the relative frame) (Emmorey, 2002; Perniss, 2007; Arik, 2008; Arik & Milković, 2007). Such conflation of frames has not been described for spoken languages, and may be a unique modality-specific feature of sign languages. Nevertheless, sign languages appear to conventionalize such conflated means differently from each other; specifically, they have different preferences for what perspective is adopted in spatial descriptions, and this conventionalized choice has consequences for how spatial relations are depicted. We explore whether this conventionalized intrinsic-relative frame may have consequences for how lexical signs are conventionalized. Specifically, we hypothesize that the preference for the conflated frame may lead to conventionalization of signs in the 2D plane (using relations between the signer's hands) rather than in the 3D plane (using relations between the signer's hands and the body). Using *the Spread the Sign* corpus, we coded seven unrelated sign languages for whether 74 concepts used for spatial descriptions employ the 2D plane or the 3D plane. We show that there is a tendency in all the languages to employ the 2D signs.

Methods: four sign languages that have been investigated for perspective taking in the past (American Sign Language (ASL), German Sign Language (DGS), Turkish Sign Language (TID) and Croatian Sign Language (HZJ)) and three additional genetically unrelated sign languages: British Sign Language (BSL), Japanese Sign Language (JSL) and Chinese Sign Language (CSL). The list of glosses generated for the pilot study was further refined: only glosses that most of the seven sign languages chosen had entries for were selected for this pilot study. In addition to coding signs as 2D or 3D, some signs were coded as "Other" if they did not meet the criteria for either 2D or 3D (arbitrary signs, fingerspelled signs, etc.).

Results: For all the glosses, 44 entries were missing (range 2-14), and 6 entries had synonyms that were included in the analysis. The dataset consisted of 480 entries. 296 entries (61.7%) were classified as 2D, 118 (24.6%) as 3D, and 66 (13.75%) as "Other". 2D signs constituted the largest group in every sign language in the study, with the range between 54% and 71%. 3D signs ranged between 17% and 29.5%. The range of "Other" signs was 11%-17%. The difference in type distribution among the seven sign languages was not statistically significant ($\chi^2(12) = 8.149, p = 0.773$).

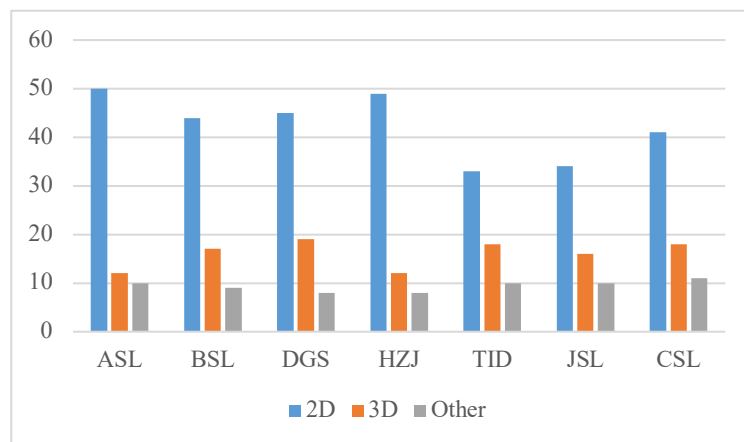


Fig. 1: The number of tokens of each type of signs per sign language.

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