Disjunction, non-manuals, and scalar implicatures in British Sign Language

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Abstract

How are conjunction (“and”) and disjunction (“or”) expressed manually and non-manually in British Sign Language (BSL), and what is the linguistic status of non-manual contributions? Scalar implicature studies of exclusivity inferences from disjunction in spoken/written forms (the likelihood that a disjunction was intended to imply an exclusive “either but not both” meaning as opposed to an inclusive “either or both” meaning) have demonstrated that the contextual presence of prosodic/orthographic contrastive stress (“You can have a biscuit *or* a cake”) can reliably increase the receiver’s strength of belief that an exclusive meaning was intended. However, scalar implicatures in sign languages have been studied extremely rarely. This study explores conjunction and disjunction in a sample of BSL Corpus conversation data, and uses those findings to inform the design of an experiment which examines the effects of linguistic context and language acquisition history on the relative strength of exclusivity inferences from BSL disjunctions. A hierarchical clustering analysis of the BSL Corpus data indicates that contrary to assertions made for some other sign languages, there is no robust association between specific forms of co-occurring non-manual feature and coordination types in the sample, with the qualified exception of English mouthings. It is conjectured that such forms (such as body leans and brow movements) are better characterised as prosodic rather than morphosyntactic. This conjecture was then tested in a scalar implicature judgement task experiment. Deaf adult BSL users were exposed to short descriptions of picture stimuli given by a video “guessing game partner”. Test conditions elicited exclusivity inferences from disjunctive statements using a continuous rating scale paradigm; control conditions were designed to verify semantic understanding and reinforce the accessibility of the stronger scalar alternatives. The lexical structure of the coordinations and contrastive non-manual prosody over the coordinates were manipulated per trial item; the participants were grouped by age of BSL acquisition and English reading accuracy score. Bayesian mixed effects modelling indicates that for participants with more language experience, where the lexical context is minimal, contrastive non-manual prosody has a tendency to increase the strength of exclusivity inferences, as predicted based on findings from analogous spoken language studies. For those with less language experience, lexical context is more influential, but readings are generally more inclusive across the board. These findings are argued to be better explained by “probabilistic pragmatics” accounts of implicature as opposed to neo-Gricean accounts, and to further support the characterisation of non-manual marking of BSL coordination as prosodic. It is also suggested that contemporary pragmatics accounts (such as the Rational Speech Act framework) can accommodate the earlier neo-Gricean “restricted alternatives” hypothesis by explicitly accounting for the differing costs of the retrievability of semantic contrasts by individuals with differing language acquisition experiences.