

Constraints on interactions between morphological processes and gesture in signed languages

Introduction

Through cross-linguistic comparison of 4 morphological processes in German Sign Language (DGS) and American Sign Language (ASL), this poster addresses the following research questions:

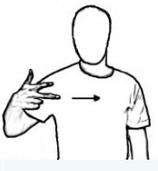
- Are there are modality effects on sign language structure with at the morphological level?
- What roles, if any, do iconicity and gesture play at the morphological level in sign languages?

Background

- Each morphological process consists of combining different parameters (HS = handshape, LOC = location, ORI = orientation, MVT = movement) for each morpheme, as illustrated in the morphological decomposition below
- Each morpheme may be realized as a Vocabulary Item (VI) in the sense of the Distributed Morphology framework
- Only in verb agreement and classifier constructions, a certain morpheme does not have a specific realization

Conclusion

- Only in certain morphological processes, i.e. verb agreement and classifier constructions, the realization of certain morphemes is mediated through interaction with a specific type of gesture; similar phenomena may occur in spoken languages with co-speech gesture, but they are optional, suggesting that certain morphological processes in sign languages display modality-specific properties
- Otherwise, all of the morphological processes allow other, optional interaction with gesture (e.g. increased speed of movement or facial expression) – this could be considered co-sign gesture, analogous to co-speech gesture, and suggests modality-neutral properties at the morphological level as well

	Example	Morphological decomposition	Each morpheme (VI) fully specified?	Interaction with iconicity and gesture?
Numeral incorporation Mathur and Rathmann (2010), Liddell (1996)		THREE + WEEK ↙ ↘ HS HS LOC LOC ORI/MVT ORI/MVT	Yes	Each morpheme may have iconic / gestural roots at lexical level Interaction with gesture optional
Aspectual modulations Rathmann (2005), Wilbur (2003)		STUDY + continuative ↙ ↘ HS HS LOC LOC ORI/MVT ORI/MVT	Yes	Each morpheme may have iconic / gestural roots at lexical level Interaction with gesture optional
Verb agreement Rathmann and Mathur (2011), Lillo-Martin and Meier (2011)		nonfirst person + ASK + first person ↙ ↘ HS HS LOC LOC ORI/MVT ORI/MVT	No: Nonfirst person morpheme	Realization of nonfirst person morpheme mediated through interaction with <u>deictic</u> gesture Other interaction with gesture optional
Classifier constructions Mathur and Rathmann (2017), Zwitserlood (2003)		classifier(VEHICLE) + ROOT('Move') ↙ ↘ HS HS LOC LOC ORI/MVT ORI/MVT	No: Root morpheme	Realization of root morpheme mediated through interaction with <u>iconic</u> gesture Other interaction with gesture optional

Discussion

- While there has been extensive discussion on the role of gesture and iconicity in the linguistic structure of sign languages at various levels (e.g., lexical, syntactic, and semantic), this poster provides a comprehensive and integrated picture of the role of iconicity and gesture at the morphological level
- Mediating the realization of certain morphemes through interaction with a specific type of gesture (deictic or iconic) occurs in other morphological processes in sign languages as well, e.g. gradable constructions
- Such mediation correctly predicts cross-linguistic similarities across sign languages with regard to these morphological processes; otherwise, there is cross-linguistic variation

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