

BACKGROUND: CONSTRUCTED DIALOGUE AND PROSODY

A sequence of **plain telling (PT)** is a communicative act without constructed action whereas **constructed dialogue (CD)** consists in the enactment of a communicative act (Clark & Gerrig, 1990; Tannen, 1986; Hodge & Cormier, 2019). In **spoken languages**, CD can be foregrounded as depictive through **prosody**, e.g., duration, loudness, and pitch (Clark & Gerrig, 1990; Stec et al., 2016; Fine, 2019). In **signed languages**, the same function has been claimed to be mostly fulfilled by **non-manual articulators**, e.g., gaze, head, etc. (e.g., Hermann & Steinbach, 2012) rather than through **manual prosody** (but see Parisot & Saunders, 2022).

DO FinSL SIGNERS FOREGROUND CD SEQUENCES (NON-)MANUALLY?



Comparing the Kinematics of Plain Telling and Constructed Dialogue in Signed Discourse:

A MOTION-CAPTURE STUDY OF FinSL NARRATIVES

Sébastien Vandenitte
Anna Puupponen
Doris Hernández
Tommi Jantunen
Sign Language Centre
University of Jyväskylä



Research Council of Finland



JYVÄSKYLÄN YLIOPISTO
UNIVERSITY OF JYVÄSKYLÄ

Clark, H. H., & Gerrig, R. J. (1990). Quotations as Demonstrations. *Language*, 66(4), 764–805. • Cormier, K., Smith, S., & Sevcikova-Sehyr, Z. (2015). Rethinking constructed action. *Sign Language & Linguistics*, 18(2), 167–204. • Crasborn, O., & Sloetjes, H. (2008). Enhanced ELAN functionality for sign language corpora. In O. Crasborn, T. Hanke, E. Efthimiou, I. Zwitterlood, & E. Thoutenhoof (Eds.), *Proceedings of 3rd Workshop on the Representation and Processing of Sign Languages*. European Language Resources Association (ELRA). • Fine, J. C. (2019). 'They just had such a sweet way of speaking': Constructed voices and prosodic styles in Kodiak Alutiiq. *Language & Communication*, 67, 1–15. • Fokkema, M., Edbrooke-Childs, J., & Wolpert, M. (2021). Generalized linear mixed-model (GLMM) trees: A flexible decision-tree method for multilevel and longitudinal data. *Psychotherapy Research*, 31(3), 329–341. • Herrmann, A., & Steinbach, M. (2012). Quotation in sign languages: A visible context shift. In I. Buchstaller & I. Alphen (Eds.), *Quotatives: Cross-linguistic and cross-disciplinary perspectives* (Vol. 15, pp. 203–228). John Benjamins Publishing Company. • Hodge, G., & Cormier, K. (2019). Reported speech as enactment. *Linguistic Typology*, 23(1), 185–196. • Jantunen, Tommi; Wainio, Tuija; Burger, Birgitta. Project data of ShowTell – Finnish Sign Language MoCap corpus. 10.17011/jyx/dataset/83520 • Parisot, A.-M., & Saunders, D. (2022). Character perspective shift sequences and embodiment markers in signed and spoken discourse. *Languages in Contrast*, 22(2), 259–289. • Stec, K., Huiskes, M., & Redeker, G. (2016). Multimodal quotation: Role shift practices in spoken narratives. *Journal of Pragmatics*, 104, 1–17. • Tannen, D. (1986). Introducing constructed dialog in Greek and American conversational and literary narrative. In F. Coulmas (Ed.), *Direct and Indirect Speech* (pp. 311–332). De Gruyter Mouton.

COLLECTING A MOTION-CAPTURE DATASET OF FINSL NARRATIVES

30 narrative retellings of *Ferd'nand* comic strips by 6 Finnish Sign Language (FinSL) signers (Jantunen et al., 2022):

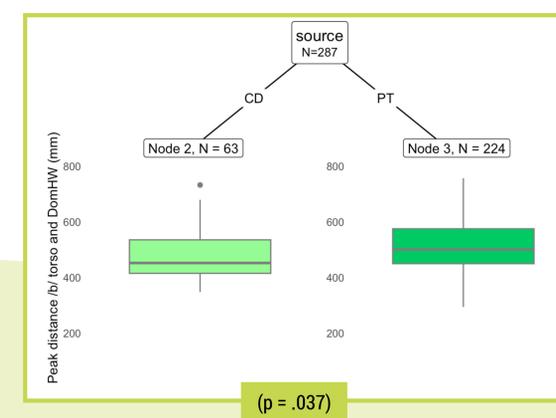
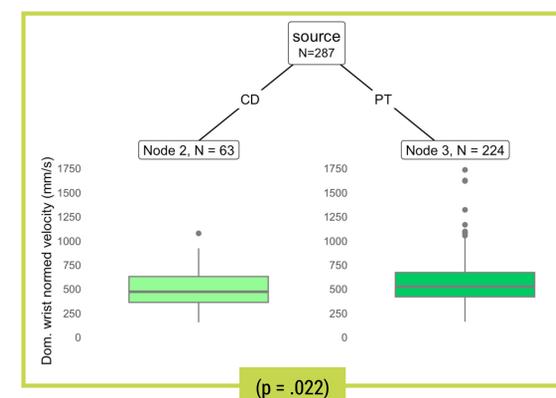
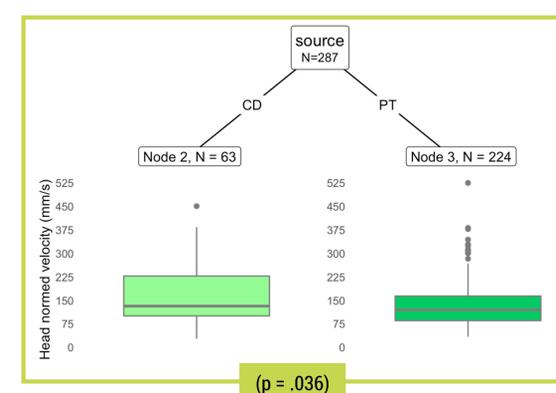
Video materials annotated for CA types and CD in ELAN (Crasborn & Sloetjes, 2008; Cormier et al., 2015) and motion capture system tracking 25 reflecting ball-shaped markers.

DATA PREPARATION

'Mocap Toolbox' (Burger & Toiviainen, 2013) to extract the kinematics of **PT** (224 tokens) and of **CD** (63 tokens): mean bounding rectangle, velocity, acceleration (**dominant hand wrist, head, and torso**), fluidity, complexity (**dominant hand wrist**), mean & peak distance (**dominant hand wrist and mid-torso**).

RESULTS

We perform the comparisons using linear mixed model trees with *glmertree* (Fokkema et al., 2021) to factor in inter-individual variation and varying annotation durations. The participants' dominant wrist movements were **slower** and traveled **shorter** distances in **CD** than in **PT**. Conversely, **faster head** movements were found in **CD** compared to **PT**.



DISCUSSION & CONCLUSION

- CD sequences are typically short: they consist in 1-3 signs and involve fewer preparation and retraction movements.
- Tokens of CD could be foregrounded from telling material with both non-manual articulators (here, head movement velocity) and stiller manual prosody.
- Future research should study local kinematic differences (actual foregrounding?) and the effect of discourse genre (e.g., conversational data).