

- 1. Research question**
- 3 groups : Native, Near-Native and Late Signers
 - Several linguistic criteria involved in (Dis)Fluency ⇒ Different behaviour according to language background?

2. Background

- Impact of a delayed L1 Acquisition at the level of Proficiency and Comprehension (Mayberry 1991)
- Lack of studies at the level of Fluency and Production

3. Theoretical framework

Componential approach of (Dis)Fluency (Götz, 2013)

- Combination of measurable markers (fluencemes)
- Not only interruptions of the flow of speech, hesitations
- But also strategies to manage the discourse

4. Methodology

3.1) Data selection on extra-linguistic criteria

4 min/signer of unprepared semi-interactive discourse

Deaf signers of LSFB	4 Native	4 Near-Native	4 Late
Parents status	Deaf	Hearing	Hearing
Age of LSFB acquisition	From birth	Before 6	After 9
Education	With Deafs	With Deafs	With Hearings

3.2) Annotation of linguistic criteria in ELAN

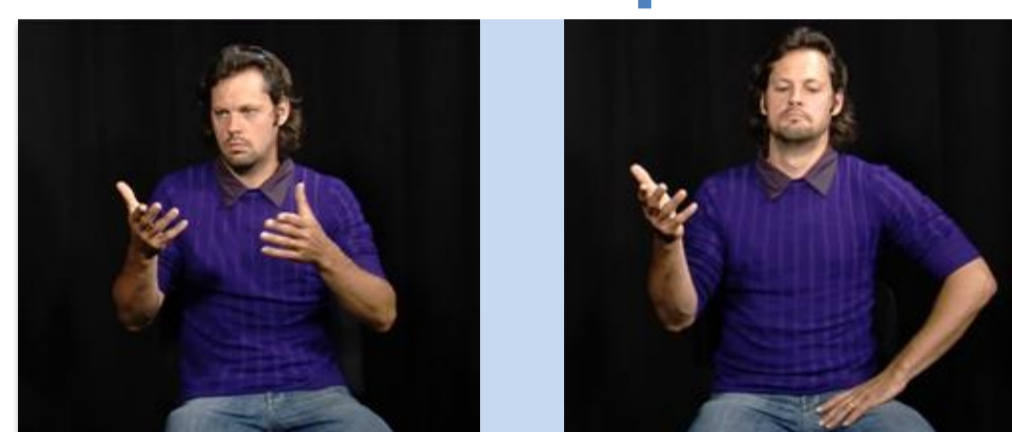
Markers of (dis)fluency (fluencemes):

- Palm-ups
- Stops of the hands between signs
- Word search gestures
- Truncations
- Gaze directions
- Co-occurring non-manuals

3.3) Data analysis in Excel and SPSS

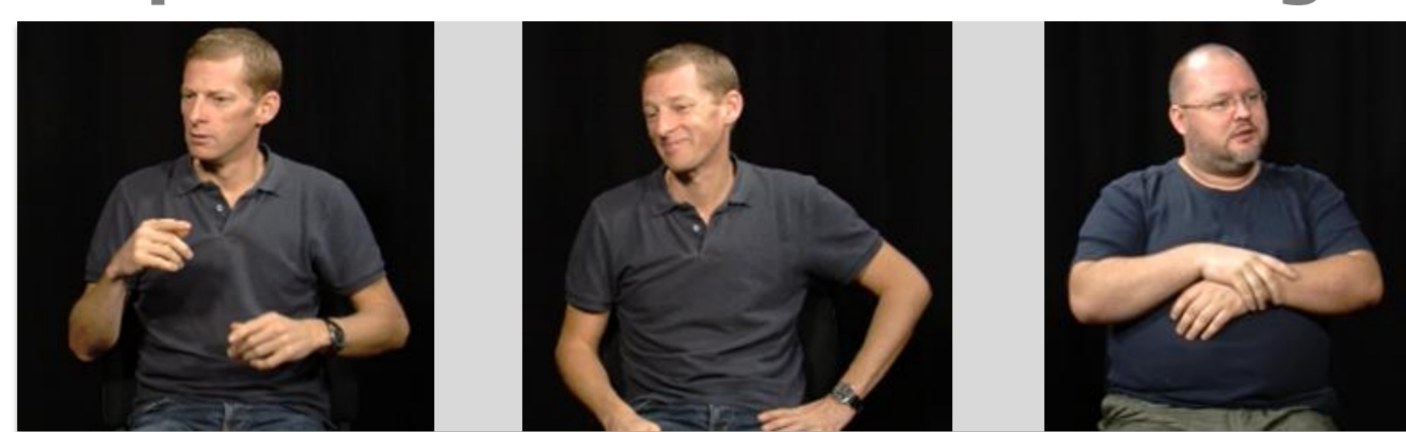
- Speed and use of both hands
- Frequency and Ratio of fluencemes
- Mean comparison and correlation

Palm-ups



Two hands One hand

Stops of the hands between signs



Neutral On the body Crossed

Signs articulated with one hand



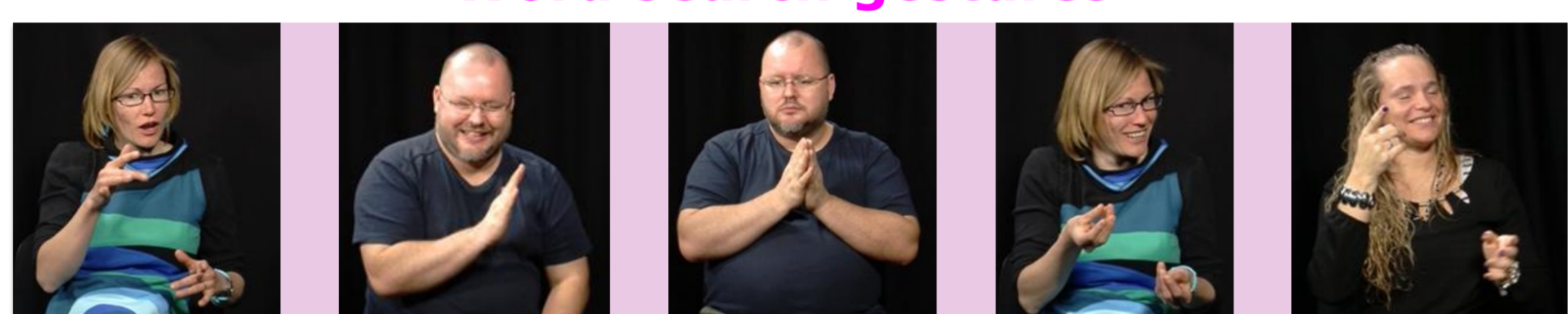
Preferred Non-preferred

Signs articulated with two hands



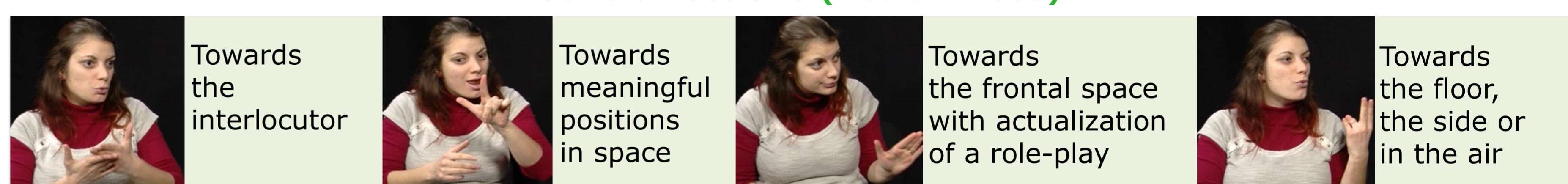
Asymmetrical Symmetrical Simultaneous

Word search gestures



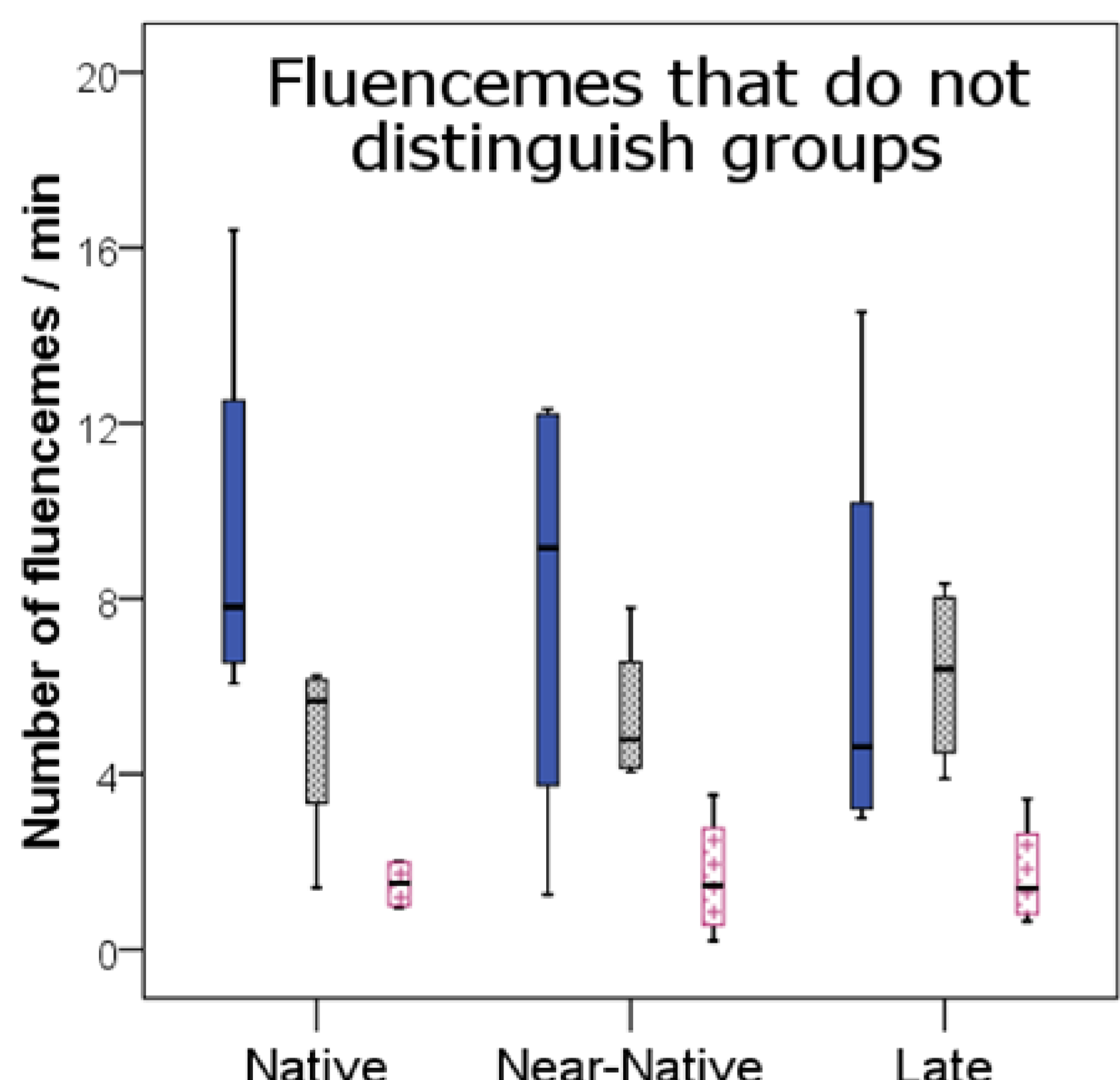
Waving Back Clapping Rubbing Flying index

Gaze directions (Meurant 2008)

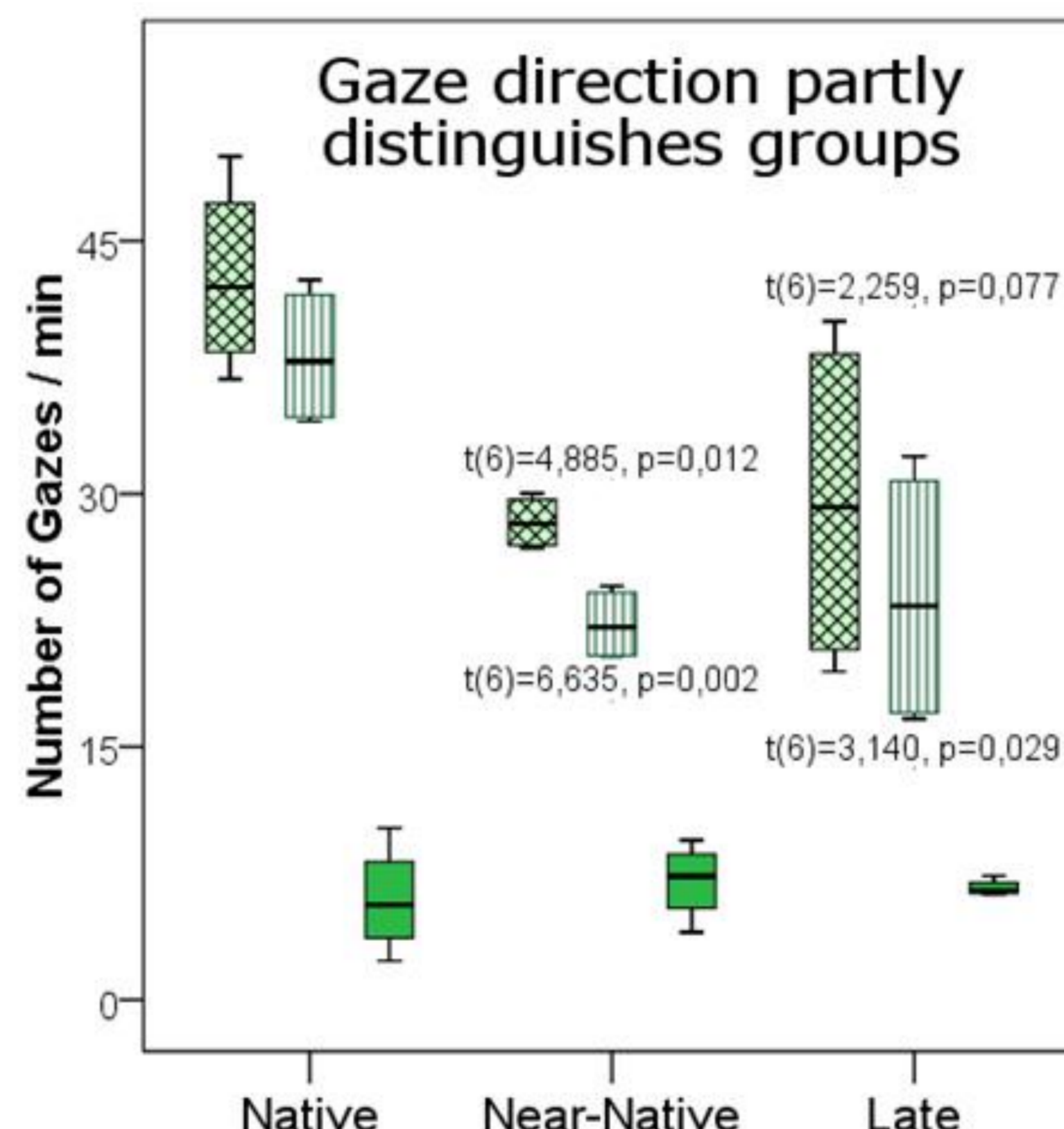


Addressed Spatialized_1 Spatialized_2 Floating

5. Results



- Palm-ups
- Stops between signs
- Word search gestures



- Addressed Gaze
- Spatialized Gaze
- Floating Gaze

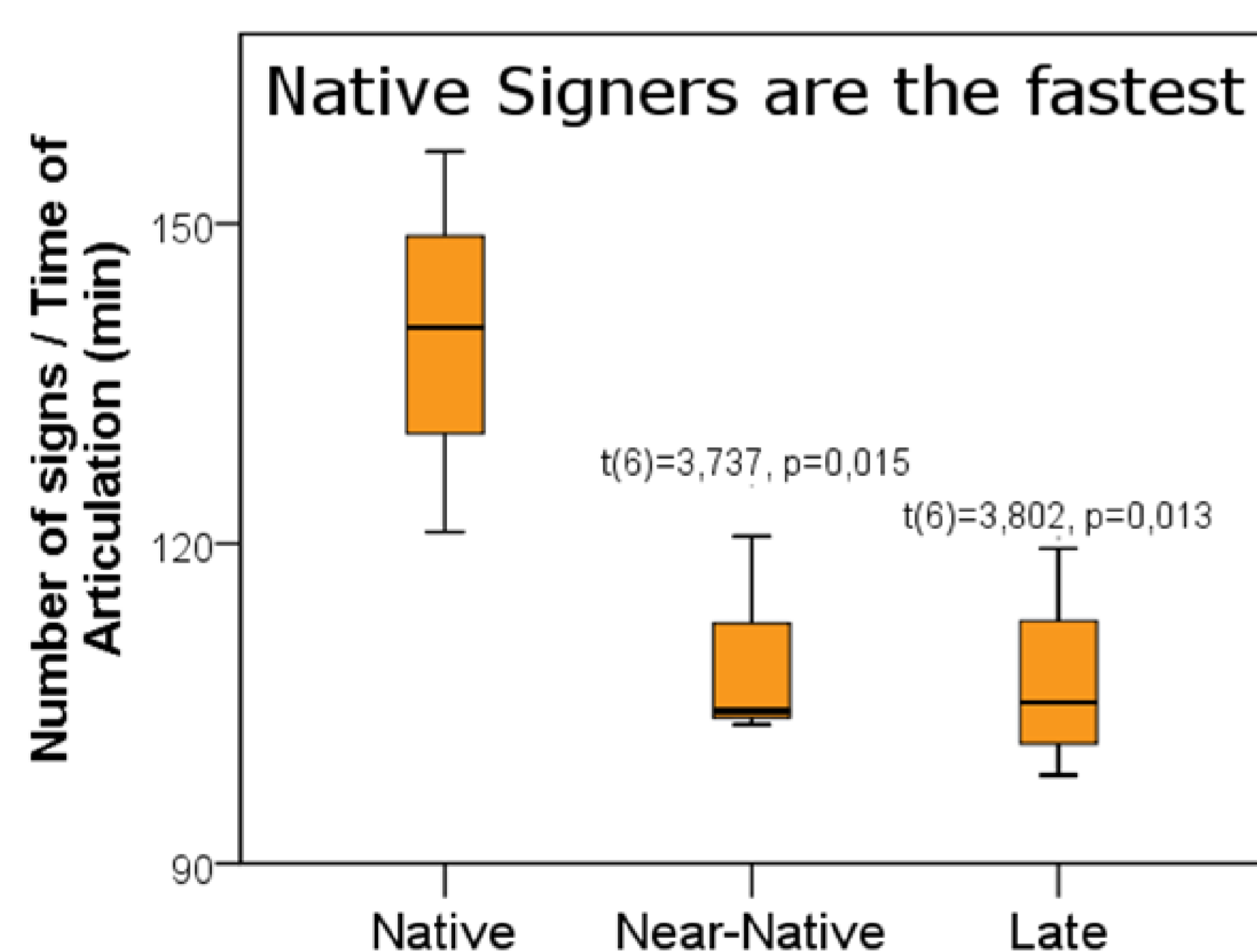
Co-occurring Non-manuals (Notarrigo & Meurant 2014):

Native Signers prefer modality and phatic functions

Near-Native and Late Signers prefer using emphasis

Slight tendency:

Native Signers do more truncations (4/min vs 3/min) than Near-Native and Late Signers



Why ?

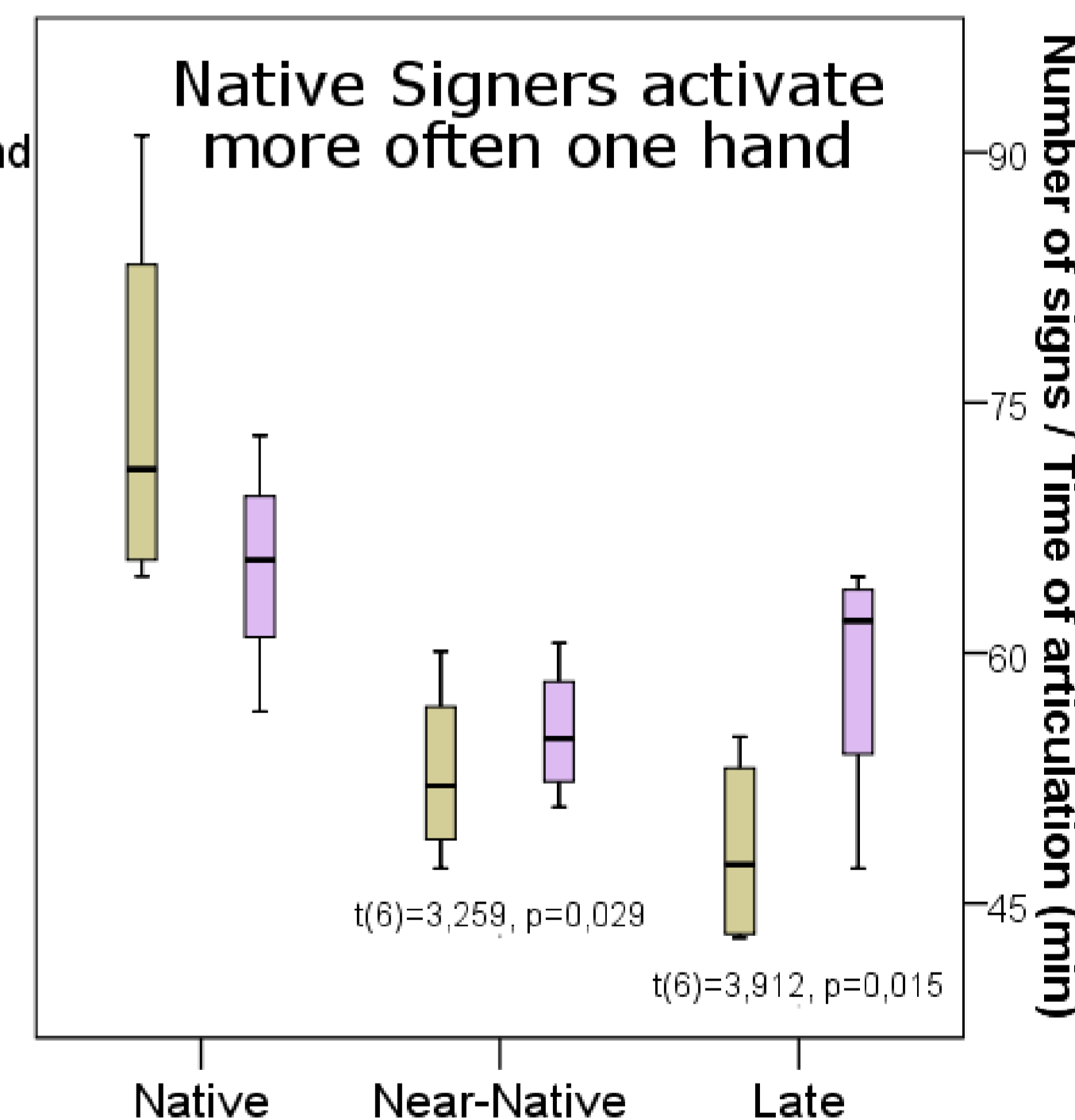
No influence of above fluencemes

No influence of break time

Maybe different articulation strategies

➤ Track: activation of one or two hands

- Signs articulated with one hand
- Signs articulated with two hands



6. Summary

- No distinction** in the frequency of linguistic criteria involved in (Dis)Fluency between signers with different language background ⇒ That is for palm-ups, stops between signs, word search gestures, and floating gazes
- Except for rate of articulation: Native Signers** (LSFB from birth) faster **versus Near-Native/Late Signers** (delayed LSFB) slower ⇒ And therefore, for the number of hands involved in signing and the number of addressed/spatialized gazes (positive correlation p<0,05)

7. Discussion

- Relative impact of L1 delayed acquisition on Production and Fluency
- Acquisition of some markers of (dis)fluency locked in time
- Acquisition of some other markers of (dis)fluency achieved at any time

8. Further issues

- Holds of hands
- Repeated signs
- Phonological economy (Parisot & Villeneuve 2007)
- Combinations of fluencemes
- Functions of fluencemes
- Additional signers

REFERENCES

- Götz, S. (2013). Fluency in Native and Nonnative English Speech. *Studies in Corpus Linguistics*, 53. John Benjamins Publishing Company.
- Mayberry, R. I. (1991). The long-Lasting Advantage of Learning Sign Language in Childhood: Another Look at the Critical Period for Language Acquisition. In *Journal of memory and language* 30:4, pp. 486-512.
- Meurant, L. (2008). The speakers'eye gaze. Creating deictic, anaphoric and pseudo-deictic spaces of reference. In R. M. de Quadros (ed.) *Sign Languages: spinning and unraveling the past, present and future*. TILSR 9, Florianopolis, Brazil, pp. 403-414.
- Meurant, L. et Notarrigo, I. (2014). Nonmanuals and markers of (dis)fluency in French Belgian Sign Language (LSFB). Proceedings of the 6th Workshop on the Representation and Processing of Sign Languages: Beyond the Manual Channel. Reykjavik, pp. 135-142.
- Parisot A.-M. and Villeneuve S. (2007). Profil phonologique de l'interprète français/langue des signes québécoise : l'interprète débutant et l'interprète expert. In *Sillexicales 5, Syntaxe, interprétation, lexique dans langues signées*, pp. 137-155.

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