

# Nonmanuals and markers of (dis)fluency in French Belgian Sign Language (LSFE)

Ingrid Notarrigo and Laurence Meurant

ingrid.notarrigo@unamur.be laurence.meurant@unamur.be

## INTRODUCTION

Collaborative project about markers of (dis)fluency in spoken English (L1-L2), French (L1) and LSFB (L1) [University of Louvain-UCL & University of Namur-UN] (*non-pathological*, Götz 2013)

In this *pilot study*: *Pauses* (113), *Palm-ups* (80) and *co-occurring Nonmanuals* under investigation

## QUESTIONS

1. What type of *information* do *Nonmanuals (Nms)* convey about the selected *manual markers (Ms)*, i.e. pauses and palm-up signs?
2. Is the (time consuming) *annotation* of each non-manual component needed for each pause and each palm-up sign?

## CORPUS

Unprepared monologues selected from larger dialogues

	Sex	Age	SL profile	Clip duration
Signer 1	M	33	Native	3min
Signer 2	F	22	Native	2min
Signer 3	M	25	Near-native	2min30
Signer 4	F	28	Near-native	2min30

## CODING Ms

<b>Palm-up (PU)</b>	Upward palm orientation sign in the neutral space resulting from a wrist rotation
<b>Pause</b>	<b>Stop</b> in the hands flow
<b>S1</b>	Stop during a sign
<b>S1:start</b>	Stop at the beginning of a sign
<b>S1:end</b>	Stop at the end of a sign
<b>S2</b>	Stop between signs
<b>S2:crossed</b>	Stop with hands crossed
<b>S2:body</b>	Stop with hands along the body
<b>S2:neutral</b>	Stop with relaxed hands in the neutral space

## METHODOLOGY

- Step 1: Coding data in ELAN  
 Step 2: Extracting overlaps between Ms and Nms  
 Step 3: Querying data in Excel
- Identifying regular combinations of Nms
  - Distinguishing consistent Ms categories

## CODING Nms

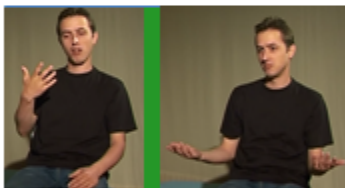
*Movement or position of Eyebrows (B:), Head (H:) and Mouth (M:)* in the *strict interval* of PU/S1/S2

*Movement of Eyes (E:) and direction of Gaze (G:) one sign before and after PU/S1/S2*

### Gaze Tags (Meurant 2008)

<b>Addressed</b>	towards a real or a fictive interlocutor
<b>Spatial out of a role</b>	towards the frontal space without the actualization of a role-play
<b>Spatial within a role</b>	towards positions in the frontal space in relation to the actualization of a role-play
<b>Floating</b>	towards the floor, the side or in the air (not addressed nor related to meaningful positions in space)

PU-mod



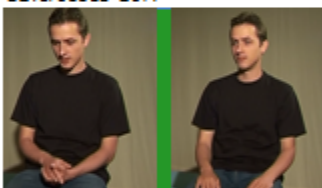
PU (lexical/filler) WELL

S1:start-str FILLED



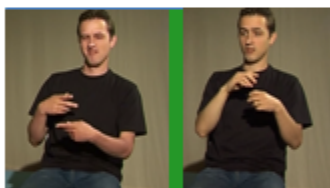
S1:start-sus WINDOW

S2:crossed-BoM



S2:body-BoE

S2:neutral-mod



S2:neutral-sl

## RESULTS

### 1. Values/functions of Ms given by co-occurring Nms

<b>Modality (mod)</b>	Comment or evaluation from the point of view of the role-played character or the signer himself/herself on what is being said
<b>Suspension (sus)</b>	Blank in the communication
<b>Phatic (pha)</b>	The signer makes sure he is well understood
<b>Stress (str)</b>	The signer emphasizes a point of his discourse
<b>Boundary (BoS, BoM, BoE)</b>	Start, middle or end position of a turn

### 2. Nms needed for annotation (cues defining categories)

**Gaze and Head** are sufficient to distinguish these functions of PU/S1/S2. Sometimes another Nm is present but not systematically.

Manual markers	Head	Gaze	Other Nms
PU-mod		Spatial within a role	
S1:end-mod			
S2:neutral-mod			
S1:start/end-sus	Fixed	Addressed or Floating	
S2:neutral-sus			
S2:body/crossed-pha	Nod	Addressed	
S2:neutral-pha			
S1:end-pha			
S1:end-str	Movement (not Nod)	Addressed or Spatial out of a role	
S1:start-str	Chin up	Addressed or Spatial out of a role	E:wide B:raised M:closed
S2:crossed/body-BoM	Turn or /	Floating	
S2:crossed/body-BoE	Nod or /	Addressed	

## FURTHER ISSUES

- Floating vs. Addressed gaze = a (dis)fluent marker in itself?
- Compare with other potential manual (dis)fluency markers: false start, self-repair, repetition, flying indexe, gesture/motion filler, spatial discourse organisation, connecting sign (list buoy, ALSO, AND, SAME, rhetorical question)
- Using a descriptive template for Nms or a tagset based on the marker functions?



Same nonmanual with another manual marker

Connecting sign  
 Left: ALSO + G:a  
 Right: ALSO + G:l

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## REFERENCES

- Götz, S. (2013). Fluency in Native and Nonnative English Speech. *Studies in Corpus Linguistics*, 53. John Benjamins Publishing Company.  
 Johnston, T. (2011). Auslan Corpus annotation guidelines.  
 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 unravelling the past, present and future*. TILSR 9, Florianopolis, Brazil, pp. 403-414.



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Neldie, C. (2002). Sign Stream™ Annotation: Conventions used for the American Sign Language Linguistic Research Project. Boston, MA: American Sign Language Linguistic Research Project Report No. 11, Boston University.

Nonhebel, A.; Crasborn, O.; van der Kooij, E. (2004). Sign language transcription conventions for the ECHO Project. Version 9, SSL mouth annotations and BSL and NGT mouth annotations version 2. University of Nijmegen <http://www.jet.kun.nl/sign-lana/scha/ssl/>

van Loon, E. (2012). What's in the palm of your hands? Discourse functions of Palm-up in Sign Language of the Netherlands, Master Thesis. University of Amsterdam, Netherlands.