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# Manifestations of SLI in LSF: Focus on argument structures

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## Specific Language Impairment (SLI)

Heterogeneous language skills

| Spoken Languages clues | Sign Languages clues |
|---|---|
| • Phonology<br>• **Syntax**<br>• Pragmatics<br>• Developmental verbal dyspraxia | • Semantico-syntactic use of **space**<br>• **Agreement morphology** (regarding *plain verbs, spatial verbs, agreement verbs*)<br>• **Classifier** system and **personal reference** |

## Atypical language development in SL

Only a few studies on SL disorders

| BSL case study | LSF case study |
|---|---|
| Significant delay (in both production and reception), exhibiting **restricted BSL grammar** and **reduced sentences** (Morgan et al., 2007) | Comprehension deficit regarding **negation**, **aspect**, **argument structure**<br>Lack of **explicit reference** in production (Puissant-Schontz, 2013) |

## Typology of LSF predicates (Puissant-Schontz, in progress)

| Properties | Existence | Action |
|---|---|---|

**Discriminative Morphological Traits (DMT)**

- **Anchored** (on the body) Vs **Floating** (no anchor)
- With **Configuration** (Handling classifier)
- **Oriented** (palm orientation)
- **Itinerary** (source-goal path)

| Anchored | | Floating | | | | | |
|---|---|---|---|---|---|---|---|
| C+ | C - | C + | | | C - | | |
| | | O + | O - | | O + | O - | |
| | | | I + | I - | | I + | I - |
| AC | A | FCO | FCI | FC | FO | FOI | F |

## Hypothesis

SLI clues in SL comprehension:

- ❑ Deficit regarding **negation**, **aspect**, **argument structure**

SLI clues in SL production:

- ❑ Lack of **explicit reference**
- ❑ Less efficient discourse

**+ Insight from LSF predicates typology?**

**Sutton-Spence R. & Woll B. (1999)**. The Linguistics of British Sign Language: An Introduction. *Cambridge: Cambridge University Press*

**Morgan G., Barriere I. & Woll B. (2003).** First verbs in British Sign Language development. *Working Papers in Language and Communication Science*, vol. 2 pp 57-66

**Morgan G., Herman R. & Woll B. (2007).** Language impairments in sign language: breakthroughs and puzzles. *International Journal of Language and Communication Disorders*, 42, 97-105

**Puissant-Schontz L. (2013).** Création d'un outil d'évaluation de la morphosyntaxe en LSF (Mémoire de Master 2 en Sciences du Langage). Université Paris Ouest Nanterre la Défense, Nanterre.

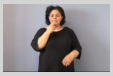
**Quinto-Pozos D., Forber-Pratt A. & Singleton J.L. (2011).** Do developmental communication disorders exist in the signed modality? *Perspectives from Professionals. Language, Speech and Hearing Services in Schools*, 42 (4), 423-443

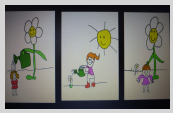
## Methodology

**Four deaf signing children, one is SLI suspected**

- Three signers aged 4;8, 7;10, 8;11
- One signer with atypical language development (communication disorders, LSF delay)
  Tested at 6;5 and 8;2, speech therapy

| Production Tasks | Reception Task |
|---|---|

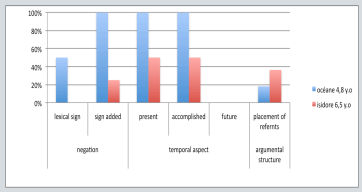




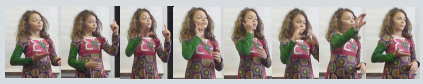
## Results

| Production tasks | Reception task |
|---|---|
| Delay of Isidore | |
| ✓ Lack of **explicit reference**<br>✓ Less efficient discourse | ✓ Deficit regarding **negation**, **aspect**, **argument structure** |

| | |
|---|---|
| Jeanne 8;11 | THREE BOYS<br>MIDDLE BOY PUSH<br>CL-PERSON-FALL |
| Isidore 8;2 | TREE BOY MIDDLE CL-PERSON CL-PERSON CL-PERSON MIDDLE<br>BUT BOY FIGHT<br>(boy) HIT (other boys)<br>(boy) PUSH (other boys)<br>(boy) HIT (other boys)<br>(boy) PUSH (other boys)<br>FIGHT<br>(boy) PUSH (other boys) |
| Louane 7;10 | TREE THERE ARE 3 BOYS<br>(boy) HIT (other boys) |



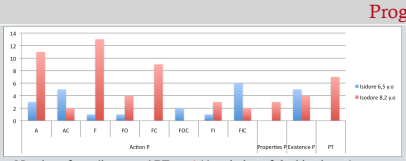

% of morphosyntactic targets children understood



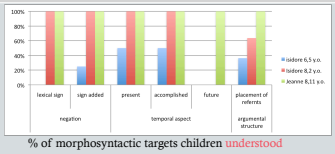
Jeanne, 8;11

Isidore, 8;2

| Production tasks | Reception task |
|---|---|
| Progression of Isidore | |

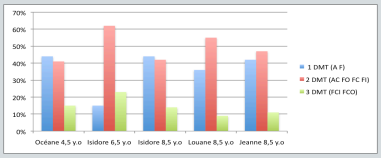



Number of predicates and PT used (description of the big picture)

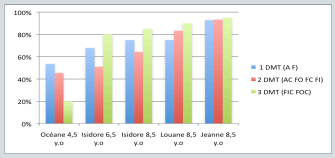



% of morphosyntactic targets children understood

| Production tasks | Reception task |
|---|---|
| Insight from LSF predicates typology? | |




% of action predicates used depending on the number of DMT




% of action predicates understood depending on the number of DMT

=> Action predicates with 3 DMT are easier to understand than to use.

## Discussion

**Discriminative Morphological Traits** are clues that help comprehension, but they seem difficult to acquire from the production point of view.

Following step: A new assessment tool including our **LSF predicates typology** (Puissant-Schontz, in progress)