

b. Je vais seulement te la présenter.
I am-going-to only to-you-clitic her-clitic introduce.

'I will only [introduce]_F her to you.' or 'I will only [introduce her to you]_F.'

=> likely inference: I will not do anything else involving her and you than introduce her to you, or: I won't do anything but introduce her to you.

Our sign language data were elicited from one native Deaf ASL and one native LSF signer, each the child of Deaf, signing parents. We used the playback method and transcription conventions described in Schlenke 2017, Schlenker et al. 2016, involving minimal paradigms signed on a video and then assessed with quantitative acceptability judgments (7 = best, average score at the beginning of each example), detailed inferential questions, and a separate question about a possible English or French influence. Judgments were entered in a computer and (redundantly) signed on a video. The reference of each video and the number of judgments obtained (on different days) are found after each example, and raw data (including the signers' own description of means of focus marking) can be found in the Supplementary Materials.² (For clarity, we also provide below videos of the manual part of the relevant signs in LSF, as still pictures do not suffice to make the distinctions clear. Full videos are not included to respect the signers' privacy.)

We start with the ASL paradigm in (3), where the subscript _F is used in ASL to indicate that prosodic focus was marked on the relevant pronoun, and in the English translations to indicate which element associates with *only*. Prosodic focus in ASL was marked very clearly by means involving in particular forward body shift, longer hold time, and eyebrow raising (see the Supplementary Materials for details); we do not transcribe prosodic focus more precisely because it is merely a control in the present squib: our point is that strong pronouns can associate with *ONLY* in the *absence* of prosodic focus.

(3) IX-1 RECENTLY CONVERSATION JOHN_a MARY_b. IX-1 ONLY ALLOW ___ TELL IX-b BILL FAIL.³

'I recently had a conversation with John and Mary. I only allowed ___ to tell her that Bill failed.'



a. ⁷ ___ = IX-a
 him (ASL 24, 76a, 4 judgments)⁴

² As seen in the Supplementary Materials, consultants were asked to describe differences of realization among the sentences. Our ASL consultant has considerable experience annotating videos, and thus his responses were particularly detailed.

³ In all but judgment except one (the first judgment task for ASL 24, 76), the written context in (i) was included:

(i) *Context*: The speaker is the director of the school. He tells a group of teachers what they are allowed to say or to put in writing after the students took an exam.

But as the consultant explicitly noted in the last of the four judgment tasks, this wasn't entirely felicitous, and it is likely that he disregarded or adapted it in the earlier tasks. As can be seen in the Supplementary Materials, he made the comment in (ii) [JL 17.05.06]:

(ii) "Note: context as listed is not accurate. Speaker is sharing what he already told two others about what is allowed, rather than telling the current group what is allowed for this group. Current judgments based on correct context. (I suspect that on previous judgments, I was thinking about this correct context rather than the inaccurate context that was present.)"

We do not know whether this change of context is related to the change of inferential judgments for (3)a: when the consultant made the remark in (ii), he read (3)a as if *ONLY* negated alternatives to *IX-b* (denoting Mary) and to *BILL*. In any event, this yields a completely very reading from ones in which John is denoted by a strong or a focused pronominal, and thus the distinct behavior of the latter is not affected.

⁴ The same sentence was included as part of another video, namely ASL 24, 75b. This other realization of the sentence gave rise to 4 further judgments, which were similar to those of ASL 24, 75a (including with respect to the last of the four inferential judgments; see the Supplementary Materials). The similarities are unsurprising since the two paradigms (ASL 24, 75 and ASL

b. ^{6,7} ___ = IX-a_F
 him_F (ASL, 24, 75c; 4 judgments)



c. ⁷ ___ = CL-IX-a_F
 him_F (ASL, 24, 76b; 4 judgments)

d. ^{6,7} ___ = CL-IX-a_F
 him_F (ASL, 24, 76c; 4 judgments)

Inferences:

a. => [3/4 judgments] only the following is allowed: John will tell Mary that Bill failed (alternative individuals are disallowed, and similarly *writing* rather than *telling* is disallowed)

[1/4 judgment (= last of 4 judgment tasks)] what is not allowed is for John to tell someone other than Mary that Bill failed, and for John to tell Mary that someone other than Bill failed.

b., c., d. => what is not allowed is for someone other than John to tell Mary that Bill failed

When two pronouns are in the scope of *ONLY*, as in (3)a, no association asymmetry is found, and the reading obtained often suggests that the entire embedded proposition *IX-a TELL IX-b BILL FAIL* is in focus (or possibly that each of its component parts is in focus, i.e. that each triggers alternatives of its own). This was determined by asking whether any of the following was disallowed: (i) that someone other than John will tell Mary that Bill failed; (ii) that John will tell someone other than Mary that Bill failed; (iii) that John will tell Mary that someone other than Bill failed (iv) that John will write to Mary that Bill failed. A uniform 'yes' was obtained on all questions, showing that each of these was understood to be disallowed. By contrast, in (3)b prosodic focus was marked on *IX-a*, and the inferential judgments changed: only for question (i) was 'yes' obtained.

(3)c,d both have a complex pronominal *CL-IX-a* in embedded subject position. *CL-IX-a* is realized by signing the person classifier *CL* with the non-dominant hand, while pointing towards it with the dominant hand, as shown by the picture in (3)c. On an interpretive level, *CL-IX-a* in (3)c yields the same meaning *as if* it were focused, but overt focus, realized in (3)d, is unnecessary to obtain this interpretation. The interpretive criteria are the very same we used in (3)b, involving the questions described in (i)-(iv) above about what is disallowed. The results suggest that *CL-IX-a* behaves as a strong pronominal which associates with *ONLY* even in the absence of prosodically marked focus. Tellingly, in one judgment task the consultant explained a non-maximal score (= 6) for (3)d by noting the redundancy between focus and *CL-IX-a*.⁵

Importantly, while (3)a-d are highly acceptable (near the ceiling 7), the consultant discerned (in two judgments out of four) an English influence due to the presence of the word *ONLY*. Further paradigms should thus be investigated in the future.⁶ But the near-ceiling acceptability of the sentences and the minimal inferential contrast between (3)a and (3)b,c,d makes it very unlikely that focus and pronominal form are not responsible for the data obtained.

In LSF, a *simplex* pronominal with a distinct manual morphology, and produced with the labialization *PI* (see the video in (4)c), displays this strong behavior as well (the same word also has uses as a relativizer, as is discussed in Hauser 2016, Hauser and Geraci 2017). We gloss this pronominal as *PI* because of the labialization,

24, 76) were tested as pairs.

⁵ His comment can be found in the Supplementary Materials ([JL 14.08.26]): "unnecessary double emphasis - normally used sparingly, e.g. opposite *IX* than would be expected".

⁶ An anonymous reviewer notes that environments involving *SELF* have been argued to yield focus-related readings without a focus prosody, and thus that on the present theory they would predict that *SELF* is in this respect interchangeable with *CL-IX*.

but its manual form is related to that of the simple pointing sign *IX*, with an important difference: the index finger is initially held by the thumb and then released, something that is not found with normal *IX*.

Focusing on the normal pointing sign, (4)a (without focus marking) yields a reading on which *ONLY* associates with the verb, while focus marking on *IX-b* in (4)b primarily yields the expected reading, on which the speaker doesn't want other people than Marie to help Pierre (these judgments are from 3 distinct paradigms; here and throughout our LSF data, focus seems to be primarily, although not exclusively, marked by eyebrow raising and eyegaze changes; as in our ASL paradigm, prosodic details are not encoded because the focused elements merely serve as a control for the behavior of the strong pronominals). The interesting observation lies in (4)c,d: *ONLY* associates with *PI* irrespective of whether *PI* is prosodically focused. Throughout this paradigm, inferences were obtained by asking about what the signer does *not* want, with the following possibilities: (i) 'one doesn't know'; (ii) the signer 'doesn't want Marie to help someone other than Pierre'; (iii) the signer 'doesn't want someone other than Marie to help Pierre'; (iv) 'something else [say what]' (see the Supplementary Materials for raw data).

(4) YESTERDAY IX-1 1-MEET MARIE_b PIERRE_a, ONLY IX-1/IX-1 ONLY/ONLY⁷ WANT __ b-HELP-a IX-a.
'Yesterday I met Marie and Pierre. I only want(ed) __ to help him.'

- a. ^{6,7} __ = IX-b
her (LSF, 57, 2482a; 2 judgments; LSF, 57, 2492a; 3 judgments; LSF, 57, 2498a, 3 judgments)
- b. ⁷ __ = IX-b_F
her_F (LSF, 57, 2482b; 2 judgments; LSF, 57, 2492b; 3 judgments; LSF, 57, 2498b, 3 judgments)
- c. ⁷ __ = PI-b
her_F (LSF, 57, 2482c; 2 judgments) **video of PI-b:** <https://drive.google.com/file/d/0B7Mz-VKvcYNKvGNZZzVIT2VNUwM/view?usp=sharing>
- d. ⁷ __ = PI-b_F
her_F (LSF, 57, 2482d; 2 judgments)
- e. ^{6,3} __ = CL-IX-b
her_F (LSF, 57, 2492c; 3 judgments) **video of CL-IX-b:** <https://drive.google.com/file/d/0B7Mz-VKvcYNKaEa5Hd3MjZaUu/view?usp=sharing>
- f. ^{6,7} __ = CL-IX-b_F
her_F (LSF, 57, 2492d; 3 judgments)
- g. ⁷ __ = CL-PI-b
her_F (LSF, 57, 2498c; 3 judgments) **video of CL-PI-b:** <https://drive.google.com/file/d/0B7Mz-VKvcYNKaB1RvIII.VhpZDQ/view?usp=sharing>
- h. ^{6,7} __ = CL-PI-b_F (LSF, 57, 2498d; 3 judgments)

Inferences:

a. => the speaker doesn't want Mary to take any action other than helping in relation to Pierre

b., c., d., e., f., g., h. => the speaker doesn't want anyone other than Marie to help Pierre

(b. yielded conflicting inferences in LSF, 57, 2482b but not in LSF, 57, 2492b and LSF, 57, 2498b)⁸

(4)e-f shows that, for this consultant at least, the same semantic result can be obtained by using the ASL strategy in (3)c, with *CL-IX-b*, a person classifier simultaneously signed with a pointing sign (see the video in (4)e). Finally, (4)g,h shows that, using this strategy, we can replace the pointing sign *IX* with *PI* (thus yielding *CL-PI-b*, as in video in (4)g). The semantic result remains the same.

We conclude that a simple semantic test suggests that the ASL complex pronominal *CL-IX* displays a strong semantic behavior, and that the LSF simplex pronoun *PI* (as well as our LSF consultant's version of *CL-IX*) does as well. On an empirical level, these data should be tested with further consultants in the future. On a theoretical level, they should be integrated with the prosodic study conducted by Bertone and Cardinaletti 2011,

⁷ The position of *ONLY* slightly varied from one example to the next, as did the presence of the first person pronoun, hence the summary transcription *ONLY IX-1/IX-1 ONLY/ONLY*.

⁸ As seen in the Supplementary Materials, the inference we indicate was obtained in 7 out of 8 judgments spread through 3 paradigms (the exception is found in LSF 57, 2782b, judgment of [LL 17.08.02]).

as part of a more general investigation of pronominal strength in sign language. Finally, we have only shown that one important property of strong pronouns is displayed by the ASL and LSF (potentially) strong pronominals under study here; it should be investigated whether they also have the additional 'strong' properties studied by Cardinaletti and Starke 1999.

References

- Bertone, Carmela and Cardinaletti, Anna: 2011, Il sistema pronominale della lingua dei segni italiana. In Cardinaletti, A, Carlo Cecchetto, C. and , Donati, C. (eds), *Grammatica, lessico e dimensioni di variazione nella Lis*.
- Cardinaletti, Anna and Starke, Michal: 1999, The typology of structural deficiency: a case study of the three classes of pronouns. *Clitics in the languages of Europe*, ed. by Henk van Riemsdijk, 145-233
- Hauser, Charlotte: 2016, Relative Clauses in LSF: Typology and Analysis. MA thesis, EHESS-ENS-Paris Descartes.
- Hauser, Charlotte and Geraci, Carlo: 2017, Relativization strategies in French Sign Language (LSF). Slides of talk given at Ecole Normale Supérieure, Paris on May 24, 2017.
- Schlenker, Philippe; Aristodemo, Valentina; Ducasse, Ludovic; Lamberton, Jonathan; Santoro, Mirko: 2016, The Unity of Focus: Evidence from Sign Language. *Linguistic Inquiry* 47, 2:363-381
- Schlenker, Philippe: 2017, Sign Language and the Foundations of Anaphora. *Annual Review of Linguistics*, 3:149–77

Supplementary Materials

Raw judgments on ASL and LSF videos can be found at:

<https://drive.google.com/file/d/1YUlipMcOgWmsAncDLi-d6lbgUTmeZKKi/view?usp=sharing>

***Sign language consultants for this article: Jonathan Lamberton for ASL; Laurène Loctin for LSF.**

Special thanks to Jonathan Lamberton and to Laurène Loctin. They provided exceptionally fine-grained data throughout this investigation.

The research leading to these results received funding from the European Research Council under the European Union's Seventh Framework Programme (FP/2007-2013) / ERC Grant Agreement N°324115–FRONTSEM (PI: Schlenker). Research was conducted at Institut d'Etudes Cognitives (ENS), which is supported by grants ANR-10-IDEX-0001-02 PSL* and ANR-10-LABX-0087 IEC.