The role of QUD in ellipsis and role shift in Catalan Sign Language

David Blunier[1] Giorgia Zorzi[2]

[1]Département de linguistique
University of Geneva, Switzerland

[2]Departament de Traducció i Ciències del llenguatge
Universitat Pompeu Fabra, Barcelona, Spain

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Outline

In this talk

- Present new data on the interpretation of shifted indexicals under ellipsis in Catalan Sign Language (LSC).
- Extend a Question Under Discussion approach to LSC to account for the possible readings available in the ellipsis site.

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Ellipsis in sign languages

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(3) Mary said Jenny went to Europe and Fred did too.

- Here, contrasted elements are marked with **contrastive focus** (Frazier et al., 2007).
- At the semantic level, focused elements generate sets of alternatives, which are presumably constrained by two factors:
  1. The corresponding elements in the A-C, and
  2. The question under discussion (QUD).

Ellipsis in sign languages

- In sign languages, **non-manual markers** (NMMs) and the **use of the signing space** signal contrast:

(4) MARINA$_a$ FRUIT $_{3a}$GIVE$_1$, JORDI$_b$ $_{3b}$AUX$_1$ TOO.
'Marina gave me some fruit and Jordi did, too'. (LSC: Zorzi 2018)

- NMMs signal contrastive focus on the two subjects: head lean and body shift towards opposite sides of the signing space, raised eyebrows, use of opposite sides of the space.

Figure: NMMs of constrative focus

Pronouns under ellipsis

- Pronouns in sign and spoken languages share features. They can be **bound**, as in (5):

(5) [ALL BOY]$_a$ WANT [ALL GIRL]$_b$ THINK IX-a LIKE IX-b.
'All the boys want all the girls to think they like them.'
(ASL, Kuhn 2015b)

Pronouns under ellipsis

- They can give rise to **strict/sloppy readings** under VP-ellipsis, as in (6):

(6) GIANNI$_a$ SECRETARY POSS$_a$ VALUE. PIERO SAME.

a. 'Gianni values his secretary, Piero ⟨values Gianni's secretary⟩, too.'
b. 'Gianni values his secretary, Piero ⟨values Piero's secretary⟩, too.'
(LIS, Cecchetto et al. 2015)

- (6)a. represents a **strict reading**, whereas (6)b. represents a **sloppy reading**

Role shift

- **Role shift** (RS) is a construction commonly used in sign languages to report utterances or thoughts from an agent's (distinct from the utterance speaker) perspective (Quer, 2011).

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- It is **signaled by non-manual markers** such as body/head movement and eyegaze contact break with the actual addressee:

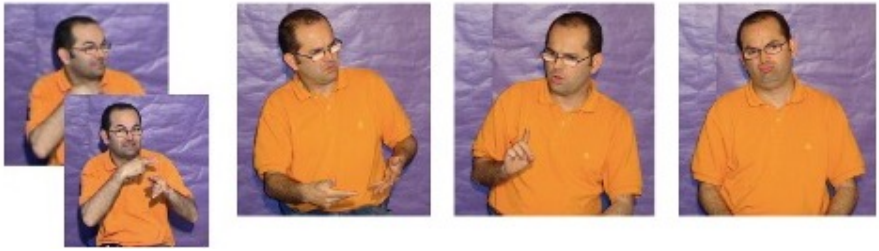

Figure: NMMs of RS: eyegaze, body shift, head position, facial expressions

Role shift

- RS displays **indexical shift**: in the scope of an attitude verb, 1st and 2nd person pronominals retrieve their reference from the reported context.

(7) MANEL$_i$ THINK [**RS** IX-1$_i$ 1$_i$-GIVE-2$_k$ AT-ALL]
'Manel thinks that he won't give me anything at all.' (Quer 2011:280)

Outline

A restriction in LIS

- The interaction of role shift and ellipsis seems to have interesting consequences for pronoun interpretation: Cecchetto et al. (2015) show, for Italian Sign Language (LIS), that **role-shifted antecedents can only give rise to sloppy readings**:

(8) a. GIANNI$_i$ SAY **IX**$_{3i}$ MARIA KISS. PIERO SAME.

Gianni$_i$ said that he$_i$ kissed Maria. Piero$_j$ did ⟨**say** that he$_{\mathbf{i/j}}$ kissed Maria⟩, too.

b. GIANNI$_i$ SAY [$_{\mathbf{RS}}$ **IX**$_{1i}$ MARIA KISS]. PIERO SAME.

Gianni$_i$ said that he$_i$ kissed Maria. Piero$_j$ did ⟨**say** that he$_{*\mathbf{i/j}}$ kissed Maria⟩, too.

Indexicals under role shift and ellipsis

- This is cashed out in terms of **a context shifting operator** (as defined in Schlenker 2017) that requires that the context c fixing the denotation of the first person indexical *I* be a context in which *I* denotes the individual whom the subject argument of SAY refers to:

(9) $[\![\text{SAY-OP}_i\ \phi]\!]^{g,c} = \lambda x'.\lambda w'[\![\phi]\!]^{g[i \to x'],w'}$

- Since, to be bound, indexicals require *SAY-OP*, the absence of a strict reading leads Cecchetto et al. (2015) to argue that the ellipsis site contains a copy of *SAY-OP*, and vindicates an **identity-in-form** approach to ellipsis.

Shifted 1st person indexicals allow strict readings under ellipsis

- However, in Catalan Sign Language (LSC) no difference arises in ellipsis readings from the presence vs absence of RS in the antecedent
- **Both strict and sloppy interpretations are available for the ellipsis clause (E-C)**, regardless whether the antecedent clause (A-C) contains a 3rd person (10a) or a shifted 1st person form (10b):

(10) a. GIORGIA$_i$ SAY IX$_{3i}$ ALEX$_k$ LIKE $_{3i}$AUX$_{3k}$. JORDI TOO. (4.2)

b. GIORGIA$_i$ SAY [**RS** IX$_{1i}$ ALEX$_k$ LIKE $_{1i}$AUX$_{3k}$]. JORDI TOO. (4.3)

Giorgia$_i$ said that she$_i$ likes Alex...

1. Jordi$_j$ ⟨**said** that **she**$_i$ likes Alex⟩, too.
2. Jordi$_j$ ⟨**said** that **he**$_j$ likes Alex⟩, too.

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- This poses a challenge for Cecchetto et al. (2015) approach, since their analysis in terms of binding rules out a strict reading under role shift for (10).

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- This poses a challenge for Cecchetto et al. (2015) approach, since their analysis in terms of binding rules out a strict reading under role shift for (10).
- Even assuming that the SAY-OP is not reconducted in E-C, their approach will not derive the strict reading, since it requires that *GIORGIA* is the argument taken by the λ-binder as argument for the SAY-OP:

(12) $\text{GIORGIA}_i\ \lambda x_i \text{SAY}_{x^i,w}\ldots\ \text{JORDI}_j\ \lambda x_j \text{SAY}_{x^{*i/j},w}\ldots$

- Since, in this approach, indexicals **must** be bound in order to be shifted (and cannot simply be referential or free, as 3rd PPs), it cannot account for the strict reading observed in LSC.

Another puzzle: embedded-LIKE and matrix-SAY readings

- Sentences like (10) a and b can have two different readings, depending on whether the embedding verb *SAY* is interpreted in E-C:

(13) a. GIORGIA$_i$ SAY IX$_{3i}$ ALEX$_k$ LIKE $_{3i}$AUX$_{3k}$, JORDI TOO.

b. GIORGIA$_i$ SAY [$_{RS}$ IX$_{1i}$ ALEX$_k$ LIKE $_{1i}$AUX$_{3k}$]. JORDI TOO.

Giorgia$_i$ said that she$_i$ likes Alex...

1. Jordi$_j$ ⟨**said** that **Giorgia/Jordi** likes Alex⟩, too. (*SAY*-reading)
2. Jordi$_j$ ⟨**likes** Alex⟩, too. (*LIKE*-reading)

Puzzles

- 1. How can we justify the similar interpretations of 3rd person and shifted 1st person under ellipsis ?
- 2. How can we tell apart the *SAY* and *LIKE* readings ?

Outline

Answering puzzle 1: Uninterpreted person features

- Remember that the presence vs absence of role shift in our LSC examples **did not** make any difference regarding the different readings available in E-C: both 3rd person and shifted 1st person pronouns can be interpreted **strictly** or **sloppily**.

Answering puzzle 1: Uninterpreted person features

- Remember that the presence vs absence of role shift in our LSC examples **did not** make any difference regarding the different readings available in E-C: both 3rd person and shifted 1st person pronouns can be interpreted **strictly** or **sloppily**.

- We would like to suggest that **person features are ignored during the computation of focus alternatives**, as suggested by i.a. Jacobson (2012), Sauerland (2013).

Answering puzzle 1: Uninterpreted person features

- It has already be noted that ϕ-features are systematically ignored in environments involving focused alternatives, like pronouns in the scope of *Only* and VP-ellipsis.

(14) *Only I did my homework.*
$\rightsquigarrow$ I did my homework and x didn't do x's homework.

(15) *John did his homework and Mary did* $\langle ... \rangle$ *too.*
$\rightsquigarrow$ Mary did his$_j$ homework (strict)
$\rightsquigarrow$ Mary$_m$ did her$_m$ homework (sloppy)

Answering puzzle 1: Uninterpreted person features

- Assuming that ϕ-features are interpreted as partial identity functions of type $\langle e, e \rangle$ and have the following entries, we can assume that their respective contributing presuppositions are not satisfied under *Only* or in ellipsis:

(16) $[\![\phi\text{-1P}]\!]^{g,c} = \lambda x : x \in s(c).x$

(17) $[\![\phi\text{-FEM}]\!]^{g,c} = \lambda x : x \in \mathit{FEM}.x$

Answering puzzle 1: Uninterpreted person features

- Schlenker (2014) and Kuhn (2015a) convincingly show that these phenomena are well attested in both American Sign Language (ASL) and French Sign Language (LSF)

Answering puzzle 1: Uninterpreted person features

- Schlenker (2014) and Kuhn (2015a) convincingly show that these phenomena are well attested in both American Sign Language (ASL) and French Sign Language (LSF)
- Similar data on **lack of person features interpretation on the verb in the E-C** is found in LSC in gapping:

(19) MARINA$_a$ JORDI$_b$ WATCH $_{3a}$**GIVE**$_{3b}$, MARC$_c$ JORDINA$_d$ PLANT $\langle_{3c}$**GIVE**$_{3d}\rangle$.

'Marina gave Jordi a watch and Marc Jordina a plant.'

(LSC, Zorzi 2018:341)

- The person-agreement features on the verb *GIVE* go uninterpreted in E-C.

Answering puzzle 1: Uninterpreted person features

- The meaning of both 3rd person and 1st person pronouns in E-C reduces to:

(20) $[\![\textit{pro}]\!]^g = \{\lambda x. \mid x \in D_e\}$

- Since the indexical 1st person features of 1P are ignored, the pronoun can either be bound or left free in E-C, giving rise to sloppy or strict interpretations:

(21) GIORGIA$_i$ SAY [$_{RS}$ IX$_{1i}$ ALEX$_k$ LIKE $_{1i}$AUX$_{3k}$]. JORDI$_j$ ⟨SAY IX$_{\mathbf{3i/j}}$ ALEX$_k$ LIKE $_{\mathbf{3i/j}}$AUX$_{3k}$⟩ TOO.

'Giorgia$_i$ said that she$_i$ likes Alex. Jordi$_j$ ⟨**said** that **s/he$_{i/j}$** likes Alex⟩, too.'

Answering puzzle 2: Main utterance point and the QUD

- Puzzle 2. How can we account for the fact that E-C is sometimes interpreted as containing the matrix verb (*SAY*-reading), and sometimes as containing the embedded clause only (*LIKE*-reading) ?

A generalized ambiguity

- Contexts are crucial in predicting the availability of the different readings the E-C can have:

1. *Context: Giorgia and Jordi are siblings. Their mother asked them who does Giorgia like and they both answered that she likes Alex.*

   'Giorgia said that she likes Alex, Jordi$_j$ ⟨**said** that **Giorgia** likes Alex⟩, too.'

2. *Context: Giorgia and Jordi are siblings. Their mother asked them who they like and they both answered that they like Alex.*

   'Giorgia said that she likes Alex, Jordi$_j$ ⟨**said** that **Jordi** likes Alex⟩, too.'

3. *Context: Giorgia and Jordi are siblings. Their mother asked who they like and Giorgia answered that her and her brother like Alex.*

   'Giorgia said that she likes Alex, Jordi$_j$ ⟨**likes** Alex⟩, too.'

The computation of ellipsis: focused alternatives à la Rooth (1992)

- We adopt a fairly standard semantic account of ellipsis, in which the meaning of E-C is retrieved via the computation of *focus alternatives*, from which the standard meaning of A-C is a part of:

(22) **Focus interpretation principle:**
$[\![\text{A-C}]\!]^g \in \| \text{E-C} \|^g$

- According to this view, ellipsis is licensed iff there is a proper contrasting item α s.t. α is a part of/subset of the focused alternatives of another object γ that matches α in type.

Ellipsis and the QUD

- We understand a context in the sense used above as the different propositions that constitute the body of information a speaker and a hearer share, pursuing a strategy of inquiry whose goal is to ultimately answer the *question under discussion* (Roberts, 2012)
- We adopt Kehler's 2016 idea that QUD plays a fundamental role in ellipsis licensing: the meaning of an elided VP is evaluated against a (explicit or implicit) QUD

(23) **Ellipsis-QUD matching condition (Kehler 2016):**
For any A-C and E-C for which $[\![\text{A-C}]\!]^g \in \| \text{E-C} \|^g$, QUD $= \| \text{E-C} \|^g$

Ellipsis and the QUD

- The EQMC states that ellipsis of a constituent α will be licensed iff there is an antecedent γ whose ordinary semantic value is part of the focus semantic value of α and that this value is **congruent** to a QUD

- Following Elliott et al. (2016), we define **Congruence** as follows: a declarative sentence S is congruent to question Q (wrt g) iff $[\![Q]\!]^g = \| S \|^g$.

- The different readings of (21) corresponds to different QUDs which, in turn, determine the semantic value of E-C.

Deriving reading 1: SAY-strict

- *Context: Giorgia and Jordi are siblings. Their mother asked them who does Giorgia like and they both answered that she likes Alex.*

  'Giorgia said that she likes Alex, Jordi$_j$ ⟨**said** that **Giorgia** likes Alex⟩, too.'

- *QUD* = ‖ E-C ‖ = $\lambda p.\exists x(p = \lambda w.$ **x** *said that* **Giorgia** *likes Alex*$)$.

Deriving reading 2: SAY-sloppy

- *Context: Giorgia and Jordi are siblings. Their mother asked them who does Giorgia like and they both answered that they like Alex.*

  'Giorgia said that she likes Alex, Jordi$_j$ ⟨**said** that **Jordi** likes Alex⟩, too. '

- *QUD* $= \| \text{E-C} \| = \lambda p.\exists x(p = \lambda w.$ **x** *said that* **x** *likes Alex*$)$.

Deriving reading 3: LIKE-reading

- *Context: Giorgia and Jordi are siblings. Their mother asked who they like and Giorgia answered that her and her brother like Alex.*

  'Giorgia said that she likes Alex, Jordi$_j$ ⟨**likes** Alex⟩, too. '

- *QUD* = ‖ E-C ‖ = $\lambda p.\exists x(p = \lambda w.$ *x likes Alex*$)$.

Disentangling readings: at-issue content

- When contexts are underspecified, i.e. compatible with different QUDs, ambiguities arise
- Such ambiguities systematically arise with embedded clauses under attitude verbs such as *say*, *think* or believe
- Embedding attitude verbs can in those cases have a so-called *parenthetical use* (Urmson, 1952):

(24) A: Why didn't Louise come to the meeting yesterday?
B. I heard that she's out of town. (Simons 2007:2)

Disentangling readings: at-issue content

- In cases such as (24), B's answer can be understood as such because the embedded clause represents the *main point* of her utterance: the matrix proposition is used parenthetically.

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Disentangling readings: at-issue content

- In cases such as (24), B's answer can be understood as such because the embedded clause represents the *main point* of her utterance: the matrix proposition is used parenthetically.
- Parenthetical material is **not-at-issue**, and non-at-issue content updates the common ground in a way that cannot be negotiated (Farkas and Bruce, 2010)
- Therefore, its content cannot be part of the potential answers to a **broader QUD**, like the one that licenses the matrix clause.

Disentangling readings: at-issue content

- We therefore predict that in any context in which the saying event is at-issue, the alternatives corresponding to the **matrix** QUD will be licensed in E-C, and both strict and sloppy *SAY*-readings in (21) can be derived:

(25) a. $\text{QUD}_{SAY} = \| \text{ E-C}_{MATRIX} \|^{g} = \{x \textit{ said that Giorgia/x likes Alex} \mid x \in D_e\}$ (EQCM condition)

b. $[\![\text{ A-C}_{MATRIX}]\!] \in \| \text{ E-C}_{MATRIX} \|^{g}$ (focus condition)

Disentangling readings: at-issue content

- If, however, the embedding predicate is not interpreted as at-issue content, it will fail to be part of the alternatives deemed relevant in the E-C, being compatible only with the QUD the embedded clause represents a partial/complete answer to, that is, the QUD_{LIKE}:

(26) a. $\text{QUD}_{LIKE} = \parallel \text{E-C}_{EMBED} \parallel^{g} = \{x \textit{ likes Alex} \mid x \in D_e\}$ (EQCM condition)

b. $[\![\text{A-C}_{EMBED}]\!] \in \parallel \text{E-C-}\textit{EMBED} \parallel^{g}$ (focus condition)

Outline

Conclusions

- The LSC data doesn't support a strict syntactic identity condition between the A-C and E-C (contra Cecchetto et al. 2015), but rather supports an hybrid account (Barros and Kotek 2018, Barros and Kotek 2019 i.a).

- With or without RS, both 3rd person and shifted 1st person pronouns can be interpreted strictly or sloppily: this is due to person features being ignored in the computation of alternatives in the E-C.

- Available alternatives in the E-C are fully predicted by a model in which the QUD serves as a licensor for ellipsis: only contrasted elements in the antecedent that count as congruent to the QUD will be treated as proper alternatives.

THANK YOU!

david.blunier@unige.ch
giorgia.zorzi@upf.edu

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