

## Indexicals under ellipsis and role-shift in Catalan Sign Language

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**Introduction.** It is common wisdom since Kaplan (1989) that indexical expressions such as *you* and *I* are both rigid and directly referential. However, both claims have been challenged on empirical grounds during the past two decades. First, it has been demonstrated since Partee (1989) that indexical pronouns *can* receive a bound interpretation (Kratzer, 2009). Second, a large and growing body of research has shown that in some languages, indexicals in embedded clauses can (and sometimes, must) be interpreted against the context introduced by the embedding verb, a phenomenon known as *indexical shift* (Schlenker 2003, Anand & Nevins 2004, Deal 2017, i.a). Most notably, indexical shift has been observed in sign languages as well, under a reporting construction known as *role shift* (RS), where the signer embodies the matrix subject to report the content of an embedded clause (Quer 2005, Herrmann & Steinbach 2012, Schlenker 2017). Recently, the interpretation of indexicals under RS has been used to diagnose ellipsis in embedded contexts. Cecchetto et al. (2015) have put forward arguments drawn from role-shifted elided verb-phrase structures in Italian Sign Language (LIS) to argue for identity in form in the ellipsis site, *contra* identity in meaning (see i.a. Hardt 1993, Fiengo & May 1994, Merchant 2013). We provide new evidence from Catalan Sign Language (LSC) involving stripping that supports the following claims: i) indexicals under role-shift give rise to “supersloppy” readings (Charnavel, 2019), a specific form of bound readings not predicted by the kaplanian approach; ii) Such constructions also derive strict readings, something not predicted under previous approaches. Based on this evidence, we propose to follow Charnavel (2019) in treating indexicals as e-type pronouns that contain an indexical variable that can either be bound or left free.

**Strict and sloppy readings under ellipsis.** Pronouns under ellipsis can generate the famous *strict/sloppy* distinction, depending on their binding status. Consider the following sentence:

- (1) Mario loves his<sub>m</sub> mustache and Luigi does <...>, too.  
a. ...and Luigi does <love his<sub>m</sub> mustache> (*strict reading*)  
b. ...and Luigi does < $\lambda_i$  love his<sub>i</sub> mustache> (*sloppy reading*)

The sentence has two readings, depending on whether the silent pronoun in the ellipsis site is bound or left free. A free pronoun having contextually been assigned an index corresponding to *Mario* will be interpreted as referring to Mario in the ellipsis site, deriving a strict reading; however, if the elided structure contains a second  $\lambda$ -abstractor taking *Luigi* as an argument, it will be indexed to *Luigi* in the ellipsis site, yielding a sloppy reading. Since, in the kaplanian approach, indexical 1st and 2nd person pronouns are considered rigid and consequently, unbindable, it is predicted that they cannot give rise to sloppy readings under ellipsis. However, as Charnavel (2019) notes, Juliet’s answer to Romeo is direct counter evidence to this claim:

- (2) *Romeo*: I<sub>r</sub> love you<sub>j</sub>. *Juliet*: I<sub>j</sub> do < ... > too. (Charnavel, 2019)  
a. *Strict reading*: I<sub>j</sub> do <love you<sub>j</sub>> (*Juliet loves herself*)  
b. *Sloppy reading*: I<sub>j</sub> do <love you<sub>r</sub>> (*Juliet loves her interlocutor, Romeo*)

Out of the two possible interpretations the elided pronoun can receive in (2), only the “strict” one is expected under a kaplanian treatment of indexicals: Juliet loves herself, i.e. the addressee of the context introduced by Romeo’s utterance. Under the sloppy reading, however, the silent pronoun in the ellipsis site is assigned a different value, Romeo. Since the context is the same for the two utterances and the semantic value of *I* and *you* is not the same, Kaplan’s theory yields wrong predictions here.

**Strict and sloppy readings under ellipsis in LIS.** Cecchetto et al. (2015) show that in LIS both sloppy and strict readings are available in VP ellipsis (3a). Under role-shift, though, only the

sloppy reading is available (3b).

- (3) a. GIANNI<sub>i</sub> SAY IX-3<sub>i</sub> MARIA KISS. PIERO SAME. (LIS, Cecchetto et al. 2015)  
 “Gianni<sub>i</sub> λ<sub>i</sub> said that he<sub>i</sub> kissed Maria. Piero<sub>j</sub> λ<sub>j</sub> did <say that he<sub>i/j</sub> kissed Maria> too.”  
 b. GIANNI<sub>i</sub> SAY [<sub>RS</sub>IX-1<sub>i</sub> MARIA KISS]. PIERO SAME.  
 “Gianni<sub>i</sub> said that he<sub>i</sub> kissed Maria. Piero<sub>j</sub> <said that he<sub>\*i/j</sub> kissed Maria> too.”

Cecchetto et al. (2015) justify the unavailability of the strict reading in (3b) by the presence of a covert SAY-operator (Schlenker, 2017) in the elided VP, triggering λ-abstraction over contexts and thus making the elided indexical refer to Piero, not Gianni (strict reading) or the overall speaker. They crucially take this to be an argument for the identity in form in VP ellipsis.

**LSC data.** However, our data from LSC reveal that both readings are available under RS (4):

- (4) MARINA<sub>i</sub> SAY JORDI<sub>j</sub> [<sub>RS</sub>IX-1<sub>i</sub> 1-AUX-2<sub>j</sub> LOVE], JORDI TOO. (LSC)  
 “Marina<sub>i</sub> said to Jordi<sub>j</sub> that she<sub>i</sub> loves him<sub>j</sub>. Jordi<sub>j</sub> <say that he<sub>j</sub> loves her/himself<sub>i/j</sub>> too.”

In line with previous research, we also tested the behavior of the locational indexical HERE under RS-ellipsis. Contrary to previous observations (Quer, 2005), (5) can generate a “sloppy/strict-locational” reading, where HERE can refer to London or Paris in the ellipsis site (Maria is assumed to be in Paris and Jordin in London):

- (5) MARINA<sub>i</sub> SAY JORDI<sub>j</sub> [<sub>RS</sub>IX-1<sub>i</sub> WORK HERE THE-2-IX-2<sub>j</sub> TOGETHER LIKE], JORDI TOO.  
 “Marina<sub>i</sub> said to Jordi<sub>j</sub> that she<sub>i</sub> likes to work here<sub>Paris</sub> with him<sub>j</sub>. Jordi<sub>j</sub> <said that he<sub>j</sub> likes to work here<sub>London/Paris</sub> with her<sub>i</sub>> too.”

**Analysis.** This data points towards two related problems. The first is the availability of a strict reading in (4) and (5), indicating a possible parse that does not contain any SAY operator in the ellipsis site, and therefore cannot be taken as an argument for the identity in form hypothesis (*pace* Cecchetto et al. 2015). The second concerns the interpretation of indexicals: a standard account does not predict any sloppy reading for (4) and (5), no more than it does for (2). Following Charnavel (2019), we propose to treat indexicals as a special form of e-type pronoun, that is, a definite description containing two variables, one of which is the function INTER:

- (6)  $\llbracket \text{INTER} \rrbracket^{c,g} = \lambda x. \lambda y. y \text{ is an interlocutor of } x \text{ in } c \wedge x, y \in \{s_c, a_c\}$

To account for the pronoun-like behavior of HERE in (5), we propose to treat it exactly the same way, i.e. as a definite description consisting of a pronominal variable *pro* and another two-place variable, the LOCATE function:

- (7)  $\llbracket \text{LOCATE} \rrbracket^{c,g} = \lambda x. \lambda l. l \text{ is the location of } x \text{ in } c \wedge x \in \{s_c, a_c\}$

Admitting, in line with recent analyses of role shift, that a non-manual SAY-operator triggers quantification over contexts, we predict that, depending on their binding status, the variables defined by INTER and LOCATE can refer to any individual in the shifted context, provided this individual is a member of the set which contains the speaker and the addressee of that context.

**Conclusion.** We provide new data on indexicals in stripping constructions under role-shift in LSC, in which both strict and sloppy readings are available. Treating both IX-1 and IX-2 pronouns, as well as the locative HERE, as e-type pronouns containing a context-sensitive variable allows us to derive both readings obtained under role shift, in line with Charnavel’s (2019) results.

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