snippets

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A Strong Crossover effect in ASL

Lillo-Martin (1991) argues that in American Sign Language (ASL) (i) Strong Crossover effects (SCO) exist when movement is to the left ((1a)); and (ii) the effects are obviated if the original position of the moved element contains a resumptive pronoun ((1b)), or a null pronoun licensed by verb agreement ((1c)).

(1) $\underline{\qquad}$t
   $_a$STEVE $_a$PRONOUN EXPECT $_1$PRONOUN
   a. *LOVE t_i
   b. LOVE $_a$PRONOUN
   c. $_1$FALL-FOR$_a$ ($_a$PRONOUN)
   Intended: Steve$_i$, he$_i$ expects me to a. love / b. love him$_i$ / c. fall for (him$_i$)

Importantly, (1) does not involve a quantificational element, contrary to standard Crossover examples; and the deviance of (1a) could be explained in terms of obligatory reconstruction of the moved proper name, combined with a Condition C effect. We thus investigated the existence of SCO effects involving *wh*-elements in ASL.

We tested three deaf native signers of deaf, signing parents, using the following 'playback' method: controlled paradigms were signed by Inf1, and were then played back to him (repeatedly, on separate occasions) and to two further informants, InfA1 and InfA2, to obtain contrastive judgments on a 7-point scale (informants who were not fully native were excluded from this analysis). Raw scores for a SCO configuration are provided in (2), where we considered various patterns of doubling for the *wh*-word. Scores are given in the format: **Inf1**| **InfA1**| **InfA2** (references following the examples are to videos made with Inf1).

(2)   a. **WHO-CL$_a$ IX-CL$_a$** THINK MARY LOVE NO-MATTER WHAT?
      2 2 1 2 | **2** | **2 5**
   b. **IX-CL$_a$** THINK MARY LOVE **WHO** NO-MATTER WHAT?
      2 1 2 1 | **2** | **2 3**
   c. **IX-CL$_a$** THINK MARY LOVE NO-MATTER WHAT **WHO** ?
      3 2 2 3 | **2** | **2 4**
   d. **WHO-CL$_a$ IX-CL$_a$** THINK MARY LOVE **WHO** NO-MATTER WHAT?
      3 1 2 1 | **2** | **1.5 5**
   e. **WHO-CL$_a$ IX-CL$_a$** THINK MARY LOVE NO-MATTER WHAT **WHO**?
      3 2 2 2 | **2** | **1.5 5**
   Intended meaning: Which person x is such that x thinks that Mary loves x unconditionally? (7, 129; 7, 134; 7, 156; 7, 264; 14, 1)

Two remarks should be made at the outset. First, we used a form of *WHO* co-occurring with the *ONE* classifier, glossed as *CL,* signed in locus *a*. *IX-CL$_a$* was a pointing sign towards *a,* co-occurring with the classifier. Second, *NO-MATTER WHAT* is a frozen expression that means 'unconditionally', and the presence of *WHAT* in that expression definitely does not suggest that we are dealing with a multiple *wh*-question. As is seen, ratings in (2) are uniformly low, except for InfA2's second session (ratings were for the intended meanings, which were shown in English to Inf1, an experienced informant; they might not have been made sufficiently clear to InfA1 and InfA2, which might account for the reversal in judgments in (2d,e).

Crucially, we need to consider control conditions to determine whether the deviance of the examples in (2) is really due to SCO:

(3) a. **WHO IX-2** THINK MARY LOVE NO-MATTER WHAT?
    7 7 7 7 | **6** | **6 7**
  b. IX-2 THINK MARY LOVE **WHO** NO-MATTER WHAT?
    4 6 6 6 | **6** | **6 7**
  c. IX-2 THINK MARY LOVE NO-MATTER WHAT **WHO** ?
    6 7 6 7 | **4** | **3 5**
  d. **WHO** IX-2 THINK MARY LOVE **WHO** NO-MATTER WHAT?
    5 6 6 6 | **2.5** | **3 1**
  e. **WHO** IX-2 THINK MARY LOVE NO-MATTER WHAT **WHO**?
    7 7 7 7 | **3** | **5 6**
 'Who do you think Mary loves unconditionally?' (7, 127; 7, 133; 7, 157; 7, 265; 14, 2)

The effect seems clear for all signers in the (a) and (b) sentences. Inf1 displays clear effects in all other sentences as well, and InfA2 might display an effect in e. But it seems that (3c,d, e) have independent problems that make it difficult to conclude to a clear SCO effect in (2c,d) and possibly (2e) for InfA1 and InfA2.

Is the SCO effect obviated by resumptive pronouns? While we have fewer judgments, the answer seems to be positive in all cases for Inf1, as shown in (4). *To the extent* that there was a SCO effect in the first place, it seems to be obviated for the other two informants in d-e; but given the data in (3d-e), it is hard to come to a clear conclusion.

(4) a. **WHO-CL$_a$ IX-CL$_a$** THINK MARY LOVE **IX-a** NO-MATTER WHAT?
    7 7 | **4** | **3 1**
  b. **IX-a-CL$_a$** THINK MARY LOVE **IX-a WHO** NO-MATTER WHAT?
    4 5 | **3** | **2 1**
  c. **IX-a-CL$_a$** THINK MARY LOVE **IX-a** NO-MATTER WHAT **WHO** ?
    7 7 | **2** | **1 1**
  d. **WHO-CL$_a$ IX-CL$_a$** THINK MARY LOVE **IX-a WHO** NO-MATTER WHAT?
    5 6 | **5** | **5 6**
  e. **WHO-CL$_a$ IX-CL$_a$** THINK MARY LOVE **IX-a** NO-MATTER WHAT **WHO**?
    7 7 | **5** | **5 6**
Intended meaning: Which person x is such that x thinks that Mary loves x unconditionally? (7, 128; 7, 135; 14, 3)

It is standardly assumed that ASL pronouns are deviant when they come before their antecedents. Importantly, this might suffice to explain the deviance of (2b), but *not* that of (2a) (in addition, for Inf 1 (4b) is significantly better than (2b), which suggests that an additional violation is incurred by the latter sentence). This suggests that SCO effects are responsible for the deviance of (2a).

Still, one might be further worried by (i) the precise role played by the classifier *CL* in our paradigm, and (ii) the possible ambiguity of the index that comes before *THINK*: we analyze it as a locus-recovering pronoun, but it could potentially be taken as a locus-establishing component of a complex interrogative sign. If so, the interrogative could be extracted from the subject position of *THINK*, with *LOVE* taking a null object bound by the subject trace. The paradigm in (5), obtained *post hoc* from Infl only, controls for (i) and (ii): first, it involves examples with and without *CL;* second, it guarantees that *IX* is genuinely a subject pronoun because it is separated from the interrogative by one level of embedding. The judgments fit the earlier pattern and confirm that SCO is involved – and is probably obviated by resumption. (As emphasized by McCloskey 2006, the *analysis* of the obviation effect is non-trivial: it might be that resumptive pronouns are not subject to SCO; or that in these cases the higher pronoun is the variable, while the lower pronoun trivially satisfies SCO because it is bound by the higher pronoun.)

(5) *Context:* You reported various opinions people supposedly have about who loves whom.
   a. **2 2** WHO IX-2 SAY IX-a THINK MARY LOVE?
   b. **6 7** WHO IX-2 SAY IX-a THINK MARY LOVE IX-a?
   c. **3 2** WHO-CL$_a$ IX-2 SAY IX-CL$_a$ THINK MARY LOVE?
   d. **7 7** WHO-CL$_a$ IX-2 SAY IX-CL$_a$ THINK MARY LOVE IX-CL$_a$?
   Intended meaning: Which person x is such that you said that x thinks Mary loves x? (14, 7; 14, 8; 14, 12)

(6) *Context:* You reported various opinions I supposedly have about who loves whom.
   a. **7 6** WHO IX-2 SAY IX-1 THINK MARY LOVE?
   b. **5 4** WHO IX-2 SAY IX-1 THINK MARY LOVE IX-a?
   c. **6 5** WHO-CL$_a$ IX-2 SAY IX-1 THINK MARY LOVE?
   d. **5 7** WHO-CL$_a$ IX-2 THINK IX-1 SAY MARY LOVE IX-CL$_a$?
   Intended meaning: Which person x is such that you said that I think Mary loves x? (14, 5; 14, 6; 14, 11) [Infl mistakenly reversed *THINK* and *SAY* in d.]

Finally, in view of the variation found among our informants for (2), (3), (4), an experimental study might be needed to settle the status of Strong Crossover in ASL.

References

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