Gradient and Iconic Features in ASL*
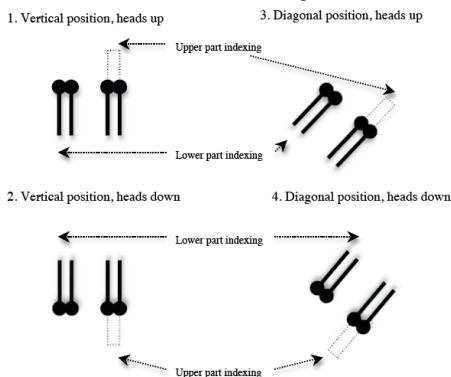
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In ASL and other sign languages, high loci can be used to refer to tall, powerful or important entities. It was argued in Schlenker et al. 2013 and Schlenker 2013 that in ASL (i) these features can have an iconic semantics, which requires the establishment of a structure-preserving map between some geometric properties of signs and some properties of their denotations; and that (ii) high features display the grammatical behavior of *phi*-features in being 'erasable' in ellipsis and focus-sensitive constructions. Iconicity and erasability were correlated in (1), where the elided VP (boxed) was taken to be copied from the antecedent VP (in **bold**), but with the high features erased, as these are incompatible with the intended denotation of the elided *SELF* (which refers to a short individual). It was further shown that iconicity was crucially involved: depending on the position of the individuals referred to, the classifiers were rotated as shown in (1), and the pronoun denoting a tall astronaut indexed the upper part *of a structured locus* rather than a position that was invariably high *in signing space*.

(1) HAVE TWO ROCKET PERSON [ONE HEIGHT]$_a$ [ONE SHORT]$_b$. THE-TWO-a,b PRACTICE DIFFERENT VARIOUS-POSITIONS [positions shown]. IX-a HEIGHT IX-b SHORT, **CL$_a$-[position]-CL$_b$-[position].** IX-a_upper_part **LIKE SELF-a_upper_part**. IX-b_lower_part NOT LIKE SELF-a_upper_part$_{elided}$.

'There were two astronauts, one$_a$ tall, one$_b$ short. They trained in various positions [positions shown]. They were in [___] position. The tall one liked himself. The short one didn't.'
(17, 178; 17, 179; 17, 180; 17, 181) (Schlenker 2013)

Positions of the the two-finger person classifiers representing a short and a tall astronaut in various positions

Ratings on a 7-point scale (7 = best), from Schlenker 2013
(all the readings were bound variable)

1. Vertical, heads up	2. Vertical, heads down	3. Diagonal, heads up	4. Diagonal, heads down
6	5.5	6.5	6

While these data could suggest that high loci display a genuinely iconic semantics, there is an alternative interpretation (David Adger, p.c.): maybe the classifiers are responsible for these iconic and gradient effects, while height specifications of loci only allow for a small number of discrete distinctions (e.g. high vs. low), computed *relative to the position of the classifier*. To control for this possibility, we explored examples in which (i) near-gradient height distinctions could be drawn, and (ii) iconic effects were displayed in the absence of any classifiers. Point (i) is established by (2), where the pronouns index 4 different heights. (2)c shows that these height specifications are 'erased' in the course of ellipsis resolution, for otherwise the elided occurrences of *SELF* taking *IX-b* and *IX-d* as antecedents would have the 'wrong' feature specifications – which in turn should yield deviance, as in the control sentence in (2)b ((2)a is a control with overt reflexives at the 'right' heights). Acceptability ratings were obtained by the 'playback method' (Schlenker et al. 2013, Schlenker 2013) from repeated jugdments by a native ASL signer [Deaf child of Deaf, signing parents] on a 7-point scale, with 7 = best.

(2) SHOW HAVE 4 GYMNAST STAND BAR ORDER HEIGHT.
  a. *SELF* signed at various, appropriate heights
6.5 IX-a PRESENT SELF-a WELL, IX-b MAYBE NOT PRESENT SELF-b WELL, IX-c NOT CLEAR, IX-d DEFINITELY NOT PRESENT SELF-d WELL.

  b. *SELF* signed at a constant, low height

3.2 IX-a PRESENT SELF-a WELL, IX-b MAYBE NOT PRESENT SELF-b^0 WELL, IX-c NOT CLEAR, IX-d DEFINITELY NOT PRESENT SELF-d^0 WELL.

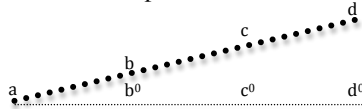c. *SELF* signed low, only once (with ellpisis of the the second and fourth VPs)
7 IX-a PRESENT SELF-a WELL, IX-b MAYBE NOT, IX-c NOT CLEAR, IX-d DEFINITELY NOT.
=> bound variable reading
'During a show, four gymasts were standing on a bar, ranked by height. One [a short one] presented himself well; the second [taller one] possibly didn't present himself well; for the third [still taller] one, it was unclear; and the fourth [still taller] one definitely didn't present himself well.'
(19, 253[1]; 19, 254; 19, 265; 19, 282; 19, 293; 4 ratings)

Schematic representation of the loci from the signer's perspective

Point (ii) is established by the examples in (3), which are each comprised of four sentences, the second of which is analogous to (2)a, with four distinct heigh specifications. The third sentence establishes that the gymnasts operated a vertical rotation, and as a result the fourth sentence introduces *additional* heights below the position of the bar to represent the gymnasts in hanging position. It is safe to assume that these further heights are introduced because the new loci map the (upper part of) the bodies of the gymnasts in hanging position, as shown in our diagram. But although these height specifications are iconic, they also display the behavior of *phi*-features in being 'erased' in the course of ellipsis resolution: unlike (3)b (= no ellipsis but wrong heights), (3)c is acceptable (and (3)a is a control with no ellipsis but with the reflexives targeting the 'right' heights).

(3) SHOW HAVE 4 GYMNAST STAND BAR ORDER HEIGHT.
   IX-a PRESENT SELF-a BAD, IX-b MAYBE NOT, IX-c NOT CLEAR, IX-d DEFINITELY NOT.
   SUDDENLY CL:ROTATION. WEIRD - NOW

a. *SELF* signed at various, appropriate heights
6.3 IX-a' PRESENT SELF-a' WELL, IX-b' MAYBE NOT PRESENT SELF-b' WELL, IX-c' NOT CLEAR, IX-d' DEFINITELY NOT PRESENT SELF-d' WELL.

b. *SELF* signed at a constant, low height
3.7 IX-a' PRESENT SELF-a' WELL, IX-b' MAYBE NOT PRESENT SELF-b'^0 WELL, IX-c' NOT CLEAR, IX-d' DEFINITELY NOT PRESENT SELF-d'^0 WELL.

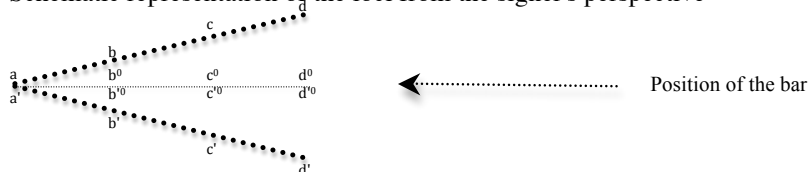c. *SELF* signed low, only once (with ellpisis of the the second and fourth VPs)
6.3 IX-a' PRESENT SELF-a' WELL, IX-b' MAYBE NOT, IX-c' NOT CLEAR, IX-d' DEFINITELY NOT.
=> bound variable reading
 (19, 272; 19, 273; 19, 284; 19, 294; 3 ratings)
'During a show, four gymnasts were standing on a bar, ranked by height. One [a short one] presented himself badly; the second [taller one] didn't present himself badly; for the third [still taller] one, it was unclear; and the fourth [still taller] one definitely didn't present badly. Suddenly, they effected a vertical rotation. Oddly, now the short one presented himself well; the second one possibly didn't present himself well; for the third one, it was unclear; and the fourth one definitely didn't present himself well.'

Schematic representation of the loci from the signer's perspective

Position of the bar

We conclude that ASL height specification of loci can display grammatical properties of *phi*-features while also having a highly iconic *and* gradient behavior.

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[1] In each case, numbers of the form *19, 253; 19, 254; etc.* refer to the videos in which the sentences were signed or the judgments recorded (the judgments were redundantly entered into a computer). The first pair of each series (here: *19, 253*) refers to the video in which the sentence was signed.

References

Schlenker, Philippe, Lamberton, Jonathan and Santoro, Mirko: 2013, Iconic Variables. *Linguistics & Philosophy* 36, 2, 91-149.

Schlenker, Philippe: 2013, Iconic Features. Manuscript, Institut Jean-Nicod and New York University.