

Low referentiality in LSF and LIS

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Goals How do we talk about individuals when we lack information about their identity? Here, we examine such cases of ‘low referentiality’ in LSF and LIS, two historically related sign languages (Volterra & Porcari 1995). We describe the meaning and use of several lexical signs and the null pronoun, as well as the contribution of non-manual markers. First, we show that in both languages, a frown face accompanying an indefinite expresses ignorance about its referent. This non-manual is shown to fit into known cross-linguistic typologies of *epistemic indefinites*. Second, we show that the null pronoun acts as an *impersonal* (similar to French *on*).

Methodology Target sentences were recorded and repeatedly judged on a 7-point scale by native signers, using low-referentiality contexts from Barberà and Cabredo Hofherr (2016).

The ‘low referentiality’ toolkit In spoken language, indefinites can be lexically specified to communicate a range of referentiality (Haspelmath 1997). For example, the Russian prefix *toe-* marks indefinites whose referent is both specific and known to the speaker; English ‘*someone or other*’ is used for unknown referents. Sign languages display a similar variation in the lexical meanings of indefinites. Previous literature on LSC (Barberà 2012) and ASL (Davidson and Gagne 2013) has further shown that some of these shades of meaning are associated with facial expressions and the use of space (high vs. neutral). The transparency of these phonological parameters suggests that the constructions can be morphologically decomposed.

In LSF and LIS, we investigated the words SOMEONE and CL-PERSON. Both act as indefinites (‘someone’); SOMEONE additionally introduces the inference that the signer does not have a particular person in mind. Two groups of non-manuals were studied. First, we investigated a collection of non-manuals (‘frown-face’ below) consisting of raised eyebrows, a downward-turned mouth, and a body lean away from the manual sign; in all sentences, these non-manual markers generated the inference that the signer did not know the identity of the person being talked about. Second, we investigated eye-gaze directed towards the manual sign; this marker systematically generated the inference that the signer had a particular person in mind. Finally, we investigated the null pronoun, which can be used with an existential meaning.

Epistemic indefinites Words like German *irgendein* and Italian *un qualche* have been called *epistemic indefinites*, because they express incomplete epistemic knowledge about the identity of their referent. Cross-linguistically, epistemic indefinites show a distinctive set of formal properties—and points of variation. We show that frown-face fits into this typology.

First, epistemic indefinites show distinctive interaction with deontic modals (Alonso-Ovalle & Menéndez-Benito 2010). In some cases, embedding of an epistemic indefinite under the modal is simply ungrammatical. For example, neither Italian *un qualche* nor frown-face in LSF can be embedded under permission modals. (Both sentences become grammatical when the ignorance marker—*qualche* or frown—is removed.)

- (1) * Maria è libera di sposare un qualche dottore. (Italian)
Maria is allowed to marry a QUALCHE doctor
- (2) * SATURDAY-NEXT YOU MAY INVITE ^{frown}SOMEONE (LSF)

Elsewhere, embedding under permission modals generates a free-choice inference. For example, German stressed *irgendein* in an analogous sentence to (1) is grammatical with the interpretation that Mary is free to marry *any* doctor. Likewise, $\overline{\text{SOMEONE}}^{\text{frown}}$ in LIS also generates a free choice reading under permission modals.

Epistemic indefinites also vary with respect to which ‘identification methods’ they track. For example, German *irgendein* can be used in contexts when the referent is visible but unidentifiable; Italian *qualche* cannot (Aloni & Port 2010). In LSF and LIS, similar patterns show up regarding the compatibility of frown-face with eye-gaze towards the hand position (as described above). In LSF, eye-gaze with frown-face generates the inference that the signer has a particular person in mind, but cannot identify them; in LIS, eye-gaze with the ignorance nonmanual is just ungrammatical. Thus, in LSF, frown-face and eye-gaze track different identification methods (ability to see vs. ability to name); in LIS, they track the same one.

Impersonal constructions (LSF) The typology of indefinites overlaps with that of so-called impersonal constructions, that generate generic interpretations; for example, French *on* can be used as an indefinite (*On a volé mon vélo* = ‘Someone has stolen my bicycle’), but also as a generic that contributes a universal-like force (*On doit faire attention* = ‘One must be careful’). Cross-linguistically, Cabredo Hofherr (2008) identifies several properties of the indefinite use of impersonals: first, multiple occurrences of an impersonal allow joint reference; second, they take obligatory low scope with respect to temporal adverbials. In sign language, Barberà & Cabredo Hofherr (2016) show that no lexical signs in LSC pass the diagnostics of impersonal reference. Here, we report analogous results for lexical signs in LSF and LIS, but show that the null pronoun in both languages does display the hallmarks of an impersonal.

With respect to the availability of generic readings (cf. (3)), joint reference (cf. (4)), and scope (cf. (5)), the null pronoun behaves similarly to impersonals like French *on*.

- (3) PERSON DRUNK *pro* SEE[^]CATCH. ✓Generic
‘One saw that the person was drunk.’
- (4) IF *pro* DRAW IX DRAWING SNAKE, THEN *pro* LOSE.
‘If one_j draws the picture of the snake, one_j loses.’
- (5) BIKE *pro* STEAL-STEAL TWICE. *∃ > twice; twice > ∃
‘Someone stole my bike twice.’

In otherwise identical sentences, both CL-PERSON and SOMEONE allow covariation under the temporal adverbial, and neither allow generic readings. On the other hand, in LIS, CL-PERSON does allow joint reference in sentences like (4). We analyze this apparent anomaly as a case of ambiguity: *cl-person* is ambiguous between an indefinite and a definite. This hypothesis is supported by the non-manuals involved; notably, the second occurrence of CL-PERSON cannot appear with frown-face, as predicted if it is a definite.

Summary Layers of non-manuals (frown and gaze) allow decomposition of indefinites with respect to two different epistemic properties, previously implicated in the literature. Cross-linguistic variation of LSF and LIS fits into known typologies. Confirming findings from LSC, no lexical items allow impersonal reference, but the null pronoun is shown to be an impersonal.

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