Pronouns and pointing: Where do sign languages fit in?

Keary Cormier
Deafness, Cognition & Language Research Centre
University College London

Between you and me: Local pronouns across modalities
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“Every language has X, doesn’t it?” Proposed substantive universals (from Pinker & Bloom 1990) supposedly common to all languages...

- E.g., “Anaphoric elements” including pronouns and reflexives...

- There are clear counterexamples to each of these claims....

- Many languages (e.g. Mwotlap; François 2005, p. 119) lack dedicated reflexive or reciprocal constructions altogether, so that “they hit them dead” can mean “they killed them,” “they killed themselves,” or “they killed each other” (Levinson 2000, p. 334 ff.). Some Southeast Asian languages lack clear personal pronouns, using titles (of the kind “honorable sir”) instead, and many languages lack third-person pronouns (Cysouw 2001). Sign languages like ASL (American Sign Language) also lack pronouns, using pointing instead.

(Evans & Levinson 2009, Box 1, pg. 431, boldface added)

Sign linguistics: A brief history

- Prior to 1960s, sign language was generally considered “just gesture”, or codified representation of speech (Sapir 1921, Bloomfield 1933)
- William Stokoe (1960) recognised and described linguistic structure of ASL
- 1960s-1980s
  - Push to justify linguistic study of signed languages as true languages in their own right
  - Application of various theoretical frameworks (mostly led by UG), also borrowing of terminology from spoken languages

Overview

- Background about sign languages
- Defining characteristics of:
  - Pronouns
  - Pointing gestures
- Where do sign languages fit in?

Use of mainstream linguistic terminology with signed languages

- Some are not controversial
  - Phonology
    - Some are controversial
    - Classifier
      - Verbs of motion, location, handling
      - Classifier verbs, classifier constructions (Frishberg 1975, Sapir 1982, Schick 1987)
      - Polymorphemic verbs, polycomponenental signs, depicting verbs, depicting signs, etc. (Schlenz 2003, Zwalve 2003, in press)
    - Agreement
      - Directional verbs which move between locations associated with subject/ object
**Pronoun**

- “The ASL lexicon contains no signs classifiable as ‘pronouns’. The equivalent of pronominal reference is achieved by the signer’s first establishing a frame of reference, in front of his body, within which he establishes points of reference identified with the objects, persons, and locations to which he will refer” (Friedman 1975: 946).
- “An index which is oriented and moving toward the signer serves as the 1P pronoun”, index away from signer and interlocuter “serves as the 3P pronoun” (Friedman 1975: 948).
- (Note: 3P referents need not be physically present)

**A note on terminology**

- For the purposes of this presentation I will refer to the pointing/directional signs which have traditionally been referred to as sign language pronouns as *pronominal signs*.
- To distinguish them from:
  - *Pronouns*: used in spoken languages
  - *Pointing gestures*: used by non-signers

**Pronominal signs**

**Criteria for pronouns**

- Cysouw (2003)
- Criteria for pronouns depend on what they are being compared or opposed to (Siewierska 2004)
  - Nominals
  - Anaphors (reflexives)
  - Person agreement markers
- A canonical typology of pronouns would be useful (Corbett 2006)
Characteristics of pronouns

- Referentiality – pronouns as shifters
  - Association with referent
  - Inability to take modifiers and complements
- Paradigmatic structure
  - Association with grammatical categories
  - Person, number, gender, case
- Conflict: Economy vs. efficiency
  - More grammatical marking = less efficient as shifters but lower economy of effort for identification of referent
  - Less grammatical marking = higher economy of effort for identification of referent but more efficiently act as shifters
- Crosslinguistic variation in marking of various grammatical categories reflects this conflict

(Bhat 2004)

Person & number

- Languages differ in which person & number categories are marked
- Even within a language, different paradigms differ in person & number marking:
  - Typical person distinctions:
    - 1st vs. 2nd vs. 3rd person
    - 1st, 2nd person vs. 3rd person
    - 2nd person vs. 2nd, 3rd person
  - Typical number distinctions:
    - Singular vs. plural
    - Singular vs. dual vs. plural
    - Also some have trial, paucal, quadral
    - Some have inclusive/exclusive distinction in non-singular
- Patterns are productive and systematic

(Cysouw 2003)

Plurality

- Typical ‘plurality’ with nouns vs. typical ‘conjunction’ with pronouns
  - Plurality with nouns emphasises similarity between referents: ‘boy’ vs. ‘boys’
  - Conjunction with pronouns emphasises differences between role held by referents
    - First person plural inherently involve conjunction and not plurality: ‘we + me + other, not multiple ‘we’
    - Second person plural can involve either conjunction (you + other) or plurality (multiple ‘you’s)
    - Inclusive/exclusive distinction involves conjunction and not plurality (‘we including you’ vs. ‘we not including you’)

(Bhat 2004)

Characteristics of pronouns

- Inherent definiteness of pronouns
  - Arguments against definiteness involve plural pronouns
    - ‘Some of us like our beer chilled.’
    - ‘Some of us like their beer chilled.’
    - ‘Some of us’ as indefinite, co-reference with ‘our’
  - Other counterexamples might include impersonal ich and du, argued to be indefinite (Zobel 2010)
- Syntactic distribution
  - Personal pronouns vs anaphors (reflexives, reciprocals)
- Relationship between pronouns as free morphemes and as bound morphemes
  - Agreement systems generally emerge by, grammaticalisation processes (Givon, 1976; Corbett, 2006)
    - Full pronouns/critic+reflectional morphology

(Chater 2003a)

Pronouns: Summary

- Referentiality
- Association with grammatical categories
  - Person
  - Number & plurality
- Definiteness
- Syntactic distribution
- Grammaticalisation

Characteristics of pointing gestures

- Prototypical pointing
  - Communicative
    - Projects a vector from a body part
    - Indicates direction, location or object
  - May indicate real or imagined referents (Kendon & Versante 2003)
- Pointing gestures co-occur with speech, integrated with speech (Clark 2003, Haviland 2003)
  - The specific nature of the integration in terms of synchrony with particular grammatical elements is unclear

(Kita 2003a)
Form and function of pointing gestures

- Form of pointing (e.g. shape, orientation, movement of hand(s) or other body parts) may vary with function
  - In Naples: specificity, concreteness (Kendon & Versante 2003)
  - In Zinacantan: direction, shape, proximity (Haviland 2003)
  - In Laos: foreground/background (Enfield, Kita & de Ruiter 2007)
  - In Arrernte: plurality (Wilkins 2003)
  - In American English: closeness; singularity/plurality (Birdwhistell 1966)

Plurality and pointing: Arrernte

- Arrernte (Wilkins, 2003: 195)
  - ‘...there is no obligatory marking in noun phrases to indicate singular or plural ... a phrase like one nhenhe (‘tree this’) can mean either “this tree” or “these trees.” However, the singular/nonsingular distinction is frequently made gesturally: when the one-finger point accompanies the phrase, the interpretation is “this tree”, whereas when the wide hand point accompanies the phrase the interpretation is “these trees”...’

Pointing gestures: Summary

- Communicative, indicates direction, location, object
- Can indicate real or imagined referents
- Co-occurs with and integrated with speech
- Form may vary with function

Pronominal signs compared with pronouns and pointing gestures

- Referentiality
- Definiteness
- Paradigmatic structure
  - Participant roles
  - Number/plurality
- Grammaticalisation
- Syntactic distribution

Referentiality

- Pronouns and pointing gestures are referential
- Unsurprisingly, pronominal signs are too
  - Communicative
  - Dissociation from referent – functions as shifter
  - If we extend to 3rd person pronominal signs:
    - Can indicate real or imagined referents
    - Indicates direction, location, objects

Definiteness

- Pronouns and pointing gestures are typically definite
  - Pronominal signs equally so
  - Recall that arguments against definiteness with pronouns involved plurals (e.g. some of us)
  - As we will see, plurals also introduce complications in pronominal signs
Paradigmatic structure

• Form varying with function
  – Participant roles/person
  – Number/plurality

Person in signed languages

• Three person system (Friedman 1975, Padden 1983)
  – But - no finite, listable set of second or third person forms or location values (e.g. Meier 1990, Rathmann & Mathur 2002)
  – Berenz (2002), Alibasic Ciciliani & Wilbur (2006) argue that other cues such as eyegaze and head, chest and hand orientation systematically distinguish 1st versus 3rd person in ASL, and Brazilian and Croatian Sign Languages
  – Problem with alignment/grammatical 2nd vs 3rd person: similar patterns are also found in pointing gestures (Kita 2003b)

• No person
  – Pronouns are directed towards discourse loci (Lillo-Martin & Klima 1990)
  – Pronouns are composed of discrete linguistic elements (e.g. handshape) which combine with gestural elements (e.g. location/direction) (Liddell 2003, McBurney 2002)

Person in signed languages (cont.)

• First vs. non-first person (Meier 1990)
  – No person distinctions amongst non-first person pronouns, but distinct first person behaviour
    • Lexically-specified location (e.g. centre of chest)
    • First person need not necessarily always refer to signer – e.g. in role shift
    • Idiosyncratic first person plurals which point less than singulars
  – Currently this two-person system widely accepted for various signed languages by many researchers (e.g. Engberg-Pedersen 1993, Emmorey 2002, Rathmann & Mathur 2002, etc) including Liddell (2003)

Problems with 1st person

• 1st person in role shift
  – Pronominal sign ME within role shift refers not to signer but to the quoted person.
  (a) BOY SAY "DOE FOR ME" (BSL)
    – The boy said “Are you looking for me?”
  – McBurney (2002) argues that “Role playing or not, index finger point to entities within a grounded mental space, and referents are identified not through abstract person features, but through gestural deixis” (p. 361).
  – Further evidence supporting McBurney:
    • Quotations as demonstrations: Non-linguistic sounds and gestures can be quoted (Clark & Gerrig 1990)
    • The boy said “Are you looking for me?”* point to self.
    • Pointing gesture within quotation refers not to speaker but to boy.
  – Idiosyncratic 1st person plurals which point less than singulars.
    • The different behaviour of first person plurals compared to other pronominal signs could be due to plurality rather than 1st person.

Problems with 1st person

• Lexically-specified, stable location for 1st person (e.g. centre of chest)
  – McBurney (2002): another explanation is that centre of the chest is the phonologically-specified location for these pronominal signs, just as cheek is location of ASL GIRL or lips are location of ASL RED.
  – An alternative explanation:
    • Same as pointing gestures to refer to self
    • First person pronoun in Japanese Sign Language is point to the nose (Smith & Ting 1979), cited in Meier & Lillo-Martin 2010); however the same form is used by Japanese non-signers as gesture for “me”
  – Other cultural influences on pronominal signs in signed languages
    • Malaysian Sign Language prefers full noun phrases over pronominal pointing signs, following politeness strategies in Khmer (Schembri, p.c.)

Plural pronominal signs (BSL)

More indexic (similar to singular pronominal signs)

“Two of us”

Less indexic compared to singular pronominal signs

“Two of them”

Number incorporated signs

“Three of us”
Number & plurality

• Plural pronominal signs have less of a pointing function than singulars
  – Plurals generally point less precisely to their referents: Higher number of referents = lower indexicality (Cormier 2002, 2005, 2007)
  – Indexicality of some plural forms appears to vary across sign languages (BSL and ASL, Cormier 2007)
  – No evidence of systematic differences in indexicality in singular pronominal signs, either within or across sign languages - possible counterexample?: Polish Sign Language (Rutkowski 2010)
  – Systematic differences in palm orientation between singular and plural pronouns in BSL

Palm orientation

• Other functions of pointing in sign languages
  – Pronominal signs vs. determiners
    (a) INDEX NOT LIKE ICE-CREAM
    “She doesn’t like ice cream.”
    (b) BOP INDEX NOT LIKE ICE-CREAM
    “The boy doesn’t like ice cream.”
  – Adverbials
    • Temporal markers
      (GO-HOLIDAY NEXT INDEX)
      “I’m going on holiday next week (there)”
    • Locative markers
      (ID INDEX KEY INDEX)
      “I found my keys there.”
  – Some have claimed different forms for these different functions in several signed languages (Engberg-Pedersen 2003, Pfau in press)
    – Nominal points (pronouns and determiners) with palm sideways
    – Adverbial points (specifically locative markers) with palm down...

Palm orientation

• In a dataset of 781 BSL signs from 210 deaf BSL signers, preliminary results indicate that plural pronouns pattern differently than singulars in palm orientation
  – Non-first person singular pronouns and determiners favoured palm sideways orientation
  – Non-first person plural pronouns and adverbials favoured palm down orientation
  – (First person pronouns not included as motoric factors affect orientation)
  • Thus in this dataset, plural pronouns pattern with adverbials rather than with all other nominals

Number & plurality

• Summary
  – Plural pronominal signs have less of a pointing function than singulars
  – Systematic differences in palm orientation between singular and plural pronouns in BSL
  – Unclear to what extent these same patterns might be found in pointing gestures
    – Frequency issues?

Paradigmatic structure in pointing gestures?

• Form of pointing (e.g. handshape, orientation, movement of hands; distinctive movements of other body parts) may vary with function
  – In Naples: specificity, concreteness (Kendon & Versante 2003)
  – In Zinacantan: direction, shape, proximity (Haviland 2003)
  – In Lao: foreground/background (Enfield, Kita & de Ruiter 2007)
  – In Aronto: plurality (Wilkins 2003)
  – In American English: closeness; singularity/plurality (Birdwhistell 1966)
• Just how productive and systematic are these patterns?
• What about other languages/cultures?
• More empirical evidence is needed

Comparing grammaticalisation

• Relationship between pronouns as free morphemes and as bound morphemes
  – Agreement systems in spoken languages generally emerge by grammaticalisation processes (Givon, 1976; Corbett, 2006).
  • Full pronouns:clitic=reflexional morphology
  – No evidence that this grammaticalisation pathway followed in signed languages – i.e. no evidence that agreement/indicating verbs are the result of the fusion of pronoun and a verb (Schembri & Cormier 2009)
  – Pronouns and agreement/indicating verbs instead involve similar uses of gestural space, and not clear that there are intermediate steps as there tend to be with processes of grammaticalisation
  – Gesture becoming language: Not the same process as grammaticalisation (Cormier, Schembri & Wolf, in press)
Syntactic distribution of pronominal signs

- Pronominal signs serve as verbal arguments
  - (a) INDEX\_NOT-LIKE INDEX\_b, ‘She doesn’t like him/her.’
- Pronominal signs substitute for noun phrases
  - (b) [INDEX\_b, NOT-LIKE ICE-CREAM ‘She doesn’t like ice cream.’
  - (c) [INDEX\_b, NOT-LIKE ICE-CREAM
  - (d) [YOUNG BOY\_a, NOT-LIKE ICE-CREAM
- Subject pronoun copy (Padden 1983)
  - (e) [INDEX\_b, NOT-LIKE ICE-CREAM [INDEX\_b, ‘She doesn’t like ice cream.’
  - (f) *[INDEX\_b, NOT-LIKE ICE-CREAM [INDEX\_b, ‘She doesn’t like ice cream.’
  - (g) *[YOUNG BOY\_a, NOT-LIKE ICE-CREAM [YOUNG BOY\_a, (Meier & Lillo-Marín 2010)]

**Summary**

<table>
<thead>
<tr>
<th>Pronouns</th>
<th>Pronominal signs</th>
<th>Pointing gestures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Referentiality</td>
<td>★</td>
<td>★</td>
</tr>
<tr>
<td>Definiteness</td>
<td>★</td>
<td>★</td>
</tr>
<tr>
<td>Participant roles</td>
<td>★</td>
<td>★</td>
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<tr>
<td>Number/Plurality</td>
<td>★</td>
<td>★</td>
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<tr>
<td>Syntactic distribution</td>
<td>★</td>
<td>★</td>
</tr>
<tr>
<td>(Grammaticalisation)</td>
<td>★</td>
<td>★</td>
</tr>
</tbody>
</table>

*(Further evidence is needed to confirm)*

**Grammaratical categories across languages**

- Must be careful in applying grammatical categories from one language to another (Haspelmath 2007, Evans & Levinson 2009)
- Equally if not more true for applying categories across modalities
- Useful to adopt categories when sufficient evidence supports it, at least until other evidence refutes it (Cormier, Schembri & Woll, in press)

**Crosslinguistic patterns**

- Pronouns
  - Large amount of crosslinguistic diversity in phonology and morphosyntax of pronouns
- Pointing gestures
  - Some evidence of diversity across cultures
- Pronominal signs
  - Higher degree of crosslinguistic similarity with pronominal signs compared to pronouns and pointing gestures?
  - This could reflect the lesser tendency of grammatical categories to be marked on pronominal signs

However...

**Pointing in village or emerging sign languages**

- Kata Kolok, a village sign language in Bali, Indonesia (Marsaja 2008)
  - Strong use of pointing to real-world locations
  - But prefers establishment of locations for referents on non-dominant hand rather than by pointing to locations in space for absent referents
- Senghas & Coppolla (in press): Emergence of pronominal signs as verbal arguments in Nicaraguan Sign Language
Other uses of pointing in sign languages

• Determiners
• Adverbials (temporal, locative markers)
• Pointer buoys (Liddell 2003)
  – Non-dominant hand points at location associated with some important element in discourse while dominant hand signs primary message
  – Pointer buoys could be closer analogue to co-speech pointing gestures

Conclusion

• The features that make pronominal signs difficult to characterise morphosyntactically (e.g. participant roles) are those features they share with pointing gestures
• The features that make pronominal signs difficult to characterise gesturally (e.g. syntactic distribution) are those features they share with pronouns
• However – pronouns have been studied in far more detail than pointing gestures
  – More research on pointing gestures could tip the scales one direction or the other
  – Particularly comparative work on pronominal signs and pointing gestures
• Other areas which may provide evidence
  – Acquisition
  – Pointing behaviours of agreement/indicating verbs

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Notes


