Introduction and maintenance of reference in narratives: Evidence from native and non-native signers of British Sign Language

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Pointing, reference, explicitness

- Pointing in signed languages: highly explicit for reference
  - Pronouns: INDEX WALK ‘she walks’
  - Determiners: WOMAN INDEX WALK ‘the woman walks’
  - Locative points: BOOK INDEX ‘the book is there’

- Morgan (2006) on British Sign Language (BSL) narratives
  - Noun phrases (with or without points) as highly explicit
  - Constructed action/role shift as least explicit

Constructed action (CA)

- Signer uses his/her head, face and body to describe what a person/character does, says, thinks or feels
- Also known as ‘role shift’
- Events are told from perspective of referent; signer ‘becomes’ referent
- CA alone is extremely low in explicitness of reference

constructed action depicting a) a bear which is about to attack a person, and b) the person who is about to be attacked pretending to be dead

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Reference establishment with CA

- Typically use of noun phrase before CA to establish referent - esp for introduction of a referent in a discourse
  - [BEAR INDEX] CA: bear-about-to-attack
  - [MAN] CA: man-pretend-to-be-dead
- This is claimed widely throughout the literature, for ASL and other signed languages (e.g. Engberg-Pedersen 1983, Emmorey & Reilly 1995, Liddell 2003, Sandler & Lillo-Martin 2006, Morgan 2006)
- Noun phrase generally considered not necessary if referent understood in context
  - Emmorey & Reilly (1998) claim that reintroduction of NP referent before CA within a discourse is not only unnecessary but infelicitous
- However this topic has not been examined empirically

Sign language acquisition

- Unique language experience of deaf people
  - 5-10% of deaf people are native signers: born to deaf, signing families
  - 90-95% of deaf people are non-native signers: born to hearing parents
  - Age of acquisition effects have been found at phonological, morphological, and lexical levels in deaf adults (Emmorey et al. 1995, MacSweeney et al. 2008, Mayberry & Fischer 1989)
- Acquisition of constructed action
  - Begins at about 3 years of age but progresses slowly for all deaf children (Reilly 2000)
  - Even by ages 9-10 some deaf children still struggle (Slobin et al. 2003)

Research questions

- How is reference established for constructed action (CA) in British Sign Language (BSL)?
  - Introduction versus maintenance - i.e. first mention of a referent versus later mentions within the same discourse?
  - Deaf native versus deaf non-native signers?
  - Deaf adults versus deaf children?
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### Adult participants

<table>
<thead>
<tr>
<th>Language background</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>native</td>
<td>6</td>
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<tr>
<td>Deaf from Deaf, signing families native signers</td>
<td></td>
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<tr>
<td>early</td>
<td>6</td>
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<tr>
<td>Deaf from hearing families who learned BSL 3-8 years old non-native signers</td>
<td></td>
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<tr>
<td>late</td>
<td>6</td>
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<tr>
<td>Deaf from hearing families who learned BSL after age 12 non-native signers</td>
<td></td>
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</tbody>
</table>

### Child participants

12 children aged between 5;1 and 7;5 (most around age 6)

<table>
<thead>
<tr>
<th>Language background</th>
<th>N</th>
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<tbody>
<tr>
<td>DD</td>
<td>4</td>
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<tr>
<td>deaf children from Deaf, signing families native signers</td>
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<tr>
<td>DH-bi</td>
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<tr>
<td>deaf from hearing families in bilingual school non-native signers</td>
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<tr>
<td>DH-TC/oral</td>
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<tr>
<td>deaf from hearing family in Total Communication/oral school non-native signers</td>
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### Task

- Participants were shown video clip and were asked to describe clip to a deaf adult native signer
- Stimulus video clip: Pink Panther cartoon
- Signed narratives were coded for CA and lexical signs using ELAN software

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Coding

- NPs: Noun phrases in the gloss tiers
  - e.g. MAN 'man', MAN INDEX 'the man', INDEX 'he'
- For each instance of CA, we coded preceding NP identifying referent of CA

NP/CA sequences identified

<table>
<thead>
<tr>
<th>NP, CA</th>
<th>Immediate reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Noun phrase followed immediately by constructed action of same referent</td>
</tr>
<tr>
<td>NP,...CA</td>
<td>Local but not immediate reference</td>
</tr>
<tr>
<td></td>
<td>Noun phrase followed by constructed action of same referent, but with intervening material in between (e.g., verb phrase or classifier construction)</td>
</tr>
<tr>
<td>CA no NP</td>
<td>No local reference</td>
</tr>
<tr>
<td></td>
<td>Constructed action with no local NP identifying that referent beforehand</td>
</tr>
</tbody>
</table>
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**NP CA**

Immediate reference:
Noun phrase followed immediately by constructed action of same referent.

[DOG CA:dog]

"The dog thinks ‘Great!’ and approaches."

**NP ... CA**

Local but not immediate reference
Noun phrase followed by constructed action of same referent, but with predicate in between (VP or CL).

[INDEX MAN] (COME BRING FROM TENT OUT) CA:man

"The man comes out of the tent with his saucepan; confused, he picks up the wet stick."

**CA no NP**

No local reference
Constructed action with no local NP identifying that referent beforehand - i.e. any previous NP or classifier construction has different referent.

[INDEX:dog] [CL:dog SEE] CA:man

"The dog is walking along and sees (the man) chopping the sign down and lighting the wood."

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**Introduction of reference before CA (adults)**

- NP CA preferred by all groups
- All introductions of CA preceded by local NP for all groups

**Maintenance of reference before CA (adults)**

- Native signers continue preference for NP CA in maintenance, contrary to Emmorey & Reilly (1998)
- Early & late learners prefer long-distance reference instead

**Introduction of reference before CA (children)**

- NP CA preferred by all groups (like adults)
- Some introductions of CA with no local NP for all groups (unlike adults)

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Discussion (1)

- NP CA (noun phrase followed by constructed action of that referent) is preferred by native signer adults, both for introduction and maintenance
  - Consistent with claims in literature about reference with CA for introduction, but against assumptions for maintenance

Discussion (2)

- Participants in all groups of children produced CA no NP (constructed action with no local referent) in introduction, but no adults did this
  - Appropriate/adult-like use of explicit reference with CA takes some time for deaf children to acquire
  - CA enactment in deaf and hearing children relatively early
  - Consistent with notion of symbol formation (Werner & Kaplan 1963; Piaget 1954)
    - Before (hearing) children begin to gesture symbolically, they describe objects and events in the world by actually using the objects themselves or performing the action itself
    - Highlights CA’s clear gestural roots - i.e. functional actions and/or pantomime gesture
    - Reference with CA requires language
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Still to come

• Current work
  – Exploring differences across groups with NP…CA (local but not immediate reference)
  – Few tokens of CA in this narrative, need to examine more data (more narratives, other stimulus types)
  – Exploring reference with entity classifier constructions
  – Longitudinal data from children
• For future
  – CA use with L2 learners of sign language
  – Reference and CA/enactment in co-speech gesture

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• More info about PALM project: http://www.dcal.ucl.ac.uk/Research/assoc1.html

References

References


