Adverbial mouth gestures in British Sign Language: A case study of tongue protrusion in BSL narratives

Donna Lewin & Adam Schembri

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Outline

• Mouth actions in signed languages
• Adverbial mouth gestures
• Our case study
• Results and observations

Mouth actions in signed languages

Terminologies currently in use (e.g., Woll, 2001)

• Mouth actions vs. other non-manual features
• Mouthing (established loans vs. one-off language contact?) vs. mouth gestures
• Mouth gestures
  • Adverbials
  • Enaction
  • Echo phonology

Mouth actions

• Mouthings are derived from the spoken language and can be fully or partially articulated

• Some evidence from a recent experimental study by Vinson et al. (in press) that mouthings and manual signs may dissociate, with slips of the tongue and hand occurring independently from each other, suggesting that (some?) mouthings and lexical signs are not bundled together into the signer’s mental lexicon

• Adverbial and echo phonology mouth gestures are part of the signed language and not derived from the spoken language, although may be related to gestures used in the surrounding hearing communities

Adverbial mouth gesture ‘mm’ co-produced with BSL DRIVE = “to drive without effort”

Enacting mouth gesture produced with BSL (BLOW-UP-)BALLOON = “blowing up a balloon”
**Echo phonology: BSL sign AT-LAST/FINALLY produced with ‘p/bu’**

- NB Woll (2001: 91): On echo phonology: “The signs in which they are found require the presence of the mouth gesture to be well-formed…the mouth gestures mirror or echo the manual movements in these signs” (compare “static configurations” of adverbial mouth gestures)
- More recently Woll (2009) seems to suggest the NMFs only required in citation form of the signs

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**Liddell (1980)**

- Adverbial mouth gestures:
  - Signal manner and degree of the action
  - Modify the co-occurring manual sign
  - Signal a contrast in meaning between identical manual signs
  - Adverbial mouth gestures can be interchanged to express a different manner

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**This ASL sign+mouth gesture complex means “fishing with relaxation and enjoyment” (Liddell, 1980)**

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**Tree diagram**

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S
  /    
 NP   VP
  /     
 MAN  FISH[continuous]  "mm" 
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**Two adverbial mouth gestures in ASL**

- DRIVE + th = “drive without due attention, in a careless manner”
- DRIVE + mm = “drive in a relaxed, casual manner”

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**‘th’ tongue protrusion**

- Liddell 1980:50: “…‘th’ is articulated with the tongue protruding between the lips. The head may be tilted and the upper lip arched upward”
- Liddell reported this nonmanual adverbial in ASL is used to convey “lack of control, inattention, unintention and unawareness…”
- Note, however, that more recently, Bickford & Fraychineaud (2008) suggest that the lip action is not necessarily part of ‘th', but that erratic motion of the hands and body may accompany its use (e.g., DRIVE)
The ‘th’ mouth gesture in BSL (1)

- Brien (1992: xxvii) ‘Dictionary of BSL/English’ describes two NMFs involving tongue protrusion: (1) tongue protrusion with open mouth and (2) tongue protrusion between the teeth
- No mention of head tilt or upper lip arching

Brennan (1992: 73) ‘th’ (with lip curl?)

- “This non-manual morpheme ‘th’ expresses meanings such as ‘boring’ and ‘unpleasant’. If added to an established sign like WORK…it may mean that the work involved was boring or not very enjoyable. It may also be used to give the impression that something is ‘incredibly easy’ or ‘no problem’: however, even here, the connotation is somewhat negative or pejorative. Thus, it may be used by someone who is boasting about something being too easy.”

Sutton-Spence & Woll (1999)

- The mouth gesture ‘th-curl’ means ‘boring’ or ‘unpleasant’
- Compare Brennan (1992) and Liddell (1980) who suggest curled upper lip is optional part of this mouth gesture
- Also, neither Brennan (1992) nor Sutton-Spence & Woll (1999) make any reference to the Liddell's adverbial in BSL
- No mention of open mouth tongue protrusion either

What motivated this study?

- Thus, ‘th’ in BSL (with or without arched upper lip?) conveys ‘boring’ or ‘unpleasant’ (Sutton-Spence & Woll, 1999), and also possibly ‘too easy’ (Brennan, 1992), but no reference is made to Liddell (1980) despite our observations suggesting that the ‘unawareness, lack of attention/control’ adverbial mouth gesture is also found in BSL
- Research question: How is the mouth gesture ‘th’ used in BSL and what meaning does it convey?

Case study data

- European Cultural Heritage Online (ECHO) corpus
- ELAN software
- SL data: Sign Language of the Netherlands (NGT), British Sign Language (BSL) and Swedish Sign Language (SSL)
- 10 BSL narratives produced by 2 native signers of BSL
- Aesop’s well-known fables
**Enaction BREATHE**

**Echo phonology DISAPPEAR**

**Adverbial mouth gesture FALL-INTO-DEEP-SLEEP**

**Results**

**Results (2)**

- Tongue protrusion total (n=47)
  - ‘Other’ category (n=23)
    - 7 of Brennan’s (1992) ‘too easy’ adverbial (?) mouth gestures
    - 14 difficult to categorise: possible echo phonology examples, previously unattested in the literature? These include 2 examples with NOTHING: possible reduced mouthing?
  - Liddell’s adverbial (n=11): interestingly, all of these are with a more or less open mouth
  - Enaction (n=12)
  - Examples of echo phonology attested in the literature (n=3)

**Examples of other meanings**

- 7 examples appear to be related to Brennan’s (1992) ‘too easy’ mouth gesture
  - Example from Participant B, Fable 1: The boy who cried wolf
    - PULL-SOMEONE’S-LEG
    - TRICK-PRO1
  - 2 examples occur with NOTHING; possibly reduced mouthing?
  - Example of (1) reduced mouthing and (2) tongue protrusion
“Spreading”

- Spreading usually refers to a mouth action linked to a specific lexical item spreading onto a neighbouring item
- 3 examples in which tongue protrusion “spreads” over more than one lexical sign (but is not specifically linked to any of them):
  - open TP
    - SAY+ LIE+
  - open TP
    - RESTLESS BORED LOOK-AROUND
  - open TP
    - UNSURE SUSPECT

Results (3) Variation between signers

- The male participant (B) uses more mouth gestures with tongue protrusion (n=31) than the female participant (A) (n=16)
- The female participant (A) shows a fairly even distribution of ‘th’ mouth gestures across different categories, whereas the male (B) uses a large number of ‘other’ mouth gestures
- Too few participants to make any conclusions about relationship between social factors and the use of ‘th’

Variation between signers

<table>
<thead>
<tr>
<th>Mouth gesture</th>
<th>Participant A</th>
<th>Participant B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adverbial</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Echo Phonology</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Enaction</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Other</td>
<td>7</td>
<td>14</td>
</tr>
</tbody>
</table>

Analysis of adverbial mouth gesture

- The ‘th’ mouth gesture occurs as part of echo phonology signs, in enaction and with an adverbial meaning
- No instances of ‘boring’ or ‘unpleasant’, or of ‘th’ with lip curl
- Findings suggest the mouth gesture ‘th’ in BSL carries similar adverbial information as in ASL, although its form in our data does differ from what is described in Liddell (1980)
- Other major meaning seems to be similar to Brennan’s ‘too easy’ adverbial

Conclusion

- Results suggest ‘th’ sometimes functions as an adverbial mouth gesture in BSL when produced with a lexical verb sign, but with a broader range of meanings than previously suggested in the BSL literature
- One meaning of the adverbial resembles what Liddell described for ASL
- However, some uses of tongue protrusion remain difficult to categorise: more work needed!

Further analysis

- Preliminary study: more work needed to tease apart the relationship between differences in form and meaning
- More work needed to investigate accompanying modifications of movement in the hands and body with the ‘th’ adverbial mouth gesture
- Larger data set needed: future studies based on the BSL Corpus data?
- How similar are mouth gestures in other signed languages, given similar uses for ‘th’ in ASL and BSL? What about the relationship between sign language mouth gestures and mouth gestures used by non-signers?
References


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Questions

Thank you

d.lewin@ucl.ac.uk

a.schembri@ucl.ac.uk