The obligatory nature of Constructed Action across 3 sign languages

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The creation of meaning in signed language

• Use of fixed lexical signs
• Use of “classifier” signs
• Use of the body to portray various aspects of an object (“becoming the object”)

Terminology

• “Becoming the object”: Linguistic descriptions
  – “shifting locative grids”; Padden, 1990
  – “point of view predicate”; Lillo-Martin, 1995
  – “shifted attribution of expressive elements” (in Danish Sign Language); Engberg-Pedersen, 1992
• “Becoming the object”: As a part of meaning creation that accompanies “language”
  – “constructed action”; Liddell & Metzger, 1998; Aarons & Morgan, 2003
  – “reported action”; Emmorey & Reilly, 1998
  – “component gestures”; Emmorey, 1999

Use of these communicative devices with spoken language

• “Demonstrations” (Clark & Gerrig, 1990; Clark, 1996) in spoken language
  – Act as quotations
  – In some cases, easier to demonstrate than to “describe”
• But, are these communicative devices ever necessary or obligatory as simultaneous speech-gesture displays with spoken language?
  – E.g. tying a shoe

Study 1

Research question: Can constructed action be considered obligatory in ASL?

• Production (Part A) and judgment (Part B) data
  – 10 Deaf ASL signers producing data for Part A
    – 5 Deaf of Deaf
    – 5 Deaf of Hearing (lang exposure between ages 3-5)
  – 18 Deaf ASL signers judging data for Part B
  – Part A participants ≠ Part B participants

Tasks: Part A

• Participant views short video clip
  – people or animals performing an action (example)
  – the movement of “non-living” objects interacting
  – a scene with stationary “non-living” objects
• Participant produces an ASL version of what was viewed (1st production)
• Participant views the elicitation clip again
• Investigator asks the participant (signer) to avoid a specific example of a classifier sign (or verb)
• Participant (maybe) produces another version of what was viewed (2nd production)
Results: Part A

- Some participants refused to produce some 2nd-production clips without the constructed action (or classifier sign) that was asked to be excluded
  - 46 out of 200 clips
  - 8 of 10 subjects refused a 2nd-production at least once
  - Example of difficulty producing 2nd clip without CA
- Most frequent pattern: participants produced 2nd-production clips that contained classifier signs in place of constructed action (example)
- Other patterns were also observed (example)

The crosslinguistic study

- American, Mexican, and British Sign Languages (maps)
- Same design as the original ASL study
- A different method for choosing elicitation clips
  - Hypothesis: the use of CA may be linked to the perceived animacy of an object
  - An animacy rating task for hearing non-signers
  - Next

An animacy rating task

- 31 clips with various objects—all depicted some type of movement or change in state
- 30 hearing non-signers (10 from UK, 10 from Mexico, 10 from USA) rated possible clips
- Degree of animacy (how "human-like" the movement or change in state appeared) was judged for each clip on a scale of 1-5
- Five categories of animacy were created based on the results (4 clips in each category, total = 20 clips)

Production data for the crosslinguistic study

- Thus far, data have been collected for 9 Deaf participants (3 ASL, 3 LSM, and 3 BSL)
- Preliminary results:
  - as in Study 1, participants of all three languages commonly replaced CA with classifier signs in their 2nd-production clips (examples)
  - as in Study 1, some participants refused to produce 2nd-production clips in some cases (example)

One strategy replaces another

- CA replaced by classifier signs
  - BSL (car/robot)
  - ASL (car/robot)
  - LSM (cartwheel)
- CA replaced by verb sign
  - LSM (car/robot)
- CL replaced by CA
  - ASL (jellyfish)
- CL replaced by verb sign
  - BSL (jellyfish)

Perceived animacy seems to predict CA use

Analyses of various distributions of CA:
1. CA in isolation (with no classifier signs or other signs)
   - No CA for clips rated as lowest animacy
   - 21 instances of CA for the clips rated most animate
2. Accompanying classifier signs (CLs)
   - 6 instances in the low animacy category
   - 29 in the high animacy category

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Study 1: Part B

- Participant (n=18) views, in random order, single clips from the 33 production-clip pairs
- Participant judges each clip along two parameters: clarity and correctness
- Each measure was assessed along a 5-point scale
- Results: significant differences between 1st & 2nd clips for more than 61% of clips

Example of judged differences

<table>
<thead>
<tr>
<th>Clarity</th>
<th>Correctness</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.26</td>
<td>4.05</td>
</tr>
<tr>
<td>(0.65)</td>
<td>(0.84)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Clarity</th>
<th>Correctness</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.21</td>
<td>2.57</td>
</tr>
<tr>
<td>(1.18)</td>
<td>(1.17)</td>
</tr>
</tbody>
</table>

means & (standard deviations)

How can we interpret the results?

- **Production data (Studies 1 & 2):** a sense of obligatoriness for those participants who refused to produce some 2nd-production clips
- **Judgment data (Study 1):** higher ratings (clarity and/or correctness) for constructed action clips suggests an obligatory nature of some portrayal of constructed action (even over signs and classifier signs)
- However, constructed action may be preferred rather than obligatory for some signers

Implications

- The similarities across these sign languages suggest that the gestural substrate of the signed modality greatly influences the way meaning is communicated.

Other considerations

- Would constructed action be considered obligatory in other sign languages in addition to these three?
- Does constructed action pattern in a systematic fashion across all sign languages?
- What is the role of metaphor in CA production?
- What is the role of register/style in CA production?

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