Skilled hands – Local and global perspectives on sign languages in unusual settings

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UK UK India Germany UK Japan USA UK Jordan

“Academic excellence and community empowerment”
Structure of the presentation

• Introduction to sign languages and Deaf Communities
• The global perspective: Transnational sign language contact
• The local perspective: Sign languages in small-scale rural communities
• Conclusions: Cognitive Linguistics looking outwards
Introduction to sign languages and Deaf Communities
Sign languages

Known since the beginning of sign linguistics:
• Visual-gestural languages with complex grammars
• Characteristics of linguistic-cultural minority communities
• Unusual patterns of language transmission
• Not similar or linked to the spoken language(s) in the same country/region
• History of oppression in many cases

Discovered more recently:
• MUCH MORE DIVERSITY ACROSS SIGN LANGUAGES AND DEAF COMMUNITIES THAN ORIGINALLY ASSUMED
Types of signing communities

Sign language communities

Urban communities

- High level of institutionalisation
  +INST

- Low level of institutionalisation
  -INST

Rural communities with hereditary deafness
VILL
Example: Turkey

Pre-Ottoman: No information

Ottoman: Signing as status language

Republic of Turkey: Early bilingual deaf education

Sign language research

Official recognition

Oral deaf education
The global perspective: Transnational sign language contact
“Multilingual behaviours in sign language users” (ERC project)

Contact between signed and spoken language
- Simultaneous Communication
- Interpreting
- Ad hoc signed communication

Contact between two or more signed languages
- Interpreting
- International Sign
- Code-switching
“Multilingual behaviours in sign language users” (ERC project)

Contact between signed and spoken language

- Simultaneous Communication
- Interpreting

Contact between two or more signed languages

- International Sign
- Code-switching
- Ad hoc signed communication → “Cross-signing”
The cross-signing study

A study of language contact between pairs of signers from different linguistic backgrounds who do not have a shared language between them.

Video recordings of dyadic conversations at regular intervals:
- First day
- One week
- One month
Research questions

- Range of communicative strategies and linguistic resources
- Development of successful communication over time
- Linguistic status of “cross-signing”
“Cross-signing” data

a) Casual conversation between multiply matched dyads:
Pilot data (2003-2005):
20 hours of video data; signers from countries with unrelated, mutually unintelligible sign languages

Hong Kong ← Turkey ← Uzbekistan

South Korea ← Bali ← India
“Cross-signing” data

b) Casual conversation and experimental data from multiply matched dyads (2012):

Conversation (15 hrs of video)
- First contact
- After one week
- After one month

Experiment (2 hrs of video)
- First contact
- ---
- After one month
Participants

- MI: Indonesian Sign Language, Bahasa Indonesia
- MS: Jordanian Sign Language, Arabic (limited)
- CP: British Sign Language, English, International Sign
- MH: Japanese Sign Language, Japanese
Conversational data
Observations from data

• Signers operate in a multilingual-multimodal space and use a wide range of resources, often exploiting iconicity.

• There are many communication breakdowns and repairs, some of which only become apparent in post-hoc interviews.
Observations from data

• Focus of current analysis: Numerals
• The use of numeral signs is shaped by competing motivations: INNOVATION, ACCOMMODATION, and PERSISTENCE
Experimental data
Jordan - UK
## Format of results

<table>
<thead>
<tr>
<th>Description</th>
<th>Target picture</th>
<th>Signer Result</th>
<th>Start time</th>
<th>End time</th>
<th>Time Taken</th>
<th>No. of Turns</th>
</tr>
</thead>
<tbody>
<tr>
<td>apple-orange</td>
<td>orange</td>
<td>MH right</td>
<td>0:07</td>
<td>0:31</td>
<td>0:24</td>
<td>1</td>
</tr>
<tr>
<td>policeman-soldier</td>
<td>soldier</td>
<td>MI right</td>
<td>0:36</td>
<td>0:48</td>
<td>0:12</td>
<td>1</td>
</tr>
<tr>
<td>duck-sparrow-hen</td>
<td>hen</td>
<td>MH right</td>
<td>1:12</td>
<td>1:53</td>
<td>0:41</td>
<td>1</td>
</tr>
<tr>
<td>pen-pencil</td>
<td>pencil</td>
<td>MH right</td>
<td>4:20</td>
<td>4:52</td>
<td>0:32</td>
<td>3</td>
</tr>
<tr>
<td>person on chair- chair</td>
<td>chair</td>
<td>MI right</td>
<td>5:04</td>
<td>5:39</td>
<td>0:35</td>
<td>2</td>
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<tr>
<td>fish-snake-whale</td>
<td>fish</td>
<td>MH right</td>
<td>5:47</td>
<td>6:03</td>
<td>0:16</td>
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<tr>
<td>argue-angry man</td>
<td>argue</td>
<td>MI right</td>
<td>6:12</td>
<td>6:20</td>
<td>0:08</td>
<td>1</td>
</tr>
</tbody>
</table>
Results

- Experiment at first contact (Set 1): total 119 pictures described; experiment after five weeks (Set 2): total 128 pictures described.

- The error rate (picking the wrong picture) is remarkably low for both Sets: 7.5% Set 1, and 3.9% Set 2.

- No noticeable difference in the number of communicative turns.
Results

• Most important differences with respect to timing:
  • Overall, Set 2 was resolved 30 % more quickly than Set 1.
  • Resolving a picture in 10 seconds or less was three times more frequent in Set 2.
  • Very few extra-long sequences (40+ sec) in Set 2.
The local perspective: Sign languages in small-scale rural communities
Community characteristics

• Hereditary deafness over a number of generations; no or little contact with deaf people from outside the village.

• Deaf people are integrated into the hearing majority and do not face major communication barriers.

• Most hearing people in the village community are more or less fluent in the local sign language.

• Consequently, most users of the sign language are bilingual L2 users; only the deaf are monolingual signers.

• No official status for the SL and no deaf education.
Alipur Sign Language, South India

- Muslim Shia enclave.
- Long-standing pattern of intermarriage within the village.
- Deafness for at least 5 generations or longer.
- Ca. 140 deaf people out of ca. 14,000 (1%).
- Strict separation of genders.
- Deaf and hearing villagers use the local sign language, which is different from the urban Indian Sign Language.
Alipur, South India
Unity School for the Deaf, Alipur
Sign languages in rural communities

Home sign

Family sign language (genetic deafness)
Communal home sign (non-genetic deafness)

End of genetic deafness
Shift to urban sign language

Rural sign language
Project “Endangered sign languages in village communities”

- Funded through the EUROCORES programme of the European Science Foundation (EuroBABEL)
- Studying 10 sign languages and communities, in Turkey, India, Jamaica, Mexico, Australia, Thailand, Israel, Mali, Ghana and Indonesia
Field sites and research teams

- UK team
- German team
- US team
- Dutch team
- Israeli team
Linguistic significance of data from rural sign languages

- Challenge presumed sign language universals (e.g. spatial grammar)
- Add to known typological diversity (e.g. numerals)
- Live laboratory for sign language acquisition, multilingualism, bilingual deaf education, etc.
Counter-examples to sign language “universals”: Sign space
<table>
<thead>
<tr>
<th>Features of spatial grammar</th>
<th>X Sign Language</th>
</tr>
</thead>
<tbody>
<tr>
<td>Directional verbs</td>
<td>YES</td>
</tr>
<tr>
<td>Whole entity classifiers</td>
<td>YES</td>
</tr>
<tr>
<td>Features of spatial grammar</td>
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<tr>
<td>----------------------------</td>
<td>----------------</td>
</tr>
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</table>
These two village sign languages differ from urban sign languages, but also from each other!
Increased typological diversity: Numerals
Data collection

- Conversational data (mostly monologues and dialogues); organised corpora with ELAN transcriptions
- Focus on colour terms, kinship terms, and numerals
- Standardised questionnaires and elicitation materials
ELAN transcription
Numerals questionnaire, short version with colour coding

Are the cardinal numbers iconic?

a) The cardinal numbers are represented by the extended finger of the hand. Please indicate for which of the numbers this is the case.
b) The cardinal numbers are motivated by the writing system. Please indicate for which of the numbers this is the case.
c) The cardinal numbers are non-iconic. Please indicate for which of the numbers this is the case.
d) The cardinal numbers are motivated, but in a different way.
Alipur Sign Language

Spatial inflection in numerals
Mardin Sign Language

• Complex sub-systems:
  - Multiplicative
    40 (2x20)
  - Additive
    50
  - Subtractive
    18 (20-2)
  - (vigesimal)
    60 (3x20)
    70 (20+50)
    19 (20-1)
    80 (4x20)
    90 (40+50)
### Summary of findings

<table>
<thead>
<tr>
<th></th>
<th>Alipur Sign Language</th>
<th>Chicán Sign Language</th>
<th>Mardin Sign Language</th>
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<th>Mexican Sign Language</th>
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<tbody>
<tr>
<td><strong>BASE-20 NUMERALS</strong></td>
<td>-</td>
<td>X</td>
<td>X</td>
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<tr>
<td><strong>BASE-50 NUMERALS</strong></td>
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<tr>
<td><strong>SUBTRACTIVE</strong></td>
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<tr>
<td><strong>DIGITAL</strong></td>
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<td>-</td>
<td>X</td>
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Cardinal numerals 0-100
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<td><strong>Subtractive</strong></td>
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<td>X</td>
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<tr>
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Conclusions: Cognitive linguistics looking outwards
1. Cognitive bases of cross-modal typology
Structural space: Negation

- Suprasegmental negation
- Morphological negation
- Negative particles

Sign languages
Spoken languages
Cognitive-structural space: Possession

Cognitive basis; existence, location & possession; grammaticalisation pathways

poss. pron.  SpL  SL  SL  SL
SL  SL  SL

existential particles

SpL  SpL  SL
inflected poss. verbs

SL  SL  SL
SL

prepositions

SpL  SpL  SpL

Cognitive basis; existence, location & possession; grammaticalisation pathways
Cross-modal typology

Sign Languages  Spoken Languages
2. Communication in multilingual-multimodal spaces
“Making meaning...”

- Creating meaning from multiple mutually supporting sources
- Co-creating meaning in interactions
- Iconicity
- Meta-linguistic skills
References


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