From emblems to grammar:

Gestural contributions to an emerging sign language in Mexico

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Gestures as a source for emerging sign languages

Gestures as a source for emerging sign languages

- Language ecology as a broad approach for our study
- Gesturers and signers in the same ecology share manual forms and visual-manual practices
- How do signers adapt these forms and practices to create a fully visual-manual language?

Field site

Gestural Analogues

3 Studies

Field Site: San Juan Quiahije

San Juan Quiahije Municipality

- Two villages
- Combined pop. ~3600 (INEGI, 2015)

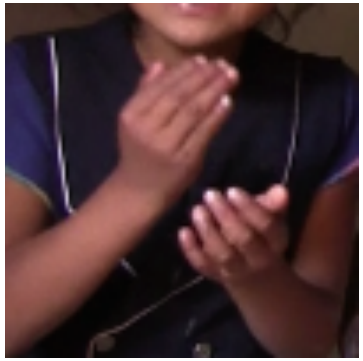
Spoken languages

- SJQ Chatino (E. Cruz, 2011; H. Cruz, 2014)
- Mexican Spanish

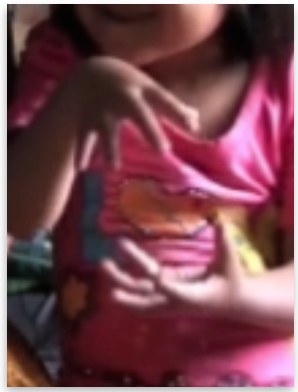
Field Site: San Juan Quiahije

11 deaf people — 0.3% of the population

- San Juan Quiahije Chatino Sign Language: a constellation of emerging family signed languages in six families (Hou, 2016)





What are the form-meaning mappings of hearing non-signers (majority of population)?

Do signers adapt the form-meaning mappings as they create a fully visual-manual language?

Gestural Analogues: *manual forms shared by deaf and hearing signers in the same communicative ecology*

3 Studies of Gestural Analogues in San Juan Quiahije

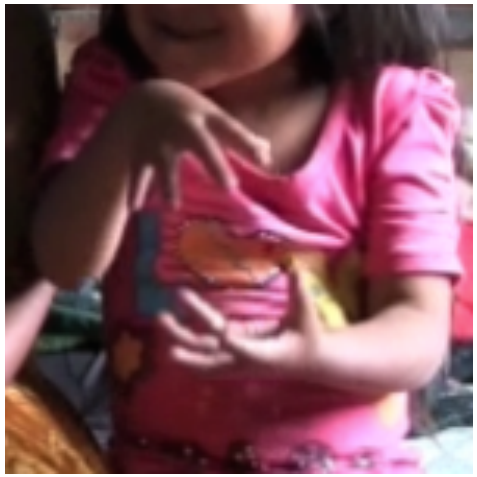
1. Animal Size-and-Shape Specifiers

Hou (in press)

1. Animal size-and-shape specifiers: Overview

Measure the height of animals by:

- delimiting the distance between the human hand and the real-world ground



- delimiting the distance between the two human hands

A common Mesoamerican strategy!

(Foster & Ospina, 1948; Meo Zilio & Mejía, 1980, Shuman, 1980; Fox Tree, 2010)

1. Animal size-and-shape specifiers: Overview

Birds and mammals distinguished by palm orientation of dom. hand

- **Birds**: palm represents top of head
- **Mammals**: ulnar side of hand represents back of the neck

1. Animal size-and-shape specifiers: Research Question

How do the deaf SJQCSL signers incorporate the animal size-and-shape specifiers into their lexicon?

1. Animal size-and-shape specifiers: Methods

Elicitation: 20 animal stimuli in a larger lexical elicitation task

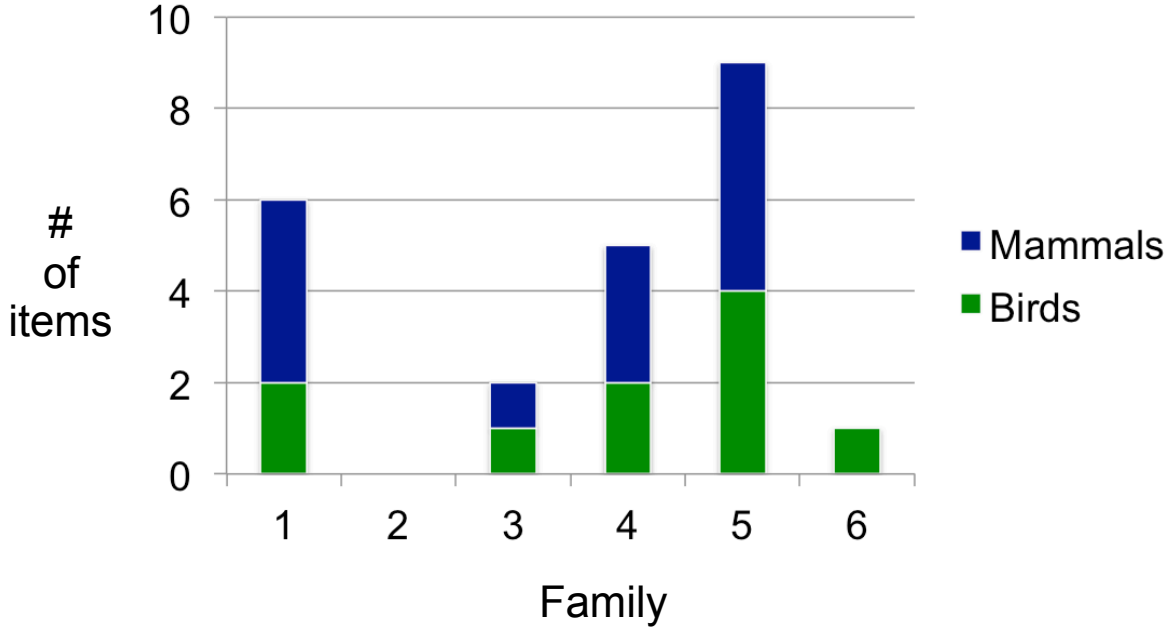
Participants: deaf and hearing signers from six families

1. Animal size-and-shape specifiers: Results

25% of the responses (*n* = 90) have gestural analogues

The overlap varies across the six signing families

Variation in whether the families used specifiers for different animal items



(Hou, in press)

1. Animal Size-and-Shape specifiers: Summary

- Animal size-and-shape specifiers contribute to each family's lexicon
- The variation of the overlap suggests that the influence of this group of gestures is not uniform in the families' vocabularies

3 Studies of Gestural Analogues in San Juan Quiahije

1. Animal Size-and-Shape Specifiers

   Hou, in press

2. Indicating Gestures

   Mesh, 2017

2. Indicating Gestures: Overview

Two clear extremes for indicating gestures

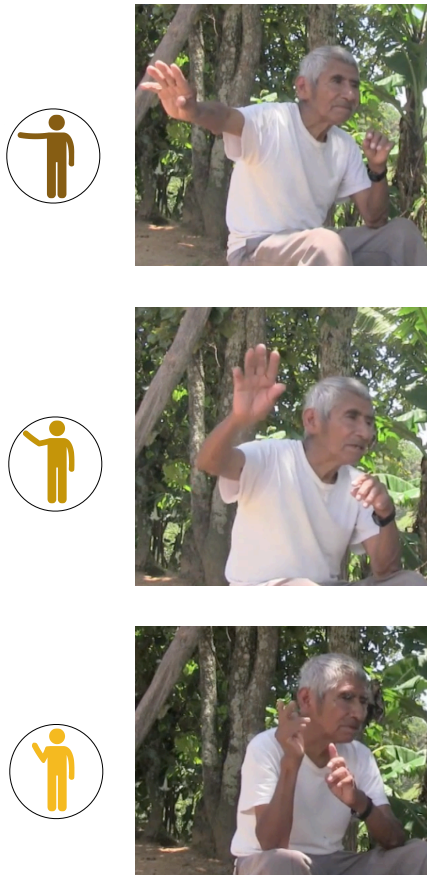
- **Promimal:** low, unextended arm, 1-HS
- **Distal**: high, extended arm, B-HS

2. Indicating Gestures: Overview

Elbow Height

Handshape

Arm Extension



2. Indicating Gestures: Research Questions

1. Do indicating gestures systematically mark target distance with all three formation features

    - for hearing nonsigners?
    - for deaf signers?

2. Are deaf signers are adapting features of the indicating system?

2. Indicating Gestures: Dataset

Filmed local environment interviews (Kita 2001)

2. Indicating Gestures: Dataset

Filmed local environment interviews (Kita 2001)

- 29 hearing participants
- Six hr., 30 min. of footage
- 873 IGs

- 2 deaf participants
- 31.5 min. of footage
- 222 Indicating signs

2. Indicating Gestures: Results

2. Indicating Gestures: Results

Elbow Height ✓

- Community conventions for modulating the **height** of indicating gestures are shared across speakers and signers

2. Indicating Gestures: Results

Elbow Height ✓

Arm Extension ✗

Handshape ✗

- Other community conventions for indicating gesture forms are not shared

2. Indicating Gestures: Results

- Signers don't simply omit features of the larger system: they replace them

2. Indicating Gestures: Summary

- Only some practices for meaningful modulation of pointing are shared between gesturers and signers

- Where signers diverge from the larger community pattern, they replace features rather than than simply omitting them

3 Studies of Gestural Analogues in San Juan Quiahije

1. Animal Size-and-Shape Specifiers

   Hou (in press)

2. Pointing Constructions

   Mesh (2017)

3. **Negative Emblems**

   Mesh & Hou (forthcoming)

3. Negative Emblems: Overview

3. Negative Emblems: Research Questions

1. What are the form-meaning mappings for negative emblems
    - For hearing nonsigners?
    - For deaf signers?
2. Are signers are adapting the form-meaning mappings of negative emblems?
3. Do deaf signers differ from hearing signers in their adaptations?

3. Negative Emblems: Dataset

5 hours and 20 minutes of video recorded spontaneous conversation

- 472 tokens of negative emblems

A general survey of 14 conventional gestures, including 5 negative emblems

3. Negative Emblems: Mixed methods

Identification of the function of each negative emblem: **denial**, **rejection**, or **non-existence**

Preliminary qualitative analysis of survey responses about meaning of negative emblems

3. Negative Emblems: Results from survey

The majority of hearing people recognize these three forms as negatives for denial, rejection, or non-existence

3. Negative Emblems: Results from survey

The majority of hearing people recognize the PALM-UP form as lack of knowledge and the DEAD form to mean, dead

3. Negative Emblems: Results from conversational data

For all hearing non-signer form-meaning mappings,

deaf and hearing signers largely exhibit the same mappings

3. Negative Emblems: Results

Deaf signers alone showed evidence of creating new form-meaning mappings for two emblems

DEAD

3. Negative Emblems: Results

Deaf signers alone showed evidence of creating new form-meaning mappings for two emblems

PALM-UP

3. Negative Emblems: Summary

- Clear overlap between form-meaning mappings in negative emblems among hearing gesturers and deaf & hearing signers
- The overlap facilitates communication between deaf and hearing users in a language ecology with highly shared context
    - Deaf signers however adapt two of the negatives, DEAD and PALM-UP, broadening the meaning of their gestural analogues

Gestures as a source for emerging sign languages

Creators of sign languages do not merely “borrow” gestural practices from the surrounding community:

- They are recipients *and* agents of a cultural transmission process
- They modify the gesturing practices they receive, in ways that are evident when signers and gesturers are systematically compared

Thank you!

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