Lexical Variation in Central Taurus Sign Language

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Introduction

- CTSL is a village sign language that emerged w/o a conventional language model (Ergin 2017, 2018)
- Used in 3 adjacent villages in Central Taurus mountains of Turkey
- ~36 deaf and ~100 hearing users of language
- Previous studies on village SLs show wide lexical variation in small populations, such as in Al-Sayyid Bedouin Language (ABSL) and San Juan Quiahije Chatino Sign Language (SJQCSL) (Sandler et al 2011; Hou 2016)
- Lexical items such as APPLE develop from compounds in homesign to have anti-chronological order in Nicaraguan SL: RUB-ON-SHIRT + EAT --> EAT + RUB-ON-SHIRT when phonological constraints take effect (Morford & Kegl 2000).

How does language become conventionalized?

- How much variation is there?
- Where does a lexicon come from?
- How is variation distributed?

Participants

- 13 deaf CTSL Signers from 3 Cohorts
- Age (*M* = 40.8; Range: 16-53, seven females and six males)
- Cohort 1 (n=5): firstborn deaf in hearing families, little-to-no linguistic input
- Cohort 2 (n=6): younger siblings of cohort 1, linguistic input from signing sibling
- Cohort 3 (n=2): deaf children of deaf and hearing parents, linguistic input from signing community. Only participants to have received some education. (Influence from Turkish Sign Language TIL)

Materials and Procedure

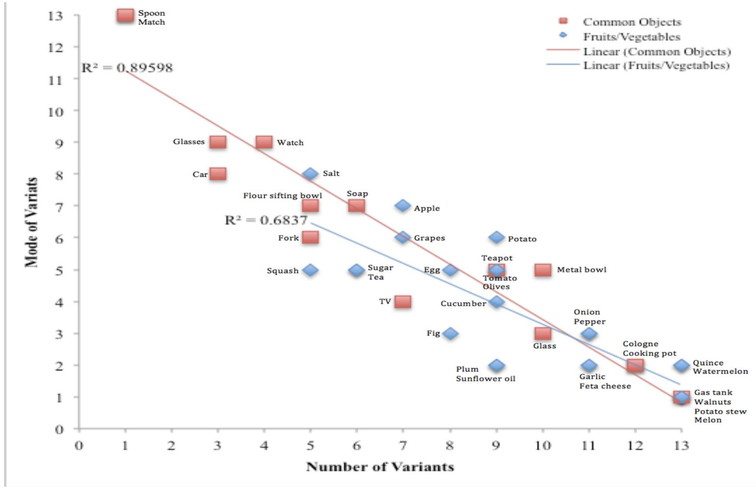
- 38 digital images of common produce and other household objects
- Participants recorded signing names/descriptions of presented stimuli (507 total responses)
- Signs given unique glosses based on iconic prototype, ignoring low-level phonetic variation
- Variation measured for each item based on: # of variants (unique utterances), mode of unique utterances, # of unique signs, mode of unique signs

Results: Variation

Table 1. *Examples of conventionalized, semi-conventionalized, and non-conventionalized items.*

	Elicited Utterance	Frequency of occurence
A conventionalized item: 'Glasses'	LENSES	9
	LENSES TEMPLES	2
	EYES LENSES	2
A semi-conventionalized item: 'Teapot'	TEA POT	5
	TEA POT FLAME	1
	TEA DRINK / TEA DRINK	1
	TEA TALL / TEA TALL	1
	TALL	1
	FLAME PUT-ON POT	1
	TEA POUR POT	1
	TEA POUR	1
	DRINK FLAME CUP	1
A non-conventionalized item: 'Gas tank'	BLOW FLAME	1
	POT-PUT MATCH FLAME	1
	SWITCH TALL WIDE	1
	SWITCH TALL / TALL SMELL	1
	TALL SWITCH	1
	SWITCH FLAME	1
	FLAT SWITCH FLAT	1
	SWITCH / SWITCH	1
	MATCH FLAME WIDE	1
	MATCH SWITCH	1
	SWITCH FLAME SWITCH	1
	SMELL COOK POT-PUT	1
	SWITCH FLAME / FLAME	1

- Item names are not all conventionalized across signers
- Items exist on both ends of the extremes: some highly conventionalized, some not at all.
- Most items are in between extremes.



- Some items (SPOON, MATCH) are highly conventionalized across all signers, albeit with variance in phonetic realization.
- Items like "Potato Stew" and "Gas Tank" did not elicit any identical utterances, but responses often shared components, albeit in different orders.

Results: Emergence of Structure

CUT MILK

MILK

One signer describes the stimulus cheese via a chronological description:
COW MILK CUT EAT

Another signer names the stimulus via anti-chronological order and with movement reduction and location assimilation:
CUT^MILK

Both signers are from cohort 2.

Discussion

- Signers use description and compounding to fill lexical gaps
- Signers draw on a common set of lexical items for description and compounding (but the line between these is blurry!)
- Items widely vary in terms of conventionalization.
- Ease of articulation constraints do not emerge for all signers or for all items even within the same cohort.

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