

Elicitation and analytic methods for documenting the lexicons of emerging signed languages

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Emerging sign languages provide unique opportunities to investigate the course of language emergence, as well as the contributions of input and learner to language acquisition. While much work has examined emerging sign languages' syntax and, to a lesser extent, phonology, less attention has been paid to their lexicons. This paucity seems at least partially due to a lack of appropriate methods and analyses, which present challenges over and above those of documenting established (signed or spoken) languages. The present work outlines these challenges, and proposes new means to address them.

A central challenge is that, by definition, emerging sign languages are not fully shared among the languages' users or investigator(s). Thus, only minimal task instructions can be reliably communicated to participants. For example, we cannot instruct participants to (A) give words for unimageable concepts, which abound on the Swadesh list and derived lists; (B) give their *word* for an object/concept rather than *describe* it; or (C) respond to basic (e.g. dog) rather than superordinate (e.g. animal) or subordinate (e.g. beagle) levels. We circumvent (A) by using only imageable objects for stimuli (e.g. boy, cloud, bucket). We surmount (B) and (C) by structuring our stimuli so that they themselves constrain participants' responses: each item was represented on a computer screen by three tokens of that object (thus encouraging participants to extract the relevant category level), and was presented in a 'contrast set' with 3 other objects that occur in similar real-world contexts (e.g. cowboy hat, baseball hat, bandana, jacket). These three other objects then disappeared while the first object moved to the center, increased in size, and then disappeared (to prevent participants from pointing at the screen, as they did with previous static stimuli).

While such a dataset is amenable to many research questions and analyses, we focus on analyzing conventionalization among Nicaraguan homesigners and their partners. Consistent with past research of emerging sign systems, participants often produced multiple gestures in a single response. While these past studies either ignored such responses, or used two uncombinable measures of consistency, we have devised a single, comprehensive measure of consistency across multi-gesture responses. We code each gesture for the aspect of the object's meaning it iconically expressed, i.e., its Conceptual Component (CC). Treating each CC as a dimension, a response receives a 1 on a dimension if it contains that CC, and a 0 if it does not. Shannon entropy in a CC-dimension is a measure of consistency in use of that CC, and average Shannon entropy across CC-dimensions is consistency in responses.

Our materials and analyses represent a step towards surmounting unaddressed challenges inherent to investigating emerging sign language lexicons. Specifically, our stimuli minimize the need for communicating task instructions to participants who often do not share a communication system with others. Further, our approach provides a valuable tool for assessing the extent of conventionalization among lexicons containing multi-gesture responses, which are common among emerging sign language lexicons.

(486 words)