Examining Variation in the Absence of a 'Main' ASL Corpus: The Case of the Philadelphia Signs Project

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1. Introduction

This paper introduces the Philadelphia Signs Project, which emerges from the Philadelphia Deaf community's desire to document their local variety of ASL. Beyond some stereotypical lexical items, it is not known what linguistic features give rise to the frequent evaluation of this variety as "different." Comparing Philadelphia ASL to other ASL varieties may be difficult given the absence of a main ASL corpus that is representative of the overall language in North America but we maintain that it is still possible. This paper describes our sociolinguistic data collection methods, our annotation procedures, and our archiving approach. We summarize several preliminary observations about potentially dialect-specific features beyond the lexicon, such as unusual phonological alternations and word orders. Finally, we outline our plans for testing whether these features are actually unique to Philadelphia in order to facilitate comparison with a main corpus when it is ready. We maintain that even without a main corpus for comparison, it is essential to document a language variety when the community itself wishes to preserve it.

2. Background and Motivations

Philadelphia ASL emerged from the residential school context at Pennsylvania School for the Deaf, where deaf Philadelphians used the language brought by Laurent Clerc and his disciples from the first deaf school in Hartford, Connecticut. The PSD residential school campus was the major site for sign language transmission in the Philadelphia area until 1984, when it was closed and moved to a day-school setting in another part of the city. As at other deaf schools around the country, the signs at the Pennsylvania School for the Deaf began to look different over time. The variety that emerged, still

currently in existence among older living signers, attracts attention in the Deaf community for being "different" and "strange." Beyond some stereotypical lexical items, it is not known what specific linguistic features give rise to such evaluations. The goal of the Philadelphia Signs Project is to uncover what, if anything, makes Philadelphia ASL distinct from other varieties in the United States. This goal is similar to that of the "Black ASL" project undertaken by McCaskill et al (2011). As described in Hill (2012), Deaf Americans could see a particular style of signing and be able to identify it as "Black ASL" but were not quite sure why. The "Black ASL" project strived to ascertain the linguistic features that marked this particular ASL variety. They came up with the following list: handedness, lowering, size of signing space, incorporation of African American English (AAE), use of repetition, use of role shifting, amount of mouthing, and lexical differences.

Since the 1984 closure of the PSD residential campus, younger speakers in the Philadelphia area have had significantly reduced exposure to native signers of Philadelphia ASL, presumably leading to a leveling of this variety toward a pan-regional variety influenced by Gallaudet. This leveling is actively reflected on by one of the participants, Colleen, an early-thirties female who has two Deaf parents and a Deaf brother. Colleen attended PSD day school until she was high-school age. She then transferred to Model Secondary School for the Deaf in Washington, D.C. and remained there to continue her postsecondary and graduate studies at Gallaudet University. Below we show a brief exchange between the interviewer and Colleen, demonstrating both her exposure to and awareness of the Philadelphian ASL variety as well as the influence of the Gallaudet, pan-regional variety on her own sign production.

Interviewer: *Tell me about your experience about transferring from PSD to MSSD and how that influenced your signing. Was it different? Did Gallaudet change your signing?*

Colleen: *Oh yes, there was definitely a difference.*

Interviewer: *Tell me about it.*

Colleen: *Well, for example, I still say "inch" like this* (see figure 1 which shows the ASL sign that is not recognized by other members of the ASL community at Gallaudet, only members of her local community in Philadelphia.).

Figure 1. Colleen signing "inch"

Colleen: *I sign it like this* (Figure 1). *But when I was at MSSD, if I tried signing it like this, others would not understand me. So I'd have to express the concept in a different way. They even told me their sign. I can't remember what it looks like. But it doesn't matter because I like my version of "inch". And I've stayed with the same version all this time. Although when I'm at Gallaudet, I'll just fingerspell "inch". But I still hold everything - all of the old signs. And when I return home, I use them… For example, for some months of the year, I'll produce our signs for them…. There are a lot of signs like that. Our sign for "eagle", for example… I catch myself changing. At home, I'll sign our version of "eagle"* (Figure 2, left) *but at MSSD, I'll sign their version of "eagle"* (Figure 2, right).
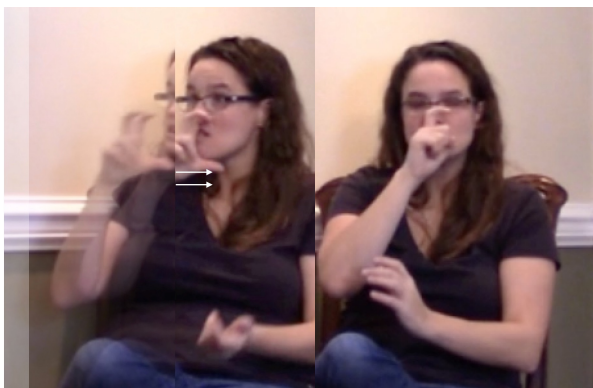
Figure 2. Philadelphia ASL variant for "eagle" (left); other ASL variant for "eagle" (right)

Colleen: *Why I change is because I think they won't understand me if I sign that way so I hold my "eagle" sign and remember that it's Philadelphian. I'll use the other ASL variant for "eagle" out there but when I go home I'll use the Philadelphian one. I go back and forth.*

2.1 Pressures towards Leveling

Since Philadelphia ASL is still in existence but on the verge of being lost, we have a time-sensitive opportunity to collect data documenting this example of regional variation within ASL. Doing so will allow us to identify features that are characteristic of Philadelphia ASL and to trace the loss of such features generationally under pressures toward leveling. We see evidence of these pressures in the Philadelphia community at large, within the interviews, and even in some of the self-reflective comments of the primary interviewer himself. One of the authors, a native Philadelphian and hearing native signer, has encountered many members of the Philadelphia Deaf community who lament the fact that their variety is dying out with the older members of the Deaf community. In turn, many have expressed appreciation of these efforts to document their variant.

There is also evidence that many older signers recognize diachronic change in younger generations, yet maintain their "old" Philadelphia signs despite seeing these changes around them; several of the interviewees comment--both in the interviews and in casual conversation before and after interviews--that they identify themselves as "using old (Philadelphia) signs," with the implication that their signing is markedly different from younger generations of Philadelphians. When one participant, Caroline, was asked by the interviewer if she "understood clearly" what one of the authors had signed to her in a conversation before the interview, she confirmed, but immediately distinguished her own signing from the author's by saying she, herself, does not use "new" signs but instead uses "old" ones and they are "hers."

One final example of the leveling pressure comes from the primary interviewer himself. Outside of the interviews, he has repeatedly referred to the noticeable decline of his own use of the Philadelphia variant, attributing the diminution of its use to the fact that he socializes with people from all over the country and travels to meet many Deaf people around the world. The distinctions between "old" and "new" Philadelphia variants are clearly noted by the community, as is their disappearance with time. Thus, documentation before complete disappearance is essential.

While it is likely that some of the perceived differences in the Philadelphia Deaf community are a result of age, we suggest that this variety is not only age-related. First, we see indications of intergenerational use of the Philadelphia variety. This is evidenced by some of the interviews we have done with families, as per one participant, Colleen's, reflections detailed earlier. In addition, anecdotes from older Deaf community members not from Philadelphia repeatedly point to the "strangeness" of the ASL sign productions of the

Philadelphia Deaf community as compared with their own ASL productions.

2.2 Beginning the Philadelphia Signs Project

This project has stakeholders of various motivations and has the potential to be applied to multiple ends. We started this project, in part, as a direct response to the Philadelphia Deaf community's longtime call to document the familiar language that they see changing and disappearing. As signed language researchers, we also recognize the significant void in publicly available ASL data in video form. We thus set out to video-record Philadelphia-native, Deaf signers conversing naturally in order to create a public, searchable, web-based corpus that will benefit Deaf community members and the research community alike. While this project has obvious benefactors in the field of signed language studies, we also anticipate that local organizations that serve the Deaf and Hard-of-Hearing communities will benefit from the existence of such a resource. For example, the documentation of the local variety will be of use to those who train interpreters in Philadelphia, while current and future generations of PSD students may find the narratives related by our participants to be of historical and cultural interest.

We have designed this project from the beginning with the understanding that these data will be public, and thus have taken great care to ensure that our participants are fully informed of the reality of such public accessibility. Furthermore, we would like to emphasize that we have been deliberate in attending to and including Deaf community members and organizations throughout this process.

3. Data Collection and Organization

The data collection procedure, in line with previous work in ASL sociolinguistics (Lucas, Bayley, & Valli, 2001), is modeled on the sociolinguistic interview methods laid out by Labov (1984). The interview questions are aimed at eliciting stories about the signer's lived experiences, with thematically similar questions grouped into modules. The interviewer, who is a native Philadelphia Deaf signer with strong ties to the local Deaf community and institutions, guides the conversation but allows the person being interviewed considerable conversational latitude in order to facilitate naturalistic conversational signing. At the end of the interview, the interviewer presents two more structured elicitation tasks. The first is the elicitation of known Philadelphia-specific lexical items using a picture-naming task. The second is a narrative description task in which the participant retells a story from a cartoon clip. The entire interview is video recorded from two perspectives: one capturing a frontal view of the participant, and the other capturing both the participant and the interviewer simultaneously.

The data have been organized in a cloud-based service that is accessible to the current research team following the basic archival format as described in Himmelmann (2006); that is, the data are consistently organized into bundles of "primary data" (the video sessions themselves) and "apparatus" (annotations, metadata, general access resources like the annotation conventions and project proposal). Currently the language documentation is temporarily archived on Google Drive but will eventually be hosted online in a way that the data can be searched and shared (e.g., using online language archives like other signed language documentation projects have used).

Currently, we have interview and elicitation data from about 25 Deaf Philadelphians. We have already started processing the data by annotating them in ELAN (Wittenburg et al, 2006). Current data processing efforts focus on partial annotation of our participants in each video session, specifically adding ID glosses for individual signs and free translation. Such efforts (ID glossing and translation) are considered to be the absolute minimum required to make primary data accessible (Himmelmann, 2006; Johnston, 2008). Figure 3 shows our current tier structure for our initial and minimal annotation.

Figure 3. Tiers in our ELAN template

For annotation of ID glosses using the "RightHand", "LeftHand" and "NMS" tiers, we are using the SLAAASh annotation conventions (Hochgesang, 2015) as well as their ID gloss list to ensure consistency both within our data and potential comparison with other ASL documentations. "Free Translation" is used to give a loose English translations of the ASL utterances produced.

The "Notes" tier (a separate one is created for each annotator that adds content to the transcript) is used for general comments, questions about the signs produced on the video, feedback on the annotation itself, and so on. The "PHOnotes" tier is used by the primary annotator to provide observations on any interesting phonetic or phonological phenomena.

4. Examining Regional Variation in ASL

Regional variation has been documented across many signed languages, although such documentation is often limited to the observation of distinct lexical items (see Schembri & Johnston 2012 for an overview). The picture-naming task in the documentation we are creating is aimed at documenting uniquely Philadelphian ASL signs

and providing empirical evidence on the extent to which such signs are attested across different generations. Because regional variability is the norm for signed languages, though, we hypothesize that the perception of the Philadelphia variety as unusual arises from deeper linguistic differences. Prior work on phonological variation in ASL has detected regional differences, but typically such differences have involved the quantitative preference for widely available phonological variants, rather than qualitative distinctions between varieties (Bayley, Lucas & Rose, 2002). Research on regional differences in syntax is even rarer; we are not aware of such work on ASL. Preliminary observations of the first interviews to be annotated, though, have presented a number of candidate examples of features in the ASL of the oldest Philadelphians that may be regionally unique.

As our data represent a diverse cross-section of the Philadelphia Deaf community including different generations of Deaf Philadelphians from the same families, we are potentially able to use sociolinguistic variables to examine the ways in which the variant demonstrates change over time through contact with signers of other variants including what we call a pan-regional ASL.

4.1 Potential Examples of Variation in Philadelphia ASL

As expected, there are several lexical variants that appear to be unique to Philadelphia ASL and have already been added to the ASL ID gloss list shared with other research teams. Figure 4 shows three ASL variants for "woman", two of which are used by the Philadelphian signers.
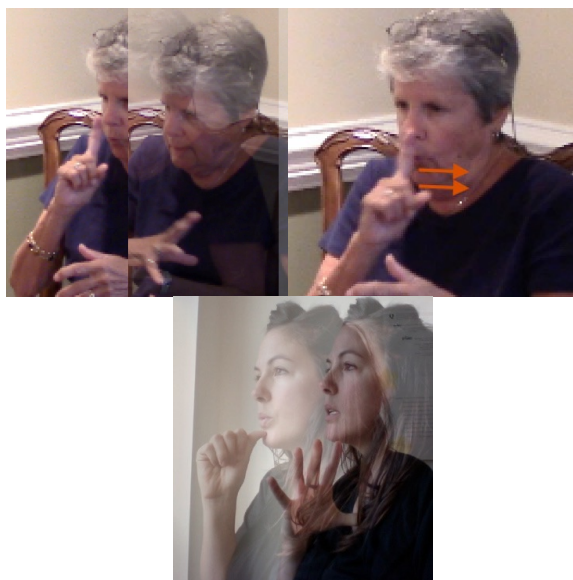

Figure 4. Three ASL variants for "woman"
(the top two by a Philadelphia signer;
the bottom is from the general ID gloss list)

As explained earlier, the "Notes" and "PHOnotes" tiers were opportunities for our annotators to record initial and casual observations about the language use and production. Many of those memos could be considered normal for signed language documentations (e.g., "assimilation occurring here"; "left hand is lower than right hand"; "subject has been dropped"). But there are also quite a few annotator observations that were unexpected and may point to potential variation specific to the Philadelphia variety.

Annotator comments from "PHOnotes" or "notes" tiers
* *PROBLEM is produced one-handed here when it's supposed to be two-handed and I wouldn't accept it as one-handed especially in this situation (the other hand is not occupied by something).*
* *HAPPEN is produced one-handed!*
* *LEARN. Morphologically interesting, may be that the movement towards the end marks aspect (perfective)*
* *INEPT. Different direction from ID gloss form*
* *USE. Interesting movement and orientation here.*
* *PEOPLE. One-handed!*
* *WORKSHOP. Note HC of second part (no "S" as expected at the end of the sign)*
* *FS(of). Wow, her pinky is extended before she even starts the sign. It's not unusual to see pinky extension because of the extension of all fingers in the LETTER-F but this is even before the fingerspelling starts. Whoa.*
* *FOURTEEN. Unusual repetition.*
* *HOME. Note how the second placement is very near to the first placement.*
* *HOME. Only one contacting hold. Usually two.*
* *FS(burrough). Something interesting about how she fingerspells - I can't quite put my finger on it. Age? Possible arthritis making joint movement stiff? Accent?*
* *MANY. Unusual orientation if this is indeed MANY.*
* *EMPTY. Signs this on top of a buoy!*
* *A lot of lip puckering during her responses or feedback*
* *ALL. I love this production. I'd say it looks "proper".*
* *THAT. I would have said that this is my "citation form" (the form I imagine when I think of this sign) but watching him produce it I realize I think this is a bit archaic, signing with the active hand contacting the palm of the weak hand. Seems more typical to do one-handed these days.*
* *TWO-YEARS. Interesting! This is numeral incorporation - number morpheme incorporated (is visible throughout the entire sign) with the rest of the sign (movement, location, etc). This is one possible grammatical variation. What number range OR word can take numeral incorporation seems to vary (geographically, etc).*
* *FS(then) Interesting production, it's almost signed with the same type of movement you'd expect in NEXT*
* *Unusual orientation in production of numbers. For example, the age "105" is usually produced with the hand oriented away from the signer for all of the numerals. However, this is "one hundred" with the hand facing forward and then turned inward to produce the number "five".*

Generally the informal observations as listed above can be

categorized as referring to unexpected phonetic forms (handedness, repetition, path, orientation), phonetic alternations, and morphological processes. It has also been noted by some of the research team members that some of the older Deaf Philadelphian adults use a much larger signing space than younger signers and a few have unexpected syntactic constructions (particularly with ordering of constituents and pronoun dropping).

Because many of the signers being interviewed for this project are quite elderly, any distinct features we detect might either be unique to Philadelphia or be characteristic of older forms of ASL pan-regionally. While other collections of ASL video recordings exist, such as that of Lucas, Bayley & Valli (2001) which are currently archived at the Gallaudet Video Library (http://bit.ly/ 1PpjDaz, last accessed March 2016), none have been annotated (or annotations, if any, have not yet been made available) or set up to facilitate access to the primary data. This puts ASL in the position of lacking a representative corpus comparable to those of other national signed languages, such as German Sign Language ("DGS-Korpus," 2014), Australian Sign Language ("The Auslan Corpus," 2014), British Sign Language (Schembri, 2008), and Netherlands Sign Language (Crasborn, Zwitserlood, & Ros, 2014).

4.2 Current Proposed Methodology of Examining Variety in Philadelphia ASL

We propose to adopt the following four methodological approaches in order to both document Philadelphia ASL as a variety in its own right and also lay the groundwork for comparison to a pan-regional ASL corpus at some point in the future. First, we will continue to document explicit observations about Philadelphia ASL as we have been doing on our "Notes" and "PHOnotes" tiers and may potentially develop annotation codes similar to other signed language corpus projects. These observations include meta-linguistic commentary from members of the Philadelphia Deaf community as well as observations about how features of Philadelphia ASL differ from the expectations of the signing researchers involved with the project.

Second, we are collecting sociodemographic information in the form of a background questionnaire about the participants, allowing us to interpret differences between participants in light of known sociolinguistic generalizations (Lucas, 1989; Schembri & Lucas, 2015, Morris, 2016). For example, the language use of participants who have lived or studied outside of Philadelphia is expected to show greater assimilation to a pan-regional variety of ASL as demonstrated in the earlier exchange between our project interviewer and Colleen.

Third, we are preparing an experimental paradigm for eliciting acceptability and familiarity judgments on lexical items through an online platform that allows us to use both English and ASL in order to make sure it is accessible. A mock-up of one potential component of this survey is shown in Figure 4. The online survey will enable us to assess whether Philadelphia signs are recognized

more widely in the US Deaf community; future work will

Figure 4. Potential design for online survey

extend the paradigm to acceptability judgments on phonetic, phonological, morphological, and syntactic features. We will also refer to similar work done by other signed language researchers for strategies that can be used to prevent scam contributions (e.g., the German Sign Language (DGS) Corpus Feedback Portal).

Finally, we emphasize the importance of transparent archiving methods (e.g., Bird and Simons 2003; Himmelmann 2006) and use of widely used, well-documented annotation conventions (i.e., the conventions listed in Hochgesang, 2015) which are currently used by a few research projects in the US and have been shared with and reviewed by other signed language researchers at the international workshop *Digging into Signs* (Crasborn, Bank & Cormier, 2015). This application of archiving and annotation best practices (both in general and specific to the study of signed languages) to our language documentation will facilitate eventual comparison to corpus data from other ASL varieties.

5. Long-Term Plans

The documentation of regional variation in ASL is an area of research that offers scientific progress in the study of language change in signed languages but also will directly benefit the Deaf community. The long-term aim of this project is to create a corpus of 100 interviews from the Philadelphia Deaf community, building on the preliminary work discussed here. We will survey a balanced sample of individuals with particular attention to capturing the full spectrum of age-related differences to document language change, as regularities in linguistic variability are detectable only with sufficiently large amounts of data from many different language users. The final product, including all annotations, will be made publicly available online; our hope is that it may serve as a model for natural signing in the local variety for training of translators and signed language education as well as preserve the linguistic heritage of the Philadelphia Deaf community for future generations.

6. Acknowledgements

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