Building the ASL Signbank: Lemmatization Principles for ASL

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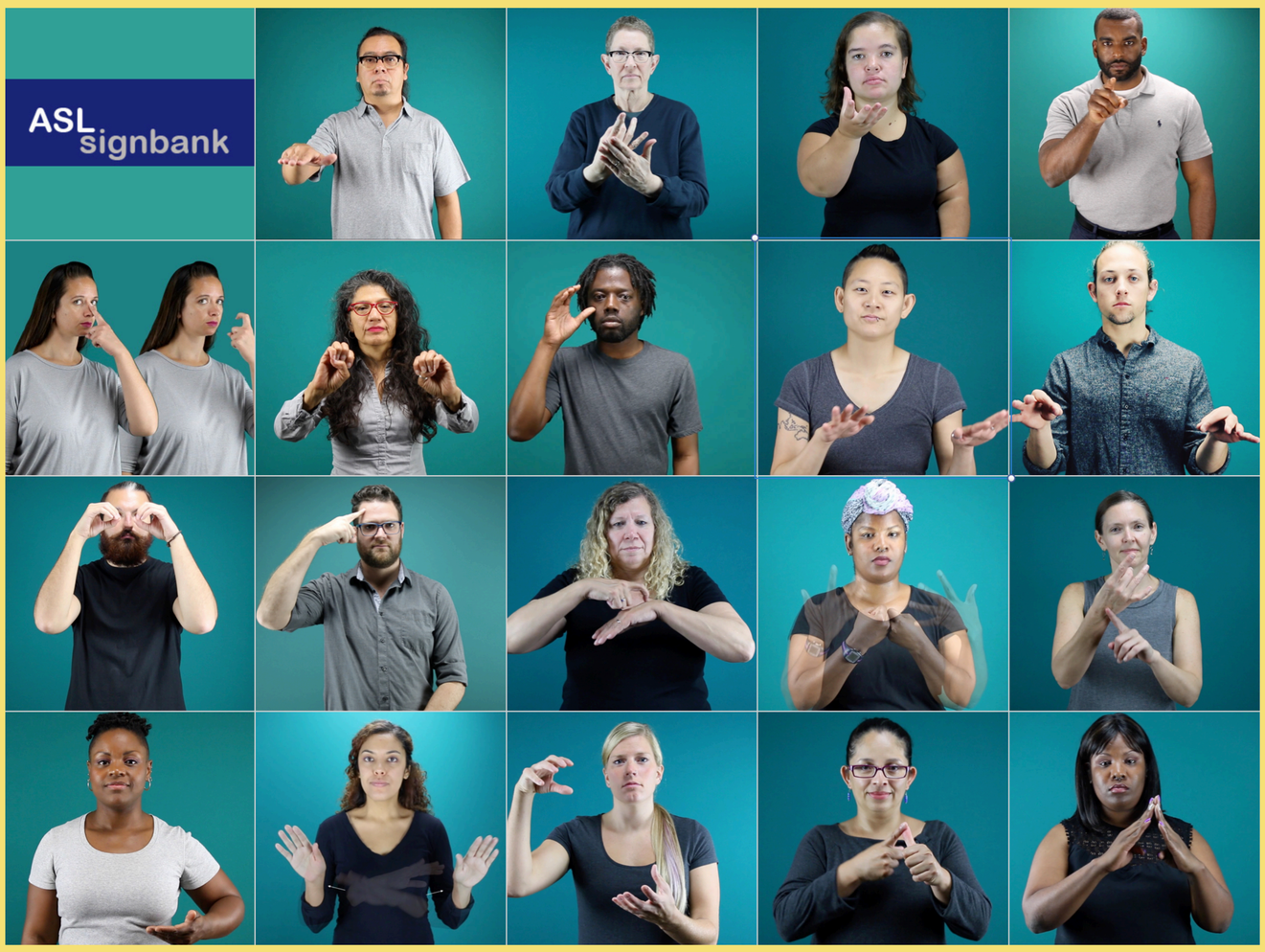
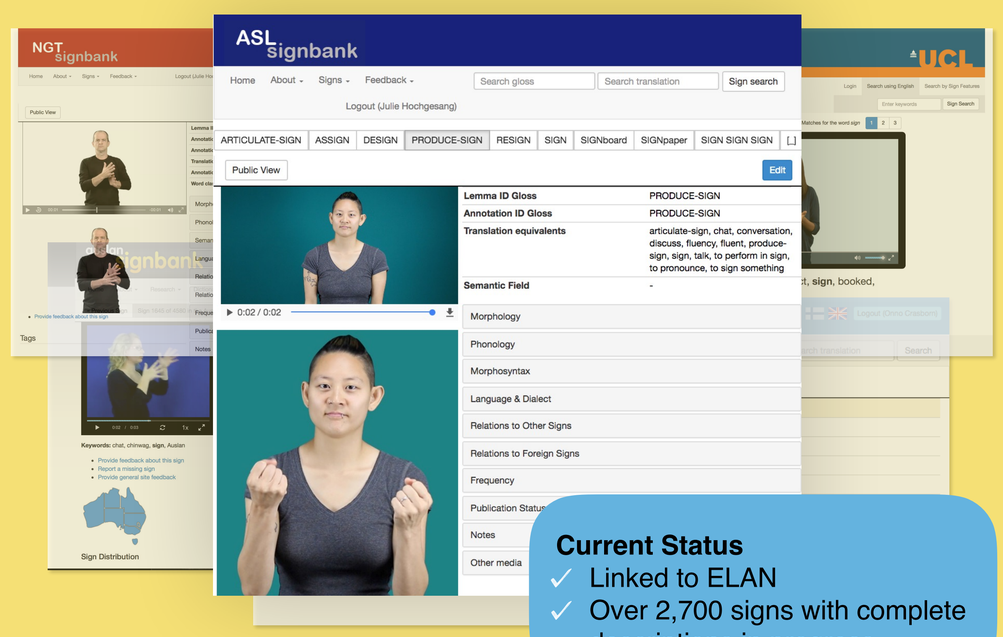


Introduction

The concept of the ASL Signbank builds on the other Signbank databases, for Auslan (Johnston 2001), British Sign Language (BSL; Fenlon et al. 2014), Finnish Sign Language, and Nederlandse Gebarentaal (NGT; Crasborn et al. 2016). The source code for these Signbanks is all at http://github.com/signbank/. Present Signbank development efforts are underway for Flemish Sign Language (VGT) and Brazilian Sign Language (Libras).



Current Status
- ✓ Linked to ELAN
- ✓ Over 2,700 signs with complete descriptions in progress

http://aslsignbank.haskins.yale.edu

Sign Language Acquisition, Annotation, Archiving, and Sharing (SLAAASh)

SLAAASh is an on-going effort to prepare corpora of sign language acquisition data to share with the research community, and eventually shared with other projects annotating ASL data.

Current aim: Serve as a consistent and constantly upgraded resource for ongoing annotation

Mid-term aim: Create a shareable archive of child language resources

Long-term aim: Be an online usage-based sign language database to serve as a source for future ASL resources, including dictionaries

Linking actions
* Alignment of glosses
* Sharing phonological coding
* Sharing iconicity ratings
* Sharing lexical properties

ASL-LEX

Linked to ASL-LEX

ASL-LEX (Caselli et al. 2016) is a lexical database which includes subjective frequency and iconicity judgments on (to date)1000 ASL signs.
http://asl-lex.org

Lemmatization of Our ID Glosses

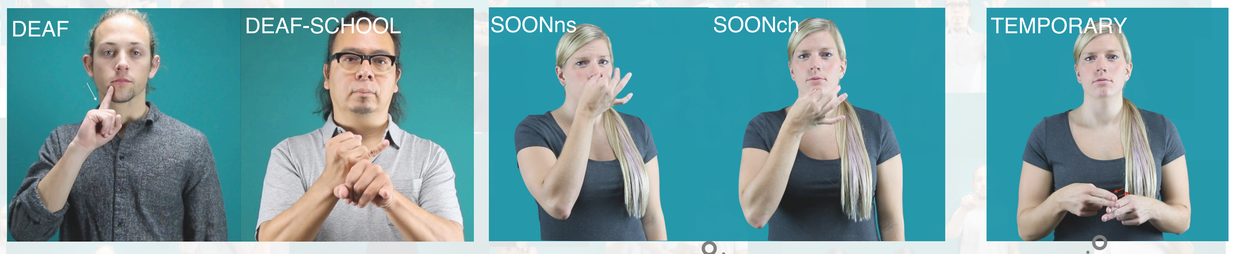
"…we consider the citation form to be the lemma (i.e. the unmodified form of a given sign is used here as the headword of a lexeme)…The ID gloss is a unique English-based translation used primarily as an annotation tag in the corpus for all occurrences of that lexeme regardless of how it might be modified" (Fenlon et al., 2015, 176)

Our Lemmatization Principles in a Nutshell

different signs, different lemmas
GLOSS
DIFFERENT-GLOSS

phonological variants, same lemma
GLOSStag
GLOSSdifferenttag

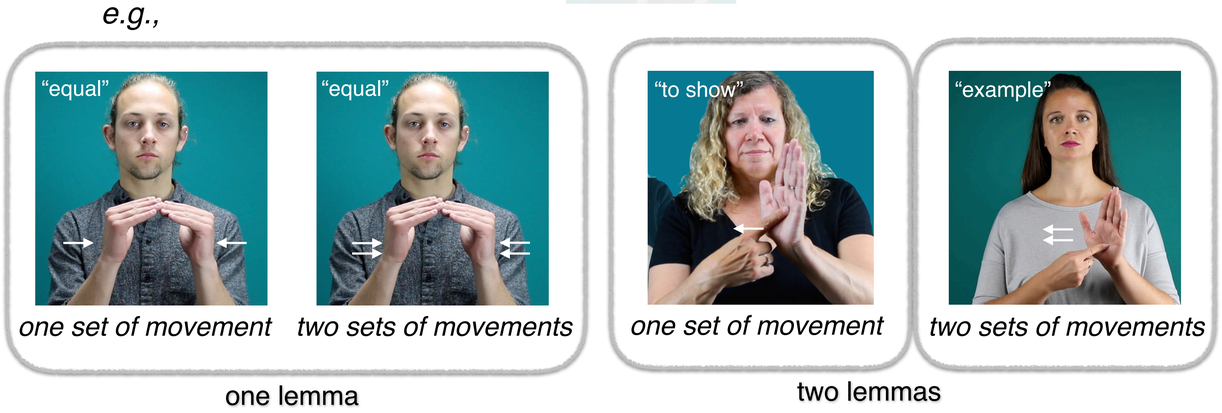
lexical variants, different lemmas
GLOSS
DIFFERENT-GLOSS
(mark - related signs)



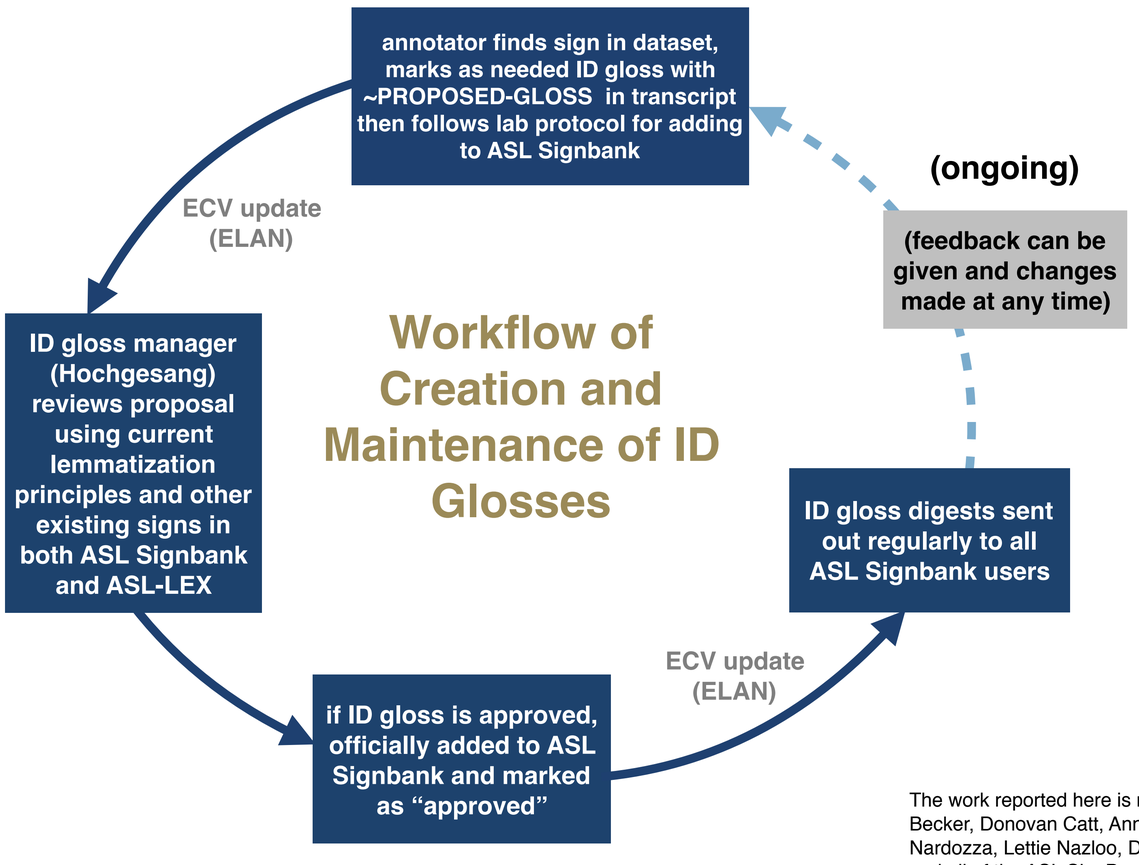
marked as related in ASL Signbank

Lemmatization of ASL signs following our current principles are made both by observing how these signs behave in the dataset and how they are understood by the researchers. Regular lab meetings are held to discuss sign lemmas. Frequently the discussion involves producing the sign in various modifications.

e.g.,



Only the contrast on the right appears to be lexicalized. The two signs (roughly meaning "to show" and "example") can have different morphological modifications. For that reason, we analyze the distinction on the right as concerning two lemmas, while the "contrast" for the signs on the left (roughly meaning "equal, be equal to") is not significant and they are therefore variants of the same lemma.



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The ASL Signbank was developed at Radboud University by Onno Crasborn, Wessel Stoop, Micha Hulsbosch, and Susan Even.

References here in our paper: http://bit.ly/ASBLemma (or scan →)

Find copy of annotation conventions and "what's new" guide here: **bit.ly/SLAAShGuides** (or scan →)

This poster here: http://bit.ly/ASBLemmaPoster (or scan →)