Signed Language Linguistics

Part 1: Phonology
Levels of Analysis

- Phonetic/Phonological
- Morphological
Body movement → signal → Perceptual system
'Sign' tract

optic

acoustic

Visual

Auditory
Spoken language

- Body movements (vocal tract gestures) produce sounds

- Phonetics
  - How are the sounds made?
  - Qualities of sounds

- Phonology
  - The inventory of sounds in a specific language and how they are combined to make words
How do we make words?

- Limited number of sounds are combined
  - How are the sounds combined?
    - Simultaneously
    - Sequentially
This sequence of sounds makes the word ‘cat’
Using the same sounds in a different sequence makes a new word: 'tack'
In speech, the phonemic components of a word are segmented in time...”
What about signed words?
Signed language

- Body movements (hand-body-facial gestures) produce visible shape, in certain locations, that move in various ways

- Phonetics
  - How are these elements made?
  - What qualities do they have?

- Phonology
  - The inventory of elements in a specific language and how they are combined to make words
How do we make words?

- Limited number of elements are combined
What are the elements

- William Stokoe identified three major types of minimal units of signed languages:
  - handshapes
  - movements
  - locations
How do we make words?

- Limited number of elements are combined
  - How are they combined?
    - Simultaneously
    - Sequentially
How do we make words?

- Limited number of elements are combined
  - How are they combined?
    - Simultaneously
  - We can’t reorder the elements sequentially!
In producing a sign language utterance, some part (or parts) of the signer’s body acts. If the active part is mobile enough, there are various places in which the action may occur... But the action, the active part, and the place are all present simultaneously.

“The problem is to see what composes signs (i.e., what elements they can be decomposed into) ... Signs cannot be performed one aspect at a time, as speakers can utter one segment of sound at a time.
Stokoe’s insight was pioneering because people said that signs were not composed of parts (phonemes) that are combined to form words.

They said that signs are holistic images, not analyzable into linguistic elements.
This is only part of the story. The full sequence of linguistic history is

- Signs are holistic, not analyzable into parts
- Signs are analyzable, but simultaneously (Stokoe)
- Sign are analyzable sequentially (Liddell & Johnson)
Spoken Word

Consonant: k
- velar
- unvoiced
- stop

Vowel: a

Consonant: t
- alveolar
- unvoiced
- stop
Signed Word ‘GIVE’

Hold
- flat-O
- chest
- up

Movement
- away from S
- ...
- ...

Hold
- flat-O
- distal Ø
- up
Signed Language Linguistics

Part 2: Morphology
This has been a PHONOLOGICAL analysis of words

- Words (spoken or signed) are composed of meaningless parts (phonemes)
- These meaningless parts are combined to form meaningful parts: morphemes
The linguist’s term for

- The minimal meaningless units of composition is **phoneme**
- The minimal meaningful unit of composition is **morpheme**
Word vs. Morpheme

‘cat’ = ?
‘cats’ = ?
‘establish’
‘establishment’
‘establishments’ (vs. establishment’s)
Roots, prefixes, and suffixes

prefix  root  suffix
mis-   communica  -tion
Word

mis-  communica  -tion

One Word

3 Morphemes
Word

establish- -ment- -s

One Word

3 Morphemes
What about signed words?
• ‘tree’
• ‘trees’?
• ‘cup’
• ‘cups’
The single word ‘walked’ has how many morphemes in English?

ASL?
OASL: [LOOK-AT]<sub>hab.</sub>
‘give’

‘I give you’

‘You give me’

How many words?

How many morphemes?

Where are the morphemes?
'GIVE'

Hold flat-O chest up

Movement away from S ...

Hold flat-O distal Ø up

'first-person agent'

'second-person recipient'