American Sign Language:
WHEN HANDS BECOME MY VOICE, AND EYES MY EARS

A Brief History of American Sign Language

355 B.C. – “Those who are born deaf all become senseless and incapable of reason.”
Aristotle.

Socrates – “If we had neither voice nor tongue, and yet wished to manifest things to one another, should we not, like those which are at present mute, endeavor to signify our meaning by hands, head, and other parts of the body?”

Should ASL be Considered a Language?

Language: A shared, symbolic system for communication.

Does ASL have a phonology? Syntax? Morphology? Pragmatics?

2.1 ASL Phonology?

What type of phonological representations do persons who are deaf have?

Are there “sound-code” representations? Are there cherological code representations?

Phonology

The sounds of language and the rule system for combining them.

Phoneme: A category of language sounds that are treated as the same sound, despite any physical difference among the category members. It is the smallest unit of sound that makes a difference to the meaning of a word.
Cherological Representations

- **Spoken Languages**
  - Phonology:
    - Place
    - Manner
    - Voicing

- **Signed Languages**
  - Phonology:
    - Location
    - Hand shape
    - Movement
    - Orientation

Phonology

- **The minimalist units of language and the rule system for combining them.**

- **Phoneme:** It is the smallest meaningless unit of language that makes a difference to the meaning of a word.

- Cherological codes

Sound Codes???

- Skilled readers who are deaf can read novel words and non-words. If you have not seen a word before, which means you have not had the opportunity to memorize the association between what a word looks like and what it means, naming the word indicates that one accessed phonological representations.

- This skill suggests that readers who are deaf can access similar sound representations as hearing readers.

Pseudohomophone Disadvantage

- **Pseudohomophone:** non-word that "sounds-like" a real word.

- Lexical decision task: RTs
  - FOX yes 500ms
  - BOCKS no 850ms
  - SNOCKS no 750ms

- Both hearing and deaf readers exhibit this pattern of results (Chamberlain & Mayberry, 2001).

- How do readers who are deaf acquire spoken phonological representations?

  - Reading
  - Lip-reading
  - Cued-speech
  - Auditory feedback
  - Learning to write
Interesting readings:


2.2 Syntax

- Despite the fact that ASL has some differences in terms of ordering words, ASL does have a set of rules for syntactical processing.

2.3 Morphology

- ASL is morphologically richer than English.
- Example:
  - Ask, ask-you, ask-them...

2.4 Pragmatics/Discourse

- Again, ASL has some similarities to English in terms of the pragmatic rules of the language.
  - Difference: walking through a conversation.

Is ASL a “Language?” Clearing up some misconceptions.

- ASL is not a derivative of English.
- ASL is not simply fingerspelling.
- ASL is not a universal language of pantomime.
- ASL is not limited to expressing only concrete ideas.

Is ASL a “Language?”

- Signed languages developed independently of spoken languages and hearing cultures.
  - ASL is not simply the translation of English into manual codes. ASL takes advantage of our propensity to learn any language, and the flexibility of formal language that aids human communications.
William Stokoe – ASL is not a pantomime. *It has the same basic properties we observe with spoken languages.*


- Question: Is it the case that deaf individuals with Parkinson’s disease or aphasia exhibit the same language dissociations as seen in hearing individuals?

- Participants: (1) Deaf individuals with Parkinsonian symptomatology, (2) Deaf individual with aphasia (left temporal lobe lesions), (3) aged-matched Deaf individuals.

<table>
<thead>
<tr>
<th>Parkinson’s</th>
<th>Aphasics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Error patterns:</td>
<td>substitutions</td>
</tr>
<tr>
<td>Fluidity:</td>
<td>monotonous signing</td>
</tr>
<tr>
<td>ASL structure:</td>
<td>movement</td>
</tr>
</tbody>
</table>

- ASL engages similar brain regions as spoken languages. Damage to these regions influences language comprehension and/or production.

- This evidence provides further support for the materialism perspective of cognitive processing.

**Neurological Basis for Language Deficits**

- It is assumed that the brain is the basis of cognition and language.

- Therefore, if the brain is damaged or insulted in any manner, we should observe specific cognitive deficits.

- The physical brain produces language and thought.

**Closing remarks**

- *Early exposure to language will allow a child to develop “normally” whether that language is spoken or signed.*
Selected readings and references:


