

# Ten Lectures on Cognitive Linguistics and the Unification of Spoken and Signed Languages

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# Thank you!!!

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# Who Am I?

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- ❖ Lecture 1: Overview of Signed Languages
- ❖ Lecture 2: Signed Language Linguistics
- ❖ Lecture 3: Overview of Cognitive Grammar
- ❖ Lecture 4: Cognitive Iconicity, Conceptual Spaces, Meaning, and Gesture
- ❖ Lecture 5: Cognitive Grammar and Signed Languages



- ❖ Lecture 6: Language and Gesture
- ❖ Lecture 7: Two Routes from Gesture to Language
- ❖ Lecture 8: Setting Language in Motion
- ❖ Lecture 9: Dynamic Systems Theory
- ❖ Lecture 10: Neural Darwinism, Neuroscience, and  
Cognitive Grammar

# Overview of Signed Languages

## Lecture 1

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*October 15, 2013*



# What are signed languages?

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- ❖ Natural languages, not invented languages.
- ❖ Languages with grammars, lexicons, rules of proper usage, and genres of literature.
- ❖ Independent languages, unrelated to the spoken languages used by hearing people in the same community / region.
- ❖ **Not** non-verbal communication
- ❖ **Not** universal!
- ❖ **Not** gestures!



# What are signed languages?

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- ❖ First, some terminology. The set of languages that are
  - ❖ transmitted by speaking: *Spoken* languages
  - ❖ transmitted by writing: *Written* languages
  - ❖ transmitted by signing: *Signed* languages



	Spoken	Written	Signed
English	✓	✓	?
Spanish	✓	✓	
French	✓	✓	
Italian	✓	✓	
Navajo	✓	?	
ASL		?	✓
BSL			✓
LIS			✓
LSF			✓



	Spoken	Written	Signed
English	✓	✓	?
Spanish	✓	✓	
French	✓	✓	
Italian	✓	✓	
Navajo	✓	?	
ASL		?	✓
BSL			✓
LIS			✓
LSF			✓



# Why study signed languages?

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- ❖ The scientific study of signed languages opens up a whole host of interesting questions about
  - ❖ The human language ability
  - ❖ The origin and evolution of language
  - ❖ Human learning (VL2)
  - ❖ Human culture and society



# Signed languages

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- ❖ How many signed languages are there?
- ❖ Summer Institute of Linguistics *Ethnologue* (2009) lists 130
  - ❖ Adamorobe-Ghana, Kata Kolok-Bali, Mexican Sign Language, Ugandan Sign Language, Meemul Tziiu-MesoAmerican, Persian Sign Language, Saudi Sign Language, and Taiwan Ziran Shouyu



# Signed language families

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- ❖ The French Sign Language family
  - ❖ French Sign Language, American Sign Language, Brazilian Sign Language (LIBRAS), Tunisian Sign Language, Russian Sign Language, and others
- ❖ The British Sign Language family
  - ❖ British Sign Language, Australian Sign Language (Auslan), New Zealand Sign Language, (Maltese Sign Language?), (Bangalore variety of Indo-Pakistani Sign Language?)



# LIBRAS and LSF

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a little



pencil



year



# American Sign Language

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- ❖ How many users of American Sign Language are there?



**Table 2. Selected Internet sources for estimates of the prevalence or prevalence ranking of ASL use in the United States.**

Prevalence or prevalence ranking estimate	Web site where estimate was found
100,000 – 500,000	ERIC Digests (Wilcox & Peyton, 1999) MSN Encarta (Wilcox, 2004) Ethnologue.com (Ethnologue, 2004)
250,000 – 500,000	American Sign Language Program @ The University of Iowa (Department of Speech Pathology and Audiology, 2004) ASLTA (NC ASLTA and NCAD Ad Hoc Committee, 2004) Colorado Department of Human Services (Colorado Commission for the Deaf and Hard of Hearing, n.d.)
300,000 – 500,000	Barnes&Noble.com (Costello, 1994) SignWriting.org (Rosenberg, 1999)
500,000*	American Academy of Family Physicians (CDGAP, 1997) ASLinfo.com (ASLinfo.com, n.d.) DEAF C.A.N.! (Deaf Community Advocacy Network, n.d.)
500,000 – 2,000,000	Brenda Schick, Ph.D. (Schick, 1998) DawnSignPress (DawnSignPress, 2003) Gallaudet University Library (Harrington, 2004)
15,000,000	Aetna IntelliHealth (Gordon, 2001)
3rd most used language in the U.S.	HandSpeak (HandSpeak.com, n.d.) Health Literacy Consulting (Osborne, 2003) Missouri Office of State Courts Administrator (Office of State Courts Administrator, n.d.)
4th most used language in the U.S.**	The ASHA Leader Online (Scott & Lee, 2003) Deaf Resource Library (Nakamura, 2002) NIDCD (National Institute on Deafness and Other Communication Disorders, 2000)
3rd to 10th most used language in the U.S.	Wikipedia (Wikimedia, 2003)



# Linguistic Analysis of Signed Languages

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- ❖ Phonetics / phonology
- ❖ Morphology
- ❖ Syntax
- ❖ Narrative



# Phonology

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- ❖ William C. Stokoe: Three parameters ('cheremes') of phonological structure:
  - ❖ Handshape
  - ❖ Location
  - ❖ Movement
- ❖ Robbin Battison later added a fourth: hand orientation



# Minimal pairs

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- ❖ APPLE-ONION
- ❖ APPLE-BITTER
- ❖ TRAIN-SOON
- ❖ CHILDREN-THING



# Morphology

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- ❖ **Size and Shape Classifiers**
  - ❖ small, flat and round objects
  - ❖ small, container-like objects
  - ❖ objects with flat surfaces
- ❖ **Handling classifiers**



# Morphology

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- ❖ **Verb aspect**
  - ❖ 'repeatedly'
  - ❖ 'continually'
- ❖ Verb aspect is marked by a change to the sign's movement parameter



# Morphology

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- ❖ **Facial grammar: adverbs**
  - ❖ “with attention, care, deliberately”
  - ❖ “without attention, carelessly, foolishly”
- ❖ **Facial grammar: Y/N questions, Wh-questions, conditionals**
- ❖ **Intensification** (marked by a change to the sign’s movement parameter)
  - ❖ SLOW vs. VERY-SLOW



# Syntax

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- ❖ **Subject-predicate constructions vs. topic-comment constructions**
  - ❖ 1<sub>p</sub> LIKE COFFEE [S-V-O]
  - ❖ [SCHOOL]-topic, [1<sub>p</sub> GO-repeatedly]-comment



# Narrative

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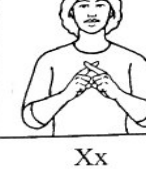
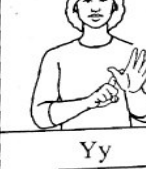


# Fingerspelling

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- ❖ One-handed: ASL, LSF, LIS, LSC, Libras
- ❖ Two-handed: BSL, Auslan
- ❖ Other fingerspelling systems: Japanese Sign Language (syllabary), Arabic family of signed languages (e.g., Saudi Sign Language), Russian Sign Language



				
Aa	Bb	Cc	Dd	Ee
				
Ff	Gg	Hh	Ii	Jj
				
Kk	Ll	Mm	Nn	Oo
				
Pp	Qq	Rr	Ss	Tt
				
Uu	Vv	Ww	Xx	Yy
				
Zz				

British 2-handed

						
А	Б	В	Г	Д	Е	Ж
						
З	И	Й	К	Л	М	Н
						
О	П	Р	С	Т	У	Ф
						
Х	Ц	Ч	Ш	Щ	Ъ	Ы
						
	Ь	Э	Ю	Я		

Russian



# Iconicity

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- ❖ A similarity between the form of a sign (word) and its meaning.
- ❖ In spoken language, this is often manifest as **onomatopoeia**
- ❖ Iconicity is much more pervasive in signed languages



# Signs and gestures

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- ❖ For spoken languages, it's easy to distinguish linguistic from non-linguistic (=non-verbal) communication: different articulators.
- ❖ For signed languages, the same articulators (hands and faces) produce *both* verbal (=linguistic) and non-verbal communication.



# Signs and gestures

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- ❖ What is the relationship between signs and gestures
- ❖ Grammaticalization: signs from gestures
- ❖ Narrative and constructed action



# Grammaticalization

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# Grammaticalization

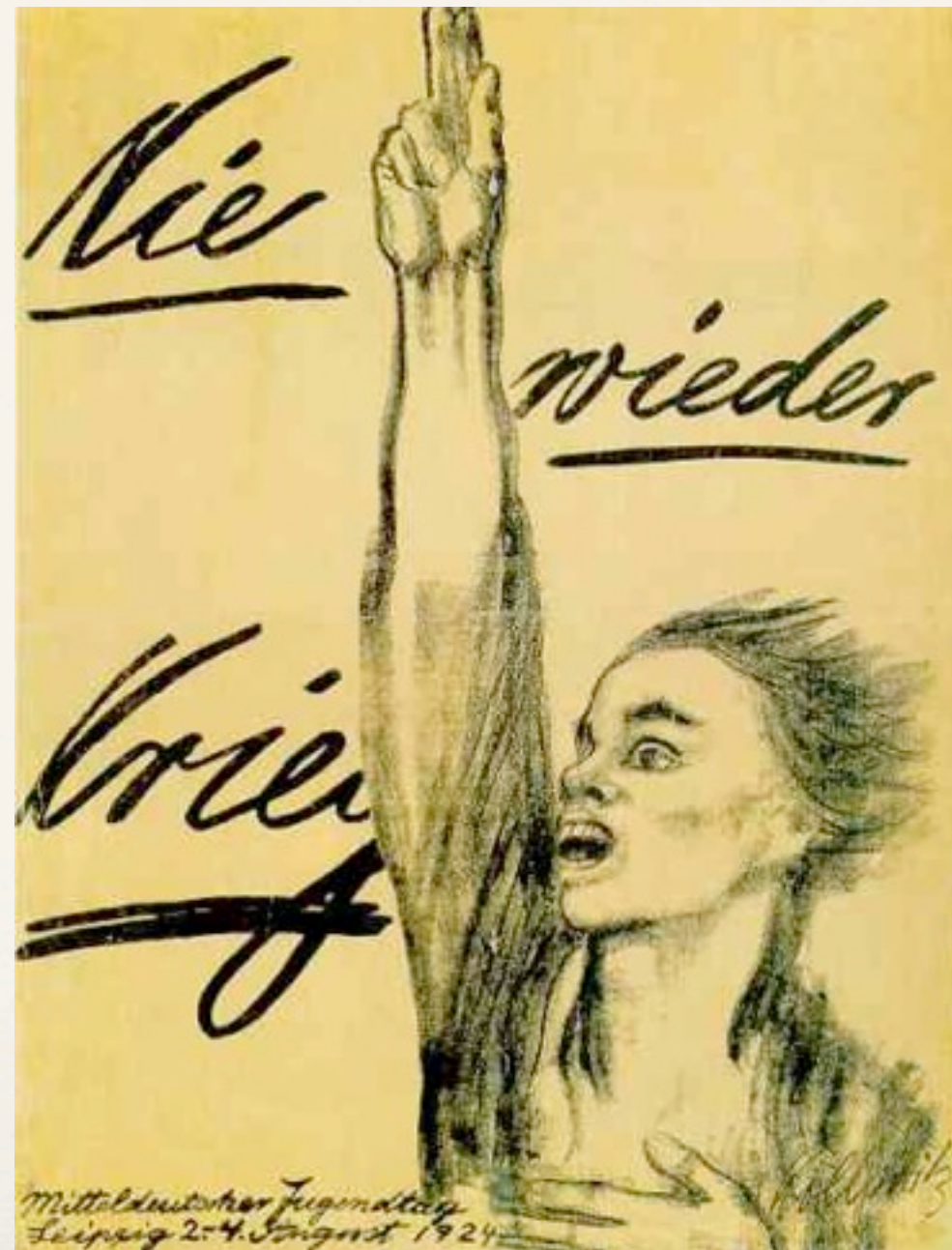
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# Grammaticalization

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# Grammaticalization

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# Constructed action

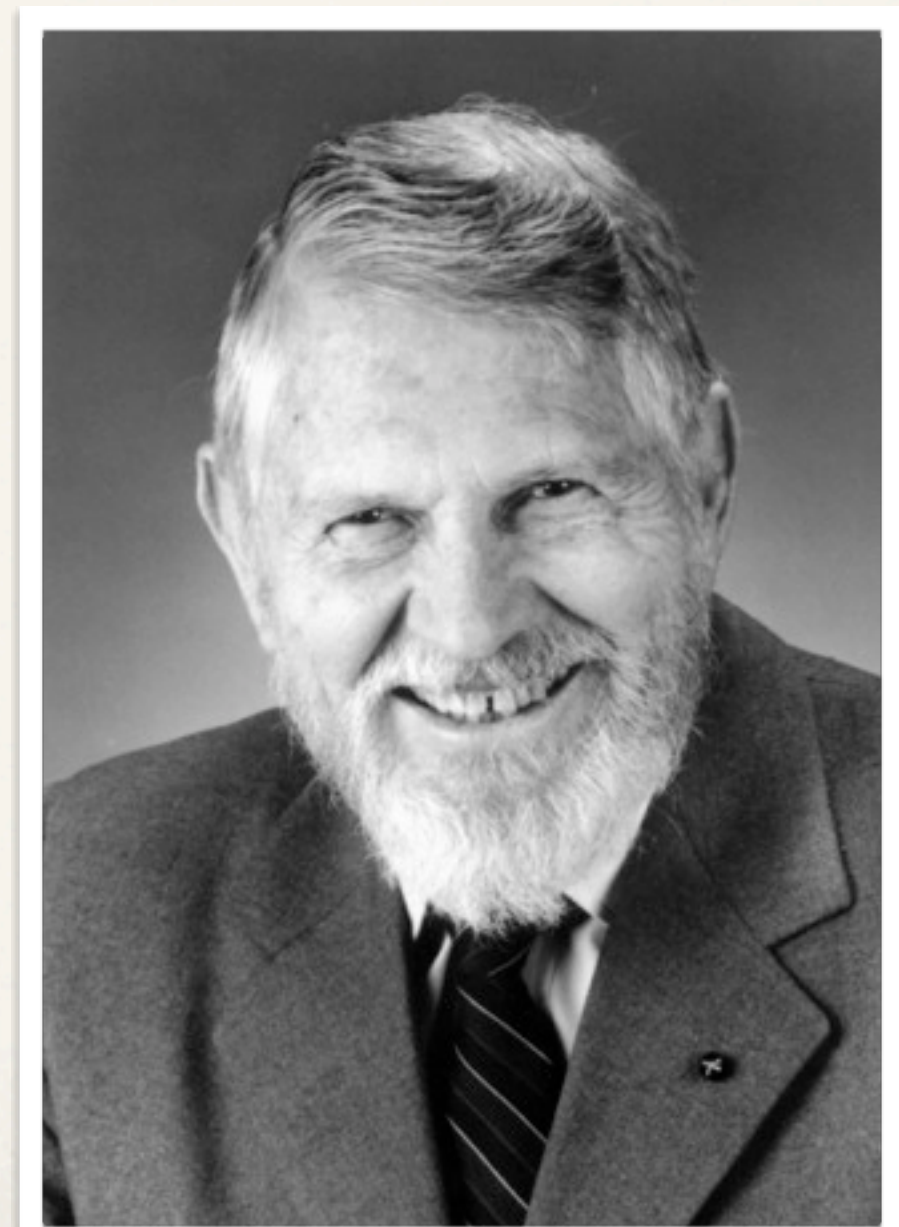
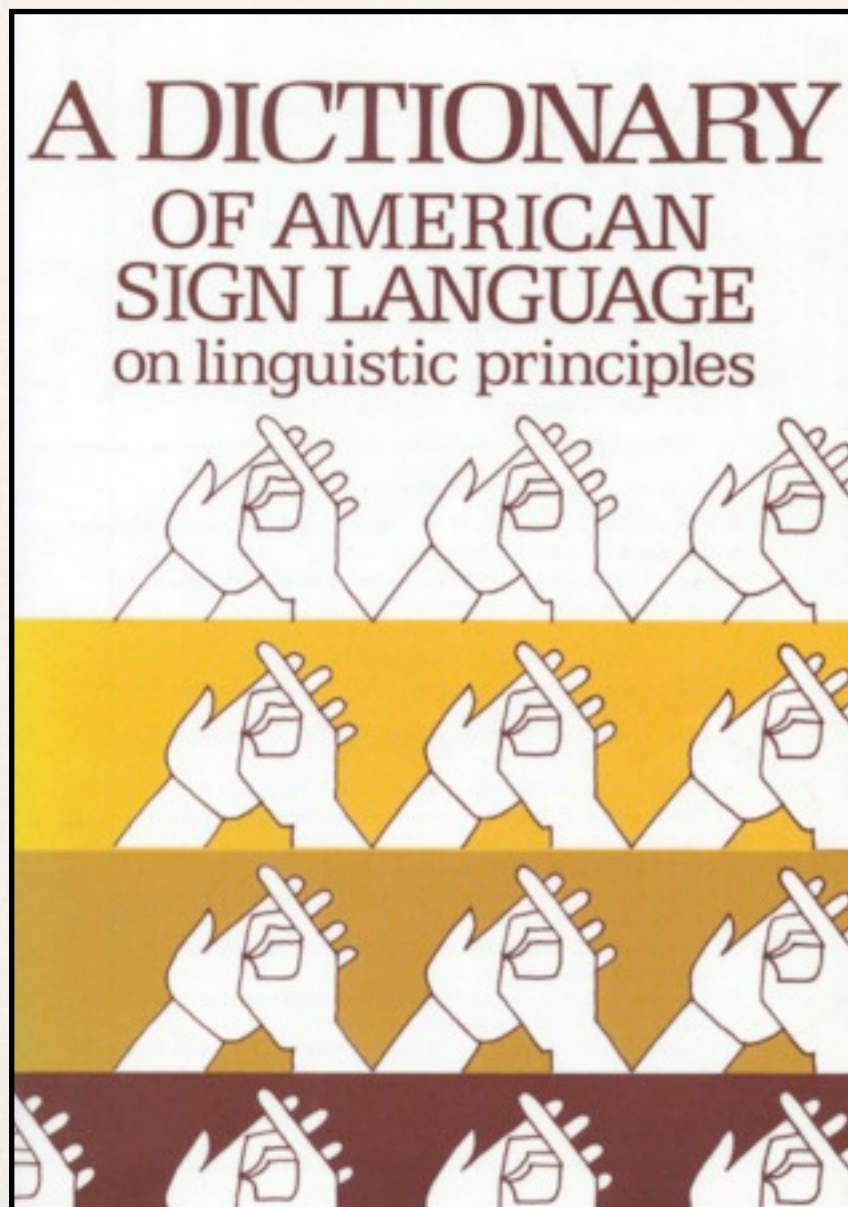
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# Writing Signed Languages

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# Stokoe notation

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$\wedge \dot{5} \dot{a}$        $\wedge B_{\perp} \dot{n}$

(single-dez form of preceding sign.)  $\times$  *stubborn, determined.*

This sign enters sign language constructions which make its commonest gloss 'stubborn' unsuitable for translation: e.g.

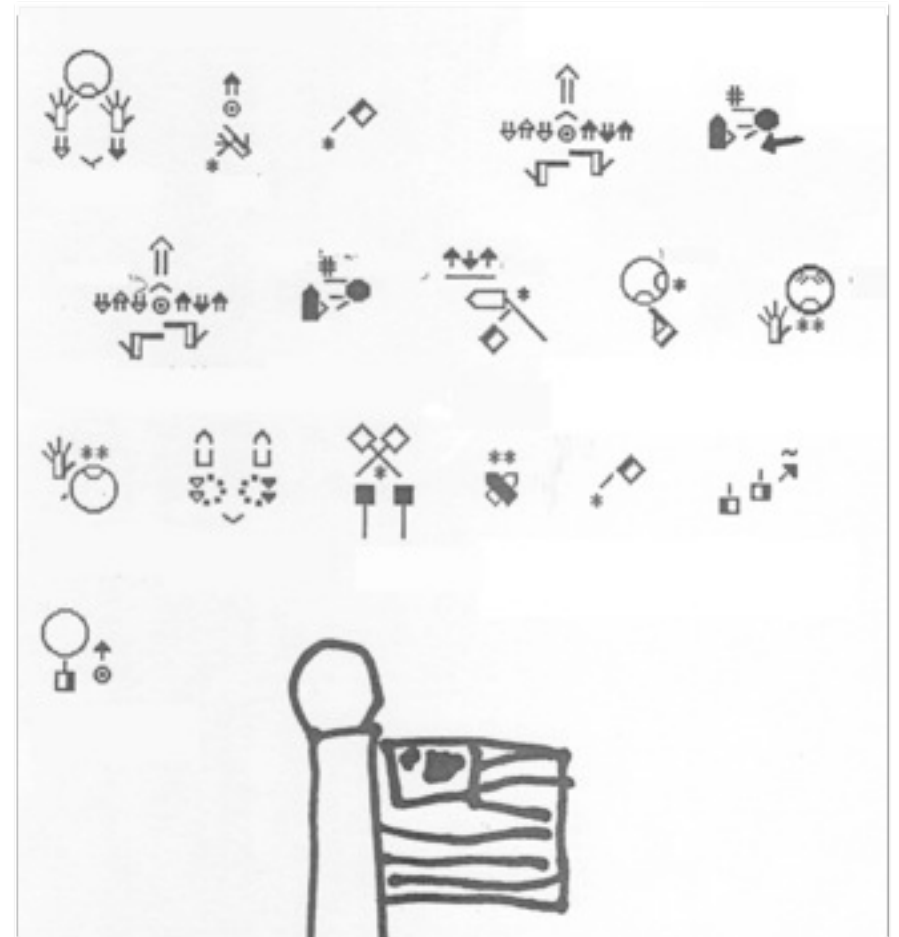
$(\wedge B_{\perp} \dot{n} \quad \bar{B}_a 5_o \wedge \quad \emptyset H^{\vee})$  Those who wish to deride sign language or its users translate this \*'stubborn learn history'. Really what the signer has said is 'I am determined to learn history.'




**ԲՆԻՄԱՆՈՒԹՅՈՒՆ (ԲՈՒՄՈ) ՋՁՅՈՒ.**  
 ԽՏՈՒՄ ԽՏՈՒՄ = ԽՏՈՒՄ ԽՏՈՒՄ  
 ԽՏՈՒՄ ԽՏՈՒՄ ԽՏՈՒՄ. **ԲՈՒՄՈ.**  
 ԽՏՈՒՄ ԽՏՈՒՄ, ԽՏՈՒՄ  
 ԽՏՈՒՄ, ԽՏՈՒՄ ԽՏՈՒՄ  
 ԽՏՈՒՄ ԽՏՈՒՄ. ԽՏՈՒՄ ԽՏՈՒՄ  
 ԽՏՈՒՄ ԽՏՈՒՄ = ԽՏՈՒՄ, ԽՏՈՒՄ  
 ԽՏՈՒՄ ԽՏՈՒՄ ԽՏՈՒՄ-ԽՏՈՒՄ.

ԽՏՈՒՄ ԽՏՈՒՄ = ԽՏՈՒՄ = ԽՏՈՒՄ =  
**ԲՈՒՄՈ.** ԽՏՈՒՄ, ԽՏՈՒՄ = ԽՏՈՒՄ.  
 ԽՏՈՒՄ-ԽՏՈՒՄ ԽՏՈՒՄ = ԽՏՈՒՄ ԽՏՈՒՄ  
 ԽՏՈՒՄ = ԽՏՈՒՄ ԽՏՈՒՄ ԽՏՈՒՄ ԽՏՈՒՄ  
 ԽՏՈՒՄ = ԽՏՈՒՄ, ԽՏՈՒՄ,  
 ԽՏՈՒՄ, ԽՏՈՒՄ = ԽՏՈՒՄ, ԽՏՈՒՄ  
 ԽՏՈՒՄ ԽՏՈՒՄ ԽՏՈՒՄ, ԽՏՈՒՄ  
 ԽՏՈՒՄ = ԽՏՈՒՄ.

SignFont



Sutton Sign Writing



h u u x b | o o y — o o

*For all generations of signers. May the past be preserved and the future built.*

h u u x b | o o y — o o



# Deaf culture and language

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- ❖ Deaf people predominantly use their natural signed languages
- ❖ Signed languages are markers of cultural and linguistic identity
- ❖ Deaf people are also, by and large, bilingual or even multi-lingual
- ❖ Deaf cultures are found everywhere. They are both distinct from, and yet embedded within, a community's or area's larger hearing society and culture



# Acceptance of ASL

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- ❖ An ever-growing list of state entities acknowledge American Sign Language as a language
  - ❖ Over 40 state bills, laws, or resolutions recognize ASL as a language
  - ❖ Many countries recognize their indigenous signed languages
- ❖ Academic acceptance of ASL as a foreign language
  - ❖ Over 200 colleges and universities accept ASL for foreign language credit.



# Thank you!

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