

# Human Language

AN INTRODUCTION

# What do we know about language?

- ▶ Do only humans speak/use language?
- ▶ Is language faculty biological, cultural, social?
- ▶ How old is human language?
- ▶ Did humans all speak a single language at the beginning?
- ▶ How many languages are there in the world?
- ▶ Are some languages more advanced or primitive than others?
- ▶ What is the language spoken by the biggest number of people?
- ▶ Do we need an international language? Is there a lingua franca, a language for global communication?

# What is language to human?

- ▶ “Language is a window into Human Nature”

Steven Pinker, *The Stuff of Thought* (2007)

- ▶ Language makes us uniquely human: no other species is comparable to humans with respect to the creativity and complexity of the systems that humans use to express thought and to communicate.
- ▶ Language is a rich and varied human ability—one that we can use effortlessly, that children seem to acquire automatically, and that linguists have found to be complex yet systematic and describable.
- ▶ Language touches every part of our lives: it gives words to our thoughts, voice to our ideas and expression to our feelings.
- ▶ Speaking in Tongues: The History of Language

<https://www.youtube.com/watch?v=OuUAPVFFCRQ> (1 Origin)

# Some surprising but true things about language

- ▶ There are more than 6,000 languages spoken in the world, but 90% of the population speaks only 10% of them ([www.ethnologue.com](http://www.ethnologue.com)).
- ▶ No language is more or less logical than any other.
- ▶ There are languages that don't have words for *right* and *left* but use words for cardinal directions (like *north* and *west*) instead (Ch 11).
- ▶ Some language, such as Turkish, have a special verb tense used for gossip and hearsay.
- ▶ Some languages structure sentences by putting the object first and the subject last. (Ch 5)
- ▶ In some communities, such as the Al-Sayyid Bedouin tribe, all members of the community can use a signed language. (<https://www.youtube.com/watch?v=8DzrkopgLfU>)

- Some aspects of language appear to be innate. (Ch 8)
- Grammar is actually a much more complex phenomenon than anything that could ever be taught in school, but nevertheless every human being masters the grammar of some language.
- There are specific structures in your brain designed to process language. (Ch 9)
- Many of the sentences that you hear and utter are novel; they have never been uttered before.
- There is nothing inherent about most words that gives them their meaning; any group of speech sounds could have any meaning.
- The language you speak affects whether or not you distinguish between certain sounds.
- Certain sounds that you could make with your mouth are never used as speech sounds in any language.
- Rules like “don’t split infinitives” were propagated by people in the eighteenth century who believed that English should be more like Latin.
- The same words in the same order don’t always mean the same thing.



# Some common misconceptions about language

- ▶ There are “primitive” languages that cannot express complex ideas effectively.
- ▶ People who say *Nobody ain't done nothing* aren't thinking logically.
- ▶ You can almost always recognize someone's background by the way he talks. (Ch 10)
- ▶ It's easier to learn Chinese if your ancestry is Chinese.
- ▶ Native Americans all speak dialects of the same language.
- ▶ Women tend to talk more than men. (Ch 10)
- ▶ People from the East Coast talk nasally. (Ch 10)

- ▶ Many animals have languages that are much like human languages. (Ch 14)
- ▶ The more time parents spend teaching their children English, the better their children will speak. (Ch 8)
- ▶ Some people can pick up a language in a couple of weeks. (Ch 8)
- ▶ Every language has a way to mark verbs for the past tense. (Ch 4)
- ▶ Nouns can be used to refer only to people, places, or things. (Ch 4)
- ▶ Writing is more perfect than speech.
- ▶ The rules in grammar textbooks are guideline for correct language use and should be followed whenever possible.
- ▶ Correct spelling preserves a language.
- ▶ Swearing degrades a language.
- ▶ Texting degrades a language.
  - John McWhorter: Txtng is killing language. JK!!! (2013)  
[http://www.ted.com/talks/john\\_mcwhorter\\_txtng\\_is\\_killing\\_language\\_jk](http://www.ted.com/talks/john_mcwhorter_txtng_is_killing_language_jk)



# What We Know About Human Language

- ▶ Investigations of linguists and the analyses of spoken languages date back at least to 1600 BCE in Mesopotamia. e.g. Panini for Sanskrit
- ▶ Wherever humans exist, language exists.
- ▶ Languages are diverse, often astonishingly so.
- ▶ Despite this diversity, there are a great many universal properties of languages. That is there are characteristics shared by all languages as well as characteristics that no language has.
- ▶ There are no “primitive” languages—all languages are equally complex and equally capable of expressing any idea (ALEC). The vocabulary of any language can be expanded to include new words for new concepts.

- ▶ Many properties of language are arbitrary, in the sense that they cannot be predicted from other properties or from general principles.
- ▶ Although a great many complex rules govern our speech, we are no more aware of them than we are of the principles that govern walking or picking up an object.
- ▶ The ability of human beings to acquire, know, and use language is a biologically based ability rooted in the structure of the human brain, and expressed in different modalities (spoken or signed).
- ▶ Children acquire language without being taught; language acquisition is (at least partly) innate; Any normal child, born anywhere in the world, of any racial, geographical, social, or economic heritage, is capable of learning any language to which he or she is exposed.
- ▶ The differences among languages are not due to biological reasons.
- ▶ All languages change over time, whether speakers desire change or not.

# General principles of human language

- ▶ Language is systematic in spite of its enormous complexity, and it can therefore be studied scientifically.
- ▶ Not only is language systematic, but it is systematic on many levels, from the system of individual sounds to the organization of entire discourses.
- ▶ These systematic rules allow us to express an infinite number of ideas in an infinite number of ways.
- ▶ Language varies systematically from person to person, region to region, and situation to situation. There is variation at every level of structure.

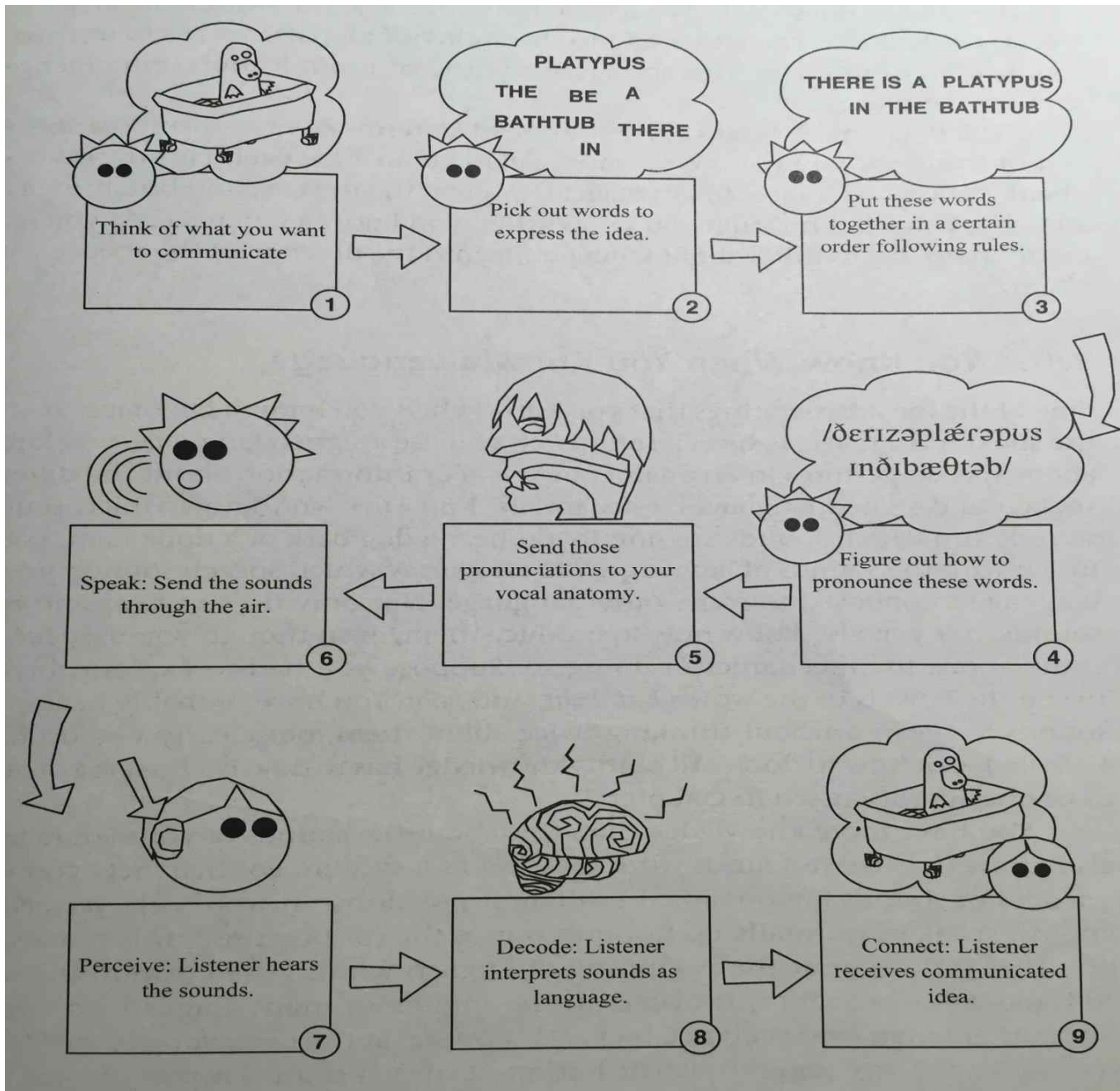
# Competence vs Performance

## Linguistic competence

- ▶ Hidden (unconscious) knowledge of language
- ▶ Unseen potential to speak a language
- ▶ Stored in your mind
- ▶ You still have linguistic competence even when you make performance errors
- ▶ cf. walking
- ▶ Linguists use performance to study competence

## Linguistic performance

- ▶ The way we produce and comprehend language
- ▶ Observable realization of that potential
- ▶ What we do with our linguistic competence
- ▶ Revealed in our speech
- ▶ Performance errors: unable to remember a word, mispronounce, jumble the words when tired, distracted, drunk, etc.



- The key elements in any communication system are

an information source,  
a transmitter,  
a signal,  
a receiver, and  
a destination

- (1) The speech communication chain  
(File 1.2, p.7)

# What you know when you know a language (linguistic competence)

- ▶ Phonetics: speech sounds
  - Can recognize and produce speech sounds: bat, beat, boot
- ▶ Phonology: system/patterns of speech sounds
  - pterodactyl, Ptolemy      /pt/ in Greek vs English
- ▶ Morphology: word formation
  - Thedogisplayinginthebackyard
  - baker/\*erbake, nicely/\*bookly
- ▶ Syntax ("grammar"): forming phrases and sentences

- (3) a. I will pick up the package up at eight o'clock.  
b. At eight o'clock, I will pick up the package.  
c. \*Package up pick at o'clock will the eight I.  
d. \*I will picks the package up at eight o'clock.

- (4) a. I have a cup of pebbles.  
b. \*I have a cup of pebble.  
c. \*I have a cup of gravels.  
d. I have a cup of gravel.

► Semantics: meaning

- (5) a. The green duck dawdled around the cactus.  
b. The duck dawdled around the green cactus.

- (6) a. The platypus ducked under the sofa.  
b. The sofa ducked under the platypus.

► Pragmatics: contextual meaning

- “Can you close the door?” yes/no question?/request?

# How your linguistic competence is stored

- ▶ Where?
  - In the minds of its speakers
- ▶ Grammar: a language system, internal structure of language
- ▶ Lexicon: words
- ▶ Mental grammar: rules
- ▶ Descriptive grammar: collections of generalizations
- ▶ A mental grammar contains all of the rules that an individual speaker uses to produce and comprehend utterances, while a descriptive grammar contains the rules that someone has deduced based on observing speakers' linguistic performance



- ▶ The relationships between the sounds and meanings of spoken languages and between the gestures and meanings of sign languages are for the most part arbitrary.
- ▶ All human languages use a finite set of discrete sounds or gestures that are combined to form meaningful elements or words, which themselves may be combined to form an infinite set of possible sentences.
- ▶ All grammars contain rules of a similar kind for the formation of words and sentences.
- ▶ Every spoken language includes sound segments, like *p*, *n*, or *a*, that all be defined by a finite set of sound properties or features. Every spoken language has both vowel sounds and consonant sounds.
- ▶ Similar grammatical categories (for example, noun, verb) are found in all languages.
- ▶ There are universal semantic properties like *entailment* (one sentence inferring the truth of another).
- ▶ Every language has a way of negating, forming questions, issuing commands, referring to past or future time, and so on.

- ▶ All languages permit abstraction like goodness, spherical, and skillful.
- ▶ All languages have slang, epithets, taboo words, and euphemisms for them, such as *john* for “toilet.”
- ▶ All languages have hypothetical, counterfactual, conditional, unreal, and fictional utterances. e.g., “If I won the lottery, I would buy a Ferrari,” or “Harry Potter battled Voldemort with his wand by Hogwarts castle.”
- ▶ All languages exhibit freedom from stimulus; a person can choose to say anything at any time under any circumstances, or can choose to say nothing at all.
- ▶ Speakers of all languages are capable of producing and comprehending an infinite set of sentences. Syntactic universals reveal that every language has a way of forming sentences such as:
  - Linguistics is an interesting subject.
  - I know that linguistics is an interesting subject.
  - You know that I know that linguistics is an interesting subject.
  - Cecelia knows that you know that I know that linguistics is an interesting subject.
  - Is it a fact that Cecelia knows that you know that I know that linguistics is an interesting subject?

# Which is more basic form of language? Speech or writing?

- ▶ There is a widely held misconception that writing is more basic than speech.
- ▶ “Perfection of writing”
  - Writing somehow seems more correct and more stable, whereas speech can be careless, corrupted, and susceptible to change.
  - Writing is usually more aptly worded and better organized, containing fewer errors, hesitations, and incomplete sentences than in speech.
  - Writing is the result of deliberation, correction, and revision, while speech is spontaneous and simultaneous formulations of ideas.
  - Writing is less subject to the constraint of time than speech.

# Language is not writing

- Speech is more immediate manifestation of language; spoken language encodes thought into a physically transmittable form, while writing encodes spoken language into a physically preservable form.
- Writing is a later historical development than spoken language.
  - Spoken language first used 150,000 years ago; writing first used in Sumer 6000 years ago
- Writing does not exist everywhere that spoken language does.
  - Among 7,000 languages, 3,900 languages (56%) are unwritten (*Ethnologue* 2009)
  - The majority of human beings are illiterate, though quite capable of spoken communication
- Writing must be taught, whereas spoken language is acquired naturally.
- Processing and production of written language is overlaid on the spoken language centers in the brain.
- Writing can be edited (delayed), while speech is much more spontaneous.
- Writing is more physically stable than spoken language.

# First writing—Sumerian cuneiform



	3200 BCE	3000 BCE	2400 BCE	1000 BCE
sag 'head'				
gin 'to walk'				
šu 'hand'				
še 'barley'				
ninda 'bread'				
a 'water'				
ud 'day'				
mušen 'bird'				

# Language is not prescriptive grammar

What is “grammar” or knowledge about language?

- ▶ Mental grammar: all the rules that native speakers know about their language that are stored in their minds; what actually exist as the foundation of language and cannot, by definition, be incorrect.
- ▶ Descriptive grammar: the linguist's description of the rules of a language as it is spoken; simply describe what happens in spoken language and accept the patterns that a speaker uses, without judgment
- ▶ Prescriptive grammar: the socially embedded notion of the “correct” or “proper” ways to use a language; make a value judgment about the correctness of an utterance

\*stranded preposition; \*split infinitive; \*double negative ← influence from Latin grammar

There is nothing inherently good or bad about any use of language.

From a strictly linguistic point of view all dialects are equally good and equally valid.

# Design features of language (Charles Hockett):

## Definition of language

Mode of communication: voice or gesture

Semanticity: all signals have a meaning or a function

Pragmatic function: serve some useful purpose

Interchangeability: individuals both produce and comprehend messages

Cultural transmission: children learn language through communicative interaction with other speakers

Arbitrariness: the connection between form and meaning is typically arbitrary: meaning is not in any way predictable from the form; nor is the form dictated by the meaning

Discreteness: able to combine together discrete units in order to create larger communicative units

Displacement: able to communicate about things, actions, and ideas that are not present in space or time while speakers are communicating

Productivity: for any number of novel messages to be built up out of discrete units

(2) Arbitrary form-meaning connections of linguistic signs as seen cross-linguistically (File 1.4, p.20)

Form	Meaning	Language
<div> <div>[watɹ]</div> <div>[o]</div> <div>[vase]</div> <div>[søy]</div> </div>	'water'	English French German Cantonese
[Li]	<div> <div>Proper name, 'Lee'</div> <div>'bed'</div> <div>'borrowed/lent'</div> <div>'this'</div> </div>	English French German Cantonese



### (3) Cross-linguistic examples of onomatopoeia (File 1.4, p.21)

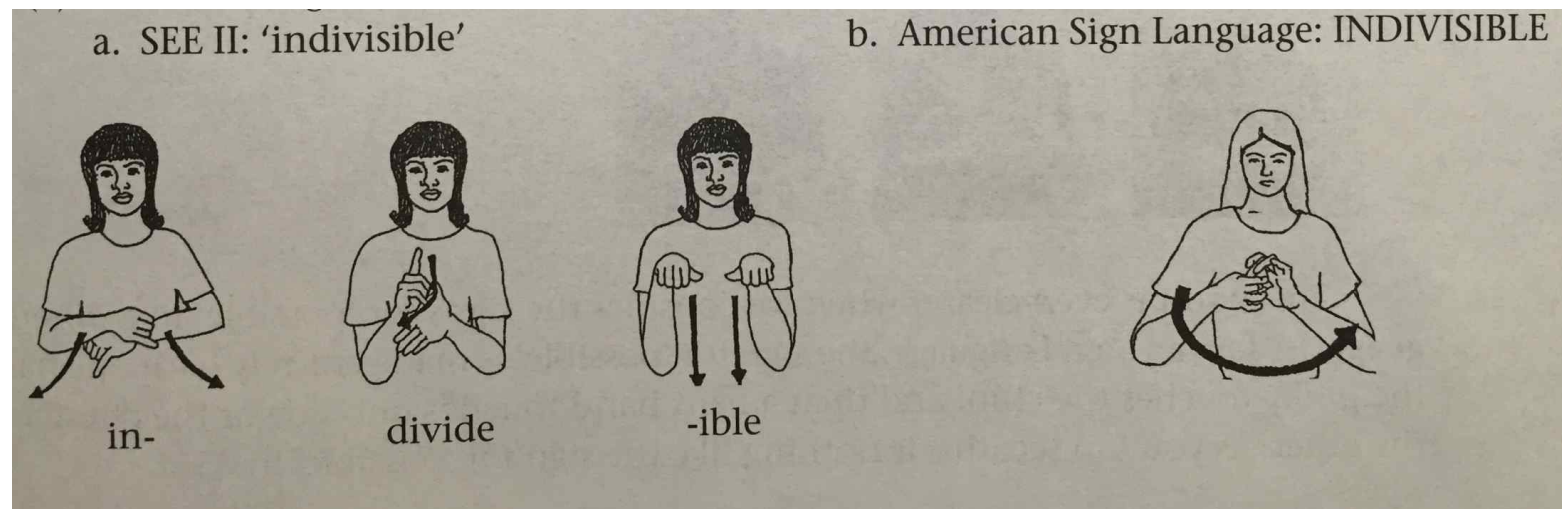
Sound	English	German	French	Spanish	Hebrew	Hindi	Mandarin	Japanese	Greek
Dog barking	[baʊwau]	[vaʊvau]	[wafwaf]	[waʊwau]	[haʊhau]	[bʰɔ̃bʰɔ̃]	[waŋwaŋ]	[wanwan]	[ɣavɣav]
Rooster crowing	[kakə-dudl̩du]	[kikəʁiki]	[kokoviko]	[kikiriki] or [kokoriko]	[kukuʔikuku]	[kukukuku]	[kukuku]	[kokekoko:]	[kikiriku]
Cat meowing	[miaʊ]	[miaʊ]	[miaʊ]	[miaʊ]	[miaʊ]	[miaʊ]	[miaʊ]	[niau]	[ɲau]
Cow lowing	[mu:]	[mu]	[mø:]	[mu]	[mu]	[mũ:]	[mər]	[mo:mo:]	[mu:]
Sheep bleating	[ba:]	[mɛ:]	[be:]	[be:]	[mɛ:]	[mɛ:mɛ:]	[miɛ]	[me:me:]	[be:]
Bird chirping	[twittwit]	[pippip]	[kʊikʊi]	[piopio] or [pippip]	[tʰuitʰuitʰ]	[tʃi:tʃi:]	[tɕitɕi]	[tʃitʃi]	[tsiutsiu]
Bomb exploding	[bum]	[bum] or [vʁum]	[bum]	[bum]	[bum]	[bʰɔ̃d̪a:m]	[bɔ̃ŋ]	[baŋ]	[bum]
Laughing	[haha]	[haha]	[haha]	[xaxa]	[haha]	[haha]	[xaxa]	[haha]	[xaxa]
Sneezing	[atʃu]	[hatʃi]	[atʃum]	[atʃu]	[aptʃi]	[atʃũ:]	[aʔtʰi]	[hakuʃon]	[apsu]
Something juicy hitting a hard surface	[splæt]	[platʃ]	[flɔk]	—	—	—	[pyaʔ]	[guʃaʔ]	[plats]
Clock	[tɪktak]	[tɪktak]	[tɪktak]	[tɪktak]	[tɪktak]	[tɪktik]	[tiʔtaʔ]	[tʃɪktaku]	[tɪktak]

# Natural language vs formal/constructed language

- ▶ Natural language: evolve naturally in a speech community; acquired naturally by children
- ▶ Formal language: formal logic for mathematics, computer languages
- ▶ Constructed language: Esperanto, *Game of Thrones*' Dothraki, *Avatar*'s Na'vi, *Star Trek*'s Klingon and *LOTR*'s (J.R.R. Tolkien) Elvish
- ▶ Some constructed languages have the potential to become natural languages
  - ▶ Modern Hebrew—reconstructed from ancient Hebrew and then adopted by a particular community
- ▶ Are Elvish, Klingon, Dothraki and Na'vi real languages? - John McWhorter

<http://ed.ted.com/lessons/are-elvish-klingon-dothraki-and-na-vi-real-languages-john-mcwhorter>

- Manual codes for spoken language are not signed language. e.g. Signed Exact English (SEE II)  $\neq$  ASL
- Signed language is not pantomime.
  - Signed language has internal structure, phonological, morphological, and syntactic rules
  - Signed language is not iconic but arbitrary
  - Just as with spoken language, signed languages are often pronounced slightly differently in causal conversation.

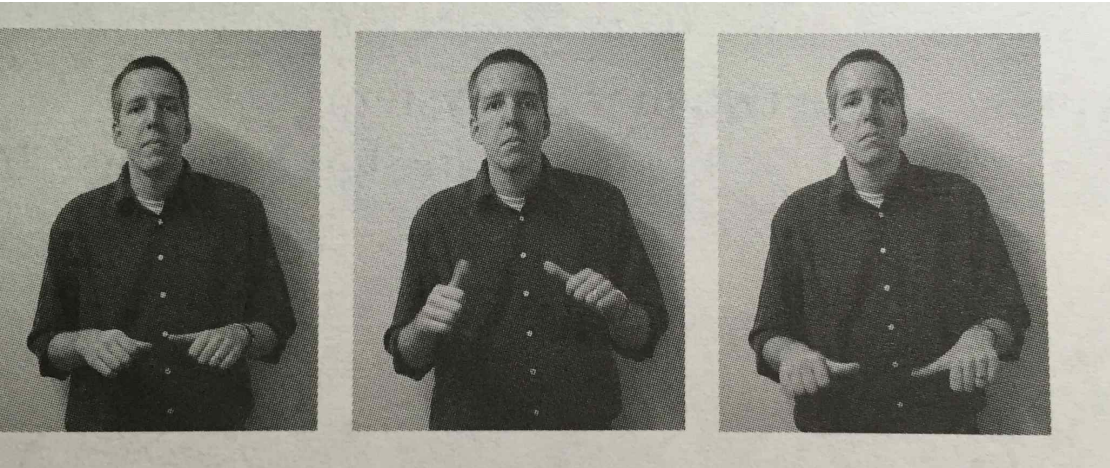


(1) The meaning 'indivisible' represented in two manual systems (File 1.5, p.25)

# Language modality

- ▶ Every language must have a modality or mode of communication: how it is produced and how it is perceived
- ▶ Auditory-vocal (aural-oral): spoken languages
- ▶ Visual-gestural: signed languages
  - Signed languages may be acquired in childhood as a person's first language or much later, through either instruction in school or immersion in a culture that uses a particular signed language.
  - Signed languages are similar to spoken languages in every way; signed languages are made up of words which can be put together in sentences according to particular grammatical rules.
  - Signed languages evolve naturally and independently of spoken languages; they do not derive from spoken languages. e.g. British Sign Language  $\neq$  American Sign Language

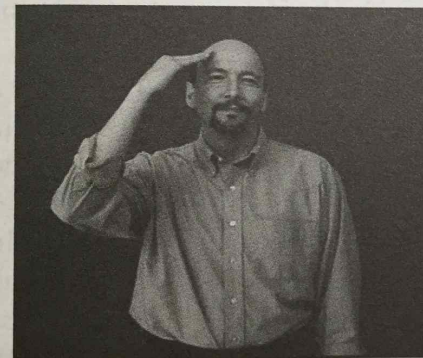
- There are many signed languages, and they are not mutually intelligible: more than 150 documented signed languages



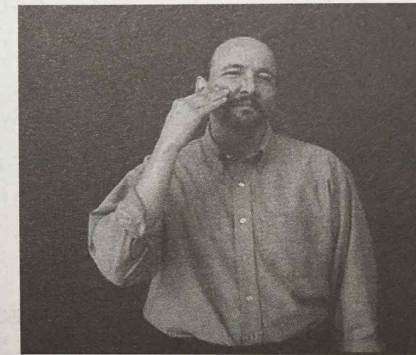
possible (ASL) and Weigh (Finnish SL) (File 1.5, p.26)

(3) (File 1.5, p.27)

(3) a. KNOW (indexical form)



b. KNOW (casual pronunciation)



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Many Different Sign Languages [https://www.youtube.com/watch?v=l3ogr9s\\_XXg](https://www.youtube.com/watch?v=l3ogr9s_XXg)