Language and its Applications
LT 5903

Jixing Li

Lecture 1: Introduction

Lecture plan

- The course logistics
- The scientific study of language
- The design features of language
- Language modality
- Short break (15 mins)
- Group discussion on HW1 questions

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Course logistics in brief

- Instructor : Jixing Li
- TAs: Yufei Zhou, Jingyao Liu, Zhuo Zhang
- Zoom: 926 0949 4427 (Passcode: 5903)
- Time: M 7:00-9:50 pm HKT

- Check Canvas for the course syllabus, announcements, assignments, slides, lecture recordings, etc. Slides will be uploaded after each lecture.

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What do we hope to teach?

- **Languages:** The foundations of linguistics:
  - phonetics, phonology, morphology, syntax, semantics and pragmatics.

- **Applications:** Linguistics and other cognitive, cultural and practical aspects of life.
  - language acquisition, psycholinguistics, neurolinguistics, sociolinguistics, computational linguistics and applied linguistics.

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Course work and grading policy

- 11 x one-week group assignments: 30%
  - **HW1 is released today! Due next Monday at 7 pm HKT.**
  - Submitted to Canvas using your @cityu.edu.hk email

- 1 x 2000-word term paper: 30%
  - Due Dec 12 at 11:59 pm HKT.
  - Please read the ***Rules on Academic Honesty***! https://www.cityu.edu.hk/provost/academic_honesty/doc/rules_on_academic_honesty.pdf

- 1 x take-home final exam: 40%
  - Due Dec 5 at 11:59 pm HKT.

- Late day policy: 3 free late days; afterwards, 1% off the overall course grade.

- Participation: 3 free absences; afterwards, 5% off the overall course grade.

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Why study language?

- It makes us uniquely human, and serves as a probe into the human mind.

- It reflects one's self-identity.

- It helps us develop better teaching tools, design computers to interact with humans, and effectively treat those with speech or language disorders.

Things you might know and are true

- Grammar is much more complex and not taught, but every human masters it

- Every language/dialect has its own set of grammatical rules and is just as valid and correct as all the others

- There is no inherent connection between a speech sound and its meaning

- What you can speak affects what you can hear

- There are many areas in your brain that are designed to process language

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Things you might know but are wrong

- The rules in grammar books are correct and should be followed by everyone
- Some people can pick up a language in a couple of weeks
- The more time parents spend teaching their children a language, the better those children will speak
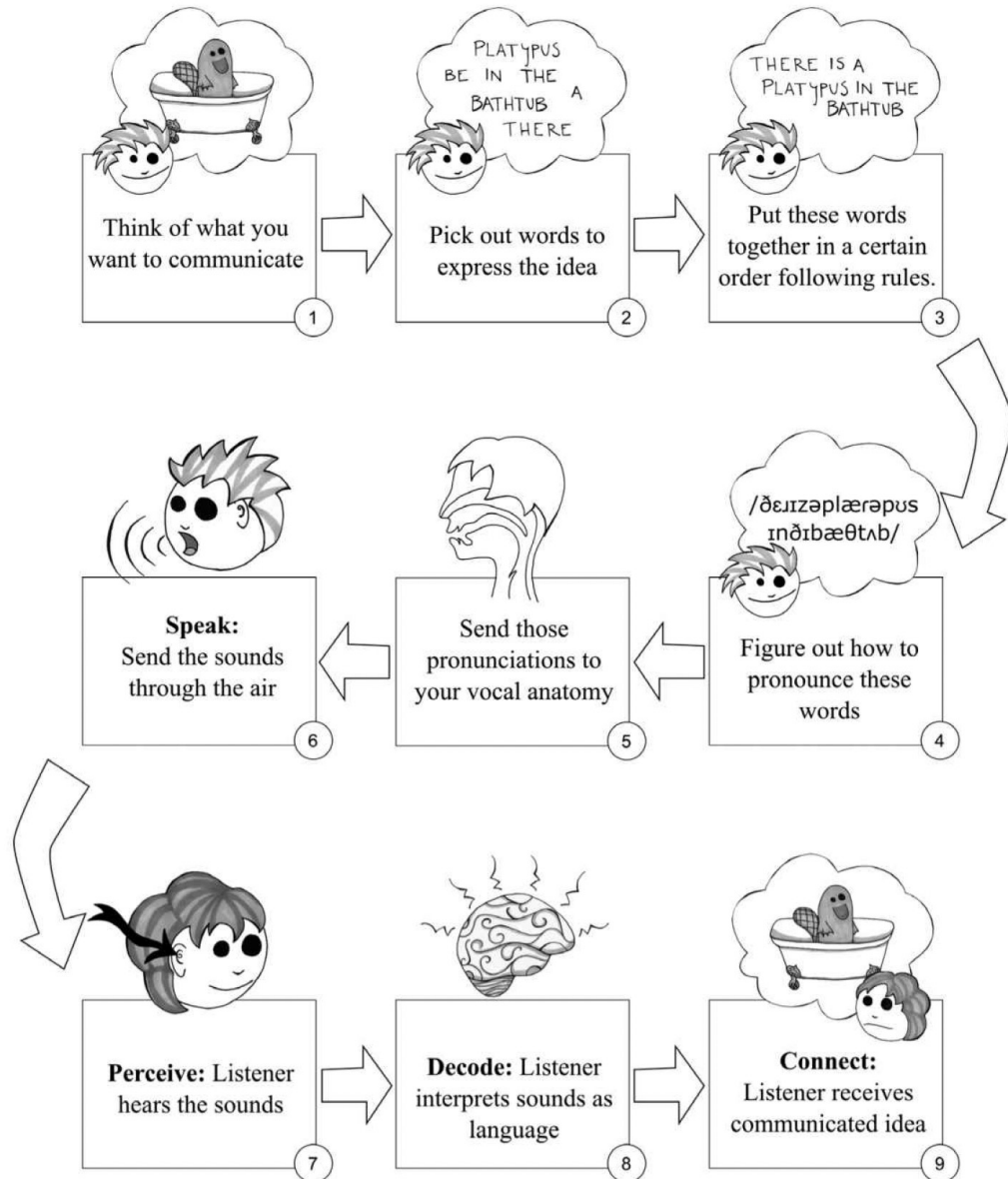- Women tend to talk more than men 😑
- …

Underlying themes of linguistic study

- Language is systematic on many different levels and can be studied scientifically

- These systematic rules allow people to express an infinite number of ideas in infinite ways

- There is variation at every structure of language, and they all change over time

- There are universal properties of language

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Competence vs Performance

- **Linguistic Competence**: the hidden knowledge that people have about language; they can do it but they don't know how they do

- **Linguistic Performance**: they way a person produces and comprehends language

- **Performance Errors**: mispronouncing or forgetting words, jumbling words up in a sentence, etc.

The speech communication chain

Steps

1. form the idea

2-4. put the idea into words

5. transmit the signal

6. the signal itself

7 receive the signal

8. decode the signal

9. communication completed

The contents of linguistic competence

- **Phonetics:** Which sounds are speech sounds
- **Phonology:** Which sequence of sounds are possible
- **Morphology:** Which words are possible
- **Syntax:** Which phrases and sentences are possible
- **Semantics:** What words, phrases and sentences mean
- **Pragmatics:** How context changes the meanings

- Stored in a lexicon and a mental grammar

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Design features of language

Charles Hockett's 9 descriptive characteristics of language:

1. **Mode of communication:** The means by which the messages are transmitted and received, e.g., vocally, gesturally.

2. **Semanticity**: All signals in a communication system have a meaning.

3. **Pragmatic function**: The communication system must serve some useful purpose.

4. **Interchangeability**: The ability of individuals to both transmit and receive messages.

Design features of language

5. Cultural transmission: There are some aspects of language that we can only acquire through interaction with other users of the system.

6. Arbitrariness: The connection between form and meaning is arbitrary.

7. Discreteness: The property to combine discrete units to form larger units.

8. Displacement: The ability to communicate about things, actions and ideas that are not present in the current space and time.

9. Productivity: The capacity to form novel messages.

Language modality

- Audio-vocal and visual-gestural languages
- Misconceptions about sign languages:
  - Sign languages are derived from spoken languages
  - Words in a sign language are completely iconic

ASL: "possible" Finnish SL: "weigh"

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