Today's outline

- Course outline, structure & information
- Introduction to the course (Altmann, chapter 1)
- History of language studies in Science

Course outline

- Everything you need to know about the course is on the course outline
- Don’t panic even if you see the reading list!
- Everything is online

How to do well in the exam?

- Read the required readings before class
- Come to lecture, make notes
- Review notes along with the required readings
How to do well in the paper?

- Start brainstorming early – even after this class!
- Glance through the optional reading list and choose a topic that you are interested in
- Use search engines to find more articles and build up some ideas
- Start writing the abstract
- Discuss your ideas with me

Why study language?

- We take it for granted... just like air.
- Air is physical, language is not. Is it mental? Psychological? Biological? Social? Experiential?
- Only human has language → biological
- Language needs to be acquired → experiential
- Communicative means → mental, social

Language acquisition

Tower of Babel
Studies of language

Interaction between two parties

Mental representation

Language

Psychology / Sociology / Linguistics

Choice 1

PART I General Issues.
1 Introduction: Themes of Psycholinguistics.
2 Linguistic Principles.
3 Psychological Mechanisms.

PART II Language Comprehension.
4 Perception of Language.
5 The Internal Lexicon.
6 Sentence Comprehension and Memory.
7 Discourse Comprehension and Memory.

PART III Language Production and Conversational Interaction.
8 Production of Speech and Language.
9 Conversational Interaction.

PART IV Language Acquisition.
10 Early Language Acquisition.
11 Later Language Acquisition.
12 Processes of Language Acquisition.

PART V Language in Perspective.
13 Biological Foundations of Language.
14 Language, Culture, and Cognition.

Choice 2

How to use this book.


Choice 3

1 The development of language: an overview and a preview
2 Communication development in infancy
3 Phonological development: learning sounds and sound patterns
4 Semantic development: learning the meanings of words
5 Putting words together: morphology and syntax in the preschool years
6 Language in social contexts: communicative competence in the preschool years
7 Theoretical approaches to language acquisition
8 Individual differences: implications for the study of language acquisition
9 Atypical language development
10 Language and literacy in the school years
11 Developments in the adult years
This course

What will you get at the end of the course?

Break…

Historical Studies of Language

• Small investigation: Language in Science
• To see how language was “scientifically” studied in the past.
• Articles returned are more philosophical than empirical…
Bell (1883)

- Visible speech: universal language that can be used for everyone, thus solve the problem of language confusion.
- Vehicle of universal language = universal alphabets → visible speech
- English is very likely to be the universal language, but the irregular grapheme-phoneme correspondence makes it difficult to achieve universality

Universal Alphabet

- Phonetic system for the roman letters

<table>
<thead>
<tr>
<th>Elementary symbols of vowels</th>
<th>Elementary symbols of consonants</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>t</em></td>
<td><em>C</em></td>
</tr>
<tr>
<td>1. Voice</td>
<td>1. Part of the mouth to form consonant</td>
</tr>
<tr>
<td>2. Contraction or rounding of lips</td>
<td>2. Part of the mouth which divides the breath</td>
</tr>
<tr>
<td>3. Compression of the back cavity of the mouth</td>
<td>3. Drawn across the end of a curve to denote a consonant that stops the breath</td>
</tr>
<tr>
<td>4. Expansion of the back cavity of the mouth</td>
<td>4. Emission of breath through the nose</td>
</tr>
<tr>
<td>5. Added to ends of curve to denote simultaneous modification by two parts of the mouth</td>
<td>5. Added to ends of curve to denote simultaneous modification by two parts of the mouth</td>
</tr>
</tbody>
</table>

An example…

ςΜ, m.

→ Stop the breath by means of the lips and sound the voice through the nose.

"Nothing could be simpler than these elements, the meanings of which are remembered by every person after a single explanation…" (p. 352)

My reaction…
Carpenter (1887)

- Language is psychological, not innate, … not a concrete object, but exists only in soul of the individual. (pp. 572-573)
- Physiological: organ of speech
- Learning another language = learning to think in this language
- Language = thought (or the representation of thought)

Language Studies

- Practical command of language: language as form of thought
- Theoretical knowledge of language: language becomes subject of thought
- Learning foreign language: organ of speech will need time and effort to be accustomed to the new sound-meaning system

Language Studies

- “…language-study is concerned not with dead letters, but with living speech.” (p. 574)
- Emphasized on usage, not spoon-fed grammatical rules: “grammar of a living language, like the life of the community itself, is constantly in process of change and development… numerous textbooks whose prototype is the old grammar of Donatus. Such a grammar may possibly have its use as a book of reference, but surely not otherwise.” (p. 575).

My reaction…
Thorndike (1943)

- Connects language to intelligence
- Language acquisition is a matter of association
- Language helps planning, memory and imagination
- Statistical learning
- Human \( \approx \) animal
  \( \Rightarrow \) Connectionism

Is language uniquely a human behaviour?

Kellogg (1968)

- “A deaf mute fails to speak because he never hears the acoustic patterns which make up words.”
- Babbling and prattling are cornerstones for language development
- Chimps? Chimps have good ears… and they imitate well
- Chimps don’t speak because they have never been exposed to language properly

Ape-rearing experiment

- “Apes as household pets are not uncommon today…”
- Research in comparative psychology showed similarities between child and infant chimps \( \Rightarrow \) up to 3 years mental age
- But disappointing performance in communication \( \Rightarrow \) never copied or reproduced human word sounds
More animals talking?

- Nim Chimsky, Lana, Washoe, Koko
- dolphins, parrots, dogs... (from other sources)
→ Over-interpretation and bias in wanting a communication between animal and human

Wade (1980)

- Clever Hans

Lenneberg (1969)

- Language development = developmental biology
- Correlation between language and motor developmental milestones is high
- Mediating factor, such as brain maturation?
- No variation in developmental rate among different societies, albeit different social environment
(First?) Scientific study of language

- 6 deaf mothers vs. 10 hearing mothers
- Home visit: 3 hours observation and 24 hours of noise/sound recording

Lenneberg’s position

- There is a biological clock for language development
- Language consists of a spectrum of processes: syntax, phonology, lexicon…
- Language and cognition are inseparable
- Relate language processing to the brain
- Critical age for language acquisition
- Language is uniquely a human behaviour

What is language?

Components of Language

- Semantics: study of meaning
- Morphology: smallest meaningful unit in a word
- Lexicon: collection of lexemes (unique vocabulary that can have many word-forms)
  - Lexeme: run
  - Word-forms: ran, run
  - Same word? Different word? Well, two word-forms of the same lexeme
Components of Language

• Syntax: rules governing the order or sequence of words
  • Example: I married James.
    James married I ??
    James married me.
  • Grammar: combination of syntax (word sequences) and morphology (word structures)

Components of Language

• Phonology: study of set of phonemes that makes up a language
  • Phoneme: smallest unit of sound which differentiates words
  • Syllable: consists of a vowel and at least one consonant. Smaller than word, could be a morpheme
    • Onset: /k/
    • Rhyme: /at/
      – Nucleus: /a/
      – Coda: /t/

Components of Language

• Phonetics: study of physical speech sounds
  • Articulatory phonetics: movements of biological structures of speech production
  • Acoustic phonetics: physical properties of acoustic signal, e.g., frequency, amplitude, intensity and duration of speech sounds.
**Sound**

- phonetics (articulatory, acoustic)
- phonology (syllable, phoneme)
- lexicon
- morphology
- syntax

**Meaning** (semantics)

**Context**

- Pragmatics: language in context
- Conversation: turn-taking of being speaker and listener
- Discourse: ability to link successive sentences appropriately and coherently

**Is language independent of cognition?**

**A possible solution?**

Cognition

Language

Cognition

Language

Cognition

Language