

# Exam 1 Study Guide

## Introduction & Overview

What is modern linguistics anyway?

- Linguistics has traditional roots in philology (the study of literature and the languages used in it). But today, modern Linguistics is at the juncture of humanities and sciences
- some might even say that it's (ultimately) a biological perspective on language.
- There is particular emphasis on...
  - the structural properties of language
  - language as a cognitive system (mind / brain)
  - the interactions between languages and other internal (perception, memory, learning) and external (social, cultural, historical) factors
  - And on Language, not languages: how are they all the same (universality) and how do they differ (diversity)

Linguists want to know: what do speakers know when they know a language?

- Being a speaker of a natural language involves an extensive amount of specialized knowledge.
- Linguists try to understand what this knowledge consists of, and to characterize it precisely, typically by means of formal tools. For example:
  - What constitutes a sentence of the Language
  - What a sentence of the Language means
  - Whether a certain sound or sound sequence is a possible part of the Language
- For example:
  - Which of the following are English sentences?
    - a. John is the guy that ate all the Nutella.\*
    - b. John is the guy ate all the Nutella.
    - c. The Nutella that John ate was from Europe.\*
    - d. The Nutella John ate was from Europe.→ Syntax
  - Which of the following are possible words of English?
    - a. thrings                      c. strumpfs      b. tonks                      d. lods→ Phonology
- In the above examples, we all seem to agree on the judgments. So what exactly is this shared knowledge and where does it come from? We haven't been "taught".
- It turns out that explaining our judgments is not trivial
  - Linguistic knowledge is unconscious
  - It takes a linguist to uncover what this knowledge consists of and how it got where it is

It also turns out that what you see is not what you get in natural language.

- Language is full of hidden structure that speakers need to be able to access and represent somehow.
- To illustrate, consider the following ambiguous words or phrases
  - "Unlockable" can either mean "can't be locked" or "can be unlocked"
  - "I shot an elephant in my pajamas" could mean either I or the elephant was in pajamas.
- The ambiguity arises because there are more than one underlying hidden structures possible.

But importantly, it's not that anything goes!

- A key question for linguists is: what structures are possible in a given language, and what structures aren't?
- Linguists test hypotheses about structures in various ways, including ways in which experimental sciences are tested
- The data a linguist collects can range from databases of text or speech, simple judgements, reaction times, productions, and the way up to brain scan data.

Language does not exist in a vacuum, it's situated in a broader context, and linguistics care about those things, too. For example linguists are interested in:

- Language processing done on the fly, and how this connects to memory, planning, etc
- Language development compared to the development of other cognitive functions (conceptual, perceptual, and social, for example).
- How and why languages change over time
- How social context shapes language, and vice versa.

Linguistics is at the core of cognitive science

- interactions with psychology, neuroscience, computer science, anthropology, sociology, and education.

One particularly interesting question is how language is acquired

- It often seems miraculous, especially given the following points:
  - By some estimates, children learn as many as 20-30 new words per day
  - The growth of linguistic complexity is impressive from “pull mommy hair” at 22 months to “put the truck on bed if you don’t want me to cry” at 27 months.
  - All (healthy) children learn languages effortlessly without any formal instruction, supervision or correction required.
  - There is also considerable independence between language acquisition and intelligence
- Given how fast this happens and how little evidence children need to become native speakers of a language, it's unlikely that language acquisition starts completely from scratch.
  - Children must be born with learning constraints.
    - One extreme, these are just constraints on the kinds of structures our brains can learn and the kinds of things we pay attention to
    - One the other, maybe we are born with a substantial amount of abstract knowledge about what human languages can be like (Universal Grammar).
  - One view of the linguists task, then, is to figure out what constitutes possible human languages.
  - Another is to figure out what kinds of structures humans can learn and why

The biological basis of language

- Perhaps language is somehow part of our biological make-up (a way we can gain knowledge prior to experience).
- If you think this sounds crazy, consider that lots of behaviors — in both humans and animals — are innate. Learning to walk compared to learning to ride a bike, for example.

## Language as an instinct

Language acquisition

Animal Communication