Fundamentals of Grammar

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today

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introductions

About me ...
About you.
course goals

our aims

- understand grammar as theory of language structure rather than rules for ‘correctness’
- analyze and represent the grammatical structure of English and draw comparisons with other natural languages
- understand that linguistic diversity is a natural phenomenon
syllabus is on course homepage

▶ http://courses.washington.edu/ling100/
Knowledge of Language

what does it mean to *know* a language?

- know how to speak so as to be understood by another speaker of your language
- know *rules* that govern sounds, words, sentences in your language
  - have *intuitions* about what is possible or impossible (ie, grammatical/ungrammatical)

Example

Colorless green ideas sleep furiously.
*Green sleep ideas furiously colorless.*
Knowledge of Language

Grammar

- call this system of combinatoric rules grammar
- knowledge of grammar is largely intuitive or unconscious
Components of grammar

phonetics

- how do physical and acoustic facts about language media (signing, speaking, hearing, seeing) constrain or influence linguistic structures

phonology

- how do sounds pattern in a language?
- how are sounds symbolized and represented?
- phonology must map continuous, naturalistic speech to a symbolic representation on which meaning can be built
Components of grammar

Morphology

- how are atomic units of meaning associated with sounds
- what rules govern word formation

Syntax

- what rules govern phrase formation
- syntax must map rules of word and phrase combination to a representation of meaning

Semantics

- what is the structure of meaning that is built up by syntax
- how is this meaning representation interpreted
phonetics

Definition
Phonetics studies what sounds occur in a language and how they are pronounced and perceived.

Example

- Cantonese [yue] tones
  - http://www.iotiamo.com/cantoneseeveryday/Tone.mp3
  - High Level/Falling 詩 si1
  - Mid Rising 史 si2
  - Mid Level 試 si3
  - Low Falling 時 si4
  - Low Rising 市 si5
  - Low Level 是 si6
Definition
Phonetics studies what sounds occur in a language and how they are pronounced and perceived.

Example
- Xhosa [xho] “clicks”
- http://youtu.be/31zzMb3U0iY
**Definition**
Phonology is the study of how speech sounds pattern and how they are organized into symbols.

**Example**

<table>
<thead>
<tr>
<th>gloss</th>
<th>base + pl.suff</th>
<th>result</th>
</tr>
</thead>
<tbody>
<tr>
<td>‘cat’</td>
<td>/kæt + z/</td>
<td>[kæts]</td>
</tr>
<tr>
<td>‘dog’</td>
<td>/dɔg + z/</td>
<td>[dɔgz]</td>
</tr>
<tr>
<td>‘bus’</td>
<td>/bʌs + z/</td>
<td>[bʌsɪz]</td>
</tr>
</tbody>
</table>

/\wʌg/ + pl. suffix → [\wʌgz]

Example

nonsense words:

blat vs *dnom

tosp vs *patk

English phonology allows onset /bl/ but not /dn/; coda /sp/ but never /tk/
Definition
Morphology is the study of the structure and formation of words.

Example
One aspect of morphology is the breaking down of words into minimal form-meaning pairings (termed morphemes).

- a creature who eats mud = a *mud-eater*
- ... eats mice = a *mice-eater*
- ... eats rats = a *rat-eater* (*rats-eater*)
**Definition**

Morphology is the study of the structure and formation of words.

**Example**

Another aspect of morphology concerns the ordering and combination of morphemes (termed *morphotactics*).

- quick + -ly → quickly *fastly*
- fast + -er → faster *erfast*
- friend + -ly + -er → friendlier *frienderly*
Syntax

Definition
Syntax is the study of the structure and formation of phrases and sentences.

Example
The cat chased the dog.
The dog chased the cat.
*The cat dog the chased.
???
syntax

Definition
Syntax is the study of the structure and formation of phrases and sentences.

Example

- A fox is in the garden. → Is a fox __ in the garden?
- A fox that is eating a flower is in the garden →
  - Is a fox that is eating a flower __ in the garden?
  - *Is a fox that __ eating a flower is in the garden?
semantics

Definition
Semantics is the study of linguistic meaning.

ambiguity
Something is ambiguous when it has more than one meaning. There are two kinds of ambiguity we’ll be interested in.
- lexical: a word-form has more than one meaning
  - RED TAPE HOLDS UP NEW BRIDGE
  - IRAQI HEAD SEEKS ARMS
  - QUEEN MARY HAVING BOTTOM SCRAPED
semantics

structural ambiguity

- Kim saw the boy with the telescope.
  - Kim saw [the boy with the telescope]
  - Kim saw [the boy] [with the telescope]

- CHILD TEACHING EXPERT TO SPEAK
  - [Child [teaching [expert to speak]]]
  - [Child teaching expert [to speak]]

- COLLEGE GRADUATES BLIND SENIOR CITIZEN
  - [[College graduates] [blind [senior citizen]]]
  - [College [graduates [blind senior citizen]]]
Model of grammar

We can conceive of this system of grammar as a pipeline between sounds and meanings.

- **semantics**
  - syntax
  - morphology
  - phonetics, phonology

- **meaning**
  - sentences, phrases
  - words, affixes
  - sounds, sound symbols
Grammar is a mental system comprised of a speaker/hearer’s knowledge of phonetic/phonologogical, morphological, syntactic and semantic rules for her language.

- this knowledge is intuitive and largely unconcious
- how can we study unconcious knowledge?
  - indirectly by examining speech output as data
  - with measureable data, we have the beginnings of a science, linguistics, welcome to ling100!