Grammar 1

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Grammar

One way of thinking about what we're interested in:

grammar

Grammar

In the real world, **grammar** means forming sentences “““properly”””

Putting commas in the right place

Not splitting infinitives

Knowing what a semicolon is

Grammar

In linguistics world, **grammar** is more specific in some ways and more general in others.

More specific: **grammar** is about things that exist in the naturally occurring linguistic system.

(no commas in this class)

Grammar

More general: **grammar** isn't just about sentence structure.

A **grammar** is a set of rules governing what structures are licit in a language.

Optional: for a speaker to learn a language, they need to have done some analysis of (external) data from that language; so, think of grammar as the state of knowledge the speaker has for that language as a result of their analysis

Generative Linguistics — generative grammar

Most contemporary linguistics is **generative** $\rightsquigarrow$ data we observe is what a grammar has 'generated'

Job of linguist $\rightsquigarrow$ given data, figure out (a/the) grammar

(i) Find the structure in the data
$\rightsquigarrow$ Components of grammar

(ii) Propose an explanation for how data was generated
$\rightsquigarrow$ Figure out how the components combine/interact to produce data

(iii) Evaluate the grammar
$\rightsquigarrow$ Determine how close your predictions are to observed data

Language v. Communication

'We know language when we see it'....

With the notion of generative grammar in hand, we have a (better?) way to state the differences

- Human language — finite grammar generating infinite data
  $\rightsquigarrow$ language
- Koko the gorilla — finite grammar (?) generating finite data
  $\rightsquigarrow$ not language, (not?) communication
- Bee dance — no grammar
  $\rightsquigarrow$ communication

Grammar

We can think about different subfields of linguistics as being concerned with grammar in some way.

Some are directly concerned with it
(phonology, morphology, syntax, semantics...)

Some focus on the building blocks the grammar relies on
(phonetics...)

Some focus on the interaction of the grammar with the broader context
(pragmatics, sociolinguistics, anthropological linguistics...)

Characteristics of grammar

inaccessibility

Grammatical knowledge is implicit.
Grammatical knowledge is often not consciously accessible.

Characteristics of grammar - Inaccessibility

school and *supermarket* are both nouns.

I went to school. ✓

I went to supermarket. ✗

Characteristics of grammar - Inaccessibility

school and *work* are both nouns.

I went to four schools yesterday. ✓

I went to four works yesterday. ✗

Characteristics of grammar - Inaccessibility

Past tense: *-ed*

buzzed - what does *-ed* sound like?

hunted - what does *-ed* sound like?

slipped - what does *-ed* sound like?

Characteristics of grammar - Inaccessibility

Inaccessibility is a major challenge for linguists.

All of our methods are focused on making the inaccessible accessible.

(Our own judgments, eye-tracking studies, MRI...)

But, inaccessibility is one of the cooler parts of linguistics, too.

You'll be amazed what you didn't know you knew! (about language.)

Characteristics of grammar - Inaccessibility

The most prominent way linguists try to access grammatical knowledge is through native speaker judgments (or 'intuitions')

Native speakers generally have very robust judgments about what's licit in their language.

Structures that sound "bad" to native speakers are **ungrammatical**. This means they aren't generated by the rules of the language.

Structures that sound "good" to native speakers are **grammatical**. They are generated by the rules.

This is the end of lecture material. The rest is for your own curiosities.

Grammar

For a speaker to learn a language, they need to have done some analysis of (external) data from that language; so, think of grammar as the state of knowledge the speaker has for that language as a result of their analysis

I think of this state of knowledge as a 'speaker' model; our analyses are 'linguistic' models. (These are not technical terms...)

'Linguistic' models and 'speaker' models are arrived at by **very** different processes; however, a goal of most theoretical linguists is to make the output of their model as close to the output of 'speaker' models.

Upshot: our models (such as a sequence of rules in phonology) are not the cognitive process behind a speaker's analysis.

(read footnote size text as my (Brandon) little inner voice speaking up)

What I like about this way of thinking:

(i) Allows us to understand grammar as having soft boundaries (uncertainty of rules... more on this below)

(ii) Easy way to see each speaker's grammar is different

(Grammar of a language is a limiting grammar for those speakers of the language???)

(iii) Allows for nice duality — grammar is both internal **and external(!)**. Speakers have their own state of knowledge (internal... their own individual grammar) but community of language speakers share some common state of knowledge as rules/protocols for language behavior (external state of knowledge to be learned for people to participate in linguistic community)

External part may be considered a hot take. Not something linguists typically talk about... maybe more of a cognitive science perspective. Compare to innateness hypothesis. See Goldsmith reading, sections 'intro', 5, 6 in particular.

Grammaticality judgments — philosophical musings

Feeling uneasy about grammaticality judgments / native speaker intuitions? You're not alone.

The dog chased the cat.	Okay, fine... clear judgment
The dog cat chased the.	

A prayer begins each banquet.	GOOD
A prayer was beginning the banquet.	?
A prayer was beginning the banquet when a fight broke out.	GOOD?

Fundamental assumption: native speakers have judgments, and these judgments can be used as indirect evidence for an analysis of (a) grammar.

These are useful in a lot of cases, so please don't exhibit blind skepticism.

Hard and soft grammar

Grammaticality judgments in their traditional sense presuppose a dichotomy. Previous slide suggests grammar may have some slack / is gradient.

Models which rely more heavily on grammaticality judgments are usually ones that have hard boundaries — i.e. there are only two things: grammatical structures and ungrammatical structures.

Not the only way of doing business... models can have soft boundaries. Some structures are preferable to others (a lot of times this can mean higher probability, but not always). This acknowledges some uncertainty in judgments.

Generative Linguistics – reverse engineering

One way to think about it:

$$f: \quad \textit{grammar space} \quad \rightarrow \quad \textit{data space} \qquad (*)$$

$$f(\textit{phon}, \textit{morph}, \textit{syn}, \textit{sem}, \textit{prag}, \ldots) = \textit{data}$$

Job of a linguist $\rightsquigarrow$ given data, figure out the functional relationship

(i) Figure out input for f $\qquad (\textit{phon}, \textit{morph}, \ldots)$

(ii) Figure out the action of f on this input

So, given *data*, describe/theorize relevant variables and reverse engineer from the data the generating function

Points of contention in practice — this class will touch on bolded material

Variables *phon*, *morph*, *syn*, *sem*, **etc.**
$\rightsquigarrow$ **What are the building blocks of grammar?**

General structure of f?
$\rightsquigarrow$ What (main) model of grammar should we use?

The details of the mapping, $\rightarrow$, ... (or can think about as selecting a particular $\hat{f}$ from a family of f's)
$\rightsquigarrow$ **'Theory-internal' questions... How do we tune the model?**

data
$\rightsquigarrow$ Is a particular grammaticality judgment legit? Are differences in some judgments real?

Last slide, I promise

A language is a limiting set of that language's data (???) $\cup D_i$
D_i is data from speaker i and union over all speakers

Grammar is a limiting function which generates that set (???) $\lim_i f_i$
f_i is data-generating function for each speaker i

Do either of these exist? Is union infinite and is there a limiting function such that $\lim_i f_i = f$?