#### Day 2: Introduction 3/1.503: Intro to Linouistic Analysis

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- 1 Linguistics
  - Objectivity
  - Linguistic Competence
  - Subfields

- 2 What is language?
  - 'Big 5' facts
  - Design Features
  - Modality

# Linguistics What is it?

Linguistics is...

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#### Linguistics is...

- "The scientific study and analysis of human language."
- But what does this mean?

# Objectivity

We all

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#### We all

- know a language (or more than one)
- have opinions about language
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- know rules about language/grammar
  - consciously: prescriptive rules
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But do we think about language objectively?

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#### Two types of "grammar":

- Descriptive grammar
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  - natural, followed intuitively, need not be taught
- Prescriptive grammar
  - prescribes rules governing what people should/shouldn't say
  - not natural, must be learned by rote (in school)



# Descriptive vs. Prescriptive grammar Examples

#### Example rules

Prescriptive:

# Descriptive vs. Prescriptive grammar Examples

#### Example rules

- Prescriptive:
  - Don't end sentences with a preposition
  - Don't split infinitives
  - Don't use double negatives
- Descriptive:

# Descriptive vs. Prescriptive grammar Examples

#### Example rules

- Prescriptive:
  - Don't end sentences with a preposition
  - Don't split infinitives
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- Descriptive:
  - The sequence of sounds [rt] can come at the end of a word in English, but not at the beginning (e.g., art, \*rta).
  - In English, adjectives precede the nouns they modify. e.g.:
    - 1 That is a big, red balloon.
    - 2 \* That is a balloon big, red.



Knowing a language

Linguistic competence

Knowing a language

- Linguistic competence
  - What a speaker of a language knows about the language
  - Is subconscious
  - What linguists want to learn about each language
- What does it mean to know a language?

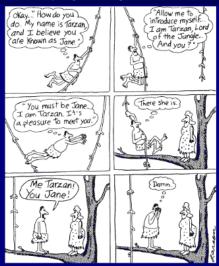
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- How do we know out what this constitutes?

Knowing a language

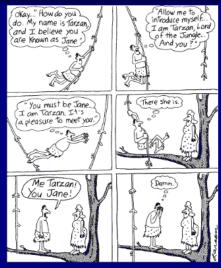
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- How do we know out what this constitutes? Not that easy...

How do we study linguistic competence?



 How do linguists study linguistic competence?

How do we study linguistic competence?



- How do linguists study linguistic competence?
  - observe our linguistic performance
  - make and test hypotheses
  - draw conclusions about what our linguistic competence must be like

#### Primary subfields of linguistics

- Phonetics
- Phonology
- Morphology
- Syntax
- Semantics
- Pragmatics

# Linguistic Subfields Phonetics and Phonology

Phonetics

Phonetics and Phonology

#### Phonetics

- the study of the physical properties of speech sounds (acoustic phonetics) and how they are made (articulatory phonetics)
- Example: "Park the car in Harvard Yard."
- [brai prak 49 gaya (braid bray)]
- [pha:k də kha: n ha:vɨd ja:d]
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- Phonology
  - the study of how speech sounds pattern and how they are organized (i.e., the sound system)
  - Example: art, \*rta (where '\*' = ungrammatical)



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- Pragmatics
  - the study of how linguistic meaning depends on context

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#### Interdisciplinary subfields of linguistics

- Sociolinguistics
- Historical linguistics
- Computational linguistics
- Psycholinguistics / Neurolinguistics
- Language and culture

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- Grammars change over time
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- Grammatical knowledge is subconscious
  - we recognise im/possible sounds, words, sentences, etc
  - we can't always explain why

- Charles Hockett (1960)
- Characterize language, distinguish it from other communication systems
- If a system lacks even one feature, it is still communication, but not language

Outline Linguistics What is language? 'Big 5' facts **Design Features** Modality

Discreteness

- Discreteness
- Arbitrariness

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#### Example (Discreteness)

'pat' 
$$\rightarrow$$
 [p], [a], [t]  $\Rightarrow$  'tap', 'apt'

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#### Example (Arbitrariness: counterexample)

iconicity; e.g., onomatopoeia



## Design Features Cultural Transmission

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#### Example (Cultural Transmission)

Any child growing up in a French-speaking environment will learn French

# Design Features Displacement

**D**isplacement

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Ability to talk about things not present in space or time

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#### **Displacement**

Definition (Displacement)

Ability to talk about things not present in space or time

Example (Displacement)

A long time ago in a galaxy far, far away. . . .

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Definition (Interchangeability)

A user can both receive and broadcast the same signal

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Example (Interchangeability)

Any conversation (where people trade roles speaking and listening)

# Design Features Productivity

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Speakers can create infinite number of novel utterances that others can understand

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#### Example (Productivity)

"Little purple gnomes living in my sock drawer said, 'Elvis lives'."

Modality

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  - visual-gestural = signed languages

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- Modality
  - auditory-vocal = aural-oral = spoken languages
  - visual-gestural = signed languages
- Signed languages
  - Not codes for spoken languages
  - Not purely iconic
  - Structurally complex at all levels
  - Meet all design features of language

# Modality Written language

Written language = secondary to spoken language

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- Written language = secondary to spoken language
  - Historical development
  - Everyone speaks a language; not all languages are written
  - Learning to speak is automatic; learning to write is not
  - More of the brain is used when writing than speaking
  - Writing can be edited