Linguistics 1 Notes

W 1 T Lec   4-4-17
Instructor: Nina Hyams
Office: Campbell Hall 2210B
Office Hours: Tuesday 11-1 and by appointment
My specialization: Language development in children

- Each TA will have a couple of hours a week where they are available
- You can also go to other TAs and we can have someone we can talk to

Teaching Assistants
- Adam Chong, Marju Kaps, Daphne Lee, Thomas Motter, Teigo Onishi, Viiu Wichman, Irene Yo
- TA Office: CH 2209; Ext. 62661
- TA office hours and email addresses will be provided in your discussion sections

Course website
https://ccle.ucla.edu/course/view/17S-LING1-1

- Copies of the power point slides for each week's lectures will be posted after the lecture.
- Homework assignments and other materials will also be posted there.

- **Don't stress out about copying everything down!**

Homework assignments and other materials will also be posted to CCLE!

Textbook
- An Introduction to Language

Course Requirements
Breakdown of final grade:
Midterm - 30%
Final - 45%
Homework assignments: 25%

- Final Exam: Wednesday, June 14, 11:30-2:30 PM

Experimental (extra) credit
- Up to 2% of the total grade. One credit is given for every hour of experiment participation.
- If you complete two hours of experiments, you will receive 2% for extra credit
- Ditto but one hour == 1% extra credit

Experimental credit
- http://ucla.sona-systems.com/
- Before signing up for experiments, you MUST select the course for which you want your experiment credits to count.

Homework
- 6 homework assignments (roughly every other week) to be turned into your TA in section
- **Late assignments will NOT be accepted**. If you cannot make it to section then you must hand in your HW before section meets.
- Has will be discussed on the day they are handed in, so have a paper or electronic copy of your HW with you.

Midterm
- Tuesday of Week 6

Tests are multiple choice and machine graded, but that won't mean they will be easy

Overview of Ling 1
- NOT taught at a HS level
- Talk about what linguistics is and have an overview of the kinds of things we talk about in class
- Just an introduction and overview to linguistics
- The scientific study of human language
- Surveying a number of different subareas of linguistics that include the various aspects of language
- Morphology
- Syntax
- Phonetics/phonology
- Semantics
- Neurolinguistics
- Cover all these topics and analyze data from English as well as other languages
- You will get some familiarity with different languages!

Language Quiz
- All these answers are false

How many languages are spoken today?
- 7,000

Asia has the greatest number of languages at 2269 (32.8% of the world's total)

What is language?

- Nellie is the class mascot!
- One way of approaching language: Function
- What do we do with it? **Communicate**
- Speakers encode meanings into sounds (or hand shapes).
- They take that meaning and convert it into sound
- Listeners decode speech sounds (or hand shapes) into semantic meaning

Another way of approaching language: **Knowledge**
Two central questions:
- What do we KNOW when we know a language?
- When you know a language, you have a FINITE set of building blocks like sounds, words, and rules by which these things are combined to produce words and phrases.
- This system of rules and building blocks is **unconscious/implicit knowledge**
- Make judgments if something is a well-formed sentence
- How do we acquire this knowledge as children?
- This is the view of language we adopt in this class and think about it as a system of knowledge and its properties and how it is that children might acquire this knowledge

What Kind of Building Blocks & Rules?
- We know the inventory of sounds in our language: **Phonetics**
- [b] is an English sound
- [x] is NOT an English sound, but it is a sound of Spanish in the name [xose] 'Jose'
- The letter "j" is pronounced [x] in Spanish; but [d_3] in English

Unambiguous
- Every symbol represents one sound

Knowledge of Sound Sequences
- Phonology
- sound patterns
- [sk]?
- skeleton
- skunk
- [sg]?
- NOT possible in English
- Compare with Italian [sgabelo] 'chair/stool'
- [fr]?
- frozen
- [vr]?
- PROBABLY NOT possible in English (Vroom!)
- Compare with Dutch [vrede] 'peace'

Knowledge of Words
- Lexicon: a mental dictionary
- **brown, cow, speak, fast**
- **insipid, nefarious, prevaricate**
- A word is an arbitrary pairing of sound and meaning
- apple =
- How do you say in Spanish, French, Japanese?
- manzana (Spanish)
- pomp (French)
- 林檎 - Ringo (Japanese)

Can you guess the meaning of these Zuni words?
- now: beans
- ma'wi: antelope
- k'yawe: water

- The relationship between the **form** and **meaning** is arbitrary!
- Tendency for people to think that signs in American Sign Language and others are more iconic!
- They look like what they represent and it should be as arbitrary in signed language as regular language

Can you guess the meaning of these words from American Sign Language?
- summer
- ugly
- dry

Form and Meaning
- It's not even clear that onomatopoeic words are NOT arbitrary

What sound does a pig make?
- Oink in English

Possible vs. impossible words
- Our knowledge of sound sequences allows us to determine what constitutes a "possible" (though non-existing) word
- Is **brincan** a possible word of English?
- YES!
- Is **bnincan** a possible word of English?
- NO! You cannot start a word with the [bn] sound!
- What about prill?
- fame
- blaft
- mbaf

- skrick

Structure of Complex Words: Morphology
- Our knowledge of *morphology* lets us build complex words
- She talk**s**/ is talk**ing** / talk**ed**
- differ, differ**ent**, different**iate**, differentia**tion**, differentiation**al**, differentiational**ity**
- And you understand that there are constraints on how a word can be built:
- * differ**iatent**

How Words Are Built
- We build complex words from rules that combine elements smaller than the word - **morphemes**
- Individual morphemes are listed in the lexicon, e.g. *differ*, *-ent, -iate*, and combined by morphological rules
- **Cannot necessarily reorder morphemes!**

Knowledge of Phrases and Sentences: Syntax
- Build these phrases out of the words we know and create something out of it.
- Spanish: un perro blanco
- A dog white
- Adjective after the noun in Spanish
- English: a white dog
- Adjective before the noun in English

I see a white dog
- SVO (Subject-Verb-Object)

Word Order Rules
- English: two big white cows
- * big two white cows
- * white two big cows
- * big white two cows
- ….

Rumanian: doua vaccin mari si albe
- two cows big and white

- Classifier: Word that tells you what kind of object this is!

More Syntax Rules: *wh* questions
(a) I saw the man steal the book
(b) **What** did you see the man steal ___?

- What is it that the man stole?
- Take this questions word i.e. what, where, who and put it at the beginning of the sentence!
- Both of these sentences are perfectly well formed.

We can move things around in a sentence and deviate from the basic subject verb order

Semantics: Meaning of Language
- We know meanings of words and other semantic properties of words:
- Count nouns: a chair, nine chairs, many chairs, but not *much chair(s), *ten pounds/pieces of chair
- These things can be counted and quantified!
- When you have a count noun, you can use an article like "a", which are things that come before them

Mass nouns: much wine, five gallons of wine, but not *a wine, *many wines

- "A wine" cannot refer to one minimal (amount of) wine, like "a chair"

When can we say "a wine"?
What about "ten pounds of chair"?
- You break down a chair into one giant mass

Sentence Meaning
- The bear promised the monkey to dance.
- The bear persuaded the monkey to dance.
- Who's going to dance?
- This is in virtue of the rules for composing meaning to sentences

(a) Jenny appeared to Mary to like **herself.**
(b) Jenny appealed to Moira to like **herself.**

W 1 R Lec   4-6-17
- AAP Peer Learning: email Asya Grigoryan

Ambiguous Sentences
- Different kinds of linguistic knowledge
- A single sentence can have more than 2 meanings associated with it
- **Flying planes can be dangerous**
- For a pilot, flying planes can be a dangerous occupation
- It can mean that planes flying overhead can be dangerous and drop on your head

Sentence Meaning
- We also know how to assign meaning to sentences:

- Different interpretation in the dancing event

Noam Chomsky and Creativity of Language
- The most interesting aspect of our linguistic knowledge is that we are "creative"
- As speakers, we are able to understand and produce novel sentences that have NEVER been produced by anybody
- Knowledge of an infinite range of possible sentences
- We can create very complex word structures and compound words
- Novel combinations of words put together to put together complex word structures

No Longest Sentence
- This illustrates linguistic creativity
- Affinity of natural language
- What device makes this longer - "**because**"
- Creativity is a **universal property**: all languages have mechanisms that do this!

The House that Jack Built
- relative clause: clause that modifies a noun
- **that**
- Another mechanism that would allow us to go on and on and on

Rules: Infinite Use of Finite Means
- Language of knowledge is infinite and our brains are finite and contain an infinite knowledge
- System of rules that lets us generate an infinite set of sentences

Grammars
- All spoken language is governed by rules
- **Mental grammar** that speakers of the language had in their head

Knowing a rule vs. Using a rule
- Sentences can be extremely long
- You can goon and on and on and make it well-formed according to a language
- Distinguish two kinds of cognitive capacities with respect to language
- Linguistic **competence**: Our knowledge of the rules of language
- **Performance**: how a speaker puts that knowledge to use in real-time speaking and understanding
- Can be affected by many factors

Performance Factors

- • Forget where it began and it doesn't have to do with grammaticality of the sentence
- • Shifts in attention and interest
- • Perfect knowledge of our language does NOT mean we will understand every situation
- • Our attention gets shifted and we stop focusing
- • This doesn't mean there is anything wrong with our linguistic competence
- • We could be tired and we may NOT feel well
- • We may fail to understand things in virtue of the particular context we are in
- • Talking to a pilot may be different than talking to another person

- **Our knowledge of (our native) language is perfect, though our performance may be affected by a variety of factors**

Speech Errors
- • Spoonerism - named after a Professor who made this kind of error
- • Sounds or other units of a sentence are transposed

Original: "You have hissed my mystery lecture and tasted the whole worm"
Target: "You have missed my history lecture and wasted the whole term."
- • H and M from "hissed" and "mystery" are transposed!

Q. Is this more likely if transposing the sounds creates actual words?
A. Hyams is NOT sure, but this is a famous case of this!

Original: "We're not the only ones with screw looses"
Target: "We're not the only ones with loose screws"
- • Changes the meaning of what he is trying to say because it is taking the s from "screws" and putting it on "loose" to form "looses", which is NOT an English word!

Insight in how speech errors can organize language in our brain
- • Everyone makes speech errors!
- • In section today and tomorrow, there will be some and there are many different types

Garden Path Sentences
- • We can also mis-comprehend!
- • The horse raced past the barn fell.

Subject to start off but then we do NOT parse correctly because we interpret the first noun we see as the main verb
- • The ball that was thrown in the air dropped

"Hold on a sec" …, perfect knowledge?

- Some of you might take issue with this claim!
- I know people are aren't particularly articulate

Let's be clear about the term "grammar"
- The term "grammar" is a familiar term as a prescriptive grammar, which is intended to teach people how they should speak in some arbitrary manner
- By the time you are in 1st grade, you know your language and you know it perfectly at that point

Descriptive grammar/rules
- Linguists are interested in describing and modeling those rules

The Arbitrariness of Prescriptive Rules
- In other languages like Italian, Spanish, and French, it is standard to use double negatives!
- Nothing intrinsically bad to use double negatives!

Descriptive vs. Prescriptive Grammar
- These are all sentences that would violate prescriptive rules from a descriptive point of view because people understand
- Sentences that violate descriptive rules and violate rules in our head!

"Hold on a sec" …, perfect knowledge?
- **No! Every native speaker has perfect knowledge of the rules of his (native) language; these rules may be different for different people.**
- Some people may speak more prescriptively than others
- We all have a system of rules in our head.
- Aren't some "dialects" of English less precise, clear, or expressive than the "standard" language?
- **No. All dialects/languages are rule-governed, fully expressive, and logical.**
- You may NOT like certain dialects, but it has more to do with social factors than anything else.

All languages have complex grammar
- There are no "inferior", "primitive", or "random" languages
- All languages are equally complex and expressive
- We have 3 dialects of English
- Appalachian
- They append an "n" to the end for our pronoun
- African American Vernacular (AAVE)
- They append an "s" to the end of our pronoun
- Standard

- Chickasaw (Chicksaw Nation, Oklahoma)

- • "I am not making you dance yet"
- • Southern Paiute (S.E. California, Idaho, Nevado, Oregon)
- • Indigenous languages

Language Universals
- • Universal Grammar can be thought of as the "laws" of languages, a blueprint for language
- • Words are often related in different languages but we are talking more in terms of the general structure
- • All languages are generally very much alike in structure

Universal vs. Language-specific Rules
- • What do all languages have in common?
- • What does universal grammar look like?

More Universals
- • All languages have 'recursive rules', i.e. that add to or embed one sentence inside another

Coordination
- • John **and** Paul sang **and** George played the guitar **and** Ringo played the drums **and** …

Another universal
- • All languages share certain constraints.
Sam ate green eggs and ham.

Language differences: Parameters
- • There are also differences among languages such as vocabulary and even among rules!
- • Word order!
- • English: The student reads a book (SVO)
- • Japanese: Gakusei-wa honored-o yonda (SOV)

Language Universals and Language Acquisition
- • How do children acquire knowledge of language?
Food for thought:
- • If there is a set of universal principles of language structure, might it make it easier for a child to acquire her language?

W 1 Dis   4-6-17
Adam Chong - phonology
O.H. are 11 AM-12 PM on Tuesdays and Wednesdays, Campbell Hall 2209

- TA office is on the 2nd floor and if you see a baby in a room, do NOT walk in.

bat
- Sounds like a "t" sound

batter
- Sounds like a "d" sound

bat and batter are related and bat on its own sounds like a "t"
- The person who is doing the action is still the same word, so what is going on here?
- How do we know they are referring to the same thing?
- Especially, how would a child know?
- The kid is just hearing stuff, and the need to be able to treat these acoustically different
- Even though they sound different, they refer to the same thing
- Test kids who are as young as 4 months old all the way to 24 months old and observe their behavior!

Emails
- Do NOT email the night before the assignment is due because there is a lot of undue pressure
- Assignments are NOT meant to take an entire week and it is supposed to be easy!

Office Hours are scheduled before the assignments are due!
- Adam might NOT even get to it the night before the assignment is due.
- All the deadlines for the assignment are in the syllabus

6 Assignments
- First one is already posted

If you cannot make section that week, let Adam know in advance!
- Each assignment will be discussed in section the day it is due

    - Lowest of the 6 assignments will be dropped
- Work with other people on class material, but they have to be written up individually!

Q. For HW, can we write on the paper?
A. Yes, we should! If there is a tiny bit of space, it is probably NOT necessary to write a whole lot.
- Make sure it is legible and if you start crossing stuff out, be careful about it.

How is the HW graded?
- The HW is graded on correctness!

HW is due in section!
- Do NOT give your HW to any other TA **UNDER ANY CIRCUMSTANCES!**
- Just make sure it comes to Adam!
- Make sure Adam's name is on it so everything is fine.

Linguistics is a lot of data analysis
- Discussion section is to practice those kinds of skills

Goal: Think more critically about language

Prescriptive: Something you have to do properly
- Rules that are somehow developed by grammarians or stylistic guides that dictates how a language should be.
- Don't split the infinitive!
- "to go"
- to <something> go
- to boldly go - Star Trek (splits the infinitive!, which is NOT proper!)
- Double negatives
- "Ain't got no time for this"
- Ending a sentence with a preposition
- "Who did you go to the movies with"? - WRONG!
- "With whom did you go to the movies with" - CORRECT!

Descriptive: How the things are is how we will talk about it

- Just because something is prescriptively wrong DOES NOT mean it is descriptive

When you use language, a lot of other things come into play!

Recursion
- Attach preposition + noun and we never do this in real speech because our buffer is that long.
- We can parse this sentence and know this is fine.

Universal Grammar
- Words are different and there are certain basic blueprints that are inherently the same.
- Innate - something you are born with
- You have certain principles towards what learning language
- This suggests that the kinds of variations that you see i.e. SVO and SOV are assumed to be principles and ways of deriving things in certain ways.

Linguistic creativity (sentences, words)
- Through limited rules of grammar, humans can form unlimited types of sentences and words from this.
- Say sentences that you have never said before easily.
- You have a limited number of building blocks and with these small little things, we can build things in an infinite way.
- Know what these concepts are!

Know an example, which will help!

0. No smoking section available
- No // smoking section available
- (No smoking) section

Grammatical judgments - descriptive
- What did the boy hit the ball with?
- Stranded preposition "with" at the end?
- Descriptively it is fine!

The cat is eager to please Nellie - **OKAY**
It is eager to please Nellie

It is easy to please Nellie
The cat is easy to please Nellie - **WRONG**

For homework, you will be doing this kind of stuff
- Is it descriptively grammatical?
- Trust your intuitions and we are looking at introspection
- Is this sentence grammatical? Can I say this?

It is NOT about stylistics!
- There are certain stylistic conventions you can use!

Read the textbook and slides

W 2 T Lec   4-11-17
Morphology
What's in a word?

What's the longest word in English?
- antidisestablishmentarianism (28 letters)
- floccinaucinihilipilification (29 letters): Act of estimating something to be so little that it is practically valueless

- • There is no longest word because we can keep adding words together to make complex words

Morphology
- • Study of the internal structure of words and the rules for combining parts of words (building blocks) to make morphologically complex words.
  - • We know how to **combine** elements to build new words
  - - member + ship = membership
  - - light + house + keeper = lighthouse keeper

  - • We know how to **decompose** words into their parts.
  - - sooner = soon + er
  - - decompose = de + compose

Morphological Rules
- • Understand words we have never heard before
- • Judge a well-formed word (possible word) from an impossible word
- • decontaminate is a good word
- • *decrime is a bad word
- • We also recognize when a word is ambiguous!
- • Words can be ambiguous in how they are put together!

Types of Morphological Rules
- • Compounding like **googleganger** (someone online who looks like you)
- • Affixation: prefixes, suffixes
- • Reduplication
- • Other

Compounding
- • Compounds are formed by combining two (or more) independent words
- • N + V
- • baby sit
- • babysit - V
- • N + N
- • tooth brush
- • toothbrush - N

Word Trees
- • Compounds can be represented by "word trees"
- • Example
- • binge watch - noun that combines with watch that generates a verb
- • Shows all the relevant information of the word
- • English speakers know all this information through practice, but probably not explicitly!
- • These trees are intended to represent implicit knowledge of the structure of these words

The Right-Hand Head Rule
- Compounds have a **head** - the central part of the compound (**rightmost member**)
    - binge watch - **watch**
    - smart watch - **watch**
    - drool worthy - **worthy**
    - Head defines the category of the bigger word

Properties of Compounds
- Complex words inherit grammatical properties from the **head**
- Inflectional endings
- toothbrushes, NOT *teethbrush!
- baby sit -> babysat

Exception to the RHH rule
- When the head is a preposition, it does not determine the category of the compound:

V-P   runaway   N/V(?)/A
V-P   drive in   N
V-P   trade-off   N/V
N-P   lineup N/V
A-P   blackout   N/V

- The compound takes the inflection of the head, but these are exceptions to the right-hand head rule

Why are prepositions different?
- Prepositions are a "closed class"; they don't admit new words.
- Nouns, verbs, adjectives, adverbs are "open classes".
- Pronouns are also a closed class, e.g. **he, she, his, her…**

Other Properties of English Compounds
(i) The **head** comes last
(ii) The **stress** comes first

Adj + N [NP]   Compound
black board   blackboard
blue bird   bluebird

Meaning and Compositionally
- The meaning of a phrase is compositional, i.e. predictable from the meaning of its parts.
    - A blue bird is a bird that is blue. [NP]
- In compounds the meaning is not completely compositional

Ambiguous Words
• Some compounds are **structurally ambiguous** (2 meanings - 2 structures).
• "California history teacher"
• Someone who teaches California history
• a history teacher from California
• Difference in internal structure is making a difference in the meaning

Productivity
• Compounding is very **productive in English (and other Germanic languages)**

New Additions to English
• drool worthy
• e-commerce, e-cigarette
• cybercafe
• rom com
• humblebrag
• tweeter-in-chief

Morphemes
• Morpheme: Minimal unit of meaning
• Morphemes are the "building blocks" for words
• Every word in the language is composed of one or more morphemes

A New Bound Morpheme?
• English has recently developed a new "intensifier", ass, which is vulgar and colloquial:

That is a big-**ass** chimichanga = That is a very big chimichanga
It's a cold-**ass** night = It's a very cold night

Derivational and inflectional affixes/morphemes
• **Derivational affixes** modify the meaning and often (not always) the syntactic category of the "host"

Affixes: Mini-quiz
Igbirra (Nigeria)
mezi   I expect
meto   I arrange
meme   I am well
metu   I beat

"me" means "I"

It is a prefix

Piro (Peru)
salwa to visit
salwakaka   cause to visit
cokoruha   to harpoon
cokoruhakaka   cause to harpoon

Q. What is the Piro morpheme meaning "cause"?
A. kaka
It is a suffix

The Structure of Complex Words
- Morphologically complex words can be represented by **word trees**

Word trees are built by **morphological rules**
- un + Adj => Adj
- e.g. unhappy, unreal, untroubled
- Adj + ness = N
- e.g happiness, tidiness, weariness

So are suffixes…
- This is a more complex type of structure and you can have compounds made of free morphemes with a more hierarchical structure
- The result of that first combination can combine to give you another layer of structure

W 2 R Lec   4-13-17
Word trees are built by morphological rules

- un + Adj => Adj
- e.g. *unhappy, unreal, untroubled*

More than one rule can apply…
- You can see how important the hierarchical organization is and you can create a pointer

A New Rule
- -able rule
- V + able => Adj (means *able* to be Led)
- e.g. laughable, believable, adjustable, desirable, …
- Two structures give rise to two different meanings

Structural Ambiguity
unlockable
- Not able to be locked

- This door is lockable but if it is unlockable, it is unable to be locked
- Can be unlocked

Words like this illustrate that it is really important to provide evidence that morphologically complex words have a rich internal structure
- NOT just the case of attaching morphemes like beads on a string without any structure

The Source of the Ambiguity
- We get the ambiguity because **un-** can attach to two different kinds of root, Verb and Adjective

Knowledge of Morphology
- Our knowledge of morphology allows us to judge well-formed vs impossible words:
- It allows us to judge when a world is well-formed or not well-formed

depersonalize	*deperson	*depersonal
detoxify	*detection	*detoxic
desulfurize	*desulfur	*desulfuric

- We can determine which words are valid, and which ones are invalid

de- can take a verb but it cannot attach to a noun or an adjective

- Words formed with de indicate the reversal of an action
Rule: de + V -> V   **de-** doesn't attach to N, Adj

Impossible Words
- *decrime
- Impossible words do not conform to the rules and do NOT have well-formed sub-trees
- There is NO node that contains all and only the parts of decrime

Principle of Compositionality
- When we say meanings are compositional i.e. the bluebird, the meaning comes from the meanings of the parts
- We can understand novel words that we have never heard about by creating new words
- Speakers always create new words and this is one mechanism by which languages change.
- We saw this in the case of compounds and we can create these novel compounds

Linguistic Creativity
friend -> **_un_friend** (Thank you FB)

humblebrag -> humblebragg*er*
tweet -> <u>re</u>tweet
aerobics -> aerobic<u>ize</u>

Even children are creative
- Children are acquiring rules and they can try to figure out what the rule system is underlying the language
- NOT just imitating words and sentences in a rote kind of way

Children's novel verbs
- Nouns => Verb (zero affixation)

John (un)<u>friend</u>ed me on FB.
Mary <u>shelved</u> the report.

You have to **scale** it. (in terms of weighing)

Productivity
- Highly productive rules
- -er
- surfer, writer, singer, dancer, blogger, tweeter(?), robocalled, …
- -able
- like able, zip able, twitter able, scanable, …
- -zero affixation (N -> V)
- shelf/to shelf, friend/to friend, …
- compounds

- Less productive rules
- -th
- wealth, health, depth, …
- -ling
- foundling, changeling, seedling, …

Derivational morphemes
(1) **Derivational morphemes** have meaning and they change the meaning of the root:
un- means 'not Adj'
-ness means 'the property of being Adj'

(2) **Derivational morphemes** may (but need not) change the grammatical category (part of speech) of the root.
un- is not category changing
-ness

English Inflectional Morphemes:
- Don't really change meaning but refer to tense

Experimental evidence of rules
- The Wug Test
- Used to test children on morphological rules
- Results show at what age children can correctly inflect "novel" words i.e. have acquired a rule.

The Mental Lexicon
- The pronunciation/arbitrary associated with a morpheme **e.g. table, mesa, -ing**
- There are three kinds of information associated with each morpheme and we need to know what its meaning is
- Repository of things that are NOT predictable by rules
- Take those building blocks and put them together

Morphological Variation
- A morpheme that is **free** in one language may be **bound** in another.

Circumfixes
- Chickasaw (Oklahoma)
- chokma - 'he is good'
- palli - 'it is hot'
- lakna - 'it is yellow'
- Negation is done by 'ik' prefix

Case morphology in English
- Nominative
- Accusative
- Genitive
- Reminder of the earlier forms of English and it broke off from the other Germanic languages
- English lost it except for a little bit of stuff that was left over

Do we have infixes in English?
- Abso-friggin'-lutely we do!
- Expletive innfixes

Reduplication
- Total reduplication
- Indonesian plural

rumah rumahrumah
'house'   'houses'

ibu   ibuibu
'mother'   'mothers'

negara   negaranegara

Word making without morphology
Blends
•   Established
smog (smoke + fog)

Clipping

Summing Up
•   To create and understand new word (infinitely many).
•   Recognize structurally ambiguous words

Morphological Analysis
•   Go through a few morphological problems here

W 2 Dis   4-13-17
HW 1 Review
•   It is more probable to learn a word than a sentence
•   You memorize new vocabulary items
•   Words are the building block and you combine them in an infinite way
•   Learning how to build a sentence with a particular structure

Question 3
•   Dog is doing the action; the dog is potentially the object of the action

Question 4
•   Be descriptive and just tell us went wrong

Mandarin
•   4 different accents and we don't use all the tones in English
•   Some of the tones are similar, though!

Different varieties of English have different stuff

Every other assignment is how to deal with data
•   This one was pretty dope

Morphemes
•   A morpheme is a basic unit of meaning
•   Morphemes do not just map onto words
•   Most of the datasets are NOT in English because English is kind of boring
when it comes to morphemes

Morphemes can be classified as to their function; what they do

- Inflectional vs derivational
- Derivational - changes the grammatical category of the word
- By necessity, I have a derivational morpheme
- Might be able to change the meaning
- Inflectional - never changes the lexical category!
- Derivational morphemes sometimes change the words' meanings

- Morphemes definitely change the meaning of the word, but not necessarily the structure of the sentence.

Drawing the tree is helpful because you understand what goes together for output.
- Rule sort of comes for free

I am minimally changing rules and this thing must correspond to the thing I change!

W 3 R Lec   4-20-17
- PS rules and trees
- Noun phrases, verb phrases, and so on
- The tree that we have seen so far has a direct object, but there are different kinds of verbs

Different Kind of Verbs
- Visit - transitive verbs
- Requires a direct object to follow the transitive verb
- *The man caught.
- The man caught a ball.
- Intransitive verbs do NOT take an objet but they can take a PP
- *The dog slept the cat.
- The dog slept (on the bed).
- Some verbs take a full sentence as complement
- The students know/think/hope that linguistics is fascinating.
- Sentential complement: a full sentence that functions like a direct object

Intransitive Verbs
- Another version of the VP -> V rule

The dog slept on the bed.
- Break it down into NP and VP
- Break down VP into V and PP
- VP -> V PP
- We need a rule to tell us what the content of the prepositional phrase is

PP constituency test
- John ran up the bill
- Try one of the three constituency tests to see if it works!

- *Up the bill John ran (this sounds weird and it isn't what we want it to mean)

Proper names and pronouns
- Breaking down into a determiner and a noun
- With wh- phrases, you have a kind of pronoun that takes the place of something else as well
- "Who slept on the bed?"
- Is "who" a noun? How would you test it?

Sentential complements
- You have one sentence inside another, so you have to have rules that reflect this fact that you can recursively put sentences inside another
- If you have CP, this breaks down and you can rewrite it as a complementizer

No Longest Sentence
(i) John knows that Mary lied.
(ii) **Paul believes** that John knows that Mary lied

- Recursive rules account for the infinity of natural language.

Relationship on trees
- V and NP_2 are sisters
- Notions like subject hood and object hood can be defined precisely by the configuration of the tree
- Subject does NOT have to be the doer of the object
- These are useful to talk about and easily talk about some other kinds of rules that we need to look at

What about 'will' and other auxiliaries?
- Tense Phrase
- Tense Bar
- Tense

English Modals and Auxiliary verbs
- Modal verbs
- can
- could
- must
- shall
- should
- will
- would
- may
- might

- Auxiliary verbs
- have (+ en form of the verb)
- be (+ ing form of verb)

The Position of Tense, Auxiliaries & Modals
- When you form Yes/No questions, you can see that the tense can be moved away from the verb

No Longest NP: PP recursion
- Sentences can be embedded inside of sentences but we have other recursive mechanisms that will cause us to further adjust or phrase structure rules

X-Bar Schema
- Phrase structure rules are organized here
- This is a structure in terms of the three levels and in English, the subject is here and language is here
- NOT all languages have subject-verb word order

What are the PS rules for Malagasy?

W 3 Dis   4-20-17
- Provide examples and be descriptive.
- Explain the examples you give and say what this sentence is showing.
- In the syntax assignment, there will be another part for a non-English language.
- What Adam hopes is that we are clear about what language X and what language Y has and how do they differ
- Be more descriptive

Q. How do you illustrate a lack of something?
A. Here is an example of a sentence that shows a language rule.

How do we tell if it is a noun phrase?
- You need a determinant i.e. de- that you can append or prepend to the word
- The same follows for a pronoun
- *a she
- Be aware that proper nouns and pronouns are noun phrases!
- They don't contain more than one word but they don't pattern in the same way as normal nouns
- When moving as a unit, usually the easiest thing is "fronting" - moving a phrase to the front
- If it doesn't sound weird besides being awkward, it is a constituent
- Spot and Nellie is a noun phrase with two noun phrases in it
- We haven't talked about how to deal with "and", but that is a whole can of worms.

Just because one of the three tests fails does NOT mean it isn't a constituent because each test will correspond to a specific category
- Don't give up just yet, so try the other phrases

These kinds of schemas apply across linguistically in general and the general splitting idea applies the same way
- Do we notice there are always only two lines?
- Binary branching
- If on your hw, you find yourself drawing more than a binary tree, then it is probably wrong!

Draw trees in the original language, not the translation back to English!
- It has to adhere to the rules of the original language

W 4 R Lec   4-27-17
Semantic Features
- dog, dingo, cat, girl, boy, bachelor
- All share the characteristic that they are mammals
- We can see how this allows us to cross-categorize words in different ways

Semantic Anomaly
- "Colorless green ideas sleep furiously"
- This sentence is so weird to us because colorless does NOT encompass green, so how does this make any sense?
- Metaphor often depends on semantic anomaly
- In the case of metaphor, they are put to some sort of poetic use

Lexical Ambiguity
- You are challenging a person, so you have an element in meaning in common
- Possibly be more polysemous

Acquisition Evidence for Features
- How do I encompass dog to all those other creatures

Word Learning
- She had a broader meaning like a smaller set of features that encompassed a broader set of things
- This is referred to as overextension
- Use a word to refer to a broader class of objects than the adult
- She starts out thinking that doggie is something that is a mammal with four legs

Truth Conditions and Meanings

- This will allow us to interpret the sentence and we know all of this even if Obama in the real world

W 5 R Lec   5-4-17
Children are literal
- Some stories are made of bubbles.
- (No) Children % correct: 95
- (No) Adults % correct: 98
- Some birds live in cages.
- (Yes) Children % correct: 84
- (Yes) Adults % correct: 99
- Some giraffes have long necks.
- (No) Children % correct: 89
- (No) Adults % correct: **41**

Major stages of child language
- Babbling (6-12 months)
- First words (1 year roughly) - **one-word stage**
- First word combinations (18-24 months)

Babbling
- A few weeks after birth: A baby can distinguish sounds
- 6 months: he begins producing speech sounds
- 9 months: babbles are syllabic and reduplicative
- intonation is native-like
- Babbling is about <u>language</u>, not speech.
- Deaf babies babble

Learned, not learned?
- A pronoun and a proper name or definite description <u>cannot</u> forever if the first branching node dominating the pronoun also dominates the name/definite description.

W 5 Dis   5-4-17
- If the test fails, then you show all the tests that we have given you failed.
- Pronoun replacement - won't work for a verb phrase
- Bonnie finished packing her books and John will do so as well

Swahili
- Class marker - says nouns fall into different lexical classes, and we have to remember which thing to use
- Analogous to counting things in Mandarin
- Different words for counting different things
- Commonplace in African language

W 6 Dis   5-11-17

Midterm Review

    0.   A sentence is ungrammatical <u>in a descriptive sense</u> if:

A. it sounds unacceptable to native speakers.

    0.   Which of the following sentences shows a <u>structural</u> ambiguity?

A. The university filled with hardworking students and professors.

    0.   Which of the following is an example of a compound?

A. cowgirl

    0.   The pragmatic meaning of a sentence:

A. all of the above

    0.   The head of a compound (e.g. <u>toothbrush</u>):

A. all of the above

    0.   The goal of a linguist is to:

A. understand the properties of human language

    0.   Plural nouns in Tohono O'odham are created by which kind of morphological process

A. partial reduplication

    0.   The morphological rule illustrated in Part A does **not** apply to:

A. mass nouns

    0.   Consider the following lines from Lewis Carroll's Jaberwocky:

"Two brilliant, and the slithy toves

Did gyre and gamble in the wake;"

A. form and meaning

Analogous to "Colorless green ideas sleep furiously"

    0.   Which of the following sentences **cannot** be generated by this set of rules?

A. The ostrich in the park will nap.

NP -> PP VP

    0.   The meanings of the words war and peace illustrate what?

A. antonymy

    0.   Inflectional morphology:

A. **is very productive, is overgeneralized by children, can be tested using a Wug test**

    0.   Stephen Pinker, author, author of The Language Instinct, writes: "The 3-year old, then, is a grammatical genius - master of most constructions, obeying rules…

A. The basic organization of grammar (UG) is wired into the child's brain.

    0.   Consider the following sentences with conjunctions (phrases connected by and) and then answer the question below:

A. Only items belonging to the same grammatical category can be conjoined.

    0.   Choose the best explanation for the ungrammaticality of the sentence:

A. **sleep is an intransitive verb**

    0.   Which of the following child utterances shows a morphological overgeneralization?

A. I folded the baby rabbits. (?)

    0.   Which of the following sentences is **true**?

A. None of the above.

0.   Which of the following sets of phrase structure rules is **not** recursive? [Don't worry that there are noX' categories, that is irrelevant to the question.]
A. VP -> V PP
   PP -> P NP

0.   In which of the following sentences is the underlined portion **not** a constituent?
A. **Giovanna had been dancing the tango for her entire life.**

0.   How many morphemes are there in the English word unapologetic?
A. 3

0.   Which of the following trees illustrates the correct structure for the word *unpresidential?*
A. Adj -> Adj

0.   What is the verb root meaning 'go' in Persian'
A. **raft**

0.   What is the 2nd person plural ('you-plural') morpheme
A. id

0.   In Persian the progressive form of the verb (like English -ing) is ode by which morphological process?
A. Prefixation

0.   How do you say 'they were going' in Persian
A. miraftand

0.   What evidence do we have that a speaker has a mental grammar?
A. He understands novel sentences.

0.   The Russian data show that:
A. the rules of Russian grammar require double negatives.

0.   Which is the most underlined error for a child to make?
A. **Is the boy who eating an ice-cream is happy?**

0.   Which of the following statements best describes a word? A word is:
A. an arbitrary pairing of form and meaning.

0.   The morpheme meaning *is* in Malay is:
A. Malay has no morpheme for is

0.   The Malay sentence *kuda bogus ini kuda ali* means:
A. This good horse is Ali's horse

0.   If the word mandidik means 'educate', the probable meaning of pandidik is:
A. educator

0.   Which of the following words have reference but no intrinsic meaning?
A. Bernie and they

0.   Which of the following is a universal property of language?
A. structure dependency

0.   Consider the following 2 sentences, then answer the question below:
A. Sentence 1 and sentence 2 have the same presupposition.

0.   Which of the following is most accurate?
A. All spoken languages are governed by rules.

0.	In which of the following sentence pairs does Sentence 1 entail Sentence 2?
A. A

0.	Based on the sentence in (i)
A. **Only subjects can be questioned in Mandarin.**

0.	The principle of compositionally does **not** apply to which kinds of linguistic
A. idioms

0.
A. **Man had X-ray vision**

0.	s
A. striking similarieies

0.	s
A. **transformational rules**

0.	s
A. tok

0.
A. sachokwatok

0.	s
A. native speakers of a language follow consistent rules of language structure

W 7 T Lec   5-16-17
Muh - has a nasal feature

The problem with alphabet
- Different letters used for the same sound
- **Alphabet is imprecise**

Language differences
- Many languages use the same letter to refer to different sounds
- In the movie "Language Acquisition", the little boy Sammy was asked what the cookie monster ate?
- He says it is spells with a "k"
- "kake" - Tester
- "Right!" - little boy

The International Phonetic Alphabet (IPA)
- It has been changed and modified over the years
- It provides a system for representing sounds in an unambiguous way
- Can be used by linguists and other people who need to have a precise system for representing sound

IPA Chart
- Gives the consonants of American English and not necessarily sounds in other languages

- You see along the top there is a whole list of categories, and this is the place in the mouth where you produce the articulation
- On the left side, there is a manner of articulation and we will go back over all of this later

Unfamiliar IPA symbols
- These are letters that you represent and what would p represent?
- It would represent "puh" and b would represent "buh"

How are sounds produced by the vocal tract?
- Air is pushed up from your lungs, goes into your mouth and nose
- At various points in that flow of air, the flow of air gets obstructed
- At those points, you have a different quality of sound
- Flute: cover fingers over the holes and that is how you modify the sound!

Vocal Tract
- The larynx consists of a hole called a glottis
- Covered by two muscular flaps and these can be tightened or released
- Move the body of your tongue to the roof of your mouth to the hard palate
- The hard part of the top of your mouth
- Raise your tongue up there and that is a way of obstructing the air
- If you move the back of your tongue to the soft palate, then you might gag since you obstruct the flow of air

W 7 R Lec   5-18-17
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W 7 Dis   5-18-17
- How is a kid's production different from an adult's?
- What are the different stages of acquisition?
- Babbling
- Holographic
- Telegraphic…

Overextension - overusing a word, using a word too broadly
- A - ball
- B - balls, balloon, marble, grapefruits, oranges pompoms
- Any shape that is 3D round

A - coo