Introduction to Linguistics

Week 2
Language? Linguistics?
Language

- a system of conventional spoken or written symbols by means of which human beings, as members of a social group and participants in its culture, communicate (Encyclopedia Britannica)

- expression of ideas by means of speech-sounds combined into words. Words are combined into sentences, this combination answering to that of ideas into thoughts (Henry Sweet, an English phonetician and language scholar)
a system of arbitrary vocal symbols by means of which a social group cooperates (The U.S. linguists Bernard Bloch and George L. Trager)
Language as a Means of Communication

Speaker    Message     Listener
Information encodes   decodes

Language
Message
Information
Difference between Languages

Languages can differ in: the fundamental elements or the rules of combination

The units and rules can be different for all of the modules of language: sounds, words, and sentences

But all languages are equally complex, they all have units and rules.

Dialects differ in the same way -- units and rules.

Languages change in the same way -- units and rules.

Children learn languages in the same way -- units and rules.

Any child can learn any human language if exposed to it.
Linguistics

- the scientific study of language that answers the questions: what is language? how is it represented in the mind?

- a social science that shares common ground with other social sciences such as psychology, anthropology, sociology and archaeology; may also influence other disciplines such as English, communication studies, computer science etc
History

- Comes from the Latin word *lingua* which means *language*.
- Ferdinand de Saussure (the father of modern linguistics) in his book *Cours de linguistique générale* proposed the terms *langage*, *langue* and *parole*.
  - *langage*: language in general
  - *langue*: a particular language
  - *parole*: the language of an individual
Linguist

- is someone who engages in studying linguistics
- focuses on describing and explaining language; not concerned with the prescriptive rules of the language
- is not an interpreter; not required to know many languages
- goal: to discover the *universal* concerning language
The Field of Linguistics

- synchronic vs diachronic linguistics
- theoretical vs applied linguistics
- microlinguistics vs macrolinguistics
Linguistics

Microlinguistics
- Phonetics
- Phonology
- Morphology
- Syntax
- Semantics

Macrolinguistics
- Stylistics
- Pragmatics
- Sociolinguistics
- Psycholinguistics
- Dialectology
- Neurolinguistics
- Computational linguistics
- Historical linguistics
- Discourse analysis
Phonetics

- the study of the production and perception of speech sounds
- is concerned with the sounds of language, how these sounds are articulated and how the hearer perceives them
- is related to the science of acoustics in that it uses much the same techniques in the analysis of sound that acoustics does
Phonology

- the study of the sound patterns of language
- is concerned with how sounds are organized in a language
- examines what occurs to speech sounds when they are combined to form a word and how these speech sounds interact with each other
- endeavors to explain what these phonological processes are in terms of formal rules
Morphology

- the study of word formation and structure
- studies how words are put together from their smaller parts and the rules governing this process
Syntax

- the study of sentence structure
- attempts to describe what is grammatical in a particular language in term of rules
- these rules detail an underlying structure and a transformational process
Semantics

- the study of meaning
- is concerned with describing how we represent the meaning of a word in our mind and how we use this representation in constructing sentences
- is based largely on the study of logic in philosophy
Language Acquisition

- examines how children learn to speak and how adults learn a second language
- is very important because it gives us insight into the underlying processes of language
- suggests that all languages operate within the same framework and the understanding of this framework would contribute greatly to the understanding of what language is.
Others

- Neurolinguistics
- Psycholinguistics
- Sociolinguistics
- Historical Linguistics
- Anthropological Linguistics
- Pragmatics
- etc
Introduction to Linguistics

Week 3
The Languages of the World
The Origins of Language

• Homo Loquens
  - cave drawings
  - gestures
  - speech?

• Human language
  → emerged 30,000 years ago
  → written language: 20,000 years go
Language Barrier

English

Javanese
Pidgin and Creole

• **Pidgin**
  → a system of communication which has grown up among people who do not share a common language, but who want to talk to each other, for trading or other reasons

• **Creole**
  → a pidgin language which has become the mother tongue of a community
Pidgin

- Called as *makeshift, marginal, or mixed language*
- Has limited vocabulary, a reduced grammatical structure, narrower range of functions
- Does not last very long, sometimes for only a few years, rarely for more than a century
- e.g. French used in Vietnam disappeared when the French left
Creole

• Comes from Portuguese *crioulo*
  → a person of European descent who had been born and brought up in a colonial territory; then
  → applied to other people who were native to these areas, and then to the kind of language they spoke

• More advanced patterns of language because of the interaction with the language existed before
Families of Languages

- Europe: Indo-European, Uralic, Maltese, Turkic
- South Asia: Indo-Iranian, Dravidian, Austroasiatic, Sino-Tibetan, Tai
- North Asia: Uralic, Altaic (Turkic, Mongolian, Manchu-Tungus), Paleo-Siberian
- Southwest Asia: Indo-Iranian, Caucasian, Semitic
• East Asia: Altaic, Korean, Japanese, Sino-Tibetan (Chinese, Tibeto-Burman), Tai & Miao-Yao

• Southeast Asia: Austroasiatic, Tai & Sino-Tibetan, Andamanese, Austronesian

• Non Austronesian languages of Oceania: Papuan, Australian Aboriginal

• Africa: Afro-Asiatic/Hamito-Semitic, Nilo-Saharan, Niger-Congo, Khoisan
• Americas: Eskimo-Aleut, Athabascan, Algonkian, Macro-Siouan, Hokan, Penutian, Aztec-Tanoan, Oto-Manguean, South American Indian
Language Isolates

• Languages that are not known to be related to any other living language

  e.g. **Basque** (northern Spain & southwestern France); **Ainu** (northern Japan); **Burushaski** (Pakistan), **Taraskan** (California)
# Top 20 Languages
(based on the number of speakers)

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<thead>
<tr>
<th>Mother-tongue Speakers</th>
<th>Official Language Populations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chinese</td>
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<td>2. Chinese</td>
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<td>3. Spanish</td>
<td>3. Hindi</td>
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<td>10. German</td>
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<td>12. Panjabi</td>
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<td>15. Italian</td>
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<td>19. Marathi</td>
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<td>20. Vietnamese</td>
<td>20. Turkish</td>
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</tbody>
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intro to ling/ts/2007
Where is English?

Indo European languages

Germanic
- German, Dutch, **English**, etc

Italic

Celtic

Baltic

Albanian

Armenian

Slavic

Indo Iranian

Hellenic

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History of English Language

- **Old English**: begins with the migration of the Jutes, Angles, and Saxons from Germany and Denmark to Britain in the 5th – 6th century

- **Middle English**: begins during the Norman Conquest in 1066

- **Modern English**: started at the beginning of the 15th century
Old English

- Also called Anglo-Saxon
- Language spoken and written in England before 1100; it is the ancestor of Middle and Modern English
- 4 dialects: Northumbrian, Mercian, Kentish, West Saxon
- Great period of literary activity: during the reign of King Alfred in 9th century
• Has 3 genders: masculine, feminine, neutral

e.g. Old English *helpan*

    → help, healp, hulpon, holpen
Middle English

• Language spoken and written in England from about 1100-1500
  a. 1100-1250: early Middle English
  b. 1250-1400: central Middle English
  c. 1400-1500: late Middle English

• 3 dialects: Southern, Midland, Northern
Modern English

- In 16th century it was the mother tongue of only a few million people living in England
- By the late 20th century, it is the native language of more than 350 million people
- The most widely taught foreign language and is also the most widely used second language
- In the entire world, one person in seven speaks English as either a primary or secondary language
English Language Imperialism

- Involves the transfer of a dominant language to other people to demonstrate power

- In America, Australia, New Zealand → new varieties of English were developed by native speakers coming from the British isles; colonial speech, an inferior form of English
• In West Africa
  → pidgins: Portuguese + African languages + English → creoles

• Now?
Introduction to Linguistics

Week 4
THEORIES in LINGUISTICS
Ferdinand de Saussure (1857–1913)
Ferdinand de Saussure

- The father of modern linguistics

- Saussure's most influential work, *Course in General Linguistics (Cours de linguistique générale)*, was published posthumously in 1916 by former students Charles Bally and Albert Sechehaye on the basis of notes taken from Saussure's lectures at the University of Geneva.
Theory of Saussure

Language
  - Langage
  - Langue
  - Parole

Signs
  - The signifier
  - The signified

Linguistics
  - Synchronic
  - Diachronic
Langue and parole

In his book *Cours de linguistique générale*, Saussure proposed the terms *langage*, *langue* and *parole*.

*langage*: language in general
*langue*: a particular language
*parole*: the language of an individual
Diachronic vs. synchronic view of linguistics
Diachronic view

- Diachronic linguistics views the historical development of a language.

- We can go back and forth in time, watching the language with all its features change.

- E.g. the change in sound system of English from old English to modern English
Synchronic view

- Synchronic linguistics views a particular state of a language at some given point in time.

- This could mean *Modern English* of the present day, or the systematic analysis of the system of Shakespeare's English.

- E.g. the modern system of modern English
structuralism

- Modern linguistics, following *Ferdinand de Saussure*, is primarily interested in the **synchronic** point of view.

- Saussure postulated the priority of synchrony: no knowledge of the historical development of a language is necessary to examine its present system.

- He arrived at this radical viewpoint due to his conviction that linguistic research must concentrate on the *structure* of language.

- Later, the whole paradigm was hence called *structuralism*.
Theory of signs (semiotics)

In linguistics, the sign has ‘two faces’ which cannot be separated

- ‘signified’ → thing meant
- ‘signifiant’ or ‘signifier’ → the acoustic image
Descriptive vs prescriptive

**Prescriptive**
- the 19\(^{th}\) century grammar was prescriptive
- how the language should be

**Descriptive**
- acc. to Saussure, linguists’ job is to describe, not to prescribe
Paradigmatic vs. syntagmatic

- Paradigmatic
  
  any link in chain of speech will suggest any other language units to us, because the units either resemble or differ from each other in form and meaning.
  
  e.g. the word ‘teaching’
Remind us of other words that have -ing ending: working, eating, talking, etc

Other compounds of teach: teacher, taught, teaches

Other words with similar meaning and form: tutor, mentor, lecturer

Words different in both form and meaning: chalk, whiteboard
syntagmatic

Syntagmatic relation holds between the successive members of a given chain

e.g:
If I *have* money
I *will* buy a car
One of the books is...
Noam Chomsky
Noam Chomsky

- in the past received various death threats because of his criticisms of U.S foreign policy.

- stated that he continues to reside in the United States because he believes it remains the "greatest country in the world,"
Syntactic structures

- The theory takes utterances (sequences of words) to have a syntax which can be (largely) characterized by a formal grammar; in particular, a Context-free grammar extended with transformational rules.

- A phrase/sentence has its internal structure
Children are hypothesized to have an innate knowledge of the basic grammatical structure common to all human languages (i.e. they assume that any language which they encounter is of a certain restricted kind).

This innate knowledge is often referred to as universal grammar.
Generative grammar

- The Chomskyan approach towards syntax is often termed generative grammar.
- Chomskyan syntactic analyses are often highly abstract, and are based heavily on careful investigation of the border between grammatical and ungrammatical constructs in a language.
- Such grammatical judgments can only be made accurately by a native speaker.
Introduction to Linguistics

Week 5
Phonetics

Description of Sounds
Definition

- the study of speech sounds and their physiological production and acoustic qualities
Fields

- *articulatory phonetics* → deals with the configurations of the vocal tract used to produce speech sounds; studies the physiological mechanisms of speech production
- *acoustic phonetics* → measuring and analyzing the physical properties of sound waves we produce when we speak
- *auditory phonetics* → studies speech sounds in terms how we hear them
- *linguistic phonetics* → the manner of combining sounds so as to make syllables, words, and sentences
Units of Representation

- Feature: subunit of segment, reflects individual aspect of articulatory control produced by articulation
- Segment: individual speech sound
- Syllable: a segment of speech that consists of a vowel, with or without one or more accompanying consonant sounds immediately preceding or following
Phonetic Transcription

• IPA (International Phonetic Alphabet)
  → represents each sound of human speech with a single symbol
  e.g. [ə] ; [θ]

Why do we need the IPA?
We need a system for recording speech sounds accurately. English spelling is very inconsistent.

- Same sound [i], different letters
e.g. see, sea, scene, receive, thief, amoeba, machine

- Same letters, different sounds
e.g. sign [s], pleasure [ʒ], resign [z]

- One sound, multiple letters
e.g. lock [k], that [ð], book [ʊ], boast [o], shop [ʃ]

- One letter, multiple sounds
e.g. exit [gz], use [ju]

- Silent letters
e.g. know, doubt, though, island
Sound Classes

Based on the phonetic properties shared:

- Vowels
- Consonants
- Glides
# English Consonants

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<thead>
<tr>
<th></th>
<th>closure</th>
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# English Vowels

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<td>lax</td>
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</table>
Figure out the differences between consonants and vowels in the following words.

- _take_ – _above_
- _cart_ – _at_
- _think_ – _ugly_
- _bell_ – _open_
- _feel_ – _eel_
## Major Differences

<table>
<thead>
<tr>
<th>Vowels</th>
<th>Consonants</th>
</tr>
</thead>
<tbody>
<tr>
<td>• syllabic</td>
<td>• non syllabic</td>
</tr>
<tr>
<td>• are produced with relatively little obstruction in the vocal tract (-obstruent)</td>
<td>• are produced with a narrow or complete closure in the vocal tract (+obstruent)</td>
</tr>
<tr>
<td>• are more sonorous (+sonorant)</td>
<td>• are less sonorous (-sonorant)</td>
</tr>
</tbody>
</table>
Glides

- Shows properties of both consonants and vowels
  - rapidly articulated vowels
  - vowel-like in articulation
  - pattern/function as consonants

- Sometimes are called semivowel and semiconsonant
  e.g. yet; wet
Introduction to Linguistics

Week 6
Phonology: Sound Arrangement
Definition

- the sound system of a language; the component of a grammar which includes the inventory of sounds (phonetic and phonemic units) and rules for their combination and pronunciation; the study of the sound systems of all languages
Scope

- Phonetics -- What are the sounds? How are they made in the mouth?
- Phonology -- How do sounds combine? How are they memorized?

Speaker's Mind → Speaker's Mouth → Listener's Ear → Listener's Mind
Phonemes

- the *phonetic alphabet of the mind* → how we mentally represent speech; how we store the *sounds* of words in our memory.
- the *phonetic* alphabet is universal (we can write down the speech sounds actually uttered in any language)
  e.g. [θ]
- the *phonemic* alphabet varies from language to language
  e.g. /θ/
Finding Phonemes

- How do we find out what's in someone's mind? How do we figure out how people store the sounds of words in their memories?

→ look for *minimal pairs* of words

→ pair of words that have *different* meanings and which differ in only *one* sound (the difference in sounds is significant, and so the *two* sounds must *both* be phonemes)
Examples

- [sɪp] and [zɪp]
  $\rightarrow$ /s/ and /z/

- [ræm] and [ræn] and [ræŋ]
  $\rightarrow$ /m/, /n/ and /ŋ/

- [bɪt], [bɪt], [bɛt], [bɛt], [bæt], [but], [bot], [bɔt], [bʌt]
Allophones

- a predictable phonetic variant of a phoneme

  e.g., [p] and [ph] (aspirated p) of the phoneme /p/ in English

- Other examples: brew – prow; drip - trip
Complementary Distribution

- a relation between two speech sounds such that each occurs in one or more positions where the other one never does
- two sounds that are phonetically similar and that are in complementary distribution are usually allophones of the same phoneme

  e.g. voiced [pʰ] always occurs when it is the syllable onset and followed by a stressed vowel → pin
  voiceless [p] occurs in all other situations → spin
Sound Combinations

In English, a word begins with three consonant-type phonemes always obeys three strict rules:

- First phoneme: /s/
- Second phoneme: /p/, /t/, /k/
- Third phoneme: /l/, /r/
Free Variation

- alternative pronunciations of a word in which one sound is substituted for another without changing the word's meaning

  e.g., pronunciation of "bottle" with a glottal stop as the medial consonant, as opposed to a [t]
Syllables

- A segment of speech that consists of a vowel, with or without one or more accompanying consonant sounds immediately preceding or following—for example, *a, I, out, too, cap, snap, check*

- A syllabic consonant, such as the final *n* sound in *button* and *widen*, also constitutes a **syllable**

- Closed (checked) syllables are those that end in a consonant; open (free) syllables end in a vowel
The Internal Structure of Syllable

Onset (O) Rhyme (R)

Nucleus (N) Coda (C)

s p r

i

n t
Exercise

- Describe the structure of the syllables in the following words:
  1. button
  2. mother
  3. sparkling
  4. however
  5. trigger
Syllable and Stress in English

- Stress: the perceived prominence of one or more syllabic elements over others in a word → the structure of individual syllables plays a role in determining which vowel is stressed

- Metrics: the study of stress placement

- Which syllable is stressed in “agenda, archipelago, and cabinet”?
Notice the stresses in the following words:

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>agénda</td>
<td>archipélago</td>
<td>cábïnet</td>
</tr>
<tr>
<td>veránãa</td>
<td>aróma</td>
<td>América</td>
</tr>
<tr>
<td>synópsis</td>
<td>horízon</td>
<td>cínema</td>
</tr>
<tr>
<td>uténsil</td>
<td>Minnesóta</td>
<td>aspáragus</td>
</tr>
<tr>
<td>appéndíx</td>
<td>coróna</td>
<td>jávelín</td>
</tr>
</tbody>
</table>

Why?
- English nouns are stressed on the *penultimate* syllable when it is **heavy**; and on the *antepenultimate* syllable when it is **light**.

- **ultimate** → last  
  **penultimate** → next to last  
  **antepenultimate** → the third syllable from the end of the word

- **heavy** → having two rhythmic elements in the rhyme  
  **light** → syllables with just a short vowel
Introduction to Linguistics

Week 7
Morphology

Morphemes, Conditioning & Words
Language is a CODE for thoughts.
A flea and a fly in a flue
Were imprisoned, so what could they do?
Said the flea: ‘Let us fly’.
Said the fly: ‘Let us flee’.
So they flew through a flaw in the flue.
Word Classes

● Content Words
  → noun, verbs, adjectives, adverbs
  → “open class” vocabulary

● Function Words
  → pronouns, conjunctions, auxiliaries, etc
  → “closed class” vocabulary
Word Relation & Morpheme

- Words can be related to other words, e.g. happy – unhappy.
  → fundamental elements: morpheme
  → rules of combination: Word Formation Rules
- Morpheme: the smallest unit that relates sound and meaning
How many morphemes are there in each of the following words?

- happy
- happier
- unhappy
- unhappier
- unhappiness
Recognition of Morphemes

- The dinosaur sniffed arrogantly and plodded forwards.

- The dinosaur grunted loudly and edged backwards.
Bound & Free Morphemes

doors → door

free morpheme

bound morpheme
What does –s mean?

• There are two doors in the room.
• There are no red doors.
• I have zero dollars.
• It’s negative one degrees outside.
• The current is 0.4 amperes.

not one
Inflectional & Derivational Morphemes

- **Inflectional morpheme**
  → provides further information about an existing lexical item

- **Derivational morpheme**
  → creates an entirely new word

**Clouds**

**Cloudy**
Affixes

- morphemes added to free forms to make other free forms

- four kinds of affixes:
  1. prefixes → unable
  2. suffixes → walked
  3. infixes → in-bloody-credible
  4. circumfixes → enlighten
Study the words below

<table>
<thead>
<tr>
<th>adjective</th>
<th>verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>dark</td>
<td>darken</td>
</tr>
<tr>
<td>black</td>
<td>blacken</td>
</tr>
<tr>
<td>red</td>
<td>redden</td>
</tr>
<tr>
<td>white</td>
<td>whiten</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>verb</th>
<th>noun</th>
</tr>
</thead>
<tbody>
<tr>
<td>sing</td>
<td>singer</td>
</tr>
<tr>
<td>dance</td>
<td>dancer</td>
</tr>
<tr>
<td>write</td>
<td>writer</td>
</tr>
<tr>
<td>compute</td>
<td>computer</td>
</tr>
</tbody>
</table>

What word formation rules can we make?
Zero Morphemes

Consider the following words:

<table>
<thead>
<tr>
<th>adjective</th>
<th>verb</th>
</tr>
</thead>
<tbody>
<tr>
<td>yellow</td>
<td>yellow</td>
</tr>
<tr>
<td>brown</td>
<td>brown</td>
</tr>
<tr>
<td>green</td>
<td>green</td>
</tr>
<tr>
<td>purple</td>
<td>purple</td>
</tr>
</tbody>
</table>

The relationship between yellow (adj) - yellow (v) is exactly the same as white – whiten → zero morpheme
Allomorphs

Cats, dogs, horses, oxen, sheep, geese

- Phonological conditioning
  → its form is dependent on the adjacent phonemes

- Lexical/morphological conditioning
  → its form seems to be a purely accidental one, linked to a particular vocabulary item
Compounds

- the combination of two free forms
- In English, the HEAD of a compound is usually the right-hand member
- The HEAD supplies the category and basic meaning for the whole compounds
- Compounds can be used with affixation to produce larger words

e.g. blackbird, sleepwalker
What about the following words:

- blackberry
- blueberry
- strawberry
- cranberry
- huckleberry
Homophones & Reduplication

Homophones
- two morphemes having the same pronunciation (form) with different meanings
  e.g. un-tie-able

Reduplication
- the copying of a part of a word; rarely found in English
  e.g. the language of the people of Madura in English?
Other Ways of Forming Words

- **Blends**
  - smoke + fog = smog
  - motor + hotel = motel

- **Words from names (eponym)**
  - jumbo, sandwich

- **Truncation (Clipping)**
  - gym(nasium), (tele)phone

- **Acronyms**
  - AIDS
Introduction to Linguistics

Week 8
Syntax

The Analysis of Sentence Structure
Recall that words have internal structure (they are comprised of morphemes)

unhappier

unhappy

-un-

happy

-er
Definition

- the subfield of linguistics that studies the internal structure of sentences and the interrelationships among their component parts
- the arrangement of words in sentences, clauses, and phrases, and the study of the formation of sentences and the relationship of their component parts
Sentence Structure

Compare the following sentences:

1. Colorless green ideas sleep furiously.
2. Green sleep furiously ideas colorless.

Which is grammatically correct? Which can you remember better?
How do we COMBINE WORDS to make SENTENCES?

→ Syntax uses trees (just as in morphology) but the trees are built on WORDS instead of morphemes

→ The laws of combination for words are the syntactic rules.
Structural Ambiguity

- Recall that un-tie-able is ambiguous word, with two meanings correspond to different word structures.

- The same kind of structural ambiguity can be found in sentences as well. Consider the phrase: synthetic buffalo hides
Combining the same words in different ways yields different meanings.
→ Many ordinary sentences can be structurally ambiguous.

Consider:
1. Big cats and dogs must be on a leash.
2. The boy saw the man with the telescope.
Phrasal Categories

- Labels for words
  → Noun (N), Verb (V), Adjective (Adj), Adverb (Adv), Article (Art), Preposition (Prep) etc

- Phrases are constructed out of a HEAD + other material
  → Noun Phrase (NP), Verb Phrase (VP), Prepositional Phrase (PP), Sentence (S), etc
The boy saw the cat on the mat.
The scientist discovered the answer.

The traditional view
The scientist discovered the answer.

**Infl**: inflection, showing the sentence's tense

**popular contemporary view**
Recursion

- Sentences can contain sentences.
  e.g. This is the cat that ate the rat.

the sentence structure?
Constituency Tests

- Constituent: a word or an intuitively natural grouping of words that behaves as a unit with respect to some grammatical rules (phrase)

- How can we tell what the structure of a sentence is? How do we know where the phrases are? How can we prove it?
  → constituency test
There are five basic tests for phrases:
1. substitution by anaphors
2. substitution by question words
3. ability to stand alone
4. coordination
5. movement
Substitution by Anaphors

- substituting pronouns for the noun phrases

  The boy saw the man with the telescope.

  He     him

- Is the new sentence still ambiguous? NO.
Making Questions

- very similar to the anaphor test

e.g. **The boy saw the man.**

  Who saw the man?
  Who did the boy see?
Ability to Stand Alone

- Frequently in conversation it is not necessary to speak in entire sentences.

- Sometimes a piece of sentence is enough, such as in answer to a question. People do speak in phrases:
  - A: Where did you eat lunch?
  - B: In the park. (=I ate lunch in the park.)
Coordination

- conjoin a parallel string of words with a conjunction
  e.g. The cat sat on the mat.
    - The cat and THE DOG sat on the mat.
    - The cat sat on the mat AND IN THE BOX.

- In some cases, alter the sentence slightly:
  e.g. The cat is eating.
    The cat AND THE DOG are eating.
Movement

- how some syntax rules can move phrases around

formula: \( \text{It was } X \text{ that } (S-X) \)

- e.g. The cat sat on the mat.
  - It was THE CAT that SAT ON THE MAT.
  - It was THE MAT that THE CAT SAT ON.
  - It was ON THE MAT that THE CAT SAT.
Deep and Surface Structures

**Will the boy leave?**

![Tree diagram](image)

```
S
 |   |
NP | VP
 |   |
Det N Infl V
  |   |
the boy will leave
```
The sentence structure diagram shows the surface structure of the sentence "will the boy leave." The diagram includes a CP* complementizer phrase, a CP node, an S node, a NP node, an Infl node, a Det node, an N node, an Infl node, and a VP node. The words "will," "the," "boy," and "leave" are part of the surface structure of the sentence.
Try This

1. Does out the door mean the same in My uncle went out the door and My uncle threw out the door?

2. Determine the deep and surface structures of the sentence What should the farmers plant?
Introduction to Linguistics

Week 9
Semantics

Meanings of Words and Sentences
Definition

The study of the linguistic meaning of words and sentences; the component of the grammar which specifies these meanings

Two components of meaning:
- meanings of the parts (lexical meaning)
- meanings of the combinations (phrase meaning)
Analyze the following sentences

- The rock ate my lunch.
- The giraffe ate the hyena.
- The giraffe ate one hundred pounds of grass today.
Semantics $\rightarrow$ things are true by the DEFINITIONS and RULES

Pragmatics $\rightarrow$ things are true by virtue of the REAL WORLD

Which of the above sentences are semantically/pragmatically OK?
Lexical Meaning

- What is the meaning of *an assassin*?
  → someone who kills someone who is prominent
- What about:
  - bachelor?
  - mother?
  - lioness?
Denotation & Connotation

- **Denotation**
  → the set of entities to which a word or expression refers (also called referent/extension)
  
  e.g. winter

- **Connotation**
  → the set of associations that a word’s use can evoke
  
  e.g. winter
Phrase Meaning

- The meanings of combinations of words are largely the products of the combinations of the meanings of the words:
  meaning \((A+B)\) = meaning \((A)\) + meaning \((B)\)

  e.g.
  As someone said, a big mouse is still smaller than a small elephant.
Semantic Features

woman, mother, widow

What characteristics do they share?

<table>
<thead>
<tr>
<th></th>
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<th>married</th>
</tr>
</thead>
<tbody>
<tr>
<td>woman</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td>mother</td>
<td>+</td>
<td>+</td>
<td>+/-</td>
</tr>
<tr>
<td>widow</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
</tbody>
</table>
Try This …

Write the semantic features of:
1. lioness, ewe, mare
2. walk, arrive, leave
3. table, chair, stove
4. giant, bear, castle
5. Woman, girl, man, boy
Semantic Relations among Words
Synonyms

→ two words with the same semantic features (meaning) but which sound different

e.g. sofa – couch
Homonyms

→ two words that sound (or are spelled) the same but have different semantic features (meaning)

e.g. bear – bare
Polysemy

→ one word with multiple related meanings

e.g. marry → to take as a spouse
→ declare to be married
Consider the following

- Jane married Bill.
  Jane and Bill married.
  Lanny married Jane and Bill.
  Lanny married Jane.

- John rented the house to Bill.
  John rented the house.
  Bill rented the house from John.
  Bill rented the house.
Antonyms

- What is the antonym of *bachelor*?
Antonyms are **NOT** words with totally different meanings, but words which are different along **ONE DIMENSION**
Kinds of Antonyms

- Complementary pairs (X, not X)
  e.g. dead-alive, awake-asleep
- Gradable pairs (opposite sides of a scale)
  e.g. hot-cold, big-small, warm-cool
- Relational opposites (opposite roles in a relation)
  e.g. teacher-pupil, buy-sell
Semantic Relations Involving Sentences
Paraphrase

- Two sentences that can have the same meaning
  
  e.g.
  - The police chased the burglar.
    The burglar was chased by the police.
  - I gave the summons to Chris.
  - It is unfortunate that the team lost.
  - The game will begin at 3.00 p.m.
Entailment

- A relation in which the truth of one sentence necessarily implies the truth of another

- I gave him a cake.
  I gave a cake to him.

- Robin is a man.
  Robin is human.

mutual

asymmetrical
Contradiction

- If one sentence is true, the other one must be false
- Two sentences which both cannot be true

**e.g.**

Charles is a bachelor.
Charles is married.
Thematic Roles

- In the case of sentences, the parts of the sentence play specific roles in the meaning, as determined by the verb.

  e.g.

  John put the book on the table.

  Agent  Theme  Goal (Location)
Some Thematic Roles

- Agent ➞ doer of action
- Theme ➞ thing done to
- Location ➞ place
- Source ➞ original place
- Goal ➞ destination place
- Instrument ➞ something that aids Agent in doing
Determine the thematic roles

1. The park wardens killed the tiger.
2. Paul bought a car from Sue.
3. The premier entertained the guests in the lounge.
4. The boy carried the red brick from the wall to the wagon.
5. Max went from being a rational gentleman to being a stark raving maniac.
Upcoming Next Week …

Sociolinguistics

Language and Culture
Language and Gender
Introduction to Linguistics

Week 10
Sociolinguistics
Language and Society
What is it?

- the study of interrelationships of language and social structure, of linguistic variation, and of attitudes toward language
- Concerns with the part language plays in maintaining the social roles in a community
• Some factors influencing the choice of sounds, grammatical elements and vocabulary items
  → age, sex, education, occupation, race, peer group identification etc

• e.g. *He don’t know nothing* instead of *He doesn’t know anything.*
Speech Varieties

- Standard (superposed variety)
- Sociolects: socio-economic status, gender, ethnic group, age, occupation, others
- Regional Varieties
- Registers: casual, formal, technical, simplified, others
Dialects

• **IDIOLECT**
  → different individual languages

• **DIALECT**
  → a sufficient number of people share knowledge of language
Dialect Differences

• Dialects can differ anywhere languages can differ: lexicon, morphology, syntax, semantics, phonology, ...

• Distinctive attributes of dialects can be found in other languages of the world. That is, a dialect is just another possible human language.

• Linguistics does NOT define "good" or "bad" languages, it simply explains how languages work in general. "Good" and "bad" are judgments about language, social statements, not linguistic statements.
As with other social statements, judgments about other people’s languages tell you more about the people making the judgments than about the people who are being judged.

Because dialects are just possible languages, each person’s language belongs to some dialect. That is, EVERYONE speaks with an accent. The accent is just more or less similar to someone else’s accent.
Differences in dialects of English

• **Sounds**
  
  → the speech sounds (elements) can be different in different dialects
  
  → the low-back quadrant of the vowel space is a major source of variation between different dialects of English
    
    e.g. in the US, [a]/[ɔ] ("cot"/"caught") merger
  
  → the pronunciation of vowels before [r]
    
    e.g. [æ]/[ɛ]/[e] before [r] (marry/merry/Mary)
• **Rules**
  → rhotic (r-full) and non-rhotic (r-less) dialects
  → deleting /r/ before consonants and at the ends of words
  
  e.g. *I pahked my cah in Hahvahd Yahd*
  
  → Canadian raising: have flaps in pronunciation, but different vowels
  
  e.g. writer [rəˈdʒɪər], rider [raɪər]
• **Words**

  → different lexical items

    e.g. lift/elevator, lorry/truck, sofa/couch/chesterfield, dinner/supper

  → different rules: the treatment of plurals of words borrowed from other languages

    e.g. criterions/criteria, datums/data
• **Sentences**
  → 'have' questions
    e.g. Has he a car?
    Does he have a car?
  → conjunctions and case: the case of pronouns following conjunction
    e.g. *between you and me* or
    *between you and I*?
    **Luke and me went to the store** or
    **Luke and I went to the store?**
→ double negatives

e.g.

Qui est arrivé? Personne.

I did not see anybody.
Je n'ai vu personne.
AAVE (African American Vernacular English)

- R & L dropping
e.g. *guard* = *god* in pronunciation
  *toll* = *toe*
- Negative agreement
e.g. *I don’t see nobody*
- Zero copula
e.g. *He late.* = *He is late right now.*
  *He be late.* = *He is usually late.*
Words Borrowing

- before the 11th century, the vocabulary of Old English consisted of an Anglo Saxon base with borrowed words from the Scandinavian languages (Danish and Norse) and Latin

  e.g.
  - Latin: street, kitchen, kettle, cup, cheese
  - Vikings/Norse: sky, egg, cake, skin, leg, window
  - Celtic: place and river names (Thames, Avon)
The English underclass cooked for the Norman upper class
- domestic animals are English: ox, cow, calf, sheep
- meats are French: beef, mutton, pork, bacon
Other languages contributed word to English:
- Australian Aborigine: kangaroo, boomerang
- India: juggernaut, turban
- Central America: barbecue, cannibal
- Nahuatl/Aztec: chocolate
- etc
- Indonesian??
Other studies of Sociolinguistics

• Language and Social Class
  the language of upper-middle-lower class?

• Language and Gender
  male-female utterance?

• Language and Geography
  the language of people living in city-village, mountain-beach?
The Brain is Wider
Emily Dickinson

The brain is wider than the sky,
    For put them side by side,
The one the other will include
    With ease, and you beside.
The brain is deeper than the sky,
    For, hold them blue to blue,
The one the other will absorb
    As sponges, buckets do.
The brain is just the weight of God,
    For lift them, pound for pound,
And they will differ, if they do,
    As syllable from sound.
Language as a Means of Communication

Linguistics

Speaker

Message

Information

encodes

Language

Listener

decodes

Psycholinguistics

components

process
Linguistics

- **Object:** language
- **Studies the structural components of a language**

Psycholinguistics

- **Object:** speech process
- **Studies language as a process**
Scope

Psycholinguistics is a relatively new branch of linguistics, an outcome of two-field convergence -- philology and psychology.

This discipline investigates the following areas:

- Language, Mind and Brain
- Mental Lexicon
- Language Processing
- Speech Generation
- Language Acquisition
- Second-Language Learning
- And much more …
Random Articulation

stimulated by the pleasurable experiences of the child, the main stimulus: reflex; produces non-distinctive sounds

Auditory organs

Internalization

an infant takes in whatever it can

Production

getting familiar with the basic morphological sets of the language

internalizes the basic sound system of a language: phonology; produces distinctive sounds

equal
Building Linguistic Competence

- Stages in L1 acquisition
  - pre-babbling → babbling → holophrastic → two word stage → telegraphic speech

Mother: doll
Baby: da
Children’s Interaction

- Children’s interaction development with the world outside involves both the verbal and non-verbal aspects → language and experience

![Diagram showing Competence and Performance](image-url)
The Formation of Linguistic Competence

Contacts with the world

Pre-verbal behavior

Stimuli

First utterance

Performance

Actual use of language
Language Errors

The most usual errors made by children under the age of three: the use of plurals and past tenses.

- using –ed in analogues manner
- generalizing -s
- goed, spitted
- mans, oxes
- boys, girls, toys
Find and Explain

1. Why don’t you eat faster, son? I am eating spoon, Mum.
2. Look he climbing up the tree.
3. My hairs gone white.
4. She spitted my begs.
5. Uncle drinking cigar.
6. That glass broke, daddy.
7. Please, be sitted, sir.
8. She is seeing at me.
9. I ran him ahead.
10. Daddy rubbing the table.
Animal Communication

What is this bird doing?
With whom does he communicate?
Forms of Communication

• The best known forms of communication involve the display of distinctive body parts, or distinctive bodily movements, e.g. the Herring Gull.

  Parent
  food
  Nest
  Chick

  brightly colored bill, yellow with a red spot
  tap the bill on the ground

• Accidental swallowing of pieces of brightly colored plastic or glass is a common cause of mortality among gull chicks.)
Another important form of communication is *bird song*, usually performed mainly by males, though in some species the sexes sing in alternation (this is called duetting and serves mainly purposes of strengthening pair-bonding and repelling competitors).

Bird song is just the best known case of vocal communication; other instances include the warning cries of many monkeys, the territorial calls of gibbons, and the mating calls of many species of frog.
• **olfactory communication**
  e.g.
  - Many mammals → glands that generate distinctive and long-lasting smells, and have corresponding behaviors that leave these smells in places where they have been.
  
  - Bees carry with them a pouch of material from the hive which they release as they reenter, the smell of which indicates if they are a part of the hive and grants their safe entry.
Introduction to Linguistics

Week 9
Semantics

Meanings of Words and Sentences
Definition

The study of the linguistic meaning of words and sentences; the component of the grammar which specifies these meanings

Two components of meaning:
- meanings of the parts (lexical meaning)
- meanings of the combinations (phrase meaning)
Analyze the following sentences

- The rock ate my lunch.
- The giraffe ate the hyena.
- The giraffe ate one hundred pounds of grass today.
Pragmatics & Semantics

- Semantics → things are true by the DEFINITIONS and RULES
- Pragmatics → things are true by virtue of the REAL WORLD

Which of the above sentences are semantically/pragmatically OK?
Lexical Meaning

- What is the meaning of *an assassin*?
  → someone who kills someone who is prominent
- What about:
  - bachelor?
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  - lioness?
Denotation & Connotation

- **Denotation**
  → the set of entities to which a word or expression refers (also called referent/extension)
  
e.g. *winter*

- **Connotation**
  → the set of associations that a word’s use can evoke
  
e.g. *winter*
Phrase Meaning

- The meanings of combinations of words are largely the products of the combinations of the meanings of the words:

  $$\text{meaning (A+B) = meaning (A) + meaning (B)}$$

- e.g.

  As someone said, a big mouse is still smaller than a small elephant.
Semantic Features

woman, mother, widow

What characteristics do they share?

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<td>+</td>
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Try This …

Write the semantic features of:

1. lioness, ewe, mare
2. walk, arrive, leave
3. table, chair, stove
4. giant, bear, castle
5. Woman, girl, man, boy
Semantic Relations among Words
Synonyms

→ two words with the same semantic features (meaning) but which sound different

e.g. sofa – couch
Homonyms

→ two words that sound (or are spelled) the same but have different semantic features (meaning)

e.g. bear – bare
Polysemy

→ one word with multiple related meanings

e.g. marry → to take as a spouse → declare to be married
Consider the following

- Jane married Bill.
  - Jane and Bill married.
  - Lanny married Jane and Bill.
  - Lanny married Jane.

- John rented the house to Bill.
  - John rented the house.
  - Bill rented the house from John.
  - Bill rented the house.
Antonyms

- What is the antonym of *bachelor*?
Antonyms are **NOT** words with totally different meanings, but words which are different along **ONE DIMENSION**
Kinds of Antonyms

- Complementary pairs (X, not X)
  e.g. dead-alive, awake-asleep
- Gradable pairs (opposite sides of a scale)
  e.g. hot-cold, big-small, warm-cool
- Relational opposites (opposite roles in a relation)
  e.g. teacher-pupil, buy-sell
Semantic Relations Involving Sentences
Paraphrase

- Two sentences that can have the same meaning

  e.g.
  - The police chased the burglar.
  - The burglar was chased by the police.
  - I gave the summons to Chris.
  - It is unfortunate that the team lost.
  - The game will begin at 3.00 p.m.
Entailment

- A relation in which the truth of one sentence necessarily implies the truth of another

- I gave him a cake.
  I gave a cake to him.
  mutual

- Robin is a man.
  Robin is human.
  asymmetrical
Contradiction

- If one sentence is true, the other one must be false
- Two sentences which both cannot be true

e.g.

Charles is a bachelor.
Charles is married.
Thematic Roles

- In the case of sentences, the parts of the sentence play specific roles in the meaning, as determined by the verb e.g.

  John put the book on the table.

  Agent     Theme    Goal (Location)
Some Thematic Roles

- Agent → doer of action
- Theme → thing done to
- Location → place
- Source → original place
- Goal → destination place
- Instrument → something that aids Agent in doing
Determine the thematic roles

1. The park wardens killed the tiger.
2. Paul bought a car from Sue.
3. The premier entertained the guests in the lounge.
4. The boy carried the red brick from the wall to the wagon.
5. Max went from being a rational gentleman to being a stark raving maniac.
Upcoming Next Week …

Sociolinguistics
Language and Culture
Language and Gender