Where am I?

o   Course: HUL242-Fundamentals of Language Sciences

o   Week 1: Lecture-1, Introduction

o   Thursday, January 2nd

About this course

➢ This is not an easy course. There is a lot of technical material to master.

➢ Everything will be fine if you do not miss classes and do the assigned readings.

➢ Consistent and regular work is required.

Tutorials

o **Date & Time**:

➢ Wednesday, 1-2 pm, & 2-3 pm

o **Place**:

➢ LH 604

Room		8-9	9-10	10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6	6-7
	MON	ELL717		RDL770	TXL773	TXL782	PYL563(T3)				HSL717	
	TUE	MLL452	PYL707	ELL895	AML795	TXL782	PYL563(T4)	ESL768		SPL723		
LH 604	WED	MLL452	PYL707	ELL895	TXL773		HUL242(Tut)	HUL242(Tut)				
(60)	THU	ELL717		RDL770	AML795	TXL773	PYL563(T1)				HSL717	
	FRI	MLL452	PYL707	ELL895	AML795	TXL782	PYL563(T2)	ESL768		SPL723		

o **Note:**

➢ Only two slots with a room with 60 seating capacity

➢ We will be assigned more TAs

➢ Finalize it by the next week.

Office Hours

➢ Monday and Thursday, 3:30 pm -4:30 pm

➢ Also, by an appointment: alok.deepak@iitd.ac.in

➢ Room: MS-620
   5th floor, MS Building.
   Humanities and Social Sciences Department (HSS)

"Linguistics"?

➢ Linguistics is the scientific study of human language.

"Science"?

o Richard Feynman, who received the Nobel Prize in Physics in 1965, describes the scientific method
https://www.youtube.com/watch?v=EYPapE-3FRw

o Science is:
  ➢ Data
  ➢ Hypothesis
  ➢ Consequences

Linguistics as a Science: Yes-no question in English

1. John is talking to a boy.   Is John talking to a boy?

2. John is talking to the boy who is tall .   Is John talking to the boy who is tall ?

3. The boy who is tall is talking to John.   Is the boy who is tall talking to John?

o Data -> systematic observation of the data -> hypothesis -> experiment/testing on more data -> if disagreement, then reformulation of the hypothesis -> experiment/testing on more data -> if agreement, then rule/principle, theory.

o The scientific process is iterative, with results contributing to further refinement of theories and hypotheses.

"Human language"?

o What do you know when you know a language?

o 5 areas of competence
  ➢ Sounds
  ➢ How to put those sounds together
  ➢ Words
  ➢ How to put words together to make a phrase/sentence
  ➢ Meaning

Human Language Competence and Linguistics

○ 5 core subfields of linguistics
  ➢ Phonetics: the study of sounds
  ➢ Phonology: the study of sound *patterns*
  ➢ Morphology: the study of word formation
  ➢ Syntax: the study of sentence structure
  ➢ Semantics: the study of meaning

Other subfields we will not get into

- **Sociolinguistics** -How people use languages in specific social contexts.
- **Historical linguistics-** How languages change over time.
- **Computational linguistics/Natural Language Processing** - How to model different aspects of language with statistical and computational models.
- **Neurolinguistics-** how language lives in the brain.
- **Psycholinguistics-** psychology + linguistics; how language is processed on-line
- **Applied fields-** speech pathology, education-language teaching and learning and many more

Languages are structured: Morphology

o Forming plural in English
   ➢ cat -> cat-s
   ➢ dog -> dog-s

o Descriptive rule
   ➢ Root + plural suffix (s)

o Can the plural marker come before the word?
   ➢ No. *s+cat, *s+dog

o Asterisks is used to show "unacceptable", "ungrammatical" constructions.

Languages are structured: Morphology

o Institute, -ion, -al, -ize, -ed

o Outcome
  ➢ Institutionalized
  ➢ *Institut(e)-al-ion-iz-ed
  ➢ *Institutet(e)-ion-iz-al-ed
  ➢ *Institut(e)-ion-al-ed-iz

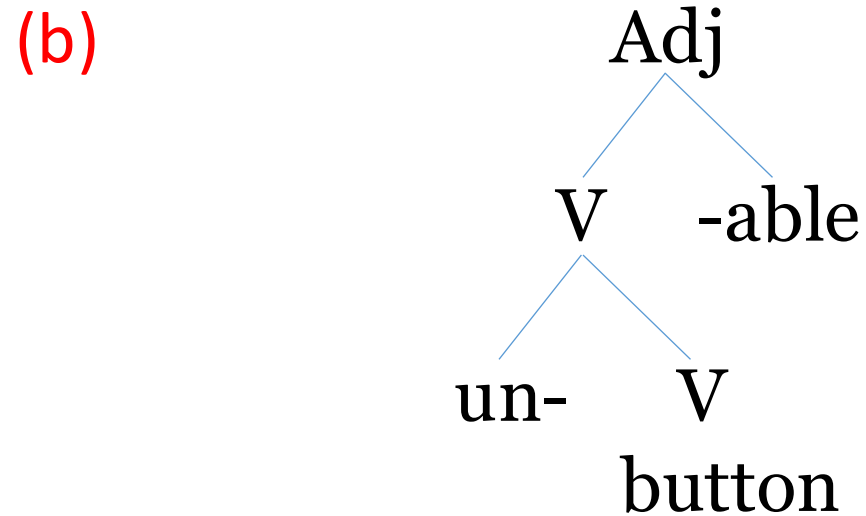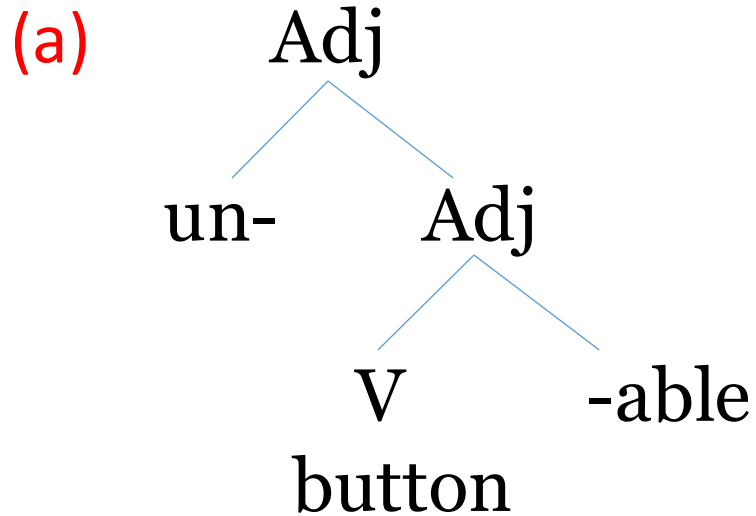o Morphemes are attached **one before another, depending on its function**

Hierarchical structure

"unbuttonable"

o What does '*un-button-able'* mean?

o It's **ambiguous**:
  ➤ Can be unbuttoned
  ➤ Cannot be buttoned

Hierarchical structure: Two possible analysis

o *Un-button-able* has two valid structure

(a)
```
          Adj
         /    \
      un-      Adj
              /    \
             V      -able
           button
```

(b)
```
          Adj
         /    \
        V      -able
       /  \
     un-   V
          button
```

o The prefix *un-* can be attached to Adj (as in left structure) or Verb (as in right structure).

Languages are structured: Syntax

o Noun phrases in English:
- ➢ Two old men
  *old two men
  *men two old
  *men old two

➢ Correct order: Numeral -> Adjective ->Noun

o Sentences in English
- ➢ John$_{Sub}$ saw$_{verb}$ Mary$_{Obj}$
  *John$_{Sub}$ Mary$_{Obj}$ saw$_{verb}$

➢ Correct order: Subject -> Verb -> Object

Languages are structured: Syntax

Ambiguity

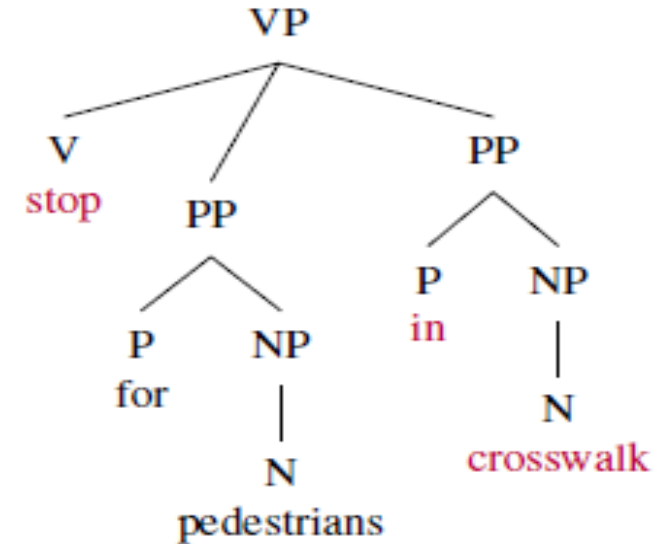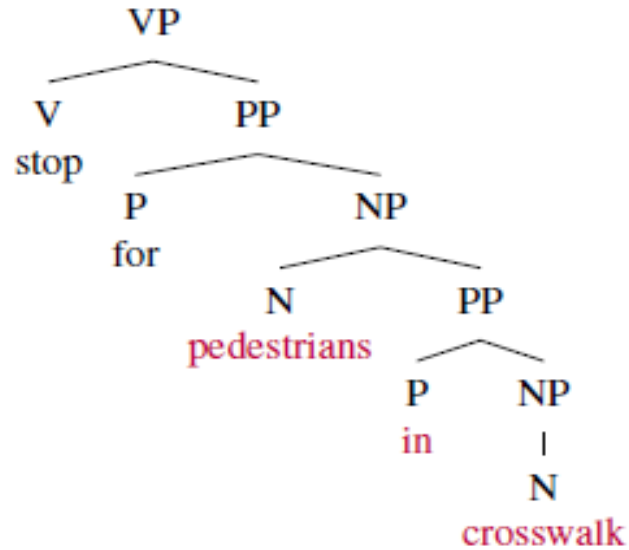Stop for pedestrians in crosswalk.

Stop for pedestrians in crosswalk.

Ambiguity

o Don't worry about the tree yet. Don't take it as official either (They're for illustration). This is where we will be headed.

Phonetics and Phonology

o We have intuitions about the sounds in our language.

o We can divide the sounds into consonants and vowels, for example.

   ➢ Three different sounds in "put"; two are consonants and one is vowel.

o Is the vowel in "put" the same as in "but"?

   ➢ **No!**

o Is the first vowel sound in "women" the same as in "fin"?

   ➢ **Yes!**

Languages are structured: Phonetics and Phonology

o Word-initial two consonant cluster in English.
- ➤ Clasp /<u>kl</u>æsp/– a word in English
- ➤ Clisp /klisp/– a "possible word" in English
- ➤ *Lkisp /lkisp/ – an "impossible word" in English

o **The descriptive rule (i.e., generalization):**
- ➤ The sequence of sounds "lk" cannot occur at the beginning of a word in English.

Languages are structured: Phonetics and Phonology

o Word-initial three consonant cluster
  ➢ Spring / <u>sprɪ</u>ŋ/
  ➢ *Srping /srpiŋ/

o **The descriptive rule**: the sequence of sounds "srp" cannot occur at the beginning of a word in English.

o But not all languages are so fussy. And some are more fussy! –Have you notice my pronunciation of the word "Spring"?

Cross-linguistic facts

o   An example from Hindi

  Isko   chhotaa   chhotaa   kaato   actual sentence
  this   small   small   cut   word by word *gloss*
  "Cut this into very small pieces."   translation into English

o   How different from English?

➢   The object comes before the verb. English does not allow this word order: (S)OV vs. (S)VO

➢   Intensificational meaning: An adjective can be reduplicated instead of modifying the adjective with another adjective.

Cross-linguistic facts

o Hindi morphology and syntax are not similar to English They are different from those of English.

o A linguist's task
➢ to determine what the rules in the two languages are such that a child learning English or Hindi learns that language with equal ease.

Cross-linguistic facts: Universal Grammar (UG)

o How does a child learn a language (their native language) so easily and so quickly without instruction?

o Noam Chomsky
  ➢ Human must have underlying principles that help them to acquire a language easily and quickly.

  ➢ Humans are born with an innate ability to acquire languages and that there are universal principles/rules that form the basis for language acquisition across different cultures and languages.

  ➢ UG provides a sort of language template in our brains, making it easier for us to grasp the grammar of the specific language we are learning.

Next class

o We will start with Phonetics.

o Reading
➢ O'Grady, Williams, et al. (2010). Phonetics, in *Contemporary Linguistics*. *6th edition*. Boston, New York: Bedford/St. Martin's. (**required**)