Syntax and Morphology

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6TH

Semester

Lecture 1
WORD STRUCTURE

❖ INTROOUCTION

- **Words are important:** basic units of language unlike phonemes and syllables, **words** carry **meaning**

- Unlike sentences, which are forgotten soon after we produce them, **words** are **stored** in a speaker's **mental dictionary** or **lexicon**. Words are the **fundamental building blocks** of language.

- Native speakers of English know thousands of words such as **read, language**, **computer**, **on,** whose meaning and form cannot be predicted

- **However,** once they know the meaning of ***phish*** (obtain sensitive information via email fraudulently), they can recognize and construct words such as: ***phised***, ***phiser***, ***phising***, and ***unphishable***.

- Thus**, MORPHOLOGY** is that component of the grammar which studies the **structure of word** to account for the knowledge that native speakers have about their own language.

- Native speakers know how to segment a string of sounds into words when they write, for instance, so then: **What is a word? How can it be defined?**

- Linguists define the **word** as the **smallest free form in a language**. This means that it can occur alone in different positions in the sentence as well:

(1) A: What creatures do children find most fascinating?
B: Dinosaurs.
(2) Paleontologists study **dinosaurs**

Dinosaurs are -s extinct (-s is NOT a free form)

❖ MORPHEMES

- Like syllables and sentences, words have an internal structure which consists of one or more **morphemes**.

- **A Morpheme is the smallest unit of language that carries meaning**.
  - ♥ For example: ***Builder*** is made up of ***build*** (construct) and -er (one who builds) ***Houses*** is made up of ***house*** (dwelling) and -s (more than one)

- One-morpheme word is said to be **simple** and two or more morpheme words are said to be complex.
  - ♥ Ex: ***hunt***, ***hunt-er***, and ***hunt-er-s***

❖ Free and bound morphemes

- A morpheme can be either **free**, when it can stand alone,

- or **bound**, when it must be attached to another one.
  - ♥ **Ex:** boy vs -s

- A free morpheme in English can be **bound** in different language.
  - ♥ Ex: **head** and ***fi** (in Athapaskan, an Amerindian lge). In this language, this morpheme is bound, sefi, meaning my head.

- Conversely a bound morpheme in English can be free in other language.
  - ♥ Ex: **play-ed vs thaan leew** (eat +pas in Thai)

❖ ALLOMORPHS

- Allomorphs are the variant forms of a morpheme.

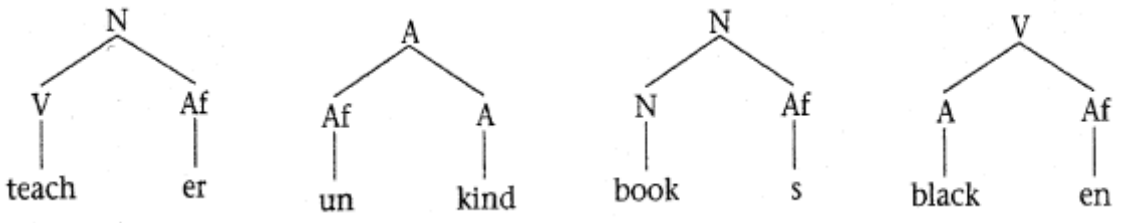
  - ♥ **Example 1**: the indefinite article in English has two variants: a when preceding a word that begins with a consonant (**a book**) and an when preceding a word that begins with a vowel (**an orange**)
  - ♥ **Example 2**: The plural morpheme **—s** has 3 pronunciations: **[s]**, **[z],** and **[əz**] as in **cats**, **dogs**, **judges**, **respectively**.

- Do not confuse spelling changes wish allomorphic variation. Ex: **e** in create and ride is dropped in **creat-ive** and **rid-ing**
- On the other hand, there is allomorphs in **electric/electric-ity** and **impress/impress-ion**, where the pronunciation changes but not the spelling **[k] → [s]** and **[s] → [sh]**

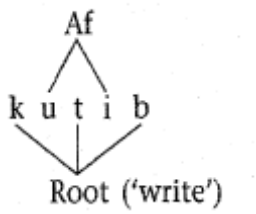
❖ ANLYSING WORD STRUCTURE

- To identify the internal structure of words, we need not only to **identify** the component morphemes but also to **classify** them according to their contribution to the **meaning** and **function** of the word.
- **Roots and affixes:** Complex words consist of a **root** morpheme and one or more **affixes**
- **The root** is the core of the word that carries the major meaning component.
- Typically, **roots** are **lexical** categories such as **N**, **V**, **A**, or **P**.
- **Affixes** are NOT **lexical** and are ALWAYS **bound** morpheme. **For ex**, **—er** in **teach-er** (**V+er → N**)

- Below are examples of the internal structure of some words



- **Affix tpes There are 3 types:**
  - ♥ A **prefix** is attached to the front of the base. **Ex**. *De-activate*, *re-play*, *il-legal*
  - ♥ A **suffix** is attached to the end of a base. **Ex**. *Faith-ful*, *govern-ment*, *huat-er*
  - ♥ An **infix**, winch less common, occurs within another morpheme. **Ex**. in TagaIog, the language spoken in the Philippines, we find: **bili → buy,** the past form of which is **b-in-ili → bought**.
  - ♥ Beware! **–ish** in (**boy-ish-nees**) is **NOT** an infix.
  - ♥ Arabic and other Semitic languages, has interesting illustration of infixing . Roots in Arabic are **consonantal**
  - ♥ Various combinations of vowels are added, including in between the consonants to mark grammatical contrasts such as:
    - **kataba→** 'wrote' **kutib →**has been 'written' **aktub→** 'I write/I am writing'
  - ♥ Representing these facts by assigning vowels o different **tiers,** level**:**



❖ PROBLEM CASES

- English morphology is said to be **word-based**. Consider the following: **re-do**, **treat-ment**. Most complex words are like these two
- Not all languages are like English, Spanish and Japanese, verbal roots are always bound and cannot therefore stand alone. Arabic is also like that.
- English also has a number of bound roots such as , **unkempt** (unkempt hair) which does not break into **un+kempt**
- Other words such as, **Inept** were **borrowed** into English from Latin *ineptus* (unsuited). Today, this word cannot be broken up into ***in-ept**

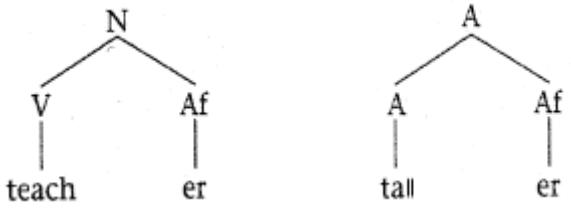
- Another class of borrowed words from Latin via French is represented by following: **receive, conceive, perceive, permit, submit, and commit**. Each potential division of the word does not have a meaning of its own. **Re →** again but **cevie →** ? Consequently, these words cannot be segmented.

Lecture 2
DERIVATION

❖ Introduction

- **Derivation** is an affixation process that forms a word with a meaning and/or category distinct from that of its base
  - ♥ **Ex.** *Sell+er* → *seller*, *V+er* → *N*, NOT to be confused with *tall+er* → *tall-er*, *A+er* → A Here **er** is inflectional

Derivation **inflection**



- Once formed, derived words become independent lexical items and receive their own entry in a speaker's **mental dictionary**. With time, words acquire new meanings.
  - ♥ **Ex.** Profession means 'career' rather than the act of professing.

❖ Some English derivational affixes

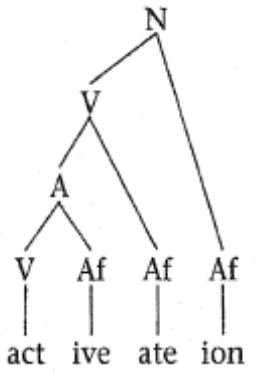
✓ **Examples of derivational suffixes:**

fix.-**able**,	refus-**al**,	claim—**ant**,	reach-**er**,	shoot-**ing**,	impress-**ive**,	treat-**ment**,
king-**dom**,	faith-**ful**,	presidet-**ial**,	optimist-**ic**,	hospital-**ise**,	brain-**less**,	poison-**ous**,
tall-**ish**,	active-**ate**,	black-**en**,	stupid-**ity**,	slow-**ly**,	happi-**ness**.	(See p. 124)

✓ **Complex derivations**

Some words require multiple levels of word structure is in Fig. 2 below:

A multilayered internal structure

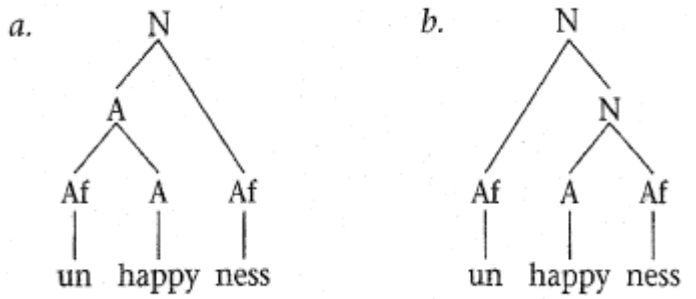


This word illustrates a multilayered internal structure with the attachment of an affix to an appropriate base.

✓ **Competing analyses**

In some cases, the internal structure of a word is **ambiguous** between two competing analyses

♥ **Ex Unhappiness**



The preferred analysis is the one in (**Fig.a**) **Un_** is more attested as a prefix with adjectives than with nouns

♥ **Ex: un**able, **un**kind, **un**hurt

♥ **but NOT:** *unknowledge, *unhealth, *unninjury.

✓ **Constraints on derivation**

Derivation is often subject to special constraints and restrictions.

♥ **Ex**. The suffix -**ant** can attach to bases of Latin origin such as combat-**ant**, assist-**ant**,

♥ **but NOT** those of English origin such as *hefp-**ant**, *fight-**ant**.

A derivational affix may attach only to a base with particular phonological properties.

♥ **Ex.** The -**en** combines with adjectives to create verbs.

♥ **Ex.** Whit**en**, soften, madd**en**, quick**en**, liv**en**,

♥ **but NOT** *abstract**en**, *blu**en**, *green**en**, angry**en**, slow**en**.

This suffix can only combine with a monosyllabic base ending in an obstruent (stop fricative or affricate).

❖ Two classes of derivational affixes

- **Class 1:**

They trigger changes in the consonant or vowel segment of the base and may affect stress placement. **Ex.**

♥ **_ity**	san-**ity**	**[ei]** changes to **[i].**
♥ **_y**	democrac-**y**	**[t]** changes to **[s]** and stress shifts from **'democrat** to **de'mocracy**
♥ **_ive**	product-**ive**	stress shifts from **pr'oduct** to **pro'ductive**.
♥ **_ise**	public-**ise**	shift from **[k]** to **[s]** from **public** to **publicise**.

- **Class 2:**

a) These tend to be phonologically **neutral**, not affecting the segmental makeup of the base.

♥ **Ex.** Prompt-**ness**, hair-**less**, hope-**ful**, quiet-**iy**, self-**ish**, defend-**er**.

b) These usually cannot intervene between the root and a **class 1** affix.

♥ **Ex.** Divis-**ive**-**ness**, fear-**less**-**ness**.

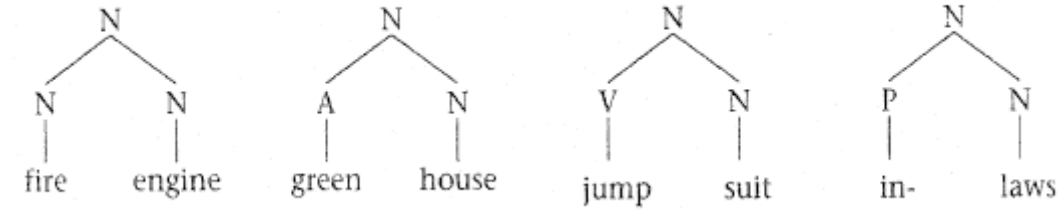
- ♥ **but NOT** *fear-**less** -**ity**

❖ Compounding

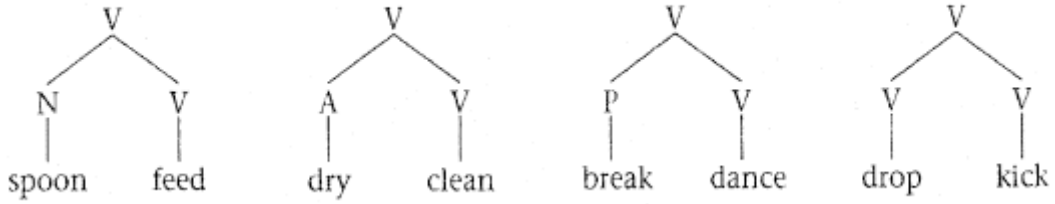
- Compounding is a process of word formation in English which consists In **combining existing words to create complex words**
- The resulting compound may be Noun or a Verb or an Adjective. **Ex:**

(1)

Noun compounds

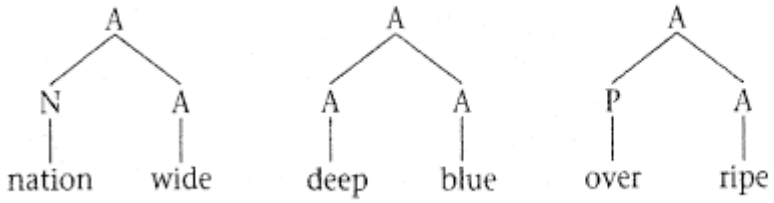


Verb compounds



(2)

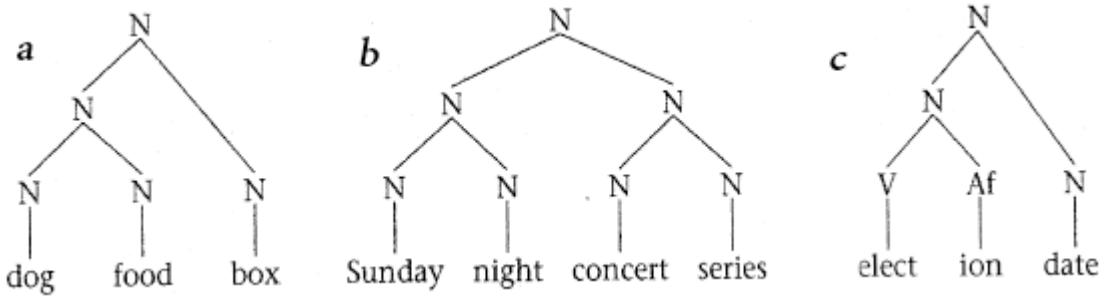
Adjective compounds



- Note that **the rightmost word determines the category of the compound**.
  - ♥ Thus, **Greenhouse** is noun because it ends with the noun **house**.
  - ♥ **Spoon feed** is a verb because it ends with the verb **feed**.
- The morpheme that determines the category of the entire word is called **HEAD**.

- Compounds can combine with other words to create even larger compounds. **Ex.**

(3)



- **Notice how compounding interacts with derivation in (3c)**

❖ Properties of compounds

- English orthography is not consistent in representing compounds. They can be written as single words, or separated by a hyphen, or simply separate words.
- As for pronunciation, some fact **MUST** be noted

- adjective—noun compounds are characterized by more prominent/stress of their first component.
  - ♥ **greenhouse** → a glass enclosed garden **/versus/** green house a house pointed green
  - ♥ **blackboard** → a chalkboard **/versus/** a black board (a board painted in black)

- Tense and plural markers cannot affect the frst element in the compound.
  - ♥ **Ex.** *the player dropped kick the ball **/versus/** the player drop kicked the ball.

❖ Endocentric and exocentric compounds

- In most cases, a compound denotes a sub-type of the meaning/concept denoted by its head /rightmost element in the compound.
  - ♥ Ex: **steamboat** → a boat powered by steam'
  - ♥ **air field** → a field where airplanes land'
  - ♥ **fire drill** → a practice in the case of a fire'
- Such compounds are said to be **endocentric**

- In a smaller number of cases, the meaning of the compound does not follow from the meanings of its compounds.
  - ♥ Ex: **redhead** → a person with red hair
  - ♥ **redneck** → a person not a type of neck.
- Such compounds are said to be **exocentric**.

- **Exocentric compounds** allow the suffixation of -s to irregular plurals, the endocentric ones do NOT.

In ENDOCENTRIC compounds	**In EXOCENTRIC compounds**
♥ wisdom teeth	♥ saber tooths (extinct species of carnivore)
♥ club feet	♥ bigfoots (mythical creatures; Sasquatch)
♥ policemen	♥ Watchmans (a type of portable TV)
♥ oak leaves	♥ Maple Leafs (Toronto's NHL hockey team)

Lecture 3
INFLECTION

❖ What is INFLECTION?

- It is a change or modification in the form of a word to mark grammatical. For examples, languages contrast plural and singular nouns by the addition of a plural affix **such as**
  - ♥ **-s** in English as in **book~ book-s**.
- The base form to which an inflectional affix is added is also called a **stem**

❖ INFLECTION IN ENGLISH

- With only 8 inflectional affixes, English is not a highly inflected language.

- English inflectional affixes

  - ♥ **Nouns**: Plural -s → **books** ;
    Possessive (genitive) -s → **John's book**

  - ♥ **Adjectives**: Comparative -er →the **smaller** one,
    Superlative -est → the **smallest** one.

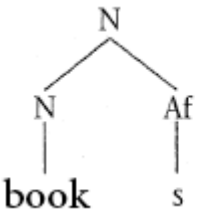
  - ♥ **Verbs**: 3 person singular .Non-past -s → he **reads** well,
    Progressive -ing → he is **working**;
    past tense -ed → he **worked**;
    past participle -en/ed → he has **eaten/worked**.

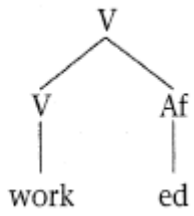
❖ INFLECTION VERSUS DERIVATION

- Four criteria are often used to distinguish between inflectional and derivational affixes.

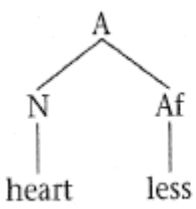
✓ **1- Category change**

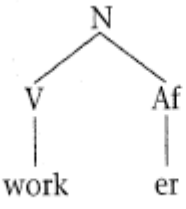
- Inflection does not change either the grammatical category of meaning of its host

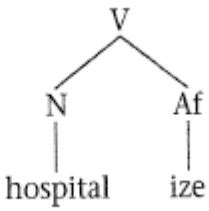


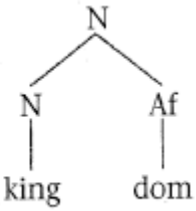


- Derivational affixes do change the category and meaning of its host



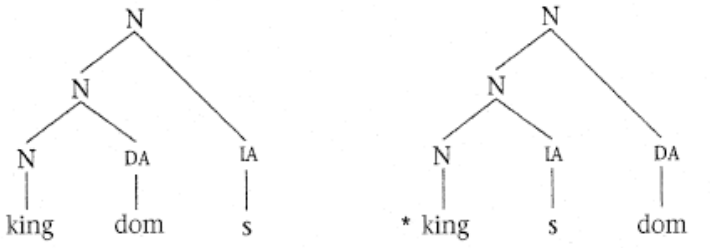






✓ **2- Order**

- A derivational affix (**DA**) must combine with the base before an inflectional affix (**IA**);
- i.e, inflection applies to the output of derivation



✓ **3- Productivity**

- **IAs** have few exceptions, comparatively.
- **DAs** typically apply to restricted classes of basis.
  - ♥ **Ex:** modernize vs *new-ise;
  - ♥ legal-ise vs *lawful-ise
  - ♥ Confine-ment; align-ment;
  - ♥ treat-ment; *arrest-ment; * straighten-ment, etc

✓ **4- Semantic transparency**

- **IAs** contributes transparent and consistent meaning to their host.
  - ♥ **Ex.** books, trees, cats or walked, played, talked, etc.
- **DAs** do not contribute consistent meaning. Often it is not possible to predict the word's meaning from its parts.
  - ♥ **Ex:** Actor is someone who acts
  - ♥ but a professor is not so who professes .
  - ♥ Government can mean institution as in government's program
  - ♥ but it can also mean act of governing s in government by the people

❖ OTHER INFLECTIONAL PHENOMENA

- **CASE:** It is a change a word's form to mark change in its grammatical function (*subject, direct object, indirect object, and so on*).
- English does not mark case on noun, but it does on pronouns;
  - ♥ **Ex.** he **VS** him,
  - ♥ he met him **VS** *him met he.
- Standard Arabic marks Case on nouns: (*nominative, accusative, and genitive*)

أكلَ	عمرُ (مرفوع)	تفاحةً (منصوب)	في	المكتبِ (مجرور)
Akala	3omar-u	t-tuffaahat-a	fi	l-maktab-i
Ate	Omar- *nominative*	apple- *accusative*	In	the-office- *genitive*

Omar ate the apple in the office

- **AGRFFMFNT:** occurs when a word is inflected to match certain grammatical properties of another word (**t-tuTaabuq**)
- In English, it is limited to the third person singular of the sample present;
  - ♥ **Ex**: He work-**s** very hard.

❖ OTHER MOIPHOLOGICAL PHENOMENA

✓ PROCFSSFS FLATFD TO PNFIECTION

– Internal Change:

- a process that substitutes a non-morphemic segment to mark a grammatical contrast.
  - ♥ **Ex.** sink → sank (ablaut),
  - ♥ goose → geese (umlaut).
- The change explained historically is as follows:
  - ♥ **Old English singular form of goose:** /go:s/
  - ♥ **Old plural form:** /go:s-i/
  - ♥ **Umlaut:** /goe:s-i/
  - ♥ **loss of the plural suffix:** /goe:s/
  - ♥ **Other changes:** /ge:s/ then /gi:s/

- Note that internal change is NOT infixing. There is no base form {**sg**}, {**sk**}. Infixing and internal change show that morphology is not always concatenative, meaning that affixation does not always apply sequentially.

– Suppletion:

- it occurs when a morpheme is replaced by another which is extremely different to mark a grammatical contrast.
  - ♥ **Ex.** Go → went
  - ♥ and was → were
- Sometimes It Is difficult to distinguish between suuppletion and internal Change.
  - ♥ **Ex.** Think → thought,
  - ♥ seek → sought.
- Often, t is treated as an extreme form of internal change or as partial suppletion.

– Reduplication :

- it involves the repetition of the base form or some part of it. **Ex:**

✓ **In Turkisk (<u>full doubling</u> of the base form).**

♥ iyi تنطق ايه	iji	well	<u>iji</u> iji	very well	رمز صوت حرف y هو [j] ي
♥ güzel تنطق قوزال	gyzel	beautiful	<u>gyzel</u> gyzel	very beautiful	

✓ **In Tagalong** لغة فليبينية **(<u>partial doubling</u> of the base form)**

♥ takbo	run	<u>ta</u>takbo	will run
♥ lakad	walk	<u>la</u>lakad	will walk

– Tone placement:

- Tone is used in some languages to mark grammatical contrast
  - ♥ **Ex: In Mini-Bill, a language spoken in the Congo, we find the following contrast:**
  - ♥ **zi → ate** while **zi → will eat**

– Conversion

- Often considered to be a type of derivation, it involves a change in meaning and category. It is also called **zero derivation**.

(Noun derived from Adjective).
- ♥ the poor, the rich, the sublime.

(preposition derived from verb),
- ♥ up the price

(verb derived from Adjective).
- ♥ dirty (a shirt)
- ♥ empty (the box)
- ♥ better (the old score)
- ♥ right (a wrong)
- ♥ total (a car)

(noun derived from verb).
- ♥ (a long) run
- ♥ (a hot) drink
- ♥ (a pleasant) drive
- ♥ (a brief) report
- ♥ (an important) call

(verb derived from noun)
- ♥ ink (a contract)
- ♥ butter (the bread)
- ♥ ship (the package)
- ♥ nail (the door shut)
- ♥ button (the shirt)

- Conversion in two syllable words a often marked by a shift in stress

NOUN	**VERB**
♥ 'implant	♥ im'plant
♥ 'import	♥ im'port
♥ 'present	♥ pre'sent

– Clipping :

- A process whereby a polysyllabic word is shortened by deleting one or more syllables.
  - ♥ **Ex:** Names: Ron → Ronald, Liz → Elisabeth
  - ♥ In casual speech: prof → professor, phys-ed → physical education
  - ♥ Other forms are much more widely spread: ad, lab, demo, etc.
  - ♥ recently, we find internet-inspired creations such as: blog → (website log of events).

– blends:

- They are words that are formed by blending non-morphemic parts of two already existing words. **Ex:**
  - ♥ **brunch =** breakfast + lunch,
  - ♥ **smog =** smoke + fog
  - ♥ **infometical =** information + commercial
  - ♥ **ginormous =** gigantic + enormous
  - ♥ **bit =** binary + digit
  - ♥ **modem =** modulator + demodulator, etc.

– Backformation

- creates a new word by removing part of an existing word, **Ex**:
  - ♥ Resurrection → resurrect
  - ♥ donation → donate
  - ♥ enthusiasm → enthuse
- Ex of new recent such creations are :
  - ♥ liaison → liaise
  - ♥ allegation → allegate
  - ♥ administration → administrate
  - ♥ aggression → aggress

- **Acronyms**

- are formed by Keeping the initial letters of some or all the words in a phrase and pronouncing them as ONE Word. **Ex**:
  - ♥ **UNICEF** → United Nations International Children Emergency Fund
  - ♥ **NATO** → North Atlantic Treaty Organisation

- **Word coinage:**

- Common for names of products.
  - ♥ **Ex**. Kodak, Teflon.

❖ MOPHOPHONEMICS

✓ Morpheme and their allomorphs

- **Is every morpheme pronounced the same in all contexts?** The answer is NO, Many morphemes have two or more pronunciations called **allomorphs**. The choice between them is determined by the **phonological context.**

  - ♥ **Examples 1:** The plural in English. How is the plural morpheme in English formed ?
    Answer, by adding **-s** to the singular form, Consider: cat**s**, dog**s**, horse**s**.

- As is well known, English spelling does not reflect pronunciation. This suffix has **three allomorphs**:
  - **[s]** as in cat**s**, lamp**s**,
  - **[z]** as in dog**s**, day**s**,
  - **[iz]** or **[əz]** as in horse**s** or judge**s**.

- The pronunciation is predictable on the basis of the phonological context:
  - ♥ Sibilants (hissing sounds) such as *horses, roses. bushes, churches, judges, calls* → **[iz]**
  - ♥ Otherwise, when preceded by a voiceless consonant**, [s]** is used as in → *cots*, *rocks*, *cups*.
  - ♥ Otherwise, when preceded b a voiced consonant**, [z]** is used as In → dogs, days, birds.

  - ♥ **Example 2:**
- How is the past morpheme **-ed** realized phonologically?
  [t], [əd], and [id] or [əd] (to be done as an exercise in class).
- Is Allomorphy a matter of phonological conditioning only?
  Yes, as in the cases above, but NO for others. Consider the word **lie**. It ends in a vowel, a voiced sound and therefore forms its plural lies with **[z],** However, if we replace **[z]** with **[s],** we get an actual word **lice**. the plural of **louse**.
- Grammar also accounts for allomorphy in English.
  - ♥ Consider ***cliff*** and ***laugh***. Both form their plural with **[s]** ***cliffs*** and ***laughs***,
  - ♥ but ***wife*** and ***loaf*** do not, *****wifes***,* ***loafs*** are ill-formed. Their plural is ***wives*** and ***loaves***.
- Similar words that change their voiceless consonants ***f, s, th*** to voiced counterparts **v, z, dh** are:
  - ♥ knife → knives,
  - ♥ life →lives,
  - ♥ path → paths.
- Notice that the change is restricted to the plural morpheme: my **wife's** car **does NOT** undergo any change.

Lecture 4

PRACTICE EXERCISES

MORPHOLOGY PRACTICE

❖ **Exercise 1: Circle the correct answer in the following rig multiple choice questions:**

1. **Morphology is the level of grammar concerned with the ----------**
   - **a)** Structure of words
   - **b)** Stricture of words
   - **c)** Status of words
   - **d)** Structure of worlds

2. **Th. association between most words and their meanings is purely ----------**
   - **a)** Controversial
   - **b)** Conditional
   - **c)** Central
   - **d)** Conventional

3. **3. We can have ---------- for a single TYPE**
   - **a)** Only one TOKEN
   - **b)** Two TOKENS
   - **c)** More than one TOKEN
   - **d)** Three TOKENS

4. **When we derive one word from another, we ----------**
   - **a)** Change its class, for example, from Verb to Noun
   - **b)** Change its tense, for example , from Past to Present
   - **c)** Both of the above
   - **d)** None of the above

5. **Roots are ----------**
   - **a)** NOT always free
   - **b)** Always free
   - **c)** Both of the above
   - **d)** None of the above

6. **A compound is a word that contains ----------**
   - **a)** One prefix and one word
   - **b)** One suffix and one word
   - **c)** Two root morphemes and one word
   - **d)** Two free standing forms

7. **---------- is a morpheme that makes the most significant contribution to a word's meaning.**
   - **a)** The phoneme
   - **b)** The derivational morpheme
   - **c)** The inflectional morpheme
   - **d)** The root

8. **---------- is some kind of resemblance between the sound of a word and what it denotes/means.**
   - **a)** idiom
   - **b)** Proverbs
   - **c)** Onomatopoeia
   - **d)** None of the above

9. **Suppletion occurs when a word is represented by two or more ---------- roots.**
   - **a)** Different
   - **b)** Similar
   - **c)** Both a and b
   - **d)** None of the above

10. **Choose the group of words that result from derivation**
    - **a)** Cry, cries, cried, crying
    - **b)** Tooth, teeth
    - **c)** kind, unkind, kindness, kindly
    - **d)** None of the above

APPLICATION EXERCISES

❖ **<u>EXERCISE 1:</u> Divide the following words Into morphemes**

<u>Examples:</u>

i. truth **morphemes**: (true) (th)
ii. barefoot **morphemes**: (bare) (foot)

- **a)** research ----------
- **b)** butterfly ----------
- **c)** holiday ----------
- **d)** morpheme ----------
- **e)** phonology ----------

❖ **<u>EXERCISE 2:</u> Some words in (2) contain suffixes. Identify the suffixes by circling them.**

- **a)** happiness ----------
- **b)** freedom ----------
- **c)** flowers ----------
- **d)** brother ----------
- **e)** blackboard ----------

❖ **<u>EXERCISE 3: Some words in (3) contain prefixes. Identify the prefixes by circling them.</u>**

- **a)** unable ----------
- **b)** discourage ----------
- **c)** establish ----------
- **d)** receive ----------
- **e)** strawberry ----------

❖ **EXERCISE 4: For each word below, indicate whether the word is morphologically simple (S) or complex (C) , includes an inflectional affix (IA), or includes a derivational affix (DA) by circling the relevant answer**

S →Simple, C → Complex, IA → Infi. Affix, DA → Deriv. Aff.

a) rider **S C IA DA**

b) colder **S C IA DA**

c) silver **S C IA DA**

d) lens **S C IA DA**

e) legs **S C IA DA**

❖ **EXERCISES 5: (i) Identify the root in the words below by underlining it;**
(ii) Stare the syntactic category it belongs to.

♥ **Example: friendly** Friend (Noun)

a) lamps ---------- ----------

b) kindness ---------- ----------

c) hinted ---------- ----------

d) payers ---------- ----------

e) grandfathers ---------- ----------

Lecture 5

PART II: SYNTAX - THE ANALYSIS OF SENTENCE STRUCTURE

❖ **What is a GRAMMAR?**

- It is a theory of language which attempts to characterize the structure of language.

- ALL languages have a grammar
  - **ALL grammars are equal** because ALL languages are acquired unconsciously by all children and at an early age. Indeed, a child Is capable of learning any language. In other words, humans are endowed with a Language Faculty, an initial and universal program, that enables them to acquire any language

  - All grammars are alike In basic ways → **UNIVRSAL GRAMMAR**

  - A grammar Is the characterization of the tacit **TACIT/IMPLICIT/u NCONSCIOUS** knowledge that native speakers have of their own language.

❖ **The organisation of a Transformational Generative Grammar**

- A **GRAMMAR** In this sense Is essentially an **INPUT / OUTPUT system**. It consists of:
  - ♥ **LEXICON** a mental dictionary (information on words: pronunciation, form, and meaning)
  - ♥ **COMPUTATIONAL SYSTEM** : operations that combine and arrange words in particular ways.

  Two main modes of operation / structure building: **MERGE** and **MOVE**.
  - **Merge** is operated on the basis of Information from the Lexicon and a theory of phrase structure, known as **X** theory.
  - As for **MOVE**, It Is the operation of displacing elements around In a structure.

❖ **CATEGORIES AND STRUCTURE**

- Words can be grouped into a small number of classes called **syntactic categories**.
- This classification is based on their **meaning**, **type affixes** they associated with and the **structures** in which they occur.

❖ **Categories of words.**

- Categories of words are classified as either **LEXICAL** or **FUNCTIONAL**.
  - The Lexical categories are nouns (**N**), verbs (**V**), adjectives (**A**), and prepositions (**P**) and Adverbs.
  - ♥ **Ex. Noun:** John, Ali, courage, book ;
  - ♥ **Verb** : come, go, discuss,
  - ♥ **Adjective**: good, bad, tall;
  - ♥ **Preposition**: to, in, near;
  - ♥ **Adverb**: badly, quickly, hard.

- The Functional categories are Determiners (**Det**), Auxiliary verbs (**Aux**), Conjunctions (**Con**) and Degree words (**DEG**). etc.
  - **Ex. DET:** a, the, this;
  - **DEG:** too, so, very. more, quite;
  - **AUX (Modal)** will, would, could. etc;
  - **AUX (non-modal):** be, have;
  - **CONJ:** and, or, but, etc.

- One source of confusion is that one word can belong to more than one category.
  - **Ex : Comb and Near:**
  - The woman found a **comb** (**N**)
  - The boy should **comb** (**V**) his hair
  - The boy stood **near** (**P**) the fence
  - The runners **neared** (**V**) the finish line
  - The end is **nearer** (**A**) than you think.

❖ **HOW CAN WE DETRMINE A WORD'S CATEGORY?**

- By considering its **meaning**, its **inflections**, its **distribution**.

❖ **MEANING**

- **Nouns** name or denote entities; viz.,
  - people (Ali, John)
  - and things (book, desk)

- **Verbs** denote
  - actions (run, jump),
  - sensations, (feel, hurt)
  - and states (be, remain).

- **Adjectives** designate a property or an attribute of the entities denoted by the noun,
  - as in **tall building**, **tall man**.

- **Adverbs** designate properties and attributes for actions, sensations, and states denoted by verbs.
  - **Ex. MANNER** Janet left QUICKY Janet left EARLY

- HOWEVER, meaning cannot always determine a word's category. Words such as
  - **difficulty, truth, likehood**, do not refer to entities in the strict sense.

- Similarly a noun such as push may denote an action in '**give someone a push**.' Further problems arise with different categories having the same meaning such **like** (V), and **fond** (A)
  - **in Mice like/are fond of cheese.**

❖ **INFLICTION**

- **NOUNS** Inflect for plural **-s** and possessive **-'s**
  - ♥ eg, book**s**, John**'s**

- **VERBS** Inflect past tense -**ed**, progressive -**ing** and third person singular **–s**
  - ♥ eg, arriv-**ed**, arriv-**rig**, arrive-**s**

- **ADJECTIVE** inflect for the comparative **-er** and superlative **–est**
  - ♥ eg, tall-**er**, tall-**est**, fast-**er** fast-**est**

- HOWEVER, even inflection fails to provide, a word's category in some cases such as : ***intelligenter**, ***beautifuiest** Also, some nouns cannot be used in the plural such as: ***moistures**, ***braveries**, ***knowledges**.

❖ **DISTRIBUTION**

- A more reliable criterion for determining a category type involves its distribution, meaning what elements (especially functional categories it can co-occur with).

- For ex. Nouns appear with a **DET**, Verbs with an **AUX**, and Adjectives with **DEG** adverbs.
  - ♥ Ex. **A car, the book, has gone, will stay, very rich, too big**.

- Of course, we can also predicate that the following combinations are not possible
  - ♥ *the destroy (**V+DET**),
  - ♥ *very arrive (**DEG +V**),
  - ♥ *will destruction (**AUX + N**).

❖ **PHRASE STRUCTURE**

- Sentences are simply formed by juxtaposing words like beards on a necklace

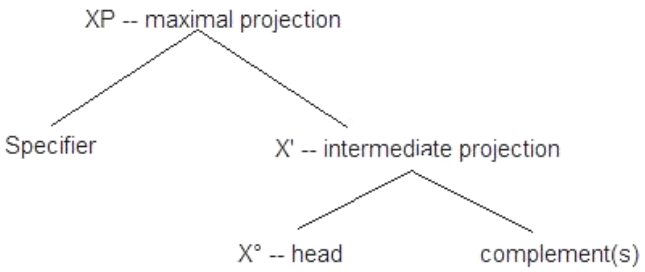
- Rather they a **hierarchical** design/structure in which words are grouped into larger units called **phrases**.

- In a sntence like:
  - ♥ **The doctor examined the patient,**
    - The words **the** and **doctor** form a phrase (NP)
    - and the words **examined** and **the patient** form another phrase (VP).
  - ♥ **[The + doctor] [arrived + quickly].**
- In Traditional syntactic analysis, [**the doctor**] Is the **Subject** and [**arrived quickly**] Is the **Predicate**.

❖ **X' Schema**

- A phrase can be broken down into **3** parts a **HEAD**, a **SPECIFIER**, and a **COMPLEMENT**.

- Arranged as in the schema below:



- **The schema above captures the following generalisations:**

  (1) All phrases have a **tree-level** structure: (**X. X', XP**)

  (2) All phrases contain a **head**: **X**

  (3) If there is a **complement**, it is attached to the intermediate **X'** level as a sister of the head.

  (4) If there is a **specifier** it is attached at the XP, as a sister of **X'**

Lecture 6

THE ANALYSIS OF SENTENCE STRUCTURE

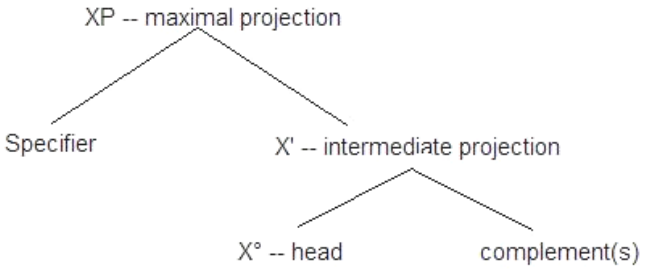
❖ PHRASE STRUCTURE

- Sentences are NOT simply formed by juxtaposing words like beads on a necklace.
- Rather, they have a **hierarchical** design/structure in which words are grouped into larger units called **phrases**.
- In a sentence like:
  - ♥ **The doctor examined the patient**.
  - ♥ The words **the** and **doctor** form a phrase (**NP**)
  - ♥ and the words **examined** and the **patient** form another phrase (**VP**).
  - ♥ (The + doctor) (examined + the patient).

- In Traditional syntactic analysis, **the doctor** is the Subject and **examined the patient** is the Predicate.

❖ X' Schema

- A phrase can be broken down into **3** parts a **HEAD**, a **SPECIFIER**, and a **COMPLEMENT**.
- Arranged as in the schema below:

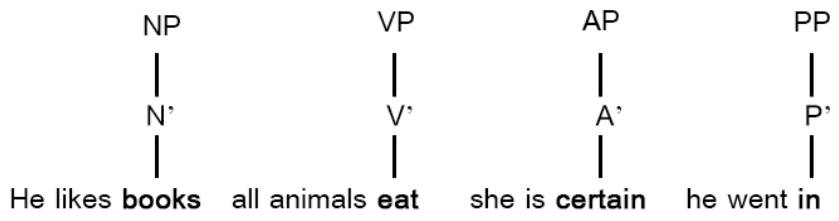


- **The schema above captures the following generalisations:**

(5) All phrases have a **tree-level** structure: (**X. X', XP**)
(6) All phrases contain a **head**: **X**
(7) If there is a **complement**, it is attached to the intermediate **X'** level as a sister of the head.
(8) If there is a **specifier** it is attached at the **XP**, as a sister of **X'**

❖ Heads

- The head is the **obligatory nucleus** around which a phrase is built.
- **X** in the schema above can be **N**, **V**. **A**. or **P**. **A** head can form a phrase just by itself.



Phrases consisting just oh a Head

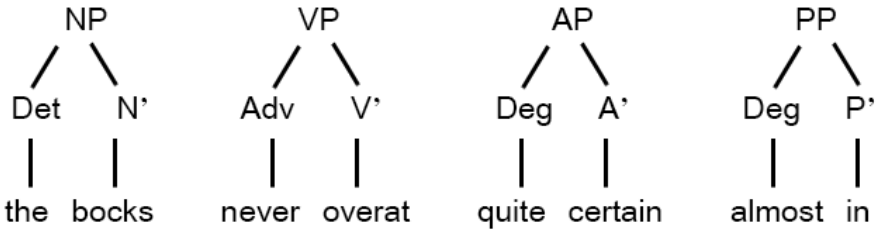
❖ **Specifiers**

- The type of **Spec** In a phrase depends on the category of the Head
- **Det** serves as **Spec** of **Ns,** preverbal adverbs serve as **Spec** of **Vs** and **Deg** as **spec** of **As**.

  - ♥ **Det** → Spec of **N** ; eg: a, those, my, no, etc.
  - ♥ **Adv** → Spec of **V**; eg: never, perhaps, often, always.
  - ♥ **Deg** → Spec of **A**; eg: very, quite, so
  - ♥ **Deg** → Spec of **P**; eg: almost

- Syntactically, Spec medic the boundary of a phrase. In English, they occupy the leftmost position in a phrase.

- Syntactically, Spec make the meaning of the head more precise.



Abbreviation

Specifiers → **Spec**
Determiners → **Det**
Auxiliary verbs → **Aux**
Conjunctions → **Conj**
Degree words → **Deg**

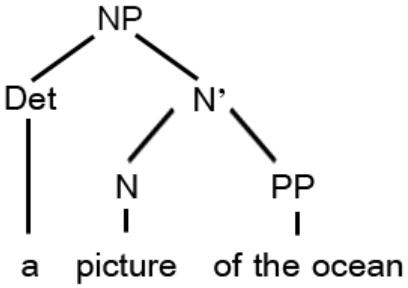
Noun → **N**
Verb → **V**
Adjective → **A**
Adverb → **Adv**
Prepositional → **P**
Complement → **C**
Sentence → **S**
Inflection → **I**

Noun Phrase → **NP**
Verb Phrase → **VP**
Adjective Phrase → **AP**
Adverb Phrase → **AdvP**
Prepositional Phrase → **PP**
inflection phrase → **IP**

❖ **Complements**

- Consider the following more complex phrases:
  - **a) NP** a picture of the ocean
  - **b) VP** never trust a rumor
  - **c) AP** quite certain about Mary
  - **d) PP** almost in the house

- In addition to the Specifiers and the underlined heads, these examples contain **COMPLEMENTS**.



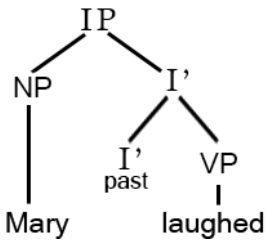
- These are phrases which complete the meaning of the heads.
- Complements are semantically selected by their heads.
- Syntactically, they are sisters the selecting head.
- **The 4 examples** above conform and illustrate the **X'**-schema given above. Ex (a) is given below.
- ((Try to draw a tree diagram for the others.)

❖ **The merge operation**

- We can formulate the following operation for sentence building:
- **MERGE:** Combine words in a manner compatible with the **X'** schema.
- The merger operation follows **a mode of application which is bottom up and right to left.**

❖ **SENTENCES**

- The largest unit of syntactic analysis Is the **sentence**.
- Typically, sentences are made up of an **NP** (the subject) and a **VP** (the Predicate).
- These two phrases are grouped together by **Inflection**.
- **I** (for short) **is the syntactic head of a sentence**. It stands for the Tense element of the sentence.
- On the other hand, because of Its central role in determining the meaning of a sentence, the **verb** is said to be the **semantic head** of **S**.
- A simple, sentence structure is provided below:



(Notice that the verb's ending and the tense feature do match)

♥ Advantage of this abstract analysis is that sentences have the same internal structure as phrases.

♥ As a head, I Is obligatory and this account for sentences being necessarily tensed

♥ **I** is a natural locus (position) for Modals, i.e. In between the subject and the **VP**.

♥ Reduces the burden of language acquisition

❖ **TESTS FOR PHRASE STRUCTURE**

- Words are grouped into **constituents**. However, how can we sure of the correctness of a particular grouping. There are syntactic tests to confirm constituent structure. These are:

– **The Substitution Test**

Replacement of the entire constituent by ONE word such as ***they***, ***it***, ***there***, ***do so***. In the example below, **[THEY]** replaces the **NP** children and **[DO SO]** replaces the **VP** stop at the corner.

♥ **[The children]** will I **[stop at the corner]** if they see us **do so**

The PP ***at the corner*** can also be replaced by one word namely THERE.
→ **They** will stop **there** if they see us **do so**.

– **The Movement Test**

The PP ***at the corner*** can be shown to be a constituent by moving it all to a different position in the sentence. → Movement test

♥ They stopped **[at the corner]** → AT THE CORNER, they stopped. But* at the , stopped corner

– **The Coordination Test**

A group of words forms a constituent If it can be joined to another group of words by a coordinating conjunction such ***and***, ***or***, ***but***.

♥ The children **[went to the playground]** and **[stayed there all day]**
(The coordinated structure is **VP**)

Lecture 7

PRACTICE EXERCISES I

❖ **EXERCISE 1: Some of the sentences below are ungrammatical. Can you figure out what makes them ungrammatical?**

1. -

a) The instructor told the students to study
b) *The instructor suggested the student to study
c) The customer asked for a hot chocolate
d) *The customer requested for a hot chocolate

2.

a) The pilot landed the plane
b) The plane landed A journalist
c) A journalist wrote the article
d) *The article wrote
e) Jerome is tired of her job
f) *Jerome is satisfied of her job

--

❖ **EXERCISE 2. Indicate the category of each word in the following sentences:**

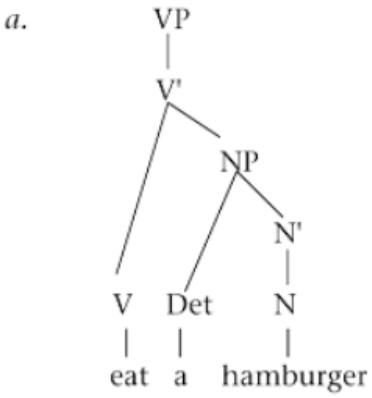
a) The glass broke
b) These tall trees are blocking the road
c) The peaches never appear quite ripe
d) I will see you when I finish
e) I don't like that
f) Some students always complain

❖ **EXERCISE 3: Each of the following phrases consists of a Spec and a Head. Build a tree for each one complying with the X'-schema.**

a) The zoo
b) This house
c) so witty
d) Quite cheap
e) always try
f) never surrender
g) Less bleak
h) very competent

❖ **EXERCISE 4: Each of the following phrases consists of a Head and a Complement. Build a tree structure for each one of them following the X'-schema.**

a) Into the zoo
b) Full of mistakes
c) Fixed the telephone
d) study this material
e) Arguments about the elections
f) Success of the program



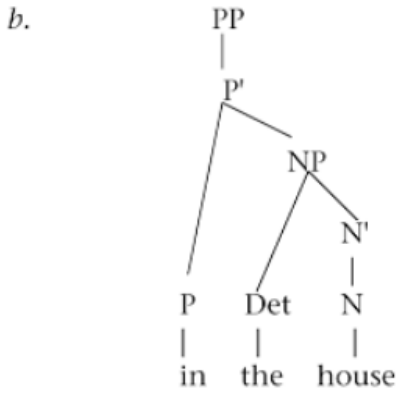


Figure 2 Phrases consisting of a head and a complement

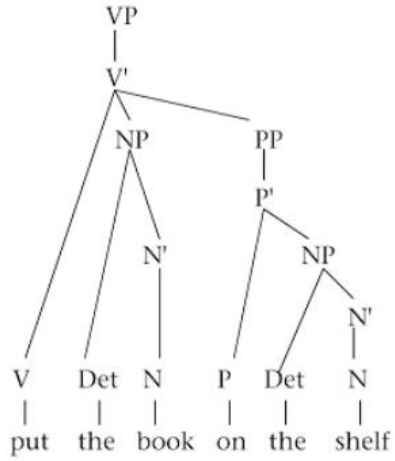
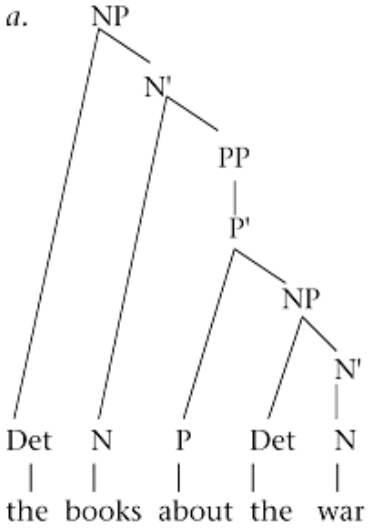
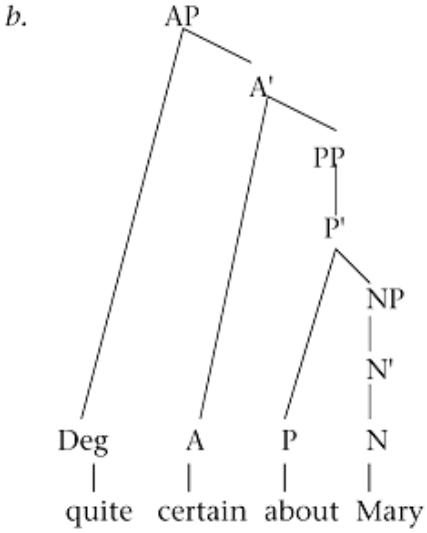


Figure 3 A verb with two complements

Full Trees





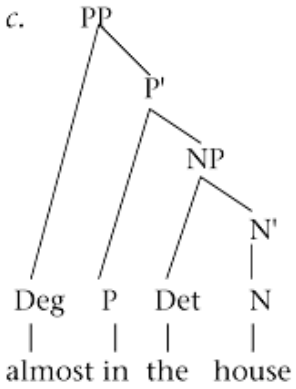
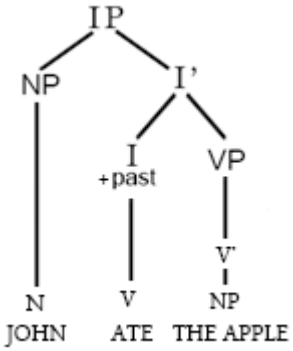


Figure 1 Other phrases consisting of a specifier, a head, and a complement

FIGURE 5 : The structure of a simple sentence



❖ **NOTE:**

- The SYNTACTIC head of I is the abstract morpheme [+PAST]. As a tense morpheme, it must be associated with a verb, hence the complement status of VP.
- The SEMANTIC head of the sentence is the verb EAT. It is the verb that selects a subject that can indeed perform the action of eating and the Object Apple, which can be eaten. Indeed, a sentence such as : *The tree ate the sea* perfectly grammatical but it is SEMANTICALLY anomalous, to say the least.

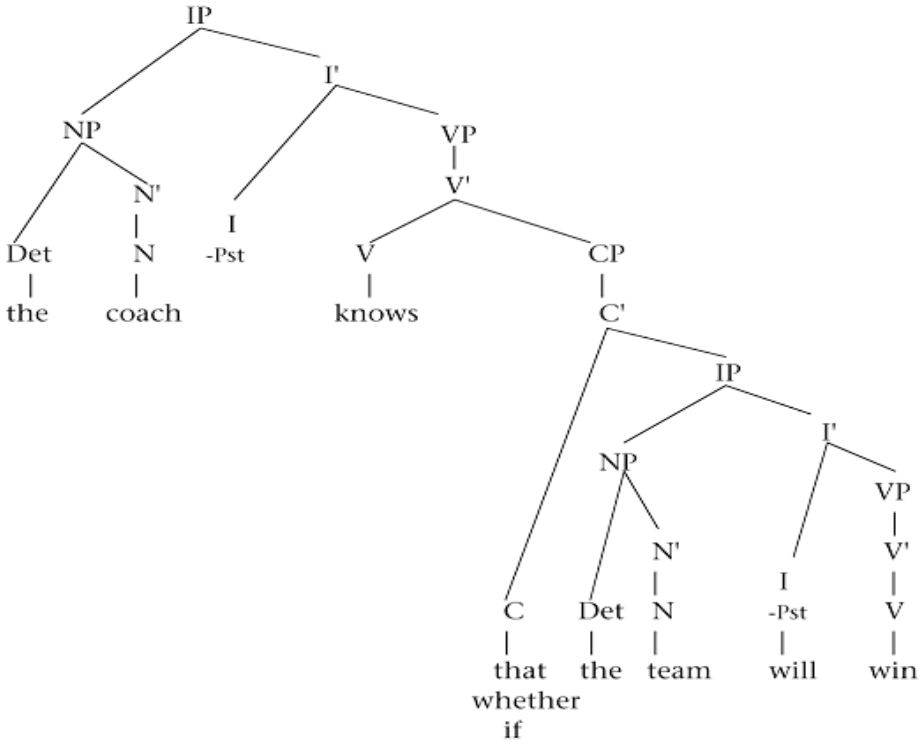


Figure 4 The structure of a sentence with an embedded CP

❖ **EXERCISE 5 Instructions: Use at least two tests to show the constituent status of the following bracketed strings:**

1. We ate our lunch [near the river bank]
2. The [computer was very] expensive
3. John loves [peanut butter and bacon sandwiches]

❖ **EXERCISE 6 Instructions: Provide a syntactic representation for the following NPs. Justify the Complement or Modifier status *of each of the NP- internal. Justify the Complement or Modifier status of each of the NP- internal.***

1. A specialist in fibre optics from Paris
2. The girl on stage in jeans
3. The failure of the program in recent years

Lecture 8

COMPLEMENTS

❖ **COMPLEMENTS**

- Complements are obligatory constituents that are selected by a given head. This head can be a Verb, Noun, an Adjective, or a Preposition.
- **Complement selection is both semantic and syntactic**. When it is syntactic, it is termed SUBCATEGORISATION. Such information is encoded in the form of lexical entries / subcategorisation frames that include phonological, semantic and syntactic properties of lexical heads as in (1):

❖ **DEVOUR:** **Cat V** / divauə / ' **EAT HUNGRILY'** [_____ NP] [+ edible]

- **We thus predict the contrast in (2) in which 2a does not include the NP direct object of the verb:**
  a) The boy devoured the sandwich
  b) * The boy devoured.

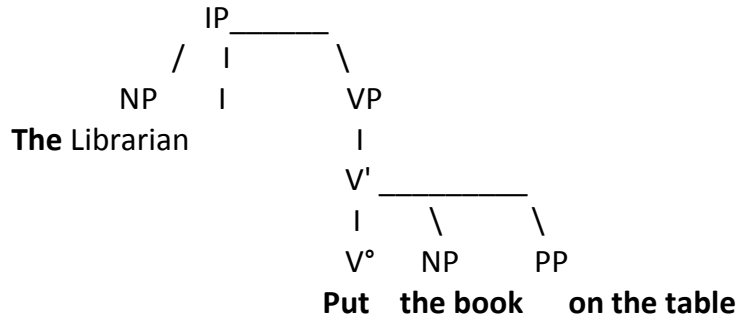
❖ **1. Complements options for the verb**

- As a verb can take more than one complement, our **XP** rule needs to be revised as in (3):

  ♥ XP ➔ (SPEC) X '
  ♥ X' ➔ X° (COMPL*)

  a) The librarian put [the book] [on the table]
  b) * The librarian put on the table
  c) * The librarian put the book

- **By rules (3 and 4, above), (5a) has the following structure:**



❖ **Some more examples of verb complements**

COMPLEMENT OPTION	VERBS	EXAMPLE
♥ **Φ**	♥ arrive, die	♥ The rabbit vanished
♥ **NP**	♥ cut, prove	♥ The professor proved the theorem
♥ **AP**	♥ be, become	♥ The man became very angry
♥ **PP**	♥ dash , talk	♥ John talked to his daughter
♥ **NP NP**	♥ hand, give	♥ She handed the man a map
♥ **NP PP**	♥ hand, give	♥ She gave the map to the man
♥ **NP PP** *loc*	♥ put, place	♥ He put the book on the table
♥ **PP** *to* **PP** *about*	♥ talk, speak	♥ I talked to the doctor about Sue
♥ **NP PP** *for* **PP** *with*	♥ open, fix	♥ He opened the door for Andy with a knife

❖ 2. Complements of other lexical categories

- Complementation is not a property of verbs alone. Other lexical categories, namely nouns, adjectives and prepositions, also subcategorize for specific complements.

COMPLEMENT OPTION	NOUNS	EXAMPLE
♥ **Φ**	♥ car, boy	♥ The car is new
♥ **PP** *of*	♥ memory, failure	♥ The memory of a friend
♥ **PP** *of* **PP** *to*	♥ presentation, donation	♥ The presentation of a medal to the winner
♥ **PP** *with* **PP** *about*	♥ argument, discussion	♥ an argument with Stella about politics

COMPLEMENT OPTION	ADJECTIVES	EXAMPLE
♥ **Φ**	♥ tall, green, smart	♥ he is very tall
♥ **PP** *about*	♥ curious, glad	♥ I am curious about China
♥ **PP** *to*	♥ apparent, obvious	♥ It is obvious to the teacher
♥ **PP** *of*	♥ fond, tired	♥ She is fond of chocolate

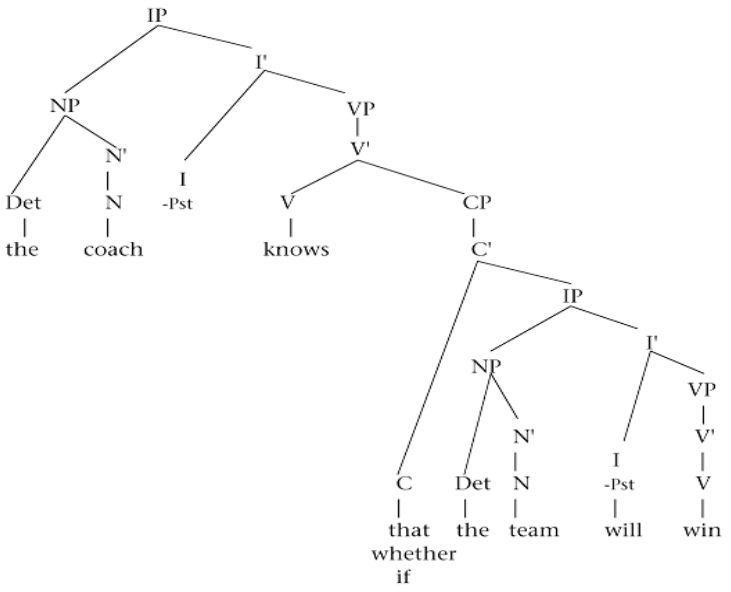
COMPLEMENT OPTION	PREPOSITIONS	EXAMPLE
♥ **Φ**	♥ away, down	♥ he walked away
♥ **NP**	♥ in, on , near	♥ on the table
♥ **PP**	♥ down , up, out	♥ down into the cellar

- Subcategorisation, also referred to as C (onstituent)-selection, ensures that only the right complement type is entered into the tree structure. This information is stored in the Lexicon.

❖ Complement clauses

- Clauses, which are larger units than phrases, can also function as complements:
  - ♥ ***The psychic knows [that / whether / if the contestant will win]***
- The bracketed phrase in (6) is called a complement clause while the larger constituent is called matrix clause.

– that / whether / if are called complementisers (**Cs**).
– Their role is to introduce (**head**) complement clauses,
– thus forming Complement Clauses which are represented as syntactic Complement Phrases (**CPs**).



❖ Verbs taking CP complements

- There are different types of verbs taking complement clauses. Some of these are given below:

  a) They believe that Eric left. [V, ____ CP]
  b) They told Mary that Eric left [V, ____ NP CP]
  c) They admitted to Mary that Eric left. [V, ____ PP CP]

- THERE IS NO LIMIT ON THE NUMBER OF EMBEDDED CLAUSES THAT CAN OCCUR IN A SENTENCE, as exemplified in (10) below:

  ♥ **EXAMPLE:** A man thought [that a woman said [that Sue reported [that Mary believed .....]]]]

– At the level of competence, a sentence can be **infinitely** long. This is accounted for in our grammar by the **recursive nature of the X' schema**. This is made possible by the fact that the same rule schema is used with the all the constituent types.

❖ Other categories with CP complements.

- **As the examples below show, a CP may serve as a complement for a N, A, or a P.**

a. **CP complement of N**

NP
I
N' __
I \
N° CP

Proof that Eric left

b. CP **complement of A**

AP
I
A' __
I \
A° CP

certain that Eric left

C. **CP complement of P**

PP
I
P'__
I \
P° CP

(talk) about whether Eric left

- It is easy to see, at least for nouns and adjectives, that the complement clause attested with the verb form is also attested with the noun and adjective forms. We thus have:

Prove **ascertain**
\ **that The theorem is false** \ **that the theorem is false**

Proof / **certain** /

Lecture 9

THE ANALYSIS OF SENTENCE STRUCTURE

❖ 1. Deep and Surface Structure

- The grammar that we have developed so far consists of a **LEXICON** and a set of Phrase Structure Rules (PSRs) constrained by the **X'-schema** .
- The combined work of these two components generates simple structures, be they phrases or clauses of a varying degree of complexity.
- The central element in a phrase is the HEAD, an **Xº,** while all its dependents (Complement, Modifier, or Specifier) are **XPs**.
- However, these components cannot account for variation in linguistic structure as represented by the following examples in a straightforward way :

(1) a. The Inspector **will** come tomorrow. ***Declarative***
b. **Will** the Inspector _____ come tomorrow ? ***Yes-No Interrogative***

(2) a. John bought **a car** ***Declarative***
b. **WHAT did** John buy _____ ? ***WH-Interrogative***

(3) a. **John** ate an **apple** ***Active***
b. **An apple** was eaten _____ **by John** ***Passive***

- Native speakers of English 'know', tacitly of course, that these sentences are both syntactically and semantically related, although they all express different modes of communication.
- This relatedness cannot be accounted for if we rely on the Lexicon and PSRs alone.
- At best, these two components will treat them as unrelated structures and thus will fail to capture the fact that the sentences in **(b)** are **DERIVED** from the sentences in **(a).**
- **HYPOTHESIS: The sentences in (b) are <u>derived</u> from the ones in (a) <u>by movement</u>**
- The **(a)** sentences are generated directly by the Lexicon and the **PSRs**.
- They represent a level of linguistic representation called **DEEP STUCTURE**
- while the **(b)** sentences represent a level of linguistic representation called **SURFACE STRUCTURE**.
- The two levels of linguistic representation are mediated by a set of rules called **TRANSFORMATIONS**.
- The work of the Transformational Component is at the centre of the Computational System in the Grammar.
- **<u>We will further assume that there are 2 types of movement :</u>**

  - ♥ Xº movement (movement of a head)
  - ♥ XP movement (movement of a phrase)

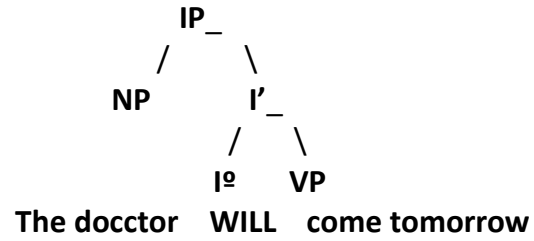
❖ 2. Transformations

2.1. Head movement: YES/NO Inversion or I -to- C

The sentences in (**1**) above, reproduced below in (**3**) instantiate the operation of head or **Xº** movement. The structure of (**3a**) is given in (**4a**)

(3) a. The docctor will come tomorrow. ***Declarative***
(3) b. Will the doctor _____ come tomorrow ? ***Yes-No Interrogative***

(4) a.

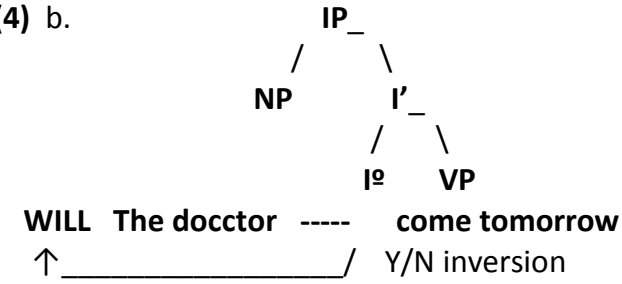


- D(eep) Structure

We apply the transformational rule ***- Yes/no Inversion***

We derive the S(urface) Structure:

(4) b.



- S(urface) Structure

By Yes/No Inversion we front the auxiliary WILL in I to a pre subject position.

- **The transformational analysis has two advantages :**

– We do not have to say that there are two types of Aux in English, one that occurs before the verb and one after it.

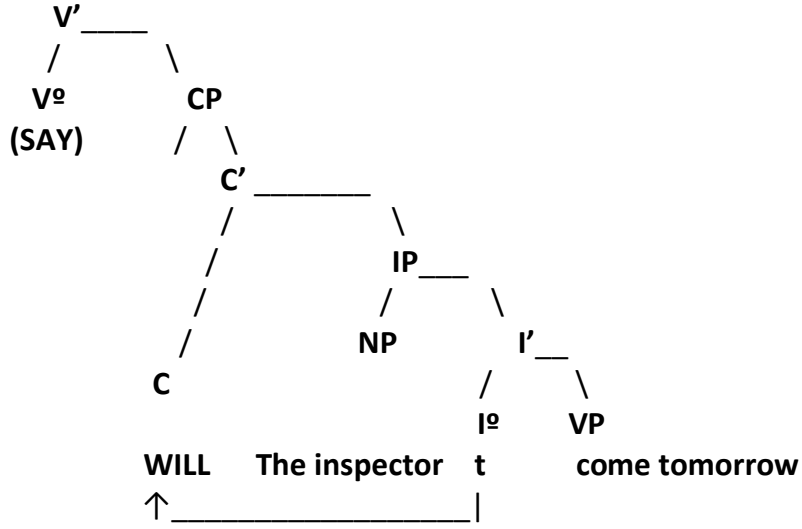
– Relatedness of the Declarative/Interrogative is also captured by the movement analysis.

- **One question remains, however: Where does the Aux element move ?**
- Recall from the previous lecture that phrase structure rules are **recursive** in nature. This means that it is possible to assume that every independent clause is in fact the complement of a verb of **SAYING/BELIEVING/THINKING**, etc. Thus, we will assume that sentence (3a) is complement to a silent verb such as in (5) :

(5) a. I SAY: **the doctor will come tomorrow**

Syntactically, (5a) has the structure in (5b):

(5) b.



- The relatedness of 5a and 5b is maintained through the fact that the movement of I leaves behind *a trace*, thus forming a movement chain. Thus, I moves to C, ONLY when the latter is empty.

- **A simple test for this analysis is provided by the contrast in (6):**

(6) a. I wonder IF/WHETHER **[the docctor will come tomorrow]**
IP
b. * I wonder IF/WHETHER WILL **[the Inspector t come tomorrow]**
↑_____ x _____|
I –to-C is blocked

- The verb WONDER subcategorises for a CP complement . Thus, the C position is filled by either IF or WHETHER. When I to C applies, the Aux WILL moves to the position that is already filled by IF or WHETHER. A Complementiser and an Aux cannot occupy the same position. This explains the ungrammaticality of (6b).
- **Conversely, if the Comp position is empty, I –to – C movement is possible as shown in (7):**

(7) I wonder : will the Inspector come tomorrow

❖ **EXERCISES: How does YES/NO inversion account for :**
* played the boys football yesterday ?
Did the boys play football yesterday ?

2.2. XP movement: Move WH to SPEC CP
Another instance of a movement rule is provided by so-called Wh-movement. This illustrated by example **(2)** above reproduced by below in **(8)**:

(8) a. John bought a car ***Declarative***
(8) b. WHAT did John buy _____ ? ***WH-Interrogative***

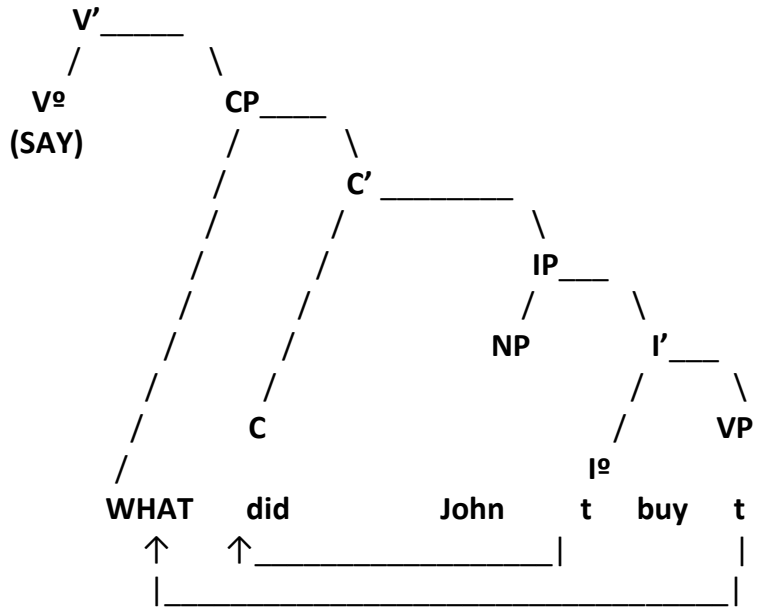
The Wh word in **(8b)** substitutes for the complement of the verb BUY in **(8a)**. The Deep structure for 8b should be as in **(9)**:

(9) John did buy WHAT ?

To derive the S-tructure **(8b)**, we need to apply two transformations, namely:
- **TRANS 1:** Subject Aux Inversion ==========➔ **did** John buy WHAT ?
- **TRANS 2:** WH-movement ==========➔ WHAT **did** John ----- buy ----- ?
↑ ↑_____| |
|_____ |

- We know from the previous subsection that the Aux element moves to C.
- We also saw that it was an instance of **X º** movement. How about the Wh-word ? Where does it move ?
- Let us assume that the Wh word moves to [**SPEC, CP**].
- We thus have the following tree structure for **(8b)**:

(10).



- **In this lecture, we have introduced and illustrated the working of the Transformational component of the Grammar .**

- Transformations are needed to account for structures that involve the **displacement/movement** of some constituent
- Two types of transformations have been illustrated : **Xº** movement in the case of **Yes/No** questions and XP movement in the case of WH-movement.

Lecture 10

THE ANALYSIS OF SENTENCE STRUCTURE

❖ V-movement to I

- Consider the following contrasts. Can they be explained in terms of the availability of **V-to-I** in French in general and only exceptionally in English:

(1) a. Paul **travaille** toujours.
b. * Paul **works** always

(2) a. * Paul toujours **travaille**
b. Paul always **works**

❖ Observation :

- English and French contrast significantly with respect to the relative word order of **V** and Adv in a simple sentence: In English the Adv **MUST precede** the verb, while in French it **MUST follow it**.

❖ Hypothesis :

- **V-to-I** applies in French, but not in English. The existence of such a head movement transformation explains the contrasts in (1 & 2).

❖ Evidence:

- Arg. 1: Both English and French have **I-to-C** in yes/ no questions, but only is expected to have **V-to-I-to-C** as shown by the contrast in (4):

(3)	a. As [tu _____ essaye] ?		I – to – C	F
	b. have [you _____ tried] ?		I – to – C	E
(4)	a. Vois [- tu ____ [_____ le livre]] ?		V - to – I – to – C	F
		IP *VP*		
	b. * See [you ___ [___ the book]] ?		* V - to – I – to – C	E

- In (3) Infl has moved to C in both languages giving rise to well-formed Yes/No questions. In (4a), the verb in V seems to have moved to I then to C in French, while in English it cannot do so. This confirms the hypothesis above.

- Arg.2 : English has exceptional V-to-I with BE and HAVE when used as main verbs. For ex. :

(5) a. Jonathan is **always** on time
b. * Jonathan **always** is on time
c. Jonathan is [**always** e on time]
VP

- **V-to-I** has applied in (5a) but not in (5b). BE in this example has a dual status: it is a main verb but at the same time it has the morphological properties of an Aux, ie an **I**. It is syntactically visible only when it surfaces in I; and not under **V**, if it does not move as in (5b).

- Arg. 3: If our analysis of (5) is correct, we predict the grammaticality of (6).

(6) Is [Jonathan e [always e on time]]
↑_____ | _ VP_____|

- The grammaticality of (6) cannot be explained unless we assume that BE has moved exactly like lexical verbs do in French, i.e over the Adverb in [Spec,VP]. (See 1&2 above**).**

❖ **Structural ambiguity**

- Some sentences are structurally ambiguous in that the meanings of their component words can be combined in more than one way. For ex:

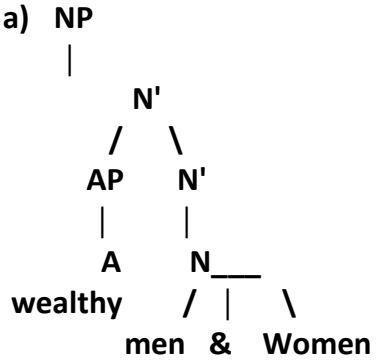
  ♥ *Wealthy men and women*

  – The phrase in (**2**) can be interpreted in 2 ways:

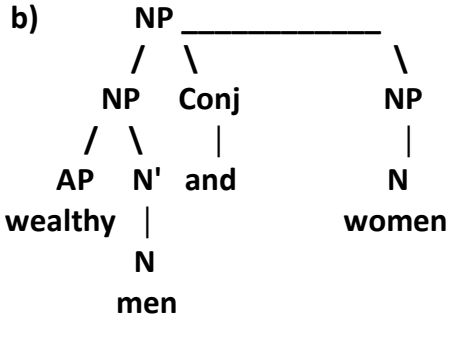
  a) *wealthy (men & women)* *meaning:* *All wealthy men and all women*
  b) *(wealthy men) and women* meaning : Only those men who are *wealthy and women*

- **These two readings are matched by 2 different syntactic structures:**

(3) a)



b)



– (**3a**) refers to all *wealthy men and wealthy women*
– while (**3b**) refers to *wealthy men and women in general.*
The latter are not wealthy.

❖ **CONCLUSION**

In this lecture, we have shown that :

♥ **I- to - C** exists in both French and English
♥ **V- movement to I** exists in French, which fact explains the existence of **V- to - I - to - C** in this language.
♥ **V- movement** , except with BE and HAVE used as main verto- **I** does NOT exist in English, which fact explains why English does not have **V - to- I- to - C**

Lecture 11

❖ THEMATIC ROLES

- Another aspect of semantic interpretation at sentence level involves the roles NPs play in the situations that they describe. Consider:

  ♥ *The company sent the salmon from Muscat to Sohar*

- It would be impossible to understand this sentence if we could not identify *the company* as the sender, *salmon* as the Sendee, etc.. The term *thematic role (theta role, ϑ-role)* is used to describe the part played by a particular element in an event. Some of the most used thematic roles are given in (6) below:

❖ Thematic roles

- ♥ **AGENT :** The entity that performs an action
- ♥ **THEME :** The entity undergoing an action or a movement
- ♥ **SOURCE :** The starting point for a movement
- ♥ **GOAL :** The end point of an action or a movement
- ♥ **LOCATION :** The place where an action occurs.

❖ In sentence (1) above the following thematic are assigned:

(2) **The company** sent **the salmon** from **Dammam** to **Riyadh**
AGENT *THEME* *SOURCE* *GOAL*

(3) **Terry** gave the **keys** to **Mary**
AGENT THEME GOAL

(4) **The magician** changed **the ball** into **a rabbit**
AGENT THEME GOAL

❖ Thematic role assignment

- Where do thematic roles come from ?
- How does the grammar ensure that the appropriate thematic role is associated with each NP in a sentence ?

❖ Thematic roles originate in word meaning.

- The meaning of the verb/predicate is central in determining the particular θ-roles that must be assigned in a sentence. For instance, the meaning of HIT calls for the θ-roles AGENT (doer) and THEME (doee). However, the other categories can also determine other roles that are assigned in a sentence. In (3) above, the prepositions **FROM** and **TO** are respectively responsible for the **SOURCE** and **GOAL** roles assigned **to Dammam** and **Ryad**.

- Generally, θ-roles originate in the Lexicon as part of the sematic information associated with particular heads. Here are some examples:

(5) The thematic roles of some words as suggested by their meanings

- ♥ HIT < agent, theme>
- ♥ TO < goal >
- ♥ NEAR < location >
- ♥ WALK < agent >
- ♥ FROM < source >

- θ-roles are assigned to NPs based on their syntactic structure, with each NP receiving ONE and ONLY ONE θ-role.
- The verb assigns two θ-roles, one <u>directly</u> to the complement and one <u>indirectly</u> via the VP to its subject because the verb is not syntactically a sister of the NP subject.

(6) **Terry gave the keys to Mary**

< ag, th > < goal >

↑_____/ _____↑ ____↑

❖ **<u>Deep structure and thematic roles</u>**

- **Does an NP receive its θ-role in its D-Structure position or in its S-Structure?**
- <u>Consider the following example in which wh-movement has applied:</u>

(6) What should the man bring e ?

- The Theme role is clearly assigned to the position occupied by the trace of the wh-word. The D-structure position is the one subcategorised for by the verb and is therefore the one that receives the relevant θ-role. Also, the D-structure position determines the nature of the θ-role. We can thus state the following:

  - **An NP's D-structure position determines its θ-role.**

- This statement lends further support to the fact that there are two types of rules PSRs to generate deep structures and TRs which convert them into surface structures.

❖ **<u>CONCLUSION</u>**

In this lecture, we have:

- introduced Thematic role assignment.
- Shown that Theta role assignment is necessary for the satisfaction of the semantic requirements of the verb.
- Noted that there is DIRECT Theta-marking by V and P and INDIRECT Theta-marking by VP.

Lecture 12

❖ **Case in syntax**

- Case is a noun inflection by means of which grammatical relations such as SUBJECT, OBJECT, Prepositional OBLIQUE, DATIVE etc. are signaled.
- English does not mark Case overtly.
- However, Standard Arabic is interesting in this respect because it has OVERT Case, marked at the end of a noun as shown in the **following example:**

♥ *Akala 9omar-***u** *t-tuffaahat-***a** *fi l-maktab-* **i**
♥ Ate Omar-**nom** apple-**acc** in the-office-**gen**
♥ ' Omar ate the apple in the office . '

♥ **SUBJECT** Case is **Nominative,**
♥ **OBJECT** Case is **Accusative,**
♥ **Prep Object** Case is **Genitive (in Arabic).**

❖ **Case Filter: All NPs must have Case**

Assume the following Case relation :

♥ **NOM** is assigned by **+ TENSE**
♥ **ACCU** is assigned by **V**
♥ **OBL** is assigned by **P (in Arabic, P assigns GEN)**

❖ **NP movement (I): Passive**

Consider the following two examples:

(7) The police arrested the thief
AGENT *THEME*

(8) The thief was arrested [e] (by the police)
THEME *AGENT*

❖ **How come that the Agent role of (2) is not assigned by the verb in (3) ?**

We will assume that the passive morphology 'weakens' the verb by making it incapable of assigning accusative Case to its object, hence the need for it to receive Case in the vacant subject position. This means that the passive verb also loses its capacity to assign the subject θ-role. The subject position is therefore non-thematic in (3). Interestingly, NP movement is a transformation which creates a CHAIN, whose head is a Case position and a non-thematic one and its TAIL/Root position is a non-Case position but a thematic one.

An NP Chain: (NP , e)
[+ Case, - θ] [- Case, + θ]

❖ **NP movement (II): Raising**

- Similarly, **RAISING** Predicates are sanctioned by the same Chain conditions given above for the Passive. Raising Predicates are predicates such as: **SEEM**, **APPEAR**, **BE LIKELY**, **BE CERTAIN**, etc. Consider the following:

(9) a. It seems [John is happy today]
b. John seems [….. to be happy]

- (9 a and b) are synonymous semantically, but they differ syntactically in that the first one has a finite, **[+ Tense**] complement clause whereas the second one has a non-finite, a **[- Tense**] complement clause. Thematically, the verb SEEM s-selects a **THEME** complement clause and a non-thematic subject.

❖ **The derivation of 94a) is as follows**

5) John seems to be happy

DS: ------ **+T** seems [John **- T** to be happy]
[+ Case, - ϑ] ***[- Case, + ϑ]***
Move NP ➔ S-S: John x +T seems [ex to be happy]
↑_____|

❖ **CONCLUSION**

In this lecture, we have seen that :

- the thematic status of a syntactic position interacts in a significant way with syntactic processes such as Passive and Raising.
- NP movement is obligatory for case reasons **(Case Filter)**. It moves an NP from a thematic and Caseless position to a non-thematic and Case marked position **(NP Chain).**.

Lecture 13

MORPHOLOGY EXERCISES

❖ **EXERCISE 1: Say whether the following words are related by inflection (I) or Derivation (D)**

a) go, goes going, gone. I - D
b) Lovely, lovelier, loveliest I - D
c) Discover, discovery, discoverer, discoverable, discoverability I - D
d) Inventor, inventor's, inventors, inventors' I - D

❖ **EXERCISE 2: For each word below, indicate whether the word is morphologically simple (S) or Complex (C), includes an inflectional affix (IA), or includes a derivational affix (DA).**

a)	Reader	S	C	IA	DA
b)	Redder	S	C	IA	DA
c)	lavish	S	C	IA	DA
d)	Readiness	S	C	IA	DA
e)	Aviation	S	C	IA	DA

❖ **EXERCISE 3: Isolate the root and the affixes in the following words.**

For example: unpredictable : un+predict+able.

a) independently _____
b) recoverability _____
c) embellishment _____
d) unsustainability _____
e) implementability _____

❖ **EXECISE 4: Some words in (4) contain prefixes. Identify the prefixes by circling them.**

a) unable _____
b) discourage _____
c) establish _____
d) receive _____
e) strawberry _____

❖ **EXERCISE 5: Circle the correct answer in the following multiple choice questions:**

1. The study of word structure is done in
a) Phonology
b) Syntax
c) Phonetics
d) Morphology

2. The association between the sound of a word and its meanings is purely ----------
a) Controversial
b) Conditional
c) Central
d) Conventional

3. **Suppletion occurs when a lexeme is represented by two or more ---------- roots.**
   - **a)** Different
   - **b)** Similar
   - **c)** Both a and b
   - **d)** None of the above

4. **When we derive one word from another, we ----------**
   - **a)** Change its class, for example, from being a Verb into a Noun
   - **b)** Change its tense, for example , from being Past into Present
   - **c)** Both of the above
   - **d)** None of the above

5. **Roots are ----------**
   - **a)** NOT always free
   - **b)** Always free
   - **c)** Both of the above
   - **d)** None of the above

6. **---------- is a morpheme that makes the most significant contribution to a word's meaning.**
   - **a)** The phoneme
   - **b)** The derivational morpheme
   - **c)** The inflectional morpheme
   - **d)** The root

Lecture 14

SYNTAX EXERCISES

❖ **Structural ambiguity**

- Look at page 35

❖ **EXERCISE 1: Instructions: The sentences below are instances of structural ambiguity;**

a) Give a paraphrase of two possible reading for each of them

b) Draw a tree structure for each reading.

1. The police shot the terrorists with rifles

♥ **Reading 1 :** The police shot the terrorists **HOLDING RIFLES**

♥ On this reading the PP **with rifles** is a modifier of the NP '**the terrorists'**

♥ **Tree Structure:**

♥ **Reading 2:** The police **USED RIFLES** to shoot the terrorists

♥ On Reading 2, the PP **with rifles** is an in Adjunct, an Instrumental Adverbial

♥ **Tree Structure:**

❖ **EXERCISE 2: Instructions:**

a) What is the status of the underlined clauses in the examples below? Are they complements or Modifiers?

b) Justify your answer.

c) Draw the tree structure of the COMPLEMENT structure of the verb BELIFVE

A. I cannot believe the rumour [<u>that John has died</u>]

B. I cannot believe the rumour [<u>that is circulating in our neighbourhood</u>]

Constituent status: that John has died is a : Complement Clause (CP)

- **Justification**

Arg. 1:

- As a complement, it completes the meaning of the head noun **RUMOUR** semantically. Thus, it cannot be omitted (**deleted**):
- I cannot believe the rumour. (the rumour about what ? As It stands this sentence is incomplete)

Arg. 2:

- If indeed this constituent is a complement clause, then we expect **THAT** to be a complementiser, and NOT a relative pronoun.
- Replacing **THAT** with **WHICH** should result in ungrammatical sentence, which is Indeed the case:
- I cannot believe the rumour **WHICH** John has died

Constituent status: <u>that is circulating in our neighbourhood</u> is a Modifler / Relative / Adjective Clause (CP)

- **Justification**

Arg. 1:

- THAT is a Relative Pronoun. NOT a complementiser. It introduces a relative clause modifying th Noun RUMOUR.
- the antecedent of the RP THAT. Ihe latter originates in the subject position of the clause:
- I cannot believe the rumour, **the rumour** is circulating

(THAT)

Arg. 2:

- If our hypothesis is correct, then the assumed RP pronoun CAN be replaced by another RP, namely WHICH as shown by the following:
- I cannot believe the rumour **<u>WHICH</u>** <u>is circulating in our neighbourhood</u>.

❖ **EXERCISE 4: Instructions:**

a) assigning it a D-structure representation
b) applying the needed transformations to generate its S-structure
c) Draw a tree structure to represent it.

What has John claimed that he can do?

- **D-structure: [+wh] [+Q]** John has claimec [that (he can do **WHAT**)]

- **Transformations:**

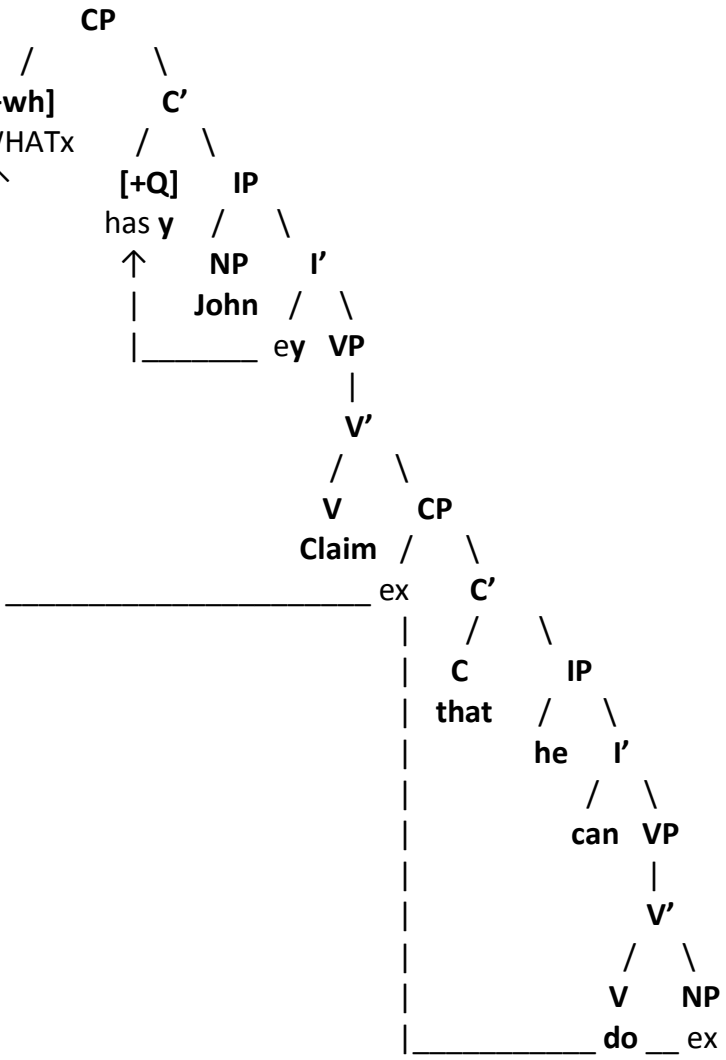
<u>Transformation 1:</u> YES?NO Question or I-to-C

- **[+wh]** has John e claimed [that (he can do **WHAT**)]

<u>Transformation 2:</u> Wh- Question

- [**WHAT**] has John e claimed [**e** (that (he can do **e**)]
  I _____I_____ I

- **Tree Representation**



❖ **EXERCISE 5: Choose the correct answer.**

1. **_____Tries to explain the unconscious knowledge that native speakers have of their own language.**
   - **a)** Generative grammar
   - **b)** Traditional grammar
   - **c)** Functional grammar
   - **d)** Systemic grammar

2. **The sentences 'Smith ate a sandwich' and 'a sandwich was eaten by Smith' are ----------**
   - **a)** Identical in the deep structure
   - **b)** Different in the deep structure
   - **c)** Identical in the surface structure
   - **d)** Identical in deep and surface structure

3. **The sentence 'she drank the juice In the kitchen' has ----------**
   - **a)** Two distinct deep structures
   - **b)** Two identical deep structures
   - **c)** Two surface structures
   - **d)** One deep and one surface structure

4. **Arabic is an example of -------- languages.**
   - **a)** VSO
   - **b)** SVO
   - **c)** SOV
   - **d)** OVS

5. **The syntactic head of a clause (IP) is: ---------**
   - **a)** V
   - **b)** I
   - **c)** V+I
   - **d)** C+I

6. **---------- refers to the speakers' actual use of language in concrete situations**
   - **a)** Performance
   - **b)** Competence
   - **c)** Linguistics
   - **d)** Syntax

Collected By Bisan - **2015**

I Wish You All The Success