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MORPHOLOGY and SYNTAX

المسوى السادس – اللغة الإنجليزية

أستاذ المقرر

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Introductory Lecture

CONTENT OF THE LECTURE

- Course description
- Course content
- Course objectives
- Course evaluation
- References
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1. BRIEF COURSE DESCRIPTION

This course introduces the basic principles of English morphology and syntax from the perspective of generative linguistics.

It covers the different processes of word formation including affixation and compounding.

The syntax part introduces basic constituent structure as well as some simple syntactic processes illustrating the working of the transformational component in the grammar.

2. COURSE CONTENT

MORPHOLOGY

- Words and word structure
- Derivation
- Compounding
- Inflection
- Other morphological phenomena
- Morphophonemics

SYNTAX

- Categories and structure
- Complement options
- Move
- Universal Grammar and parametric variation

3. COURSE OBJECTIVES

By the end of the course, students should be able to:

- Identify the internal structure of English words.
- Distinguish different types of morphemes: derivation vs. Inflection.
- Identify the constituent parts of a sentence: words, phrases and clauses.
- Provide a syntactic representation of constituent types on the basis of X'-theory.
- Provide a syntactic derivation for some common sentence types.

4. Course Evaluation

Total mark is out of 100

1. 30% of the total mark is assigned to:

- ✓ Your participation in the Blackboard Forum. (10%)
- ✓ Your main three assignments. (10%)
- ✓ Your attendance to live and recorded lectures. (10%)

2. 70% of the total mark is assigned to the FINAL TEST

The final test consists of a set of multiple choice questions with five options to choose from.

The exact date and time of the final test will be announced later.

5. References

William O'Grady, John Archibald, and Francis Katamba. *Contemporary Linguistics: An Introduction. Pearson Education Limited (2011).*

The content of the course is to be found in Chapters 4 and 5.

http://www.amazon.com/Contemporary-Linguistics-William-OGrady/dp/0312555288/ref=sr_1_fkmr0_1?s=books&ie=UTF8&qid=1423734206&sr=1-1-fkmr0&keywords=contemporary+linguistics+an+introduction+candle+edition

Part I: MORPHOLOGY

Lecture 1

INTRODUCTION

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 fundament 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: *phished, phisher, phishing*, and *unphishable*.

Thus, **MORPHOLOGY** is that component of the grammar which studies the **structure of words** 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 and in different positions in the sentence as well:

(1) What creatures do children find most fascinating?

Dinosaurs

(2) Paleontologists study **dinosaurs**

Dinosaurs are studied by paleontologists

* **Dinosaur (-s)** is 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, 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 a different language. *Ex: head* and **fi* (in Athapaskan, an Amerindian language). In this language, this morpheme is **bound**, *sefi*, meaning *my head*.

Conversely, a bound morpheme in English can be **free** in other languages. *Ex, play-ed vs thaان leew* (eat + past 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] as in *cats*, [z] as in *dogs*, and [əz] as in *judges*.

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

ANALYSING WORD STRUCTURE

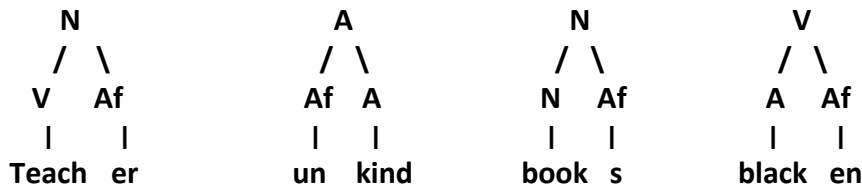
To identify the internal structure of words, we need not only to **identify** the component morphemes but also to **classify** them according to their contribution to the **meaning** and **function** of the word.

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. N=Noun, V=Verb, A=Adjective, P=Preposition.

Affixes are NOT **lexical** and are ALWAYS **bound** morphemes. For ex, **-er** in **teach-er** (V+er → N) Af=Affix

Below are examples of the internal structure of some words:

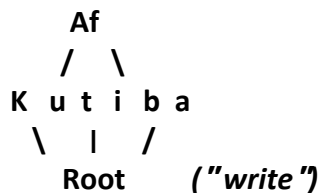


AFFIX TYPES: There are 3 types :

1. A **prefix** is attached to the front of the base. Ex. **De-activate, re-play, il-legal**
2. A **suffix** is attached to the end of a base. Ex. **Faith-ful, govern-ment, hunt-er**
3. An **infix**, which less common, occurs **within** another morpheme. For example, in Tagalog, (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-ness** is NOT an infix.

Arabic, and other Semitic languages, has interesting illustrations of infixing. Roots in Arabic are **consonantal**. Various combinations of vowels are added, including in between consonants to mark grammatical contrasts such as: **Kataba → wrote, kutiba → has been written, aktub → I write/am writing**. One way of representing these facts is by assigning vowels to a different **tier**, 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 the 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 **-ceive** → ? Consequently, these words cannot be segmented.

Lecture 2

Derivation

INTRODUCTION

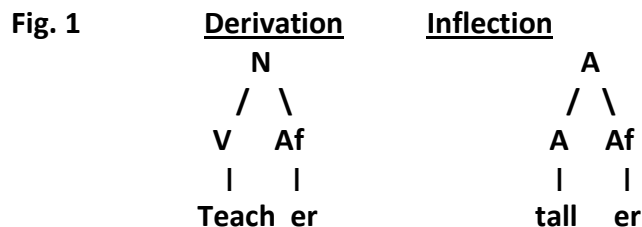
Some English derivational affixes

- Complex derivations
- Constraints on derivation

Two classes of derivational affixes compounding:

- Properties of compounds
- Endocentric and exocentric compounds

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



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*'.

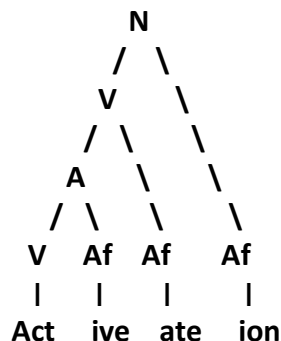
SOME ENGLISH DERIVATIONAL AFFIXES

Examples of derivational suffixes: *fix-able*, *refus-al*, *claim-ant*, *teach-er*, *shoot-ing*, *impress-ive*, *treat-ment*, *king-dom*, *faith-ful*, *presidet-ial*, *arab-ian*, *optimist-ic*, *hospital-ise*, *brain-less*, *poison-ous*, *tall-ish*, *active-ate*, *black-en*, *stupid-ity*, *slow-ly*, *happi-ness*.

COMPLEX DERIVATIONS

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

Fig.2: A multilayered internal structure



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

COMPETING ANALYSIS

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

Ex. *Unhappiness*

Fig. a.

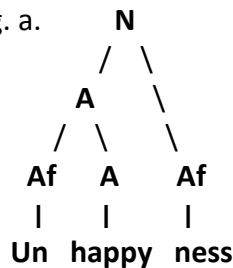
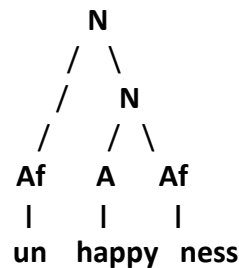


Fig. b.



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

Ex. *unable, unkind, unhurt but not *unknowledge, *unhealth, *uninjury.*

CONSTRAINTS ON DERIVATION

Derivation is often subject to **special constraints** and **restrictions**.

For example, the suffix **-ant** can attach to bases of Latin origin such as *combat-ant, assist-ant*, but not those of English origin such as **help-ant, *fight-ant*.

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

For example, the **-en** combines with adjectives to create verbs.

Ex. *Whiten, soften, madden, quicken, liven*, but not **abstracten, *bluen, *greenen, *angryen, *slowen*.

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], from sane to sanity.

-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-ly, self-ish, defend-er.*

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

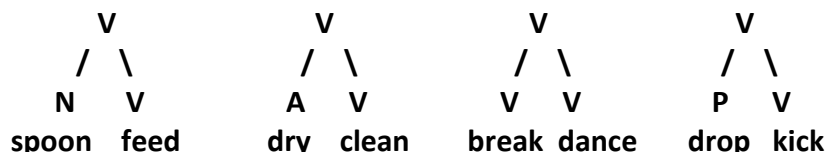
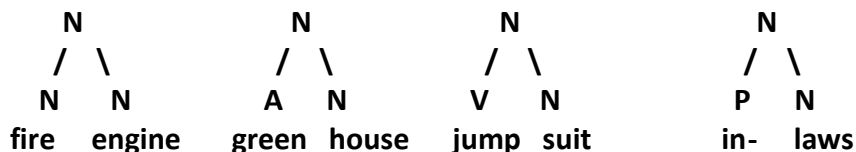
Ex. *Divis-ive-ness, fear-less-ness*, but not **fear-less-ity*.

COMPOUNDING

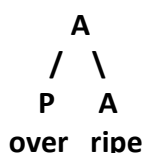
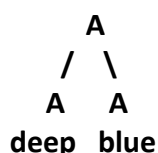
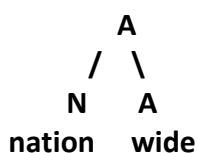
Compounding is a process of word formation in English which consists in **combining existing words to create complex words**.

The resulting compound may be a Noun or a Verb or an Adjective. Ex. :

(1)



(2)

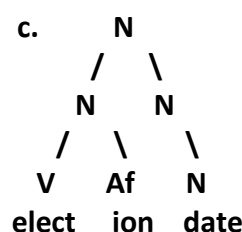
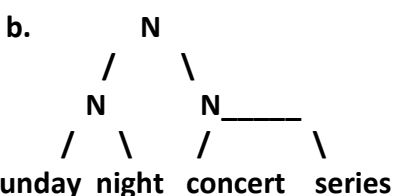
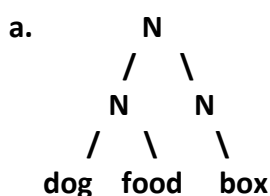


Note that **the rightmost word determines the category of the compound**. Thus, *Greenhouse* is a **noun** because it ends with the noun *house*. *Spoon-feed* is a **verb** because it ends with the verb *feed*.

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 facts **MUST** be noted: **Adj-Noun compounds** are characterized by **more prominence/stress** of the first compound: *`greenhouse* → "a glass enclosed garden" vs. *green house* "a house painted green"; *`blackboard* → "a chalkboard" vs. *black board* (a board painted in black).

Tense and **plural** markers cannot affect the first element in the compound. Ex. * the player *dropped kick* the ball vs 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 the **head/rightmost element in the compound**.

Ex.:

steamboat → a boat powered by steam.

airfield → a field where airplanes land.

fire drill → practice in case of fire.

Such compounds are said to be **endocentric**.

In a smaller number of cases, the meaning of the compound **does not follow from the meaning of its compounds**.

Ex.

redhead → a person with red hair.

redneck → a person, not a neck.

Such compounds are said to be **exocentric**.

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

Ex.

Endocentric:

wisdom teeth, policemen, oak leaves.

Exocentric:

bigfoots (mythical creatures), *watchmans* (a type of portable TV).

Lecture3 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** as in *books* ; **Possessive (genitive) –s** as in *John's book*.
- **Adjectives: Comparative –er** → the *smaller* one, **Superlative –est** → the *smallest* one.
- **Verbs: 3Person sing. Non-past –s** → He *reads* well. **Prog. –ing** → He is *working*.
past tense –ed → He worked; **past participle –en/ed** → He has *eaten/worked*.

INFLECTION VERSUS DERIVATION

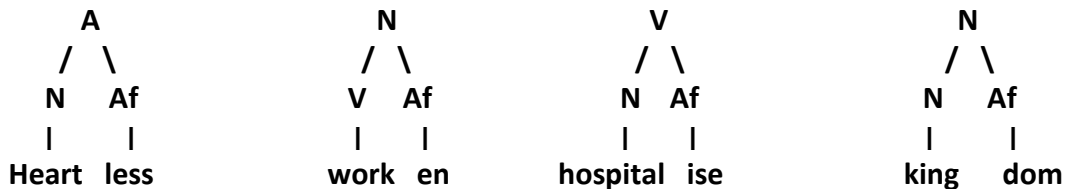
4 criteria are often used to distinguish between inflection and derivation affixes.

(1) Category change:

Inflection **does not change the grammatical category or the meaning** of its host.



Derivational affixes **do change the category and meaning** of their 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 bases. 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 **contribute 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** as 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**)

Akala Omar-u t-tuffaahat-a fi l-maktab- i

Ate Omar-nom apple-acc in the-office-gen

'Omar ate the apple in the office. '

AGREEMENT: Occurs when a word is inflected to match certain grammatical properties of another word (**t-taTaabuq**). In English, it is limited to the third person singular of the simple present; ex, He work-**s** very hard.

PROCESSES RELATED TO INFLECTION

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:

- | | |
|------------------------------|-------------------------------------|
| a. Old English form : /go:s/ | d. Loss of the plural suffix /gœ:s/ |
| b. Old plural form: /go:s-i/ | e. Other change /ge:s/ then /gi:s/ |
| c. umlaut /gœ:s-i/ | |

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 suppletion and Internal Change. Ex. **Think ~ thought, seek ~ sought**. Often, it 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 Turkish, **iji → well**, while **iji iji → very well** (full doubling of the base form).

In Tagalog, **takbo → run**, while **tatakbo → will run** (partial doubling of the base).

Tone placement : **Tone** is used in some languages to mark grammatical contrast. Ex, In Mini-Bili, a language spoken in the Congo, we find the following contrasts: **zí → ate**, while **zì → 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**. Ex., **the poor, the rich, the sublime**, (Noun ~ Adjective), **up the price** (preposition ~ verb), **dirty** (verb to Adj), **run** (verb ~ noun), **butter** (noun ~ to verb).

Conversion in two syllable words is often marked by a shift in stress. Ex., **`implant (N) ~ 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*, *smoke* = *smoke* + *smog*, *infomercial* = *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*, etc. Ex of new recent such creations are: *liaison* → *liaise*, *allegation* → *allegate*, *administration* → *administrate*, *aggression* → *aggress*.

Acronyms: They 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's Emergency Fund*, *NATO* → *North Atlantic Treaty Organisation*, etc.

Word coinage: Common for names of products. Ex., *Kodak*, *Teflon*.

MORPHOPHONEMICS

Morphemes 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: *cats*, *dogs*, *horses*. As is well known, English spelling does not reflect pronunciation.

This suffix has three allomorphs: [s] as in *cats*, *lamps*, [z] as in *dogs*, *days*, and [iz] or [əz] as in *horses* or *judges*. **The pronunciation is predictable on the basis of the phonological context :**

- **Sibilants** (hissing sounds) such as *horse*, *rose*, *bush*, *church*, *judge*, call for [iz]
- Otherwise, when preceded by a **voiceless consonant**, [s] is used as in *cat*, *rock*, *cup*.
- Otherwise, when preceded by 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]

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, **wives*, **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
MORPHOLOGY PRACTICE

EXERCISE 1: Circle the correct answer in the following 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. The association between most words and their meanings is purely**
 - a. Controversial
 - b. Conditional
 - c. Central
 - d. Conventional
- 3. 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
- 4. Roots are**
 - a. NOT always free
 - b. Always free
 - c. Both of the above
 - d. None of the above
- 5. 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
- 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
- 7. 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
- 8. 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

9. Choose the group of words that result from derivation

- a. Cry, cries, cried, crying
- b. Kind, unkind, kindness, kindly
- c. Tooth, teeth
- d. None of the above

EXERCISE 2: Divide the following words into morphemes and morphs.

Examples: (i) truth

morphemes: {true} {th}

(ii) barefoot

morphemes: {bare} {foot}

(1)

- a. research {re} {search}
- b. butterfly {butter} {fly}
- c. holiday {holi} {day}
- d. morpheme {morph} {eme}
- e. phonology {phono} {logy}

EXERCISE 3: Some words in (2) contain suffixes. Identify the suffixes by circling them.

(2)

- a. happiness
- b. freedom
- c. flowers
- e. brother
- e. blackboard

EXERCISE 3: Some words in (3) contain prefixes. Identify the prefixes by circling them.

(3)

- 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), or includes an inflectional affix (IA), or includes a derivational affix (DA) by circling the relevant answer. S => simple, C => Complex, IA => infl. Affix, DA => Deriv. Aff.

- | | | | | |
|-----------|----------|----------|-----------|-----------|
| a. rider | S | <u>C</u> | IA | <u>DA</u> |
| b. colder | S | <u>C</u> | IA | <u>DA</u> |
| c. silver | <u>S</u> | C | IA | DA |
| d. lens | S | <u>C</u> | <u>IA</u> | DA |
| e. legs | S | <u>C</u> | <u>IA</u> | DA |

EXERCISE 5: (i) Identify the root in the words below by underlining it; (ii) State the syntactic category it belongs to. Example: friendly: friend (Noun)

- a. lamps lamp (Noun)
- b. kindness kind (Adjective)
- c. hinted hint (Noun)
- d. players play (Verb)
- e. grandfathers grandfather (Noun)

Lecture 5

Part II : SYNTAX

The Analysis of Sentence Structure

What is 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 → **UNIVERSAL GRAMMAR**.
- A grammar is the characterization of the tacit **TACIT/IMPLICIT/UNCONSCIOUS** knowledge that native speakers have of their own language.

The Organization of the Transformation 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)**, **Prepositions(P)** and **Adverbs(Adv)**.
Ex. **N**: *John, Ali, courage, book*; **V**: *come, go, discuss*; **A**: *good, bad, tall*;
Adv: *badly, quickly, hard*.
- ❖ The **Functional** categories are **Determiners(DET)**, **Degree Words(DEG)**, **Auxiliary Verbs(AUX)**, **Conjunctions(CONJ)**, etc. Ex. **DET**: *a, the, this*; **DEG**: *too, so, very, more, quite*; **AUX(Modal)**: *will, would, could*; **AUX(non-Modal)**: *be, have*; **CONJ**: *and, or, but*.

One Source of confusion is that one word can belong to more than one category. Ex. **Near** and **Comb**.

1. The boy stood *near*(**P**) the fence.
2. The runners *neared*(**V**) the finish line.
3. The end is *nearer*(**Adv**) than you think.
4. The woman found a *comb*(**N**).
5. The boy should *comb*(**V**) his hair.

How can we determine a word's category?

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

MEANING:

- **Nouns** name or denote **entities**; Ex. 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 *quickly*. Janet left *early*.

However, meaning cannot always determine a word's category.

Words such as difficulty, truth, likelihood; 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 as *like*(V) and *fond*(A) Mice like/are fond of cheese.

INFLECTION:

- **Nouns** are inflect for plural **-s** and possessive **-s** ; Ex. *books, John's*.
- **Verbs** inflect past tense **-ed**, progressive **-ing** and 3d singular **-s** ; Ex. *Arrived, arriving, arrives*.
- **Adjectives** inflect for the comparative **-er** and superlative **-est** ; *taller, tallest, faster, fastest*.

However, even inflection fails to provide a word's category in some cases such as: **intelligenter, *beautifulst*. 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 example, **Nouns appear with DET, Verbs with an AUX, Adjectives with DEG**; Ex. *A car, the book ; has gone, will stay ; very rich, too big*. Of course, we can also predict that the following combinations are not possible: **the destroy(V+DET), *very arrive(DEG+V), *will destruction(AUX+N)*.

PHRASE STRUCTURE

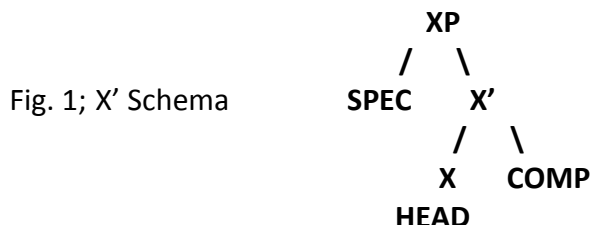
Sentences are simply formed by **juxtaposing words** like beads on a necklace. Rather, they are a **hierarchical design/structure** in which words are grouped into larger units called **phrases**. In a sentence like: *The doctor examined the patient*. The words *the* and *doctor* form a noun phrase(NP) and the words *examined* and *the patient* form another verb phrase(VP). [*the + doctor*], [*arrived + quickly*].

The traditional syntactic analysis *the doctor* is the **Subject** and *arrived quickly* is the **Predicate**.

X' SCHEMA

A phrase can be broken down to 3 parts: a **HEAD**, a **SPECIFIER(SPEC)**, and a **COMPLEMENT(COMP)**.

Arranged as in the schema below:



The schema above captures the following generalizations:

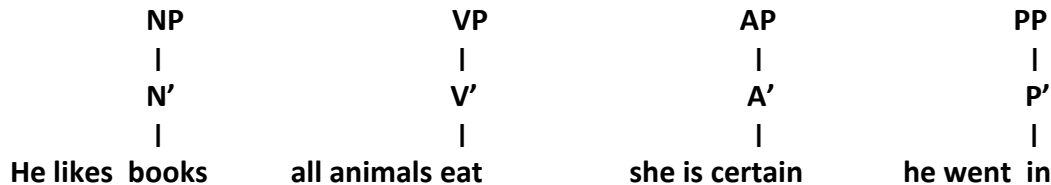
1. All phrases have a **tree-level structure** (X, X', XP).
2. All phrases **contain a HEAD, X**.
3. If there is a **COMPLEMENT**, it is **attached at the intermediate X' level**, as a sister of the HEAD.
4. If there is a **SPECIFIER**, it is **attached at the XP**, as a sister of X'.

Lecture 6

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.

Fig. 2: *Phrases consisting just of a head*



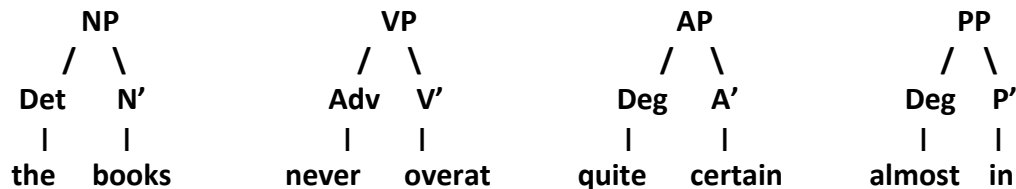
SPECIFIERS

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 mark the boundary of a phrase. In English, they occupy the leftmost position in a phrase.

Semantically, Spec make the meaning of the head more precise.



COMPLEMENTS

Consider the following more complex phrases:

a. [*a picture of the ocean*] - NP

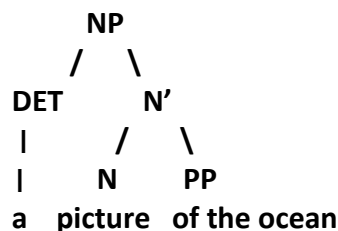
b. [*never trust a rumour*] - VP

c. [*quite certain about Mary*] - AP

d. [*almost in the house*] - PP

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** of 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

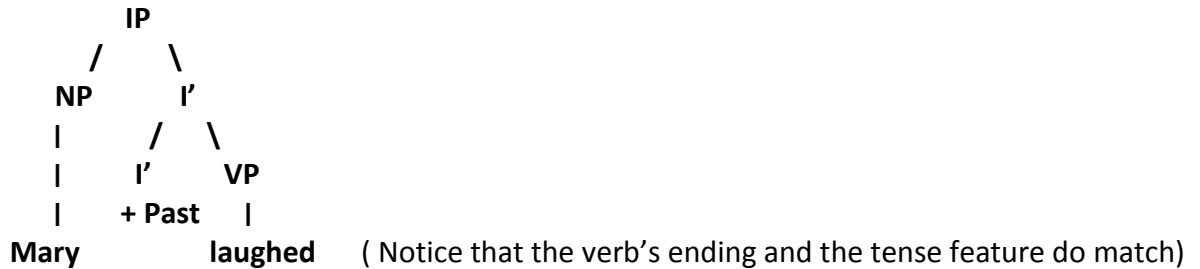
We can formulate the following operation for sentence building:

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:



- Advantage of this abstract analysis is that sentences have the same internal structure as phrases.
- As a head, I is obligatory and this accounts 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 be 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 [**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 not * at the, they 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

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

a.

NP
|
Det | N | PP
| | |
the | books | about the war

b.

AP
|
Deg | A | PP
| | |
quite | certain | about Mary

c.

PP
|
Deg | P | NP
| | |
almost | in | the house

a.

```
graph TD
    VP[VP] --> Vp[V']
    Vp --> V[V]
    Vp --> NP1[NP]
    NP1 --> Det[Det]
    NP1 --> Np[N']
    Np --> N[N]
    V --- eat[eat]
    Det --- a[a]
    N --- hamburger[hamburger]
```

b.

```
graph TD
    PP[PP] --> Pp[P']
    Pp --> P[P]
    Pp --> NP1[NP]
    NP1 --> Det[Det]
    NP1 --> Np[N']
    Np --> N[N]
    P --- in[in]
    Det --- the[the]
    N --- house[house]
```

ريم العمادي

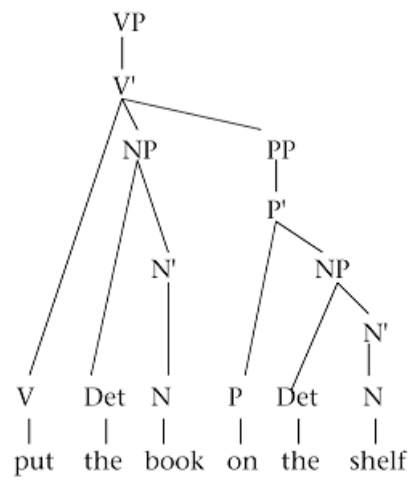


Figure 3 A verb with two complements

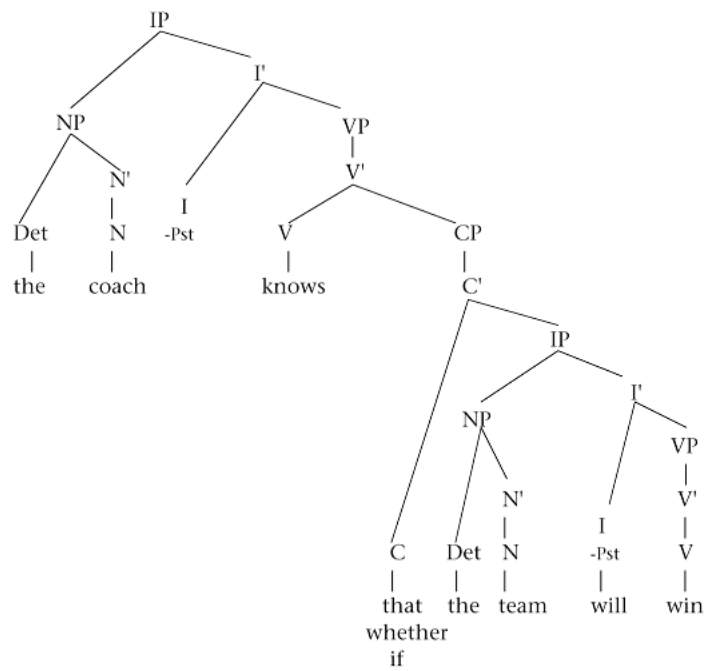
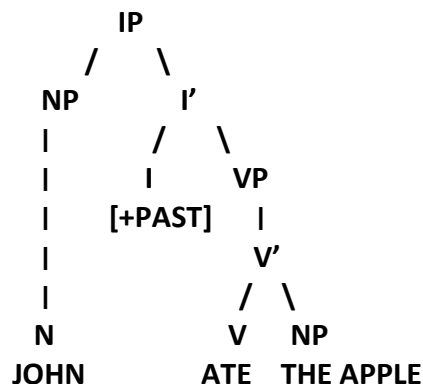


Figure 4 The structure of a sentence with an embedded CP

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.

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 **SUBCATEGORIZATION**. Such information is encoded in the form of lexical entries / subcategorization 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:

- The boy devoured the sandwich
- * The boy devoured.

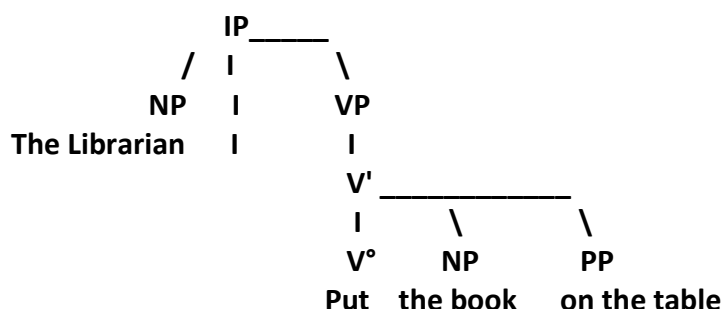
1. Complements options for the verb

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*)

- The librarian put [the book] [on the table]
- * The librarian put on the table
- * 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 <i>loc</i>	put, place	He put the book on the table
PP <i>to</i> PP <i>about</i>	talk, speak	I talked to the doctor about Sue
NP PP <i>for</i> PP <i>with</i>	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.

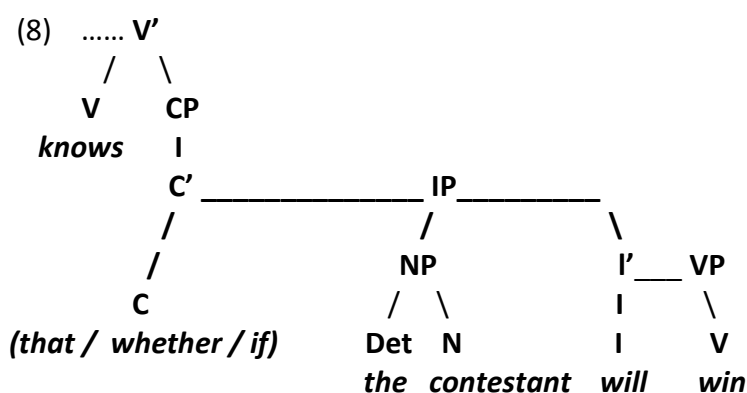
3. Complement clauses

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:

- (9) 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:

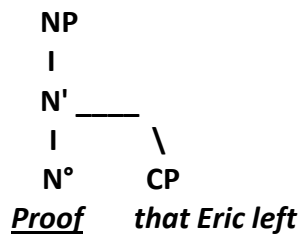
EXAMPLE: *A man thought {that a woman said [that Sue reported (that Mary believed)]}*

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.

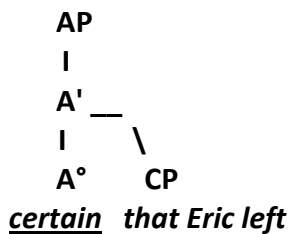
Other categories with CP complements

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

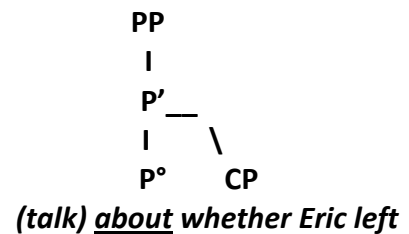
a. CP complement of N



b. CP complement of A



c. CP complement of P



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 \ that the theorem is false
 Proof /

ascertain \ that the theorem is false
 certain /

Lecture 9

TRANSFORMATIONS (I)

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 X^0 , 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. | <i>Declarative</i> |
| b. Will the Inspector _____ come tomorrow? | <i>Yes-No Interrogative</i> |
| (2) a. John bought a car | <i>Declarative</i> |
| b. WHAT did John buy _____? | <i>WH-Interrogative</i> |
| (3) a. John ate an apple | <i>Active</i> |
| b. An apple was eaten _____ by John | <i>Passive</i> |

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 **derived** from the ones in (a) **by movement**.

The (a) sentences are generated directly by the Lexicon and the PSRs. They represent a level of linguistic representation called **DEEP STRUCTURE** 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.

We will further assume that there are 2 types of movement:

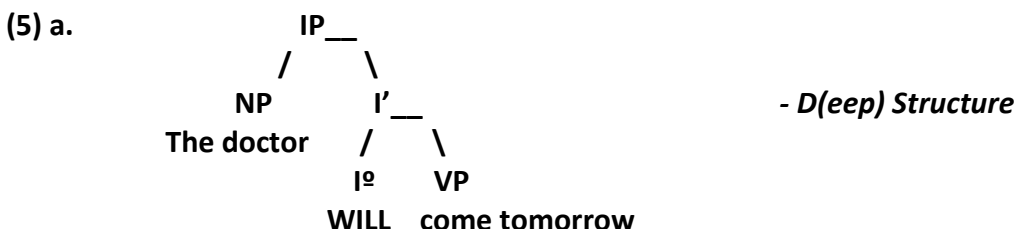
- **X^0 movement (movement of a head)**
- **XP movement (movement of a phrase)**

2. Transformations

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

The sentences in (1) above, reproduced below in (4) instantiate the operation of head or X^0 movement. The structure of (4a) is given in (5a).

- | | |
|---|-----------------------------|
| (4) a. The doctor will come tomorrow. | <i>Declarative</i> |
| b. Will the doctor _____ come tomorrow? | <i>Yes-No Interrogative</i> |



We apply the transformational rule

- Yes/no Inversion

We derive the S(urface) Structure:

(5) b.



WILL The doctor ----- come tomorrow - Y/N inversion

↑ ----- /

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.

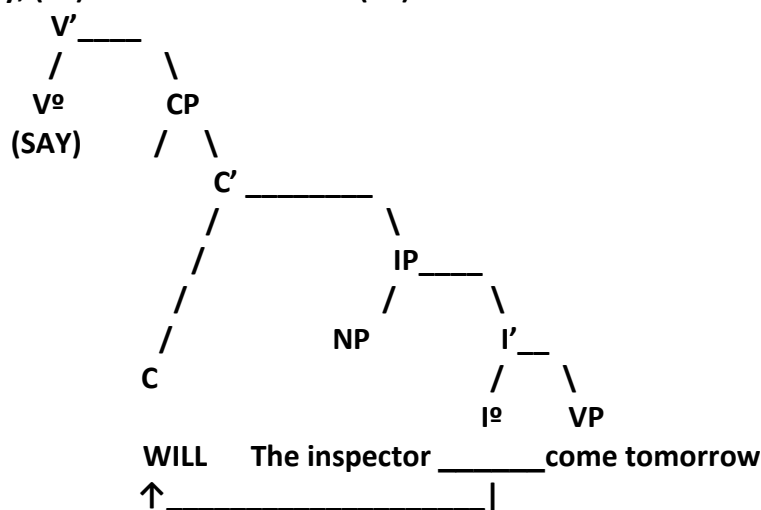
One question remains, however: **Where does the Aux element move?**

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 (4a) is complement to a silent verb such as in (6):

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

Syntactically, (6a) has the structure in (6b):

(6) b.



The relatedness of 6a and 6b 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 (7):

(7) a. I wonder IF/WHETHER [the doctor will come tomorrow]

IP

b. * I wonder IF/WHETHER WILL [the Inspector ----- 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 (7b). Conversely, if the Comp position is empty, I –to – C movement is possible as shown in (8):

(8) 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 (9):

(9) a. John bought a car

b. **WHAT** did John buy _____?

Declarative

WH-Interrogative

The Wh word in (9b) substitutes for the complement of the verb **BUY** in (8a). The Deep structure for 8b should be as in (10):

(10) John did buy **WHAT**?

To derive the S-structure (9b), we need to apply two transformations, namely:

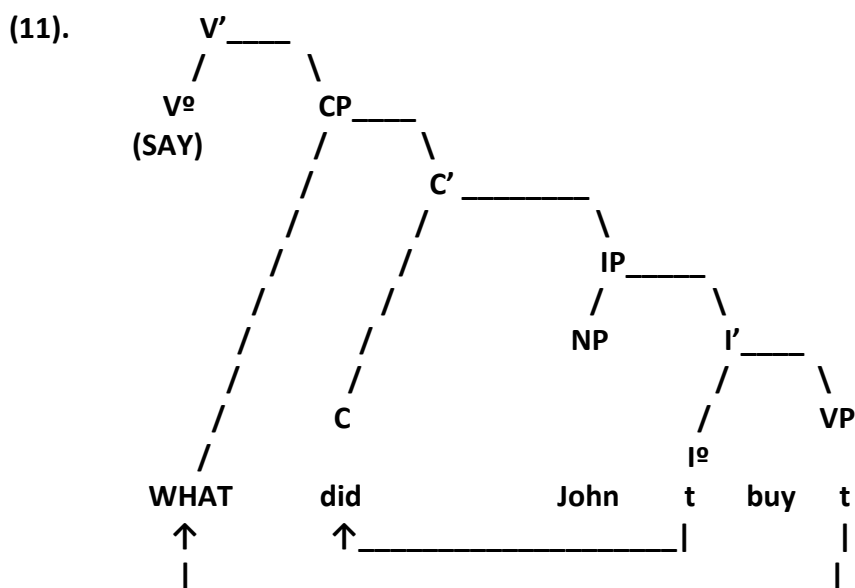
TRANS 1: Subject Aux Inversion =====>

TRANS 2: WH-movement =====>

	did	John	buy	WHAT?
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^0 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 (9b):



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: X^0 movement in the case of Yes/No questions and XP movement in the case of WH-movement.

Lecture 10

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*

Observations: 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 (1 & 2)

Evidence:

Arg 1. Both English and French have I-to-C in Yes/No questions, but only French has V-to-I followed by V+I-to-C. Consider the following:

- | | | | | | |
|-----|----|-------------|--------------------------------------|-----------------------|---|
| (3) | a. | <i>As</i> | [tu _____ essaye] ? | I – to – C | F |
| | b. | <i>have</i> | [you _____ tried] ? | I – to – C | E |
| (4) | a. | <i>Vois</i> | [- tu _____ [_____ le livre]] ? | V - to – I – to – C | F |
| | | IP | VP | | |
| | b. | <i>*See</i> | [- 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 used as main verb in ex. Such as:

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

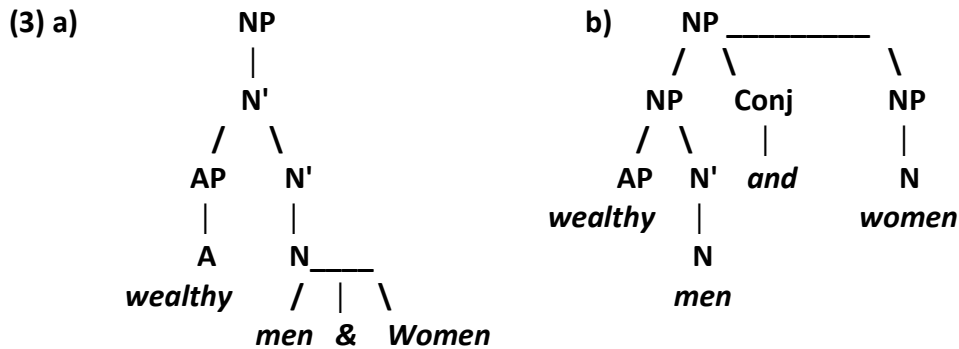
Some sentences are **structurally ambiguous** in that **the meanings of their component words can be combined in more than one way**. For ex:

Wealthy men and women

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

a) wealthy (men & women) or b) (wealthy men) and women

These two readings are matched by 2 different syntactic structures:



(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:

- 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 to 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:

(1) *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 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 the **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** role assigned to **Dammam** and **Riyadh**.

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

(5) The thematic roles of some words are 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 -roles.

The verb assigns two θ -roles, one directly to the complement and one indirectly 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>

↑ _____ / \ _____ ↑ & \ _____ ↑

Deep Structure and Thematic Roles

Does an NP receive its θ -role in its D-Structure position or in its S-Structure position?

Consider the following example in which wh-movement has applied:

(7) 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 subcategorized 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 roles **PSRs to generate deep structures** and **TRs which convert them into surface structures**.

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, and Prep Object Case is Genitive (in Arabic).

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)

Case Filter: All NPs must have Case

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

D-structure: (9) _____ *was arrested the thief (by the police)*

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

- 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 from I.
- Assume that the passive verb also loses its capacity to assign the subject θ -role. The subject position is therefore non-thematic in (9). 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:

- (10) a. *It seems [John is happy today]*
b. *John seems [..... to be happy]*

(10 a and b) are synonymous, 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 10b) 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 | |

EXERCISE 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

Practice

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

- Give a paraphrase of two possible readings for each of them
- 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:

- What is the status of the underlined clauses in the examples below ?Are they complements or Modifiers ?
- Justify your answer.
- Draw the tree structure of the COMPLEMENT structure of the verb BELIEVE.

A. *I cannot believe the rumour [that John has died]*

B. *I cannot believe the rumour [that is circulating in our neighbourhood]*

- 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.*

EXERCISE 3: Constituent status: that is circulating in our neighbourhood is a Modifier/Relative/Adjective Clause (CP) Justification

Arg. 1: THAT is a Relative Pronoun, NOT a complementiser. It introduces a relative clause modifying the Noun RUMOUR, the antecedent of the RP THAT. The 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 WHICH is circulating in our neighbourhood.

EXERCISE 4. Instructions: Provide a syntactic analysis of the following sentence by:

a) assigning it a D-structure representation

b) Applying the needed transformations to generate its S-structure

c) Drawing a tree structure to represent it.

What has John claimed that he can do ?

➤ D-structure: [+wh] [+Q] John has claimed [that [he can do WHAT]]

➤ Transformations:

Transformation 1: YES?NO Question or I-to-C

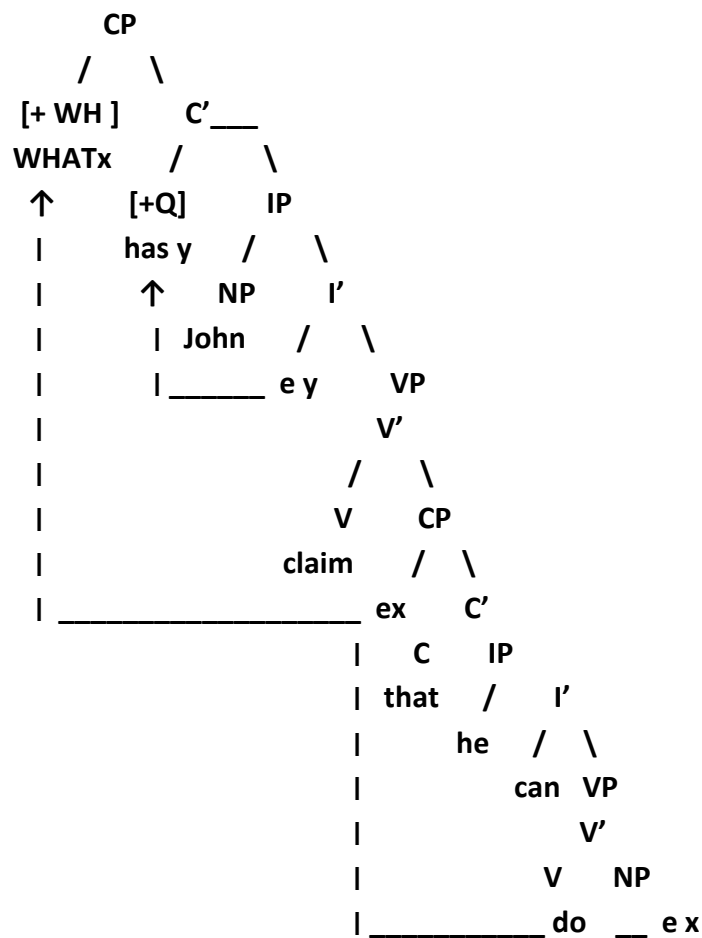
[+wh] has John e claimed [that [he can do WHAT]]

Transformation 2: Wh- Question

[WHAT] has John e claimed [e [that [he can do e]]

↑ _____ | _____ |

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