The Origin of Language

INTRODUCTION

- There was a time when people didn't have the ability to talk.
- Humans developed language between 100,000 and 50,000 years ago (but, written language appeared 5000 years).
- There is no physical evidence about when and how of language in humans emerged.
- All what is said in this regard is a matter of speculation

THEORIES

1- The Divine Source

2- The Natural Sound Source

3-The Physical Adaptation Source

4- The tool-making source

5-The Genetic Source

THE DIVINE SOURCE

In most of the worlds religions, language is regarded as a gift from gods to the humans:

- Hinduism: Saraswati (Sarasvati), Brahma's wife, has given language to humans as a gift.
- Biblical Source:

In the book of Genesis, God created Adam and "whatsoever Adam called every living creature, that was the name thereof."

ASSUMPTION

If human infants were allowed to grow up without hearing any language around them, then they would spontaneously begin using the original God-given language.

QURAN

وَعَلَّمَ ءَادَمَ ٱلْأَسْمَآءَ كُلَّهَا ثُمَّ عَرَضَهُمْ عَلَى ٱلْمَلَٰٓئِكَةِ فَقَالَ أَنۢبِـُٔونِى
بِأَسْمَآءِ هَٰٓؤُلَآءِ إِن كُنتُمْ صَٰدِقِينَ ﴿٣١﴾

And He taught Adam the **names of all** things; then He placed them before the angels, and said: "Tell me the names of these if ye are right."

STORY OF AN EGYPTIAN PHARAOH

The Greek writer Herodotus reported the story of an Egyptian pharaoh named Psammetichus (or Psamtik) who tried the experiment with two newborn babies more than 2,500 years ago. After two years of isolation except for the company of goats and a mute shepherd, the children were reported to have spontaneously uttered, not an Egyptian word, but something that was identified as the Phrygian word bekos,meaning bread." The pharaoh concluded that Phrygian, an older language spoken in part of what Is modern Turkey, must be the original language. That seems very unlikely. The children may not have picked up this "word" from any human source, but as several commentators have pointed out, they must have heard what the goats were saying. (First remove the -kos ending, which was added in the Greek version of the story, then pronounce beas you would the English word bed without -d at the end. Can you hear a goat?)

KING JAMES' EXPERIMENT

- King James the Fourth of Scotland carried out a similar experiment around the year 1500 and the children were reported to have spontaneously started speaking Hebrew, confirming the King's belief that Hebrew had indeed been the language of the Garden of Eden.

THE NATURAL SOUND SOURCE

The suggestion of this source is:

Primitive words could have been imitations of natural sounds which early men heard around them.

- CAW-CAW sound of flying objects
- COO-COO sound of a flying creature.
- People started to imitate the sounds and named the objects and creatures with these sounds.

THE BOW –WOW THEORY

All modern languages do have words with pronunciation that seem to echo naturally occuring sounds

In addition to *cuckoo*

☐ Splash ☐ Bang ☐ Boom ☐ Rattle ☐ Buzz

☐ Hiss ☐ Roar (**Onomatopoetic words) sound symbolism**

1. This theory is only acceptable in regard to onomatopoeic words. While we know that not all the words are onomatopoeic.
2. This theory does not explain the origin of abstract word in language.
3. The function of language is not just to name the words.

THE POOH-POOH THEORY

Natural cries of emotion

Another theory suggests that the original sounds of language may have come from natural cries of emotion such as:

Pain: *Ouch!*

Anger: ***Ah!***

disgust: ***yuck!***

These are produced with intakes of breath!

But normal spoken language is produced when air is exhaled rather than inhaled

YO-HE-HO THEORY

Sounds made due to physical effort involving several people could be the source of our language:

- Grunts
- Groans
- Curses

☐This theory is based on the social and cultural cooperation found among early men.

☐However, apes have grunts but they do not have a language like ours!

The appeal of this theory lies in its emphasis on social context.

- Language we know is a social phenomenon and it must have been originated in groups.
- Early people must have lived in groups, if only because larger groups offered better protection from attack.

THE PHYSICAL ADAPTATION SOURCE

Basic Assumption

Physical features humans possess, especially those that are distinct from other creatures, may have been able to support speech production.

Bipedalism

Our ancestors made a very significant transition to an upright posture, with bipedal (on two feet) locomotion, and a revised role for the front limbs.

Human physical features that help language

- Human teeth are upright / f, v/
- The lips are made of intricate muscles /p, b/
- The tongue is also helpful.
- Human larynx (voice box: containing vocal cords)

pharynx (resonator).

- Human brain: left hemisphere, in most of the people is

responsible for controlling the above organs of speech

TEETH

Human teeth are upright, not slanting outwards like those of apes, and they are roughly even in height. Such characteristics are not very useful for ripping or tearing food and seem better adapted for grinding and chewing. They are also very helpful in making sounds such as f or v.

LIPS, MOUTH AND TONGUE

- Human lips have more intricate muscle interlacing than is found in other primates and their resulting flexibility certainly helps in making sounds like p or b.
- The human mouth is relatively small compared to other primates, can be opened and closed rapidly, and contains a smaller, thicker and more muscular tongue which can be used to shape a wide variety of sounds inside the oral cavity.

☐ In addition, unlike other primates, humans can close off the airway through the nose to create more air pressure in the mouth. The overall effect of these small differences taken together is a face with more intricate muscle interlacing in the lips and mouth, capable of a wider range of shapes and a more rapid and powerful delivery of sounds produced through these different shapes.

THE TOOL-MAKING SOURCE

As early humans' hands became occupied with tool use, they were less able to use hand gestures, so speech became a necessity

- Preferential right-handedness
- Lateralized brain: each hemisphere of brain has its own functions alternatively
- Speech and tool-making abilities are very close to one another in the left hemisphere

THE GENETIC SOURCE

The reason why physical adaptation takes place in humans & why deaf and dumb can be fluent sign language users is answered by supporters of **innateness hypothesis (human offspring are born with a special capacity for language).**

- The language capacity is genetically hardwired

in born babies

A crucial genetic mutation arose which gave humans the unique ability to produce and understand language. This means that language is

- *Innate*
- Hard-wired like in a computer
- Pre-programmed
- Universal in form
- The *innateness hypothesis states that language is endemic to all* humans.

CONCLUSION

The origin of language			
Theories	Characteristics	Criticism	Development
The divine source (monogenetic)			Suddenly
The natural sound source (bow-wow/pooh-pooh)	Existence of onomatopoeia	Soundless things and abstract concepts Produced with intake of breath	Gradually
The social interaction source (yo-he-ho)	Early humans lived in groups	Other primates also live in groups and use grunts	Gradually
The physical adaptation source (teeth, lips, mouth, larynx & pharynx)	There's evidence for the evolutionary changes	These changes would not themselves lead to speech production	Gradually
The tool-making source (brain)	Accounts for structural organisation of language		Gradually
The genetic source (innateness theory)	Automatic set of developments in young children		Suddenly

Thanks

ANİMALS AND HUMAN LANGUAGE

Dr. Adel Thamery

COMUNICATION:
COMMUNICATIVE VS. INFORMATIVE SIGNALS

Communicative Signals: To convey a message intentionally. e.g. All the things you say for communicating.

- **I`nformative Signals:** Unintentional messages, e.g. If you sneeze the person you are talking to he or she will understand that you have a cold.
- If you have a strange accent, others will understand that you are from some other part of the country.

UNIQUE PROPERTIES OF HUMAN LANGUAGE

Communication is the primary function of human language; other creatures do communicate in some way but they cannot reflect on their communication.

(Dogs cannot talk about their barking

Human: «I wish he wouldn't use too many technical terms»

Reflexivity or reflexiveness is the use of language to talk about language(limited to human language)

FIVE PROPERTIES OF HUMAN LANGUAGE

Because of «reflexivity», we can talk about the properties of human language as reflexivity is« our ability to talk about our language

- Displacement
- Arbitrariness
- Productivity
- Cultural Transmission, and
- Duality.

1- DİSPLACEMENT

1. Humans can refer to the past, present and future events .
2. Humans can talk about remote things and events that are not present in the immediate
3. Even we can talk about things we are not sure of their existence , e.g., fairies, Superman

A SMALL EXCEPTION

- Bee communication has displacement in an extremely limited form.
- By different types of dance: A bee can show the others the source of the food.
- Limited: because it is only for **recent** food

2. ARBİTRARİNESS

No natural relation between the linguistic form and its meaning

The word **DOG** or **كلب** do not have natural or iconic relationship with the hairy four-legged object

There are words that are onomatopoeic : less arbitrary but relatively rare.

Majority of animal signals have a clear connection with the conveyed message.

3. PRODUCTİVİTY

Humans are creative; they always create new expressions using their linguistic resources :(Creativity)

Language users create new words as they need them.

- An aspect of language which is linked to the fact that the **potential number of utterances in any human language is infinite.**
- **Animal communication has fixed reference:** Each signal is fixed to a certain thing or situation

BEE EXAMPLE (BEES CANNOT COMMUNICATE NEW PLACES)

- A Beehive is placed the foot of radio tower
- Food source is placed at the top
- 10 bees taken to top and then released to tell the rest
- Those bees could not find the food ; they could not create a new message to indicate the vertical distance (fixed reference)
- Animal have **fixed reference.** Each signal refers to a particular object/occasion

CULTURAL TRANSMİSSİON

- Humans cannot inherit language as the may inherit the eye and colour
- We acquire language in culture with other speakers
- Language passes from one generation to another by cultural transmission and not by genes.
- We have the ability to acquire a language in a general sense

In animals there is an instinctively produced signals

Birds even without hearing other birds in their 1st 7days, start producing instinctive songs only with little diffference.

However, human infants growing up in isolation produce no instinctive language.

DUALİTY (DOUBLE ARTICUTION)

Human language is organized at two levels simultaneously

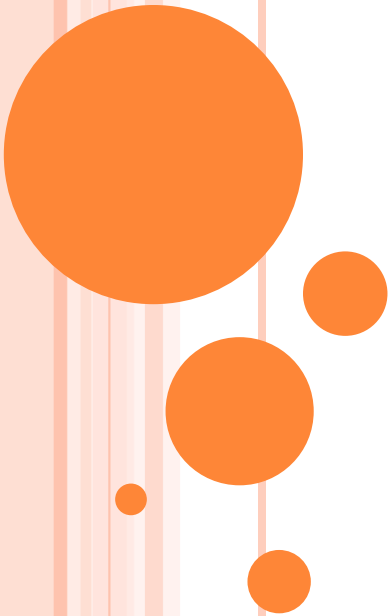
1) We can produce discrete or individual sounds , none of them has intrinsic meaning
2) We can combine sounds in different ways «nib-bin» which have distinct meanings.
3) With Limited number of discrete sounds, humans can produce a large number of combinations(words) that have different meanings

- To use some sounds in different places. e.g. cat – act . Sounds are the same but the meanings are different.
- There is no duality in animal communication.

TALKİNG TO ANİMALS

- Some people talk to animals and animals may respond but this is very limited
- But if animals show some behaviour does not mean they «understand» human language.
- They have learnt to do some movements in response to some sounds (noises) produced by human beings.

CHAPTER 5
WORD FORMATION



- **Neologisms** are new words introduced into a language. These new words are accepted and used by speakers. There are some basic processes by which new words are created or formed.

- **Etymology**: the study of the origin and history of words. This word comes through Latin and has Greek origin. When we look at the origin and history of words we will see that new words can enter language in different ways. When a new word enters a language it might be refused by some people but with time these words are accepted which indicates that language is vital and creative.

WORD FORMATION PROCESSES

- **Borrowing**: the process of taking words from other languages. English language for example has borrowed and adopted a large number of words from other languages. (Admiral , cotton , alcohol, from Arabic /yogurt form Turkish / piano from Italian). Other languages borrow from each other.
- **Loan- translation or Calque**: it is a type of borrowing by a direct or literal translation of the elements of a word into the borrowing ; the word is called loanword (e.g. the French word gratte-ciel "scrape sky" for skyscraper ; the German Lehnwort is translated into Loanword)

- **Compounding**: the process of joining two words to form a new word : nouns(textbook, wallpaper, fingerprint, waterbed); adjectives(good-looking, low-paid) ; adj.+noun (fast-food, full-time)

- **Blending**: the combination of two separate forms to produce a single new term. We typically take the only beginning of one word and join it t the end of the other words(eg. Smog from (smoke +fog), smaze from (smoke +haze), bit (binary+digit), brunch (breakfast + lunch), motel (motor +hotel).These are called **Portmanteau words**

- **Clipping**: the process of reducing a word of more than one syllable to a shorter form (e.g. ad from advertisement, Prof. from Professor, flu from influenza,). Names are also clipped like Al, Ed, Liz, Mike etc. other examples are from education environment (chem., exam, gym, math, typo, lab)
- **Hypocorism**: a word-formation process in which a longer word is reduced to a shorter form with -y or -ie at the end (e.g. telly for television, movie for motion picture , Barbie for barbecue, bookie for bookmaker)

- **Backformation:** the process of reducing a word such as a noun to a shorter version and using it as a new word such as a verb (e.g. babysit from babysitter, donate from donation, opt from option)

- **Conversion**: the process of changing the function of a word, such as a noun to a verb, as a way of forming new words, also known as "category change" or "functional shift" (e.g. vacation in They're vacationing in Florida) .This process is highly productive in English

- Nouns Verbs / bottle , water , butter, chair -----
- Verbs Nouns /guess, spy, must
- Phrasal Verbs Nouns / print out – printout, take over – takeover

- **Coinage:** The process of inventing and using totally new words. (1)The usual source is trade names for commercial products (aspirin, nylon, Vaseline) , (Kleenex, Teflon, Xerox) Google _ This is a misspelling of googol(the number 1 followed by 100 zeros) , now google is also used as a verb. (2) eponym -a word derived from the name of a person or place (e.g. sandwich from Earl of Sandwich, hoover form William Hoover, teddy bear (teddy Roosevelt), jeans from the Italian city Genua.
-
- **Acronyms**: they are new words formed from the initial letters of a set of other words. These can be forms such as CD ("compact disk") or SPCA ("Society for the Prevention ofCruelty to Animals") where the pronunciation consists of saying each separate letter. More typically, acronyms are pronounced as new single words, as in NATO, NASA or UNESCO. These examples have kept their capital letters, but many acronyms simply become everyday terms such as laser ("light amplification by stimulated emission of radiation"), radar ("radio detecting and ranging"), scuba ("self-contained underwater breathing apparatus") and zip ("zone improvement plan") code

- Derivation: It is accomplished by means of a large number of small “bits” of the English language that are not usually given separate listings in dictionaries. These small bits are the affixes. some affixes are added to the beginning of the word (e.g. un-, mis-). These are called prefixes. Other affixes are added to the end of the word (e.g. -less, -ish) and are called suffixes. Infixes are the affixes that are added inside the word. They are rarely used in English

MORPHOLOGY CHAPTER 6

The Study of Language

MORPHOLOGY

In biology: the study of the form and structure of animals and plants.

In linguistics: the study and description of how words are formed in a language

- It is the field of linguistics that studies the internalstructure of words

MORPHEMES

The basic units of morphology : a minimal unit of meaning or grammatical function .They can't be broken down any further

Example:

Words: talk, talks, talker, talked, talking

Morphemes: talk, -s, -er, -ed, -ing

Word: reopened Morphemes: re-, open, -ed

All these elements are described as morphemes

Word: tourists

Morphemes: tour, -ist, -s

Word: hunters

Morphemes: hunt, -er, -s

Word: reactivate

Morphemes: re-, act, -ive*, -ate

Some morphemes have meaning and some have grammatical function

* Keep in mind, sometimes morphemes change their spelling.

FREE AND BOUND MORPHEMES

Free Morphemes – Morphemes that can stand by themselves.

Examples: talk, open, tour, hunt, act

Bound Morphemes – cannot stand alone, and are usually tied to another morpheme. Examples? -s, -er, -ed, -ing, re-, -ate

All AFFIXES are bound morphemes!

STEM

A free morpheme that has bound morphemes attached to it

Word: teach er s

STEM

Undressed

-un dress -ed

Prefix stem suffix

Bound free bound

carelessness

care -less -ness

stem suffix suffix

free bound bound

Undignified

restlessness

disrespectful

balance

dishonesty

- FREE AND BOUND MORPHEMES : Not all words have a free morpheme!
- Words: receive, reduce, repeat Morphemes: re-, -ceive, -duce, -peat They are all bound morphemes : re- is a regular bound morpheme -ceive, -peat, and -duce are bound stems

- What are the morphemes? Are they bound or free? What are the stems? Are they bound or free? Word Bound Morphemes, Free Morphemes , Stem Bound or Free Stem?
- farmers friendliness artistic meanings recalculated

Free morphemes: Lexical & Functional

- FREE MORPHEMES : Two categories, lexical morphemes and functional morphemes Lexical Morphemes: words that carry content that a message convey :nouns (girl, man, house, tiger), adjectives (sad, long, yellow, sincere) ,verbs (look, follow, break, go)
- Lexical morphemes are open class – we can create new ones easily!

Functional Morphemes – all other free morphemes

- Examples: the, a, an (articles) at, in, on, above (prepositions) he, she, her, we, that, these (pronouns) and, nor, or, but, so (conjunctions) Functional morphemes are closed class – we rarely (almost never) create new ones

BOUND MORPHEMES

- Two categories, derivational morphemes and inflectional morphemes
- Derivational Morphemes : We use them to make new words or words of a different grammatical category from the stem. They include suffixes & prefixes
- Examples:
- good (adjective) + -ness = goodness (noun) care (noun or verb) + -less = careless (adjective) pay (verb) + -ment = payment (noun)

- Inflectional Morphemes
- They are not used to produce new words in the language.
- They are used to indicate aspects of the grammatical function of a word. (plural, singular, past tense,comparative, possessive)
- In English, all the inflectional morphemes are suffixes.
- English has only 8 inflectional morphemes
-

- Nouns: Plural –s: books, cats, teachers
- Possessive –'s: Jane's, UCF's, students'
- Verbs :3rd person singular -s Progressive -ing Past tense -ed Past participle -en/-ed:
- works, walks, visits working, walking, visiting worked, walked, visited worked, taken, eaten

- Inflectional Morphemes
- show different grammatical forms of the same word
- Adjectives :Comparative –er, Superlative -est smaller, louder, prettier smallest, loudest, prettiest.

Morphological Description

- An inflectional morpheme never changes the grammatical category of a word.
- e.g. old, older, oldest are all adjectives
- A derivational morpheme can change the grammatical category of a word.
- e.g. teach (v.) >> teacher (n.)
- Bound morphemes always appear in order, first derivational then inflectional. (e.g. *teachers)*

- Find the 8 types of Inflectional Morphemes in the sentences below:

1. Jim's two sisters are really different.
2. One likes to have fun and is always laughing.
3. The other liked to read as a child and has always taken things seriously.
4. One is the loudest person in the house and the other is quieter than a mouse

Morphs and allomorphs

- cars (car + -s) = (lexical + inflectional 'plural')
- buses (bus + -es) = (lexical + inflectional 'plural')

Two morphs (-s & -es) are used to realize the inflectional morpheme 'plural'.

(-s & -es) are allomorphs of the morpheme 'plural'

- Cat + plural = cats = (cat + -s)
- Bus + plural = buses = (bus + -es)
- Sheep + plural. = sheep = (sheep + Ø)
- Man + plural = men = (æ ε)

- Morphs are the actual forms used to realize morphemes.
- When we find a group of different morphs, **all versions of one morpheme, we can use the prefix 'allo-"** and describe them as allomorphs of that morpheme

The young boy played with his friends

The
Young
Boy
Play
-ed
With
His
Friend
-s

- A functional free morpheme
  - A lexical free morpheme
  - A lexical free morpheme
  - A lexical free morpheme
- An inflectional bound morpheme
  - A functional free morpheme
  - A functional free morpheme
    - A lexical free morpheme
- An inflectional bound morpheme

Chapter 7

Grammar

INTRODUCTION

We have already considered two levels of description used in the study of language..What are they?

Phonological ðəlʌkibɔjz

Morphological

The	luck	-y	boy	-s
functional	lexical	derivational	lexical	inflectional

GRAMMAR

- the lucky boys
- * boys the lucky
- * lucky boys the

asterisk * = unacceptable or ungrammatical

- English has strict rules for combining words into phrases.
  - article + adjective + noun
  - noun + article + adjective ×

GRAMMAR

So, what is GRAMMAR?

One way of defining grammar

- The process of describing the structure of phrases and sentences in such a way that we account for all the grammatical sequences in a language and rule out all the ungrammatical sequences.

TRADITIONAL GRAMMAR

- Concepts and ideas about the structure of language that Western societies have received from ancient Greek and Latin sources.
- These two languages were known as the languages of scholarship, religion, philosophy and knowledge;
- So, the grammar of these languages was taken to be the model for other grammars.
- The best known terms from that tradition are those used in describing the parts of speech.

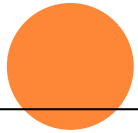
The Parts of Speech (Syntactic Categories)

- The lucky boys found a backpack in the park and they opened it carefully.

The	lucky	boys	found	a	backpack
article	adjective	noun	verb	article	noun
in	the	park			
preposition	article	noun			
and	they	opened	it	carefully	
conjunction	pronoun	verb	pronoun	adverb	

The Parts of Speech (Syntactic Categories)

• Noun	N	• boy, backpack, dog, school, roughness, earthquake, love.
• Articles	Art	• a, an, the
• Adjective	Adj	• happy, large, strange
• Verb	V	• go, talk, be, have
• Adverb	Adv	• slowly, yesterday, really, very
• Preposition	Prep	• at, in, on, near, with, without
• Pronoun	Pro	• she, herself, they, it, you
• Conjunction	Conj	• and, because, when



AGREEMENT

- Traditional grammar has also given us a number of other categories:
  - Number
  - Person
  - Tense
  - Voice
  - Gender

Agreement

Cathy loves her dog

The verb *loves* agrees with the noun *Cathy*

- loves not love
- **Number** (singular or plural)
- **Person**
  - 1st person = speaker
  - 2nd person = hearer
  - 3rd person = others

AGREEMENT

- The different forms of English pronouns can be described in terms of person and number.
- We use:
  - I for 1st person singular
  - you for 2nd person singular
  - he, she, it (or Cathy) for 3rd person singular.
- So, in the sentence Cathy loves her dog, we have a **noun** Cathy, which is 3rd person singular, and we use the **verb** loves (not love) to **agree with** the noun

Agreement

Cathy loves her dog

The form of the verb must be described in terms of:

- Tense (Loves = present tense NOT past tense)
- Voice (active or passive)
- Gender (Cathy & her)

Grammatical Gender

- Some languages use grammatical gender:
- Natural gender is based on sex (male & female)
  - masculine (*el sol* = the sun)
  - feminine (*la luna* = the moon)
- Grammatical gender is based on the type of noun (masculine & feminine)
- Nouns are classified according to their gender class
  - masculine (der Mond = the moon)
  - feminine (die Sonne = the sun)
  - neuter (das Feuer = the fire)

Articles and adjectives have different forms to agree with the gender of the noun.

Arabic

- masculine خاتم ثمين
- feminine ساعة ثمينة

Prescriptive vs. Descriptive Approach

- **Prescriptive grammar** refers to the structure of a language as certain people think it *should* be used.

- **Descriptive grammar** refers to the structure of a language as it is actually used by speakers and writers.

The Prescriptive Approach

- It is one thing to adopt the grammatical labels to categorize words in English sentences.
- it is quite another thing to go on to claim that the structure of English sentences should be like the structure of sentences in Latin.
- That was an approach taken by a number of influential grammarians, mainly in 19th century England, who set out rules for the “proper” use of English.

The Prescriptive Approach

- Some familiar examples of prescriptive rules for English sentences are:
  - You must not split an infinitive.
  - You must not end a sentence with a preposition.
- Following these types of rules, traditional teachers would correct sentences like
  - *Who did you go with?* ×

to

  - *With whom did you go?* ✓

making sure that the preposition ***with*** was not at the end of the sentence.

* Although in real-life communication, both of them are correct!

The Prescriptive Approach

- Traditional teachers would also correct:

  - *Mary runs faster than me*

to

  - *Mary runs faster than I.*

and

  - *Me and my family*

to

  - *My family and I*

- According to them, in ‘proper’ English writing, one should never begin a sentence with *and!*

The Prescriptive Approach

- It may, in fact, be a valuable part of one's education to be made aware of this 'linguistic etiquette' for the 'proper' use of the language.
- If it is a social expectation that someone who writes well should obey these prescriptive rules, then social judgments such as 'poorly educated' may be made about someone who does not follow these rules.
- However, it is worth considering the origins of some of these rules and asking whether they are appropriately applied to the English language.

The Prescriptive Approach

- Please read p. 86 – Captain Kirk's infinitive.
- It would be appropriate in Latin grammar to say you cannot split an infinitive. But is it appropriate to carry this idea over into English where the infinitive form does not consist of a single word, but of two words, *to* and *go*?
- There are structures in English that **differ from** those found in Latin, rather than think of the English forms as 'bad' because they are breaking a rule of Latin grammar.

The Descriptive Approach

- It may be that using the grammar of Latin is:
  - a useful guide for some European languages (e.g. Italian or Spanish)
  - less useful for others (e.g. English)
  - misleading for some non-European languages
- Toward the end of the 19th century, this became clear to linguists. The categories and rules that were appropriate for Latin grammar just did not seem to fit these languages.

The Descriptive Approach

- As a consequence, for most of the 20th century, a rather different approach was adopted.
- Analysts collected samples of the language they were interested in and attempted to describe the regular structures of the language **as it was used**, **not** according to some view of **how it should be used**.
- This is called the **descriptive approach.**

STRUCTURAL ANALYSIS

- One type of descriptive approach is called **structural analysis**.
- Its main concern is to investigate the distribution of forms in a language.
- The method involves the use of “test-frames” that can be sentences with empty slots in them.
- e.g
  - The_____makes a lot of noise.
  - I heard a_____yesterday.
- *car, child, donkey, dog, radio*
- Because all these forms fit in the same test-frame, they are likely to be examples of the same grammatical category (i.e. nouns N)
- How about: *Cathy, someone, the dog, a car ?*
- They don’t fit

STRUCTURAL ANALYSIS

- for these forms, we require different test-frames
  - ___ makes a lot of noise.
  - I heard__yesterday.

- *It, the big dog, an old car, the professor with the Scottish accent, Cathy, someone, the dog, a car*
- These forms are likely to be examples of the same category. (i.e. noun phrase NP)
- In the older, Latin-influenced, analysis of **pronouns,** they were described as

"words used in place of **nouns**"

- More accurately, pronouns are words used in place of **noun phrases** (not just nouns).

CONSTITUENT ANALYSIS

- Another type of descriptive approach is called **constituent analysis**.
- It shows how small constituents (components) in sentences go together to form larger constituents.
- e.g. *An old man brought a shotgun to the wedding*
- At the word level, how many constituents do we have?
- Nine constituents
- How do those nine constituents go together to form constituents at the phrase level?
- *An old man brought brought a shotgun to to the*
- Is this right? Are they proper English phrases?

Constituent Analysis

- *An old man brought a shotgun to the wedding*

- *An old man, a shotgun, the wedding* = Noun phrases (NP)
- *to the wedding* = Prepositional phrase (PP)
- *brought a shotgun* = Verb phrase (VP)

- This analysis can be represented in different types of diagrams.
- See p. 88

SYMBOLS USED IN SYNTACTIC ANALYSIS

S sentence	**NP** noun phrase	**PN** proper noun
N noun	**VP** verb phrase	**Adv** adverb
V verb	**Adj** adjective	**Prep** preposition
Art article	**Pro** pronoun	**PP** prepositional phrase

*	ungrammatical sentence
→	consists of / rewrites as
( )	optional constituent
{ }	one and only one of these constituents must be selected

S → NP VP

NP → {Art (Adj) N, Pro, PN}

VP → V NP (PP) (Adv)

PP → Prep NP

Labeled and Bracketed Sentences

- An alternative type of diagram is designed to show how the constituents in sentence structure can be marked off by using labeled brackets.

Labeled and Bracketed Sentences

This can be done by following the following steps:

1. Put brackets round each constituent
2. Put more brackets round each combination of constituents.

For example:

The dog loved the girl

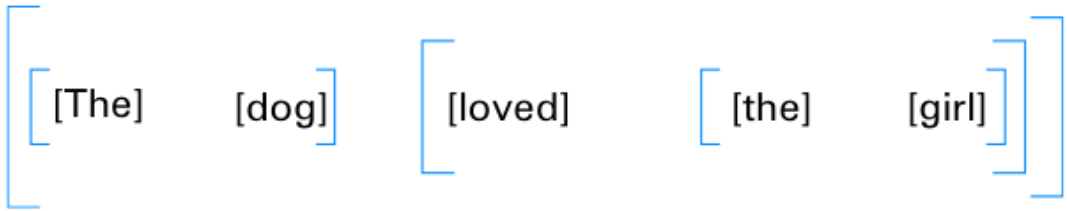


Figure 7.4

- Try it!
- At the word level: [*the*] or [*dog*]
- At the phrase level: [*the dog*] or [*loved the girl*]
- At the sentence level: [*The dog loved the girl*]

Labeled and Bracketed Sentences

3. Label each constituent using these abbreviated grammatical terms.

Art (= article)	V (= verb)
N (= noun)	VP (= verb phrase)
NP (= noun phrase)	S (= sentence)

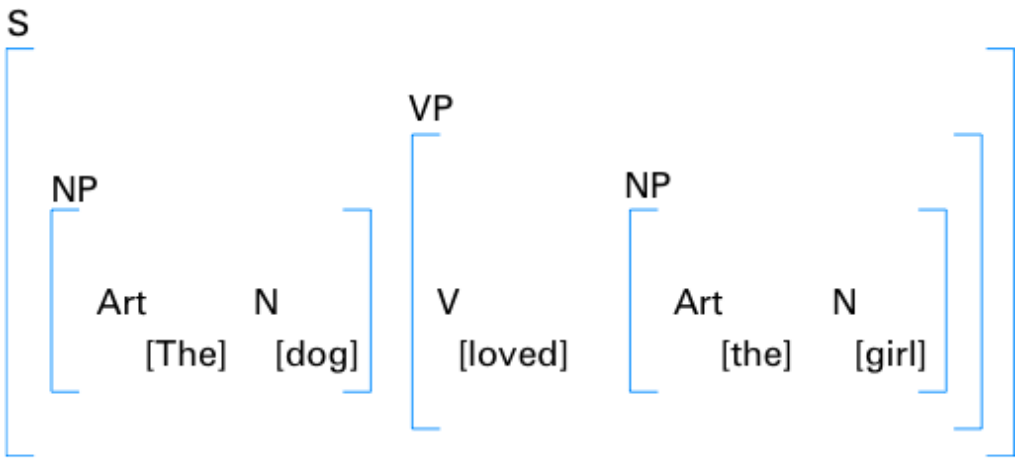


Figure 7.5

Labeled and Bracketed Sentences

In performing this type of analysis, we have not only labeled all the constituents, we have revealed the hierarchical organization of those constituents.

- S is higher than and contains NP
- NP is higher than and contains N
- S is higher than and contains VP
- VP contains V + NP

Chapter 8

SYNTAX

WHAT IS SYNTAX?

- When we focus on the structure & ordering of within a sentence = studying the syntax of a language components

- Syntax (originally Greek) = „putting together"/ „arrangement"

Syntax is the study of the rules governing the way words are combined to form sentences in a language.

Properties of syntactic knowledge

- Humans can understand & produce an infinite number of sentences they never heard before
  - "Some purple gnats are starting to tango on microwave"
- Our grammar can understand and produce long sentences
  - "Bill said that he thought that the esteemed leader of the house had it in mind to tell the unfortunate vice president that the calls that he made from the office in the White House that he thought was private….."
- Determine the grammatical relations in a sentence
  - Mary hired Bill Vs. Bill hired Mary

Syntax & meaning

- Non-sense sentences with clear syntax
  - Colorless green ideas sleep comfortably.
  - A verb crumpled the milk.
  - I gave the question an angry egg.
  - * Comfortably sleep ideas green colorless.
  - * Milk the crumpled verb a.
  - * the question I an gave egg angry.

- Sentences are composed of discrete units that are combined by rules.
- These rules explain how speakers can store infinite knowledge in a finite space - brain.

Generative Grammar

- Noam Chomsky 1950s
- In theoretical linguistics, generative grammar refers to a particular approach to the study of syntax.
- A generative grammar of a language attempts to give a set of rules that will correctly predict which combinations of words will form grammatical sentences.

Generative Grammar

- Language & mathematics
- The mathematical perspective helps to explain „generative“. How?
- $3x + 2y$
- We give x and y the value of a number
- That simple algebraic expression can „generate“ an endless set of values
- When x = 5 and y =10, the result is 35
- When x= 2 and y = 1, the result is 8

Generative Grammar

- These rules will follow directly & predictably from applying the explicit rules.
- If the sentences of a language can be compared to this , then there must be a set of explicit rules that can produce all those sentences.
- Such a set of explicit rules = *generative grammar*

Syntactic structure

- A generative grammar defines the syntactic structures of a language.

- The „all and only“ criterion:
  - The grammar will generate all the well-formed structures (e.g. sentences) of the language
  - The grammar will not generate any ill-formed structures.
- In other words, all the grammatical sentences and only the grammatical sentences
will be produced.

- The grammar will have a finite (i.e. limited) number of rules, but will be capable of generating an infinite number of well-formed structures.

Symbols used in syntactic description

- S (= sentence)
- NP (= noun phrase)
- N (= noun)
- Art (= article)
- ⟶ (= consists of)

For example:

- NP ⟶ Art N
- It is a shorthand way of saying that a noun phrase consists of an article and a noun.

SYMBOLS USED IN SYNTACTIC DESCRIPTION

- round brackets ( ) = an optional constituent

For example:

- The dog = NP
- The small dog = NP
- When we want to use a NP in English, we can include an (Adj), but we don"t have to. It"s optional.
- NP → Art (Adj) N
- It's a shorthand way of saying that a noun phrase consists of an article (Art) and a noun (N), with the option of including an adjective (Adj) in a specific

SYMBOLS USED IN SYNTACTIC DESCRIPTION

- curly brackets { } = only one of the elements enclosed within the curly brackets must be selected.

For example:

NP → Art (e.g. *the dog*)

N →

NP → Pro (e.g. *it*)

NP → PN (e.g. *Cathy*)

NP → Art N

NP → Pro

NP → PN

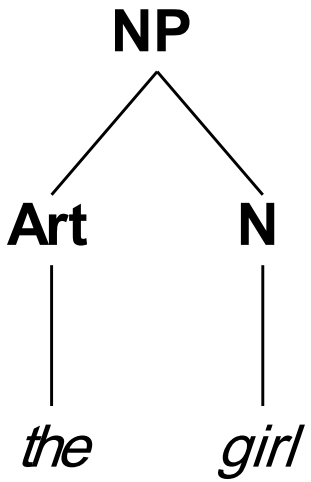
NP → { Art, N, Pro, PN }

NP → {Art N, Pro, PN}

Tree diagrams

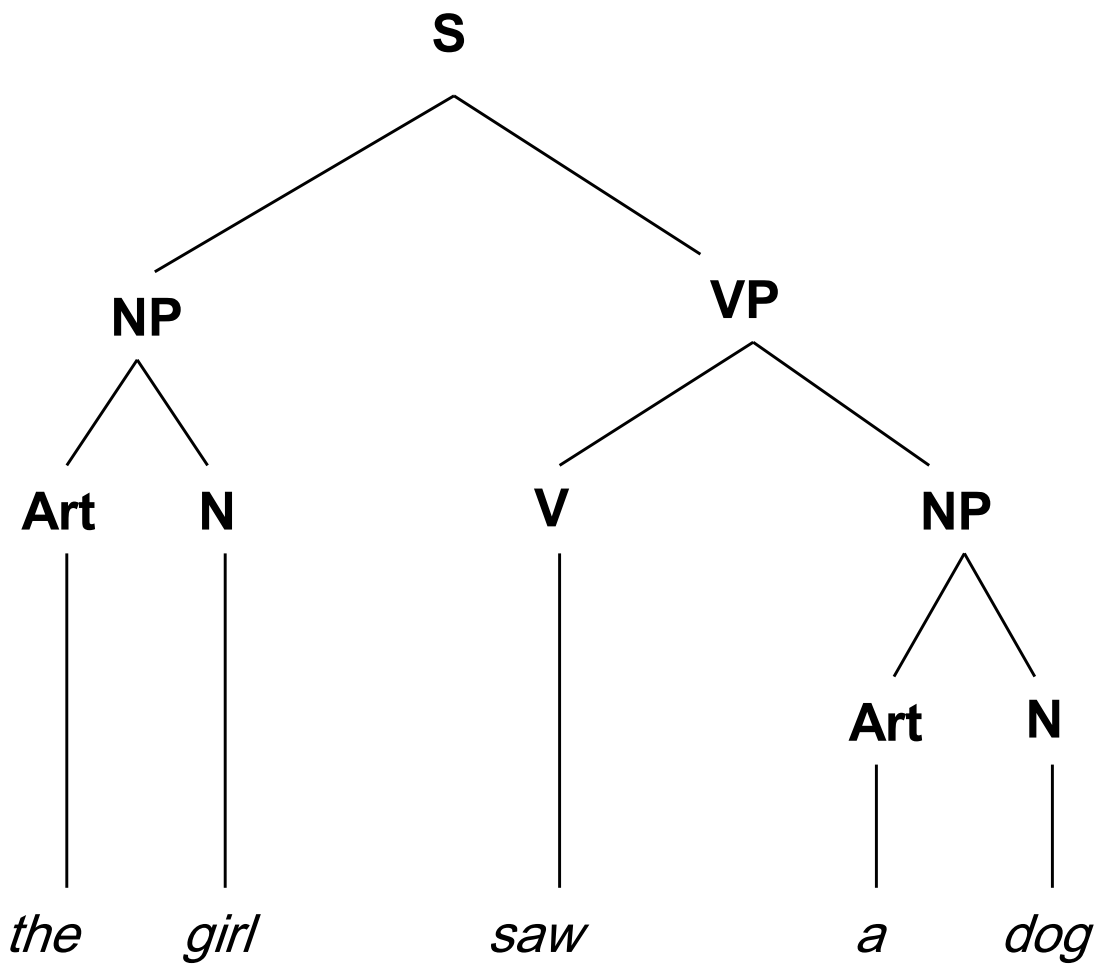
- *The girl*

- Tree diagram



Tree diagrams

- *The girl saw a dog*

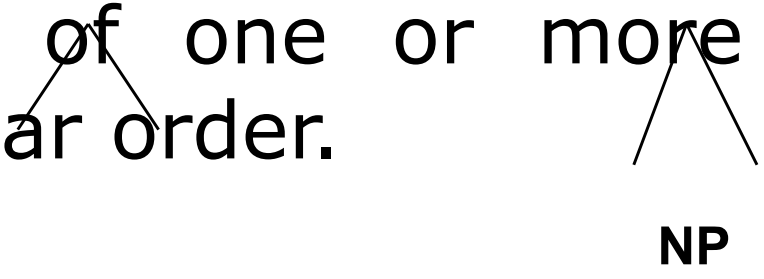


PHRASE STRUCTURE RULES

We can think of the tree diagram format in 2 different ways.

1. Static representation of the structure of the sentence shown at the bottom of the diagram.
2. Dynamic format – represents a way of generating a very large number of other sentences with similar structures.

- Phrase structure rules state that the structure of a phrase of a specific type will consist of one or more constituents in a particular order.



NP → Art N

PHRASE STRUCTURE RULES

S → NP VP

NP → {Art (Adj) N, Pro, PN}

VP → V NP (PP) (Adv)

PP → Prep NP

LEXICAL RULES

- Phrase structure rules generate structures.
- In order to turn this structure into recognizable English, we also need lexical rules.

PN → {Mary, George}
N → {girl, dog, boy}
Art → {a, the}
Pro → {it, you}

V → {followed, helped, saw}
Adj → {small, crazy}
prep → {near, with}
Adv {recently, yesterday}

- We can rely on these rules to generate the grammatical sentences , but not the ungrammatical sentences

Exercises

- Try this:
  - Sarah went to the hospital.
  - He saw John with an amazing car yesterday.
  - I met her yesterday.

Deep and surface structure

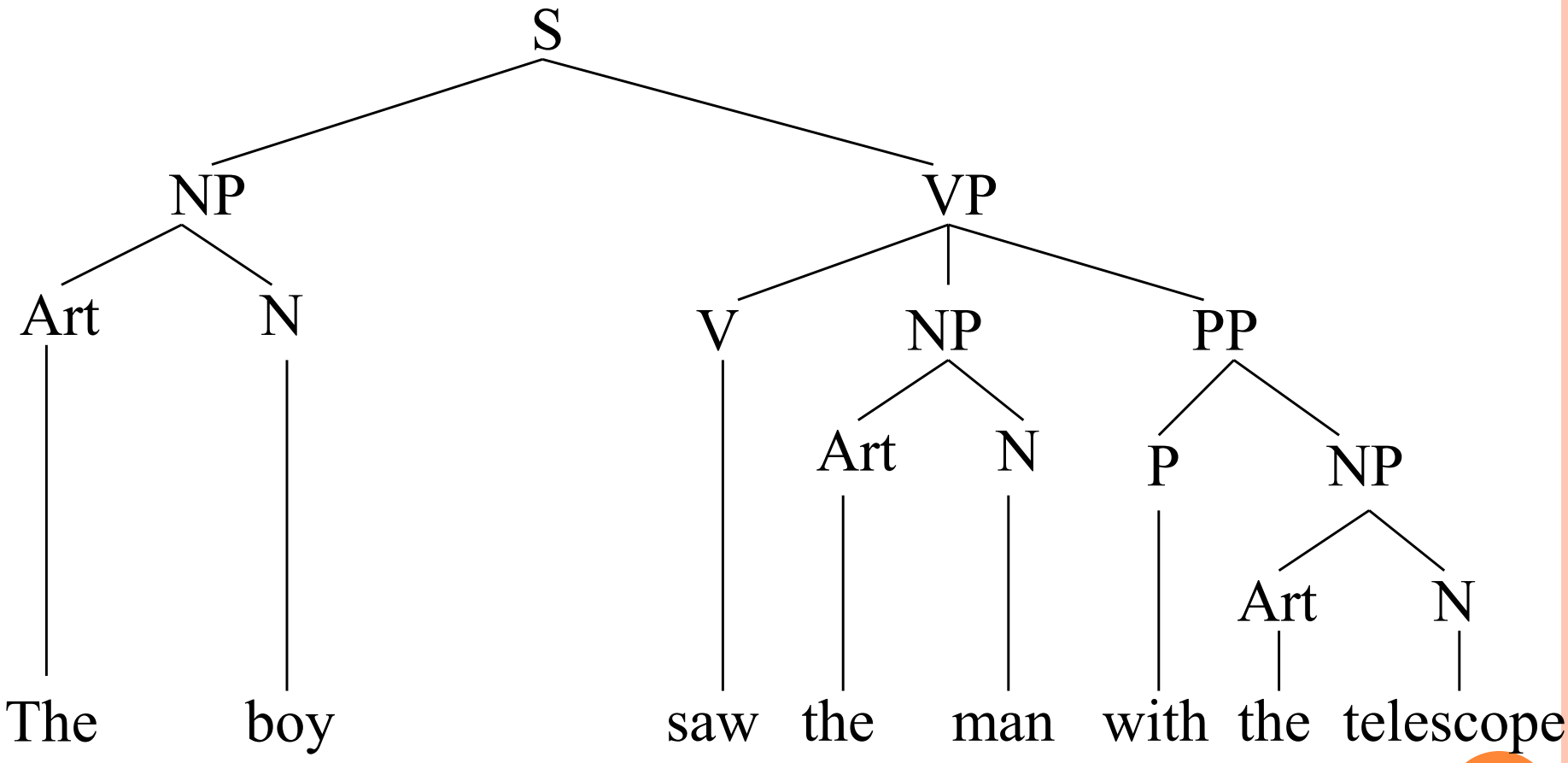
- *Charlie broke the window.*
- *The window was broken by Charlie*
- *Charlie was the one who broke the window*
- *It was Charlie who broke the window*
- *Was the window broken by Charlie?*

- Different in their *surface structure* = different in syntactic forms = different arrangement or ordering
- BUT they have the same „deep“ or underlying structure = same basic components (NP + V + NP)

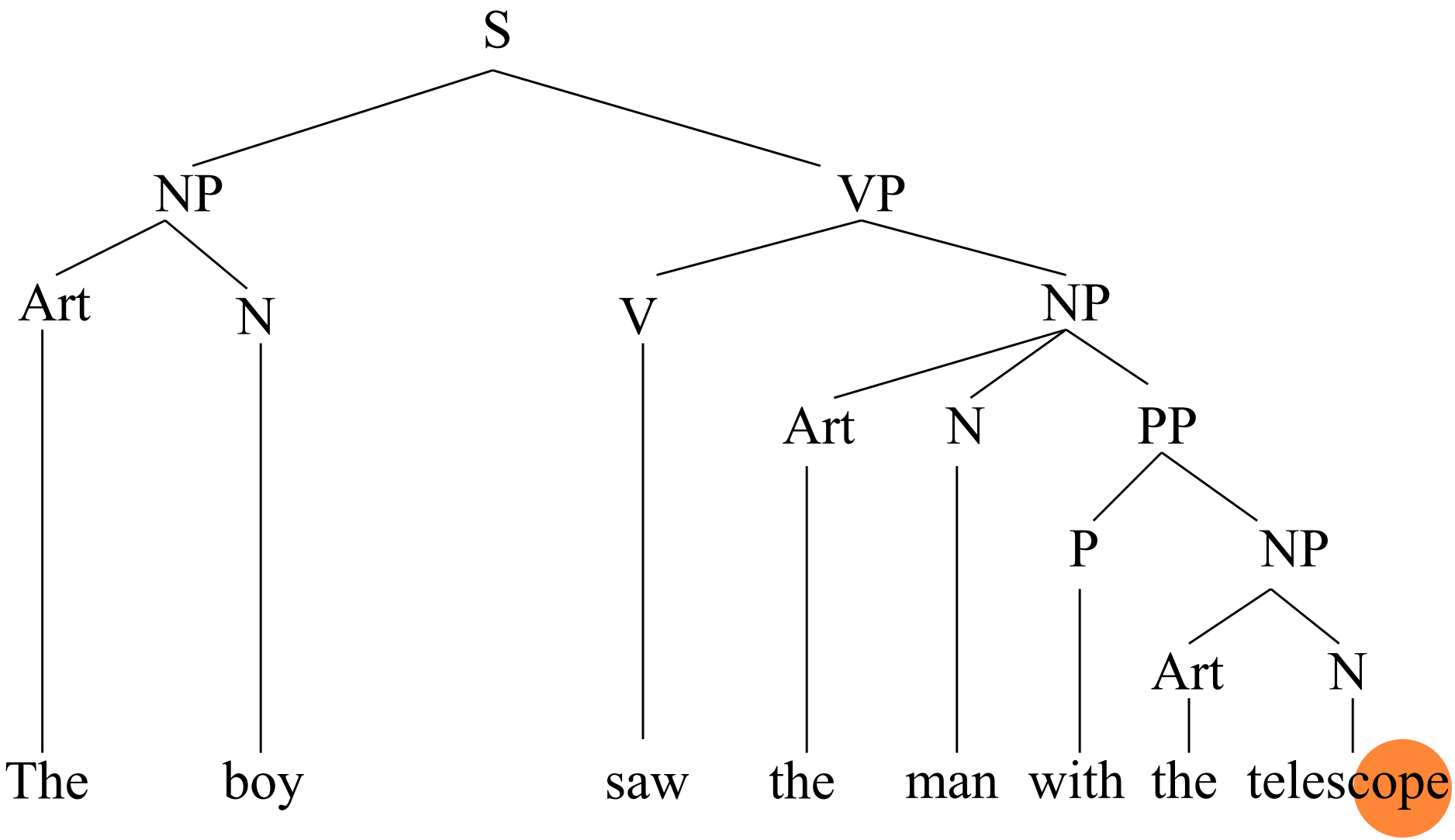
Structural ambiguity

- *Annie whacked the man with an umbrella*
  - Same surface structure but different deep structure
  - What are the two possible meanings/ the two distinct deep structures/ two distinct underlying interpretations here?
- *The boy saw the man with a telescope*
- *Small boys and girls*

Structural ambiguity



Structural ambiguity



Recursion

- Rules can be applied more than once in generating sentences
- e.g. repeat prepositional phrase more than once
  - *The gun was on the table.*
  - *The gun was on the table near the window.*
  - *The gun was on the table near the window in the bedroom.*
- Put sentences inside other sentences
  - *Mary helped George*
  - *Cathy knew that Mary helped George.*
  - *John believed that Cathy knew that Mary helped George.*
  - *This is the cat that ate the rat that ate the cheese that was sold by the man that lived in the city that was on the river…*
- No end to recursion that would produce longer complex sentences.

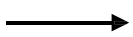
Complement Phrases

"A complement phrase consists of a complementizer and a sentence."

CP ⟶ C S

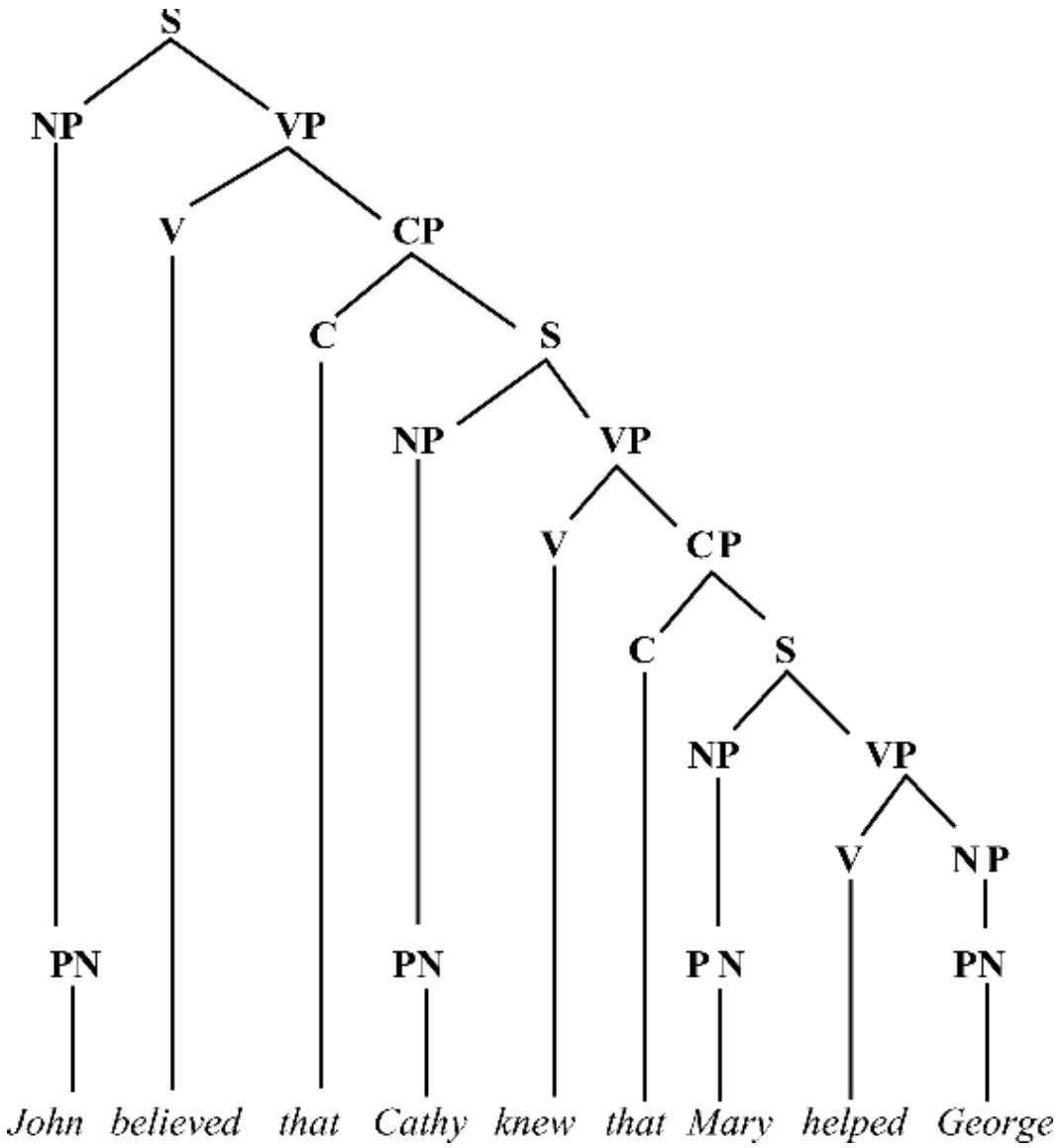
- From the example, the CP comes after a V
- This means that we are using the CP as part of a VP (*knew that Mary helped George)*.
- Now, we have a new rule, "A verb phrase consists of a verb and a complement phrase."

or, VPV ⟶ CP



- *Cathy knew that Mary helped George*
- *that* = complementizer (C) = introducing complement phrase (CP) *that Mary helped George* = CP

COMPLEMENT PHRASES

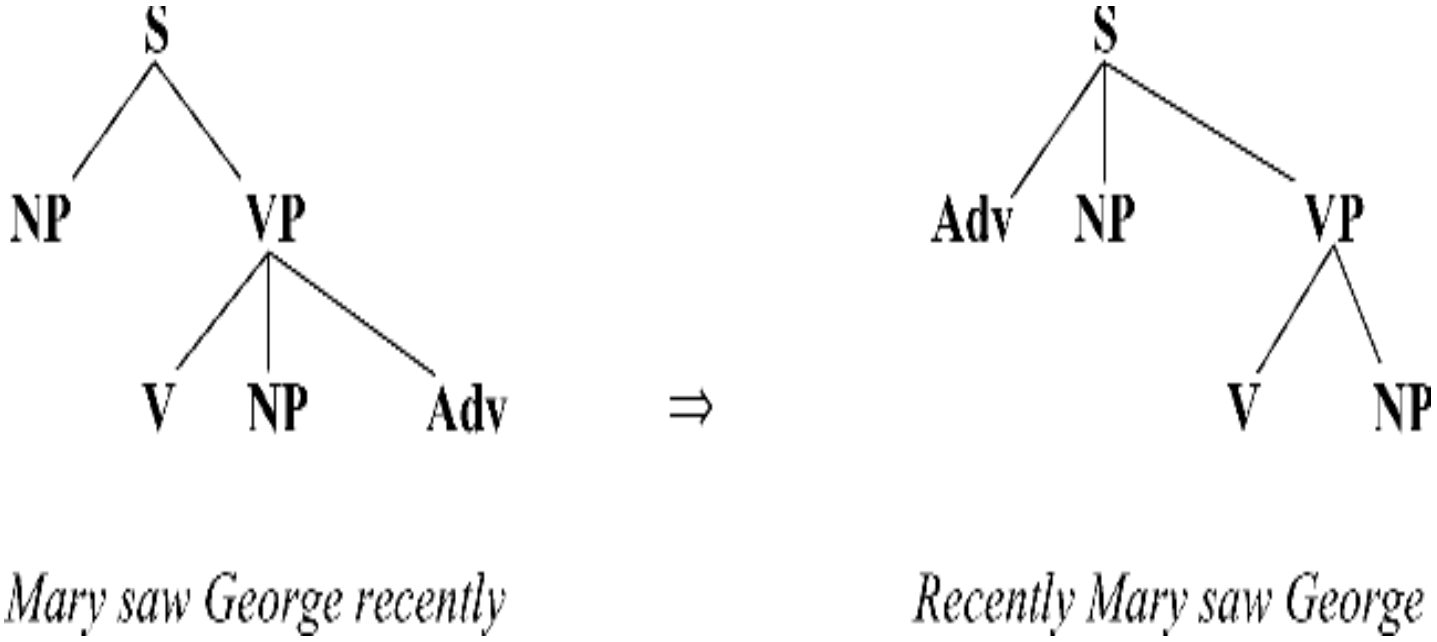


Exercises

- Try this:
  - Ahmed thinks that the teacher knows that Muhammad met Hani.

Transformational Rules

- What do the transformational rules do?
- They take specific part of structure, like a branch of the tree, away from one part of the tree diagram and attach it to a different part.



Exercises

- Draw a tree diagram to represent the different syntactic components components of the following sentences:
  - I talked to her briefly.
  - Briefly, I talked to her.

Transformational Rules

- For this particular rule, we need to specify:
  - which type of constituent can be moved
  - From where & to where
- We can also use a transformational rule to derive question structures in English.
- *You will help Cathy*
- *Will you help Cathy?*

- Phrase structure rule: S → NP Aux VP
- Lexical rule: Aux → {can, should, will}
- Transformational rule (Questions): NP Aux VP ⇨ Aux NP VP

- FORM THE PHRASE STRUCTURE RULES OF THE FOLLOWING SENTENCES.
  - Can John see it?
  - Should Mary follow the small boy?
- Draw a tree diagram to represent each of the above sentences.

Exercises

- Draw a tree diagram to represent the different syntactic components of the following sentences.
  - The guy met the researcher.
  - The smart guy met the researcher.
  - The smart guy met the famous researcher.
- Now, create a labeled & bracketed analysis of the above sentences.

Chapter 9: Semantics

Semantics

What is Semantics?

Semantics is the study of the meaning of words, phrases, and sentences.

Meaning

- When we define words, we deal with the conceptual meaning rather than the associative meaning.

- What is the difference?

Meaning

- Associative meaning:

- Needle = pain, illness, blood, drugs, thread, knitting, hard to find.
- Low calorie = healthy
- Associative connotations related to a word.
- These associations differ From a person to another.

Conceptual meaning:

- Needle = thin, sharp, steel, instrument
- Low-calorie = producing a small amount of heat or energy

Meaning

Poets, song-writers, novelists, literary critics, advertisers and lovers

Associative Meaning

In linguistic semantics

Conceptual Meaning

Semantic Features

- The hamburger ate the boy
- The table listens to the radio
- The horse is reading the newspaper 

- The oddness of these sentences does not derive from their syntactic structure.
- According to the basic syntactic rules for forming English sentences ,we have well-formed structures.

NP V NP

The hamburger ate the boy

Semantic Features

- This sentence is syntactically good, but semantically odd.
- Since the sentence *The boy ate the hamburger* is perfectly acceptable, we may be able to identify the source of the problem.
- The components of the conceptual meaning of the noun *hamburger* must be significantly different from those of the noun *boy.*
- The kind of noun that can be the subject of the verb *ate* must denote an entity that is capable of 'eating'.
- The noun *hamburger* does not have this property and the noun *boy* does .

Semantic Features

- We can make this observation applicable by trying to determine the important features of meaning that any noun must have in order to be used as the subject of the verb *ate*.

- Feature = animate being

  boy: + animate [+ = has the feature]

  hamburger: – animate [– = doesn't have the feature]

Semantic Features

	table	horse	boy	man	girl	woman
animate	-	+	+	+	+	+
human	-	-	+	+	+	+
female	-	-	-	-	+	+
adult	-	+	-	+	-	+

- The word *girl* involves the elements [+ human, + female, - adult]
- Syntactic analysis + semantic features:

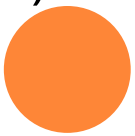
The_____is reading the newspaper

N [+human]

Semantic Roles

- Instead of thinking of words as ‘containers’ of meaning, we can look at the ‘roles’ they play.

- *The boy kicked the ball*
- The verb describes an action (kick)
- The noun phrases describe the roles of entities, such as people & things, involved in the action.
- We can identify a small number of semantic roles (thematic roles) for these noun phrases.

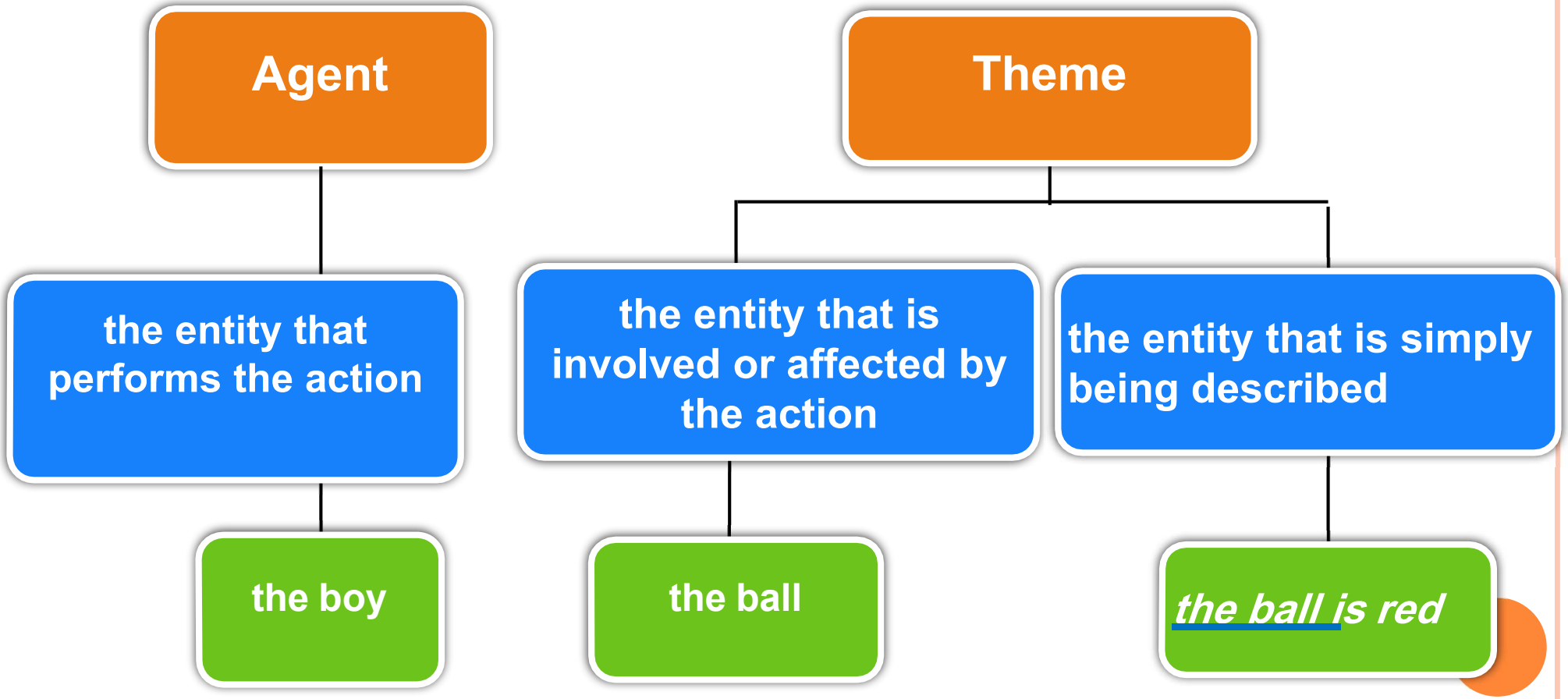


Semantic Roles

- Agent
- Theme
- Instrument
- Experiencer
- Location
- Source
- Goal

Agent and Theme

The boy kicked the ball



Agent and Theme

- Although **agents** are typically **human**, they can also be **non-human** entities that cause actions.
- as in noun phrases denoting:
  - A natural force (the wind blew the ball away)
  - A machine (A car ran over the ball)
  - A creature (The dog caught the ball)

Agent and Theme

- The theme is typically **non-human**, but can be **human**
  - The dog chased the boy.
- The same physical entity can appear in 2 different semantic roles in a sentence
  - The boy cut himself the boy = agent

himself = theme

Instrument

- If an agent uses another entity in order to perform an action, that other entity fills the role of **instrument**.
  - The boy cut the rope with an old razor.
  - He drew the picture with a pencil.
- The NP *an old razor* & *a pencil* are being used in the semantic role of instrument.

EXPERIENCER

- When a NP is used to represent an entity as the person who has a feeling, perception or state, it fills the role of **experiencer*.***
- If we *see*, *know* or *enjoy* something, we are not really performing an action (so, we are not agents)
- We are in the role of experiencer.
  - The boy feels sad
  - Did you hear that noise?
  - The boy = experiencer
  - You = experiencer
  - that noise = theme

Agent Vs Experiencer

- **Agent:** A participant which the meaning of the verb specifies as doing or causing something, possibly intentionally.
  - e.g. subjects of kill, eat, hit, smash, kick and watch.
- **Experiencer:** A participant who is characterised as aware of something.
  - e.g. subjects of love, like, enjoy, smell, hear

Location

- A number of other semantic roles represent where an entity is
  - on the table
  - in the room
- Where an entity is fills the role of **location**.

Source and Goal

- Where an entity moves from is: the **source**
- Where an entity moves to is: the **goal**.
  - *We drove from Basrah to Baghdad*

    source goal
  - *I transferred the money from saving to checking.*

    source goal

Semantic Roles

- All these semantic roles are illustrated in the following scenario.
- *Mary* *saw* *a fly* *on the wall.*

  EXPERIENCER THEME LOCATION
- *She* *borrowed* *a magazine* *from George*

  AGENT THEME SOURCE
- *she* *hit* *the bug* *with the magazine*.

  AGENT THEME INSTRUMENT
- *She* *handed* *the magazine* *back to George*

  AGENT THEME GOAL
- *"Gee* *thanks,"* *said* *George*

  AGENT

Lexical Relations

- Synonymy
- Antonymy
- Hyponymy
- Prototypes
- Homophones
- Homonyms
- Polysemy
- Metonymy
- Collocations

Semantic Roles

- Extra examples:

I	*took*	*the pen*	*from her*	*and*	*gave*	*it*	*to him*
AGENT		THEME	SOURCE			THEME	GOAL

The	*door*	*is*	*big*
THEME			

Lexical Relations

- What is the meaning of the word *conceal*?
- What is the meaning of *shallow*?
- What is the meaning of *Rose*?
- By answering these questions, we are characterizing the meaning of each word, not in terms of its component features, but in terms of its relationship to other words.

Lexical Relations

- Words can have relationships with each other.
  - *Big*

    The same as *large (Synonymy)*
  - *Big*

    The opposite of *small (Antonymy)*
  - *Dog*

    A kind of *animal* (Hyponymy)

- Lexical relations

Synonymy

- Synonyms are two or more words with very closely related meanings.

Ex*amples:*

almost/nearly, big/large, broad/wide, buy/purchase, cab/taxi, car/automobile, couch/sofa, freedom/liberty.

SYNONYMY

- They can often, though not always, be substituted for each other in sentences.
  - *What was his answer?* ‘
  - *What was his reply?* ‘
- The idea of “sameness” of meaning is not necessarily ‘total sameness’.
- In many occasions, one word is **appropriate** in a sentence, but its synonym is **odd**.
  - *Sandy had only one correct answer on the test.* ‘
  - *Sandy had only one correct reply on the test.* ×

Formal Vs. informal uses

- *My father purchased a large automobile.*
- *My dad bought a big car.*

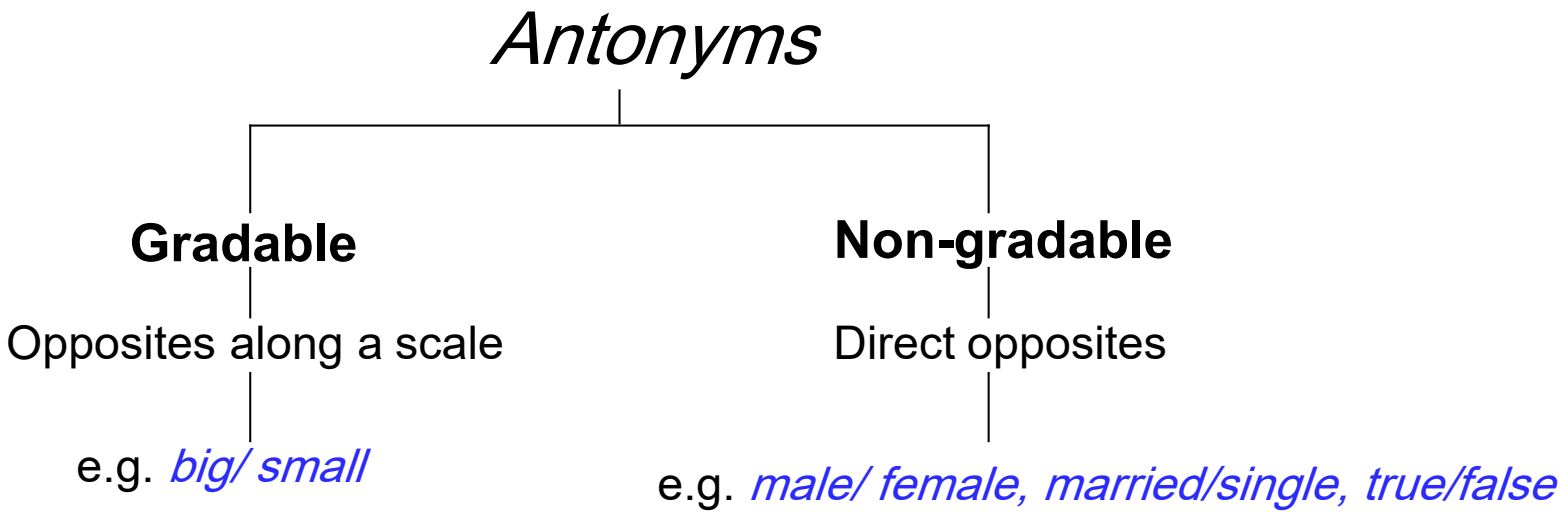
Antonymy

- Antonyms are two forms with opposite meanings.

Examples:

alive/ dead, big/small, fast/slow, happy/sad, hot/cold, long/short, male/female, married/single, old/new, rich/ poor, true/false.

ANTONYMY



1- Used in comparative constructions

e.g. *I'm bigger than you*
A pony is smaller than horse

2 – The negative of one member of a gradable pair doesn't necessarily imply the other.

e.g. *My car isn't old ≠ My car is new*

1- comparative constructions are not normally used

e.g. *dead* ‘ *deader* × *more dead* ×

2 – The negative of one member of a non-gradable pair does imply the other member.

e.g. *My grandparents aren't alive = My grandparents are dead*

Hyponymy

- Hyponymy = when the meaning of one form is included in the meaning of another.

Examples:

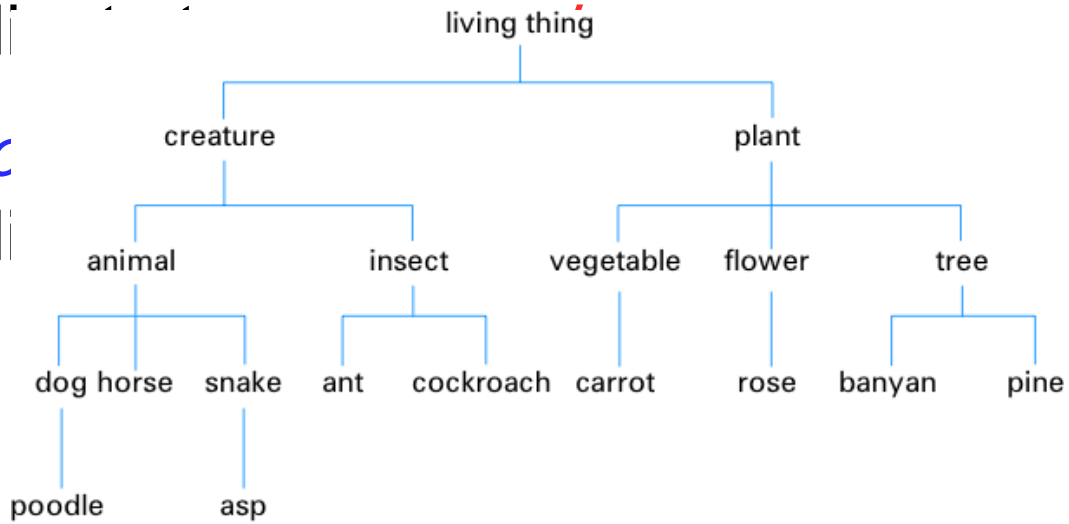
animal/dog, dog/poodle, vegetable/carrot, flower/rose.

- The concept of 'inclusion' involved in this relationship is the idea that if an object is a *rose*, then it is necessarily a *flower*
  - *rose* is a hyponym of *flower*.

- The relationship of hyponymy = the concept of 'is kind of'
  - e.g. "an *asp* is a kind of *snake*"

Hyponymy

- Looking at the diagram, we can say that "*horse* is a hyponym of *animal*" or "*ant* is a hyponym of *insect*"
  - *animal* = *superordinate* (= higher level)
  - *insect* = *superordinate*
- The 2 or more words that share the same superordi
  - *Dog* & *hc* superordi



Hyponymy

- Not only words of ‘things’ but also words of ‘actions’
  - e.g. *punch*, *shoot*, *stab* are co-hyponyms of the superordinate term *injure*.

Prototypes

- What is the clearest example of the word *bird*?
- What is the clearest example of the word *fruit?*
- What is the clearest example of the word *furniture*?
-

PROTOTYPES

- "The characteristic instance" of a category is known as the *prototype*.




- Explain the meaning of certain words in terms of resemblance to the clearest example.
  - Bird
    - Pigeon & sparrow are closer to the prototype than ostrich & penguin.
  - Clothing--- *shirts* are closer than *shoes*.
  - Furniture --- *chair* is closer than *stool*




Homophones

- Homophones: Two or more words with different forms and the same pronunciation

- Examples:

Bare/bear, meat/meet, flour/flower, pail/pale, right/write, hole/whole, to/too/two.

Homonyms

- **Homonyms:** Two or more words with the same form and pronunciation that are unrelated in meaning
- Examples:

bank (of a river)	*bank (financial institution)*
mole (on skin)	*mole (small animal)*
pupil (at school)	*pupil (in the eye)*
race (contest of speed)	*race (ethnic group)*

- Homonyms are words that have separate histories and meanings, but have accidently come to have exactly the same form and pronunciation .

Polysemy

- **Polysemy:** Two words or more with the same form and pronunciation, and with related meanings.

Examples:

- *Head* = the object on top of your body
- *Head* = the person at the top of a company or department.
- *Foot* = of person/ of bed/ of mountain
- *Run*= person does/ water does/ colors does.

Polysemy

- It is possible for two terms to be distinguished via homonymy and via polysemy.
  - Date = a thing we eat
  - Date = a point in time

homonyms

- Date = a point in time is polysemous in terms of:
  - a particular day and month (=on a letter)
    - *The date on the letter was 30th August 1962.*
    - *What's today's date?*
  - An arranged meeting (= an appointment)
    - *Let's make a date to come over and visit.*
  - A romantic meeting (=with someone we like)
    - *I've got a date with Andrea tomorrow night.*
  - A person (that person we like)
    - *Can I bring my date to the party*

polysemy

Metonymy

- A container-contents relation
  - *Bottle/water* *e.g. He drank the whole bottle.*
  - *Can/juice*
- A whole-part relation
  - *Car/wheels*
  - *House/roof*
- Representative-symbol relation
  - *King/crown*
  - *The President/ the White House* *The White House has announced..*

- Using one of these words to refer to the other is an example of metonymy.

Metonymy

Other examples:

- *10 Downing Street protested..*
- *answering the door*
- *boiling a kettle*

- Making sense of such expressions often depends on context, background knowledge and inference.

Collocation

- Which words tend to occur with other words.
  - *hammer/ nail*
  - *table/ chair*
  - *butter/ bread*
  - *needle/ thread*
  - *salt/ pepper*
  - *Break/ rule, break/promise, break/ heart*
  -
  -

Chapter 9: Semantics

Semantics

What is Semantics?

Semantics is the study of the meaning of words, phrases, and sentences.

Meaning

- When we define words, we deal with the conceptual meaning rather than the associative meaning.

- What is the difference?

Meaning

- Associative meaning:

- Needle = pain, illness, blood, drugs, thread, knitting, hard to find.
- Low calorie = healthy
- Associative connotations related to a word.
- These associations differ From a person to another.

Conceptual meaning:

- Needle = thin, sharp, steel, instrument
- Low-calorie = producing a small amount of heat or energy

Meaning

Poets, song-writers, novelists, literary critics, advertisers and lovers

Associative Meaning

In linguistic semantics

Conceptual Meaning

Semantic Features

- The hamburger ate the boy
- The table listens to the radio
- The horse is reading the newspaper 

- The oddness of these sentences does not derive from their syntactic structure.
- According to the basic syntactic rules for forming English sentences ,we have well-formed structures.

NP V NP

The hamburger ate the boy

Semantic Features

- This sentence is syntactically good, but semantically odd.
- Since the sentence *The boy ate the hamburger* is perfectly acceptable, we may be able to identify the source of the problem.
- The components of the conceptual meaning of the noun *hamburger* must be significantly different from those of the noun *boy.*
- The kind of noun that can be the subject of the verb *ate* must denote an entity that is capable of 'eating'.
- The noun *hamburger* does not have this property and the noun *boy* does .

Semantic Features

- We can make this observation applicable by trying to determine the important features of meaning that any noun must have in order to be used as the subject of the verb *ate*.

- Feature = animate being

  boy: + animate [+ = has the feature]

  hamburger: – animate [– = doesn't have the feature]

Semantic Features

	table	horse	boy	man	girl	woman
animate	-	+	+	+	+	+
human	-	-	+	+	+	+
female	-	-	-	-	+	+
adult	-	+	-	+	-	+

- The word *girl* involves the elements [+ human, + female, - adult]
- Syntactic analysis + semantic features:

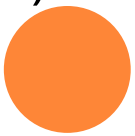
The_____is reading the newspaper

N [+human]

Semantic Roles

- Instead of thinking of words as ‘containers’ of meaning, we can look at the ‘roles’ they play.

- *The boy kicked the ball*
- The verb describes an action (kick)
- The noun phrases describe the roles of entities, such as people & things, involved in the action.
- We can identify a small number of semantic roles (thematic roles) for these noun phrases.

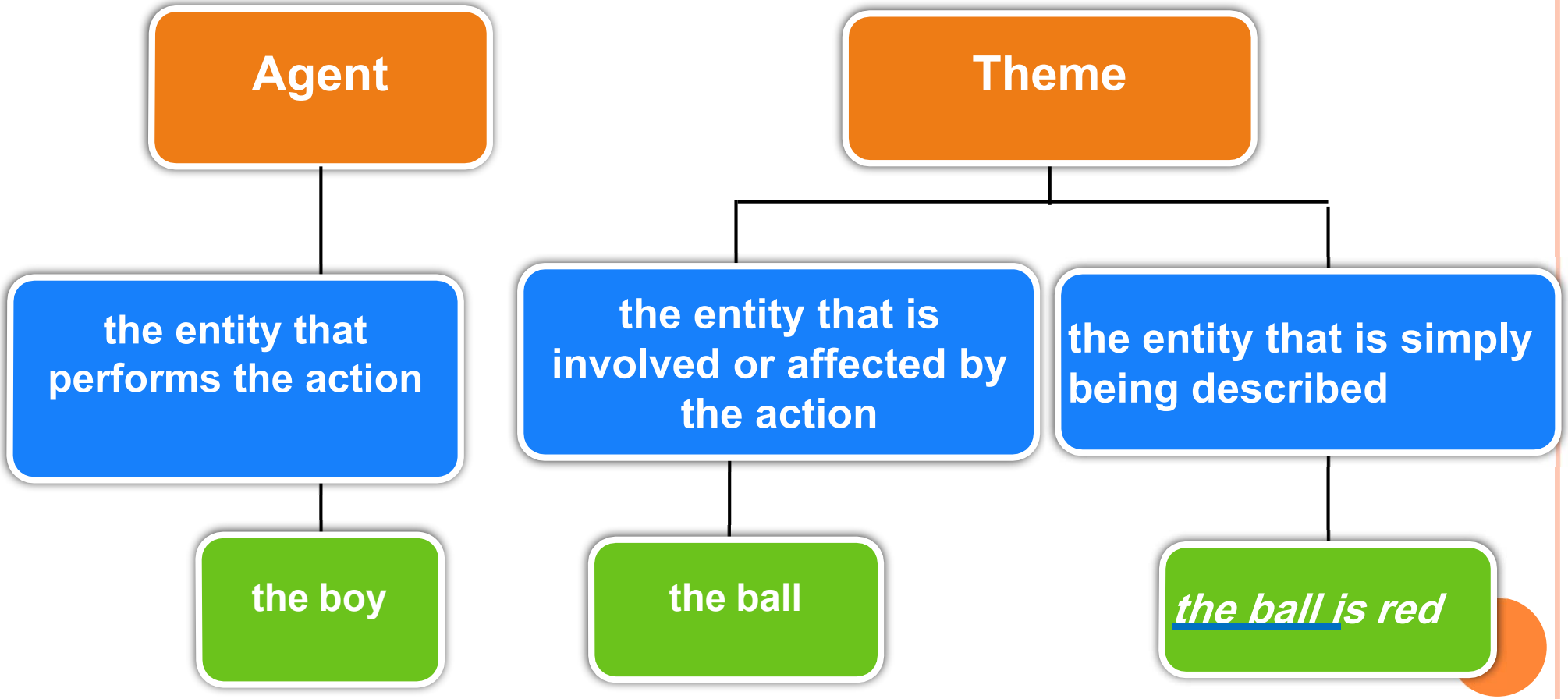


Semantic Roles

- Agent
- Theme
- Instrument
- Experiencer
- Location
- Source
- Goal

Agent and Theme

The boy kicked the ball



Agent and Theme

- Although **agents** are typically **human**, they can also be **non-human** entities that cause actions.
- as in noun phrases denoting:
  - A natural force (the wind blew the ball away)
  - A machine (A car ran over the ball)
  - A creature (The dog caught the ball)

Agent and Theme

- The theme is typically **non-human**, but can be **human**
  - The dog chased the boy.
- The same physical entity can appear in 2 different semantic roles in a sentence
  - The boy cut himself the boy = agent

himself = theme

Instrument

- If an agent uses another entity in order to perform an action, that other entity fills the role of **instrument**.
  - The boy cut the rope with an old razor.
  - He drew the picture with a pencil.
- The NP *an old razor* & *a pencil* are being used in the semantic role of instrument.

EXPERIENCER

- When a NP is used to represent an entity as the person who has a feeling, perception or state, it fills the role of **experiencer*.***
- If we *see*, *know* or *enjoy* something, we are not really performing an action (so, we are not agents)
- We are in the role of experiencer.
  - The boy feels sad
  - Did you hear that noise?
  - The boy = experiencer
  - You = experiencer
  - that noise = theme

Agent Vs Experiencer

- **Agent:** A participant which the meaning of the verb specifies as doing or causing something, possibly intentionally.
  - e.g. subjects of kill, eat, hit, smash, kick and watch.
- **Experiencer:** A participant who is characterised as aware of something.
  - e.g. subjects of love, like, enjoy, smell, hear

Location

- A number of other semantic roles represent where an entity is
  - on the table
  - in the room
- Where an entity is fills the role of **location**.

Source and Goal

- Where an entity moves from is: the **source**
- Where an entity moves to is: the **goal**.
  - *We drove from Basrah to Baghdad*

    source goal
  - *I transferred the money from saving to checking.*

    source goal

Semantic Roles

- All these semantic roles are illustrated in the following scenario.
- *Mary* *saw* *a fly* *on the wall.*

  EXPERIENCER THEME LOCATION
- *She* *borrowed* *a magazine* *from George*

  AGENT THEME SOURCE
- *she* *hit* *the bug* *with the magazine*.

  AGENT THEME INSTRUMENT
- *She* *handed* *the magazine* *back to George*

  AGENT THEME GOAL
- *"Gee* *thanks,"* *said* *George*

  AGENT

Lexical Relations

- Synonymy
- Antonymy
- Hyponymy
- Prototypes
- Homophones
- Homonyms
- Polysemy
- Metonymy
- Collocations

Semantic Roles

- Extra examples:

I	*took*	*the pen*	*from her*	*and*	*gave*	*it*	*to him*
AGENT		THEME	SOURCE			THEME	GOAL

The	*door*	*is*	*big*
THEME			

Lexical Relations

- What is the meaning of the word *conceal*?
- What is the meaning of *shallow*?
- What is the meaning of *Rose*?
- By answering these questions, we are characterizing the meaning of each word, not in terms of its component features, but in terms of its relationship to other words.

Lexical Relations

- Words can have relationships with each other.
  - *Big*

    The same as *large (Synonymy)*
  - *Big*

    The opposite of *small (Antonymy)*
  - *Dog*

    A kind of *animal* (Hyponymy)

- Lexical relations

Synonymy

- Synonyms are two or more words with very closely related meanings.

Ex*amples:*

almost/nearly, big/large, broad/wide, buy/purchase, cab/taxi, car/automobile, couch/sofa, freedom/liberty.

SYNONYMY

- They can often, though not always, be substituted for each other in sentences.
  - *What was his answer?* ‘
  - *What was his reply?* ‘
- The idea of “sameness” of meaning is not necessarily ‘total sameness’.
- In many occasions, one word is **appropriate** in a sentence, but its synonym is **odd**.
  - *Sandy had only one correct answer on the test.* ‘
  - *Sandy had only one correct reply on the test.* ×

Formal Vs. informal uses

- *My father purchased a large automobile.*
- *My dad bought a big car.*

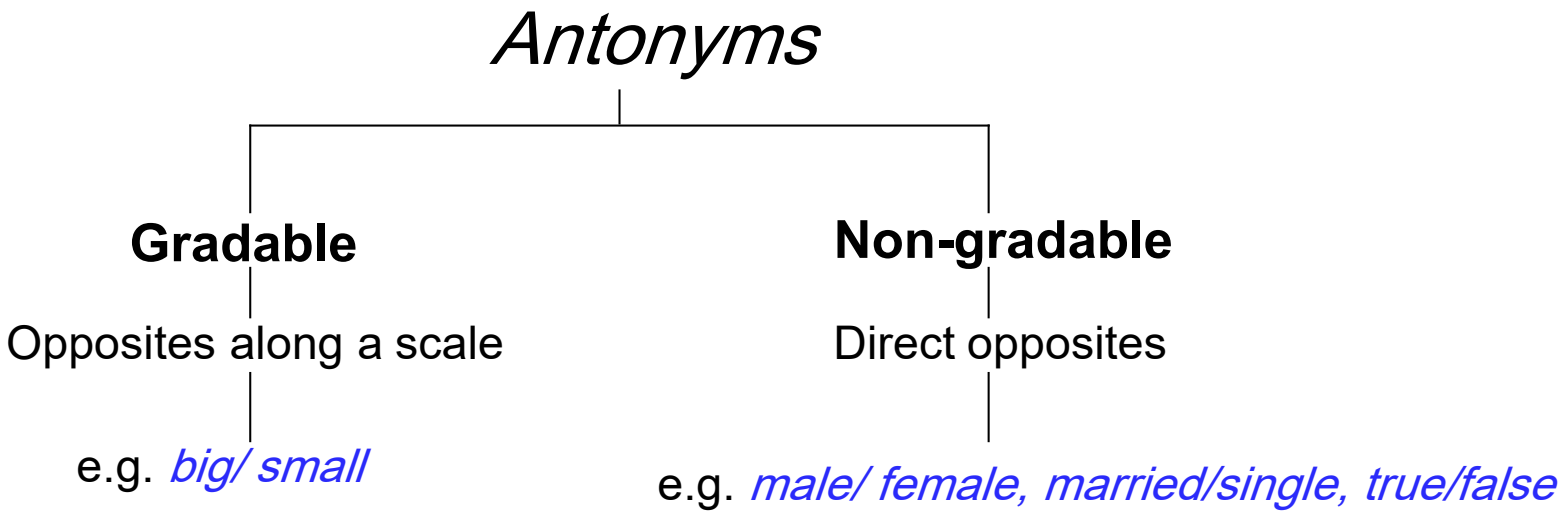
Antonymy

- Antonyms are two forms with opposite meanings.

Examples:

alive/ dead, big/small, fast/slow, happy/sad, hot/cold, long/short, male/female, married/single, old/new, rich/ poor, true/false.

ANTONYMY



1- Used in comparative constructions

e.g. *I'm bigger than you*
A pony is smaller than horse

2 – The negative of one member of a gradable pair doesn't necessarily imply the other.

e.g. *My car isn't old ≠ My car is new*

1- comparative constructions are not normally used

e.g. *dead* ‘ *deader* × *more dead* ×

2 – The negative of one member of a non-gradable pair does imply the other member.

e.g. *My grandparents aren't alive = My grandparents are dead*

Hyponymy

- Hyponymy = when the meaning of one form is included in the meaning of another.

Examples:

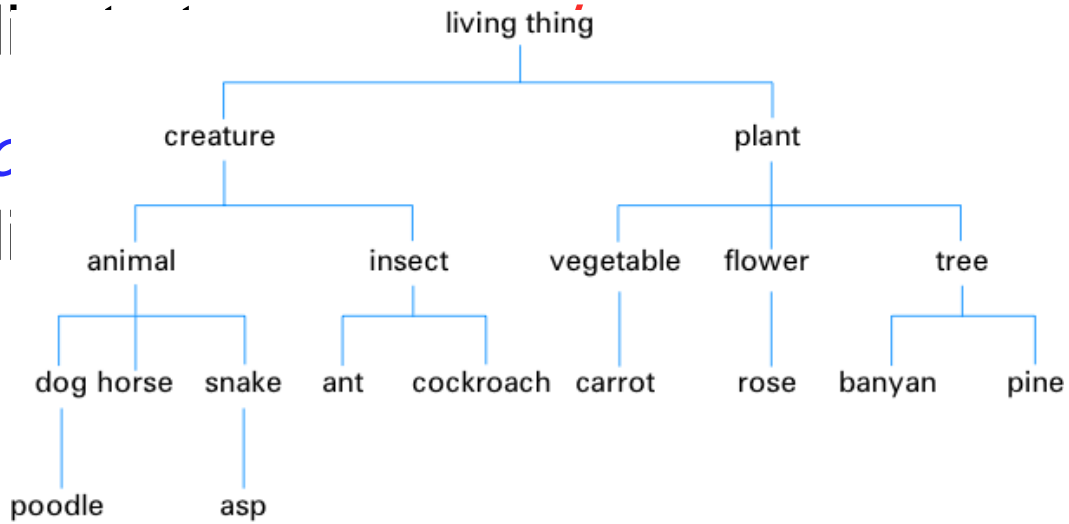
animal/dog, dog/poodle, vegetable/carrot, flower/rose.

- The concept of 'inclusion' involved in this relationship is the idea that if an object is a *rose*, then it is necessarily a *flower*
  - *rose* is a hyponym of *flower*.

- The relationship of hyponymy = the concept of 'is kind of'
  - e.g. "an *asp* is a kind of *snake*"

Hyponymy

- Looking at the diagram, we can say that "*horse* is a hyponym of *animal*" or "*ant* is a hyponym of *insect*"
  - *animal* = *superordinate* (= higher level)
  - *insect* = *superordinate*
- The 2 or more words that share the same superordi
  - *Dog* & *hc* superordi



Hyponymy

- Not only words of ‘things’ but also words of ‘actions’
  - e.g. *punch*, *shoot*, *stab* are co-hyponyms of the superordinate term *injure*.

Prototypes

- What is the clearest example of the word *bird*?
- What is the clearest example of the word *fruit?*
- What is the clearest example of the word *furniture*?
-

PROTOTYPES

- "The characteristic instance" of a category is known as the *prototype*.




- Explain the meaning of certain words in terms of resemblance to the clearest example.
  - Bird
    - Pigeon & sparrow are closer to the prototype than ostrich & penguin.
  - Clothing--- *shirts* are closer than *shoes*.
  - Furniture --- *chair* is closer than *stool*




Homophones

- Homophones: Two or more words with different forms and the same pronunciation

- Examples:

Bare/bear, meat/meet, flour/flower, pail/pale, right/write, hole/whole, to/too/two.

Homonyms

- **Homonyms:** Two or more words with the same form and pronunciation that are unrelated in meaning
- Examples:

bank (of a river)	*bank (financial institution)*
mole (on skin)	*mole (small animal)*
pupil (at school)	*pupil (in the eye)*
race (contest of speed)	*race (ethnic group)*

- Homonyms are words that have separate histories and meanings, but have accidently come to have exactly the same form and pronunciation .

Polysemy

- **Polysemy:** Two words or more with the same form and pronunciation, and with related meanings.

Examples:

- *Head* = the object on top of your body
- *Head* = the person at the top of a company or department.
- *Foot* = of person/ of bed/ of mountain
- *Run*= person does/ water does/ colors does.

Polysemy

- It is possible for two terms to be distinguished via homonymy and via polysemy.
  - Date = a thing we eat
  - Date = a point in time

homonyms

- Date = a point in time is polysemous in terms of:
  - a particular day and month (=on a letter)
    - *The date on the letter was 30th August 1962.*
    - *What's today's date?*
  - An arranged meeting (= an appointment)
    - *Let's make a date to come over and visit.*
  - A romantic meeting (=with someone we like)
    - *I've got a date with Andrea tomorrow night.*
  - A person (that person we like)
    - *Can I bring my date to the party*

polysemy

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