

Ch-11 Language

Function Words & Content words

↳ Nouns, verbs, adjectives & adverbs
 ↳ Pronouns, Auxiliaries, Negations
 Usually monosyllables / short words
 More frequently used.

Language is usually associated with the left hemisphere of the brain.
 Also math is predominantly left

Right is more ~~creative~~ creative and is apparently musical.

True for 95% of right handed people, but only 14.5% of left handed people show inverted qualities.

Henniker's area is the mental lexicon

Broca's area is used to convert mental blueprint to speech

Received Pronunciation:- Spoken English UK [BBC]

Phonology:- Sound Patterns

eats → [k eɪ t̪ə] ↗ Voiceless consonant
 figs → [fɪg z̪] ↗ diff in vocal vibrations
 ↗ Voiced consonant

Dialect:- neutral label used to refer to a variety of language used by speakers.

AAVE :- African American Vernacular English {consisted features like negative doublets}

SAE:- Standard American English

Diffr b/w standard & vernacular :- Absence & presence of socially disfavoured words/phrases.

Downsides of having a complex grammar system

1) Learnability (time)

2) Complex Neural Structure (brain size?)

Broca's Area :- Production of words

Wernicke's Area :- Comprehension.

Design features of language :- {Proposed by Charles Hockett}

- Specialized modes of communication
- Arbitrariness (Correspondence b/w form & meaning)
- Semanticity (Symbolic not literal reference to things on earth)
- Discreteness. (Sounds → words → sentences)
- Displacement. (Referencing stuff that is not present)
- Productivity. (Sentences never been seen before)
- Pragmatic Functions (Non-genetic system to preserve ideas)
- Cultural transmission
- Interchangeability. (Speaker & Listener are not fixed designations)

Degree of Arbitrariness

- Sound symbolism
- Onomatopoeia

Most words having visual perception start with "G"

Language is innate but is triggered by society

Normal brain development depends on early & regular exposure to language.

fox p2 gene is required for grammar.

B/w birth and 12 years is the critical period to learn language. (True for signs as well)

No grammar acquisition after critical period

Wernicke's area is visible by the 26th week of gestation

Bees signal the location & quality of food source by "dancing"

Round dance → < 20 ft

Sickle → 20-60 ft

Tail wagging → > 60 ft

Repetition rate :- Acc dist (lower means longer)

Angle :- Direction.

Evolution of language:-

i) Continuity { Gradualist Approach } :- Natural selection & Adaptation

Modification of ancestor's abilities.

ii) Discontinuity { EFA & PA } :- "Act of God", Lucky mutations
Explanation. { Random changes enabling changes ; Saltation :- Sudden changes b/w generations }

Artistic revolution occurred about 50k years ago

Pidgins :- Restricted vocab, rudimentary grammar, lack of tense markers on verbs, no subject verb agreement, lack of preposition. Formed when adults of different languages are forced to communicate.

Creole :- Next gen (children of pidgin speakers) speak a more grammatical variant

Ch-2:- Phonetics :-

- Articulatory phonetics: How do we produce sound.
- Acoustic phonetics :- Physical properties of speech
- Auditory phonetics : Sound perception

International Phonetic Alphabet :-

Sounds → (voicing & Vowels
Location → manner of articulation.

Sound → Auditory system → Phonological representation
decodes ↓

Impression. ← Syntactic ← Lexical Selection
representations

But this whole process happens ~~parallelly~~ in parallel

Oxymors :- When people ~~speak~~: wrongly hear speech.

Mondegreen :- Extreme case of oxymor.

~~Letter~~ Letter - sound correspondence:-

-ough :- cough, tough, through, though.
 [kɒf] [tʌf] [θruː] [θoʊf]

Silent letters :- knee, knight, knife, debt, psychology
 mortgage

One letter - multiple sounds : exit, use
 [ɛksɪt] [juːz]

multiple letters - one sound :- the, revolution
 [r̩]

G H O T I can replace fish

Tough women revolution
 ↘ F I SH ↗

The silly amoeba stole the key to the machine

All sound like - e

ʌ ə

International Phonetic Alphabet :-

Each sound gets its own symbol. It tries to eliminate the usage of many symbols for diff sounds and vice versa.

Speech sounds

- Consonants → Greater degree of constriction of vocal tract
- Vowels → Free flow of air.

- Consonants :-
- 1) Place of articulation → Column headers
 - 2) Manner of articulation → Row headers
 - 3) Voicing :- $a \quad b$ → $a = \text{voiceless}$
 $b = \text{voiced.}$
 - 4) Aspiration :- $[p^h] [b^h]$ {Puff of air}

Voicing :-

voiced consonants :- vocal folds vibrate together.

voiceless :- vocal folds distant & do not vibrate much
 vowels are usually voiced

- | | | | |
|---------|-------------------------------|---------|-------------------------------|
| bin :- | $[b \text{ I } n]$ | time :- | $[t \text{ ə } \text{ I } m]$ |
| spin :- | $[s \text{ p } \text{ I } n]$ | dime :- | $[d \text{ ə } \text{ I } m]$ |
| pin :- | $[p^h \text{ I } n]$ | | |

Places of Articulation :-

Bilabial :- 2 lips $[p] [b]$

Labiodental :- Lower lip plus upper row of teeth $[v] [f]$

Dental :- Tip of tongue b/w the teeth $[ð] [ð]$

Alveolar :- Tip of tongue and the alveolar ridge $[+] [d]$

Post-alveolar :- Tip of tongue and region b/w alveolar $[ʃ] [ʒ]$

Palatal :- ridge & back of teeth.

Palatal :- Mid Tongue at hard palate $[j]$

Velar :- Mid Tongue at soft palate [k] [g]

Retroflex :- Tip of tongue curls back [t̪] [d̪]

Glossal :- Glottis is used [h]

Vocalic :- Back of tongue and uvula are used [χ] [ɔ̄]

Mid Tongue is ~~not~~ actually called Front of Tongue //

Manners of Articulation:-

Plosive :- Complete closure \rightarrow airflow is stopped [p] [b]

Fricative :- Partial closure \rightarrow disturbance in airflow [s] [z]

Nasal :- Air is redirected to nose & [m] [n]

Affricate :- Plosive + Fricative [tʃ] [dʒ]

Tall :- Rapid succession of tongue taps [ɾ]

Tap / flap :- Brief tongue tap [ɾ]

Approximant :- Slight constriction not enough to cause turbulence

Liquids :- Approximants like [l] [ɹ]

Glick :- Semivowel approximant [j] [w]

ə - Schwa \rightarrow makes the "uh" sound.

Aspiration :- Brief puff of air [h]

Vowels :-

- 1) Tongue Height
- 2) Tongue Advancement / Retraction
- 3) Lip rounding
- 4) Tense / Lax [Amount of tension in the tongue]

Front vowels :- [i:] & [ɪ] Tongue is in the front.

Back vowels :- [u:] & [ʊ] Tongue is in the back.

boot foot

~~central~~~~Mid vowels :-~~

	Front	Central	Back
High	i {beet}		u {boot}
	I {bit}		ʊ {foot}
Mid		ə {among}	
	ɛ {bet}	ʌ {but}	ɔ {bought}
Low	æ {baɪt}	a {father}	

Monophthongs :- Simple vowels [i] [ɪ] [ɛ] [æ] [u] [ʊ] [ɔ] [ɑ] [ʌ] [ə]

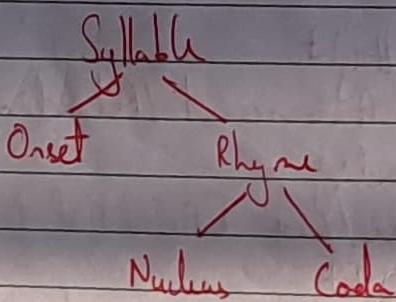
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Diphthongs :- [aɪ], [aʊ], [ɔɪ], [oʊ], [eɪ] :- Complex vowels

Vowels can be nasalized as well, like dean [d̄ɪn]

Syllabic Sounds :-

Blocks of speech sounds.



button = [bʌt̪n̪]

↳ Syllabification

Syllabic Consonants :- [ŋ] [ɳ] [ʈ] [ɖ]

Vowels usually forms the nucleus of the syllable.

Major Phonetic Classes :-

- i) Continuants vs Non continuants (Stops & Affricates)
- ii) Obstruents (Non-nasal stops, fricatives, plosives, affricates)
- iii) Sonorants (vowels, nasal stops, liquids, glides)
- iv) Labials
- v) Anteriors
- vi) Sibilants

Ch:3- Phonology :-

Basically about sound pattern of language.

It is the study of the system of sounds in a language.
Every language/dialect has a phonological system.

The mind sorts incoming sounds using one set of rules, outgoing sounds with another.

Phonetica deals with the production of language, phonology deals with understanding in the mind {Perception}

Ng Mr. Grush Effect:- Different sound perceptions with eyes open & closed.

Speech Perception → Auditory + Visual Inputs
 Acoustic ^(on)

Motor Theory

Words starting with less obstruent consonant comes first.

Words with high vowel precede those with low vowels.

Phone :- Sound.

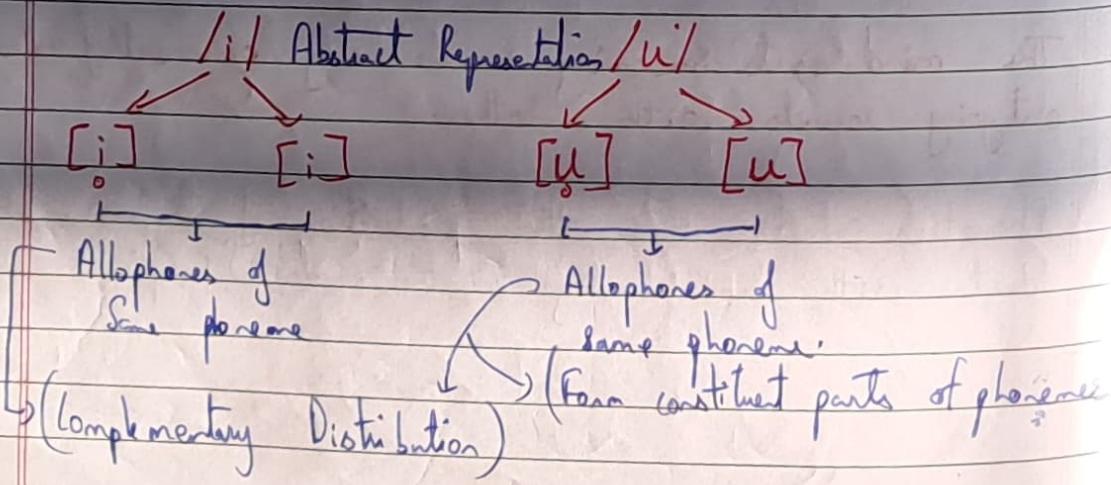
Phonemes :- Abstract mental representation (contrastive)
 Found in minimal pairs Distribution

[k] cat vs [t] bat

[kæt] [bat]

[k] vs [b] → Results in contrast in terms of meaning

In → Mobilese, high vowels are voiceless when occurring b/w 2 voiceless consonants.



Hey there!!

classmate

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Allomorphs :- Plural sounds [z] [s] [~~θ~~]

After voiced non-sibilant segments

After voiceless non-sibilant segments [p][t][k][f][θ]

After sibilant segments ← [s][ʃ][z][ʒ][tʃ][dʒ]

→ [b][d][g][v][j][m][n][ŋ][i][ɪ][ə][ɔɪ]

Bugs + plural

Bat + pl

Bug + pl

/bʌgɪz/

/ba:t/+z/

/bʌg/+z/

a

NA

NA

NA

s

NA

[bʌgɪz]

[ba:t+s]

[bʌg+z]

Allophones of different phonemes :- Meaning changes

Allophones of same phoneme :- Meaning doesn't change, interchangeable sounds

[t] vs [tʰ]

Top vs stop vs little vs kitten vs hunter

[tʰ:p] [stɔ:p] [lɪtʰ!] [kɪt̪n] [hʌnt̪ɪ]

[t̪:p] [stap] [lɪt̪!] [kɪt̪n] [hʌnt̪ɪ]

$/t/ \rightarrow [t^h]$
 $\hookrightarrow [t]$
 $\hookrightarrow [t]$
 $\hookrightarrow [?]$
 $\hookrightarrow \text{Deleted}$

Every dialect has a unique phonological system

Tight transcription attempts to record every nuance of an utterance.

Loose transcription just captures the essentials

Phonological process processes

Assimilation:- A sound becomes more like its neighbouring sound. { /kaet+z/ = [kætoʊz] }

Insertion:- A segment is added

Deletion:- A segment is deleted.

Strengthening:- A sound becomes stronger (more distinct)

Weakening:- A sound becomes weaker (less distinct)

Dissimilation:- Two neighbouring sounds become dissimilar
{ alveolar vs velar }
[æŋgʌlər] vs [æŋgʊlər]

Phenological Rules:- Applied to abstract mental entities to convert them to real physical entities.

Ans:- Writing Systems:-

Writing:- A more or less permanent method of representing utterances in such a way that it can be recovered more & or less exactly without interference of the writer.

Alphabetic

Syllabic

Logographic

i) Alphabetic:- Represents all sounds [consonants & vowels alike]
Ex:- Etruscan, Latin, Korean, Cyrillic, Runic, etc.

Abjads:- Represents consonants only [sometimes select vowels, diacritics generally available]
Ex:- Arabic, Amharic, Aramaic, Hebrew.

Letters are used to encode sounds. But this is not a one to one correspondence.

ii) Syllabic:- Alpha syllabaries : Writing systems that have symbols that represent consonant + vowel, and also have symbols for vowels. Vowels can be changed by adding diacritics.

Ex:- Balinese, Javanese, Tibetan, Tamil, Thai, Tagalog

Syllabaries:- Writing systems having separate symbols for each syllable:

Ex:- Hingana, Devanagari

iii) Ilography :-

Pictographs :- Originally pictures of things, now stylized & simplified.

Ex:- Mandarin

Ideographs :- Representation of abstract ideas.

Compounds :- Combination of ideographs.

Semantic-phonetic compounds :- Symbols with a meaning element (hinting at meaning) and a phonetic element (hinting at pronoun pronunciation)

Ex:- Nihongo, Ancient Egyptian

iv) Non standard writing systems:

a) Braille → Tactile.

b) Chromatographic

Japanese :-

Japanese writing systems :- Kanji & Kana
 Hingana ← → Katakana.

All 3 are used at once while transcribing /writing in Japan

People injured in the left hemisphere cannot read Kanji
 Right hemisphere damaged population cannot write read Kanji
 [Ilography]

Kanji:- 5000 - 10000 borrowed Chinese characters

Katakana :- Foreign words & onomatopoeia

Hingana :- Everything else.

Korean:- Korean writing is an alphabetic, syllabic and logographic.

Hangul:- Developed in 1446 during King Sejong's reign.

There are

Azerbaijani:- A Turkish language with speakers in Azerbaijan, northwest Iran & Georgia.

Arabic scripts were used from 7th century until 1920s. Three different scripts were used.

Latin was forced upon by the Soviet Union in 1929
Cyrillic became official in 1939
Back to Latin in 1991

Advantages & Disadvantages of writing systems:

Accuracy:- Can every word be transcribed accurately.

Learnability:- Ease of memorization.

Cognitive ability:- Are systems unnatural?

Language particular differences:- English has thousands of possible syllables while Japanese has very few.

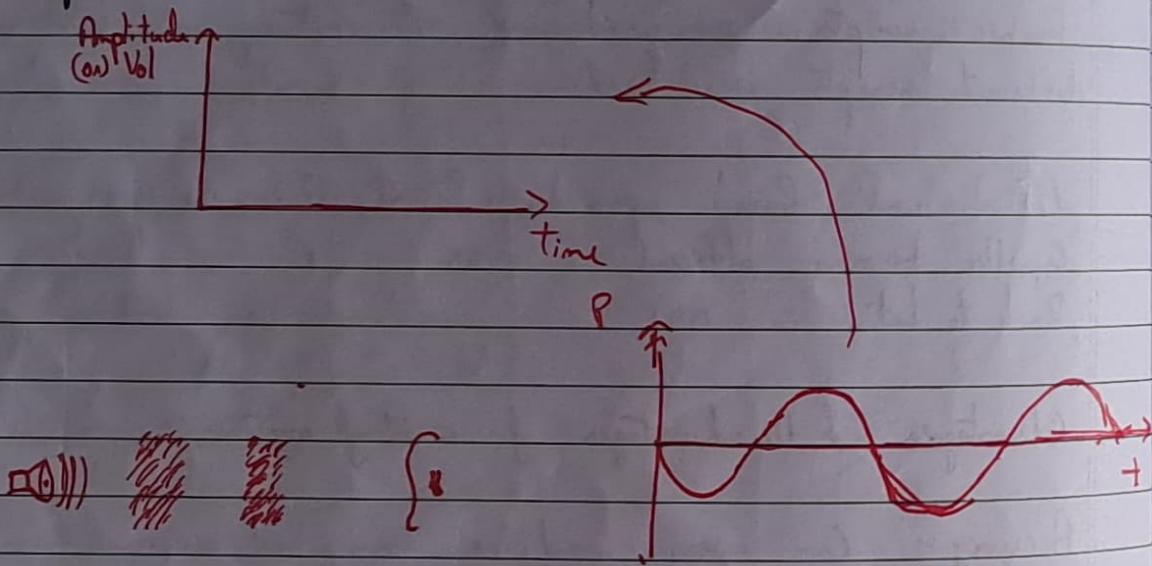
Connection to history/culture:- Will changing a writing system have social consequences?

GL:1:- Acoustic Phonetics {Guest Lecture 3}

Four processes of spoken communication

- 1) Cognition
- 2) Neuro-motor controls
- 3) Production
- 4) Perception

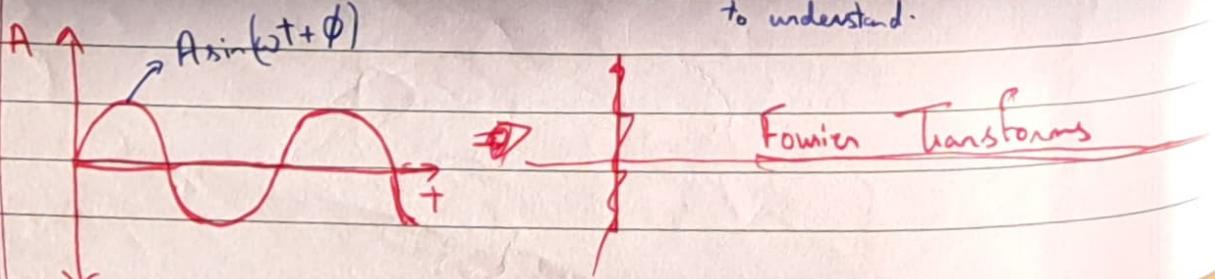
Perception:-



We can decipher the words from the graphs since there is co-articulation and time variance.

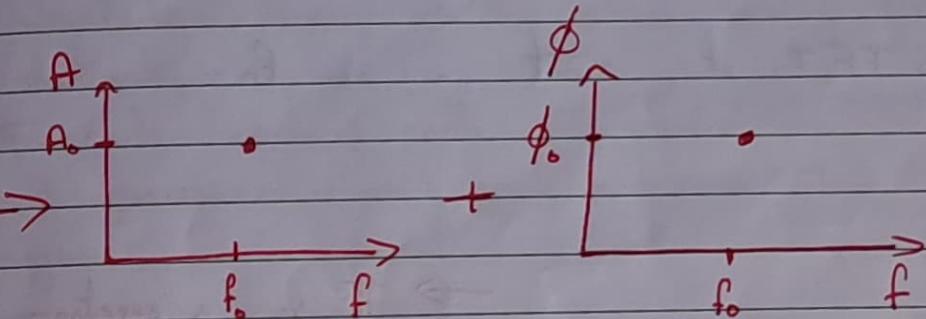
Unlike how we perceive, computers use short term ~~long~~ analyses using chunking and Fourier transforms.

Short Term Fourier Transforms :- To make it easier for computer to understand.

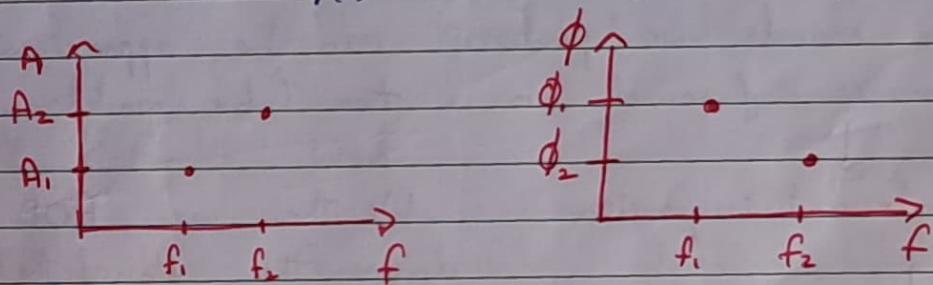


$$A \sin(\omega t + \phi) = A_0 \sin(2\pi f_0 t + \phi_0)$$

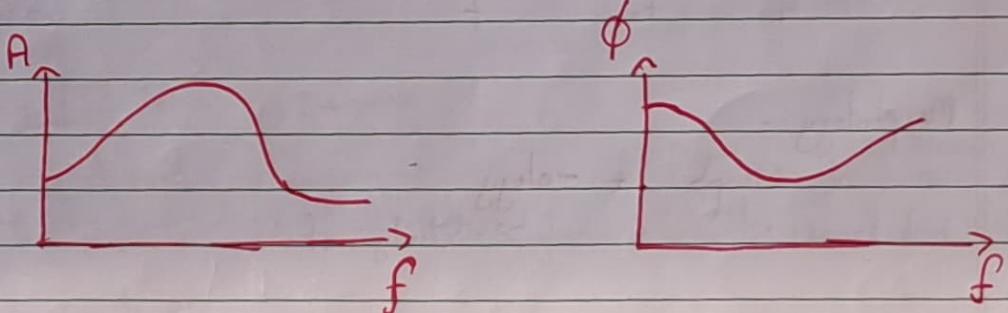
$A_0, f_0, \phi_0 \leftrightarrow$



$$A_1 \sin(2\pi f_1 t + \phi_1) + A_2 \sin(2\pi f_2 t + \phi_2)$$



Extrapolating this to normal speech sounds.

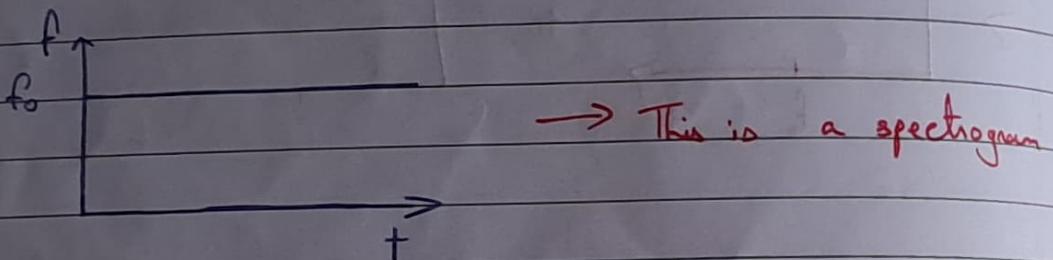


We use "Short Term" Fourier Transform to improve
losslessness.

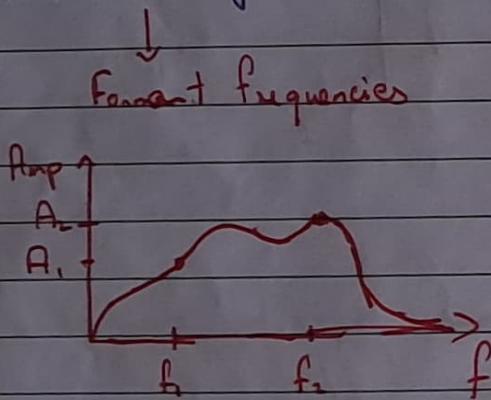
For each chunk, we have a 2-d plane with 2 axes, A & ϕ & f . For n such chunks, it becomes a 3-d space with time as the third axis.

We then compress this 3-d into a 2-d by coding the amplitudes.

a) Find STFT of ~~$\sin f_0 t$~~ $\sin f_0 t$:



The sounds we produce can be approximated to resonance of sound in a two tube model.



We then use AOD to derive the f_n of the curve?

Ch5:- Morphology:-

Morph + -ology
Word forms \hookleftarrow \hookrightarrow Study of

Ambiguity :- Capable of operating a noun with either head.
Logority :- Measure of logority.

These are all compound words coined by citizens in recent times

On an average, a 6 year old knows about 13k words.
On the other hand, an unabridged dictionary has about 500k words.

A high school student knows about 60k words

Wernicke's Area is the place hosting the mental lexicon / dictionary.

Broca's Area pulls out words from the Wernicke's Area and processes it as signals and uses those to control the organs

Lexicon :- Contains → Sounds & Pronunciation
 ↳ Meanings
 ↳ Spelling (Literates)
 ↳ Grammatical Category.

Content & Function Words:-

Content words:- Nouns, verbs, adjectives, adverbs
 cat, pink, 'come, go' strong, beautiful slowly, silently

Function words:- the, a, of, in, and, he, she, it
 Determiners, preposition, conjunctions, pronouns
 auxiliaries
 is, was

↗ Loss of grammar

Damage to Broca's Area → Loss of fn words, broken speech

Damage to Wernicke's Area → Meaningless speech, Nonsense words

↳ Loss of coherence

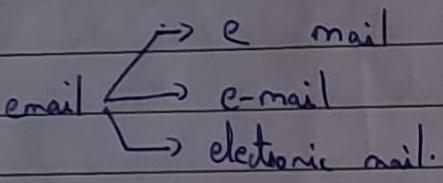
Fn words are closed class :- Little to no borrowing

Content words are open class :- Open to borrowing.

Fn words are resistant to change

Check out spoonerism.

Words:- Usage of spaces, hyphenation & punctuation is very inconsistent.



The panda eats sheets & leaves Lynn Truss.
The panda, eats, sheets & leaves.

Tokenization:- Adding spaces b/w tokens.

It eats, sheets and leaves

Also, spaces do not exist in spoken language anyway.

Morpheme:- Sound + Meaning
Minimal unit of meaning.

Morphemes are indivisible:

catty := cat + ty
free ↖ ↳ bound
morpheme morpheme.

Root := The morpheme that carries most of the meaning.
drive :- drive + e

unhelpful :- un + help + ful
prefix ↖ ↑ root ↳ suffix
bound free bound.

Affix:- Prefix \Rightarrow Suffix

Latin origin words like receive, perceive, conceive, decide
-ceive is a bound root.

Roots are not required to be free, they can be bound.

Root:- Morpheme corresponding to the core meaning of a word.
& Has only a single morpheme

Stem:- When a root morpheme is combined with an affix, it forms a stem. Stems can have multiple affixes.

-er :- Suffix is both agentive & comparative & sometimes not a morpheme at all.

~~L2 Leipzig Glossing Rules:-~~

~~Practice of providing linguistic information about the morphology and syntax of a sentence in another language.~~

~~Explains how morphemes translate b/w languages.~~

~~Helps in comparing structures b/w languages.~~

~~Rule ①:- Interlinear glosses are left aligned word by word~~

Ram ne aam khaya

Ram mango ate.

~~Rule ②:- Morphemes are separated by hyphens~~

++ Tom Brown's School Days !

Morphology + Phonology + Phonetics → 4th Nov-
Add to meaning.

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Bound morphemes :- 1) Derivational : ↑ changes the class of word.
2) Inflectional : Number, gender, etc.

Zero morpheme :- {∅} No morpheme, but meaning changes.
Ex:- Sheep.

Circumfix:- You add morphemes to both the front & the back simultaneously.

Ex :- lieb → geliebt

Infix:- Morpheme changes in the middle of a word. Talab → Talib

Un-:- Usually signifies antonyms

Exceptions :- unnerve, unearth, unfrock.

Derivational Morphemes:- Adding these changes the meaning of the root and usually changes the grammatical category as well. Ex:- Drive + er → Driver.

Inflectional Morphemes:- Strictly grammatical process, where the core meaning of root remains same after the addition of the morpheme. Ex:- Sing + s → Sings.

Derivational → [Category || Meaning change] ||
Pronunciation change {Velar softening
inter diphthong}

Inflection

- 1) Grammatical fm
- 2) No class change
- 3) Small - no meaning change
- 4) often required by rules of grammar
- 5) Follow derivational morphemes in a word

Derivational

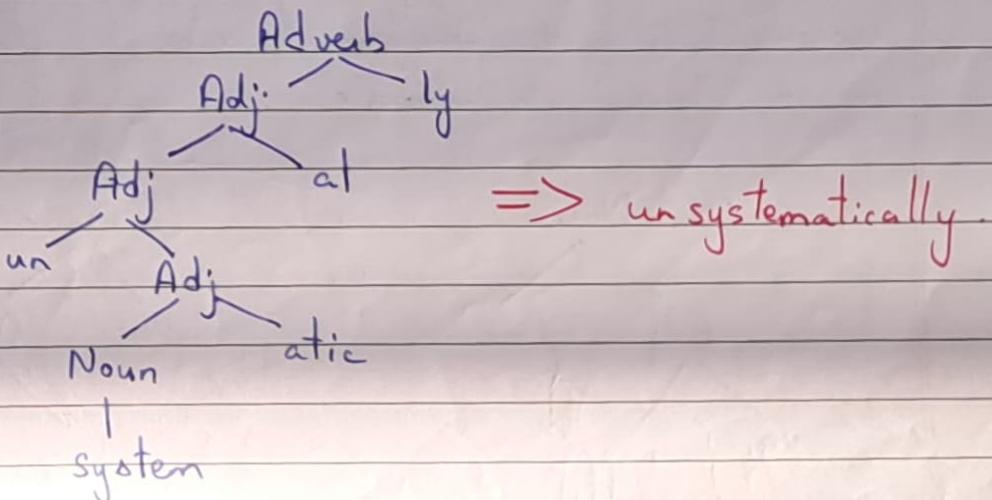
- Lexical fm
May cause class change
Some meaning change
Never required by the rules of grammar.
- Precede inflectional morphemes in a word

Morphology of Signing

Similar to morphology of spoken language.

Ex:- Rapid turning over of hand(s) following the end of the root sign.

On the other hand, the gestures are simultaneous, unlike in spoken languages where the morphemes follow a particular order.

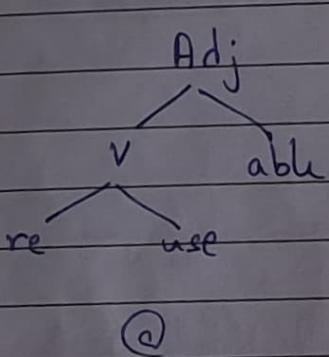
Hierarchical Structure of words

Reusable :-

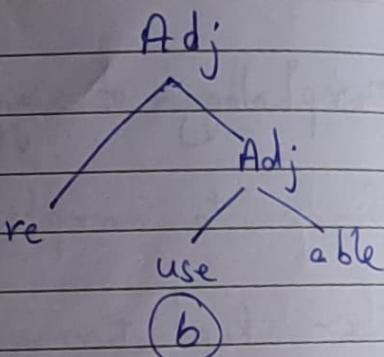
re-use-able

re :- Joins with verbs like "do" & "use"

-able :- Joins with verbs ~~& adjectives~~



or



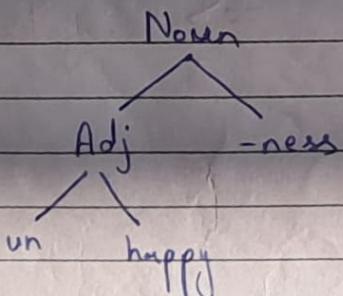
(b) is incorrect since re - prefixes only verbs.

Un-happiness :-

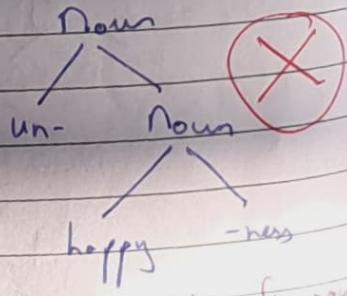
un-happy-ness

un :- Joins with nouns & verbs

ness :- Joins with adj.

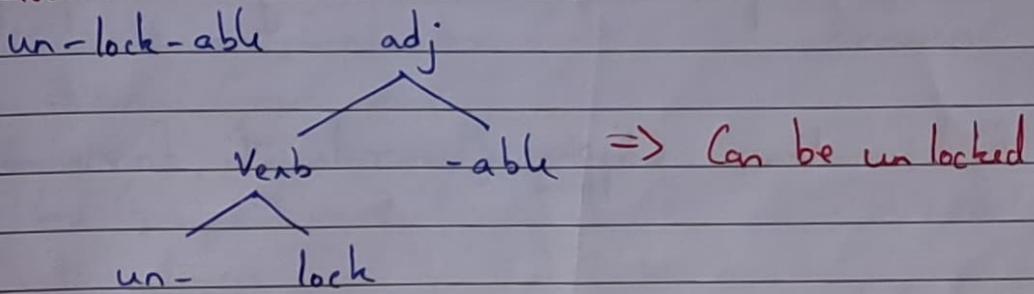


vs

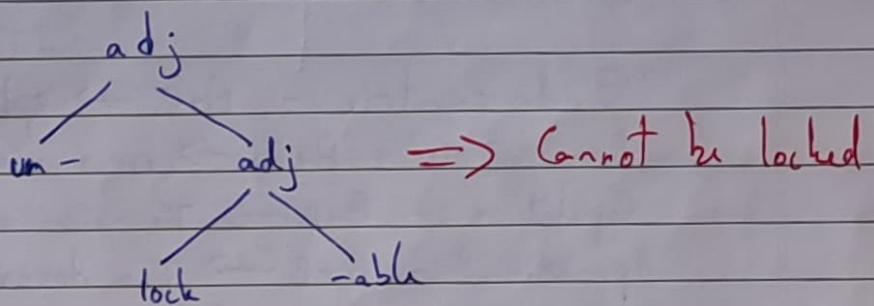


un does not prefix nouns

Unlockable:-



\Rightarrow Can be unlocked



\Rightarrow Cannot be locked

Rule Productivity:

While 'un-' usually combines with adj to negate them, this system is not regular. ~~for~~, 'un-' cannot be used with words like sad or brave.

'Un-' is also unpredictable unpredictable! Ex:- Unfrock.

Plurals are not regular either:

cats \rightarrow cats; mouse \rightarrow mice; child \rightarrow children.

Lexicon:- List of regular words.

Morphologically complex words whose meanings are not predictable must be listed individually in our mental lexicons.

Determiners → Definite → the, those

↳ Indefinite → a

↳ Possession → our, my

↳ Quantity → every, fifteen

classmate

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Irregular plurals are used only with proper nouns.

Back formation:- Clipping of words to form new words.

Compounding :- Two or more words are combined to form a new word

Endocentric :- A+B → spl form of B

Exocentric :- A+B → new word

Copulative :- A+B → The sum of A & B

Appositional :- A+B → Two descriptions of the same thing.

Ambiguity in compounding

Top hat rack → rack for top hats or the highest hat rack.

Ch: 6 - Syntax:- Study of ways in which words are combined to form sentences

Basic rules of grammar that must be followed for the sentence to make sense.

8 classes of words

Open Class:-

Noun ↳ Content

Verb Words

Adjective

Adverb

Closed Class:-

Pronoun

Determiner

Conjunction

Preposition

Aux verbs

Function

Words

Adverb:- Provide more info about / modify verbs / other adverbs / adjectives
 Ex:- very, quickly - Hopefully
 also entire sentences
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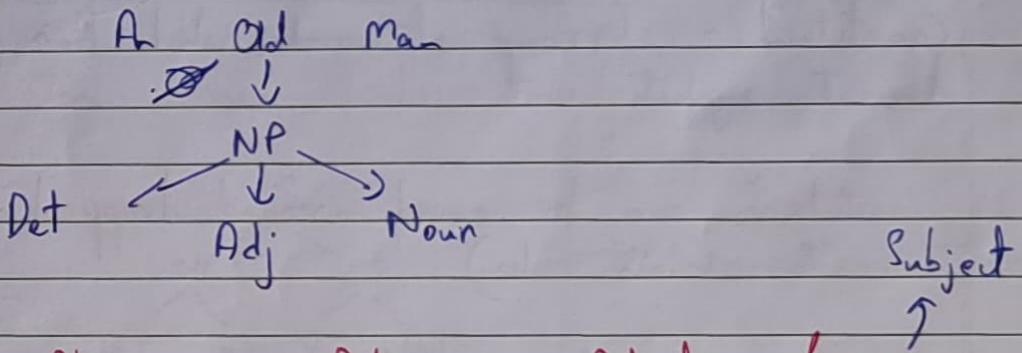
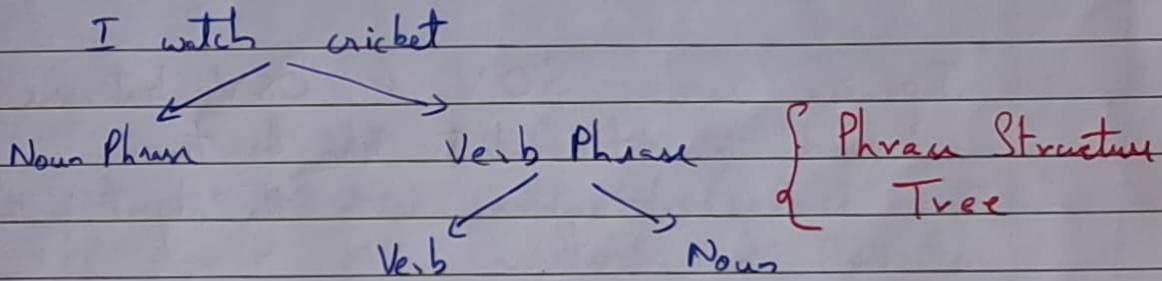
Describes manner, time,
 temporal frequency, attitude & judgement

Now words can be formulated in open class. This is not possible in closed class.

Constituency Grammar:-

Phrase:- Partial meaning of a sentence is present.
 ↳ Group of words following certain rules

Most sentences can be split into a noun phrase and a verb phrase. [Subject & Predicate]

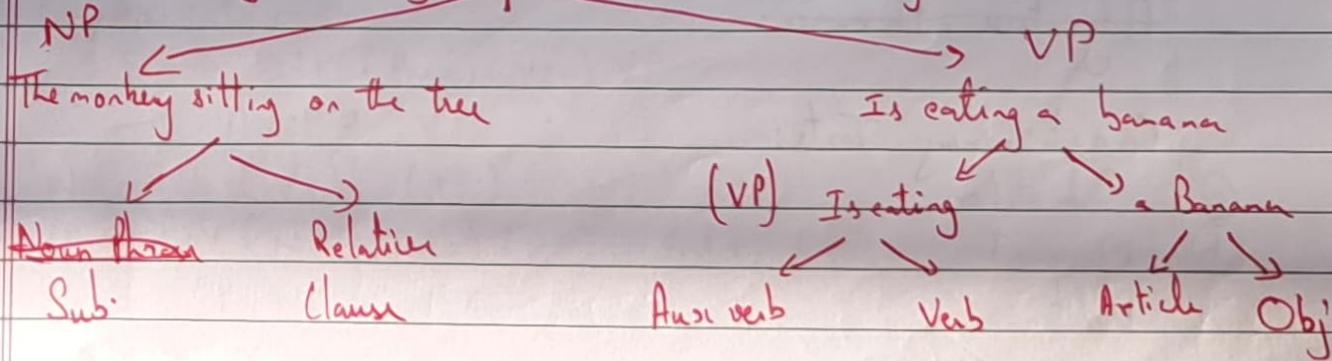


① **Noun Phrase** :- Determiners, Adjectives & Nouns

Verb Phrase :- Adverb, Verbs & Nouns

↳ Object

The monkey sitting on the tree is eating a banana



Word order :-

For any n word sentence, there are $s!$ ways of permuting these, but most of them are not legitimate.

English has a Subject Verb Object word order but this is not true for all the other languages.

Japanese uses SOV & OSV, but case markers are used to differentiate b/w the two.

The Hindi verb agrees with the object in the presence of the -ne marker.

Constituent:- Group of words which form a discrete coherent syntactic units.

(constituents can be moved around, dropped out & substituted (acc. To certain rules))

Thus one could say that there is a hierarchical structure to phrases and sentences.

[[I] [eat [fish] [with [a [fork]]]]]

Adjective Phrases:-

Constituency Tests:-

- (a) Substitution
- (b) Movement
- (c) Deletion

Context Free Grammar :- It is defined as a tuple consisting of four sets (N, V, S, R)

N : finite set of non-terminal symbols

V : finite set of terminal symbols

$S \in N$ is the start element α

R : finite set of rules $X \rightarrow \alpha \{ \text{Alpha} \}$

$X \in N$; α is a sequence of symbols from $N \cup V$

Simple Grammar:-

$S \rightarrow NP VP$: $NP \rightarrow N$

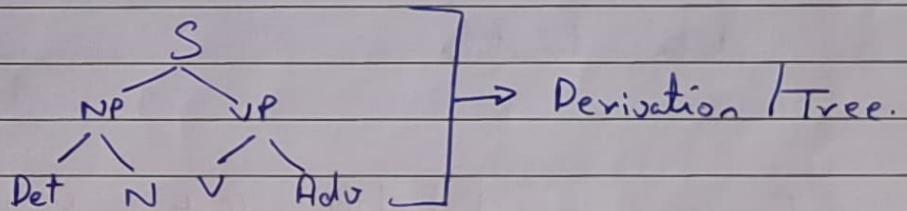
$NP \rightarrow Det N$: $VP \rightarrow V NP$

$PP \rightarrow P NP$: $VP \rightarrow V NP Adv$

$VP \rightarrow V Adv$:

Det N V Adv

Ex:- The man walked slowly



Terminals:- All the leaves in the Derivation

Non-Terminals:- All nodes not leaves in the Derivation

"Complex" Grammar

$S \rightarrow NP (\text{Aux}) (\text{Neg}) \underline{VP}$

$S \rightarrow AdjP \underline{VP}$

$NP \rightarrow (\text{Det})^* (\text{Adj})^* (\underline{N})^+ (\text{PP})$

$VP \rightarrow \underline{V} (\text{NP}) (\text{Adv}) (\text{PP})^* (\text{Adv})$

$PP \rightarrow \underline{P} \text{ NP}$

$X \rightarrow X \underline{\text{conj}} X$

$\text{AdjP} \rightarrow \text{Det } \underline{\text{Adj}}$

X denotes any lexical / phrasal category

$(X) \rightarrow X$ is optional

$(X)^* \rightarrow \text{count}(X) \in [0, \infty)$

$(X)^+ \rightarrow \text{count}(X) \in [1, \infty)$

The process of constructing a derivation is known as parsing. It encodes the hierarchical structure.

Linear order:- The order of words in a sentence

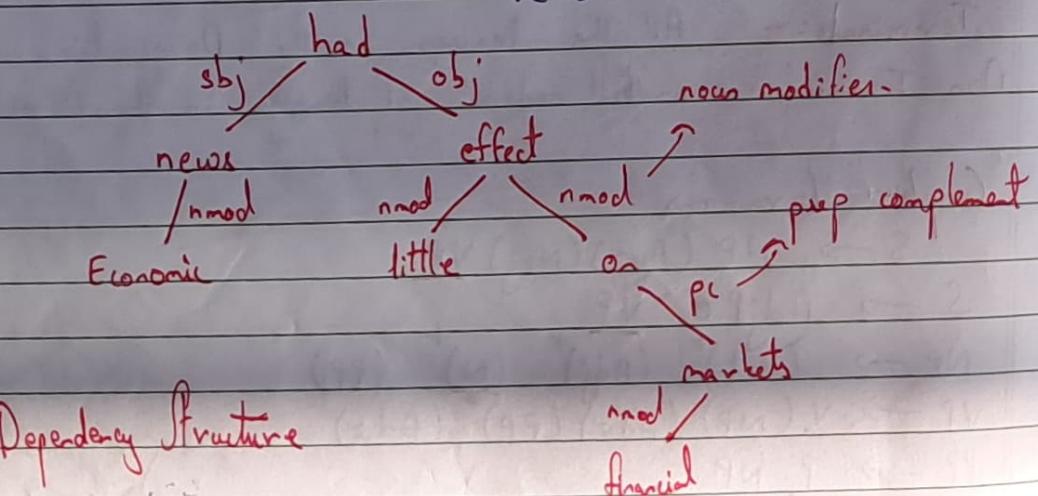
The meaning of the sentence changes with order.

[Specific to English only, other languages could use case markers instead]

Dependency Grammar:-

Syntactic structure

Economic news had little effect on financial markets
Verb is the root of tree.



head dependent phrase

Phrase Structure Graphs & Dependency Structures form an isomorphic pair.

Ch:-3 Language families:-

- (a) Indo-Aryan [Sinhala belongs here]
- (b) Dravidian [Only in India sans Brahui]
- (c) Tibeto-Burman
- (d) Austro-Asiatic
- (e) Andamanese.

(f) Indo-Aryan:- From Pakistan to Bangladesh, Nepal to Sri Lanka.

Intro To Linguistics - 2

Three parts :- Semantics [Meaning within]
 Pragmatics [Meaning without]
 Discourse [Meaning in a large context]

Grammaticality judgement :- Chomsky believes that this is tacit. [It exists within us without our knowledge]

Ideal speaker-hearer :- Person who has perfect tacit knowledge.

Paraphrasing :- Same meaning, but different word ordering

Contradiction:- The sentence and its negation