Language Basics

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What is Language

- Language is a system of symbols
- Consists of spoken and written forms
- Governed by rules (grammar) and conventions
- It is important to understand **Composition** in Language.

Levels in Linguistic Analysis

- Phonology: Sounds of language and their organization.
- Morphology: Structure of words and morphemes
- Syntax: Sentence structure (Grammatical relations)
- Semantics: Meaning of Words and Sentences
- Pragmatics: Meaning in Context and speaker intent

Phonology

- Phonology studies sound systems of language.
- Focuses on **phonemes** (Distinct sound units)
- Examines Sound patterns and Rules
- Different languages have different phoneme inventories.

Phonology

Consonants (24)		
/p/ (as in **p**en)	/θ/ (as in **th**in)	/n/ (as in **n**o)
/b/ (as in **b**ad)	/ð/ (as in **th**is)	/ŋ/ (as in si**ng**)
/t/ (as in **t**ea)	/s/ (as in **s**un)	/tʃ/ (as in **ch**ain)
/d/ (as in **d**id)	/z/ (as in **z**oo)	/dʒ/ (as in **j**am)
/k/ (as in **c**at)	/ʃ/ (as in **sh**oe)	/l/ (as in **l**eg)
/g/ (as in **g**ot)	/ʒ/ (as in vi**s**ion)	/r/ (as in **r**ed)
/f/ (as in **f**all)	/h/ (as in **h**at)	/j/ (as in **y**es)
/v/ (as in **v**an)	/m/ (as in **m**an)	/w/ (as in **w**et)

Phonology

Vowels (20)	
/uː/ (as in t**oo**)	/æ/ (as in c**a**t)
/ɜː/ (as in b**ir**d)	/e/ (as in d**e**sk)
/aɪ/ (as in m**y**)	/ɪ/ (as in s**i**t)
/aʊ/ (as in n**ow**)	/ɒ/ (as in h**o**t)
/eɪ/ (as in s**ay**)	/ʌ/ (as in b**u**t)
/oʊ/ (as in g**o**)	/ʊ/ (as in p**u**t)
/ɔɪ/ (as in b**oy**)	/ə/ (as in **a**live)

/eə/ (as in h**air**)	/iː/ (as in b**ee**)
/ɑː/ (as in f**a**ther)	/ɪə/ (as in n**ear**)
/ɔː/ (as in d**oor**)	/ʊə/ (as in p**ure**)

Morphology

- Morphology studies the internal structure of words
- **Morpheme**: Smallest meaning bearing unit.
- They can be broadly categorised as two types:
- Free: Can stand alone as words (Eg. book, happy, teach)
- Bound: Cannot stand alone. Attach to free morphemes. (Eg. un-, re-, -s, -ed, -ing)

Inflectional Morphology

- Inflection modifies a word to express grammatical information.
- Does not change word class or core meaning
- Common inflections: Tense, number, person, case.
- Walk → Walked
- Cat → Cats
- Teach → Teaching

Derivational Morphology

- Derivation forms new words from existing ones.
- Often leads to change in word class (noun, verb, adjective)
- Uses prefixes and suffixes (e.g., un-, -ness, -ize)
- Teach → Teacher (Verb to Noun)
- Happy → Happiness (Adjective to Noun)

Which type of Morphology will lead to increase in vocabulary: Inflectional or Derivational?

Syntax

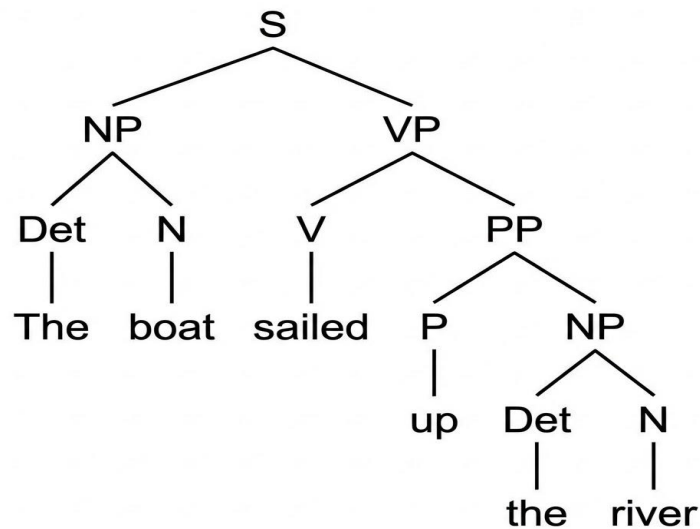- It is a set of rules to construct grammatically correct sentences out of words and phrases in a language.
- Syntactic structure in linguistics is represented in many ways.
- A common approach is parse tree.
- Sentence Rule: S → NP VP
- Eg. [The girl] [is studying]

Syntax

- Noun Phrase: NP → (Det) (Adj) N (PP)
- Eg. [The] [small] [book] [on the table]
- Verb Phrase: VP → V (NP) (PP)
- Eg. [Goes] [to park] [in morning]
- Prepositional Phrase: PP → P NP
- Eg. [on] [the table]

Syntax

- Sentence: The boat sailed up the river.

Semantics

- Meaning from group of words and sentences.
- Semantics focusses on whether a sentence makes sense.
- Two levels of semantics:
- Lexical Semantics (Word Level)
- Sequential Semantics (Sentence Level)

Semantics

- Lexical Semantics: Focuses on meaning of individual words and how they relate to others.
- Synonymy: Words with same meaning (Eg. big and large)
- Antonymy: Words with different meaning (Eg. hot and cold)
- Hyponymy: Words having a relationship (Eg. spoon and cutlery)
- Polysemy: Single word with different meanings (Eg. 'head' of a person vs 'head' of company) (Eg. 'cold' (weather or illness)).
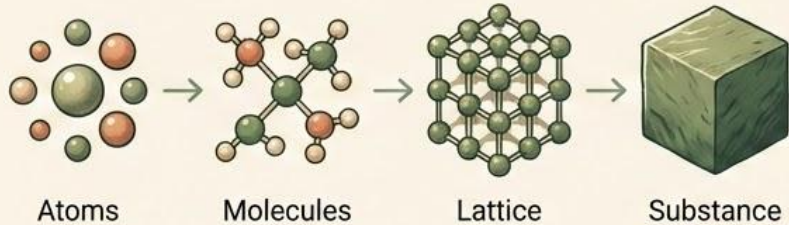
Semantics

- Sequential Semantics: focuses on arrangement of words.
- 'The dog bit the man' vs 'The man bit the dog'
- Observe: The arrangement of words create a complete thought.
- Sometimes sentences might be syntactically correct but may not have any meaning.
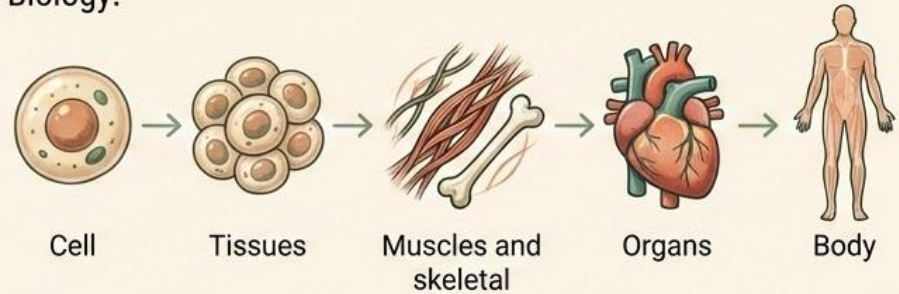- Eg. Colorless green ideas sleep furiously.

Pragmatics

- Pragmatics studies meaning in context, beyond literal words.
- Eg. "Can you close the door?"- This is a request. It is not a question.
- Deixis: words whose meaning depends on context (Eg. here, now, I ,you)
- Implicature: Implied meaning not explicitly stated.
- Eg. "Some students passed" → not all passed
- Presupposition: Assumed background knowledge
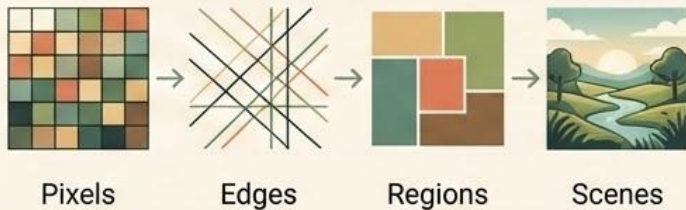- Eg. "He stopped smoking" → He used to smoke