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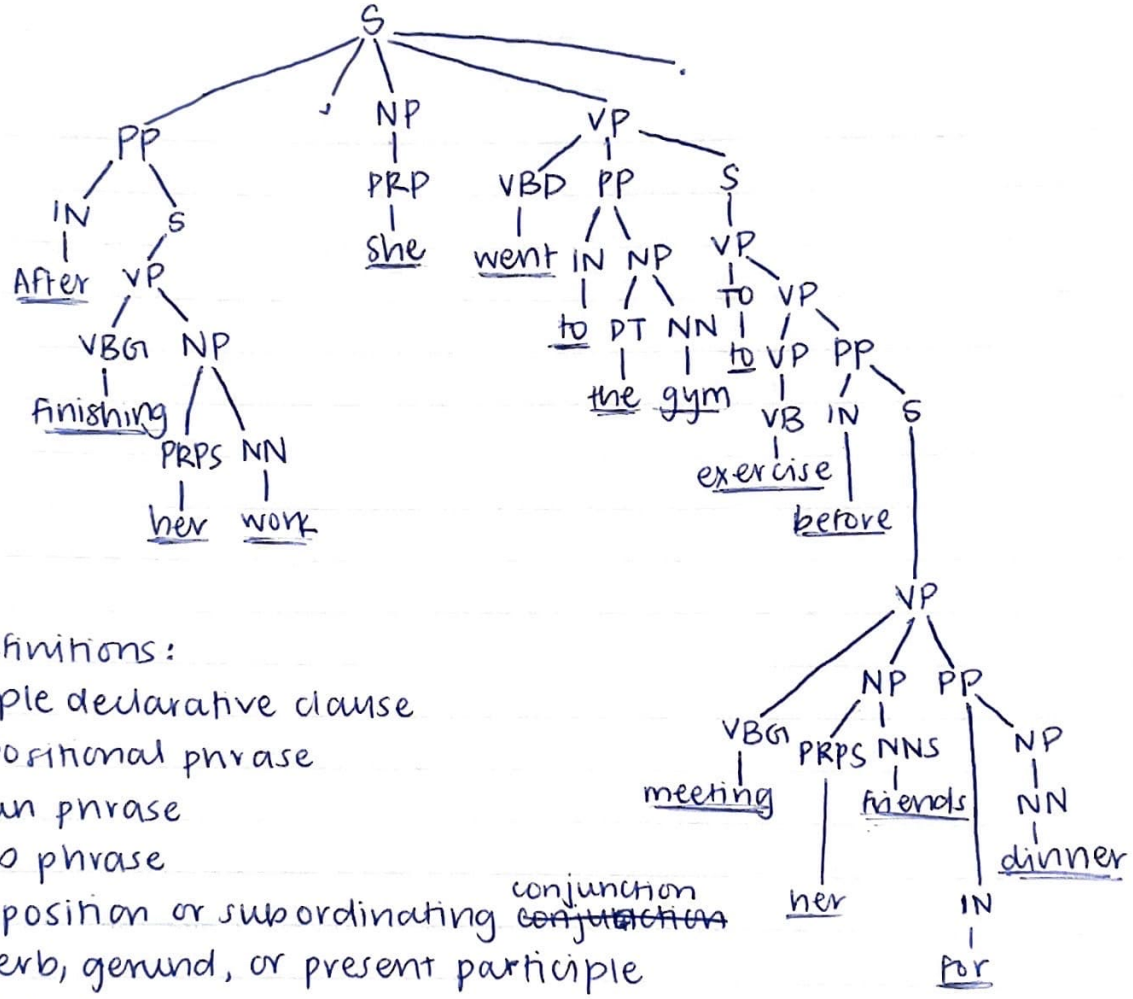
03/01/2023

Parsing Sentences

After finishing her work, she went to the gym to exercise before meeting her friends.

PSG Tree

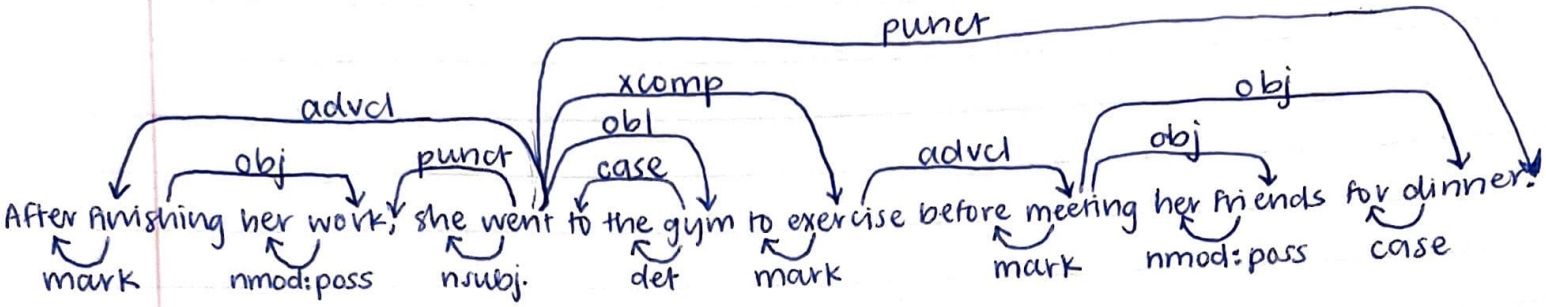


Term definitions:

phrase lvl.
- S → simple declarative clause
- PP → prepositional phrase
- NP → noun phrase
- VP → verb phrase

word lvl.
- IN → preposition or subordinating conjunction ~~conjunction~~
- VBG → verb, gerund, or present participle
- PRPS → possessive pronoun
- NN → noun, singular or mass
- PRP → ~~personal~~ personal pronoun
- VBD → verb, past tense
- DT → determiner
- TO → to
- VB → verb, base form
- NNS → noun, plural

Dependency parse



Dependency relation definitions:

- mark → marker; introducing finite clause subordinate to another clause
- obj → object; second most core arg. of a verb after the subject
- nmod:poss → possession modifier; holds b/w head of NP & poss determiner
- advcl → adverbial clause modifier; clause modifying the verb
- punct → punctuation
- nsubj → nominal subject; NP which is syntactic subj. of a clause
- det → determiner; relation b/w ~~NP~~ head of NP & determiner
- case → case marking; any case-making elem. which is treated as sep. syn. word
- obl → oblique nominal; used for nominal funct. as a non-core arg. or adjunct.
- xcomp → open clausal complement; a pred. or claus. complement w/out subj.
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~~CKY Parser~~

~~[illegible]~~

~~[illegible]~~

SRL Parse

1) verb: finishing (predicate)
   ↳ ARG1: her work
   ↳ ARG0: she

2) verb: went (pred.)
   ↳ ARGM-TMP: After finishing her work
   ↳ ARG0*: she
   ↳ ARG4: to the gym
   ↳ ARGM-PRP: to exercise before meeting her friends for dinner

3) verb: exercise (pred.)
   ↳ ARG0: she

4) verb: meeting (pred.)
   ↳ ARG0: she
   ↳ ARG1: her friends
   ↳ ARGM-PRP: for dinner

Arguments explained:

- verb 1:
  ↳ ARG0, or "she", is the one doing the action, which in this case is "finishing"
  ↳ ARG1, or "her work", is what "she" is "finishing"

- verb 2:
  ↳ ARG0, or "she", is the one doing the action, which in this case is "went"
  ↳ ARG4, or "to the gym", is where "she" ended up. It represents the end point or her destination of where "she" "went".

- verb 3:
  ↳ ARG0, or "she", is the one doing the action, which in this case is "exercise"

- verb 4:
  ↳ ARG0, or "she", is the one doing the action, which in this case is "meeting"
  ↳ ARG1, or "her friends", is who "she" is "meeting"

Modifier definitions:

(verb 2) ARGM-PRP → explains why; in our case it explains why "she" is "went" "to the gym"

(verb 2) ARGM-TMP → explains when; in our case it explains when "she" is "went" "to the gym"

(verb 4) ARGM-PRP → explains why; in our case it explains why "she" is "meeting" "her friends"

Pros/cons of each parse type

PSG parse is useful b/c it breaks down each part of the sentence and shows exactly how to get to each token. It is pretty base level though and doesn't show us much besides the phrase & word breakdown. There is a lot of structural ambiguity. Dependency parsing shows the relationships & dependencies between words which is very useful. However, it does not show the structure of a sentence which can make it difficult to analyze. Again, similar to PSG, it shows only one aspect which isn't super helpful. SRL parsing is very useful as it assigns roles to each part of the sentence. By using predicates, or verbs, it is able to accurately decipher how each part of the sentence works with that verb. It is very helpful for understanding sentences and what they mean. However, there are so many arguments & modifiers that they can be hard to keep track of sometimes.