Sentence Parsing

My complex sentence: Together Denzel and Doug ate ten cookies, green broccoli, and soft candy under the apple tree, then planned to frolic if it did not rain.

The PSG tree can be seen pm the next page. Some phrase terms that appear are:

NP: Noun phrase

VP: Verb phrase

ADVP: Adverb phrase

NNP: Proper noun, singular

CC: Coordinating conjunction
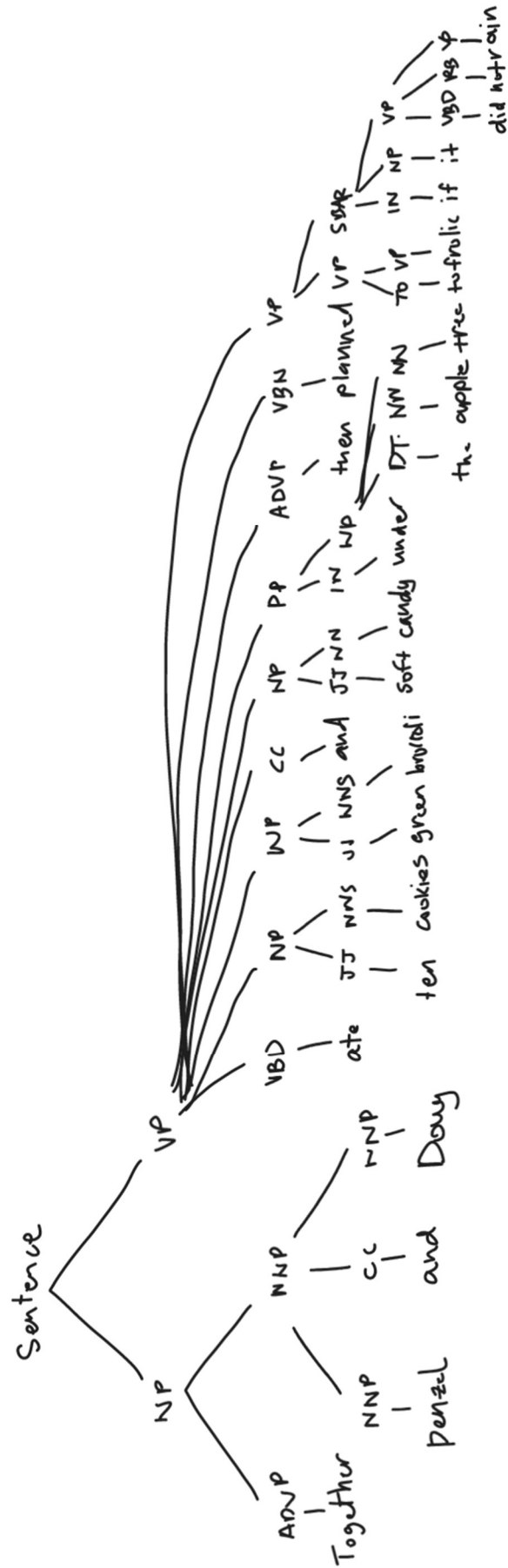
VBD: Verb, past tense

JJ: Adjective

NNS: Noun, plural

NN: Noun, singular or mass

IN: Preposition or subordinating conjunction

DT: Determiner

TO: to

Sentence

NP

VP

ADVP — Together

NNP

NNP — Denzel

CC — and

NNP — Doug

VBD — ate

NP

NP

VP

CC — and

PP

ADVP

VBN

VP

JJ — ten

NNS — cookies

JJ — green

NNS — broccoli

NP

IN — under

NP

then

planned

VP

SBAR

JJ — soft

NN — candy

DT — the

NN NN — apple tree

TO VP — to frolic

IN — if

NP — it

VP

VBD RB — did not rain

Next is the dependency parse. A few important dependency types are as defined below:

advmod: adverb modifier, modifies meaning of the word

nsubj: nominal subject, syntactic subject of clause

cc: coordination, between coordinating conjunction and conjunt

conj: conjunct, two elements connected by aa coordinating conjunction

punct: punctuation

nummod: numeric modifier, specifies quantity

dep: dependent: system unable to determine

amod: adjectival modifier: modifies the meaning of the noun

det: determiner: between head and its determiner for a noun phrase

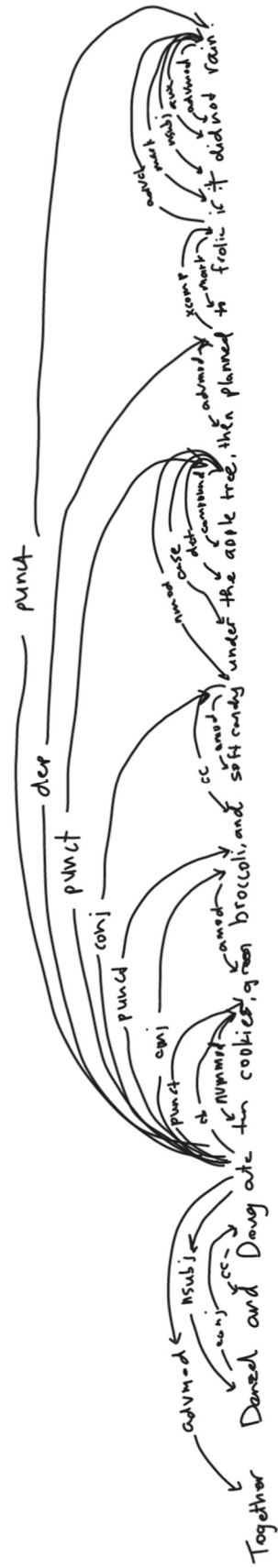xcomp: open clausal complement, clause without its own subject

mark: marker, introduces finite clause subordinate

advcl: adverbial clause, modifies the verb clause

aux: non-main verb of the clause i.e. has, should

compound: part of a phrase which changes the meaning i.e. proper noun

obj: serves as direct object of clause for the verb

Together Denzel and Doug ate ten cookies, green broccoli, and soft candy under the apple tree, then planned to frolic if it did not rain.

advmod · nsubj · conj · cc · punct · conj · punct · conj · det · nummod · amod · amod · conj · cc · amod · case · nmod · det · dep · punct · advmod · xcomp · mark · advmod · mark · nsubj · advmod · neg · punct

Finally, a SRL parse done on the sentence.

Predicate: ate

      Argument 0: Denzel and Doug

      Argument 1: ten cookies, green broccoli, and soft candy

      LOC: under the apple tree

      MNR: Together

Predicate: planned

      Argument 0: Denzel and Doug

      Argument 1: to frolic if it did not rain

      TMP: then

      COM: Together

Predicate: frolic

      Argument 0 : Denzel and Doug

      ADV: if it did not rain

Predicate: did

Predicate: rain

      NEG: not

The numbered arguments refer to the agents of the action. Argument 0 is the one that is doing the action while argument 1 is the direct object Argument 0 is acting on. A few of the modifiers seen are defined below:

      LOC: location action occurred

      MNR: how the action was done

      TMP: temporal, when action occurred

      COM: who action was done with

      ADV: adverbial, further description that does not fit other categories

      NEG: negation

Summary of Parsers

The phrase structure grammar (PSG) parse organizes sentences into a hierarchy of phrases based on the constituents' part of speech. The main pro of this one is that it is simple to understand. Most people are able to identify basic parts of speech, so this parse is easily understood. A limitation is that it can be confusing at times to determine how many children a node should have. The next kind of parse is the dependency parse, which shows relationships between words of a sentence in an acyclic graph. This one is good for showing the many relationships a word may have, whereas the PSG was limited to ancestors and descendants. A drawback was that it could be confusing to see which way the arrows were supposed to be directed since everything is organized on the same layer. The final parse is called semantic role labeling (SRL). The main advantage of this one is its ease of representation as it did not require hand drawing a diagram. It was also easy to understand and apply to the semantics of the sentence. The drawback is that it focused on clarifying the verbs of the sentence. Though nouns were involved, not much was clarified about them besides if they were the actor or the object.