

Sentence Parsing

1. Write a fairly complex sentence. The sentence should have at least 12 tokens. More points are awarded for sentences with more than one clause.

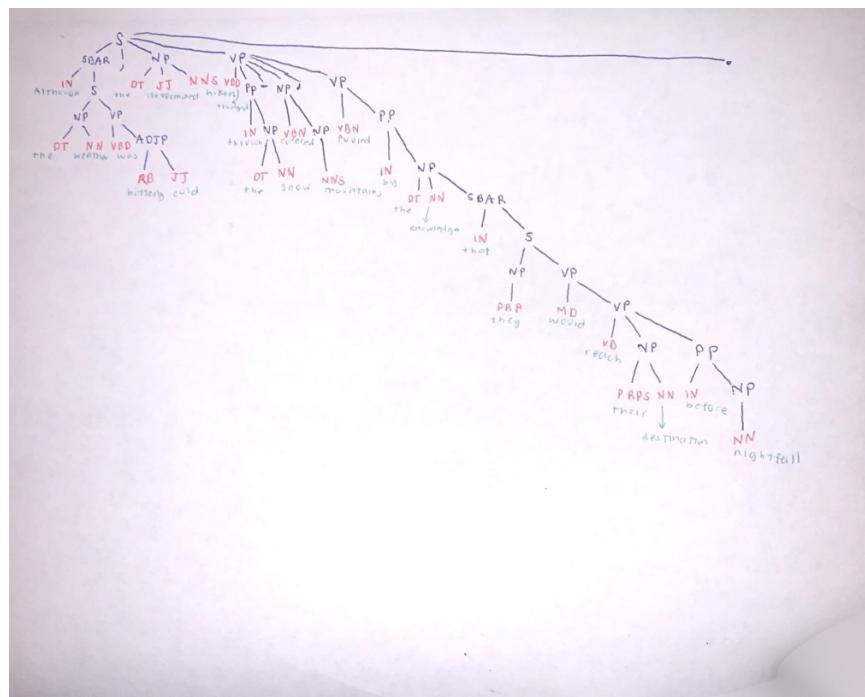
Although the weather was bitterly cold, the determined hikers trudged through the snow-covered mountains, fueled by the knowledge that they would reach their destination before nightfall.

2. Hand draw (no copy/paste) a PSG tree of the sentence, labeling POS. Briefly define all phrase terms that appear such as: S, SBAR, NP, VP, PP, etc. This resource may be helpful: <https://gist.github.com/nlothian/9240750>

Defining Phase Terms:

- S: simple declarative clause
- SBAR: clause introduced by a subordinating conjunction
- NP: noun phrase
- VP: verb phrase
- ADJP: adjective phrase
- PP: prepositional phrase

Information from: <https://gist.github.com/nlothian/9240750>

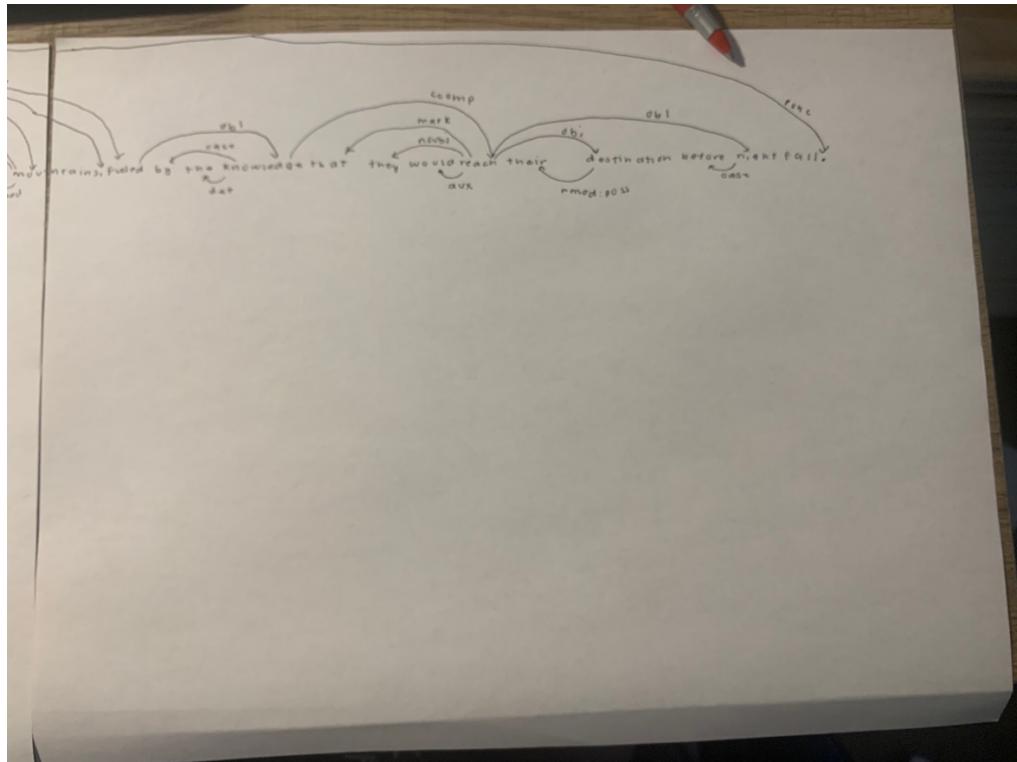
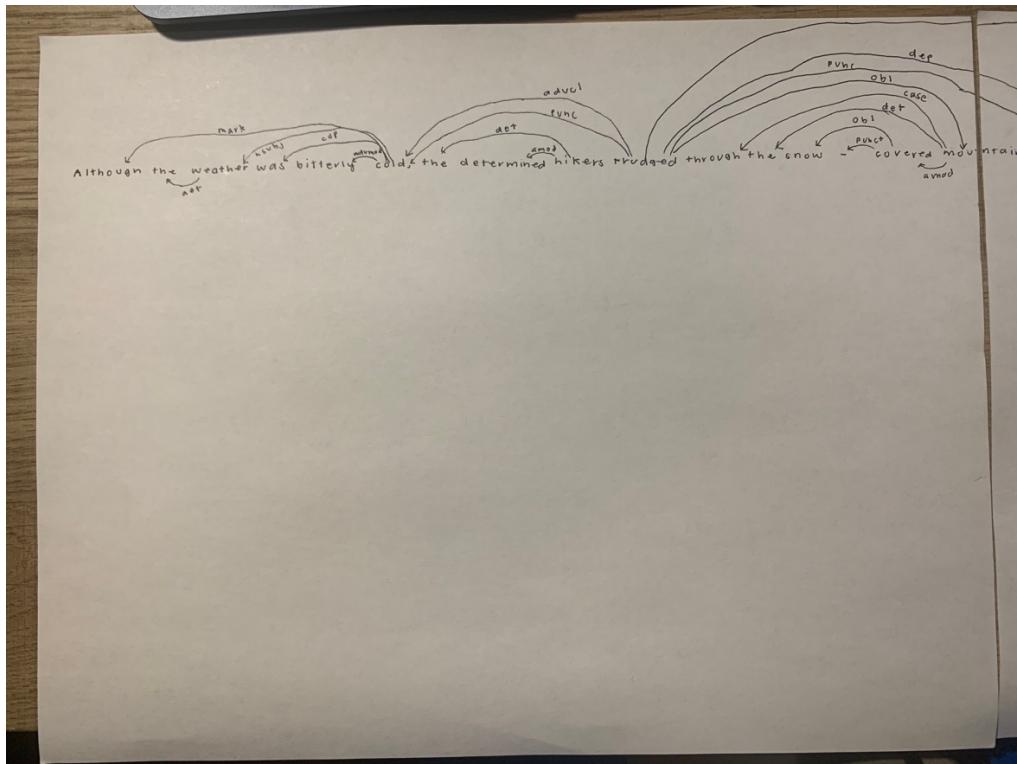


3. Hand draw (no copy/paste) a dependency parse of the sentence, labeling dependency relations (but not POS). Briefly define all dependency relations that occurred in the parse. You can use the Stanford Dependencies Manual that is uploaded to Piazza.

Defining Dependencies:

- Mark: A marker is the word introducing a finite clause subordinate to another clause.
- Nsubj: A nominal subject is a noun phrase which is the syntactic subject of a clause.
- Cop: A copula is the relation between the complement of a copular verb and the copular verb
- Advmod: An adverb modifier of a word is a (non-clausal) adverb or adverb-headed phrase that serves to modify the meaning of the word.
- Advcl: An adverbial clause modifier of a VP or S is a clause modifying the verb (temporal clause, consequence, conditional clause, purpose clause, etc.).
- Punct: This is used for any piece of punctuation in a clause, if punctuation is being retained in the typed dependencies.
- Det: A determiner is the relation between the head of an NP and its determiner.
- Amod: An adjectival modifier of an NP is any adjectival phrase that serves to modify the meaning of the NP.
- Dep: A dependency is labeled as *dep* when the system is unable to determine a more precise dependency relation between two words.
- Ccomp: A clausal complement of a verb or adjective is a dependent clause with an internal subject which functions like an object of the verb, or adjective.
- Aux: An auxiliary of a clause is a non-main verb of the clause, e.g., a modal auxiliary, or a form of “be”, “do” or “have” in a periphrastic tense.
- Obj: object

Information from: Stanford typed dependencies manual



4. For the SRL parse, list the predicate, all arguments (numbered) and modifiers (TMP, LOC, etc.) for each verb in the sentence. Briefly discuss the numbered arguments and their relation to each verb. List each modifier and briefly define what it is. Refer to the list of arguments in the class slides.

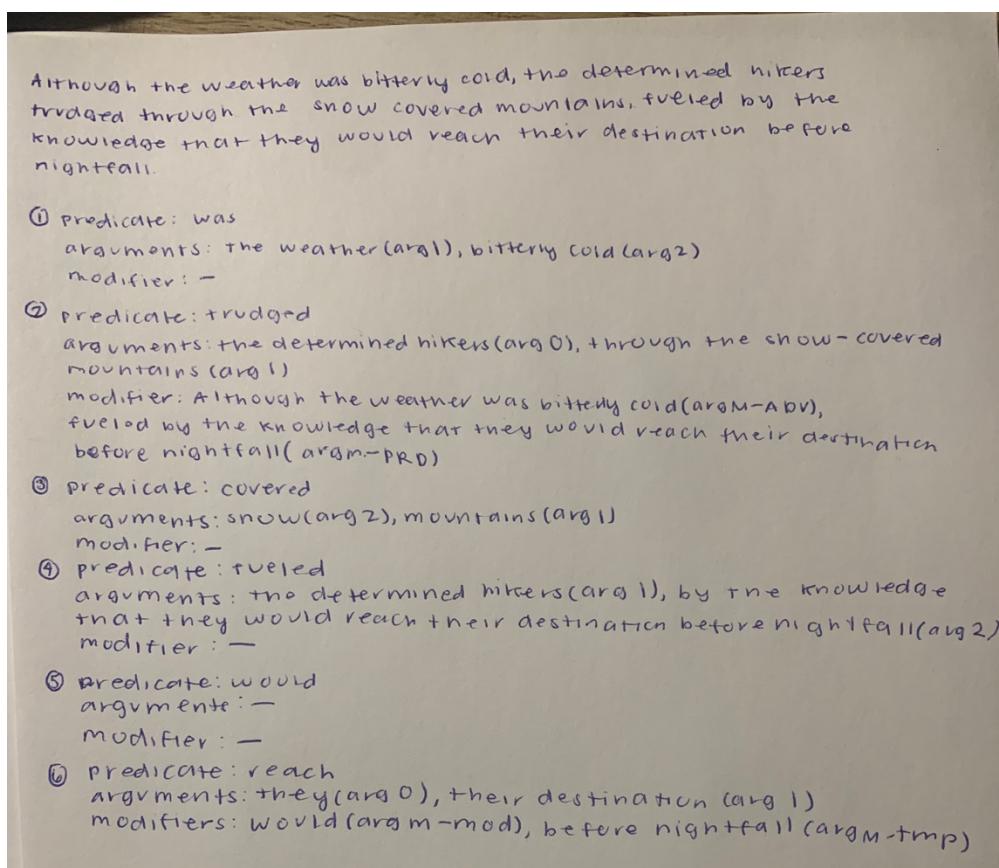
Defining Arguments:

- ARG0: the agent of the sentence, the one doing the action / proto-agent
- ARG1: often the passive actor / proto-patient
- ARG2: often the 'instrument' / often benefactive, instrument, attribute, end state

Defining Modifiers:

- ARG-M-ADV: adverbials (modify the event structure of the verb in question, but do not fall in other headings)
- ARG-M-PKD: markers of secondary prediction (used to show that the adjunct of a predicate can carry some predicate structure)
- ARG-M-MOD: modals (include *will*, *may*, *can*, *must*, *shall*, *might*, *should*, *could*, *would*)
- ARG-M-TMP: temporal markers (when the action happened)

Information from: <https://verbs.colorado.edu/~mpalmer/projects/ace/PBguidelines.pdf>



5. Write a paragraph briefly summarizing the pros/cons of each parse type (your opinion) for your sample sentence.

The sentence that I chose to parse to understand PSG parsing, dependency parsing, and SRL parsing was: Although the weather was bitterly cold, the determined hikers trudged through the snow-covered mountains, fueled by the knowledge that they would reach their destination before nightfall. First, I started with PSG parsing. The pro that I found for this type of parsing was that it was incredibly detailed and gave so much information on the grammatical structure of the sentence. The con that I found was that it got quite complicated quite quickly, and it took me a while to understand. I then moved on to dependency parsing. The pro that I found for this type of parsing was that it clearly defined the structure between the subject, verb, and the predicate. The con that I found was that this was the most difficult type of parsing to understand because when I am reading something, I am not normally looking for dependencies between words unless I need clarity. Finally, the last type of parsing I did was SRL. The pro for this parsing was it gave really unique insights into the sentence that I didn't get from other types of parsing. For instance, I found the modifiers to be quite interesting. I didn't really find a con for this type of parsing.