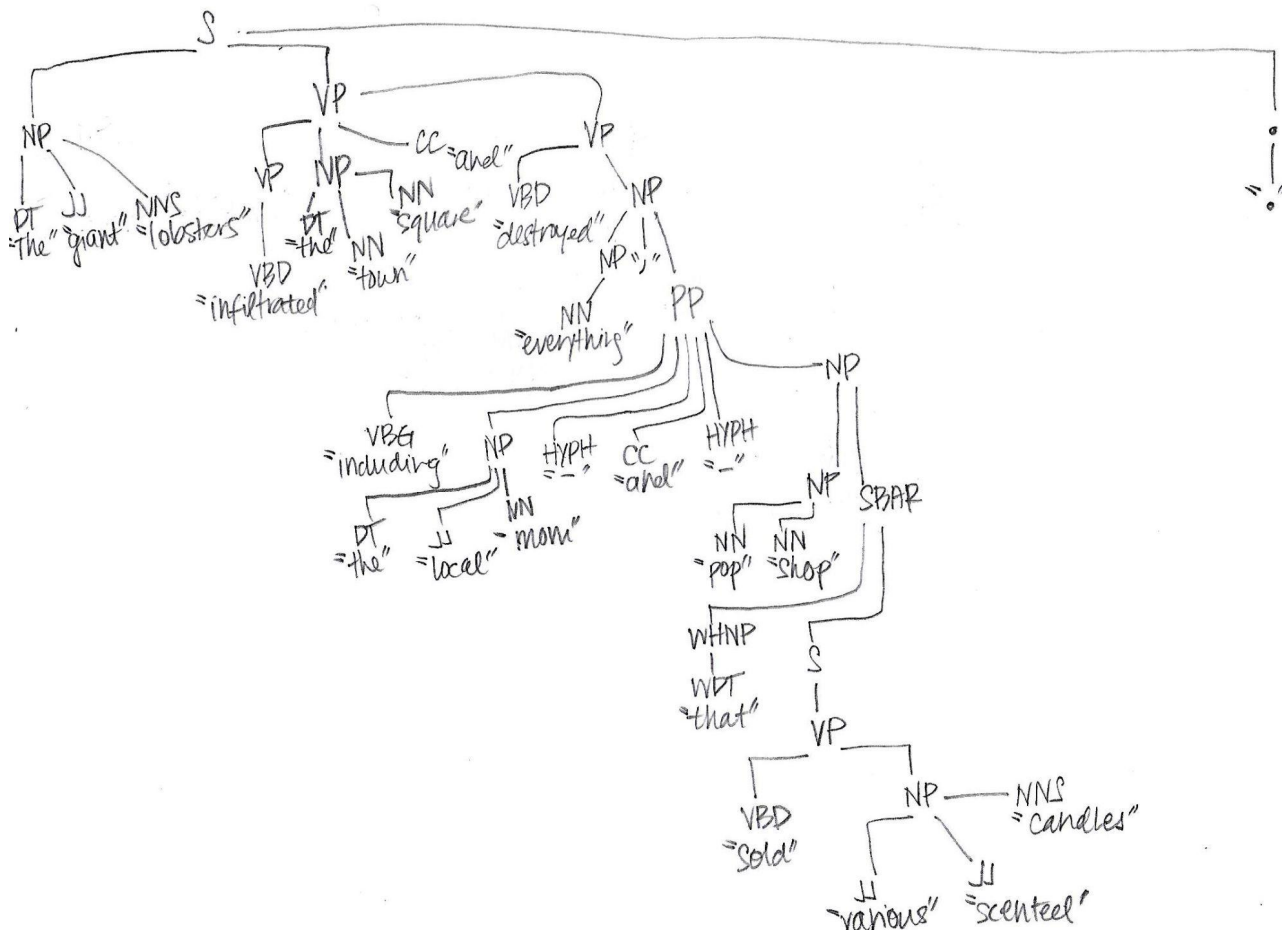


Assignment 7 - Sentence Parsing

- 1.) The sentence I made up: "The giant lobsters infiltrated the town square and destroyed everything, including the local mom-and-pop shop that sold various scented candles."

2.)



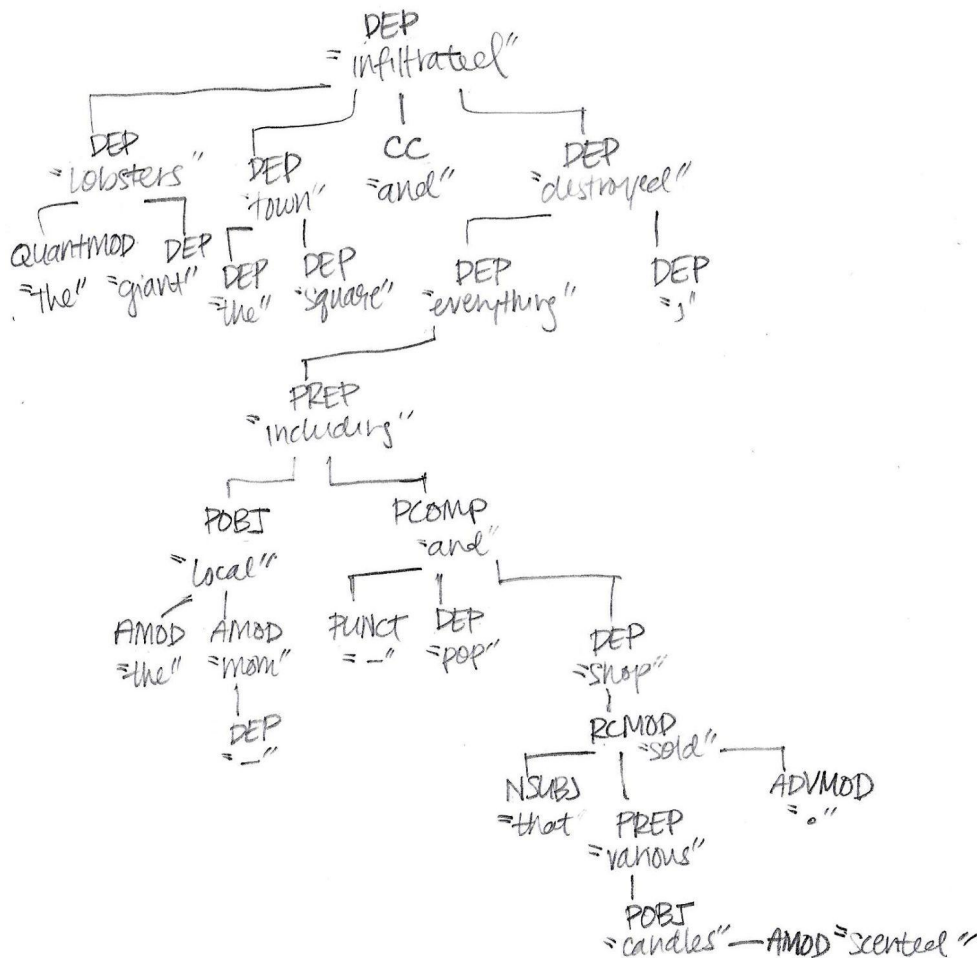
Phrase terms:

- S (simple declarative clause) - A declarative clause that isn't introduced by a subordinating conjunction or a wh-word (e.g., who, what, when, where, why, etc.). This clause also doesn't exhibit subject-verb inversion.
- NP (noun phrase) - A phrase that contains a noun (or pronoun) as its head and/or is a phrase of words that can be replaced by a pronoun.

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- VP (verb phrase) - A phrase that contains a verb and its arguments, except for the subject of the sentence (i.e., it expresses an idea, but can't stand on its own as a sentence).
- PP (prepositional phrase) - A phrase that contains a preposition and its object.
- SBAR (clause) - A clause that is introduced by a possibly empty subordinating conjunction.
- WHNP (wh-noun phrase) - A phrase that introduces a clause with a NP gap.

3.)



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Dependency relations:

- DEP (dependent) - Labeled as such when the system isn't able to determine more precise dependency relations.
- QUANTMOD (quantifier phrase modifier) - An element modifying the head of a QP constituent; these modifiers are in complex numeric quantifiers.
- CC (coordination) - The relationship between an element of a conjunct (relationship between two elements connected by a coordinating conjunction) and the coordinating conjunction word of said conjunct.
- PREP (prepositional modifier) - Any prepositional phrase that serves to modify the meaning of a noun, verb, adjective, or another preposition.
- POBJ (object of a preposition) - The head of a noun phrase following the preposition. Sometimes it's the adverb "there" and "here".
- AMOD (adjectival modifier) - Any adjectival phrase that serves to modify the meaning of the NP (noun phrase).
- PCOMP (prepositional complement) - Used when the complement of a preposition is a clause of prepositional phrase—sometimes an adverbial phrase.
- PUNCT (punctuation) - Used for a piece of punctuation in a clause.

- NSUBJ (nominal subject) - A NP which is the syntactic subject of a clause.
- RCMOD (relative clause modifier) - A relative clause modifying the NP; the relation points from the head noun to the head of the relative clause (which is normally a verb).
- ADVMOD (adverb modifier) - A non-clausal adverb or a phrase headed by an adverb that serves to modify the meaning of the word.

4.) Frames for "infiltrated":

- Predicate: "infiltrated"
- Arg0: "The giant lobsters"
- Arg1: "the town square"
- No modifiers
- Arg0 refers to the agent of the sentence (i.e., the one doing the action). In this case, Arg0 is "The giant lobsters" because they are the ones doing the action (i.e., they "infiltrated"). Arg1 refers to the passive actor, which in this case is "the town square" because it is the thing that is being infiltrated.

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Frames for “destroyed:”

- Predicate: “destroyed”
- Arg0: “The giant lobsters”
- Arg1: “everything, including the local mom-and-pop shop that sold various scented candles”
- No modifiers
- Arg0 is, again, “The giant lobsters” because they are the ones actively destroying stuff. “everything, including...” represents Arg1 because it is the thing getting destroyed.

Frames for “including:”

- Predicate: “including”
- Arg0: “everything”
- Arg1: “the local mom-and-pop shop that sold various scented candles.”
- No modifiers
- Arg0 is “everything” because the word encompasses Arg1, which is the “local mom-and pop shop...”. Including is the verb, the predicate, in which “everything” is acting upon.

Frames for “sold:”

- Predicate: “sold”
- Arg0: “the local mom-and-pop shop”
- Arg1: “various scented candles”
- R-Arg0: “that”
- No modifiers
- Arg0 is “the local mom-and-pop shop” because it’s the thing that’s actively doing the selling. The “various scented candles” is the thing being sold, which is why it’s Arg1. R-Arg0 means it’s a reference argument. In this particular case, “that” is the reference argument because it’s referring to the local mom-and-pop shop, which emphasizes the fact that *it* is the one selling the candles, not anything else.

- 5.) There are many different pros and cons for each kind of parse and how they each decided to parse my sample sentence. For the dependency parse, I think one pro is that it broke up the sentence relatively cleaning up the noun dependencies and the verb dependencies. However, I think a con is that it can get a bit messy. I think particularly with longer and more complex sentences, like

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my sample sentence, the diagram can tend to get kind of messy. For example, in the section of my sentence that says “the local mom-and-pop shop”, you’d expect that “mom-and-pop shop” may be a dependent for local, however, the diagram splits up the whole phrase. “Local” is the object of a preposition (POBJ), “the” and “mom” are adjectival modifiers (AMOD) and the first hyphen is a dependent of “mom.” The second part of the phrase, “-and-pop shop” is parsed in a completely new and separate section.

For the constituency parse (aka the PSG parse), I think a pro is that, in my opinion, this particular type of parse makes the most sense. While it doesn’t tell you the relationships and dependencies between each word, it does show you the various parts of speech (e.g., NN, JJ, VBD, etc.) and phrases (e.g., NP, VP, etc.). It’s also organized in a pretty neat way. A con for this particular kind of parse is that, like the dependency parse, it can sometimes be overly complicated and messy, especially for larger sentences. Because we are parsing out the parts of speech for every single token in the word, if you have a long and complex sentence, that can be a very big tree (like the one I have for my sentence).

Lastly, in regards to the SRL (semantic role labeling) parse, I think a pro is that the parse itself can be organized and diagrammed in a way that’s very succinct and concise. With the SRL parse, it’s all dependent on the predicate and the arguments (and potential modifiers) that revolve around it. Because of this, you can group large phrases together as a single argument, which makes the diagramming a lot easier. SRL parsing shows you the relationship between agents (which are usually nouns) and the predicates (which are the verbs), and can help you understand the meaning of a sentence. And while I said that grouping large phrases together as a single argument can be a good thing, I can also see that as a con as well. For example, in my sentence, if you’re going to use “destroyed” as the predicate, Arg1 would be “everything, including the mom-and-pop shop that sold various scented candles.” That’s a pretty long phrase and in SRL parsing, you don’t break that up any further; it’s just all simply Arg1 for the predicate “destroyed.” because of this, you’re not really able to break down/understand larger phrases if you need to without doing another kind of parse.