COSI135: Fall 2017
VP-Ellipsis as Anaphora

In this project, you must modify the parser to interpret VP-ellipsis. This involves interpreting the ellipsis as verbal anaphora ("Bill did too"), calling the binding/accommodation algorithm, isolating a content-bearing predicate, isolating the anaphor ("did too" anaphor may need to added), and equating the two (binding/accommodation).

Part 1. Consider the case of ellipsis with a "saturated predicate", such as that below:

(1) Bill laughed. Mary did too.

Here, you are to treat *do* as a predicative anaphor, where its antecedent is the VCP in the previous sentence, *laughed*. Alternatively, you may want to treat the *do* as an indicator or clue that there is a VP gap to its right. In any case, you need to be careful to treat the antecedent as just the VP without the tense, or modality or negation, if present.

Here's more or less what the binding looks like.

(2) Bill PAST [$_{VP}$ laugh]. Mary did [$_{VP}$ x] too.

Provide an interpretation of VP ellipsis in the model, and determine if it is satisfied. This will be very similar to pronoun anaphora.

Part 2.

Now try to extend your treatment to accommodate "unsaturated predicates", such as that shown below.

(3) Bill raised his hand. Mary did too.

In this and related cases, the predicate must be treated as containing an unbound variable that is then interpreted and bound appropriately when the entire VP predicated of the anaphor's subject. Namely,

(4) a. Bill PAST [$_{VP}$ raise x's hand]. Mary did [$_{VP}$ y] too.
b. $\lambda x[raise(x, of(hand, x))]$

Your submission should also contain a write-up describing how you attacked this problem, what avenues you explored, and what problems you ran into. There is no length requirement, but you should include some use cases for testing and you should describe your strategy, process, and assumptions in some depth.

NOTES:

- A semantic resource that you can refer to is Chapter 7 "Ellipsis as a window on context", Semantics An Introduction to Meaning in Language, Cann et al.
- This, like all the final project options, is very open ended. **It is neither required not expected that you will develop fully bound and accommodated VP-ellipsis handing in the parser, though you should explore how you might get to that point.** No matter how far you do get, you will be graded on the strength of your submission as it stands and on your write up, not in comparison to some ideal. This is a problem that doesn't necessarily have an established answer, and the purpose is simply to explore some of the semantic issues that arise in parsing VP-ellipsis as described above.