

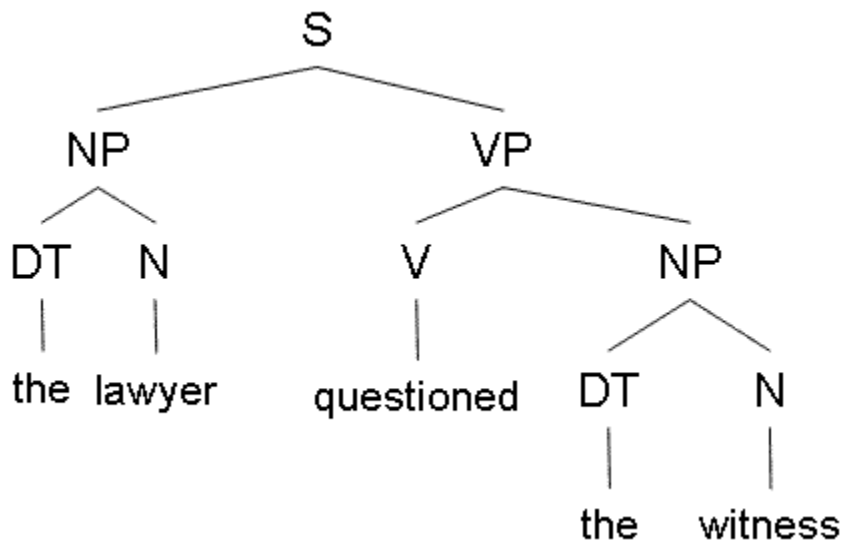


Quiz 6

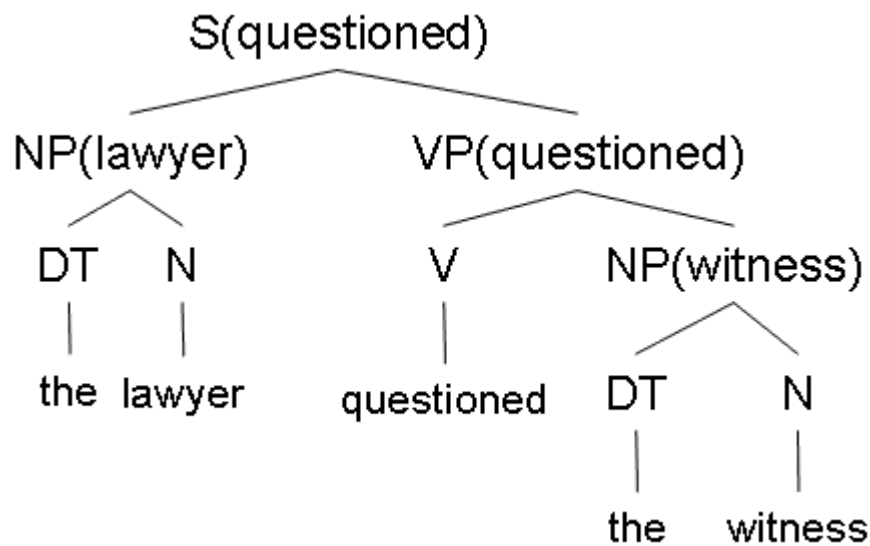
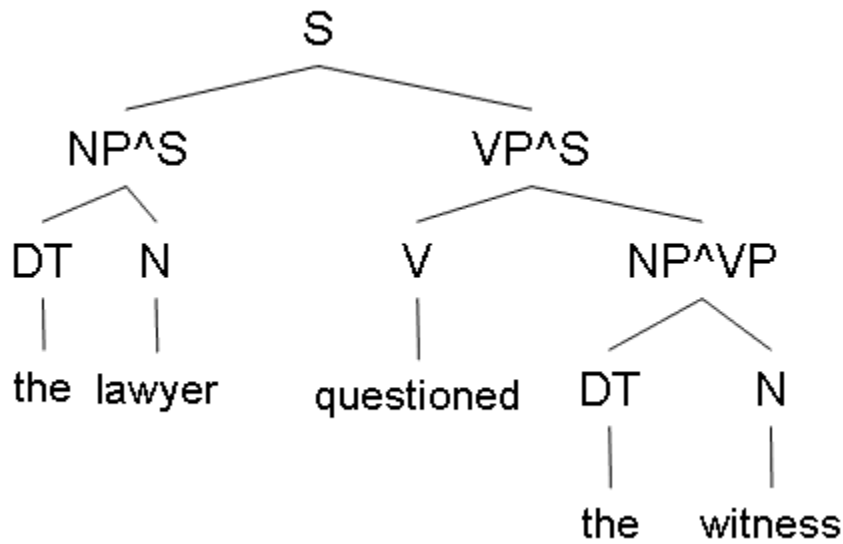
1: Which statement is true about FrameNet?

- It is based on Penn TreeBank.
- Every verb is annotated, whether or not it seems to be part of a frame.
- It first defines some "frames" of interest, then selects example sentences that have those verbs and annotates them.
- It represents a good sample of the real world statistics of frames.
- None of the above
- All of the above

2: Which of the following trees is a lexicalized tree?



1.



- 3.
- 1
 - 2
 - 3
 - 1 & 2
 - 2 & 3
 - 1 & 3

3: For the trees above, when you count and estimate the probability for rewrite rules, which tree is most likely to encounter sparseness problem?

- 1
- 2
- 3

4: Which of the following is true about parsing?

- The time complexity of lexicalized PCFG parsing like Collins (1997) and Charniak (1997) is $O(n^3)$. (n: sentence length)
- Binarization is crucial for CKY algorithm to run in $O(n^3)$ time complexity. (n: sentence length)
- The Collins's parser (1997, 1999) is a generative model, and in the generative rules he made use of POS tag information.
- Lexical information is useful for dealing with PP-attachment ambiguity.
- Some of those above (more than one, but not all) are true.
- All of those above are true.

5: Which statement is true?

- Propbank annotates the arguments of predicates (verbs) with labels like "arg0" and "arg1".
- FrameNet uses more informative names, but there is a simple mapping between Propbank and FrameNet annotations.
- Propbank annotates for verbs and nouns.
- None of those above
- Two of those above
- All of those above

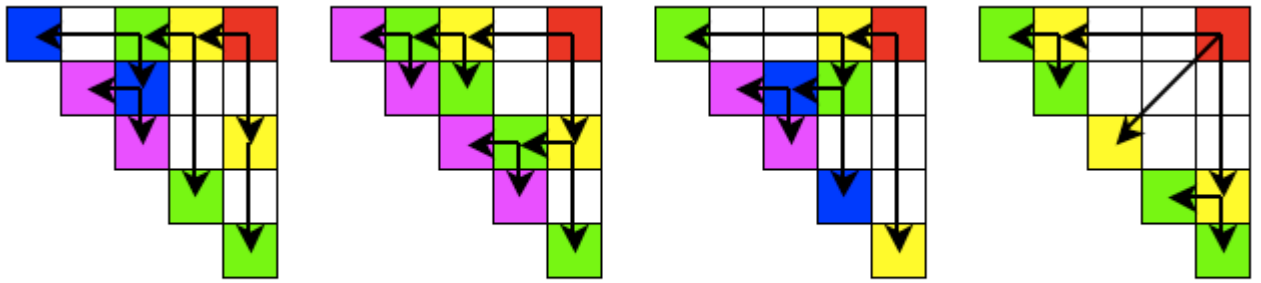
6: Which of the following is a false statement about PCFGs:

- The rules impose independence assumptions that effect poor modeling of structural dependency across the tree.
- The rules do not model syntactic facts about particular words, which causes a variety of problems.
- The joint probability of a sentence, S, and a parses of it, T, is the same as the probability of the parse, T.
- None of the above is false

7: If we take a parser, run it on some hand-annotated treebank, and score the parser's output against the human-labeled ground truth, then we have just performed:

- Supervised learning
- Online learning
- Extrinsic evaluation
- Intrinsic evaluation

8: Which of the following parses below are correct parses that could have been discovered by the CKY algorithm? (Note: the colors and arrows are simply two different ways of showing the backwards chaining)



A

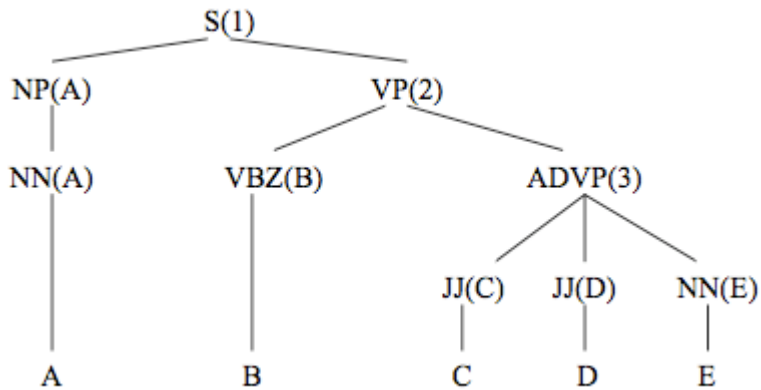
B

C

D

- A
- B
- C
- D
- None are correct
- Some are correct
- All are correct parses

9: For the following sentence, which are the valid head tags according to the head percolation table in J&M p. 415:



- 1: A, 2: B, 3: C
- 1: A, 2: B, 3: D
- 1: A, 2: B, 3: E
- 1: A, 2: C, 3: C
- 1: A, 2: D, 3: D
- 1: A, 2: E, 3: E
- 1: C, 2: C, 3: C
- 1: D, 2: D, 3: D

- 1: E, 2: E, 3: E
- 1: B, 2: B, 3: C
- 1: B, 2: B, 3: D
- 1: B, 2: B, 3: E