Assignment 2: Due Monday, August 22

1. (4 points) Below are some headlines. In each case there is an ambiguity that involves grouping the words in different ways. For each item, draw two tree structures showing the different word groupings.

   a) 'COW INJURES FARMER WITH AX.'

   b) 'SISTERS REUNITED AFTER 18 YEARS IN CHECKOUT COUNTER.' You may treat 18 as a determiner and 'checkout counter' as a compound noun.

Use the following phrase structure rules:

\[
\begin{align*}
S & \rightarrow \text{NP} \quad \text{VP} \\
\text{NP} & \rightarrow \{ (\text{Det}) \quad \text{N} \quad (\text{PP}) \quad (S) \} \\
& \quad \{ \text{Pro} \} \\
& \quad \{ \ldots \} = \text{choose either the top line or the bottom line but not both} \\
& \quad (\ldots) = \text{the enclosed phrase is optional, i.e. it may be present or absent} \\
\text{VP} & \rightarrow \text{V} \quad (\text{NP}) \quad (\text{AdvP}) \quad (\text{PP}) \\
& \quad \{ \ldots \} = \text{more than one of these phrases may be present. For example, a VP may be composed of a V, NP, PP and PP.} \\
\text{PP} & \rightarrow \text{Prep} \quad \text{NP} \\
\text{AdvP} & \rightarrow (\text{Intens}) \quad \text{Adv} \\
& \quad \text{Intens = “intensifier” such as very, much more, etc.}
\end{align*}
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2. (12 points) Using the Phrase Structure Grammar from the lecture notes and class, draw trees for the following sentences:
   
   a. He followed the girl in the dress.
   b. The man who stole the shoes won the race.
   c. The woman with the dog left parking lot on foot. (treat 'parking lot' as a compound noun).
   d. That turtle swims very quickly.

3. (2 points) Create a sentence with a tree structure that involves at least two cases of recursion. Be sure to draw the tree structure for your sentence.

4. (6 points) For each of the following words, show the structure of the word using trees like those in the lecture notes.
   
   a) hotdogs
   b) unconstitutional
   c) denationalize
5. (6 points) Below are two cartoons. For each one, explain the basis of the joke, e.g. "a non-standard interpretation of a compound (or idiom)," "a literal interpretation of a compound (or idiom)," "creation of a compound not previously used."

a)

b)

7. (10 points) Kiche is a Mayan language spoken in Guatemala. Below are some Kiche words. Each word contains at least 1 affix (the affixes are underlined). For each affix, state whether it is derivational or inflectional.

a) \texttt{aj-tixonel-ab'}
   \texttt{one.who-teach-plural}
   \texttt{'teachers'}
b) \( x\text{-}eb\text{'-umuk } \)
   \( \text{past-3person.plural-bury } \)
   'they buried'

c) \( \text{tikonijik-b'al } \)
   \( \text{sow-place.of } \)
   'garden'