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## Short Homework Assignment 2

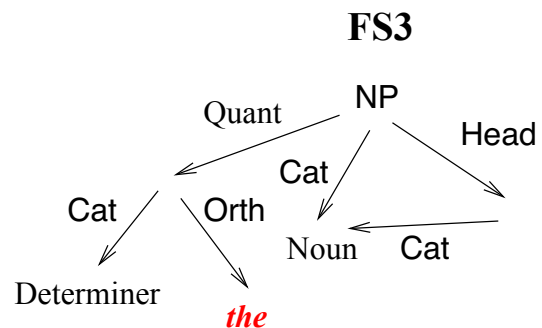
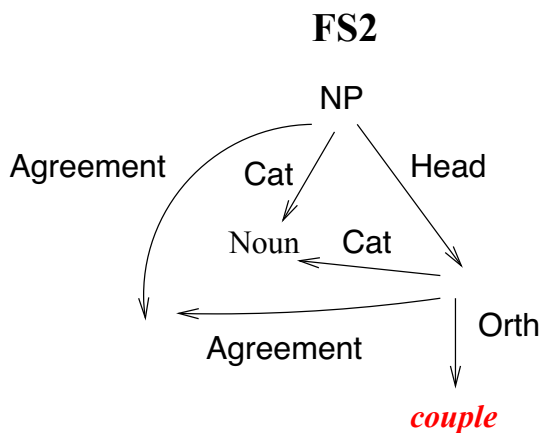
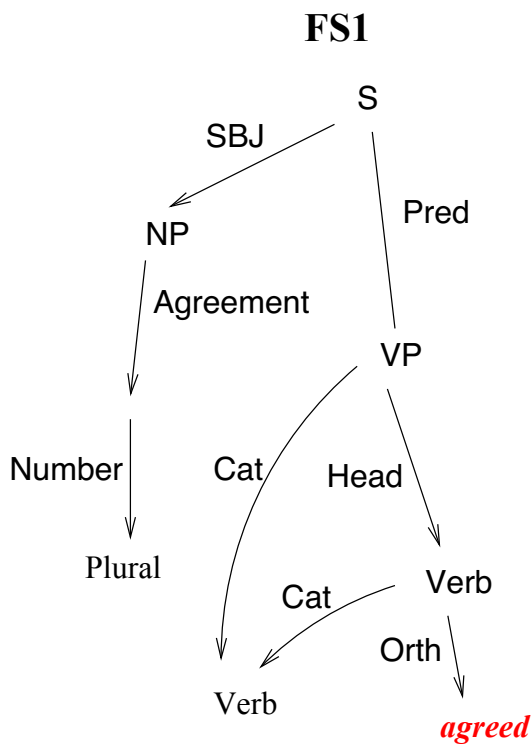
Due at Midnight on the day of Class 25

Below, there are three typed feature structures modeled as directed acyclic graphs. **FS1** represents a sentence that has the main verb *agreed*. **FS2** represents a Noun Phase containing the head word *couple*. **FS3** represents a Noun Phrase that begin with the determiner *the*. For this question, do the following:

1. Unify **FS2** and **FS3** at the roots. You can do this by redrawing the combined FS  $FS2 \sqcup FS3$  or drawing extra edges and labels on **FS2** or **FS3** in the figure. The result will be a representation of the phrase *the couple*.
2. Unify the result of the previous step (i.e.,  $FS2 \sqcup FS3$ ) with the graph rooted at NP in **FS1**. Once again, you can either draw a new sentence DAG or you can modify **FS1** on the test to reflect this change. The result will be a representation of the sentence *the couple agreed*. Note that *couple* is a word that can act, in some respects, as if it is either a singular or a plural noun.

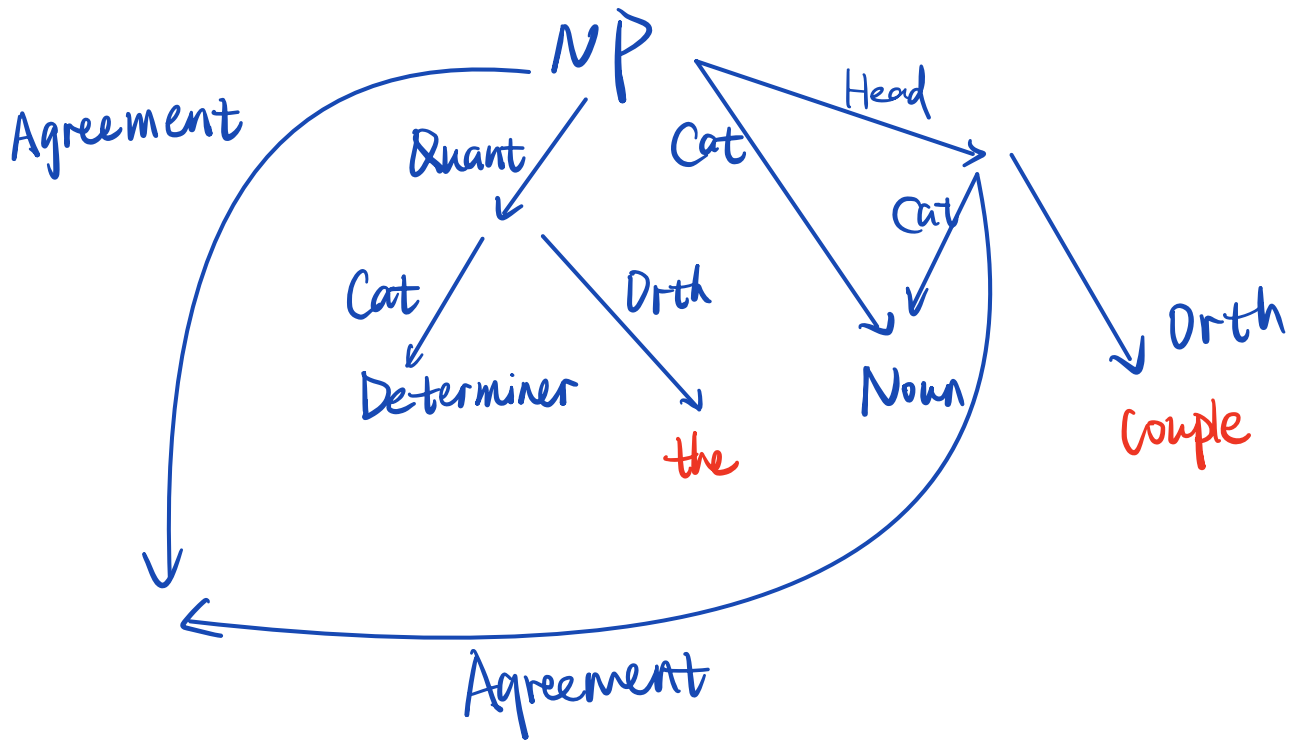
Please scan your drawings of parts 1 and 2 and submit through NYUClasses (.pdf file only). To be clear, the submission can either be: (i) a printout of the question, with additional graphs or parts of graphs added; or (ii) a new sheet of paper with your drawn graphs. You can draw this by hand or use graphics software (xfig, photoshop, etc.), at your discretion.

### 3 Typed Feature Structures



GRAPHS ON NEXT PAGE

(1)  $FS_2 \sqsubset FS_3$  : "The couple"



(2)  $FS_1 \sqsubset FS_2 \sqsubset FS_3$  : "the couple agreed"

