# Tree Adjoining Grammars <br> Exercises 

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Exercise 1 (22.01.2016) Consider the following sentence and its semantics (provided Mary' is treated as a constant):
(1) $a$. Mary bought every flower.
b. every' $(x$, flower' $(x)$, buy' $(x)($ Mary' $))$
buy' is of type $\langle e,\langle e, t\rangle\rangle$.
Show how STAG derives this semantics by giving

1. the elementary tree pairs including their links used for (1);
2. the derivation tree and
3. the pair of derived trees.

Solution:

1. C



every

2. 


bought

3.
flower

Exercise 2 (22.01.2016) Now consider again the same sentence and give its analysis in the framework of unification-based LTAG semantics. Note that here, the syntactic analysis of determiners is as in the $X T A G$ case ( $=$ the determiner tree adjoins to the noun tree), in contrast to the STAG analysis that assumes the noun to substitute into the determiner tree. Furthermore, the semantics of John is slightly different in the two approaches (see slides).

Give

1. the elementary pairs of trees and semantic representations used for (1);
2. the derived tree and the derived underspecified semantic representation;
3. the semantic representation after disambiguation.

Solution:


