XMG: session 4
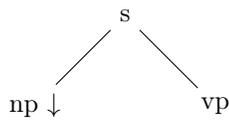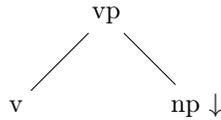# Exercises

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Exercise 1: extraction

We saw until now that the following fragments, combined in different ways, could produce the elementary trees for $\alpha nx0V$ $\alpha nx0Vnx1$:

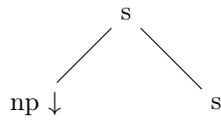Subject   Object   VerbProjection
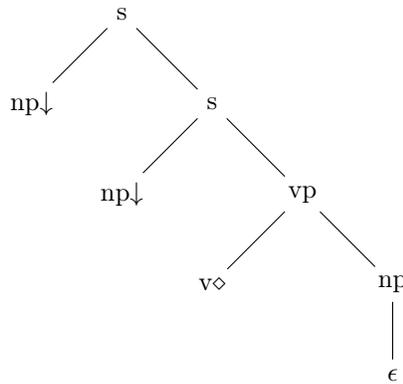
To describe the tree $\alpha W1nx0Vnx1$, we need a new fragment, for the extraction of the object:

ExtractedNP

Write the class `ExtractedNP`, and use it inside the new class `alphaW1nx0Vnx1`. You will quickly face a problem related to the marks on the nodes: adapt the existing fragments to solve this problem.

$\alpha W1nx0Vnx1$

Exercise 2: passives

For each one of the trees described until now, a passive tree (using a *by* phrase) can be found. Write new classes to describe the trees $\alpha nx1Vbynx0$ and $\alpha W1nx1Vbynx0$.

s
np ↓   vp
        v◇   pp
              p   np↓
              |
              by
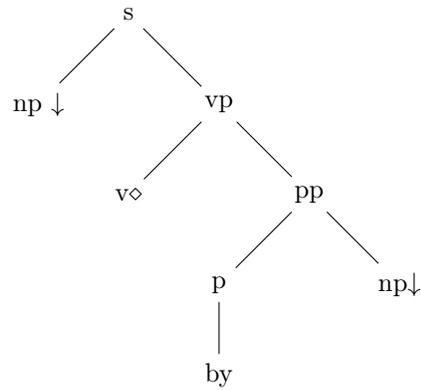
$\alpha nx1Vbynx0$

Exercise 3: families

We now have a set of tree fragments, that we combine to produce a set of elementary trees. What we need now is to gather trees in families, as in the XTAG grammar. In XMG, a family is created for every axiom of the metagrammar, in other words every `value` statement.

Use the classes `Tnx0V` and `Tnx0Vnx1` to gather all intransitive and transitive trees.

```
class Tnx0V
declare ?FAM
{
        ?FAM = (alphanx0V[] | alphaW0nx0V[])
}
```