

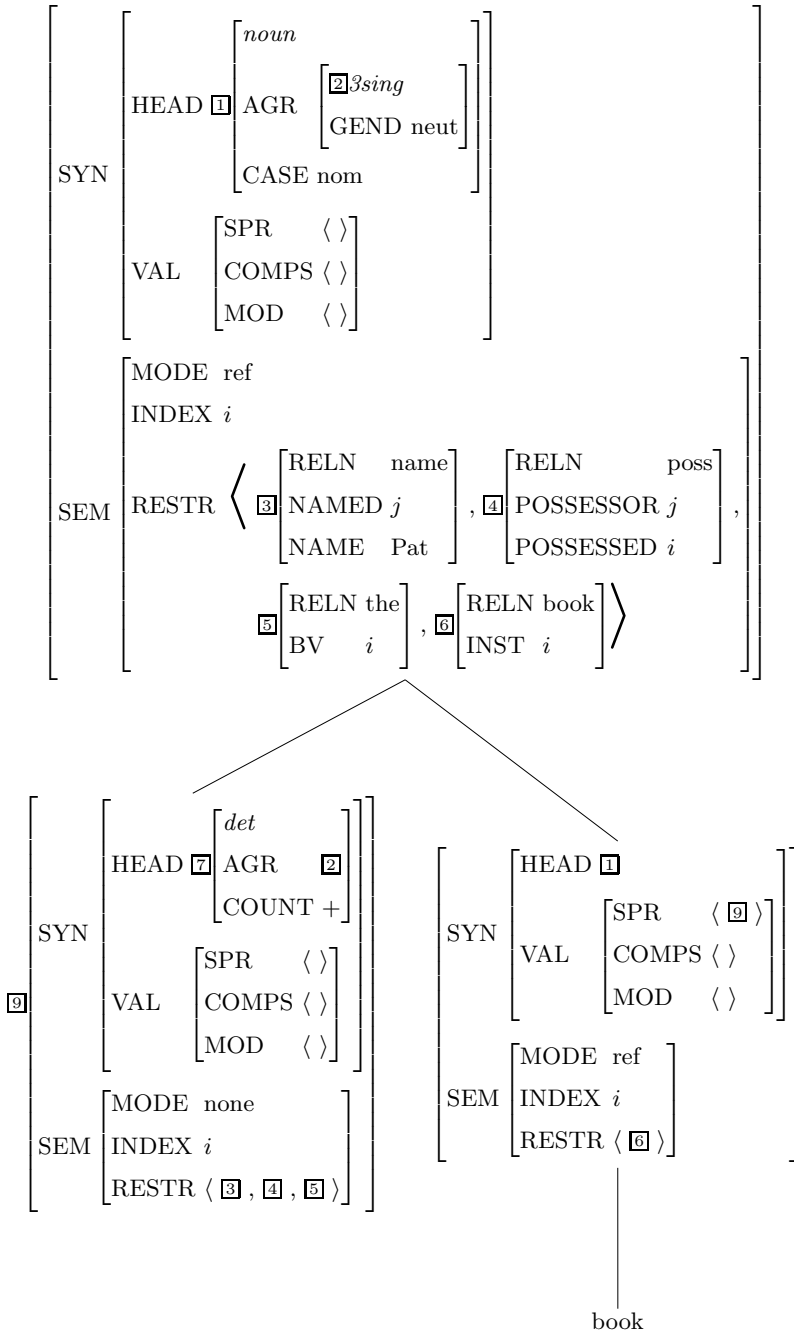
## Chapter 6, Problem 5: English Possessives III

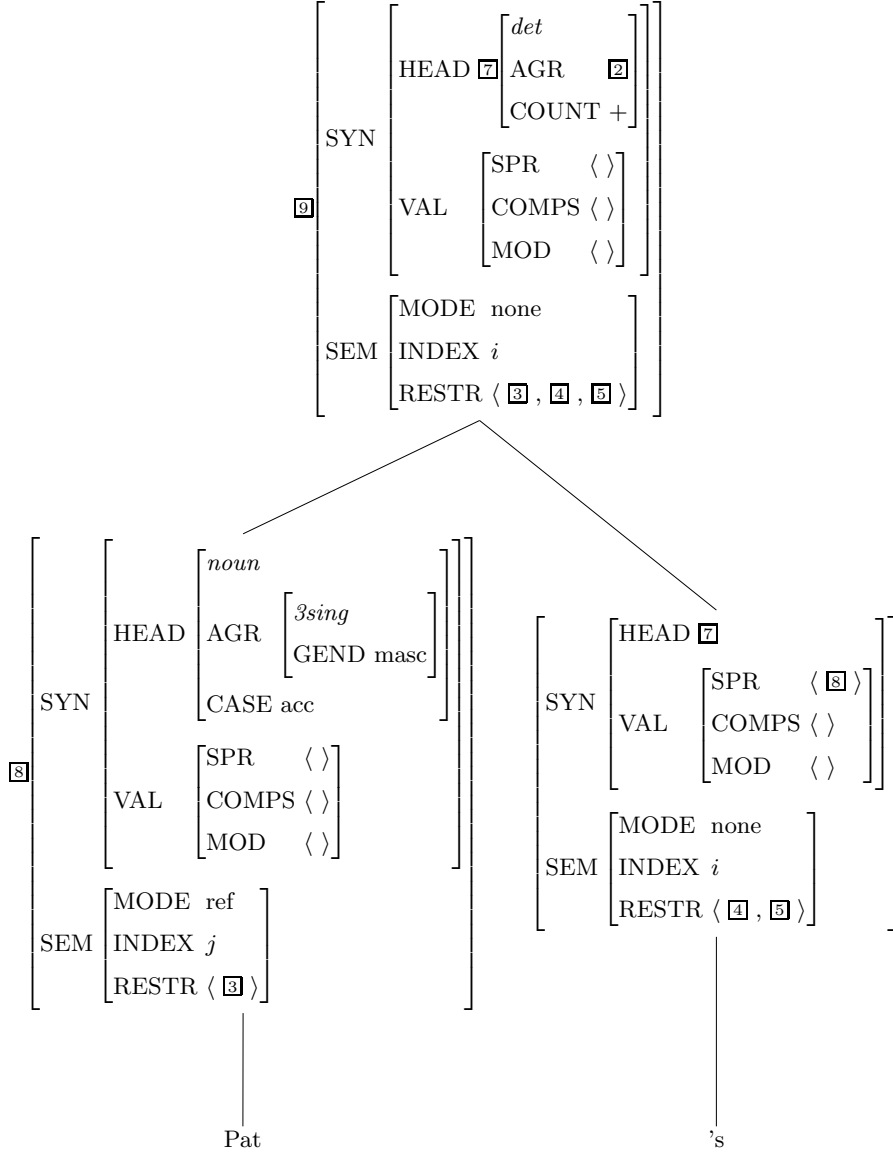
A. 
$$\left[ \begin{array}{ll} \text{MODE} & \text{none} \\ \text{INDEX} & i \\ \text{RESTR} & \left\langle \left[ \begin{array}{ll} \text{RELN} & \text{poss} \\ \text{POSSESSOR} & j \\ \text{POSSESSED} & i \end{array} \right], \left[ \begin{array}{ll} \text{RELN} & \text{the} \\ \text{BV} & i \end{array} \right] \right\rangle \end{array} \right]$$

Note that  $j$  must also be the INDEX of the SPR of 's.

- B. The grammar actually licenses 12 distinct trees for this string, as it leaves three features underspecified: the CASE of the whole NP, the CASE of the NP *Pat*, and the GEND of the NP *Pat*. We have picked values for each of these features in order to show a fully resolved tree.

This tree won't fit on one page, so we've split it in two. The mother in the second tree is the left-hand daughter of the first tree.





- C. The INDEX value of the phrase is  $i$ , because the Semantic Inheritance Principle identifies the INDEX value of the NP with the NOM *book*, and the lexical entry for *book* identifies its INDEX with the INST of the *book* relation.

The MODE value of the phrase is *ref*, because the Semantic Inheritance Principle identifies the MODE value of the NP with that of the NOM *book*, and the lexical entry for *book* specifies [MODE *ref*].

The INST value of the book relation ( $i$ ) is identified with the BV of the the relation thanks to two constraints on lexical entries: the constraint on *'s* that its INDEX is the same as the BV of the the relation, and the constraint on *book* that its INDEX is the same as its SPR's INDEX. In addition, the Semantic Inheritance Principle identifies the INDEX of the D *'s* with the INDEX of the DP *Pat's*, and the Head Specifier Rule identifies the whole expression *Pat's*, including its INDEX, with the SPR requirement of the NOM *book*. This same index ( $i$ ) is also the value of the POSSESSED feature in the poss relation thanks to a constraint on the lexical entry for *'s*.

The INST value of the named relation ( $j$ ) is identified with the POSSESSOR of the poss relation thanks to the lexical entry for *'s*, the Head Specifier Rule (which identifies the NP *Pat* with the SPR

requirement of 's) and the lexical entry for *Pat*, which identifies its INDEX with the INST of the named relation.

The RESTR of the whole phrase consists of the 4 relations contributed by the three lexical entries thanks to the Semantic Compositionality Principle.