

Exercise 1

1. Let G be a context-free grammar with the following rewriting rules:

$S \rightarrow NE VP$ $NP \rightarrow DET N$
 $VP \rightarrow V$ $NP \rightarrow NE$
 $VP \rightarrow V NP$ $VP \rightarrow ADV VP$
 $V \rightarrow sings$
 $ADV \rightarrow always$
 $NE \rightarrow Heribert$
 $DET \rightarrow a$
 $N \rightarrow song$

- (a) Give a LTAG that lexicalizes G while localizing subcategorization frames. Recall that a LTAG consists of a finite set of elementary trees (initial trees and auxiliary trees) and that every elementary tree is lexicalized by one lexical item.
- (b) Is it possible to lexicalize this CFG even with a TSG? If so, give such a TSG. Comment on the difference between this TSG and the LTAG for G .