Tree Adjoining Grammars
Exercises

Laura Kallmeyer, Simon Petitjean

Wintersemester 2015

Exercise 1 (27.11.2015) *Give*

a. *the elementary trees,*

b. *the derived trees and*

c. *the derivation trees*

(without features) for the following sentences:

(1) *John seems to hope to win.*

(2) *Gauß proved the theorem right.*

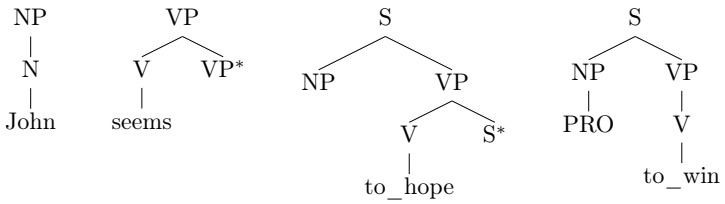
(3) *Mary tries to consider John successful.*

Consider the "to" of the infinitives to be part of the tree anchored by the verb, i.e., assume anchors "to hope", "to win" and "to consider".

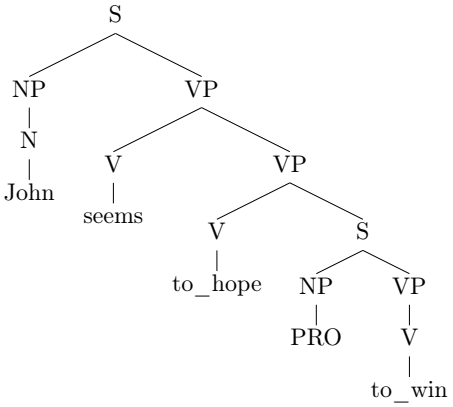
Solution:

(1) John seems to hope to win.

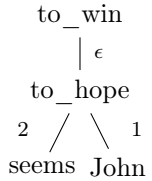
Elementary trees:



Derived tree:

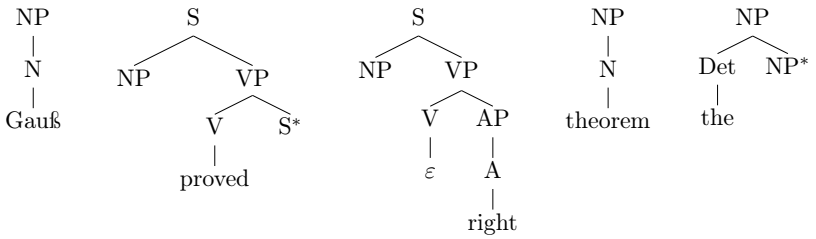


Derivation tree:

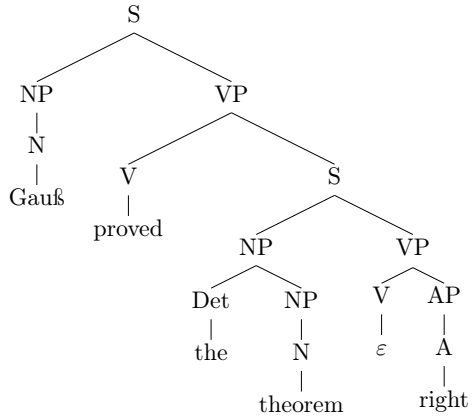


(2) Gauß proved the theorem right.

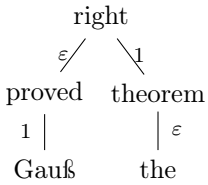
Elementary trees:



Derived tree:

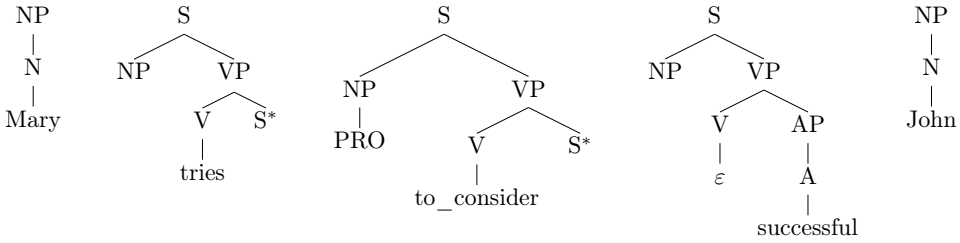


Derivation tree:

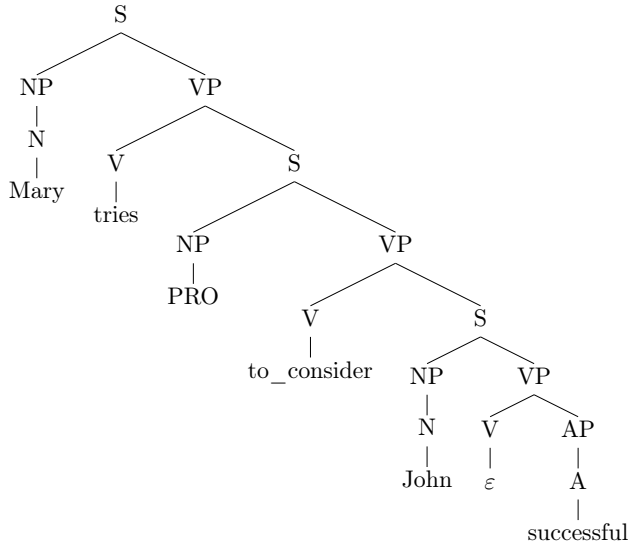


(3) Mary tries to consider John successful.

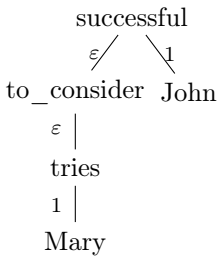
Elementary trees:



Derived tree:



Derivation tree:



Exercise 2 (27.11.2015) *Put features on the elementary trees for the verbs used in the following examples that make sure that all NPs get their correct case assigned.*

(4) *John expects Mary to come.*

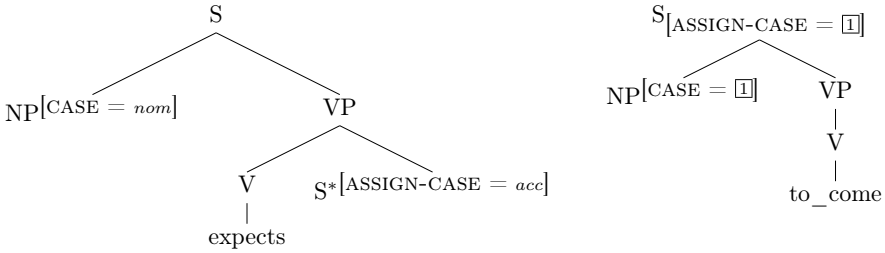
(5) *John claims that Mary comes.*

Trees for (4)

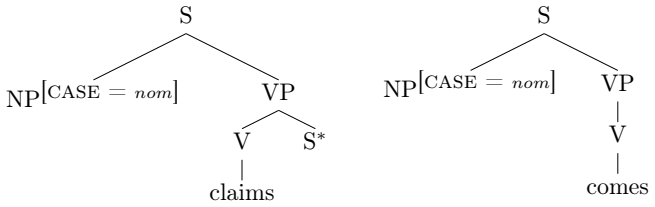
Trees for (5)

Solution:

(4):


S
NP[CASE = nom]
VP
V
S*[ASSIGN-CASE = acc]
expects
S[ASSIGN-CASE = 1]
NP[CASE = 1]
VP
V
to_come

(5):


S
NP[CASE = nom]
VP
V
S*
claims
S
NP[CASE = nom]
VP
V
comes