LFG — Stephen Wechsler

Lexical-Functional Grammar exercise #1

Consider the following grammar:

Phrase structure rules:

S → (NP) (VP)
(↑SUBJ) = ↓ ↑= ↓

NP → (Det) (N)
↑= ↓ ↑= ↓

VP → (V) (NP)
↑= ↓ (↑OBJ) = ↓

Lexical entries:

the Det (↑DEF) = +

a Det (↑DEF) = –
(↑NUM) = SG

sees V (↑PRED) = 'see<(↑SUBJ)(↑OBJ)>'
(↑TENSE) = PRES
(↑SUBJ NUM) = SG
(↑SUBJ PERS) = 3rd

Mary N (↑PRED) = 'Mary'

boy N (↑PRED) = 'boy'
(↑NUM) = SG

1. (a) Draw the **c-structure** tree for the sentence *Mary sees the boy*. Be sure to include the functional annotations (equations) on the nodes.
(b) Put numbers on the c-structure nodes in the tree and instantiate the meta-variables in the f-annotations for the rules used (this gives you an **f-description**).
(c) Construct the **f-structure**, based on the f-description.

2. (a) Add to this grammar a new lexical entry for the word *boys*.
(b) Show how this new grammar, together with the axiom of **Uniqueness,** rules out the ungrammatical NP **a boys*, and the ungrammatical sentence **The boys sees Mary*.