

## 1 Generalization

*Bart chased Lisa* is a sentence (S) with the pattern N V N. So presume we have this rule:  $S \rightarrow N V N$ . Now consider the sentence *Marge thinks Bart chased Lisa*. One way to state the pattern of this sentence is adding a new rule:  $S \rightarrow N V N V N$ . But there is a better way. **What is a better rule? What makes it better?**

## 2 PSRs and Trees IV

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$S \rightarrow$	NP V NP
$S \rightarrow$	NP V NP NP
$NP \rightarrow$	Det N
$NP \rightarrow$	NP <i>and</i> NP
$NP \rightarrow$	N

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Det $\rightarrow$	<i>a</i>
N $\rightarrow$	<i>beer</i>
N $\rightarrow$	<i>gift</i>
N $\rightarrow$	<i>Bart</i>
N $\rightarrow$	<i>Marge</i>
N $\rightarrow$	<i>Homer</i>
N $\rightarrow$	<i>Lisa</i>
V $\rightarrow$	<i>bought</i>
V $\rightarrow$	<i>saw</i>
V $\rightarrow$	<i>sent</i>

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**A. Give the tree that these rules generate for the sentence *Homer bought Marge a gift*.**

**B. Give the tree that these rules generate for the sentence *Homer sent Marge Bart and Lisa*.**

**C. Give three additional English sentences that this grammar generates.**

**D. Give three additional non-English sentences that this grammar (erroneously) generates.** To help ensure you're on the right track, let me note/suppose that (even though you can kind of make sense of it by forcing an interpretation where there is a class organized by name) *a Lisa* is not well-formed in English.

**E. Revise the grammar so that it still produces sentences like those you gave in (C) above, but no longer produces sentences like those you gave in (D).**

### 3 Funny

The sentences below are not handled by either grammar above.

- (1) a. A fancy comedian sent Homer a beer.  
 b. A cold comedian saw Lisa.  
 c. A funny comedian bought a gift.

A. What new rules (including four new lexical items) must be added to the rules in the previous problem in order to produce these sentences?

B. Does the grammar predict *Homer sent a funny comedian a cold beer*? Answer that and give a sentence about what is interesting about that fact.

C. Draw a tree for *Homer sent a cold funny comedian a fancy beer*.

### 4 PSRs and Trees V

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S	→	NP VP
VP	→	Vi
VP	→	Vt NP
VP	→	Vd NP NP
NP	→	Det N
N	→	Adj N
NP	→	Nn
NP	→	N
NP	→	NP Conj NP
VP	→	VP Conj VP
S	→	S Conj S

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Conj	→	<i>and</i>
Conj	→	<i>or</i>
Det	→	<i>a</i>
Adj	→	<i>big</i>
Adj	→	<i>fancy</i>
Adj	→	<i>expensive</i>
N	→	<i>beer</i>
N	→	<i>gift</i>
Nn	→	<i>Bart</i>
Nn	→	<i>Marge</i>
Nn	→	<i>Homer</i>
Nn	→	<i>Lisa</i>
Vt	→	<i>drank</i>
Vi	→	<i>slept</i>
Vd	→	<i>gave</i>

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A. Give the tree that these rules generate for the sentence *Marge and Homer gave Bart and Lisa a big expensive gift*. This tree is relevant for B–F below.

B. Write “B” by the nodes that the Adj node over *big* c-commands.

C. Write “C” by the nodes that the Vd node over *gave* c-commands.

D. Write “D” by the nodes that the NP-daughter-of-S dominates.

E. Write “E” by the nodes that dominate *Bart*.

F. Write “F” by the nodes that precede *Bart*.

G. Give the tree that the rules generate for *Homer drank a beer and slept*.