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# analytical methods in morphology and syntax

## *practice problems #5*

*(10% of the grade on Assignment #5 depends on timely completion of these practice problems)*

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### **exercise: toy english**

*Tom Payne*

A. The following are some new sentences in toy English. Assign each word to its appropriate class in the lexicon, and give word class labels to all the words in the following clauses.

B. Enclose all the phrases in brackets. This includes NPs, VPs and Ps. Remember that phrases can occur within other phrases.

The first example has been done for you:

[DET N] [ V [DET ADJ N ] ]  
a. The dog indicated a longish siphon.

b. A flower on an old chair is silly.

c. They moved the woman and the silly old stick.

d. The dog with the stick is a silly dog.

e. The siphon and the dog chased the flower with a stick.

f. Triangular siphons admire longish benches.

g. Williams helped a woman on a longish bench.

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## **exercise: toy english tree diagrams**

*Tom Payne*

1. Draw a constituent structure tree for the following Toy English sentence:

The longish siphon in the bucket indicates the ugly pond.

2. The following Toy English sentence is structurally ambiguous. Draw two constituent structure trees, one for each of the possible structures that underlie this sentence:

Williams hit a television with a stick.

Williams hit a television with a stick.

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## exercise 5.5: Scottish Gaelic phrase structure

Yule, 1996

Here are some simplified phrase structure rules for Scottish Gaelic:

$S \rightarrow V NP NP$

$NP \rightarrow \left\{ \begin{array}{l} DET N (ADJ) \\ PN \end{array} \right\}$

Lexicon:

DETerminer	Noun	Proper Noun	ADJective	Verb
an	cu gille	Tearlach Calum	beag mor	chunnaic bhuail

Only two of the following four strings would be considered well-formed clauses, according to the rules above. First, identify the ill-formed sentences, using the asterisk (\*) symbol. Second, draw tree diagrams for the two well-formed sentences:

1. Calum chunnaic an gille.
2. Bhuail an gille mor an cu.
3. Bhuail an beag cu.
4. Chunnaic Tearlach an gille.

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## exercise: constituency

A. Bracket the noun phrases, and underline the verb phrases in the following excerpt (from *Nicholas Nickleby* by Charles Dickens). Remember that there may be multiple embeddings, i.e., phrases within other phrases.

Nicholas looked at the ugly clerk, as if he had a mind to reward his admiration of the young lady by beating the ledger about his ears, but he refrained, and strode haughtily out of the office.

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## exercise 5.8: Apinaye

1. kukrĕ kokoi. 'The monkey eats.'
2. kukrĕ kra. 'The child eats.'
3. ape kra. 'The child works.'
4. kukrĕ kokoi ratš. 'The big monkey eats.'
5. ape kra metš. 'The good child works.'
6. ape metš kra. 'The child works well.'
7. ape ratš mĭ metš. 'The good man works a lot.'
8. kukrĕ ratš kokoi punui. 'The bad monkey eats a lot.'
9. ape punui mĭ piĵetš. 'The old man works badly.'
10. ape piĵetš mĭ. 'The man works a long time.'

A. Write phrase structure rules and a lexicon that account for all of these data. In your lexicon, be sure to reduce word classes to the bare minimum.