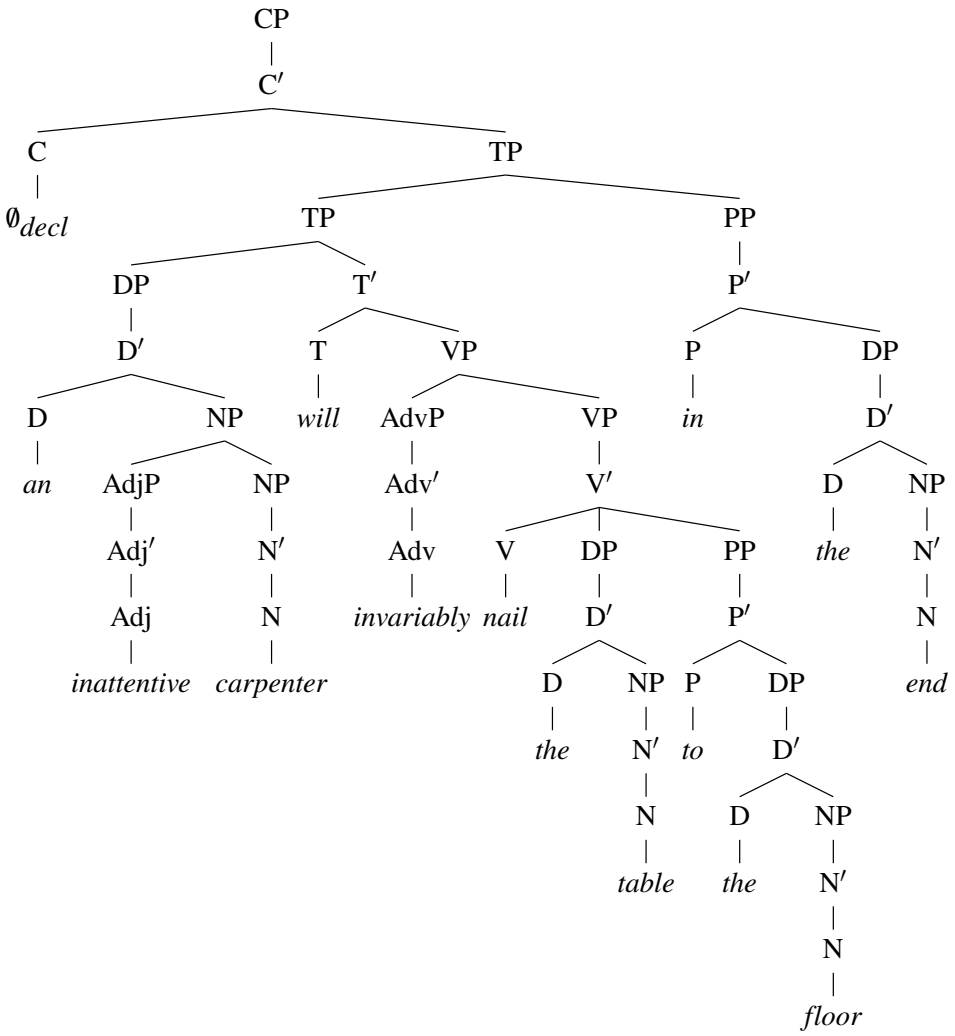
Version 1.4: Eliminated superfluous Adv rules in part 1.3 (there were no adverbs); **Version 1.3**: Eliminated a superfluous *the* from (5g). Doesn't affect the problem much, but the fix makes (5g) informative rather than irrelevant; **Version 1.2**: Sentence (4g) used to be a duplicate of another sentence, updated now to reflect what I had intended. Not entirely necessary for the problem, but fixed anyway; **Version 1.1**: AdvP, Adv′, AdjP, Adj′ rules were added in problem 1.3 (they were accidentally omitted in v.1.0.)

1 From trees to rules and *vice versa* (13 points, combined)

1.1 Tree to PS rules [5 points]

Provide the PS rules that derive the following tree. Give the simplest rule system you can, avoiding redundancy. **For this question, also give the lexical items, but just with their category (no other features).** To give one example of a lexical item: *will*, T.



1.2 X-bar structure [3 points]

Which phrases are adjuncts in the structure above? (Based on the tree alone, use the words in the phrase to identify them)

1.3 PS rules to tree [5 points]

Provide a tree diagram for the following sentence based on the grammar below. (Assume the lexical items that would be appropriate, you can consider *can* to be a T, and *ease* to be a (mass) noun.) You may find that the rule system allows for more than one possible structure. If so, provide the structure that best captures the most likely meaning of the sentence. The root node of the tree should be CP.

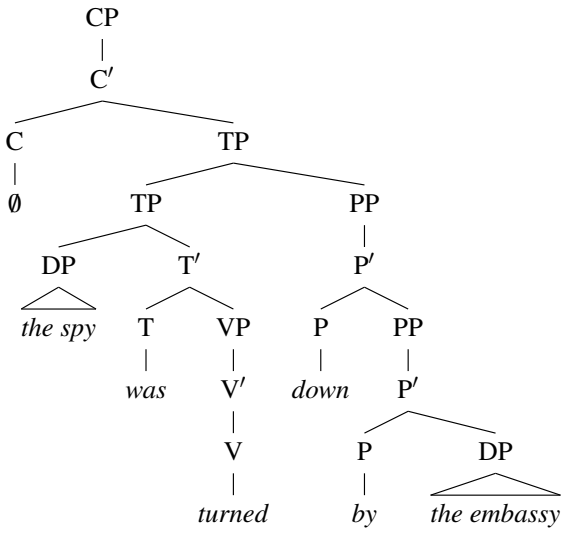
I heard that the clever squirrels can locate the nuts in the ground with ease on the radio

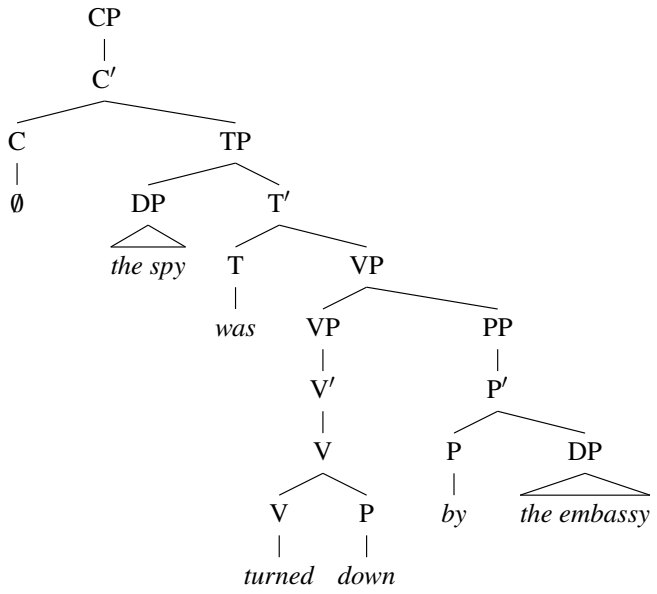
CP →	C′
C′ →	C TP
TP →	DP T′
T′ →	T VP
DP →	D′
D′ →	D (NP)

VP →	V′
VP →	AdvP VP
VP →	VP PP
V′ →	V DP
V′ →	V CP
AdjP →	Adj′
Adj′ →	Adj

NP →	N′
NP →	AdjP NP
NP →	NP PP
N′ →	N
PP →	P′
P′ →	P DP

2 Developing an argument (4 points)





Task. The two tree diagrams above are two candidate structures for *The spy was turned down by the embassy*. Neither is fully correct, but that doesn't matter for the purposes of this problem.

- **Part A**: Provide a sequence of words that form a constituent only in the first tree.
- **Part B**: Provide a sequence of words that form a constituent only in the second tree.
- **Part C**: Write two consituency test sentences for each of those potential constituents you identified in the two parts above (so, four test sentences in total), and indicate what you expect the available meanings will be for each. (You don't need to judge whether they do in fact have the predicted meanings, just say what the predictions are.) You can refer to the meanings as the "cooperating-spy" (allegiances have been turned, changed sides) meaning and the "disappointed-spy" (spy was rejected) meaning.

3 Building a lexicon (5 points)

Observe the following data. For each, come up with a lexical entry for the underlined word. (Primarily, this is about constructing (a) subcategorization frame(s) for each.) You may add a few words how your lexical entry explains the data in question, if there is anything you'd want to say beyond just what it says in the lexical entry. (No need to just restate the lexical enty in prose.)

(1) a. Pat depends on the MBTA
b. * Pat depends
c. * Pat depends near the MBTA
d. * Pat depends on the MBTA on the rental income

(2) a. Tracy approves.
b. Tracy approves of science.
c. Tracy approves at lunch.
d. Tracy approves of science at lunch.
e. * Tracy approves at lunch of science.

(3) a. The fire melted the ice.
b. The ice melted.
c. * The fire melted the ice the plastic figure.

(4) a. John deposited the check.
b. * John deposited.
c. John deposited the check at noon.
d. John deposited the check in the slot.
e. * John deposited the check at noon in the slot.
f. * John deposited the check in the bank in the slot.
g. John deposited the check in the slot at noon.

(5) a. The blacksmith convinced the clients that the Earth is flat.
b. The blacksmith convinced the apprentice of the conspiracy.
c. The blacksmith convinced the apprentice.
d. The blacksmith convinced the apprentice in 20 minutes.
e. * The blacksmith convinced that the Earth is flat.
f. * The blacksmith convinced of the conspiracy.
g. * The blacksmith convinced the apprentice that the Earth is flat of the conspiracy.
h. * The blacksmith convinced the apprentice the clients.
i. * The blacksmith convinced.