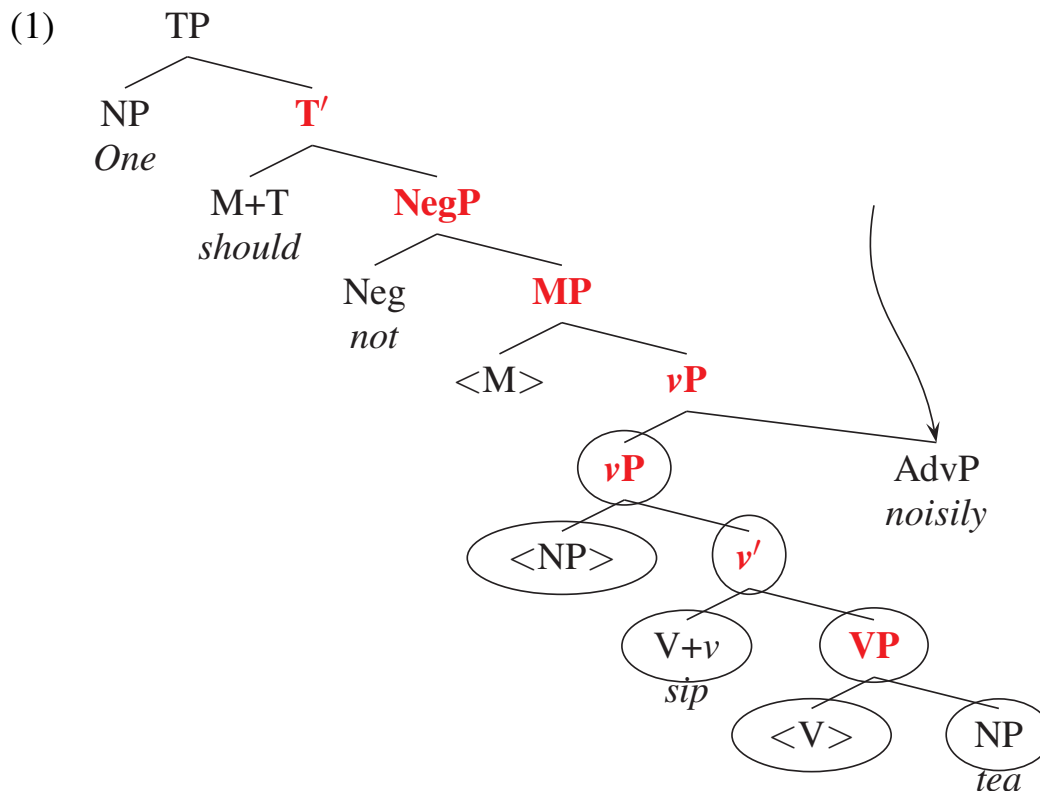**Budget your time. 50 points total. 80 minutes. Average 1.6 points/minute.**

The number of points assigned to each part is indicated by a number in brackets.

Actually, after grading this, I changed my mind. Some of these questions were disproportionately valuable, and people were, it seemed to me, often getting slammed somewhat unfairly for kind of minor errors, even while getting more substantive things correct. So, I rescaled it post-hoc. The main change I made is that a lot of the all-or-nothing questions that were worth 2–3 points before have been rescaled to be worth 1 point. Also, in problem #1 I accidentally had only 7 things to get points for, but 8 points assigned. So, I moved that back down to 7.

1. [8] Fill in the missing labels for the nodes in the tree below. Where a node is the maximal projection of a lexical item, indicate this with the standard "X-bar" notation (e.g., NP for the maximal projection of a noun, v' for an intermediate projection of v). The sentence is *One should not sip tea noisily.*The arrow is for use in question 4.

(1)

```
            TP
          /    \
        NP      T'
        One    /  \
            M+T    NegP
           should  /   \
                 Neg    MP
                 not   /  \
                    <M>    vP
                          /  \
                        vP    AdvP
                       /  \   noisily
                   <NP>    v'
                          /  \
                      V+v    VP
                      sip   /  \
                         <V>   NP
                               tea
```

There were a couple of labeling mishaps. Make sure you understand why the labels on the key are correct, if you got any of them wrong. This was counted out of 7, rather than out of 8, since there were only 7 nodes to label.

2. [6] Yes or No. In the sentence for which the structure is given in (1)...

   (a) Is *should not* a constituent?   **No**

   (b) Is *sip tea noisily* a constituent?   **Yes**

   (c) Does NegP dominate *sip*?   **Yes**

   (d) Is AdvP the specifier of *v*P?   **No**

   (e) Does *v*+V dominate the NP *tea*?   **No**

   (f) Is MP the complement of NegP?   **Yes**

There was widespread denial of (f) here. In fact there were a number of people for whom that was the only point taken off. This may have been a terminology confusion. The specifier of XP is the thing in the specifier position of the phrase whose head is X, the complement of XP is the thing in the complement position of the phrase whose head is X. When I say "complement of XP" I mean the complement position of XP, the sister to the head (I'm not treating "XP" as a head itself).

3. [2] Circle one. The verb shown in the structure in (1) above is...

<div align="center">

ditransitive / **transitive** / unergative / unaccusative

</div>

4. [2] C-command. The arrow in the tree above points to a node. Circle every node in the tree that node c-commands.

5. [2] θ-role. Name the θ-role that *One* has in (1). **Agent**

6. Suppose we start building a structure for a sentence, and at a certain stage we wind up with a vP as shown (abstractly) below in (2). *Note:* The superscripts are just for identification purposes—they aren't there in the structure, I just need to be able to refer to the individual nodes.

Ok, on this: This is an unaccusative verb, it has just a Theme (NP^2). The Theme has PP^2 adjoined to it. So, NP^2 would be something like *soldiers in movies*, *water on mountains*, *people under stress*. None of the available sentences differentiated the NP on this point. The differentiation had to do *only* with the θ-role that the NP got. *Shoot* is arguably a transitive verb as used here, but in any event, the subject is an Agent, so it is incompatible with the tree in (2). Similarly, *drive* is an unergative (intransitive, with an Agent), and so that too is incompatible with the tree in (2). *Boil*, on the other hand, is unaccusative. It's only argument is a Theme, and so that's why *Water on mountains boils in seconds* is the correct choice.

(2)
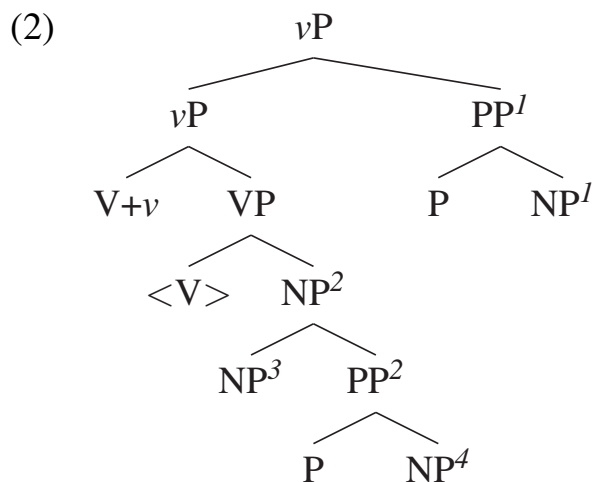
(a) [2] Name the θ-role that the NP^2 will have. **Theme**

(b) [2] Name the operation (Merge, Adjoin, Move) that connected NP^3 and PP^2.

Adjoin

(c) [2] How many [uP] features were there—total—in these lexical items initially?

None

(d) [3] Which of the following three sentences might plausibly include the vP in (2)?

    1. Soldiers in movies shoot at people.

    2. ‖ **Water on mountains boils in seconds.** ‖

    3. People under stress drive in circles.

7. [2] Circle one. The verb shown in the structure in (2) is...

<div align="center">ditransitive / transitive / unergative / ‖ unaccusative ‖</div>

8. Suppose you had a sentence with the abstract structure given below in (3). I have provided two lexical items (the NP, *Spiderpig*, and the bare (uninflected) form of the verb, *walk*).

Here, (a) continues to be counted out of three points, since there were three arrows to draw. (b–d) are all counted out of one point.

(3)
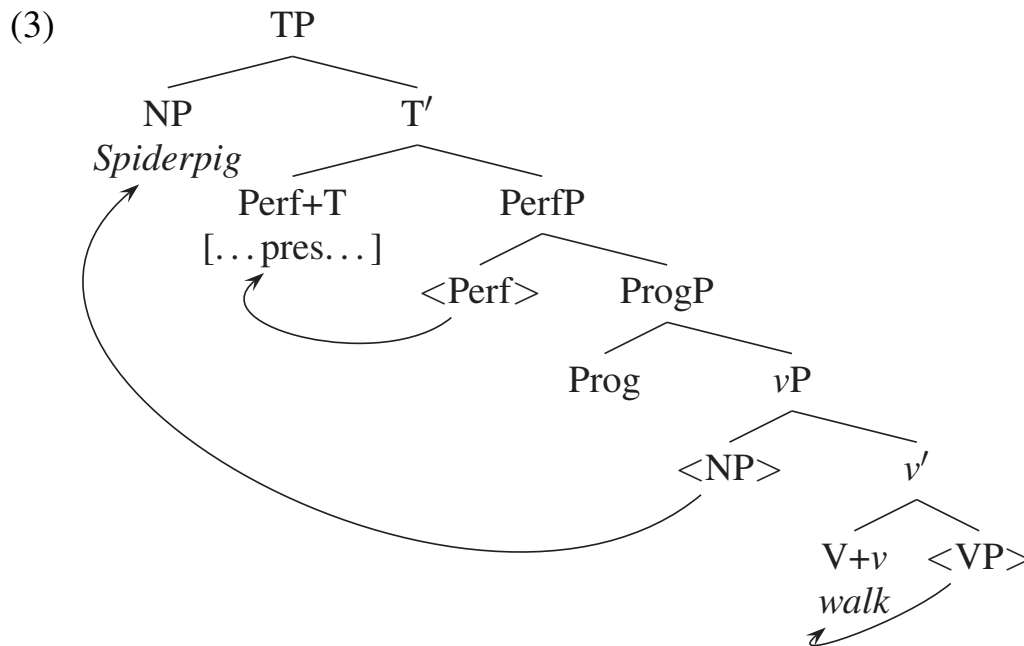
(a) [3] Draw arrows in the tree that show, when things moved, where they moved from and to.

<div align="center">4</div>

(b) [3] Write the sentence that this would be the structure for.

Spiderpig has been walking.

(c) [2] What was the motivation to Merge T and PerfP?

The Hierarchy of Projections—PerfP was finished, T was next on the Hierarchy.

(d) [2] What was the motivation to Merge v' and NP?

v' had a [uN] feature that needed to be checked.

9. [5] Binding Theory. One question, about the sentences in (4) below. The question is this: **Why does (4a) have only one of the two interpretations you might expect?** The background is this: If you consider (4b), which differs from (4a) only in the subject of the lower clause, it is ambiguous—there are two different interpretations of *near Bill*. It is either that *that book near Bill* was allegedly stolen, or that the allegation of theft was itself pronounced *near Bill* (perhaps so he would overhear). In (4a), where *he* refers to *Bill*, one of those readings disappears. The question here is asking you to explain why only one interpretation survives. *Hint:* The title of this question is "Binding Theory"— expect to find yourself using the word "Principle" and one of the capital letters "A," "B," or "C."

(4)   a. Mary$_i$ said that he$_j$ stole that book near Bill$_j$.

        b. Mary$_i$ said that Ed$_k$ stole that book near Bill$_j$.

There was a third reading here that I hadn't considered, which I think tripped a couple of people up. It is also possible that the *stealing* happened near Bill. That is, it could be *book near Bill*, *stole near Bill*, or *said near Bill*. Of those three, the only meaning that should be available under Principle C, though, is as described below, *said near Bill*. It's the meaning most like *Mary said near Bill that he (Bill) stole the book*.

    The ambiguity in (4b) arises from the existence of two possible attachments sites for the adjunct *near Bill*. One is in the lower clause, modifying *book*, one is in the higher clause, modifying *said*. However, if *near Bill* is attached in the lower clause then the subject of the lower clause will c-command *Bill*, and so the subject of the lower clause cannot be co-referential with *Bill* (or else it would violate Principle C). Accordingly, if the subject of the lower clause *is* co-referential with *Bill*, the only place the adjunct *near Bill* can be attached is in the higher clause, modifying *said*.

10. [4] The sentence in (5) seems grammatical in English, at least to me right now. But the system developed so far in class predicts that it should not be. Explain why this cannot be constructed using the system we have so far.

(5)   Patricia should be not wasting time.

This could be for either of two reasons. Either (a), two auxiliaries moved up to T, when only the top one was supposed to move, or (b) the Hierarchy of Projections was not respected, and Neg was Merged too early.