

This homework builds directly on homework 8. The goal of homework 8 was for you to extend Bob 1.1 to cover a new range of data that involved verbs that take different kinds of complements (examples (1)–(10)). There were several different solutions that accounted for the observed pattern, that is, many different Bob 2.0s that generated the grammatical sentences in the data set and simultaneously did not generate the ungrammatical ones (placing Bob 2.0 in the happy diagonal of the schema on the latest class handout).

The goal of this homework is to go a step further and discuss different solutions, i.e. different Bob 1.1 extensions that all generate the grammatical sentences in the data set, but assign them different tree structures. The homework is focussed on evaluating competing hypotheses, which involves finding and considering independent evidence for or against a particular solution, analytical reasoning, and writing up the results of these in **clear, connected prose that consists of full sentences**.

Rather than asking you to evaluate two different Bob 2.0s wholesale, I have picked two aspects of Bob 2.0 for which different solutions were given in homework 8 and you are asked to evaluate two competing hypotheses for each aspect. This should make the task easier. These two aspects relate to what we have been talking about in class and section last week and to what we will talk about in class today and also section later this week. So your notes from those occasions should be useful. File 6.5 (Tests for Structure) will also be useful for Part B.

For each part of this assignment, assume that the portion of the grammar **not** under investigation is as presented in Friday's class, i.e. Bob 2.5:

Phrase Structure Rules

PSR1 $S \rightarrow NP VP$

PSR2 $NP \rightarrow N$

PSR3 $VP \rightarrow V1$

PSR4 $NP \rightarrow NP Cj1 NP$

PSR5 $S \rightarrow S Cj1 S$

PSR6 $S \rightarrow S AdvP$

PSR7 $AdvP \rightarrow Cj2 S$

PSR8 $PP \rightarrow P NP$

PSR9 $VP \rightarrow V2 NP$

PSR10 $VP \rightarrow V3 PP$

PSR11 $VP \rightarrow V4 CP$

PSR12 $CP \rightarrow C S$

TR1 Move a phrase (that ...) to be the left-most daughter of the S that immediately contains it.

Lexicon

$N = \{\text{Sally, Harry}\}$

$V1 = \{\text{slept, wept}\}$

$V2 = \{\text{greeted}\}$

$V3 = \{\text{thought}\}$

$V4 = \{\text{thought}\}$

$P = \{\text{of}\}$

$C = \{\text{that}\}$

$Cj1 = \{\text{and, or}\}$

$Cj2 = \{\text{as, but, while, though}\}$

For the aspect of the grammar under consideration, you have have deviate from Bob 2.5 in the specified respects.

Layout guidelines When you cite examples either set them apart from the prose in a separate paragraph and number them (as done under task 2 of Part A) or include them with the prose but set them apart by underlining or italicizing them.

Part A

Examples (7)–(9) on homework 8 show that the verb *thought* can occur with a CP complement (as in example (7)) or with a PP complement (as in example (9)), but not with a NP complement ((8) is ungrammatical). In this light consider hypotheses 1 and 2 below:

Hypothesis 1 There is only one instance of the verb *thought* in the lexicon:

$V3 = \{thought\}$

but there are two PSRs which use it:

PSR10. $VP \rightarrow V3 PP$

PSR11'. $VP \rightarrow V3 CP$

Hypothesis 2 There are two instances of the verb *thought* in the lexicon:

$V3 = \{thought\}$

$V4 = \{thought\}$

and they are used by two different PSRs:

PSR10. $VP \rightarrow V3 PP$

PSR11. $VP \rightarrow V4 CP$

Task 1 (10 points) Show that both hypotheses, taken together with the rest of Bob 2.5, account for the behavior of *thought* in the data set from homework 8.

Task 2 (30 points) Discuss the advantages and disadvantages of each of these hypotheses and argue in favor of one of them. Your argument should involve both empirical considerations and theoretical ones. On the empirical side consider the data in (i)–(vi):

- i. Harry relied on Sally.
- ii. *Harry relied that Sally slept.
- iii. Harry lived in Tucson.
- iv. *Harry lived that Sally was in Arizona.
- v. Harry announced that Sally was in Arizona.
- vi. *Harry announced on Sally.

On the theoretical side, consider the simplicity of the two hypotheses: Does one involve more rules than the other? Does one involve a more complex lexicon than the other?

Part B

Example (7) on homework 8 was *Harry thought that Sally slept*. Below are two hypotheses about how this sentence is generated (it is not relevant for this part of the homework whether there is one or two instances of *thought* in the lexicon):

Hypothesis 3 Generating sentence (7) involves applying the following two PSRs (in addition to PSR1, PSR2 and PSR3):

PSR11. $VP \rightarrow V3 CP$

PSR12. $CP \rightarrow C S$

Hypothesis 4 Generating sentence (7) involves applying the following PSR (in addition to PSR1, PSR2 and PSR3):

PSR 11'. $VP \rightarrow V3 C S$

Task 1 (10 points) Give the tree structures associated with sentence (7) under each hypothesis.

Task 2 (10 points) How are the two trees different? Characterize this difference in terms of constituent structure.

Task 3 (20 points) Discuss the advantages and disadvantages of each of these hypotheses and argue in favor of one of them. Base your argument on the difference in constituent structure examined in task 2 and draw on the tests for constituent structure developed in the book (File 6.5) and in section (pseudoclefting).

Bonus task (5 points) Construct an argument in favor of Hypothesis 3 from the data in (a)–(g).

- a. Everyone believed that Sally would get the job.
- b. That Sally would get the job was believed by everyone.
- c. *Sally would get the job was believed that by everyone.
- d. *Sally would get the job was believed by everyone.
- e. It was believed by everyone that Sally would get the job.
- f. *It was believed that by everyone Sally would get the job.
- g. *It was believed by everyone Sally would get the job.

Due Monday April 17 in class