

A BOOK
OF
GB SYNTAX PROBLEMS

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Preface

These 25 problem sets were written for a sequence of interactive courses designed to introduce graduate students to Government-Binding theory—specifically, the theory of Chomsky’s *Barriers* (1986). Most were written in 1990; all have been used, at one time or another, in the graduate syntax sequence at UCSC.

The first 19 problem sets form the basis for a problem-intensive introduction to GB that deals with phrase structure and the lexicon, Case Theory, Binding Theory (Condition A), the theory of A-movement, and the analysis of infinitives and small clauses. My goal in writing these problems was to create a GB analogue to Syntax 1, the UCSC course in which undergraduates are led, via intensive problem solving and the Socratic method, to discover the classic transformational approach to syntax. Accordingly, these problem sets draw heavily on Syntax 1 materials developed previously by Judith Aissen, Jorge Hankamer, William A. Ladusaw, James McCloskey, and myself. But they are specifically ‘about’ GB, and can (if desired) be used to introduce the basics of a GB approach to syntax without the support of any other materials.

The remaining 6 problem sets were written for an intermediate course in A-bar dependencies—a course that covers the Wh-Movement hypothesis and various versions of Subjacency and the ECP. They are intended to supplement readings from the *Barriers* and post-*Barriers* period. Most of these problem sets deal with French; I hoped they would expose students to the investigation of another language besides English, and ultimately to the notion ‘parameter’. These problems sets are based on the works on French syntax listed in the references at the end.

When I began writing these problem sets in 1990, it was not obvious to me that UCSC’s interactive method of teaching syntax could be used to teach GB. Although I knew how to get students to inductively ‘discover’ the classic transformational approach to syntax, I was not sure I could get them to discover the principles of a theory with rich deductive structure. The strategy that worked (for me) was to treat the principles as ‘assumptions’ whose correctness could be inferred from facts of English. In my version of the introductory GB course, the class is led—through problem sets and discussion—to develop a list of assumptions that begins with Chomsky’s (1970) X-bar schemata and ends up as something close to the network of principles of ‘standard’ GB. Rather than try to describe the process in any more detail, I have simply included (after Assignment 19) a sample list of the assumptions that can be arrived at on the basis of the first 19 problem sets.

Comments and suggestions concerning these materials will be much welcomed. My internet address is: chung@cats.ucsc.edu .

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Assignment 1

The italicized words in the examples below are called auxiliaries.

- (1) Sheila *might* reconsider.
- (2) Your coffee grinder *will* last longer if you follow these simple instructions.
- (3) I *have* spoken.
- (4) Somebody *is* sleeping in my bed.
- (5) No intelligent person *could have* made such a statement.
- (6) Their behavior *has been* puzzling me.

Consider the following two hypotheses about the phrase structural analysis of auxiliaries:

Hypothesis A. Auxiliaries are specifiers of $V^{[0]}$.

Hypothesis B. Auxiliaries are heads of VP (= $V^{[2]}$); that is, they are (a special type of) $V^{[0]}$.

Which hypothesis is superior, and why? Adopt the assumptions about phrase structure and sub-categorization made in class. Then use the two sets of evidence below to support your answer. Argue clearly and explicitly; identify any additional assumptions you make; illustrate your points with specific trees and examples.

SET 1

The following pairs of examples are related by VP Ellipsis:

- (7) Jill hasn't talked to Sam, but I may talk to Sam.
- (8) Jill hasn't talked to Sam, but I may.
- (9) We donated some money to the fund, and Maxine will donate some money to the fund too.
- (10) We donated some money to the fund, and Maxine will too.
- (11) He is reading *Barriers* because she is reading *Barriers*.
- (12) He is reading *Barriers* because she is.
- (13) Although he hasn't finished Chapter 5, she has finished Chapter 5.
- (14) Although he hasn't finished Chapter 5, she has.

Assume that VP Ellipsis permits an empty VP constituent to be grammatical just in case there is some overt VP elsewhere in the sentence that can be used to supply the content of the empty VP. (Note that the overt VP must supply its content in such a way that (8) and (10) can be derived.)

Add to this informal statement of VP Ellipsis so that it describes the ungrammaticality of (16) and (18):

- (15) Jill didn't talk to Sam, but we talked to Sam.
- (16) *Jill didn't talk to Sam, but we.

- (17) He likes the pictures, and she likes the pictures too.
 (18) *He likes the pictures, and she too.

Now consider the following:

- (19) Jill may not have been playing the piano, but Sam may have been playing the piano.
 (20) Jill may not have been playing the piano, but Sam may have been.
 (21) Jill may not have been playing the piano, but Sam may have.
 (22) Jill may not have been playing the piano, but Sam may.

SET 2

- (23) *Samantha may should play the piano.
 (24) Samantha may have played the piano.
 (25) Samantha may be playing the piano.
 (26) *Samantha has may(en) play the piano.
 (27) Samantha has been playing the piano.
 (28) *Samantha is may(ing) play the piano.
 (29) *Samantha is having played the piano.

NOTE: Each auxiliary in English requires the immediately following auxiliary or main verb to occur in a particular form. If necessary, use the information below to remind yourself of these requirements, which do NOT bear directly on the data in SET 2.

Most English verbs have six forms: three finite forms (*present singular, present plural, past*) and three nonfinite forms (*the bare form, the -ING form, and the -EN form*). Some examples are given below.

<i>Pres Sg</i>	<i>Pres Pl</i>	<i>Past</i>	<i>Bare</i>	<i>-ING</i>	<i>-EN</i>
gives	give	gave	give	giving	given
sings	sing	sang	sing	singing	sung
walks	walk	walked	walk	walking	walked
smiles	smile	smiled	smile	smiling	smiled
runs	run	ran	run	running	run
buys	buy	bought	buy	buying	bought
has	have	had	have	having	had
is/am	are	was/were	be	being	been

Every auxiliary requires the auxiliary or main verb that immediately follows it to occur in a particular form. Determine which form—*present, past, -ING, -EN, bare*—is required by:

is (be)

have

the modals (*might, could, will, can, should, etc.*)

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Assignment 2

PART A

What's going on here? Account for the following. State the relevant subcategorization restrictions and give the constituent structures of the VP's in (5), (8), and (9).

- (1) Sam is afraid of catastrophes.
- (2) *Sam is afraid to Sally.
- (3) *Sam is sleepy of catastrophes
- (4) *Sam is sleepy to Sally.
- (5) Sam seemed afraid of catastrophes.
- (6) *Sam seemed sleepy of catastrophes.
- (7) Sam seemed afraid to Sally.
- (8) Sam seemed sleepy to me.
- (9) Sam seemed afraid of catastrophes to me.
- (10) *Sam seemed sleepy of catastrophes to me.

PART B

The embedded clauses in the examples below are italicized:

- (11) Everyone insisted *that the store would close on Thursdays*.
- (12) They managed *for their children to be happy*.
- (13) Sue wondered *whether the smoke would clear before daylight*.

Do embedded clauses conform to our X-bar principles? If so, what head are they projected from? If not, why not? Argue clearly and cogently; make all assumptions explicit; illustrate your analyses with relevant trees.

- (14) *Everyone insisted for the store to close on Thursdays.
- (15) *Everyone insisted whether the store would close on Thursdays.
- (16) *They managed that their children would be happy.
- (17) *They managed whether their children would be happy.
- (18) *Sue wondered for the smoke to clear before daylight.
- (19) *Sue wondered that the smoke would clear before daylight.
- (20) Most geologists aren't sure that these tremors are serious.
- (21) *Most geologists aren't sure for these tremors to be serious.
- (22) Most geologists aren't sure whether these tremors are serious.
- (23) I would like that he leave.
- (24) I would like for him to leave.
- (25) *I would like whether he would leave.

NOTE: Assume that *the smoke would clear before daylight*, *their children to be happy*, and so on, are instances of the (as yet unanalyzed) category S.

Assignment 3

The following sentences illustrate so-called *yes-no questions* in English. (*Yes-no* because they elicit one of these answers.)

- (1) Has she declined the offer?
- (2) Will the budget have passed by Tuesday?
- (3) Has the earth been getting warmer?

Here are some ungrammatical yes-no questions. You should be able to construct others.

- (4) *Will have the budget passed by Tuesday?
- (5) *Has been the earth getting warmer?
- (6) *Has she might decline the job?
- (7) *Passed the budget last week?
- (8) *Is the earth has/have gotten warmer?

Consider the following two hypotheses:

Hypothesis A. Yes-no questions are directly generated by phrase structure rules that conform to the X-bar principles we have assumed.

Hypothesis B. Yes-no questions are derived from the corresponding nonquestions by some (as yet unspecified) movement rule.

First, make Hypothesis A explicit by developing a set of phrase structure rules that will generate (1).

Then construct an argument against (your version of) Hypothesis A and in favor of Hypothesis B.

Make all assumptions explicit; formulate all restrictions and rules; illustrate with trees.

Assignment 4

PART A

The following examples reveal a difference among the English complementizers *that*, *for*, and *whether*. Say what this difference is. Be sure to comment explicitly on (11-13). Note any exceptions you come across to the descriptive generalization(s) you propose.

- (1) The committee chairman hopes that the budget will pass.
- (2) The committee chairman hopes the budget will pass.
- (3) We believe that the earth has been getting warmer.
- (4) We believe the earth has been getting warmer.
- (5) Sally was happy for Joe to do the catering.
- (6) *Sally was happy Joe to do the catering.
- (7) They managed for their children to be happy.
- (8) *They managed their children to be happy.
- (9) Everyone wonders whether he has noticed.
- (10) *Everyone wonders he has noticed.
- (11) Joe doesn't know that Sally has declined the job.
- (12) Joe doesn't know whether Sally has declined the job.
(not synonymous with (11))
- (13) Joe doesn't know Sally declined the job.
(unambiguous)

Note that the embedded clauses in (9) and (12) are embedded yes-no questions.

PART B

Assume that yes-no questions are derived from the corresponding nonquestions by a movement rule.

Question: What moves, and where does it move to?

In answering this question, assume the following:

- I. Movement is either adjunction or else structure-preserving. No other types of movement are allowed.
- II. Movement observes the principle of 'no loss of information'. As a consequence, no category can be moved to a position already held by a category that is lexically filled.
- III. Questions (both main clause and embedded) are distinguished syntactically from non-questions by the feature [q], which appears on C.

Your answer should account for the following contrasts. Be sure to explain how it accounts for them, and to argue against possible alternative analyses:

- (14) Has Sally declined the job?

- (15) *Sally has declined the job? (disregard the echo/incredulity question reading)
- (16) *Whether Sally has declined the job?
- (17) *Whether has Sally declined the job?
- (18) Joe doesn't know whether Sally has declined the job.
- (19) *Joe doesn't know whether has Sally declined the job.
- (20) *Joe doesn't know has Sally declined the job.
- (21) Is the earth getting warmer?
- (22) *The earth is getting warmer? (disregard the echo/incredulity question reading)
- (23) *Whether the earth is getting warmer?
- (24) *Whether is the earth getting warmer?
- (25) I wonder whether the earth is getting warmer.
- (26) *I wonder whether is the earth getting warmer.
- (27) *I wonder is the earth getting warmer.

WARNING: Further scrutiny of the facts of English may reveal a problem with the argument you construct in Part B. If you discover the problem, say what it is. Otherwise, ignore this note.

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Assignment 5

English has a set of words known as *wh*-words (*who, what, which, where, when, why*, etc.), which are found in constituent questions and/or relative clauses. Phrases containing *wh*-words are known as *wh*-phrases. Questions containing *wh*-phrases are known as *wh*-questions.

PART A

Assuming that our X-bar principles extend to *wh*-questions, what phrase structural position is occupied by the *wh*-NP *which books* in (0)?

(0) Which books has she read?

Justify your answer. Then give the (s-structure) tree associated with (0).

PART B

Assume whatever mechanism you proposed in Assignment 4 to derive the order of subject and auxiliary in questions. Then use the facts below to evaluate the following two hypotheses about the derivation of *wh*-questions.

Hypothesis X. The phrase structure rules generate *wh*-questions with the *wh*-phrase at the left, in the position you identified in Part A. No other new mechanisms (aside from whatever accounts for the order of subject and auxiliary) are involved in the derivation of these questions.

Hypothesis Y. The phrase structure rules generate *wh*-questions with the *wh*-phrase 'in place' (e.g. a *wh*-direct object originates as the sister of V). Subsequently the *wh*-phrase moves to the position you identified in Part A.

Your job is to show that one of these hypotheses complicates the grammar in ways that the other does not.

For each hypothesis, begin by formulating the relevant phrase structure rules. Then turn to the subcategorization restrictions necessary to account for the nonquestions below. Do these restrictions account for the pattern of grammaticality found in the *wh*-questions? If so, how? If not, why not? What further mechanisms would be required to insure the right result? Be explicit at every point.

WARNING: Stay within our current framework of assumptions.

- (1) They are planting daffodils in the afternoon.
- (2) What are they planting in the afternoon?
- (3) *What are they planting daffodils in the afternoon?

- (4) Sylvia has invited the demonstrators.
- (5) *Sylvia has invited.
- (6) Who has Sylvia invited?

- (7) *Who has Sylvia invited the demonstrators?
- (8) Might Max rely on my mother?
- (9) *Might Max rely?
- (10) *Might Max rely on?
- (11) Who might Max rely on?
- (12) *Who might Max rely on some person?
- (13) *Who might Max rely?

- (14) Will Matilda put milk in your coffee?
- (15) *Will Matilda put milk?
- (16) *Will Matilda put milk in?
- (17) What will Matilda put milk in?
- (18) *What will Matilda put milk in your coffee?
- (19) *What will Matilda put?

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Assignment 6

The (c) examples below are called “passive” sentences in traditional grammar. Consider the following proposal:

Proposal X: Passive sentences are generated in their s-structure form by the phrase structure rules.

To implement this proposal, assume that auxiliaries subcategorize for a following VP and *the verb form* of the head of that VP. For instance, the lexical entries of perfective *have* and progressive *be* include the following subcategorization frames:

have [_ VP[en]]

be [_ VP[ing]]

Crucially, the lexicon also contains a second auxiliary *be*, called *be2* below, whose subcategorization is as follows:

be2 [_ VP[en]]

PART A

Show how this proposal derives the following sentence:

Those walls may have been being replastered.

PART B

Use the examples below to construct an argument against Proposal X.

- (1) a. The kids threw toys into the playhouse.
b. *The kids threw into the playhouse.
c. Toys were thrown into the playhouse.
d. *Toys were thrown playthings into the playhouse.
- (2) a. The girl pursued the hypothesis.
b. *The girl pursued.
c. The hypothesis was pursued.
d. *The hypothesis was pursued the idea.
- (3) a. The authorities spotted Sam.
b. *The authorities spotted.
c. Sam was spotted.
d. *Sam was spotted the criminal.
- (4) a. The students may have recognized the difficulty of the problem.
b. *The students may have recognized.

- c. The difficulty of the problem may have been recognized.
- d. *The difficulty of the problem may have been recognized the complexities.

Base your argument on the subcategorization frames of the verbs involved.

PART C

Use the examples below to construct a second argument against Proposal X. Make your reasoning clear and explicit.

- (5) a. We fainted.
- b. *We fainted the duchess.
- c. *The duchess was fainted.

- (6) a. The prisoners died.
- b. *The prisoners died the jailor.
- c. *The jailor was died.

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Assignment 7

PART A

Analyze the following:

- (1) It seems that Sam kept that promise.
- (2) It appears that they have something in the box.
- (3) It happens that those forms are incomplete.
- (4) It turns out that the radiator was on the blink.
- (5) *The situation seems that Sam kept that promise.
- (6) *The hamster appears that they have something in the box.
- (7) *The first line happens that those forms are incomplete.
- (8) *The event turns out that the radiator was on the blink.

Your analysis should make clear (i) what the lexical entry is for each matrix verb in (1-4), including subcategorization and the linking of semantic roles to syntactic positions, (ii) why (5-8) are ungrammatical, (iii) why *it* in (1-4) does not refer to anything.

Feel free to treat *turn out* as a V.

PART B

Extend your analysis to the following:

- (9) It is believed that your daughter will write a book.
- (10) It is estimated by the GAO that more banks will fail.
- (11) *The news is believed that your daughter will write a book.
- (12) *The calculation is estimated by the GAO that more banks will fail.

PART C

Now extend your analysis to the following:

- (13) It disturbs me that he left the room.
- (14) It mattered to Sally that Sue was late.
- (15) It was reassuring to him that we liked the daffodils.
- (16) It makes no sense to me that the kids agreed.
- (17) *Max disturbs me that he left the room.
- (18) *The event mattered to Sally that Sue was late.
- (19) *This was reassuring to him that we liked the daffodils.
- (20) *The agreement makes no sense to me that the kids agreed.

PART D

Without altering any of your previous analysis, make a proposal to account for the grammaticality of the following. Explicate fully.

- (21) That he left the room disturbs me.
- (22) That Sue was late mattered to Sally.
- (23) That we liked the daffodils was reassuring to him.
- (24) That the kids agreed makes no sense to me.
- (25) That your daughter will write a book is believed by everyone.

NOTE: In solving Part D, ignore the ungrammaticality of sentences such as:

- (26) *That Sam kept that promise seems.
- (27) *That those forms are incomplete happens.

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Assignment 8

English has three pro-forms that can be used to refer back to *Sally* (female): *she*, *her*, and *herself*. *Herself* is a reflexive anaphor; *she* and *her* are pronominals.

PART A

State the descriptive generalization that determines when *her* is used, as opposed to *she*. Give relevant supporting examples, both grammatical and ungrammatical.

PART B

Using the data below and any other data you want to consider, make an initial stab at determining under what conditions the reflexive anaphor *herself* is used, and under what conditions a pronominal (*she* or *her*) is used.

Formulate your condition(s) as carefully as possible. Illustrate the correctness of your formulation by drawing trees for several relevant sentences, and commenting on them.

- (0) She/*herself shuddered.
- (1) Sally enjoyed herself at the party.
- (2) Sally left a note for herself.
- (3) Sally thought that Max disliked her/*herself.
- (4) Sally talked to John about himself.
- (5) Sally talked to John about herself.
- (4) Sally believed that she/*herself would succeed.
- (5) That Sally might succeed amazed her/*herself.
- (6) That we had seen Sally in the street amazed her/*herself.
- (7) That Sally enjoyed herself/*her surprised her/*herself.

(“her/*herself” means *her* is grammatical but *herself* is not.)

Assignment 9

PART A

- (1) I would like to leave by noon.
- (2) I would hate to be swimming in that pond.
- (3) I would like to have finished the homework by midnight.

Consider the following proposal:

Proposal W. The main V in (1-3) subcategorizes for a VP complement that begins with *to*.

How *to* comes to appear inside this VP complement will not concern us further.

Finessing any questions surrounding *to*, draw the s-structure tree for (3) under this proposal.

PART B

Give an argument against Proposal W, based on sentences (1-3) as well as the following:

- (4) I would hate to be chosen by the committee.
- (5) I would like to be appreciated by someone.

Take into account the meaning of these sentences, our assumptions about the linking of semantic roles to syntactic positions, and the fact that (4-5) are synonymous with:

- (6) I would hate for the committee to choose me.
- (7) I would like for someone to appreciate me.

PART C

Propose an alternative analysis for (1-3) that does not run into the problem you identified in Part B. State explicitly any new syntactic rules or conditions you propose. Give derivations for (1), (2), and (4) under your analysis.

PART D

Now consider the following:

- (8) *I would hate for me to be swimming in that pond.
- (9) *I would like for me to have finished the homework by midnight.
- (10) Jack would like for him to leave. (grammatical only if *him* is not Jack)

Does your analysis account for the ungrammaticality of (8-9) and the lack of ambiguity of (10)? Does Proposal W account for these facts? JUSTIFY your answers clearly and completely.

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Assignment 10

PART A

We have already analyzed sentences like:

- (0) Sally hates for Sam to misunderstand her.
- (1) Sally hates to snub Sam.
- (2) Sam hates to be snubbed by Sally.

Now consider:

- (3) Sam seems to appreciate Sally.
- (4) Sally appears to have guessed this.

Sentences containing *seem* or *appear* plus infinitive differ in several ways from sentences containing *like* or *hate* plus infinitive.

For example, (5) and (6) are SYNONYMOUS. (Convince yourself of this by asking whether (6) could be true at the same time that (5) was false. The answer is no. Compare (1-2).)

- (5) Sam seems to have chosen Sally.
- (6) Sally seems to have been chosen by Sam.

Further, *seem* and *appear* CANNOT be followed by infinitives with overt subjects. (Compare (0) with:

- (7) *Sam seems for Max to have chosen Sally.
- (8) *Max appears for Sally to have misunderstood him.)

Propose an analysis of sentences containing *seem* and *appear* that accounts for these facts. Explicate fully.

PART B

The following examples illustrate a general condition on movement:

- (9) They are saying (that) Max likes cats.
- (10) What are they saying (that) Max likes?
- (11) *Who are they saying that likes cats?
- (12) Who are they saying likes cats?
- (13) Sally is eager for Sam to do the job.
- (14) What is Sally eager for Sam to do?
- (15) *Who is Sally eager for to do the job?
- (16) Max wonders whether/if Sally will snub Sam.
- (17) Who does Max wonder whether/if Sally will snub?
- (18) *Who does Max wonder whether/if will snub Sam?

State the condition. Then say how it accounts for the grammaticality of (10) and (12), but the ungrammaticality of (11).

PART C

Is your analysis of sentences containing *seem* and *appear* consistent with the the condition you proposed in Part B? If so, say how. If not, revise your analysis accordingly.

Assignment 11

PART A

Given our current assumptions, why are the following ungrammatical?

- (1) *Joe spoke Sally.
(Compare: *Joe spoke to Sally.*)
- (2) *Max to be invited is very unlikely.
(Compare: *For Max to be invited is very unlikely.*)

PART B

Say as clearly and precisely as you can how the following contrasts are accounted for within our current framework of assumptions (including your solution to Assignment 10). Justify all claims; give illustrative derivations; make your reasoning clear. Describe any new phenomena clearly and precisely.

- (3) It seemed that Sally had rejected the idea.
(Compare: *Sally seemed to have rejected the idea.*)
- (4) *It tried that Sally rejected the idea.
(Compare: *Sally tried to reject the idea.*)
- (5) There is no solution.
- (6) There seemed to be no solution.
- (7) *There tried to be no solution.
- (8) The shit hit the fan.
(Idiomatic or nonidiomatic)
- (9) The shit seems to have hit the fan.
(Idiomatic or nonidiomatic)
- (10) *The shit tries to hit the fan.
(Ungrammatical if idiomatic; grammatical but bizarre if nonidiomatic)

Assignment 12

Analyze the following verbs and adjectives and (all) the complex sentence types in which they occur. Pay particular attention to subcategorization and argument structure. Justify all claims; give complete arguments; cite relevant examples and give illustrative derivations.

condescend

bound (as in *Sheila is bound to disagree with them.*)

likely

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Assignment 13

PART A

Propose an analysis for:

- (1) Sally persuaded Sam to volunteer for the job.
- (2) Max might convince Sally to fix the sink.

PART B

Say clearly how your analysis accounts for the following:

- (i) In (1), the person doing the volunteering must be Sam.
- (ii) Sentences (3-4) are grammatical:
 - (3) Sally persuaded Max to improve himself.
 - (4) Sam might convince Sally to interview herself.
- (iii) So are sentences (5-6):
 - (5) Sam might convince himself to fix the sink.
 - (6) Sally persuaded herself to volunteer for the job.
- (iv) Sentences (7-8) are not synonymous. Neither are sentences (9-10):
 - (7) Sally persuaded Max to interview Sam.
 - (8) Sally persuaded Sam to be interviewed by Max.
 - (9) Sam might convince the committee to choose Sally.
 - (10) Sam might convince Sally to be chosen by the committee.
- (v) Sentences (11-12) are ungrammatical:
 - (11) *Sally persuaded there to be no solution.
 - (12) *Sam might convince the shit to hit the fan.

PART C

Does your analysis (combined with our assumptions to date) account for the difference in grammaticality between (13) and (14)?

- (13) *Sally persuaded Max to improve herself.
- (14) Sally promised Max to improve herself.

If so, say how. If not, make a conjecture about how the difference should be described.

Assignment 14

PART A

Propose an analysis for sentences (1-2):

- (1) Jerry believes the world to be a strange place.
- (2) Jerry believes Sue to have implicated him in the crime.

Justify fully. Then, if you have not done so already, show how your analysis accounts for the following facts:

- (i) Sentences (1) and (2) are roughly synonymous with (3) and (4):
 - (3) Jerry believes that the world is a strange place.
 - (4) Jerry believes that Sue has implicated him in the crime.
- (ii) Sentences (5) and (6) are grammatical, but (7) is not:
 - (5) Sue believes Jerry to have implicated himself in the crime.
 - (6) Sue believes herself to have implicated Jerry in the crime.
 - (7) *Jerry believes me to have implicated himself in the crime.
- (iii) Sentences (8) and (9) are synonymous:
 - (8) Jerry believes Sue to have embezzled the money.
 - (9) Jerry believes the money to have been embezzled by Sue.
- (iv) Sentence (10) is grammatical:
 - (10) Who might Jerry believe to have implicated him in the crime?
- (v) Sentence (11) is not grammatical:
 - (11) *Jerry believes to have succeeded.

PART B

Is the analysis you proposed for *believe* the same as your analysis of *persuade* and *convince*? If so, why? If not, why not? Justify fully. Discuss any relevant contrasts that were not brought up earlier in your solution.

Assignment 15

Analyze the following verbs and (all) the complex sentence types in which they occur. Pay particular attention to subcategorization and argument structure. Justify all claims; give complete arguments; cite relevant examples and give illustrative derivations.

prove
expect
need

NOTE: Feel free to ignore the auxiliary *need* when solving this problem.

Assignment 16

Consider:

Assumption P: Material that gets interpreted semantically as a proposition forms a single syntactic constituent at d-structure.

PART A

Analyze the verb *think* in the following sentences. Justify all claims briefly but explicitly; make sure your argumentation is clear. Then say whether your analysis is consistent with Assumption P. If it is consistent, say how; if not, say why not.

- (1) Joe thought that the monster was unfriendly.
- (2) *We thought Max to have committed a crime.
- (3) Max was thought to have committed a crime.

PART B

Now consider the verb *think* in:

- (4) Joe thought Sally unfriendly.
- (5) We think him rather ridiculous.

What is the subcategorization of *think* here, and how are these sentences derived?

In answering this question, take the following into account:

- (6) Joe thought that the monster was in the garden.
- (7) The monster was thought to be in the garden.
- (8) *Joe thought the monster in the garden.
- (9) We think that he is from New Hampshire.
- (10) He is thought to be from New Hampshire.
- (11) *We think him from New Hampshire.
- (12) Joe thought that Sally was an architect.
- (13) Sally was thought to be an architect.
- (14) *Joe thought Sally an architect.
- (15) Everyone thinks that Cuomo is governor of New York.
- (16) Cuomo is thought to be governor of New York.
- (17) *Everyone thinks Cuomo governor of New York.
- (18) We thought that Sally was lounging by the pool.
- (19) Sally was thought to be lounging by the pool.
- (20) *We thought Sally lounging by the pool.

- (21) Reporters think it unlikely that the economy will improve.
- (22) We thought it outrageous that she had capitulated.
- (23) *Reporters think the situation unlikely that the economy will improve.
- (24) *We thought Sally outrageous that she had capitulated.

- (25) Joe was thought quite unfriendly.
- (26) It was thought outrageous that she had capitulated.

- (27) Joe thinks himself rather ridiculous.

Your analysis should be clear and coherent. What definition of government does your analysis assume? Is your analysis consistent with Assumption P, or not? Explicitly identify all other assumptions. Justify all claims made; argue against plausible alternatives.

NOTE: There is some speaker variation in the acceptability of sentences of type (4-5). When solving this problem, stick with the judgements given.

Assignment 17

PART A

What accounts for the following contrasts? Make all assumptions explicit; justify all claims.

- (1) We think it surprising that morphology is not required.
- (2) *We think Sally surprising Joe.
(Compare: *We think that Sally is surprising Joe.*)
- (3) Everyone thought him overwhelmed by the task.
- (4) *Everyone thought her given a book by Max.
(Compare: *Everyone thought that she was given a book by Max.*)

PART B

Analyze *seem* in the examples below. Justify fully, arguing against plausible alternatives (by producing arguments based on empirical facts) and making all assumptions clear.

- (5) Sally seems unfriendly.
- (6) He seems rather ridiculous.
- (7) *The monster seems in the garden.
- (8) *He seems from New Hampshire.
- (9) *She seems an architect.
- (10) *Cuomo seems governor of New York.
- (11) *She seemed lounging by the pool.
- (12) It seems unlikely that the economy will improve.
- (13) It seemed outrageous that she had capitulated.
- (14) The shit seems likely to hit the fan.
- (15) There seems likely to be no solution to this problem.
- (16) It seems surprising that morphology is not required.
- (17) Each participant seems overwhelmed by the task.

Assignment 18

PART A

Given our current framework of assumptions, why is each of the following ungrammatical?

- (1) *Who does it seem to like? (where *it* is nonreferential)
- (2) *Julia is likely for it to be possible to win.
- (3) *Julia is possible to be understood.

PART B

(i) Analyze *keep* in the following examples, paying special attention to its subcategorization. Justify all claims, state all assumptions explicitly, show your proposal to be superior to plausible alternatives.

- (4) The director kept me aware of developments.
- (5) That news might keep him sober.
- (6) They kept Sylvia off the ship.
- (7) Joe's friends are keeping him in the garden until midnight.
- (8) ?*They might keep me an engineer.
- (9) ?*The country kept Reagan president for eight years.
- (10) The job kept Sally overwhelmed with work for some time.
- (11) They kept Joe waiting at the door.
- (12) They kept Joe writing songs all night.
- (13) They kept me polishing my shoes until midnight.
- (14) *They kept Joe written songs all night.
- (15) *They kept Joe write(s) songs all night.
- (16) *They kept me polished my shoes until midnight.
- (17) They want to keep it clear that nothing has been approved.
- (18) Sam kept it vague whether he or Sally would attend the party.
- (19) Everyone should be kept aware of developments in the Gulf.
- (20) Joe tried to keep himself in good shape.

(ii) In what ways is *keep* similar to, and different from, *think*? In what ways is *keep* similar to, and different from, *seem*?

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Assignment 19

PART A

We have already come up with an analysis of *there* that describes the grammaticality of sentences like (x) and the ungrammaticality of sentences like (y) and (z):

- (x) There are no solutions.
- (y) *We found there.
- (z) *There is every solution.

Say what this analysis is.

PART B

Extend the analysis you just described to deal with the following. Make all assumptions explicit; justify all claims made. Support your proposals with explicit argumentation. Then, if you have not already done so, derive (1) and (14).

- (1) There are many options available to us.
- (2) There might have been people drunk at another party.
- (3) There should be more weekends free in the next month.
- (4) There is a gopher in the study.
- (5) There might be somebody under the bed.
- (6) *There are two men engineers.
- (7) *There is nobody President of Santa Cruz.
- (8) There are three children riding bicycles.
- (9) There were some cats meowing in the background.
- (10) *There are three children ridden bicycles.
- (11) *There were some cats meow in the background.
- (12) There was a watch stolen by the children.
- (13) There were some bottles found by my sister.
- (14) There was a watch being stolen by the children.
- (15) There is a woman being photographed in the next room by Herve.
- (16) There was/*were someone screaming.
- (17) There were/*was three candidates being interviewed by the committee.
- (18) *There might people have been drunk at another party.
- (19) *There might have people been drunk at another party.
- (20) *There have two children yawned.

PART C

Does your revised analysis account for the ungrammaticality of (21)? If so, say how. If not, say what the problem is. (Suggestions for a solution are welcome, but not required.)

- (21) *There seemed several options available.

PART D

Does your proposal have consequences for the analysis of sentences like the following? If so, say what they are. Give illustrative derivations where appropriate.

- (22) Many options are available to us.
- (23) A gopher might be in the study.
- (24) Some bottles were found by my sister.
- (25) Someone was screaming.

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A Sample Set of Assumptions (Annotated)

D-Structure

[See Katz and Postal (1964) and Chomsky (1965)]

- A. D-structure trees must be licensed by the phrase structure rules.
- B. D-structure trees have undergone lexical insertion.
- C. D-structure trees must satisfy conditions on semantic wellformedness.

Phrase Structure (X-Bar Theory)

[See Chomsky (1970) and Pullum (1985)]

- D. The possible phrase structure rules are:

$$(1) \quad X^{[2]} \rightarrow \text{Specifier } X^{[1]}$$

$$X^{[1]} \rightarrow X^{[0]} \text{ Complements}$$

where $X = [\pm N, \pm V]$ or $X = C, I$, and Specifier and Complements are abbreviations for (sequences of) maximal projections.

$$(2) \quad Z^{[n]} \rightarrow Z^{[n]} Y^{[2]}$$

NOTE: Our X-bar system observes Pullum's X-bar principles of Maximality, Optionality, Lexicality, Uniformity, Centrality, and (for (1) only) Succession.

Lexical Entries (Theta Theory)

- E. Lexical entries must meet the following conditions:

- (1) A head $X^{[0]}$ subcategorizes for all and only its complements. No other subcategorization is allowed.

[See Chomsky (1965)]

- (2) Every complement must be linked to a semantic role.

[Part 1 of the Projection Principle; see Chomsky (1981, p. 38)]

- (3) There is at most one semantic role per lexical entry that is not linked to a complement. This role is the *external argument*.

[See Williams (1981)]

NOTE: It turns out that every complement in a lexical entry is linked to exactly one semantic role, and every semantic role that is not an external argument is linked to exactly one complement. These descriptive generalizations may follow from something (for instance, G below).

F. Desiderata:

- (1) Where possible, lexical entries satisfy ALIGNMENT. Alternative linkings between semantic roles and syntactic positions in a lexical entry are avoided.
- (2) Where possible, lexical entries should be collapsed.

Conditions on Semantic Wellformedness (More Theta Theory)

G. Adjuncts must satisfy (1):

- (1) Every d-structure adjunct must be interpreted as restricting the interpretation of the category to which it adjoins.

Nonadjuncts must satisfy the Theta Criterion, which consists of (2) and (3):
[see Chomsky (1981, p. 36)]

- (2) Every XP with intended reference must be linked to exactly one semantic role.
- (3) Every semantic role that is going to be assigned must be linked to exactly one XP with intended reference.

Syntactic Rules

- H. All subsequent syntactic trees in the derivation must be related to the d-structure tree via one or more instances of movement.
- I. Syntactic rules obey the principle of ‘no loss of information’.

Theory of Movement

[see Chomsky (1986) on J and K]

J. The two possible types of movement are:

- (1) structure preserving movement
- (2) adjunction

- K. A moved $X^{[n]}$ leaves behind a coindexed empty $X^{[n]}$ in its origin site. This coindexed empty category is the *trace* of the moved element.
- L. A moved wh-phrase gets its Case from the wh-trace with which it is coindexed.
- M. A wh-trace counts as phonetically overt for the purposes of the English filter (v).

S-Structures

- N. S-structure trees must satisfy Case Theory.
- O. S-structure trees must satisfy Binding Theory.

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- P. If a semantic role and an XP with intended reference are linked at d-structure, they must be so linked at s-structure.

(One consequence of this: No syntactic rule alters the linking between semantic roles and XP's with intended reference.)

[this is roughly Parts 2 and 3 of the Projection Principle]

Case Theory

[see Chomsky (1981)]

- Q. Case Assignment (occurs just prior to s-structure):

V and P assign objective Case to the NP they govern.

I assigns nominative Case to its NP specifier.

N assigns genitive Case to its NP specifier.

- R. Case Filter: Phonetically realized NP's that are Caseless at s-structure are ungrammatical.

NOTE: An NP coindexed with the expletive *there* satisfies the Case Filter if *there* satisfies the Case Filter.

Binding Theory

- S. An anaphor is legal if and only if, at s-structure:

(i) it is coindexed with a c-commanding NP (= its antecedent)

(ii) its governor and its antecedent are dominated by all the same IP's.

[this is roughly Principle A of the Binding Theory; see Chomsky (1981)]

NOTE: A trace left by movement of an NP to the specifier of I counts as an anaphor.

- T. PRO is a null NP with intended reference. It must be ungoverned at s-structure.

Other Assumptions and Definitions

- U. A head may share features with its:

(1) maximal projection

(2) specifier

- V. X is a blocking category for B if and only if X dominates B and X is not the complement of $[\pm N, \pm V]^{[0]}$.

- W. X is a barrier for B if and only if either

(i) X is a blocking category for B and X is not IP; or else

(ii) X is the maximal projection most immediately dominating Y, and Y is a

blocking category for B.

- X. The Definition of Government
[close to Chomsky's (1986) definition]

A governs B if and only if:

- (i) A is $[\pm N, \pm V]^{[0]}$ or I[+fin].
- (ii) Every $X^{[2]}$ that dominates A also dominates B.
- (iii) Every barrier for B also dominates A.

- Y. A C homophonous with P acts just like P for the purposes of government and Case assignment.

Specific Syntactic Rules

- (i) A null VP is licensed only if there is an overt VP in the sentence that can be used to supply the content of the null VP.
- (ii) The highest V[aux] must move to I.
- (iii) I must move to a C[q].
- (iv) After s-structure, the C[q] *whether* deletes if its specifier is occupied by an overt wh-phrase.
- (v) In English the specifier of finite I must be phonetically filled at s-structure.
- (vi) If a clause contains a CP complement, the expletive *it* may be inserted in subject position.
- (vii) If a clause contains a NP complement of V that is a weak NP, the expletive *there* may be inserted in subject position. *There* must be coindexed with the weak NP.

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Assignment 20

PART A

Consider:

- (1) Whose secret have you discovered?
- (2) Whose gorilla were the kids talking to?
- (3) To whose gorilla were the kids talking?
- (4) What is Sheila stirring the soup with?
- (5) With what is Sheila stirring the soup?
- (6) Who(m) are you trying not to be afraid of?
- (7) Of whom are you trying not to be afraid?
- (8) *Whose have you discovered secret?
- (9) *Whose were the kids talking to gorilla?
- (10) *Visiting whose gorilla were the kids?
- (11) *Is stirring the soup with what Sheila?
- (12) *Afraid of whom are you trying not to be?
- (13) *Not to be afraid of whom are you trying?

Modify the class assumptions so that (1-7) are generated, but (8-13) are not. Motivate your modifications clearly, but efficiently.

PART B

Analyze the following examples. Make all relevant generalizations clear. Discuss and justify any new assumptions made. If no new assumptions are necessary, say why.

- (14) Sheila wondered whether to complain to the management.
- (15) Vincent will ask you where to put the rabbits.
- (16) The little girls don't know whose book to encourage you to read to Freddy.
- (17) The little girls don't know which boy to encourage you to read your book to.
- (18) It is unclear what to do after Sunday.
- (19) What to do after Sunday is unclear.
- (20) How to begin to proceed is a mystery to me.
- (21) *Sheila wondered whether (for) her to complain to the management.
- (22) *Vincent will ask you where (for) Joe to put the rabbits.
- (23) *It is unclear what (for) you to do after Sunday.

PART C

Does your analysis account for the following contrasts? If so, say how. If not, further revise your analysis so it does.

- (24) Sheila wondered who would complain to the management.
- (25) *Sheila wondered who to complain to the management.
- (26) It is unclear who will feed the pigs after Sunday.

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- (27) *It is unclear who to feed the pigs after Sunday.
- (28) Joe asked who was likely to be convicted.
- (29) Joe asked who it was likely would be convicted.
- (30) *Joe asked who to be likely to be convicted.
- (31) *Joe asked who it was likely to be convicted.

PART D

Now analyze the italicized portions of the following sentences:

- (32) *The book for you to try to assign to your students* is Chomsky & Halle.
- (33) They found *a topic for me to work on*.
- (34) *The spoon for them to stir the soup with* is on the table.
- (35) *The book to try to assign to your students* is Chomsky & Halle.
- (36) *The spoon to stir the soup with* is on the table.

Does the analysis you developed in Parts A-C extend to the following? If so, say how. If not, say why not; then revise further. Note any curiosities you come across (there will probably be some). You need not limit yourself to the examples above; however, any additional examples should be constructed with care.

- (37) I called *a man to fix the sink*.
- (38) *The person to be chosen for the job* must be courageous.

- (39) *I called *a man who to fix the sink*.
- (40) **The book which to try to assign to your students* is Chomsky & Halle.
- (41) *They found *a topic which for me to work on*.
- (42) *They found *a topic which to work on*.
- (43) They found *a topic on which to work*.
- (44) *The spoon with which to stir the soup* is on the table.
- (45) **The man whose words to remember* is Jorge Hankamer.

CAUTION: The italicized material in some of these examples has an alternative analysis in which the embedded CP does not form a constituent with the preceding NP, but rather is an adverbial clause—specifically, a purpose clause (as in: *I bought it [for you to stir the soup with]*). However, when the italicized material appears in subject position, a purpose clause analysis is not possible. Ignore the possibility of a purpose clause analysis.

Assignment 21

BACKGROUND

The basic word order of French is Subject-Verb-Object:

- (1) Ton ami partira demain.
Your friend will-leave tomorrow.

Auxiliary verbs precede the main verb:

- (2) Marie est sortie.
Marie has left.

Matrix questions in French do not necessarily involve any word order perturbation. Compare the statement in (1) with the yes-no question in (3) and the constituent question in (4):

- (3) Ton ami partira?
Your friend will-leave?
(= Will your friend leave?)
- (4) Ton ami partira quand?
Your friend will-leave when?
(= When will your friend leave?)

Alongside (4), French has also constituent questions in which Wh-Movement *has* occurred. Questions of this second type are the focus of this problem set.

PART A

To begin with, consider matrix constituent questions. When Wh-Movement has applied and the wh-phrase is the subject, there are few surprises. Compare the statement in (5) with the question in (6):

- (5) Paul est sorti avec Marie.
Paul has left with Marie.
- (6) Qui est sorti avec Marie?
Who has left with Marie?

When Wh-Movement has applied and the wh-phrase is not the subject, then a pronominal copy of the subject must be attached to the leftmost V. This pronominal copy is *-il* in (7):

- (7) Avec qui Paul est-il sorti?
With whom Paul has-he left (= With whom has Paul left?)

If the subject itself is a pronoun, then it is realized via the copy alone:

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- (8) Avec qui es-tu sorti?
With whom have-you left?

Assume that the pronouns *il* in (7) and *tu* in (8) are the SUBJECTS of their respective clauses, both at d-structure and at s-structure. Propose an analysis of (6-8). Your analysis should address questions like: What is the s-structure position of *Paul* in (7)? Of *est*? Of *sorti*? Your analysis should generate (6-8) but not the examples below, which are ungrammatical:

- (9) *Avec qui Paul est sorti?
(With whom Paul has left?)
- (10) *Avec qui tu es sorti?
(With whom you have left?)
- (11) *Avec qui est Paul sorti?
(With whom has-Paul left?)
- (12) *Avec qui Paul est sorti-(t)-il?
(With whom Paul has left-he?) (-t- is epenthetic; ignore it.)
- (13) *Qui est-il sorti avec Marie?
(Who has left with Marie?)

Discuss thoroughly, pointing out in which ways your analysis conforms to our current assumptions, and in which ways (if any) it does not conform. Illustrate with precise derivations. Identify any new stipulations you must make.

Warning: The analysis of (7-8) is fraught in various ways. Your task is not to come up with the best analysis of this construction—surely an impossibility given the limited data supplied,—but merely to come up with a PLAUSIBLE analysis.

Assignment 22

Reread the background section of Assignment 21 before beginning this problem set.

MORE BACKGROUND ON FRENCH

At least some relative clauses in French involve movement of a visible wh-phrase:

- (0) [L'homme [avec lequel Marie est sortie]] s'appelle Jacques.
The-man with whom Marie has left is-named Jacques.

THE PROBLEM

The construction you analyzed in Assignment 21 is known as Complex Inversion (CI). Alongside CI, French has questions and relative clauses in which the subject appears to the right of the MAIN VERB. (2-5) illustrate this second construction, which is known as Stylistic Inversion (SI):

- (1) Je me-demande quand ton ami partira.
I wonder when your friend will-leave.
- (2) Je me-demande quand partira ton ami.
I wonder when will-leave your friend.
(= I wonder when your friend will leave.)
- (3) Avec qui est sortie Marie?
With whom has left Marie?
(= With whom has Marie left?)
- (4) Le problème auquel réfléchit le savant est trivial.
The problem of-which is-thinking the scholar is trivial.
(= The problem of which the scholar is thinking is trivial.)
- (5) L'homme avec lequel est sortie Marie s'appelle Jacques.
The man with whom has left Marie is-named Jacques.
(= The man with whom Marie has left is named Jacques.)

Propose an analysis of SI that: (i) accounts for (2-5) and the examples below, and (ii) clearly differentiates SI from CI. Make explicit how your analysis works; be sure to justify it as opposed to plausible alternatives. Once again, point out relevant ways in which your analysis does or does not conform to our assumptions.

- (6) *Partira ton ami?
(Will-leave your friend? = Will your friend leave?)
- (7) *Partira ton ami quand?
(Will-leave your friend when? = When will your friend leave?)

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- (8) *Partira quand ton ami?
(Will-leave when your friend? = When will your friend leave?)
- (9) Marie pense que Pierre a crié.
Marie thinks that Pierre has yelled.
- (10) *Marie pense qu'a crié Pierre.
(Marie thinks that has cried Pierre.)
- (11) Je me-demande si ton ami partira.
I wonder whether your friend will-leave.
- (12) *Je me-demande si partira ton ami.
(I wonder whether will-leave your friend.)
- (13) Le fait que cette fille t'a parlé ne nous intéresse pas.
The fact that this girl to-you has spoken doesn't us interest.
(= The fact that this girl has spoken to you doesn't interest us.)
- (14) *Le fait que t'a parlé cette fille ne nous intéresse pas.
The fact that to-you has spoken this girl doesn't us interest.
- (15) Que voulait manger ce jeune homme?
What wanted to-eat this young man?
(= What did this young man want to eat?)
- (16) Ce à quoi voulait faire allusion le premier conférencier était ridicule.
That to which wanted to-make reference the first lecturer was ridiculous.
(= What the first lecturer was alluding to was ridiculous.)
- (17) A quelle heure aura lieu la manifestation interdite?
At what time will-take place the demonstration forbidden?
(= When will the banned demonstration take place?)

NOTE: As can be seen from (13) and other examples, pronominal direct and indirect objects surface as clitics attached to the left of the first verb of their clause. Ignore this.

Assignment 23

Consider the following three hypotheses about Wh-Movement across an apparently unbounded distance.

Hypothesis A. The wh-phrase moves directly, in one fell swoop, to the specifier of CP which is its s-structure destination.

Hypothesis B. The wh-phrase must move successively through every intermediate specifier of CP before finally reaching the specifier of CP which is its s-structure destination.

Hypothesis C. The wh-phrase may move any way it chooses (either successive cyclically or else skipping the specifiers of intermediate CP's) to reach the specifier of CP which is its s-structure destination.

Use the distribution of SI in the following examples to decide between these hypotheses. (For each pair of hypotheses, either argue that one hypothesis is superior to the other, or else say clearly why no such argument can be constructed.) Argue clearly; justify fully; give illustrative derivations. If it will be useful to your argumentation to reevaluate the correctness of your analysis of SI in Assignment 22, do so. Be sure to draw clear and precise conclusions.

- (1) Qui Marie a-t-elle dit qu'avait vu Paul?
Who Marie has said that-has seen Paul?
(= Who has Marie said that Paul has seen?)

NOTE: CI has applied in the matrix clause of this example.

- (2) L'homme avec lequel je crois qu'a soupé Marie s'appelle Georges.
The-man with whom I believe that-has dined Marie is-named Georges.
(= The man with whom I believe that Marie has dined is named Georges.)
- (3) L'homme avec qui je sais que Marie croit qu'est sortie Jeanne vient d'arriver.
The-man with whom I know that Marie believes that-has left Jeanne just arrived.
(= The man with whom I know that Marie believes that Jeanne has left just arrived.)
- (4) Qui a dit que Paul pleure?
Who has said that Paul is-crying?
- (5) *Qui a dit que pleure Paul?
(Who has said that is-crying Paul? = Who has said that Paul is crying?)
- (6) Comment sait Marie que Luc est mort?
How knows Marie that Luc is dead?
(= How is it that Marie knows that Luc is dead?)

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- (7) *Comment sait Marie qu'est mort Luc?
(How knows Marie that-is dead Luc?
(= How is it that Marie knows that Luc is dead?)
- (8) Avec qui a prétendu Marie que sortirait Jean?
With whom has claimed Marie that would-leave Jean?
(=With whom has Marie claimed that Jean would leave?)
- (9) Sur qui a prétendu Marie que tirerait Jean?
At whom has claimed Marie that would-shoot Jean?
(= At whom has Marie claimed that Jean would shoot?)
- (10) Où pense Marie que Jean a dit qu'est allé Paul?
Where thinks Marie that Jean has said that has gone Paul?
(= Where does Marie think that Jean has said that Paul has gone?)
- (11) Quand Marie a-t-elle déclaré que Paul était mort?
When Marie has declared that Paul had died?
(= When_i has Marie declared t_i [that Paul had died]?
OR: When_i has Marie declared [that Paul had died t_i]?)
- (12) Quand Marie a-t-elle déclaré qu'était mort Paul?
When Marie has declared that-had died Paul
(= When_i has Marie declared [that Paul had died t_i]?
BUT NOT: When_i has Marie declared t_i [that Paul had died]?)
- (13) Combien a-t-elle dit que d'enfants étaient venus?
how-many has-she said that of-children had come?
(= How many children did she say had come?)
- (14) Combien a-t-elle dit qu'étaient venus d'enfants?
how-many has-she said that-had come of-children
(= How many children did she say had come?)
- (15) ..les filles avec qui tu disais que prétendait que sortirait son mari
the girls with whom you said that claimed that would-leave her husband
(= the girls with whom you said that the poor woman I spoke to you
la pauvre femme dont je te parlais..
the poor woman of-whom I to-you spoke
about claimed that her husband would leave)

NOTE: Even though the relative clause (15) is awkward, assume for the sake of argument that it is completely grammatical.

Assignment 24

CONDITIONS ON WH-MOVEMENT

French has ungrammatical wh-questions similar to the English examples that led us to propose that Wh-Movement obeys (some version of) Subjacency. Compare the grammatical (1b) with the ungrammatical (2b-3b):

- (1)a. Marie a dit que Paul avait vu son mari.
Marie has said that Paul had seen her husband.
- b. Qui Marie a-t-elle dit que Paul avait vu?
Who Marie has-she said that Paul had seen?
(= Who has Marie said that Paul had seen?)
- (2)a. Je connais l'homme qui a vu Marie.
I know the-man who has seen Marie.
- b. *Qui connais-tu l'homme qui a vu?
(Who know-you the-man who has seen?)
(= Who do you know the man who has seen?)
- (3)a. Il croit l'histoire que tu as vu Marie.
He believes the-story that you have seen Marie.
- b. *Qui croit-il l'histoire que tu as vu?
(Who believes-he the story that you have seen?)
(= Who does he believe the story that you have seen?)

On the other hand, if Wh-Movement is assumed to observe Subjacency in French, then Subjacency must be characterized differently in this language than in English. This is made clear by the (b) examples below, which contrast strikingly with their English translations:

- (4)a. Tu as vu [_{NP} combien de personnes]?
You have seen how-many (of) persons?
- b. Combien as-tu vu de personnes?
How-many have-you seen (of) persons?
- (5)a. [_{NP} Le soeur de cet homme] est architecte.
The sister of this man is an-architect.
- b. Je connais l'homme dont le soeur est architecte.
I know the-man of-whom the sister is an-architect.
(Treat *dont* as a PP meaning 'of whom')

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- (6)a. On n'a pas encore trouvé quoi envoyer à ces gens.
One has not yet found-out what to-send to these people.
- b. Voilà une liste des gens à qui on n'a pas encore trouvé quoi envoyer.
Here-is a list of people to whom one has not yet found-out what to-send.
- (7)a. Je crois que je sais lequel j'offrirais à Marie.
I believe that I know which-one I-might-offer to Marie.
- b. Voilà quelqu'un à qui je crois que je sais lequel j'offrirais.
Here-is someone to whom I believe that I know which-one I-might-offer.

Note the ungrammaticality of the (b) examples below, which is crucial:

- (8)a. Je sais lequel je crois que j'offrirais à Marie.
I know which-one I believe that I-might-offer to Marie.
- b. *Voilà quelqu'un à qui je sais lequel je crois que j'offrirais.
(Here-is someone to whom I know which-one I believe that I-might-offer.)
- (9)a. On a trouvé à qui présenter les parents de cet homme.
One has found-out to whom to-introduce the parents of this man.
- b. *Voilà l'homme dont on a trouvé à qui présenter les parents.
(Here-is the man of-whom one has found-out to whom to-introduce the parents.)

THE PROBLEM

A. With only a minor modification, the Bounding Nodes version of Subjacency can be made to correctly predict the judgements above. Say what the modification is and how it works. To the extent possible, generalize over the examples you discuss. (Do not give a separate derivation for each example.)

B. Now choose either the *Barriers* (Chomsky (1986)) version of Subjacency, or else the Lasnik & Saito (1992) version, and show that, *with respect to this particular set of facts*, it is inferior to the hypothesis you explicated in PART A. Try to articulate as precisely and insightfully as possible where the 'other' version of Subjacency falls down. (Again, do not give a separate derivation for each example. Your goal should be to make your prose argumentation crystal clear WITHOUT having to give many—or, conceivably, any—derivations.)

Assignment 25

MORE BACKGROUND ON FRENCH

The finite complementizer in French is *que*. Some of its uses are shown in (1-4). Note that, unlike English *that*, *que* cannot in general be omitted:

- (1) Jean croyait qu' elle était malade.
Jean believed that she was sick. (* without *que*)
- (2) Elle est heureuse que tu sois là.
She is happy that you are here. (* without *que*)
- (3) Il est important que tu reviennes bientôt.
It is important that you return soon. (* without *que*)
- (4) Tant de personnes sont venues qu' il a manqué de bonnes places.
So many people have come that there were lacking any good seats. (* without *que*)

PART A

Consider the following examples of constituent questions and relative clauses in French:

- (5) Dis-moi avec qui je dois parler.
Tell-me with whom I should speak.
- (6) La fille avec qui tu parlais s'appelle Marie.
The girl with whom you were-speaking is-named Marie.
- (7) Je ne sais pas lequel Marie préfère.
I do not know which-one Marie prefers.
- (8) Dites-moi qui John photographiera.
Tell-me whom John will-photograph.
- (9) *Le garçon lequel Marie préfère s'appelle Georges.
(The boy who Marie prefers is-named Georges.)
- (10) *La fille qui John photographiera est là.
(The girl who John will-photograph is over-there.)
- (11) Le garçon que Marie préfère s'appelle Georges.
The boy that Marie prefers is-named Georges.
- (12) La fille que Jean photographiera est là.
The girl that Jean will-photograph is over-there.

Analyze these constructions, pointing out relevant ways in which they differ from constituent

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questions and relative clauses in English. Make explicit how your analysis accounts for the fact that (7-8) and (11-12) are grammatical, but (9-10) are not.

NOTE: (13) is ungrammatical:

- (13) *Je ne sais pas que Marie préfère.
(I do not know that Marie prefers.)

PART B

The analysis of relative clauses you just constructed should already account for the ungrammaticality of (14-15):

- (14) *La table laquelle te plaît nous appartient.
(The table which to-you pleases to-us belongs.)
- (15) *Ce quoi serait arrivée, c'est ceci.
(That what might happen is this.)

Crucially, (16-17) are also ungrammatical; but (18-19) are fine:

- (16) *La table que te plaît nous appartient.
(The table that to-you pleases to-us belongs.)
- (17) *Ce que serait arrivée, c'est ceci.
(That that might happen is this.)
- (18) La table qui te plaît nous appartient.
The table that to-you pleases to-us belongs.
- (19) Ce qui serait arrivée, c'est ceci.
That that might happen is this.

Use the ECP to construct an account of these facts. In constructing your analysis, you will need to assume that *qui* in (18-19) is a form of the finite complementizer with 'special properties'. Be sure to specify what these properties are. After presenting your analysis, either show how it accounts for all of the following, or else revise it further until it does.

- (20) Qui crois-tu que Jean a photographié?
Who believe-you that Jean has photographed?
- (21) *Qui crois-tu que viendra le premier?
(Who believe-you that will-come the first?)
- (22) Qui crois-tu qui viendra le premier?
Who believe-you that will-come the first?

- (23) *Qui crois-tu qui Jean a photographié?
(Who believe-you that Jean has photographed?)
- (24) Elle ne fait que chanter.
She not does that to-sing. (= She only sings.)
- (25) *Elle ne fait qui chanter.
(She not does that to-sing = She only sings.)

References for the French Problem Sets

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