Syntactic Theory 2
Homework 2: ECP and Subjacency
Due 02/14

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January 18, 2017

Before doing this homework, it's wise to revisit the sections on subjacency and the ECP.

Government is obviously a major component of Government & Binding Theory, since it's the relation under which theta-roles and case are assigned, and part of the definition of governing category, and the ECP. However, it also is stipulative, and somewhat counter-intuitive, since we've needed to introduce clauses about certain nodes "blocking" antecedent government, and the stipulation that TP is not a barrier for case and theta-role assignment. However, the ECP and Subjacency do capture a wide range of important facts. So, before we leave the ECP and Subjacency for patter pastures, let's explore some of the more interesting problems of this theory.

1 Subjacency

A. (15 points). The following ungrammatical sentences are island violations. However, not all of these violate subjacency. For each sentence, determine whether it violates subjacency. Name the bounding nodes that chains cross. **Note:** intermediate traces are not represented here. Remember that movement is **successive cylic**, and stops at every open Spec,DP and Spec,CP spot. For the ungrammatical sentences that do not violate subjacency, you do not need to explain why they are ungrammatical. Assume that *when* is in Spec,CP, but *that* and *because* are just bare C^0 – i.e., their specifier positions are open.

Example answer:

*$[_{CP}$ Why$_i$ did $[_{TP}$ you $[_{VP}$ know $[_{CP}$ that $[_{TP}$ Mary $[_{VP}$ arrived] t_i]]]]]?

'No, this does not violate subjacency. Since this is A′ movement, which is successive cyclic movement, there is an additional trace in the embedded Spec,CP. The first movement from t_i to the intermediate trace in the embedded CP crosses one bounding node, TP. The second movement, from the intermediate trace position to the matrix Spec,CP, crosses one bounding node, the matrix TP. For that reason, no link in the movement chain crosses two bounding nodes.

1. *[$_{CP}$ Which person$_i$ did [$_{TP}$ Mary [$_{VP}$ doubt [$_{CP}$ who$_j$ [$_{TP}$ t_j [$_{VP}$ saw t_i]]]]]]?

2. *[$_{CP}$ Why$_i$ did [$_{TP}$ you [$_{VP}$ remember [$_{CP}$ that [$_{TP}$ nobody [$_{VP}$ left t_i]]]]]?

3. *[$_{CP}$ Why$_i$ did [$_{TP}$ you [$_{VP}$ wonder [$_{CP}$ when [$_{TP}$ Mary [$_{VP}$ ate a sandwich t_i]]]]]]?

4. *[$_{CP}$ Who$_i$ did [$_{TP}$ you [$_{VP}$ leave] [$_{CP}$ because [$_{TP}$ John [$_{VP}$ liked t_i]]]]]

5. *[$_{CP}$ Who$_i$ did [$_{TP}$ you [$_{VP}$ say [$_{CP}$ that [$_{TP}$ t_i [$_{VP}$ likes Mary]]]]]]?

B. (5 points). Subjacency correctly rules out the sentence in (1-a), because it crosses two bounding nodes – the subject DP, and the matrix TP. Does subjacency predict that (1-b) should be grammatical or ungrammatical? Is this prediction correct?

(1) a. *[$_{CP}$ Who$_i$ did [$_{TP}$ [$_{DP}$ a book about t_i] [$_{VP}$ impress John]]?
     b. [$_{CP}$ Who$_i$ did [$_{TP}$ John [$_{VP}$ read [$_{DP}$ a book about t_i]]]]?

To explain why extraction out of an object DP is acceptable, suppose that *who* can "Chomsky-adjoin" to the object DP, i.e., stop at the edge of DP. This is a position above the specifier that is an "escape hatch" for movement:

(2) [$_{CP}$ Who$_i$ did [$_{TP}$ John [$_{VP}$ read [$_{DP}$ t_i [$_{DP}$ a book about t_i]]]]]

C. (5 points). Does this sentence now violate subjacency? Explain which bounding nodes each part of the movement chain ($\langle t, t' \rangle$, $\langle t', who \rangle$) crosses. Does either part cross two bounding nodes?

D. (5 points). With this new "trick" of Chomsky-adjunction, we find ourselves in a pickle. We predict that (1-a) is now grammatical, contrary to fact. Explain why.

To remedy this situation, we will adopt a simple version of Chomsky's *Barriers* framework. This framework gives a new definition of the subjacency condition, paraphrased below:

(3) a. **subjacency condition**: do not move over a barrier.
     b. all phrases are **barriers**, except complements of lexical heads (V, N, A, P)

E. (10 points) There's a slight hitch in this theory. The following sentence is predicted to be ungrammatical. Explain why it is predicted to be ungrammatical in this new Barriers definition of subjacency:

(4) [$_{CP}$ Who$_i$ [$_{TP}$ t_i [$_{VP}$ left]]]

To fix this, we amend our definition of subjacency and barriers as so:

(5) a. **subjacency condition**: do not move over a barrier.
     b. all phrases are **barriers**, except complements of lexical heads (V, N, A, P)
     c. TP is not a barrier.

Lastly, we will still need to use Chomsky-adjunction for movement across a VP. VP is always a complement of T, meaning that it should be a "barrier" on this theory. However, we will allow Chomsky-adjunction to not "count" as crossing a barrier, by stipulation. Similarly, moving from a Chomsky-adjoined position doesn't "count". For example:

(6)   [$_{CP}$ What$_i$ did [$_{TP}$ you [$_{VP}$ t_i''' [$_{VP}$ say [$_{CP}$ t_i'' that [$_{TP}$ Mary [$_{VP}$ t_i' [$_{VP}$ likes t_i]]]]]]]]?

(7)   This sentence is acceptable. The first link of the chain, $\langle t_i, t_i' \rangle$, Chomsky-adjoins to a VP, which doesn't count as crossing a barrier. Next, $\langle t_i', t_i'' \rangle$, moves from its Chomsky-adjoined VP position, which doesn't count as crossing a barrier, and then crosses a TP node, which is not a barrier (by stipulation). Next, $\langle t_i'', t_i''' \rangle$ crosses a CP node, which is the complement of the lexical head *say*, and thus is not a barrier. It then Chomsky-adjoins to the matrix VP, which again does not count as crossing a barrier. Lastly, $\langle t_i''', what_i \rangle$ exits a VP from a Chomsky-adjoined position (not "crossing"), and then crosses a TP (not a "barrier"). Thus, no link in the movement chain crosses a barrier.

F. (10 points). Despite its excentricities, this new Barriers framework is more powerful than the earlier subjacency theory, because it actually captures more island phenomena. The Barriers framework, as described here, accurately predicts the following judgment patterns, provided the intermediate traces that I've given below. For each sentence, explain why the sentence is good or bad. For this exercise, ignore the internal details of DP structure – i.e., you only need to make reference to VP, TP, and CP. Your explanation should look something like (7).

(8)   a.   [$_{CP}$ Who$_i$ did [$_{TP}$ John [$_{VP}$ t_i' [$_{VP}$ read [$_{DP}$ a book about t_i]]]]]?
      b.   *[$_{CP}$ Who$_i$ did [$_{TP}$ [$_{DP}$ a book about t_i] [$_{VP}$ surprise John]]]?
      c.   *[$_{CP}$ Who$_i$ did [$_{TP}$ you [$_{VP}$ t_i'' [$_{VP}$ leave]] [$_{CP}$ because [$_{TP}$ John [$_{VP}$ t_i' [$_{VP}$ liked t_i]]]]]]
           (**Hint:** note that the CP here is not a complement to the verb)

G. (10 points). Even though Barriers is a bit more powerful than subjacency, and dispenses with the notion of bounding node, it still has one problem. The following sentence is actually predicted to be **grammatical** in this version of Barriers that I've presented. Explain why. Does this violate the classic theory of subjacency? (Remember, there was no Chomsky-adjunction in the earlier subjacency theory, so ignore the t_i' and t_i'' traces in your answer to this part of the question)

(9)   [$_{CP}$ Who$_i$ did [$_{TP}$ you [$_{VP}$ t_i'' [$_{VP}$ wonder [$_{CP}$ who$_j$ [$_{TP}$ t_j [$_{VP}$ t_i' [$_{VP}$ saw t_i]]]]]]]]?

Chomsky (1986) and Lasnik & Saito (2002) actually do provide solutions to this, but we won't pursue the issue anymore. The point here is that, although subjacency is an elegant and intuitive theory, it quickly runs into empirical difficulty. In GB, the strategy was to enrich subjacency theory. But, perhaps a more Minimalist approach to these problems might be more efficient! To be continued…

2 ECP

The ECP is often a topic that is very pointedly avoided in some Syntax 1 classes, because it was the first thing to be jettisoned in Minimalism. However, it had some clever uses, some of which are still unresolved issues in Minimalism.

Recall the definition of ECP:

(10) α properly governs β iff:
   a. α governs β and α is lexical (= **lexical government**), OR
   b. α binds β and β is 0-subjacent to α (i.e., there is another trace or antecedent with no bounding nodes in between) (= **antecedent government**)

(11) α governs β iff:
   a. α **m-commands** β
   b. there is no barrier γ that governs β
   c. Every XP is a barrier, except for TP

We will also awkwardly state that null C allows antecedent government over it into Spec,TP[1], but overt C (i..e, *that*) blocks antecedent government into Spec,TP. To paraphrase this technical language – the ECP says that a trace is okay if (1) it's in a complement position or specifier position of a lexical phrase (usually V), OR if (2) there is another trace or antecedent that c-commands it that is separated by at-most a single TP, or a null C, but **not** an overt C.

H. (10 points). Using the ECP, explain why the following sentence is ungrammatical in English. Which trace violates the ECP? Why?

(12) *[CP Who$_i$ did [TP you [VP say [CP t'_i [C′ that [TP t_i [VP arrived?]]]]]]]
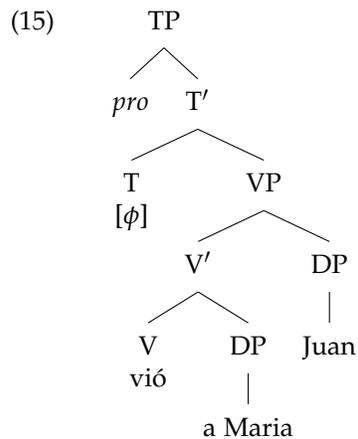
I. (5 points). Examine the following sentence from Spanish. Does it appear that the ECP applies in this language? Is this surprising?

(13) Quién dijiste   que llegó?
      who   you-say that arrived?
      'Who did you say that arrived?'

Rizzi (1982) argues that languages like Spanish actually do obey the ECP, despite appearances. He proposes that inflectional morphology in T^0 satisfies the EPP (and somehow magically transmits Nominative Case – more on this later.) This means that the subject may actually stay in its Spec,VP position.

(14) Vió a   María Juan
      Saw Acc Mary John
      'John saw Mary'

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[1]Perhaps because CPs are usually complements of VPs?

(15)

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              TP
             /  \
          pro    T'
                /  \
              T     VP
             [φ]   /  \
                  V'    DP
                 /  \    |
                V    DP  Juan
               vió   |
                  a Maria
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Of course, this isn't required – the subject may appear in Spec,TP as well:

(16)   Juan vió a   María
       John saw Acc Mary
       'John saw Mary'

J. (10 points). Suppose Rizzi is correct. Why is (13) grammatical, then? That is, how does it satisfy the ECP? Provide a representation of the Spanish sentence in (13) that is grammatical on Rizzi's analysis.

You will notice a peculiarity. Rizzi's analysis requires that the subject be moved from a specific location in order to satisfy the ECP. So far, we've only seen theory-internal reasoning for this.

Evidence for Rizzi's conclusion comes to us from Moroccan Arabic, surprisingly. Kenstowicz (1989) reports that the word for 'who' is pronounced with a short vowel in Spec,TP (*min*), but with a long vowel in other positions (*miin*):

(17)   a.   min ðarab miin?
            who hit   who?
            'Who hit who?'
       b.   ma9a miin raaḥ Fariid al-suug?
            with who went Fariid the-market
            'Who did Fariid go to the market with?'

(18)   a.   min i9tigad   min kisar   al-šubbaak?
            who thought who broke the-window
       b.   min i9tigad kisar miin al-šubbaak?
            who thought broke who the-window?
            'Who thought who broke the window?'

K. (10 points). Explain whether the following data supports or fails to support the conclusion that you drew about Italian in J. Is this expected, given Rizzi's proposal that the ECP applies in Italian, but its apparent "violation" follows from the peculiar property of Italian subjects? Explain your

answer.

(19) a. miin Fariid gaal innu kisar al-beeḍa?
who Fariid say that broke the-eggs
'Who did Fariid say that broke the eggs?'
b. *min Fariid gaal innu kisar al-beeḍa?
who Fariid say that broke the-eggs
intended: 'Who did Fariid say that broke the eggs?'

Lastly, we examine the following data in French. French is like English, in that subjects obliga-torily must occur in Spec,TP. In French, subject extraction is allowed only if the complementizer *qui* is used. The complementizer *que*, conversely, blocks subject extraction, like *that* in English (Kayne 1981).

(20) a. Qui$_i$ a-t-il dit qui/*que est arrivé?
Who has-he said that is arrived
'Who did he say that arrived?'
b. Qui$_i$ a-t-il dit que Jean a vu?
Who has-he said that Jean has seen
'Who has he said that Jean saw?'

L. (10 points). Explain how we might account for the difference between *que* and *qui* using the ECP framework. Recall the difference between null C in English and overt C (i.e., *that*). Does this seem intuitive to you? Can you think of any other solutions (this is obviously an "open ended question").

There's a bit more to say about Moroccan Arabic and French. The French complementizer *qui* permits subject extraction, and *que* permits all extractions except for subject extraction much like English *that*). However, *qui* seems to **only** be allowed when there's a subject extraction:

(21) a. Jean a dit *qui/que Marie est arrivée
John has said that Marie is arrived
'John has said that Mary has arrived'
b. Qui$_i$ a-t-il dit *qui/que Jean a vu? Who has-he said that Jean has seen
'Who has he said that Jean saw?'

Similarly, in Moroccan Arabic, when the null complementizer is used, the Spec,TP form of 'who', *min*, is used:

(22) a. miin/*min Fariid gaal innu kisar al-beeḍa?
who Fariid say that broke the-eggs
'Who did Fariid say that broke the eggs?'
b. *miin/min Fariid gaal kisar al-beeḍa?
who Fariid say that broke the-eggs
'Who did Fariid say that broke the eggs?'

In other words, in both Arabic and French, there exist particular language-specific strategies to avoid the *that*-trace effect. In French, we have a special "*that*-trace complementizer" *qui*, and in Moroccan Arabic, we have a special form of the word *who* that's reserved for non-Spec,TP posi-

tions that's used when a complementizer appears. But, in all other cases, we see the "normal" complementizer *que* in French, and the Spec,TP form of "who" in Moroccan Arabic.

M. (10 points). Tell me any question, comment, or concern that you might have about subjacency or the ECP. :)

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