Syntactic Theory 2
Homework 4: Workspaces and Phases
Due 03/14

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In this homework, we'll examine what repercussions the notion of "workspaces" has for our theory of movement, and explore phase theory and its interactions with Agree.

First, recall that in (early) Minimalism, the primary phrase-structure building operation was Merge. Movement is understood as nothing more than an instance of Merge, i.e., re-merging the same lexical item (or a "copy" of it) in a distinct position. Merge is constrained by the **Extension Condition**[1], which requires that Merge always occurs at the top of the tree, i.e., you can't Merge inside of a complex tree.

(1) $\text{Merge}(\alpha, \beta) = [_\alpha\ \alpha\ \beta]$

The Extension Condition forces us to postulate that left-branching structure must be built by Merging lexical items in two "workspaces", and then Merging the two treelets. In other words, at some point in the derivation, we actually have two distinct trees with two distinct roots:

(2) $\text{Merge}([_{DP}\text{ the dog}], [_{vP}\ v \text{ likes the cat}]) = [_{vP}\ [_{DP}\text{ the dog}]\ [_{vP}\ v \text{ likes the cat}]]$

(3)
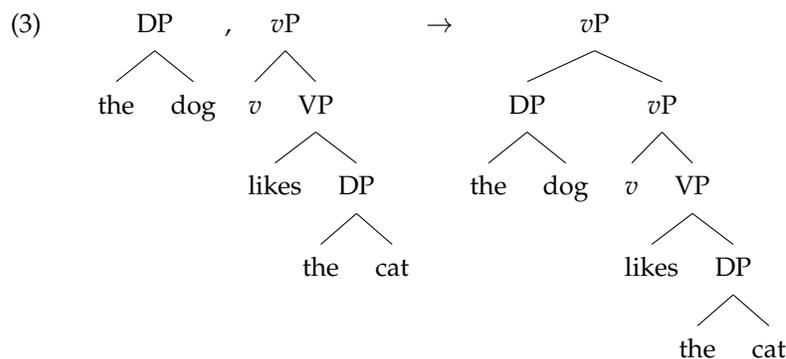
Nunes (2001) points out that this grammatical architecture implies that it should be possible to move "sidewards", that is, nothing should prevent us from merging a copy of something in one treelet with the root of another treelet. This does not violate the Extension Condition. In the following trees, ϵ moves from one treelet to another, before the two treelets Merge:

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[1]In later syntaactic theory, the Extension Condition was replaced with the stronger "No Tampering Condition".

(4)   a.   Merge:

```
      α              γ
     / \            / \
    α   β          γ   δ
                      / \
                     δ   ϵ
```

   b.   Merge(ϵ,α):

```
          α              γ
         / \            / \
      → ϵ   α          γ   δ
           / \            / \
          α   β          δ   ϵ
```

   c.   Merge(α,γ)

```
            α
          /   \
        α       γ
       / \     / \
      ϵ   α   γ   δ
         / \     / \
        α   β   δ   ϵ
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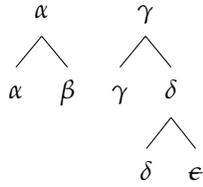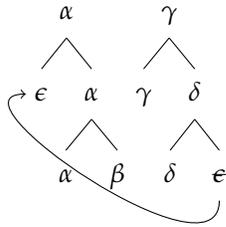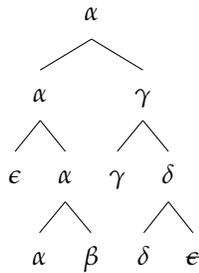
1   Parasitic Gaps and Sideward Movement

(A.) (10 points). Sideward movement is disallowed if we accept an Attract or Agree theory of movement, but is predicted to be possible on a Greed/Enlightened Self-Interest theory of movement. Explain why this is the case.

Nunes (2001) proposes that parasitic gap constructions are instances of sideward movement. A parasitic gap is a gap that occurs in an island that is only licensed if there's an A′-trace preceding it (Engdahl 1983). In (5-a), the relation between *which article* and *e* is unacceptable, because it crosses an island boundary. However, the relation between *which article* and *e* is allowed if there is a trace outside of the island boundary for *which article* to bind, to use the GB terms. The idea is that *e* is a gap that is a "parasite" on the grammatically-licensed gap (i.e., *t*):

(5)   a.   *Which article did John file the report [without reading *e*]?
       b.   Which article did John file *t* [without reading the report] ?
       c.   Which article did John file *t* [without reading the *e*] ?

Nunes (2001) argues that this can be derived via sideward movement. That is, first the PP *without reading which article* is Merged. Then, *file* is introduced into a new workspace. Afterwards, *which article* Merges with *file*, becoming its complement. Then, the rest of the *v*P is built, followed by Merger of the PP:

(6)
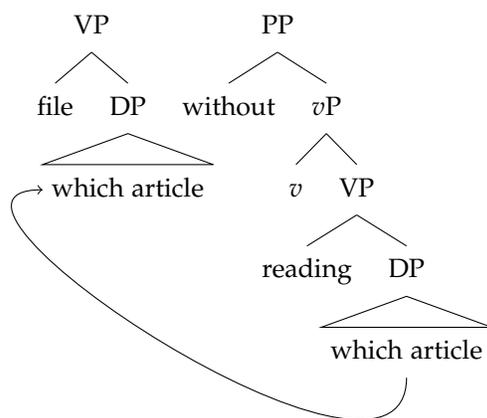
(B.) (10 points). Why would *which article* move from its base position to the complement position of *file*? Is this compatible with Greed? How about Enlightened Self-Interest?

(C.) (10 points). Assume that we understand the adjunct island constraint as banning movement out of a phrase that is adjoined, i.e., it isn't a constraint on the distribution of traces (as in GB), but rather a ban on particular instances of Move/Merge. How can the sideward movement analysis explain why the parasitic gap (i.e., the copy of *which article* in the PP) is grammatically licensed? That is, why is (7-a) not an island violation, but (7-b) is, on Nunes' analysis?

(7)   a.   Which article did you file ~~which article~~ [without reading ~~which article~~]
       b.   Which article did you file the report [without reading ~~which article~~]

Next, examine the following contrast.

(8)   a.   Which article did John file ~~which article~~ [without reading ~~which article~~]?
       b.   *When did John file the article ~~when~~ [without reading the report ~~when~~]?
             At which time *x*, did John file the aritcle at time *x*, without reading the report at time *x*?

3

D. (10 points). Does your explanation in (C) explain this contrast? Explain your answer. Hint: recall that verbs don't select for adjuncts, but they do select for complements!

Now, examine the following sentence. Here, we find that parasitic gaps are in fact sensitive to island constraints, as long the island boundary is in the adjunct containing the parasitic gap (Nissenbaum 2000):

(9)   *Which article did John file ~~which article~~ [without believing [the claim that Mary read ~~which article~~]]?

E. (10 points). How might we understand this, in Nunes analysis? What might this suggest about the timing of the movement, or the nature of island constraints? (This is a fairly open-ended question – this is sometimes thought to be a problem for Nunes' analysis)

Finally, examine the following contrast of parasitic gaps with clefting (which we assume to involve A′-movement like *wh*-movement).

(10)   a.   It was himself that John should take a look at ~~himself~~ [before Mary decides to promote ~~himself~~]
        b.   *It was herself that John should take a look at ~~herself~~ [before Mary decides to promote ~~herself~~]

F. (10 points). Would this contrast be expected on Nunes' analysis, assuming the copy theory of movement? Why or why not?

2   Phase Theory

Next, we turn our attention to phase theory. Recall that phase theory says that upon completing a *v*P or a CP, the complement (= VP, = TP) is Transferred to PF and LF (i.e., Spelled-Out). We propose that spelled-out material is now inaccessible for probing by higher heads, which we call the Phase Impenetrability Condition:

(11)   **Phase Impenetrability Condition** (PIC). In Phase HP with head H, the domain of HP is inaccessible to operations outside of HP, except for H and its specifier.

That is, the PIC assume that Agree cannot cross into the complement of a phase.

First, examine this ungrammatical sentence from Spanish. Here, the T^0, with the verb raised to it, fails to Agree with the subject in the *v*P to check the subject's Nominative Case, and to check its own φ-features (i.e., plural agreement).

(12)   *[$_{CP}$ [$_{TP}$ se   corrieron [$_{vP}$ los hombres]]]
                     self ran.Pl   the men
           intended: 'The men ran'

G. (10 points) Given the version of phase theory that we sketched above, is this expected? Explain your answer.

Next, examine the following sentence from Spanish. Here, we see that the argument of the verb can surface in its base position:

(13)   [$_{CP}$ [$_{TP}$ se   cayeron [$_{vP}$ las hojas]]]
                self fell.Pl   the leaves
        'The leaves fell'

H (10 points). Is the acceptability of the sentence in (13) surprising, given the version of Phase Theory sketched here?

I (10 points). Suppose that some vPs are phases, but others are not. How might we leverage this difference in order to explain the asymmetry between (12) and (13)? Hint: assume that the argument structure differences between *fell* and *ran* are not fundamentally differences in the verb, but differences in the "flavor" of v.

J (10 points) Any last questions/comments/concerns about phase theory, sideward movement, or workspaces?

Bibliography

Engdahl, Elisabet. 1983. Parasitic Gaps. *Linguistics and Philosophy* 6, 5–34.

Nissenbaum, John. 2000. *Investigations of Covert Phrase Movement*. PhD Thesis, MIT.

Nunes, Jairo. 2001. Sideward Movement. *Linguistic Inquiry* 31(2), 303–344.