

1 Islands

Surprising gaps

- (1) a. Mary heard that Pat kissed Chris
b. Who did Mary hear that Pat kissed?
- (2) a. Mary heard the rumor that Pat kissed Chris
b. * Who did Mary hear the rumor that Pat kissed?
- (3) a. Mary sneezed after Pat kissed Chris
b. * Who did Mary sneeze after Pat kissed?
- (4) a. Mary asked if Pat kissed Chris
b. ?* Who did Mary ask if Pat kissed?

Islands

We know how *wh*-question formation is supposed to work, the interrogative C has a [*uwh**] feature that makes the *wh*-phrase move up to the specifier of CP. But it seems that there are certain kinds of constituents that can “trap” a *wh*-phrase. **Islands**.

- (5) Who did Mary hear [_{CP} that Pat kissed *t*]?
- (6) * Who did Mary hear [_{DP} the rumor that Pat kissed *t*]?
- (7) * Who did Mary sneeze [_{adjunct} after Pat kissed *t*]?
- (8) ?* Who did Mary ask [_Q if Pat kissed *t*]?

If a *wh*-phrase is inside an island, it can't move to a point outside.

Moving around inside the island

There's no problem moving inside an island, or outside an island—the problem arises if you try to move from inside the island to outside the island.

- (9) Who *t* sneezed [_{adjunct} after Pat kissed Chris]?
- (10) Mary sneezed [_{adjunct} after Pat asked who *t* kissed Chris].
- (11) Mary sneezed [_{adjunct} after Pat asked who Chris kissed *t*].
- (12) * Who did Mary sneeze [_{adjunct} after Pat kissed *t*]?
- (13) ** Who did Mary sneeze [_{adjunct} after *t* kissed Chris]?

If a *wh*-phrase is inside an island, it can't move to a point outside.

Long distance relationships

It's also not that islands block any relationship at all, generally. It's just movement. So in (15), the sneezers can vary with the kissees.

(14) * Who did Mary sneeze [_{adjunct} after Pat kissed *t*]?

(15) Every boy_{*i*} sneezed [_{adjunct} after Pat kissed him_{*i*}]?

Locality

So what's wrong with moving out of an island? The intuition behind the analysis is that it is “moving too far”—it is a *locality* constraint. That is, movement is constrained to be local, short.

At first, this seems at odds with the fact that it is plainly obvious that *wh*-phrases can move very far. But the resolution of the paradox is that when a *wh*-phrase moves over a long distance, it does so chaining together a bunch of shorter hops.

(16) Who did Pat say [that Mary heard [that Chris kissed *t*]] ?

(17) Who did Pat say [*t'* that Mary heard [*t'* that Chris kissed *t*]] ?

2 Successive cyclic movement

2.1 Leaving traces

When a *wh*-phrase drops something

We know that normally *wh*-phrases move into the specifier of CP. The hypothesis is that this is where the *wh*-phrases are stopping as they hop up the tree. We might look to see if there is any evidence that the *wh*-phrases occupied those intermediate positions.

(18) What exactly did they say that you bought?

(19) What did they say that you bought exactly?

If *what exactly* begins as a constituent, seems that you can either move *what exactly* together, or move *what* but leave *exactly* behind.

(20) What did they say exactly that you bought?

(21) * What did they say that exactly you bought?

(22) * What did they exactly say that you bought?

Partial *wh*-movement

(23) [Mit wem] glaubt Hans *t'* dass Jakob jetzt *t* spricht?
with whom thinks Hans that Jakob now speaks
'With whom does Hans think that Jakob is now talking?'

(24) Was glaubt Hans [Mit wem] Jakob jetzt *t* spricht?
WHAT thinks Hans with whom Jakob now speaks
'With whom does Hans think that Jakob is now talking?'

- (25) Was glaubst du (was / *dass) Hans meint [Mit wem] Jakob *t* gesprochen hat?
 WHAT thinks you (WHAT / that) Hans believes with whom Jakob spoken had
 ‘With whom do you think Hans believes that Jakob is now talking?’

Interpretation in lower positions

Reconstruction

Semantically, there can also be evidence of the content of a moved element being interpreted in a lower position.

- (26) Someone said every boy brought *Cat’s Cradle*. (* $\forall > \exists$)
 (27) Which of his books did Mary say * every boy brought ?
 (28) John said Mary brought this picture of herself / *her.
 (29) Which picture of herself did Mary say John brought * ?
 (30) Which picture of herself did John say * Mary brought ?
 (31) Which picture of her did Mary say * John brought ?
 (32) Which picture of her did John say Mary brought * ?

Phases

Phases and edges

Phases

Within minimalist syntax, it is widely supposed that the derivation proceeds in chunks, building up a small portion of the structure, and then packaging it up (fixing its phonological and semantic interpretation) so that it becomes inaccessible to further operations.

This is mostly motivated by computational/resource considerations. By working only with a small part of the structure at a time, you can ensure that the computational load will not become too large. The system is structured to minimize computation—fewer elements to search through.

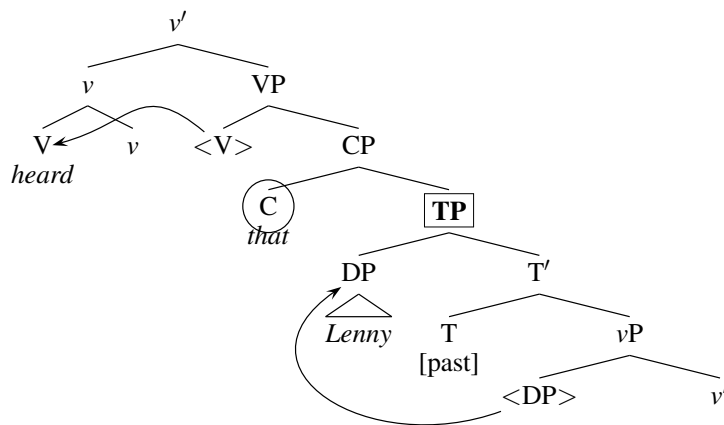
This explains why movement proceeds in small hops, because if it doesn’t reach the edge of the phase by the time the phase is sealed, it will be trapped.

The escape hatch

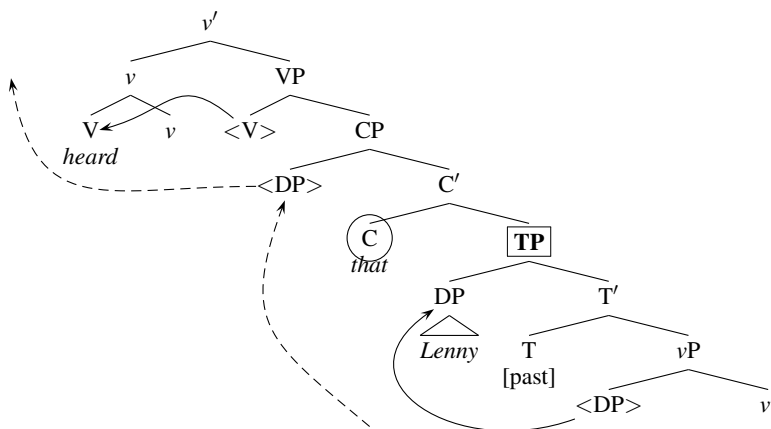
In order to accommodate the successive-cyclic movement:

- The CP is the intuitively sensible delimiter of a phase.
- SpecCP must be accessible from the higher phase, and the SpecCP of the higher phrase must be reachable.
- Thus: C is a “phase head” that marks the end of a phase.
- But: Spellout involves freezing the complement of C (TP).
- SpecCP is an “escape hatch,” the means of escape from a lower CP to a higher CP.

Finite declarative CP embedded within another: Zoomed in



Passing *wh*-word: Zoomed in



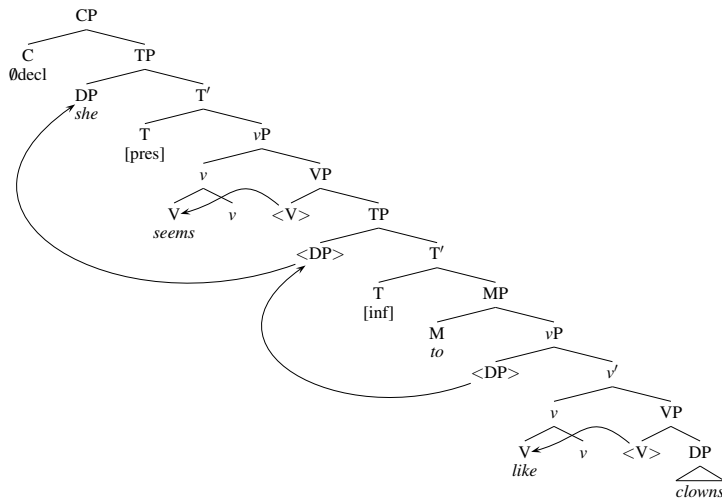
Embedded infinitives

We earlier had looked at some examples with embedded infinitives, like ECM and raising examples.

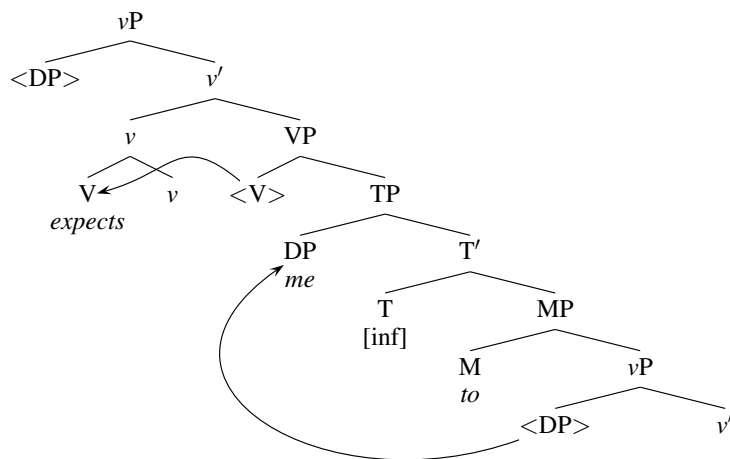
- (33) I expect them to leave.
 (34) They seem to have left.

In such cases, there is no CP, so there would not be a phase boundary there. The embedded subject would not need to move to the edge of a phase to be visible for movement from above, or get case from above.

She seems to...



She expects me to leave: Zoomed in



Islands as phases without usable edges

Islands revisited

This also can give us a way to think about islands. The DP island (Complex Noun Phrase island) could arise from taking D to be a phase head as well. Meaning that to get something out, it would need to get to the edge.

- (35) * Who did you buy my painting of _ ?
- (36) ?? Who did you buy the painting of _ ?
- (37) ?? Who did you buy (almost) every painting of _ ?
- (38) Who did you buy _ a painting of _ ?
- (39) Who did you buy _ (several) paintings of _ ?

Perhaps: sometimes it is possible to move to the edge, but only sometimes. Not when there is a “subject” or if it is “definite”?

Islands revisited: Adjunct islands

Perhaps the same for adjunct islands; they are phases, but movement is not allowed to the edge? (Or: movement to the edge doesn't help?)

- (40) * Who did you sneeze after Pat introduced _ to you?

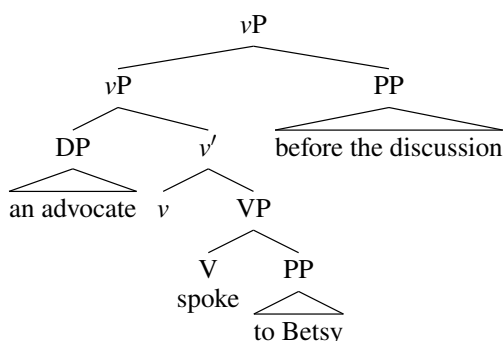
Why might the edge not be available or useful? These are called adjunct islands, it seems possible that it has something to do with how they are incorporated into the structure.

Subject and adjunct islands as spelled-out phases

Attaching adjuncts vs. attaching arguments

(Based loosely on discussion from Johnson (2003) *Nordlyd* 31.1)

The upper two triangles have to be built separately, before attaching them to the tree (unlike the lower PP). You build but then it goes back on the workbench—Johnson suggests—spelled out.



Renumeration

So the idea is that if you build a complex structure and put it back on the workbench (particularly if it is the projection of a phase head, perhaps), it becomes frozen/atomic.

What allows successive-cyclic movement along the spine is that you keep building up, and Merge the lower CP as an object of the embedding verb without needing to spell it out first. The TP inside still gets frozen when CP is finished, but the edge is still accessible from above unless you put it down.

This should make subjects (at least ones that are complex enough to have something inside you could try to move) islands as well.

Subject islands

Lo and behold, subjects are also islands.

- (41) Who did you say Pat fired a friend of _ ?
(42) * Who did you say a friend of _ quit ?
(43) * Who did you say a friend of _ was fired ?

Normally you can get out of an indefinite DP like that, but only if it is an object, not a subject, even a “derived subject” like in the passive.

Focus projection

Johnson (2003) notes that adjuncts also seem to stop “focus projection” (which can go along with the idea that they are spelled out and frozen when returned to the numeration).

Idea: focus is phonologically realized on the last/lowest element of the focused constituent.

- (44) a. Who did your friend talk to yesterday?
- b. My friend talked to [JERRY] yesterday.
- (45) a. What did your friend do yesterday?
- b. My friend [talked to JERRY] yesterday.

Focus projection

Adjuncts get focus marked, but a focus mark within an adjunct can’t lead to an interpretation where the whole VP is focused.

- (46) a. What did your friend do yesterday?
- b. * My friend complained after Jerry QUIT.
- c. My friend COMPLAINED after Jerry QUIT.
- (47) a. What bothered Jerry yesterday?
- b. Doing his HOMEWORK bothered Jerry.
- c. What happened yesterday?
- d. * Doing his HOMEWORK bothered Jerry.
- e. Doing his HOMEWORK bothered JERRY.

Focus projection

Unless the subject was originally an object, like in a passive or unaccusative.

- (48) a. What happened yesterday?
- b. Jerry’s HOMEWORK was discussed.
- c. Jerry’s HOMEWORK melted.
- d. * Jerry’s HOMEWORK won.
- e. Jerry’s HOMEWORK WON.

Perhaps: assignment of stress is part of spelling something out and reaching the focused constituent. In the passive case, the VP is built and the stress is assigned before the movement takes it to a left branch. Adjuncts and subjects had to be spelled out and so already have stress assigned, they no longer participate.

Ditransitives

One place where this might seem a little tricky is with ditransitives, which we have analyzed as having Theme in SpecVP and Agent in SpecvP. Both of those should be islands.

- (49) What did you give a book about to Pat?

(50) Who did you give a book about trees to?

But the Theme doesn't seem to be. Johnson has a workaround for this which we won't go into here, but which allows either the Theme or the Goal to be the non-island. Which predicts that you can't project focus from one and extract from the other.

(51) What did you give a book about to Pat?

(52) * What did you sell a book about to TRACY?

Ditransitives

Perhaps an argument becomes an island only when it moves somewhere else. Essentially, if the merged object gets a θ -role, its edge is protected. Or: Attaching an XP to the structure without a θ -role involved requires spelling it out fully, freezing the edge.

If so, it might predict that if we can catch the subject in the specifier of ν P it might not be an island down there. Like, perhaps, in *there*-constructions.

(53) There is a friend of Pat in the garden.

(54) Who did you say there is a friend of _ in the garden?

(55) * Who did you say a friend of _ is in the garden ?

Side note: ν P as a phase

There are some reasons to think that ν defines a phase just as C does. People do largely assume this. In that case, phases are actually pretty small, and movement would need to proceed through a specifier of ν P as well. We won't adopt that here, but if we did, it requires considering passives and unaccusatives. One way through is to suppose that only ν P that introduces an external argument is a phase, but the ν P that occurs in passives and unaccusatives is not. Since the object needs to move out but would be frozen in place before we reach the place they would move to. Most of the evidence for the phasehood of ν P shows that it is possible for moving things to stop there, which is different from showing that they *must* move there, but this is full of intricate, advanced-syntax kind of detail.