Previously, in LX522...

- Some example requirements:
  - EPP (T needs a specifier), [+Q]-C needs a T, [+WH]-C needs a [+wh]-specifier, v needs a V, ...
  - DPs need Case, quantifiers must bind a variable from outside the clause, wh-words must be in SpecCP, ...
- Constraints on movement:
  - Head movement constraint
  - Subjacency (wh-island constraint, CNP constraint)
  - Proper binding condition (moved element c-commands its trace)
  - Shortest move (where two movements could both satisfy the same requirement, only the shorter movement is grammatical).

vP and the Agent [\textit{\[\]}]-role

- Recall that in order to properly analyze ditransitive verbs, we needed to suppose that the VP is made of two “shells”, the vP and the VP. The vP is where the Agent [\textit{\[\]}]-role is assigned.
- John will give the book to Mary.
- And given that we needed v to assign the Agent [\textit{\[\]}]-role in these constructions, we might as well assume that there is only one way that the Agent [\textit{\[\]}]-role gets assigned: The Agent [\textit{\[\]}]-role is only ever assigned to the specifier of vP.

vP and the Agent [\textit{\[\]}]-role

- Whenever there is an Agent [\textit{\[\]}]-role (transitives, unergatives, ditransitives), there is also a v to assign it.

AgrOP and vP

- There seems to be a correlation between a verb being able to assign accusative Case to its object and there being an external argument (Agent). (Burzio’s Generalization).
- Translated into our terms, it seems that AgrOP (which is responsible for assigning accusative Case) can only be present if there is a vP assigning the Agent [\textit{\[\]}]-role.
ECM and AgrOP
- In cases where an embedded subject seems to get accusative case from the higher verb (I want Bill off the boat, I consider Bill to be annoying), this is due to raising the embedded subject into the higher clause's AgrOP, as here.

More on [-]roles and vP
- When there’s an Agent [-]role, it is assigned by v in a vP structure.
- We said we might even think of v as having a meaning something like ‘CAUSE’ with the [-]role going to the causer in SpecP.
- What about Experiencers (where there is no agentiveness) like John in John knows French, John needs to leave?
- We’ll basically assume that there’s a vP whenever there is an external argument (generally either Agent or Experiencer—that is, generally cognizant). This one doesn’t mean ‘CAUSE’ of course, it’s a different v.

Object control verbs
- Recall that one kind of verb that embeds a clause with PRO is the object control verb (I persuaded John PRO to leave).
- These are like (well, they are) ditransitives, we need the vP structure to even be able to draw them.
- You would draw them like this at DS, where DO later raises to SpecAgrOP (above vP) to get case (John persuaded me PRO to leave).

vP, VP, and adverbs
- Recall that we needed to assume that V moves to v before SS to account for ditransitive verbs like John gave the book to Mary.
- However, also recall that in English, the verb still has to precede adverbs...
  - ‘John cleaned carefully his plate.

vP, VP, and adverbs
- There are lots of intricacies here, but the bottom line seems to be that sometimes you can’t adjoin an adverb to V'.
  - In fact, it is very often when the adverb would separate the verb and an accusative Case marked object, for whatever reason.
  - But this also tells us that sometimes (usually?) you can attach adverbs to v’ instead.
  - John intentionally gave the book to Mary.
  - John gave the book intentionally to Mary
  - John threw the book perfectly to Mary.
  - John perfectly threw the book to Mary.

Embedded non-finite clauses
- As mentioned earlier, the policy on embedded non-finite clauses is that they are just TPs unless there is evidence of a CP.
- Consider: I know what PRO to buy.
- We have evidence of a CP here, since what must be occupying SpecCP in the lower clause.
### Embedded non-finite clauses
- The subject of a finite clause can get nominative case in its clause.
- Subject moves to SpecAgrSP in a finite clause, gets case.
- In a non-finite clause, nominative case is not available to the subject.
- Policy: Nonfinite clauses do not have AgrSP.
- Note: Nothing prevents a nonfinite verb from assigning accusative case, so AgrOP can be in a nonfinite clause (plus, the evidence from French in favor of AgrOP in the first place was about nonfinite clauses).

### Object *wh*-phrases and Case
- Movement must always be upwards.
- *Wh*-objects like *what* (in *What should I buy?*) are DPs, and need to get Case like any other DP.
- *Wh*-movement to SpecCP happens before SS (in English). Objects don’t need to get Case (move to SpecAgrOP) until after SS.
- But if the *wh*-word is already in SpecCP, it can’t move back down to SpecAgrOP.
- The only option is for the object to stop off in SpecAgrOP on its way up to SpecCP.

### Passives
- The effect of passivizing a verb like *eat* is that it loses the external [-] role (*vP*) and the ability to assign accusative Case (AgrOP).
- So, a passive form a verb is drawn (at DS) without *vP* and, thus, without the associated AgrOP.
- Remember: AgrOP goes with *vP*—you don’t have AgrOP without *vP*.

### Relative clauses
- The structure of a relative clause is like this.
- A [+Q, +WH] CP is adjoined inside the NP, like an adjective, or a PP modifier.

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### Op
- Relative clauses can also make use of *Op*, the silent *wh*-word.
- That is, the book *which* Mary read and the book *Mary read* are really exactly the same except that in one case you pronounce the *wh*-word, and in the other, you don’t.
- the book *[CP which, Mary read t₁]*
- the book *[CP Op₁ (that) Mary read t₁]*

### Relative clauses
- The structure of a relative clause is like this.
- A [+Q, +WH] CP is adjoined inside the NP, like an adjective, or a PP modifier.
## Op, DFC, & Recoverability

- The Doubly-Filled COMP filter is the traditional "explanation" for why "the book which that Mary read is bad.
- Doubly-Filled COMP filter: 
  \[ \text{wh-word if/that/for...} \]
- Recoverability condition: The content of a null category must be recoverable.
  - the place \([\text{Op}](\text{that}) \text{Mary bought that book}\]
  - the day \([\text{Op}](\text{that}) \text{Mary bought that book}\]
  - the reason \([\text{Op}](\text{that}) \text{Mary bought that book}\]
  - the way \([\text{Op}](\text{that}) \text{Mary bought that book}\]
- This is why you can’t just ask a regular wh-question with Op.

## Summarizing some: DS

- Lexical items must be arranged in conformance with the []-criterion and X-bar theory.
  - Agent [\-role is assigned by v.]
  - AgrOP is only there if there is a vP as well.
  - Auxiliaries head their own VP and take AspP as a complement.
  - Finite clauses and main clauses always have a C and a T.
  - Embedded nonfinite clauses only have a C if there is overt evidence for one.
  - Nonfinite clauses do not have AgrSP.

## Summarizing some: SS

- Universally (by SS in all languages):
  - SpecTP must be filled (EPP).
  - Move the closest eligible DP.
  - w moves to V.

- Special head movements (by SS in some languages).
  - Main clause [+Q] C: T moves to C. (English)
  - Finite T: V moves to T (French, not English)

## Summarizing some: SS/LF

- Languages can choose whether other things happen overtly (by SS) or just by LF.
  - SpecCP must be filled with a wh-phrase [+Q,+WH] C.
  - All wh-phrases must be in SpecCP for [+Q,+WH] C.
  - All quantifiers must bind a (case-marked) trace (moved to adjoin to AgrSP).
  - Object to SpecAgrOP for Case
  - Subject to SpecAgrSP for Case

## So when is there a vP? When is there an AgrOP?

- If the verb assigns accusative Case, there is an AgrOP, and below that a vP (B’s G) assigning an external [\-role.
- Transitive active verbs have vP and AgrOP.
- Intransitive verbs don’t have AgrOP (they don’t assign accusative Case—there’s no object).
- Intransitive verbs can have vP though, if they assign an Agent/Experiencer [\-role.
- Passives and unaccusatives don’t have vP (and of course no AgrOP either, since they’re intransitive and don’t assign accusative Case).

## When is there an AgrSP? When is there a CP?

- AgrSP
  - AgrSP is the structural correlate to “assigns nominative Case.”
  - Finite verbs assigning nominative Case; hence finite sentences have AgrSP.
  - Nonfinite verbs do not assign Case to the subject; hence nonfinite verbs do not have AgrSP; they are just TPs.
- CP
  - As announced before, finite clauses are always assumed to be CPs; nonfinite clauses are assumed to be TPs except if there is direct evidence that it is a CP (for example, a wh-word, or overt C: I know what to do, I want John to leave).
Variation we’ve seen:

- English:
  - Subject moves to SpecTP overtly.
  - DP's move for case covertly.
  - (Topmost) auxiliary verb V raises to finite T overtly.
  - Main verb V does not raise higher than C.
  - First wh-phrase moves to SpecCP for [+Q, +WH] C overtly.
  - All other wh-phrases move to SpecCP covertly.
  - All quantifiers move to adjoin to top of the clause (AgrSP or TP) covertly.
  - T moves to [+Q] C.
  - SVO (head-first) word order.

Variation we’ve seen:

- French:
  - Subject moves to SpecTP overtly.
  - DP's move for case covertly.
  - Any kind of V (topmost aux or main V) raises to finite T overtly.
  - (Topmost) auxiliary verb V may raise to nonfinite T overtly.
  - Main verb V may raise to AgrO overtly.
  - First wh-phrase moves to SpecCP for [+Q, +WH] C overtly.
  - All other wh-phrases move to SpecCP covertly.
  - All quantifiers move to adjoin to top of the clause (AgrSP or TP) covertly.
  - T moves to [+Q] C.
  - SVO (head-first) word order.

Variation we’ve seen:

- Irish, Arabic (VSO):
  - Subject moves to SpecTP overtly.
  - DP's move for case covertly.
  - (possibly overt of object over visible AgrO in one special case)
  - Any kind of V (topmost auxiliary or main V) raises to AgrS.
  - Main verb V may raise to AgrO overtly.
  - SVO (head-first) word order.
- German (SOV V2):
  - Any kind of V (topmost auxiliary or main V) raises to C in a finite clause.
  - SpecCP must be filled (V2).
  - SOV (head-final) word order.

Variation we’ve seen:

- Japanese:
  - All wh-movement to SpecCP covert.
  - SOV (head-final) word order.
  - Possible to (optionally) scramble a DP to adjoin to AgrSP (like QR).

Some sentences from previous finals/practices

- 2001PF:
  - Every father wants to know what the children are watching.
  - What had Bert’s mother said was stolen from the living room?
  - Ralph’s puppy seems to like to chew the sofa.
- 2001F:
  - What had Bill expected to buy at Wal-Mart?
  - Every serious linguist will eventually need to know what Chomsky has written.
  - My tape of Benton’s last episode appears to have been misplaced.

Some sentences from previous finals/practices

- 2000PF:
  - Who do you think bought the laptop which Mary said she sold?
  - Which student will Mary say took every prerequisite?
  - Mary said that John’s mother was chosen.
- 2000F:
  - Which test will Mary say that every student took?
  - Which senator said that Congress will pass which bill?
  - The pen which Larry’s assistant thought that Artie lost was found under the table.