

# Syntactic Theory 2

## Week 11: Pesetsky & Torrego on Nominative Case

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- Rouveret & Vergnaud (1979) develop the theory of abstract Case to account for the distribution of DPs:
  - (1) a. [<sub>CP</sub> That Sue would arrive late] was expected  
b. It was expected [<sub>CP</sub> that Sue would arrive late]
  - (2) a. [<sub>DP</sub> Sue's late arrival] was expected  
b. \*It was expected [<sub>DP</sub> Sue's late arrival]
- Perlmutter (1971) noted the *that*-trace effect, a subject/non-subject asymmetry regarding extraction over an overt C<sup>0</sup> (for Chomsky 1981 & Rizzi 1982, an ECP violation):
  - (3) a. Who do you think (that) Sue met ~~wh~~o?  
b. Who do you think (\*that) ~~wh~~o met Sue?
- Stowell (1981) pointed out that null C also exhibits a subject/non-subject asymmetry, for him, also an instance of the ECP:
  - (4) a. Mary thinks [<sub>CP</sub> (that) Sue will buy the book]  
b. [<sub>CP</sub> \*(That) Sue will buy the book] was expected by everyone.
- Koopman (1983) shows that there's a subject/non-subject asymmetry regarding subject-auxiliary inversion – for her, also an instance of the ECP, whereby a T<sup>0</sup> adjoined C<sup>0</sup> blocks antecedent government.
  - (5) a. Who bought the book?  
b. \*Who did buy the book?
  - (6) a. What did Sue buy?  
b. \*What Sue bought?
- As stressed in this class – *which* syntactic objects block antecedent government and *why* has never been clear. Thus, although there is an exciting confluence of facts, ultimately the ECP is a descriptive tool, not an explanatory one

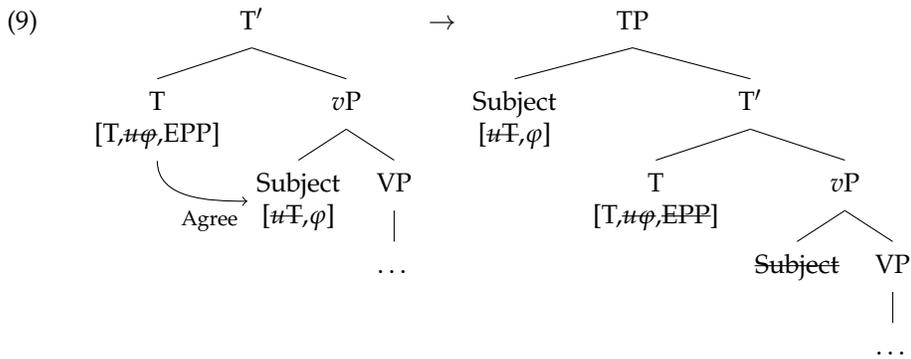
- Furthermore, accounts based in government often fail to account for why there is a subject vs. non-subject asymmetry; that is, why adjuncts should pattern with complements/objects is mysterious, given that adjuncts and (Spec,TP) specifiers are not governed, but complements are

## 1 Background Assumptions

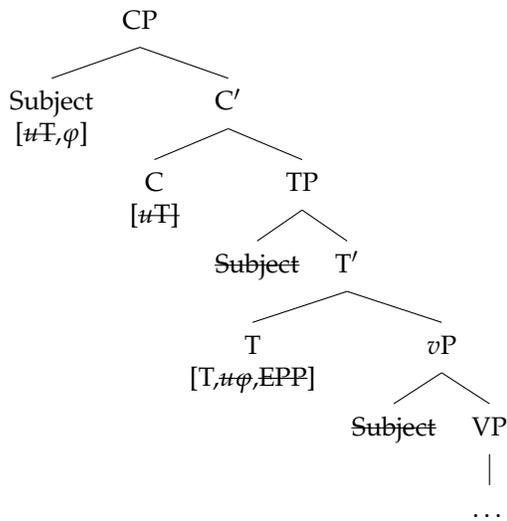
- Pesetsky & Torrego will take an Agree approach to movement, whereby an uninterpretable feature on a target will trigger a probe for an XP with an interpretable feature (*pace* Chomsky 2001). Diacritic EPP features trigger movement. For P&T, EPP features are “features of features”, not features of heads.
- Furthermore, Pesetsky & Torrego add an economy condition that they call Economy Condition (!):
  - (7) Economy Condition: A head H triggers the minimum number of operations necessary to satisfy the properties (including EPP) of its uninterpretable features.
- Lastly, P&T propose that feature checking involves “marking” a feature for deletion, i.e., the feature is not necessarily deleted immediately (cf. Activation Condition for Chomsky 2001)
- The relevant features will be: [ $i\varphi$ ,EPP] for  $T^0$ , and for  $C^0$ , this will be [ $iW_H$ ,EPP].  $\varphi$ -features and  $W_H$  features are interpretable on DP, but not on  $T^0$  or  $C^0$ . Additionally, in questions,  $C^0$  will bear a [ $uT$ , EPP] feature to trigger  $T^0$ -to- $C^0$  movement.

## 2 T-to-C Movement; Nominative Case

- Why is there no T-to-C movement with nominative *wh*-questions? How is  $uT$  checked in this context?
  - (8) a. Who (\*did) saw Dan?
  - b. Who \*(did) Dan see?
  - c. Wen \*(did) Dan see Don?
- To solve this, Pesetsky & Torrego claim that Nominative Case is actually  $uT$  on D:



- When  $C_{[uT]}$  merges, it will probe the DP in Spec,TP, and raise it to Spec,CP:



- In order for this to work, the  $C^0$  is checking its  $uT$  feature against the nominative DP whose  $uT$  feature was already checked
- Why does the nominative *wh* have to move? Why can't  $T^0$  move over the *wh*-phrase? P&T reduce this to a superiority violation:

- (10) a. Who C ~~who~~ bought what?  
 b. \*What did who buy ~~what~~?

- The subject/non-subject asymmetry follows because  $C^0$  can check off all of its features by moving the *wh*-nominative, but will have to Agree twice with all other *wh*-phrases:

- (11) a. [CP  $C_{[uWh, uT]}$  [TP Mary<sub>[uT, φ]</sub> T<sub>[T, uφ]</sub> [<sub>vP</sub> Mary bought what<sub>[Wh]</sub>]]]  
 b. [CP  $C_{[uWh, uT]}$  [TP who<sub>[uT, φ, Wh]</sub> T<sub>[T, uφ]</sub> [<sub>vP</sub> Mary bought a book]]]

- The Economy Condition will thus imply that  $C^0$  should directly probe the *wh*nominative to check all three of its features instead of probing twice – thus, we predict no T-to-C with nominative *wh*phrases
- Something that is unclear to me: if DP in Spec,TP is more local to  $C^0$  and is thus preferred in subject *wh*-questions, why doesn't  $C^0$  always check its *uT* feature by raising the subject from Spec,TP?
- Surprisingly, there is some evidence that nominative morphology is linked to tense:

- (12) a. Ngapiri-ngu thawa paya-nha  
 Father-FUT kill bird-ACC  
 'Father will kill the bird'
- b. Thithi-ngu karnta pathiparnta  
 Elder brother-FUT go morning  
 'Elder brother will go in the morning'

### 3 That-Trace Effect

- Richards (1997):

- (13) **Principle of Minimal Compliance (PMC):** Once an instance of movement to  $\alpha$  has obeyed a constraint on the distance between source and target, other instances of movement to  $\alpha$  need not obey this constraint.

- This is intended to explain superiority effects in multiple *wh*-movement languages:

- (14) a. Koj kakvo vižda  
 who what sees  
 b. \*Kakvo koj vižda  
 what who sees  
 'Who sees what?' (Bulgarian)

- (15) a. Koj kogo kakvo e pital?  
 who whom what AUX asked  
 b. Koj kakvo kogo e pital?  
 who what whom AUX asked  
 'Who asked who what?' (Bulgarian)

- Generalization: Highest *wh*-phrase must be left-most; all other *wh*-phrases are freely ordered
- Two questions: (1) how do we move any *wh*-phrase that isn't in Spec,TP on this analysis? (2) how do we capture the apparent superiority (non-)effects?
- The first movement must target the highest phrase – i.e., obey superiority – afterwards, all further movements are free, with additional movements to Spec,CP "tucking in"

- (16) [CP C [TP koj e pital kakvo kogo]]  
 [CP koj C [TP ~~koj~~ e pital kakvo kogo]] ← Highest DP moves  
 [CP koj kakvo C [TP ~~koj~~ e pital ~~kakvo~~ kogo]] ← Either *wh* can move  
 [CP koj kakvo kogo C [TP ~~koj~~ e pital ~~kakvo~~ ~~kogo~~]]
- T-to-C is maximally closest movement; afterwards, any and all other phrases can be targeted by C<sup>0</sup>, given the PMC:

- (17) [CP C<sub>[uWh, uT]</sub> [TP Mary<sub>[#E, φ]</sub> T<sub>[T, #φ]</sub> [vP Mary bought what<sub>[Wh]</sub>]]]  
 [CP C<sub>[uWh, #E]+T<sub>[T, #φ]</sub>] [TP Mary<sub>[#E, φ]</sub> T<sub>[T, #φ]</sub> [vP Mary bought what<sub>[Wh]</sub>]]] ← T moves; maximally local movement  
 [CP what<sub>[Wh]</sub> C<sub>[#Wh, #E]+T<sub>[T, #φ]</sub>] [TP Mary<sub>[#E, φ]</sub> T<sub>[T, #φ]</sub> [vP Mary bought ~~what~~]]] ← C is free to probe past T now by PMC</sub></sub>

- Thus, T-to-C movement must precede probing for the *wh*-phrase inside the TP
- However, *wh*-movement does not always pattern with T-to-C movement:

(18) What did John say [CP ~~what~~ that John saw ~~what~~]

- How can the embedded C probe for *what*, given that the maximally closest phrase is TP, and there is no T-to-C movement?
- First, P&T note that in Belfast English, Spanish, and French verbs raise over the subject when a *wh*-phrase passes through:

- (19) a. I wonder what did John think would he get  
 b. Who did John say [did Mary claim [had John feared [would Bill attack]]]?

- (20) a. A quién prestó Juan el diccionario  
 To who lent John the dictionary  
 'Who did John lend the dictionary to?'  
 b. Qué pensaba Juan [que le había dicho Pedro [que había publicado la revista]]  
 what thinks John that him had told Pedro that had published the magazine  
 'What did Juan think that Pedro told him that the magazine had published?'  
 (Spanish)

- (21) Qui a-t-elle dit qu' avait vu Paul  
 Who did she said that had seen Paul  
 'Who did she say that Paul had seen?'

- P&T claim that Standard English is the same as Belfast English and Spanish despite appearances – C<sup>0</sup> *that* is actually the higher copy of the T morpheme:

- (22) Merge: [CP C [TP Mary will buy what]]  
 Move T: [CP C+T [TP Mary will buy what]]  
 Move what: what ... [CP C+T [TP Mary will buy what]] Spell-Out:

what ... that Mary will buy (Standard English)  
 what ... will Mary buy (Belfast English)

- For non-nominative *wh*-phrases, the *that* appears because T must raise to C, so that way C can probe further down the structure without incurring a superiority violation, by the PMC:

(23) What did John say [<sub>CP</sub> ~~what~~ C+T [<sub>TP</sub> Mary will buy ~~what~~]]

- However, for nominative *wh*-phrases, the Economy Condition rules out T-to-C movement because movement of the *wh*-nominative satisfies all features on C – thus, we never “construct” a *that*:

(24) Who did John say [<sub>CP</sub> ~~who~~ C [<sub>TP</sub> ~~who~~ will buy some books]]

## 4 Embedded Declarative Clauses

- This analysis implies that we have T-to-C movement in non-Q embedded clauses in general:

(25) Mary thinks [<sub>CP</sub> T+C Sue will buy the book]  
 Mary thinks that Sue will buy the book

- They argue that sentences lacking an overt complementizer involve raising of the subject DP to Spec,CP to check the *u*T feature on the C:

(26) Mary thinks [<sub>CP</sub> Sue [<sub>TP</sub> ~~Sue~~ will buy the book]]

- P&T suggest that both options are available because T and Spec,TP are equidistant from C<sup>0</sup>
- This is also the case with non-nominative *wh*-movement:

(27) a. What does Mary think [<sub>CP</sub> Sue [<sub>TP</sub> ~~Sue~~ will buy ~~what~~]]?  
 b. What does Mary think [<sub>CP</sub> ~~will~~+C [<sub>TP</sub> Sue will buy ~~what~~]]?

- P&T argue that this analysis of null complementizers can explain the preference for an overt complementizer with fronted adverbials:

(28) a. Mary knows \*(that) books like this Sue will enjoy reading  
 b. Mary claims \*(that) for all intents and purposes John is the mayor of the city

- If we take front material to be a specifier position internal to the TP above the subject; therefore, TP and Spec,TP will no longer be equidistant to C, and extraction of the subject will be a superiority violation:

(29) a. Mary thinks for all intents and purposes John is the mayor of the city  
 b. [<sub>CP</sub> C [<sub>TP</sub> for all intents and purposes [<sub>TP</sub> John is ... ]]

- c. [CP C+T [TP for all intents and purposes [TP John is ... ]]] ← Probing T(P); *that*
- d. \*[CP John C [TP for all intents and purposes [TP John is ... ]]] ← superiority violation

- Similarly, with nominative *wh*-extractions, having a topic above the subject should force C to probe the T(P), yielding a *that*:

(30) Sue met the man who Mary is claiming [CP that [TP for all intents and purposes [TP who ... ]]]

- Does this also work for matrix *wh*-questions?:

(31) Who did, for all intents and purposes, read books?

## 5 Matrix questions

- T-to-C patterns differently in interrogatives and in exclamatives:

(32) a. What book \*(did) Mary buy?  
 b. What book \*(did) was bought by Mary?

(33) What a silly book \*(did) Mary buy!

- P&T claim that this is evidence of non-*wh*nominatives moving to Spec,CP to check *uT*:

(34) [CP What a silly book [CP Mary [TP ~~Mary buy what a silly book~~]]

- A question: If we accept Richards' (1997) "tuck in" analysis, the word order here implies that the *wh*-object was moved first – that should be a superiority violation!

## 6 Embedded CPs and EPP

(35) a. Bill asked [CP what Mary bought]  
 b. \*Bill asked [CP what did Mary buy]  
 c. \*Bill asked [CP what that Mary bought] (Doubly Filled Comp Filter)

- However, these are acceptable in Belfast English:

(36) a. She asked who had I seen  
 b. They wondered what had John done

(37) a. I wonder which dish that they picked  
 b. They didn't know which model that we had discussed

- Importantly, subject *wh*-questions pattern differently even in Belfast English:

- (38) a. \*I wonder who did go to school?  
 b. \*I wonder which author that wrote this book.

- This is expected if subject movement is favored by Economy Principles over T-to-C, and *that* is another phonologization of a higher copy of T
- There is also a *that*-trace effect observed in Belfast English, with both *that* and with the higher auxiliary copy:

- (39) a. \*Who did John say did ~~who~~ go to school?  
 b. \*Who do you think that ~~who~~ left?

## 7 Moved CPs

- Match Condition: If a head H enters an Agree relation with a set of phrases K, each syntactic feature of H must be present on some member of K (not necessarily with the same value, including value for EPP)
- The two ways of checking  $uT$  on C are not syntactically identical: one leaves a copy of T with interpretable tense features in the C system, whereas the other checks  $uT$  with a marked-for-deletion  $uT$  feature on the DP:

- (40) a. [<sub>CP</sub> C+T [<sub>TP</sub> Subject  $\bar{T}$  ... ]]  
 b. [<sub>CP</sub> Subject C [<sub>TP</sub> ~~Subject~~ T ... ]]

- We can use this difference and the Match Condition to explain the obligatoriness of complementizers on fronted CPs:

- (41) \*(That) Sue will buy the book was expected by everyone

- The CP must have tense features in order to be probed by  $T^0$ , according to the Match Condition. For this reason, we must select the structure in which the T ends up in the CP layers:

- (42) [<sub>TP</sub> T<sub>[T,uφ]</sub> ... [<sub>CP</sub> C<sub>[#E]</sub>+T<sub>[T]</sub> [<sub>TP</sub> T ... ]]

- (43) \*<sub>[TP</sub> T<sub>[T,uφ]</sub> ... [<sub>CP</sub> DP<sub>[#E]</sub>C<sub>[#E]</sub> [<sub>TP</sub> DP T ... ]]

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