Syntax – LIN331
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Case

We are going to bridge to Case theory, using our lecture on verb movement (Jan 24) as a point of departure.

Last time:

- inflectional class of verb determines position

- correlation between inflection and position can be captured by situating inflectional morphemes in the functional structure and driving verbs to these positions with verb movement operation.

- potential for positions to host verb sensitive to strong-weak distinction, initially conceived of as correlating with richness of inflectional morphology.

- notion of **strong** vs **weak** positions(originally correlated with morphological richness) introduced to account for differences in verb movement patterns.

Verb inflection

- For verbs that move to an inflectional head like Agr or T, there is a straightforward idea that the verb acquires its inflection when it moves to the head.

  1) [... *v*+Agr+T [... *t* [... *t* [... V ...]]]] (Aux V)

- For verbs that do <u>not</u> move, we talked briefly about the possibility that inflection **lowers** to the verb.
  — but lowering is not characteristic of syntactic operations

- Alternative: a new generalized transformation: **Feature-checking**

Feature-checking

2) [... T [... Agr [... V+*v* [... t ...]]]] Main V (English)

FF FF FF

- Let verbs come with features that will determine how their morphological form is ~~determined~~ will look
- Let inflecting heads like Agr and T also come with those features.
- Let the licensing of inflectional morphology arise by matching and ~~valuing~~ the relevant features on a verb with the features on an inflecting head, under appropriate conditions.

checking

1) [... T [... Agr [... V+*v* [... t ...]]]] Main V (English)

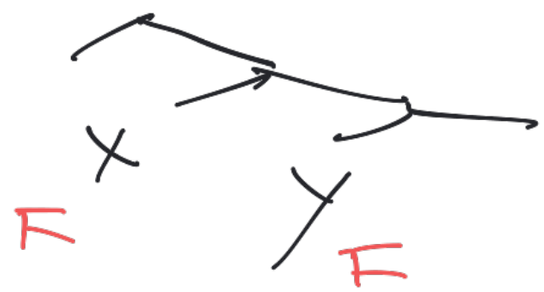
FF FF FF

2) Feature-checking (to be revised)

Let X and Y be terms that carry feature F. F on X can check F on Y just in case:

a. X c-commands Y, and

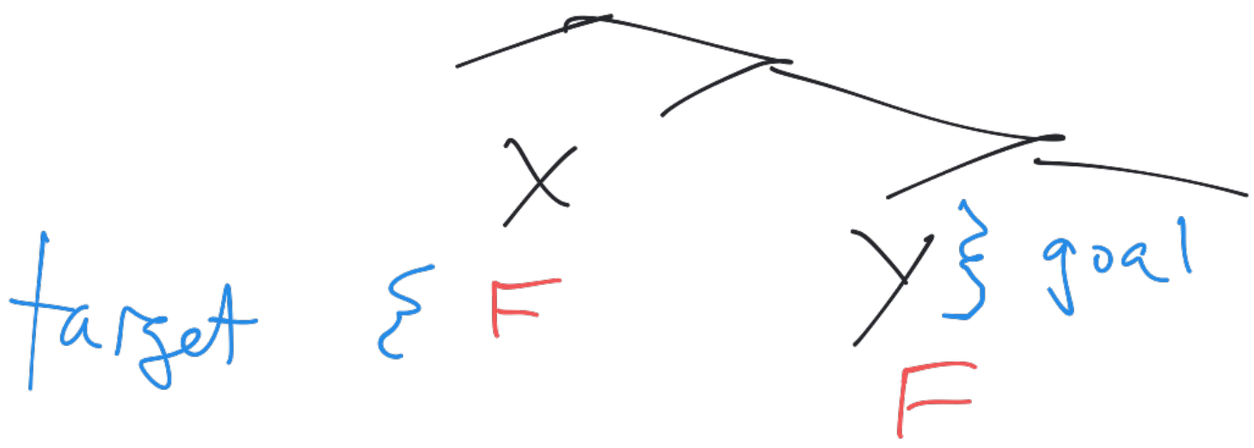
b. If X and Y are heads, there is no head Z such that X c-commands Z and Z commands Y



3) Stray feature principle: an unchecked feature is illegible at the interfaces.

- The **feature-checking** operation allows an inflectional head like T or Agr to license morphological information of a matching element in its c-command domain.

- Some new terminology:
  - — **Target**: the feature F on X that will check F on Y
  - — **Goal:** the term Y with a feature F that matches the target.



Feature-checking and Move: Strong vs weak features

We can tie Pollock's strong/weak dichotomy to **Feature-checking** by conceiving of the strong vs weak distinction as being a **property of features** as opposed to being a property of heads.

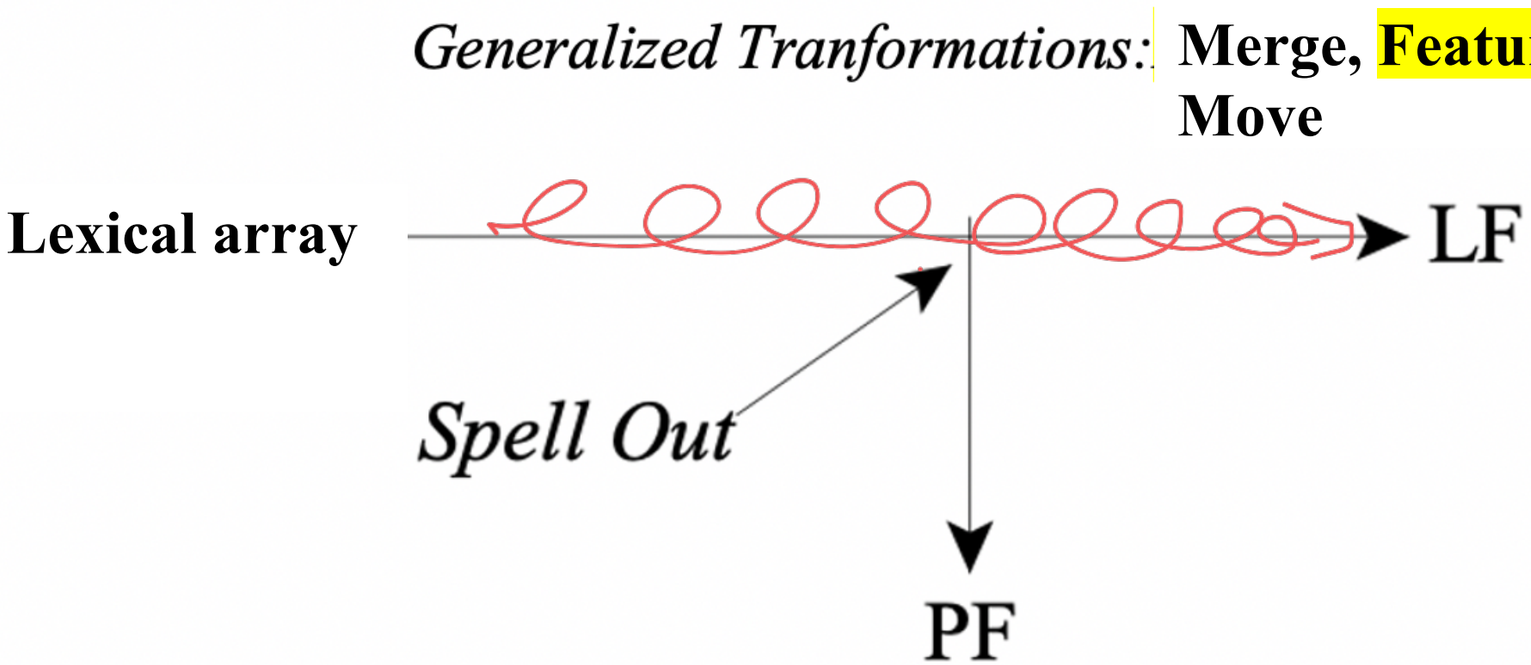
Checking with a strong F correlates with **Move** for main V

Checking with a weak F correlates with lack of movement for a main V

(For auxiliary Vs there is more to be said but we'll set these aside)

Chomsky repurposed Pollock's strong/weak dichotomy as follows:

> **Checking** with a **strong** F triggers movement in the overt component of syntax
>
> **Checking** with a **weak** F also triggers movement but it is deferred to the covert component of syntax

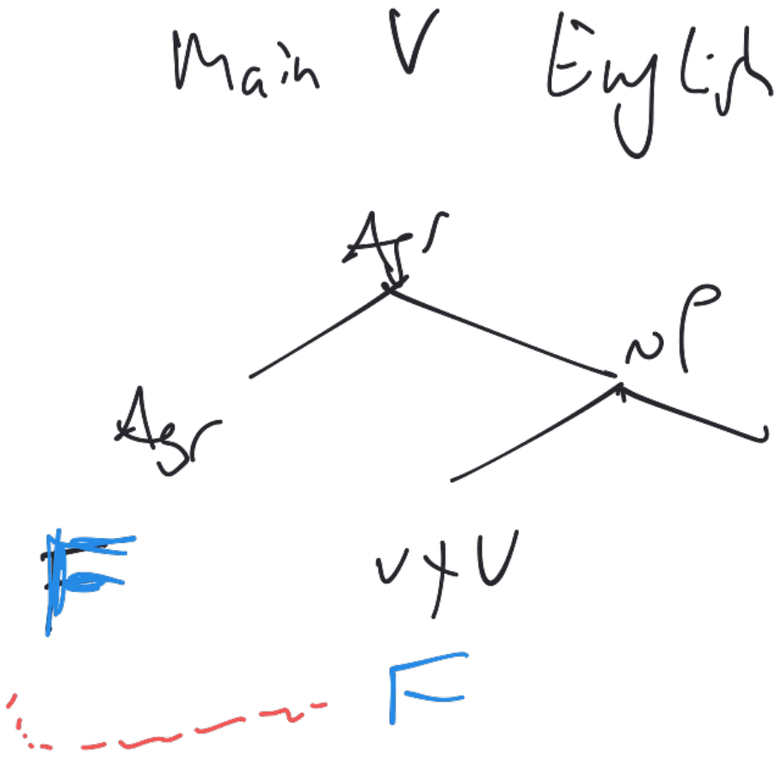


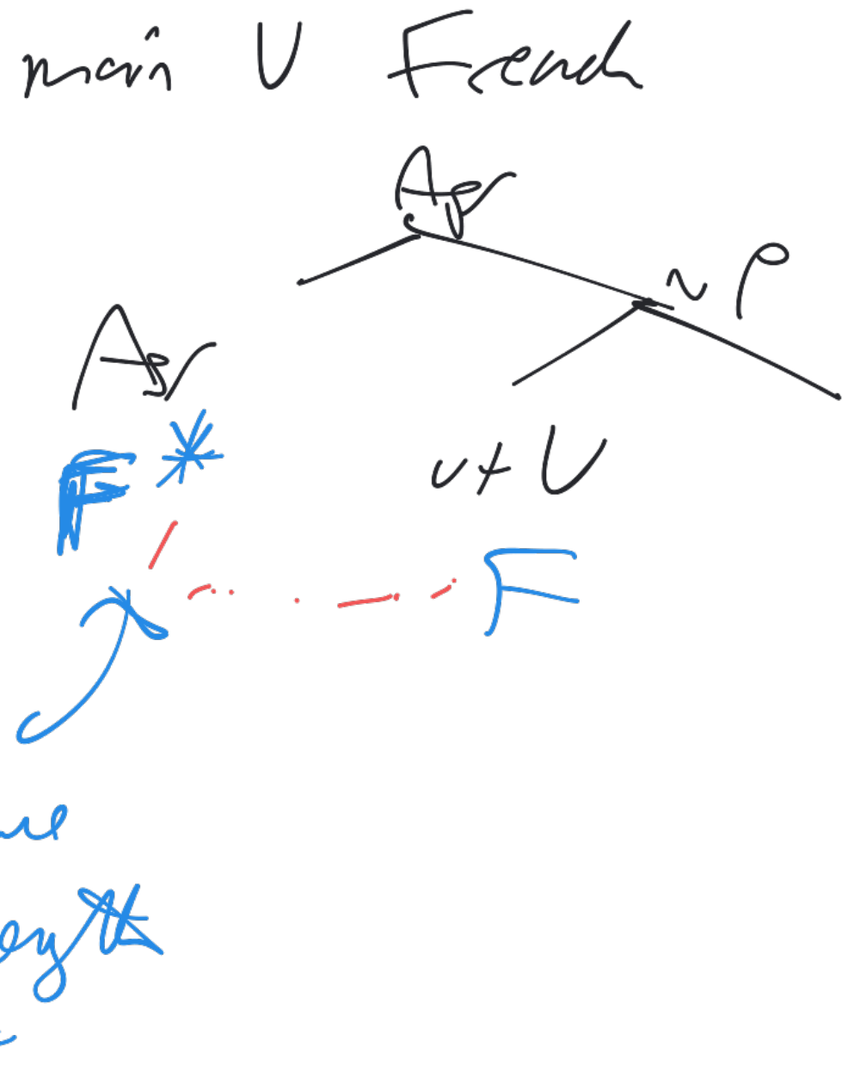
Uniformity and variation re-imagined:

- all features trigger movement in the same ways (uniformity)
- but languages vary as to overtness/covertness of this movement (variation).
- x-linguistic differences (parameterization) encoded as a property of lexical items: they reduces to properties of formal feature (FF) bundles. strong vs. weak

We will look more carefully at the evidence for covert movement after reading week.

Recap


Main V English
Agr
~P
Agr
V+V
F


main V French
Agr
~P
Agr
V+V
F
Feature
Strength

Case

- Another situation in which inflectional morphology and syntactic position are tightly linked is **Case**.
- We will see that feature-checking and movement can again be invoked to capture major patterns.

Morphological case

- NPs in many language are able to host case morphology.

	Nominative	*Accusative*	*Genitive*
1st, sing	I	me	my
1st, plur	we	us	our
2nd, sing	you	you	your
2nd, plur	you	you	your
3rd, sing, fem	she	her	her
3rd, sing, masc	he	him	his
3rd, sing, neut	it	it	its
3rd, plur	they	them	their

- The particular case morphology borne by an NP is correlated with its syntactic position.

4) **Nominative** case assigned to subjects of finite IPs

a.	**She** left.	*compare:*	*I left **she.**
b.	**We** arrived before **he** left.	*compare:*	*I talked to **he.**
c.	**They** thought **I** would stay.	*compare:*	***they** hat

5) **Accusative** case assigned to complements of active Vs and some prepositions

a.	We met **him**.	*compare:*	***Him** left.
b.	They talked to **me**	*compare:*	*They are happy **me.**
c.	She stood near **us**.	*compare:*	***us** hats.

Abstract Case

- Under GB, an abstract counterpart of morphological case, termed Case (with a capital C), was proposed as a mechanism for linking the distribution of overt NPs to positions where Case is assigned.
    - — "Abstract" because not necessarily reflected in morphology (e.g. English NPs other than pronouns)
- Abstract Case is conceived of as a formal requirement of overt NPs. This was articulated in GB by the **Case filter**:

6) Case filter
*NP if NP has phonetic content and has no Case (Chomsky 1981: 49)

- The Case filter accounted for the distribution of overt NPs.
  - — Positions where overt NPs are possible = Case positions
  - — Positions where overt NPs are not possible = Caseless

7) (Un)availability of overt subject in non-finite IP

a. Leo decided [(*Lina/himself) to leave].
b. Leo believed [Lina to be a genius].
c. Leo decided [for Lina to leave].
d. For Leo to win would be great.
e. *Leo to win would be great.

8) Raising to subject out of non-finite IP

a. Lina seems [*t* to like her brother].
b. Lina is likely [*t* to fall asleep].

9) Unvailability of object in passive

a. Lina was kissed *t* (by Leo).

b. Kai was believed [*t* to have won the soccer match].

c. The birdcage was found [*t* empty].

10) Unavailability of object in unaccusative

a. Jeffrey's bus arrived *t*.

b. The tree fell *t*.

11) Ordering of internal arguments

a. Maggie donated [$_{NP}$ her allowance] [$_{PP}$ to the charity].

b. *Maggie donated [$_{PP}$ to the charity] [$_{NP}$ her allowance].

Case configurations in GB

- Under GB, DPs must be assigned Case by a governing verb, preposition or finite Infl at SS.

  — Why at SS? Because case is relevant at both LF and PF and not at DS.

  — Why not DS? Passive and raising constructions, where DP can't receive case in its DS position.

12) a. He was seen *t*.
    b. He seems *t* to like Almodovar movies.

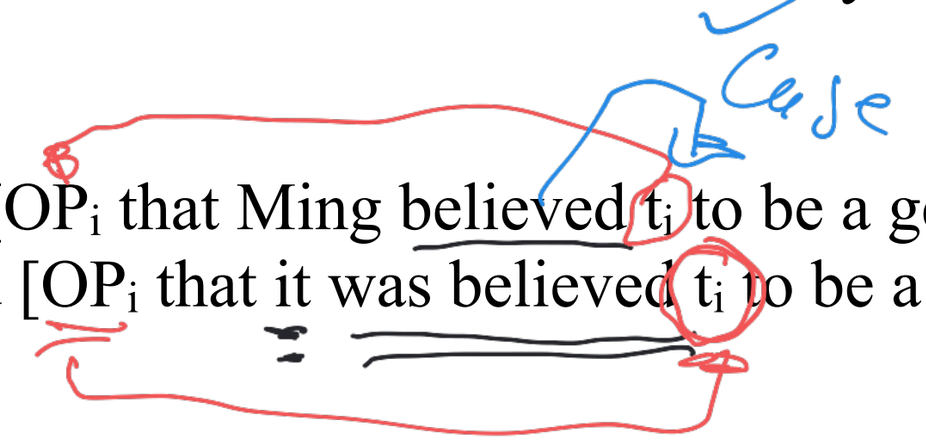
- Note: all that passive and raising constructions tell us is that Case has to be assigned after movement, but both PF and LF are after movement too, so not necessarily SS!

  — Why not LF? Because Case has phonological implications (the English pronominal system and the Case markings in other languages).
  — What about PF? It's not possible because of the **Visibility Condition**.

13) Visibility Condition: A DP's theta-role is visible at LF only if it's Case-marked.

- If Case-assignment occurred at PF, then no theta-role would be visible at LF and every single sentence would violate the Theta Criterion.

- But what's the empirical evidence for the Visibility Condition? Contrasts such as:



14) a. I met the child [OP_i that Ming believed t_i to be a genius]
b. *I met the child [OP_i that it was believed t_i to be a genius]

- Why is (13b) bad?
  - — It can't be a pure case problem, because <OP, t> is not overt, and as such should not require case.
  - — The Visibility Condition forces a connection between Case and theta.
  - — So, (13b) becomes a theta problem: not having Case disallows theta-role assignment to lower EA

- Conclusion: Case assignment has to take place after DS, and feed PF and LF.

Case assignment under Government

Not covered in class
So ignore for now

Can we generalize over the structural configurations in which case-assignment take place ?

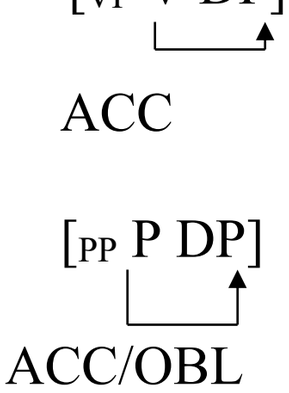
In GB a generalization was proposed by way of the **government** relation.

What is **government**? Canonically, government is defined as mutual c-command (i.e. sisterhood).

- Note that this a head-complement relation.
- Government was seen as a privileged relation, underlying a range of syntactic phenomena (e.g. theta-role assignment, certain binding configurations, much more.)

- Verbs and prepositions assign case to the DP they are sisters of, satisfiying, conforming to canonical government.

15) Mutual c-command (i.e. sisterhood)

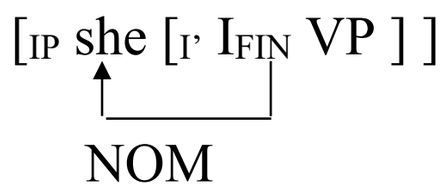


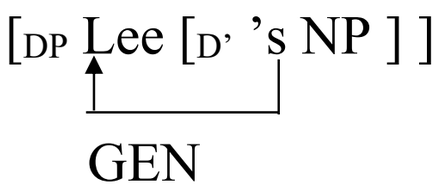
Not covered in class
So ignore for now

- But nominative Case assignment cannot be reduced to canonical goernment.

Not covered in class
So ignore for now

16) Spec-head relations





- To unify Case assignment configurations (head-complement AND spec-head) a revision to c-command was proposed: **m-command**

17) m-command:

Not covered in class
So ignore for now

18) Government (to be revised):
α governs β iff α m-commands β

Exceptional Case Marking (ECM)

This might be useful for HW3

But now let's look at what is known as ECM (Exceptional Case Marking) exemplified in (3).

19) a. [Lee [$_{VP}$ expects [$_{IP}$ her to win]]]
b. [[$_{CP}$ for [$_{IP}$ him to leave]] would be terrible]

(18a): *expect* Case-marks *her,* so if verb passivized the result is ungrammatical → (~~4a~~ 20a)

(18b): *for* case-marks *him*, so if *for* is deleted the result is ungrammatical → (~~4b~~ 20b)

20) a. *[it was [$_{VP}$ expected [$_{IP}$ her to win]]]
b. *[[$_{CP}$ him to leave] would be terrible]

Q: Which of the spec-head, head-complement or government relations (if any) can handle ECM?

NEITHER! This resulted in a reformulation of government in terms of **barriers**

Not covered in class
So ignore for now

21) *Government*
α governs β iff
(i) α m-commands β; and
(ii) there is no barrier γ that dominates β but does not dominate α.

22) *Barrier*
α is a barrier iff
(i) α is a maximal projection; and
(ii) α is not a complement

What does a Barrier look like?

Not covered in class
So ignore for now

23)

a. * She made him running easy.

b. She saw him running.

Not covered in class
So ignore for now

Returning to (18), repeated below, neither IP is a barrier, so *expect* and *for* can assign case across them!

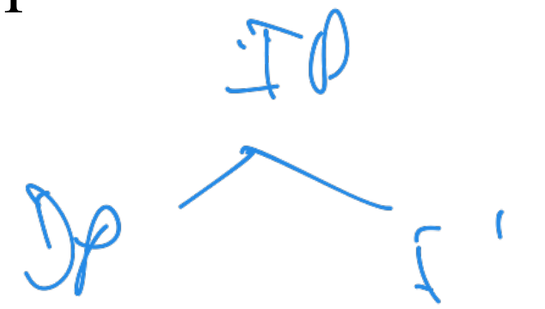
(18) a. [Lee [$_{VP}$ expects [$_{IP}$ her to win]]]
b. [[$_{CP}$ for [$_{IP}$ him to leave]] would be terrible]

Case assignment in minimalism

Q: How do the above configurations play out in Minimalism?

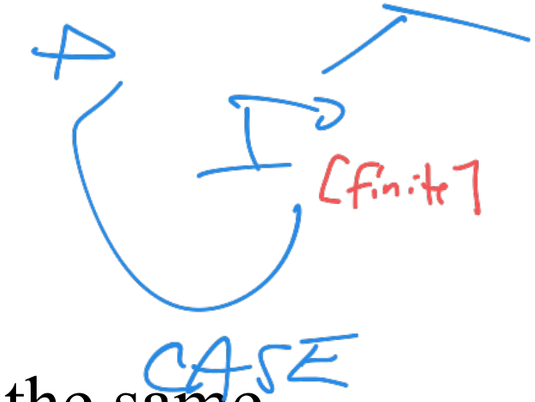
Recall from Jan 31 lecture: in bare phrase structure, spec-head and head-comp relations come 'for free'.

- Complement-head relation = first Merge
- Spec-head relation = second Merge.



Minimalist hope: No other relation is needed!

Can we dispense with government?



Maybe! It seems perhaps feature-checking can get us the same results, arguably with fewer special assumptions, and added empirical coverage..

- Of our two 'free' relations, the starting point for GB case assignment was the head-complement relation
- Minimalist Case theory went the other way and pursued the idea that spec-head is the canonical configuration for case-checking.
    - — All case assignment happens in Spec-head configuration
    - — Generalized transformations: Feature-checking and Move give us this result
    - — This will require one innovation to our functional structure: addition of new AgrP for Accusative Case assignment.

Accusative Case and the Split-Infl Hypothesis

Traditional GB view: Infl us the head responsible for encoding inflectional info such as tense/aspect as well as subject agreement

But: This couldn't be the whole story wrt inflection, because some languages exhibit object agreement as well, as shown in (7)-(8).

(7) *Basque*
Gizon-ek eskutitza-k Amaia-ri darama-**zki-o**-te.
man-ERG.PL letter-ABS.PL Amaia-DAT bring-3.PL.ABS-3.SG.DAT-3.PL.ERG
'The men bring the letters to Amaia.'

(8) *Mohawk*
Sak **shako**-nuhwe'-s ne Uwari.
Sak MAS.SG.SUBJ+FEM.SG.OBJ-like-HAB NE Mary
' Sak likes Mary.'

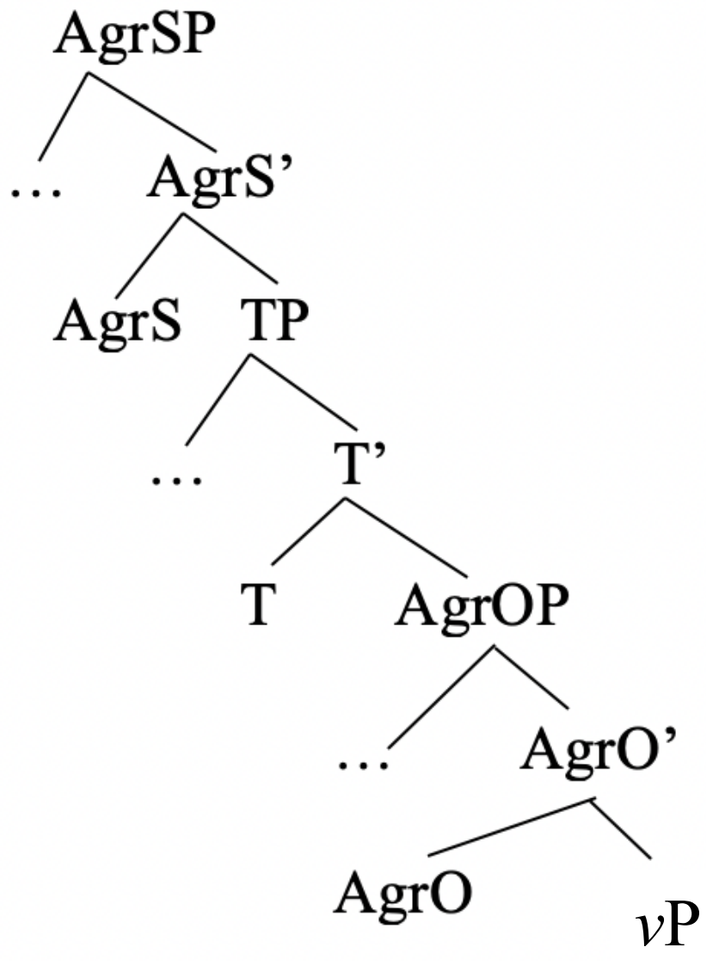
Q: Is the existence of object agreement a problem?

Not really! One can assume that object agreement info is also part of the Infl domain.

As we saw Jan. 24, the Infl domain is an articulated domain of functional structure and can be decomposed (e.g. Pollockian AgrP and TP).

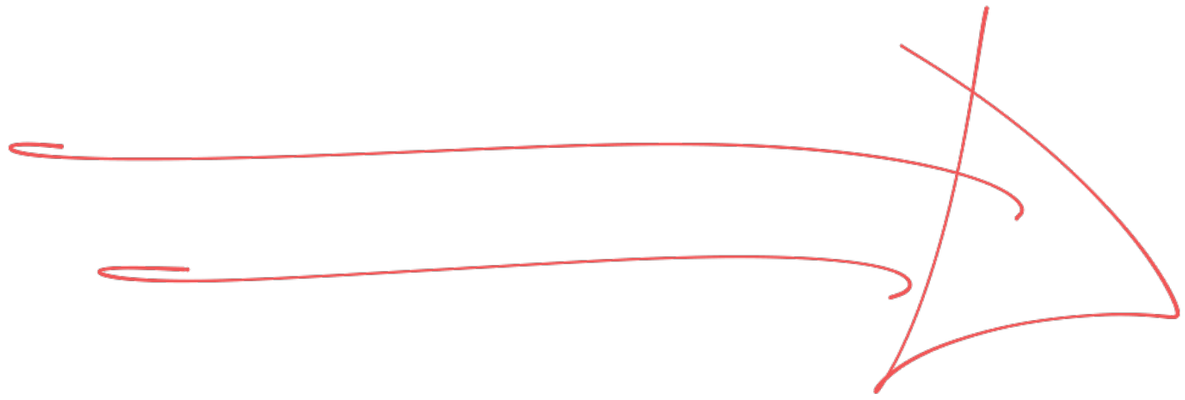
Chomsky (1991) proposed a further refinement of functional structure with **two projections for Agr**, one for subject agreement AgrS and another one for object agreement AgrO, as in the tree on the next slide.

24) Decomposed Infl domain with AgrS and AgrO



Notice that in addition to the new phrase AgrOP, the relative order between AgrSP and TP is the reverse of what we saw before.

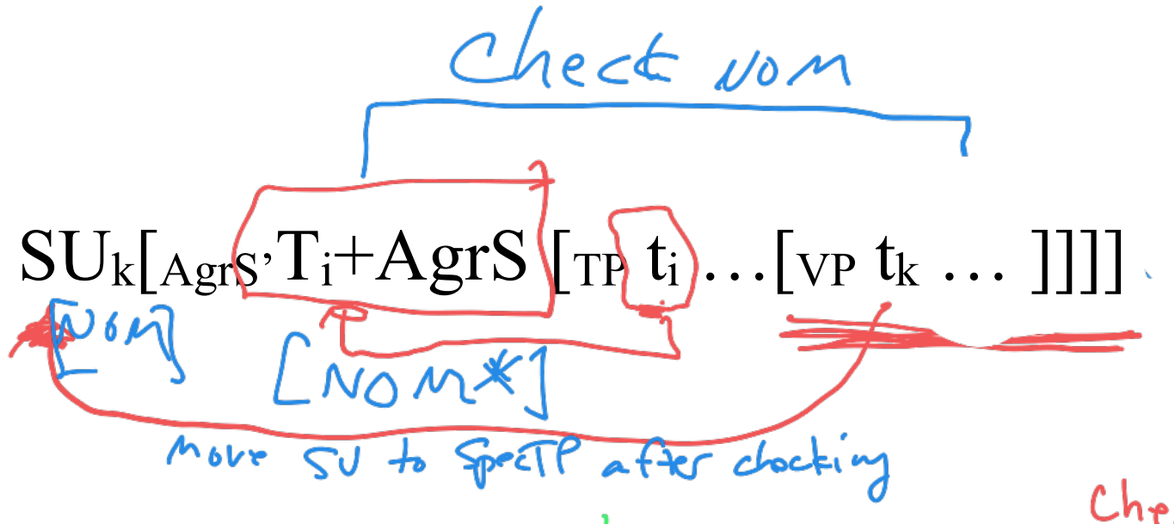
Back to Case: The structure in (22) has the ingredients for a unified account of Case under the spec-head relation.

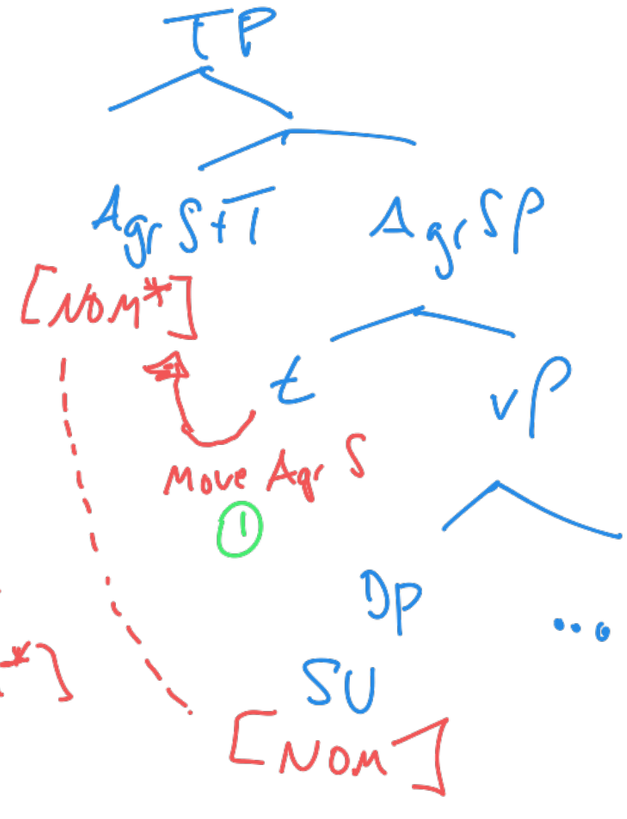


Nominative

- T adjoins to AgrS. (This captures a well-known correlation between nominative Case assignment and agreement).
- Then checking of nom. case and subject agreement can occur under a spec-head relation (25)
- In (25) the subject also moves from its VP-internal position to SpecAgrSP. This can be understood either in terms of the EPP or **strength** of the features that are checked.

25) $[_{AgrSP}\ SU_k[_{AgrS'}T_i+AgrS\ [_{TP}\ t_i \ldots [_{VP}\ t_k \ \ldots\ ]]]]$

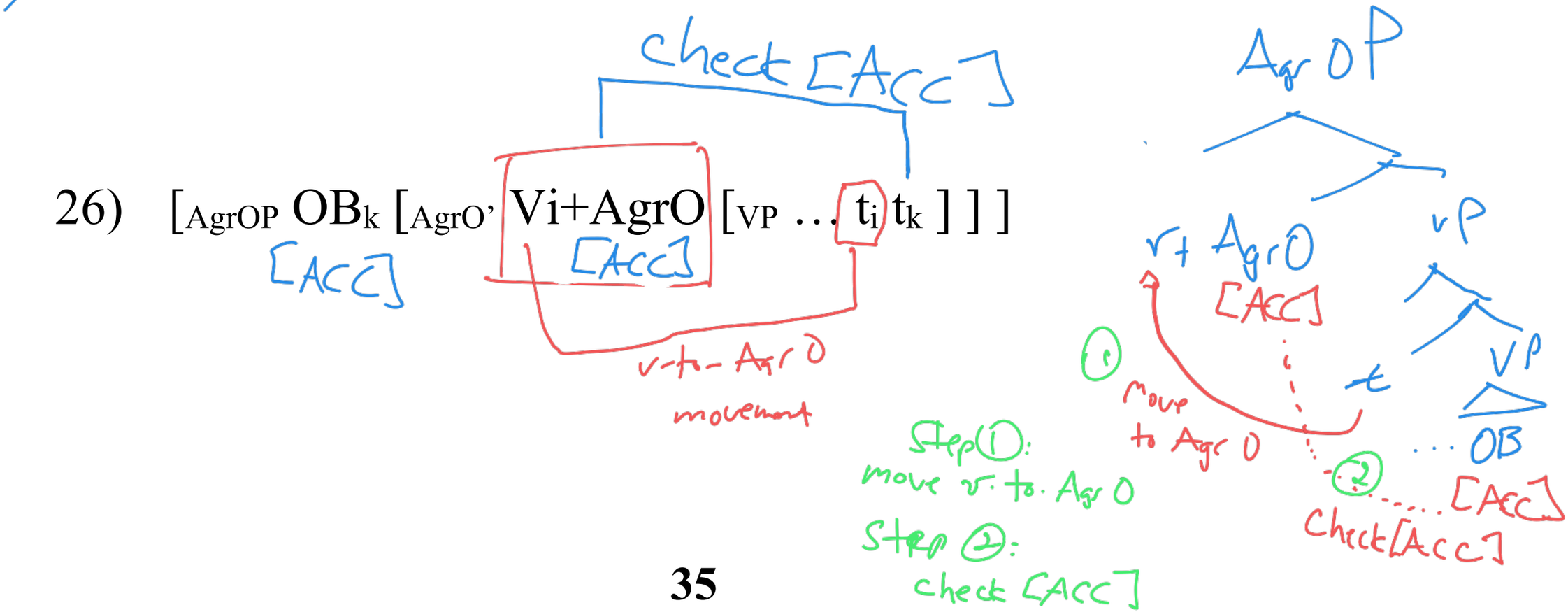




Accusative

- A parallel account can be proposed for accusative case
- *v* moves to AgrO
- then the object checks its feautures with SpecAgrOP (26).
- If the Case feature is strong then the object moves to Spec,AgrOP

26) [AgrOP OBk [AgrO' Vi+AgrO [VP … ti tk]]]



Overt vs covert Case checking

Q: Do these operations have to happen overtly as far as case is concerned?

NO! Recall that case is checked at LF. In English, for example, we can assume that nominative Case checking is done overtly but accusative covertly.

See (27) as an example, with (27b) showing the LF structure.

27) a. He saw her.

b. [$_{AgrSP}$he$_s$ [$_{AgrS'}$T$_i$+AgrS [$_{TP}$ t$_i$ [$_{AgrOP}$ her$_O$ [$_{AgrO'}$ saw$_v$+AgrO [$_{VP}$ t$_s$ [$_{V'}$ t$_v$ t$_o$]]]]]]]

Q: Can this be extended to ECM?

- Yes! This is shown in (28). Note that we are avoiding the complication we had to introduce before (Barriers)!

- Note also that we crucially need the checking theory of case, because otherwise, we would not get the right case on the pronouns in (27) and (28) given that the movement to the case position is covert.

28) a. Lee expects her to win.

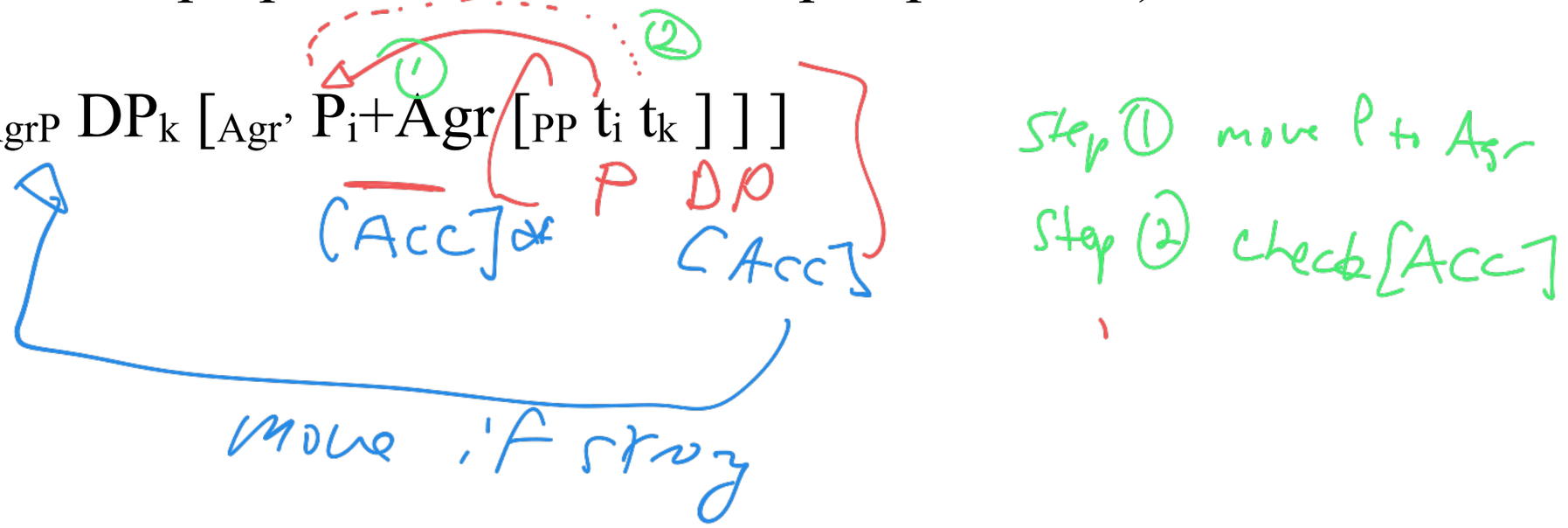
b. LF: [Lee [$_{AgrOP}$ her$_i$ [$_{AgrO'}$ expects$_v$+AgrO [$_{VP}$ t$_v$ [$_{IP}$ t$_i$ to win]]]]]

Prepositional case

- In GB, P assigns case to its complement DP under a head-comp relation.
- If case-checking is always under a spec-head relation, the same should be true of the prepositional case.

This extension is shown in (29). Whether this movement is overt or covert depends on feature strength. In English, it has to be covert! (Hence English has prepositions rather than postpositions).

29) $[_{AgrP}\ DP_k\ [_{Agr'}\ P_i\text{+}Agr\ [_{PP}\ t_i\ t_k\ ]\ ]\ ]$



- Some support for this account of prepositional case: Languages with postpositions showing overt agreement, e.g. Hungarian in (30).
  - — This is natural if in Hungarian overt agreement morphology requires overt spec-head configuration.

30) *Hungarian*

a. én-mögött-**em**
I-behind-POSS.1.SG

b. te-mögött-**ed**
you-behind-POSS.2.SG

c. mi-mögött-**ünk**
we-behind-POSS.1.PL

d. ti-mögött-**etek**
you-behind-POSS.2.PL

'behind me / you (SG) / us / you (PL)'

Correlating overt movement and agreement

- Kayne (1994) suggests that agreement in adpositional phrases is generally found in languages that employ postpositions, but not those with prepositions.

- More Hungarian: prepositions are only possible with Ps that never allow agreement:

31) Hungarian: agreement (✓ post, × prep)
a. én-**mögött**-em
I-**behind**-POSS.1.SG
b. ***mögött**-em én
behind-POSS.1.SG I
'behind me'

32) Hungarian: no agreement (× post, ✓ prep)
a. *a hídon **át**
the bridge.SUP **over**
b. **át** a hídon
over the bridge.SUP
'over the bridge'

- A similar correlation is found with respect to subject agreement in Standard Arabic:

33) Standard Arabic

a. √al-√awlaad-u naam**uu**.
the-children-NOM slept-**3.PL.MASC**

b. Naam**a** l-√awlaad-u.
slept-**3.SG.MASC** the-children-NOM
'The children slept.'

34) a. $[_{IP}\ SU_k\ V_i{+}I^0\ [_{VP}\ t_k\ [_{V'}\ t_i\ \ldots\ ]\ ]\ ]$

b. $[_{IP}\ V_i{+}I^0\ [_{VP}\ SU\ [_{V'}\ t_i\ \ldots\ ]\ ]\ ]$

Challenge: *She made [him running easy]

compare: She saw [him running]

Can we exclude this?