

## 1. Case Theory and Phrase Expansion

Following-up on our last chapter regarding tree template structures, one perspective that has emerged out of syntactic theory is the hypothesis that trees grow, phrase by phrase, and expand outward from a need to check formal features. The one feature which seems to be the driving force behind such tree expansion in **Case** assignment. So, it is only natural that after our chapter on ‘tree structures’, we next turn our attention to Case.

### 1.1. Preliminary thoughts on Case: ‘top-down’ vs ‘bottom-up’ accounts

Along the way in determining an eventual ‘bottom-up’ licensing of case, other ‘top-down’ accounts will be considered. While it may be safe to say that current linguistics trends toward preferring some version of a ‘top-down’ model in the guise of it being either more parsimonious in nature (addressing the **learnability problem**), or that only ‘top-down’ acquisition models speak to how children acquire their target language (the **continuity problem**), contrary to current orthodoxy, our accepted (alternative account) will show that there is rather sound syntactic evidence that a Head/verb can actually enter into a bottom-up (c-command ‘from’) case-checking relationship with the higher Spec/pronoun within the same clause. Evidence comes from looking at truncated *vP* structures as found in African-American English (AAE) as well as in certain English Creole utterances (EC) which, *inter alia*, demonstrate correct Nom case assignment despite catastrophic failure to mark for Tense & Agreement—(e.g., *What they do?* (EC), *He be tall* (AAE) etc.)

As we will discuss below, such reduced utterances which show Case but no Tense/Agreement provide some support for an alternative ‘bottom-up’ **structure-building model** of clause projections as well as for case assignment, perhaps allowing us to dispense with otherwise counter-intuitive **exceptional case marking (ECM)** configurations which would have to be posited—viz., ECM breaks the traditional grammatical norm in that a pronoun is attributed case via a verb higher-up and **not** within the same clause of the pronoun—

- (1) [TP *We* [T [Tense]] [*vP want* [TP [-Fin] *him to be good*]]].

where ECM assumes that the pronoun ‘him’ within the lower [-Fin] TP gets case assignment via the verb ‘want’ of a different (higher) *vP* clause). In our alternative structure-building account, we will assume that [-Nom] case is checked via the non-finite verb found within a defective TP, with TP of a *vP*>TP structure being roughly defined as a **Defective Clause** (meaning that

the TP does not extend a higher CP layer but is rather relegated to having a *vP* extension).

This ECM factor may be an important sticking point in light of our discussion in the last chapter regarding the **Phase Impenetrability Condition**—namely, that *vP* and CP are phases, not TP.

Consider below:

- (2) (a) \*It were hoped [CP that [TP they took the right train]].  
(b) It was hoped [CP that [TP they took the right train]].

In (2a), formal features (in this case ‘number’) cannot be controlled via an agreement relation by a matrix verb higher-up in the tree (across a CP). What prevents ‘was’ (acting as a probe) from agreeing with ‘they’ is the fact that ‘they’ has already satisfied its probe-goal relationship with the verb ‘took’ within the same clause and at this CP phase, where the derivation gets processed and transferred to PF, LF.

Our tentative claim on Case will then be as follows—(i) through (iii) calling for (overt) case licensing as motivating via movement, (iv) calling for (covert) case licensing without movement:

- (i) *vP*>TP (**TP defective**) checks for [-Nom] Object case (in spec-TP),  
(ii) *vP*>VP (***vP* proper**) checks for [+Nom] Subject case (in Spec-*vP*),  
(cf. ‘bottom-up’ account)  
(iii) CP>TP (**TP proper**) checks for [+Nom] case (in spec-TP),  
(cf. ‘top-down’ account)  
(iv) VP>DP (**VP in situ**) checks for [-Nom] Indirect Object case by default (or Oblique case). (in Spec-VP).

Having spelled-out this structural configuration as a relation to case, by extension we can argue the following points taken from a ‘top-down’ model:

- (v) If CP must be present in order to assign [+Nom] Case to the Spec-of-TP (when CP>TP), then the fact that [+Nom] case is not assigned for the defective *vP*>TP is in fact a result of there not being a CP.

The crucial element that factors into the above paradigm is that all overt case assignment must involve movement of the nominal to the light verb *vP*. It is only at the light verb *vP* that (overt) case assignment can be checked. When case is not required to move in the overt syntac at PF, then such case requiring nominals can remain behind VP *insitu* in receiving either (i) case via covert LF, or (ii) some form of a default case. (In English, the **default** sets at Accusative Case).

However, we will adopt a crucial distinction taken from the (bottom-up) structure-building view and assume that case, either [+/-Nom], must be checked as early as possible within the derivation. This insures that the tree cannot continue to expand and form until the lower formal elements have gone through the checking process, one **phase** at a time. If this is correct and formal elements (i.e., potential case marked nominals) must be checked as early as possible (**Earliness Principle**), then case of a given pronoun must be of a relation to its verb lower down in the tree, and not higher up in the tree outside of its phase. (Such a treatment is perfectly illustrated in **passive verbs**). This structure-building treatment of case however goes somewhat against what is typically offered in the literature (and there are a variety of views on case licensing). In the following pages, though both **top-down** (c-command ‘by’) and **bottom-up** (c-command ‘from’) views will be presented, will shall for the most part come down on the structure-building / bottom-up view of case licensing.

One further caveat is in order here for the reader. It may very well turn-out—and indeed it does—that as part and parcel of our stipulation that case be involved with the motivation of movement, the entire range of accounts as argued on behalf of case licensing become null and void and formulate a moot point of contention: viz., if minimalists assumptions demand that case and movement be intertwined, case, as a consequence, can then only be licensed via a bottom-up manner as pegged to movement. Below we spell-out some of this reasoning.

### **The light verb *vP***

A crucial distinction will additionally be made in Part-2 between the higher [+Fin] ***vP*** (sometimes referred to as a *light verb* with a small italic ‘v’ script) and the lower [-Fin] **VP**. In this context, *vP* light verbs are to be considered as (formal) **Functional Categories *par excellence*** (i.e., they are NOM Case assigners). This newly formulated light verb distinction now as a formal category distinguishes itself from the otherwise traditional Verb Phrase (VP) treatment, with the VP now defined as exclusively maintaining only a thematic/lexical status—i.e., Lexical VPs are (lexico-semantic) thematic assigners. Functional *vPs* on the other hand are (formal-syntactic) case assigners. Reference to *vP* becomes important in the context of our ‘VP-shell’ analogies which follow.

### 1.1.1 Case marking

A Case marking position is then said to be of a (local) Spec-Head c-command relation (of the same clause) to a Finite Head  $vP$  [+Fin] (with subsequent raising to TP). A default or non-case marking position (though an otherwise theta-marking position) is then said to be of an Adjunct relation to a non-Finite Head of VP or TP (which may or may not be of the same clause, which pertains to the nature of adjuncts). We assume that NOM case is checked within the light verb  $vP$  (not TP) since we assume what drives a TP is tense only. (The fact that subjects do move up to TP is independent of case and rather has to do with theory internal considerations having to do with a so called **strong D-feature** on T and EPP which stipulates that all heads must have an overtly spelled-out Specifier). Otherwise, an unwanted ‘look-ahead’ mechanism would have to be employed which would motivate the subject to raise out of VP (the Verb Internal Subject Hypothesis), skip over  $vP$  and land directly into TP. Such skipping doesn’t seem to be evidenced in the data however, while **phase-by-phase movement** is, as attested by creole examples where a  $vP$  phase is parsed (without TP)—e.g., *What they do?* (as shown in Tree Template 7).

### 1.1.2 Theta ( $\theta$ -marking)

A theta ( $\theta$ ) marking position is then said to be of a Spec-Head-Comp (c-command) relation to a Non-Finite verb (base-generated and VP insitu). All theta markings are thus semantic in nature and reside only in the lower VP projections (and never in a  $vP$  light verb), given there may be double VP-projections presumably which check the theta requirements of di-transitives and three place predicates. **Internal** theta-marking can be found either in a Spec or Comp position of VP. **External** theta marking however is necessarily done within a Spec position of VP.

The VP linear direction of case & theta assignment then might look as follows (prior to merge with TP *proper*). Strikethrough shows movement.

(3) (a) John hoped to wash. (= He hoped to wash himself)

(b) [TP... [ $vP$  John [~~VP John~~ [~~hope~~ [~~TP John~~ to [~~VP John~~<sub>i</sub> wash John<sub>i</sub>]]]]]]]

Theta:		external		internal	internal
Position:		Spec		Spec	Comp
Case:	He	him	him	him	himself

(4) The full TP merge structure of (3) above:

[TP John [T' [  $t_{...v}$  past {ed} ] [ ~~$vP$  John~~ [~~VP John~~ [ $v$  hope [TP ~~John~~ to [VP ~~John~~<sub>i</sub> wash John<sub>i</sub>]]]]]]] ↑

In (4) above, we now merge a TP to the light verb *vP/VP* in order to capture Tense [past {ed}]. Note the t(ense) t-affix feature [*t-past*] forms a (v)erb chain [t-v] (via covert raising) allowing the verb to have the **phonological form (PF)** *v*-{ed} (*hoped*). (This is something along the lines of affix hopping or affix lowering, though see note below). Verb movement from V into T in English is only done covertly and the actual movement (skipping from V to T) is not apparent at the phonological level where otherwise overt verb movement crossing negation would be shown. Elizabethan English, which classifies much like French in being a verb overt raising language, shows such verb crossing over NegP or TP—e.g.,

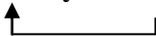
(5) [TP *He* [T *heard* [NegP *not* [VP [V ~~hear~~... *that*]]]] (Elizabethan English)



(‘He does not hear that’)

(6) [CP *Où* *croise-tu* *que* *Jean est allé*] (French)

(Where **believe-you** believe that Jean has gone)



(‘Where do you believe Jean went?’)

(7) \*Where believe you believe that John went?



(8) Where do you do believe John went? (Standard English)



(The Elizabethan and French examples in (5, 6) allow main verbs ‘hear’, ‘croise’ ‘believe’ to raise and invert above the subject, as triggered by a ‘wh-style’ trigger (with *Où* (where) in French triggering main verb inversion. French as well as Elizabethan (5) Grammar allow such main verb overt raising. In English (8) however, only the auxiliary verb, a formal category, can raise and invert).

*Note:* In current syntactic theory, any notion of feature *lowering* from T to V has fallen out of favour. So, given that English verbs lack the required **richly inflected** morphological feature(s) which would otherwise motivate overt verb raising, and given there is this ban on lowering tense features down onto V, the only other way for the verb to realize tense is to have the verb's raising onto T take place not overtly at the **phonological form** (PF), but rather at the covert **logical form** (LF). What we could claim in English is that the verbal morphological features form a chain whereby the verb raises (at LF) and attaches to tense-features (t) which are affixal in nature forming the chain [t...v].

The partially fledged light verb construction [*vP John hope to wash (himself)*] is said to be **finite** in nature allowing for NOM case to be assigned, prior to the merging of higher TP projection. Past participle morphology such as {*en*} {*ed*} may also be realized within the *vP* as shown in (9) below. Hence, Present/Past Participle morphology is a reflex of a Finite *vP* with the Tense [+Past] being a reflex of Tense within T'. The fact that the subject raises out of *vP* and places into TP is a result of theory internal considerations which suggest that T has a **D-feature** which must be checked locally within a c-command configuration (EPP). This 'D-feature' in English forces overt (phonological) raising of the subject from out of *vP* and into TP.

(9) Past Participle morphology within *vP*: (= He had hoped to wash himself)

[TP He [T' had [past] [*vP* ~~He~~ [VP ~~Him~~ [hoped [TP ~~Him~~ to [VP ~~Him~~<sub>i</sub> wash himself<sub>i</sub>]]]]]]]]]

Returning to (3) above, the lower verb 'wash' requires two theta positions: an **internal argument** (*theme*: the person being washed, in this case 'John-himself'), and an **external argument** (*agent*: the person doing the washing, in this case 'John'). In theory, the internal theta-role assignments are captured within the first lower VP. The external theta-role is later assigned within VP. 'John' first merges with 'wash' forming a VP. As a result of the reflexive nature of the predicate 'wash', 'John' instantly becomes the complement (*John<sub>i</sub> washed himself<sub>i</sub>*). Each time 'John' raises, the pronoun checks and assumes those theta-features of the predicate involved. 'John' merges with an infinitive 'to' phrase which formulates a Tense Phrase (TP). (Note that this non-finite TP does not check case and the default accusative case survives ('him')). Also note that finiteness is not a necessary reflex of a TP since the TP in (3) above is non-Fin. This distribution was indicated in the prior note just above where we speculated that a *vP* could house +Fin while TP exclusively housed Tense). 'John' then merges a third time in forming a second VP (*John hoped*). The upper VP houses what will become the external theta argument of the verb 'hope'. (The internal argument of 'hope' remains the embedded TP 'John wash' clause: <John hopes x (x, John wash)>).

Since the NOM Case of 'John' cannot be checked here within the lexical/thematic VP (where a default accusative case would result (= 'him')), 'John' must 'raise' to the light verb *vP* which

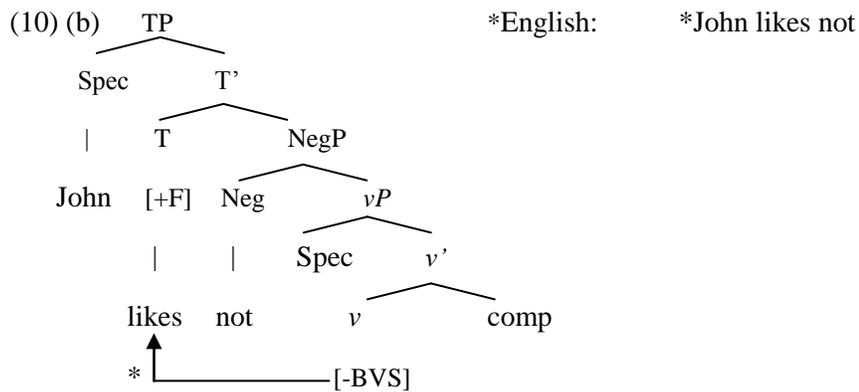
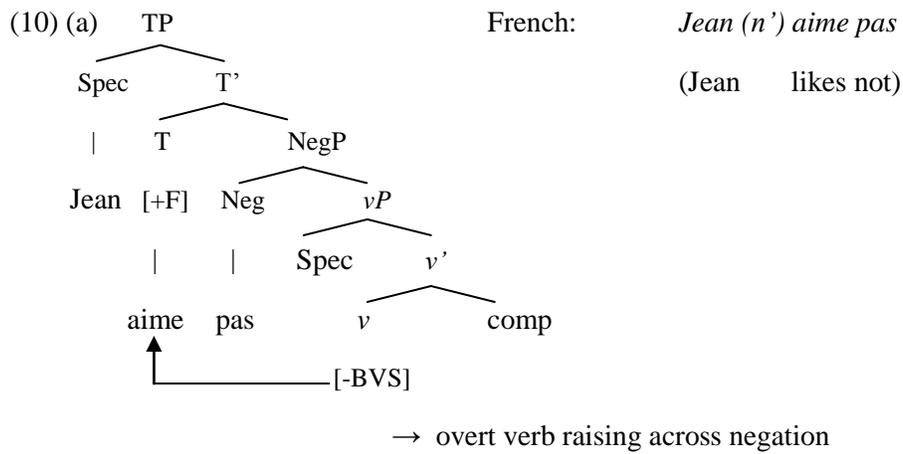
serves as a **functional category** for purposes of checking Case, Tense and Agreement. 'John' situates within the Spec-of-*vP* whereby NOM case is assigned (= 'He'). Note that theta-marking is barred from being assigned within the light *vP*.

### 1.1.3 A Note on Main Verb Movement: The [-Bare Verb Stem] parameter

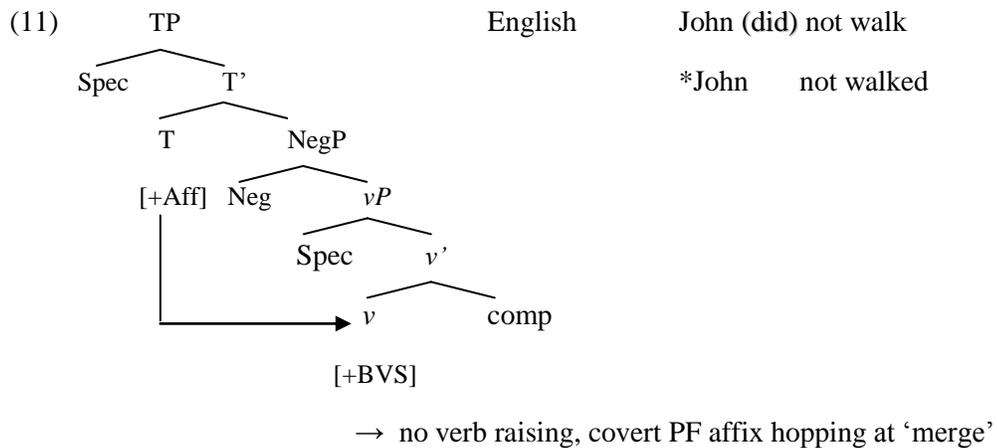
Regarding French style main verb movement, it may be that French main verbs (as well as English Auxiliary verbs *Be*, *Have*), are 'strong' and come fully inflected from out of the lexicon since such 'strong' verbs are not allowed to be drawn from the lexicon in their 'Bare Form'—namely, French verbs must show affixal material, e.g., infinitives in French have an (affixal) ending, etc. This **Strong** feature is said to force French verbs to raise in the overt (open) syntax across negation as **Head to Head movement**. There is no **adjacency** demand on such movement so an intervening NegP doesn't block merger of V with T. In English, Auxiliary verbs 'Be', 'Have' don't have a bare stem counter-part and so too can be taken as fully inflected strong forms, thus resembling French main verbs. Unlike French raising verbs showing Head-to-Head movement, English AUX verbs however immediately insert into T. This is because T in English is **affixal** in nature, (not **featural**) where only the attracting affix-movement of the V stem can attach to the T affix particle. Hence, fully inflected items such as the AUX verb cannot 'move' in a head-to-head capacity into T in English. So, the fact that AUX verbs are not affixal bans any such movement of the AUX verb from V to T.

It may be that it is this **Bare Verb Stem** [BVS] feature which helps define whether or not a verb will move and raise from out of a lower V of VP into a T of TP (as with French style raising verbs), or if the verb will insert immediately in T of TP (as is the case with English auxiliaries), or if only covert movement applies.

Consider below some tree analyses showing the +/- BVS as affixal in nature in deciding whether or not movement must ensue to satisfy the affixal feature:



Unlike the French structure in (10a) above, English main verbs (10b) cannot raise given that English verbs need an [Aff] feature to attract the bare stem for merger. (In English the Aux ‘do’ directly inserts—via ‘merge’—capturing Tense/Agreement). If the English verb were to raise, head-to-head, the [F] featural feature on T would not be properly checked—English verbs are not ‘featural’ but ‘affixal’ in nature—and the derivation would crash. This is tantamount to saying that English main verbs don’t undergo (overt) Head ‘movement’, but rather (covert) PF ‘merger’.



Consider the above example \**John not walked*. The past tense verb ‘walked’ is not in its bare form so it must have attached to the [AFF] feature in T. But ‘not’ intervenes between T and V ‘walk’, hence there is no **adjacency hold**. T and V cannot merge therefore, and the only way to save the derivation is for there to either be an AUX direct insert (*John does not walk*) or for there to be covert PF merger via affix hopping.

- (12) English:           (a) \*John not likes.  
                              (b) \*John likes not.

English presents us with the following inflectional properties:

(13) English

- (a) English main verbs are ‘weak’, they come out of the lexicon as bare stems.
- (b) In order to attach an affix [AFF], {ed}, {s}, stems must raise and merge with T.
- (c) However, NegP intervenes blocking merger of T with V. (Adjacency).
- (d) Conclusion: affix must lower onto verb stem via covert PF merger.

(14) French

- (a) French verbs are ‘strong’, they come out of the lexicon fully inflected.
- (b) They insert into T to check the featural feature on T. ‘Featural’ requires that the whole lexical item insert in one fell swoop via Head movement. T is not affixal in nature, hence there is no decomposition of stem-affix break-up in the derivation.
- (c) Neg doesn’t act as a barrier since French verbs insert into T via Head movement. Head movement doesn’t demand an adjacency condition where the two phrases would have to be next to one another without any interceding phrase (such as NegP).

## Summary

It is assumed that NegP blocks any possible English overt Head-to-Head movement (Adjacency). Why might there be no verb raising in English? English is an [+Aff] language, it is not featural and so must resort to a non head movement such as PF merge. While there may be overt or covert merge possibilities at PF, there is also an adjacency condition in play since NegP intercedes between the T and V. This eliminates the possibility of any overt merge for English. English main verbs, unlike AUX, do not have the strong capacity to insert directly into T. Since English is a Bare Verb Stem

language, it cannot be attracted by a French type featural T. A featural T forces overt head insertion of the whole lexical item. Since French is a Non-BVS language, possible decomposition of stem+affix is not permitted, forcing a kind of pied-piping of the whole lexical item to insert from V to T in one fell swoop. English is a decomposed BVS language which allows a bare stem to detach from its affix. BVS items in English are pulled from out of the lexicon in the BVS state and must undergo stem-affix inflection.

Given French is a **Verb Featural** language, which requires a lexical head to be hosted within T, it is this ‘featural’ feature which drives overt verb raising in French. Connected to this feature specificity is the classification that French is a minus **Bare Verb** Stem language [-BVS], with Tense /INFL requiring a featural property.

English T is **Affixal** which allows a lexical stem to merge with [Aff] covertly at PF. This covert style raising may be the default since it is the most economical, with overt movement being the most costly.

It is assumed that an Affixal Tense INFLECTION must merge with a V. This is a PF process where **adjacency** conditions hold for merger. This is seen as being very different from **Head movement** (French style verb raising) which does not demand adjacency. Tense (Inflection) is both strong for French and English. The only difference between the two languages is that English is also a BVS language type. This requires an [Aff] feature on T to force covert raising of the bare verb to the affix feature on T. However, English Auxiliary verbs *Be*, *Have*, not being affixal in nature but rather featural, have the possibility of immediately inserting into T without crossing NegP—e.g.,

(15) (a) [TP John [T **does**] [NegP [Neg not] [VP [V like...]]]]

(b) \*[TP John [T] [NegP [Neg not] [VP [V like-s]]]]

(c) [TP Jean [T **aime**] [NegP [Neg pas] [VP [V **aime**...]]]]

## Heads vs Adjunct

Adjuncts are qualitatively different from Spec or Head in this way. Consider differences between Neg (Head) of NegP ‘not’ and an Adverbial Adjunct ‘never’:

(16) (a) \*[TP John [T [+past] [NegP [Neg not] [VP [V left]]]]]      \*(John not left)

(b) [TP John [T [+past] [Adjunct [Adv never] [VP [V left]]]]] (John never left)

In order for the main verb ‘leave’ to acquire the appropriate [+Past] feature, the bare stem ‘leave’ must merge with a tense affix on T. But since ‘not’ (NegP) is intervening (as was the case in our examples above), any merger is phonologically blocked. Merger must be of an adjacent operation in this case. However, note in (16b) how Adjuncts don’t block such merger.

Also note how the insertion of an Auxiliary directly into T saves the derivation (16c):

(16) (c) [TP John [T is] [NegP [Neg not] [VP [V leaving]]]]

(d) \*[TP John [T] [NegP [Neg not] [VP [V is leaving]]]]

Let’s consider the paradigm:

(17) T / INFL... V...                      → French verbs (and English AUX)

+F                      +F

(18) T / INFL... V...                      → English main verbs

+Aff                      bare

(19) \* T / INFL... V...

+F                      bare                      → Derivation crash.

English main verbs can’t merge

### 1.1.4 Theta $\theta$ -marking: Raising vs. Control Predicates

Following the above section on Theta marking, let's now briefly note how theta-role assignments interact with differing sentence types, referred to as **Raising vs. Control Predicate** sentence types. Before we examine the role of arguments and their theta-role assignments, we need to spell-out exactly what the criterion is for theta marking.

**Theta criterion.** The theta criterion calls for the following stipulation—that:

- (i) One and only one argument maps onto a specific theta assignment,
- (ii) There must be a semantic 'one-to-one' mapping between argument and theta assignment.

What the above criterion means is that if a given sentence, for instance, has three arguments (i.e., three DPs), then there must be three separate theta roles assigned to each argument. For instance, the verb 'give' in the sentence below has the semantic/argument structure which requires there to be three arguments, thus three separate theta roles:

(20) *John gave flowers to Mary*

In sentence (20) above, the syntactic DP-subject 'John' receives the theta-role **Agent**, the syntactic Direct DP-object 'flowers' receives **Theme**, and the syntactic Indirect DP-object 'Mary' receives **Goal**.

Using this criterion, we can determine the argument/syntactic structure of a given sentence, with the main distinction playing out between **Raising vs. Control Predicate** type sentences. Below, we show the verb 'likely' functioning as a raising predicate and the verb 'reluctant' functioning as a control predicate, with only the former DP-subject of the raising predicate allowing the expletive 'it' to insert as a subject of the expression (shown in (21b) contra (21d)).

- (21) (a) Mary is 'likely' to speak. **Raising**
- (b) It is *likely* that Mary will speak.
- (c) Mary is 'reluctant' to speak **Control**
- (d) \*It is *reluctant* that Mary will speak.



Since ‘Mary’ in (22b) cannot receive a new theta role, as shown by the acceptance of the non-thematic expletive ‘it’ in its place, the only way we can be assured that the theta information (*Mary is...*) can percolate backward to the moved constituent of the original position (*Mary will...*) is to claim that **traces** form a **chain** whereby both thematic/semantic as well as syntactic material freely flow from the original, but now moved constituent, to the newly created host constituent. It is in this respect that **traces** (with this free flowing exchange of thematic/syntactic material) will operate in a very different manner from **PRO** (as discussed below) where no such chain is formed.

The important point to take away from this discussion is twofold: (i) that only a trace can accommodate an expletive ‘it’ and (ii) that this expletive substitution test might help us in determining the status of a given sentence (viz., if a sentence can host an expletive ‘it’, it is Raising type sentence, if it cannot, it is a Control type sentence—with subsequent impact on theta-role assignment).

Similar to how the above subject-to-subject raising works in conjunction to Raising type structures, there is also **Subject-to-Object Raising**. Consider the example below showing how complex sentences allow double DP-subjects, and therefore double agents, as provided by the theta criterion, which calls for such a one-to-one mapping.

(22) Agent      Agent (= complex sentence)



(d) [Mary desires [you to speak]].

**Subject-to-Object Raising**

(e) [*It* is desired that [ *you* speak]]. (= passive)

(f) [Mary desires you<sub>i</sub> [t<sub>i</sub> to speak]].

**Control Predicates.** In sentences where the expletive *it* cannot be employed (where only a true DP argument can insert) what then needs to be determined is whether or not the structure in question is of a Control nature. If so, then only a PRO can insert in the matrix clause with no such chain formation, thus assuring that no free flow of semantic/syntactic material can be exchanged between the two DP positions in accordance with the theta criteria (viz., that there is a one-to-one mapping between an argument and a theta role, and that one argument can never take two theta roles). In other words, without a chain binding formation, two arguments can remain autonomous.

The only kind of **empty category** that can be employed in such circumstances is the PRO. Given this difference, PRO structures may have a given DP-argument change its theta-role assignment over the course of the sentence derivation, shifting theta-roles as it moves up the tree.

Consider below:

(23) Agent



(a) \*[Mary<sub>i</sub> is *reluctant* [t<sub>i</sub> to speak]]. (Not a Raising predicate)



Exp



(b) \*[It is reluctant that [Mary will speak]]. (Theta Criterion violation)

Experiencer



Agent



(Correct Control predicate)

(c) [Mary is reluctant [PRO to speak]].

(Mary can be assigned two  $\Theta$ -roles)

One final way we can determine whether or not a sentence is of a **raising** nature—which involves the subject of the matrix clause to move and become a new subject of the main clause (subject-to-subject movement)—is to see if the raising verb denotes a word like ‘seem’. Consider below how the following raising predicates can denote the quintessential raising verb ‘seem’ (as opposed to the control verb ‘try’):

(23 cont.)

(d) [*There*<sub>i</sub> seem to be [*several students*<sub>i</sub> at the door]]. **Raising**

(d') [Several students<sub>i</sub> seem to be [~~several students~~-t<sub>i</sub> at the door]].

(e) \*[*There*<sub>i</sub> tried to be [*several students*<sub>i</sub> at the door]]. **Control**

(e') \*[Several students<sub>i</sub> tried to be [~~several students~~-t<sub>i</sub> at the door]].

(f) [ TP John<sub>i</sub> does [ VP t<sub>i</sub> *seem* [ TP to [vP t<sub>i</sub> like Mary]]]]. **Raising**

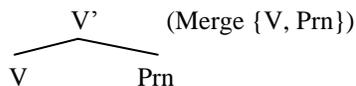
**non- $\Theta$ -marked:** *John/It seems*

**$\Theta$ -marked:** *John likes*



Case licensing via a two step path:

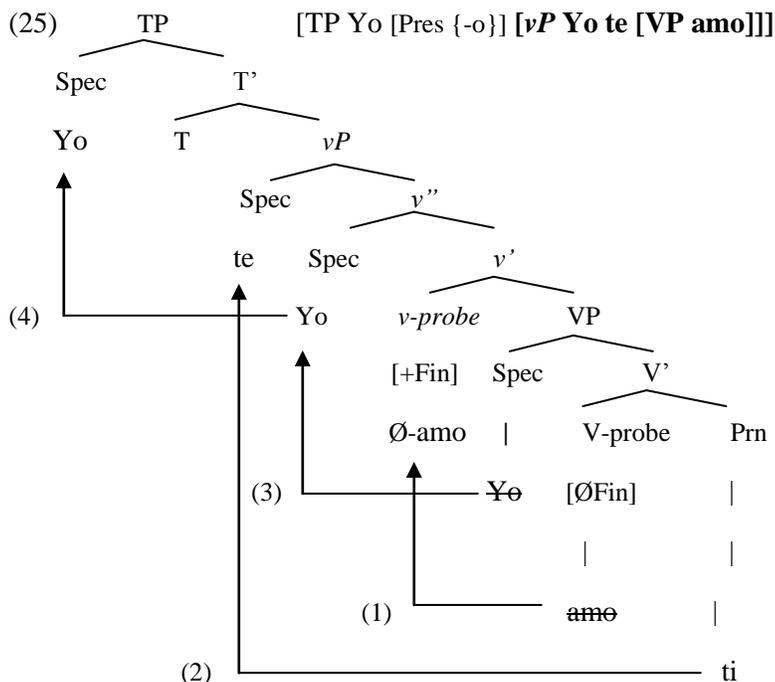
- (0) The verb 'kiss' enters into the derivation by first merging V' with the Pronoun 'Mary' forming a V' (V-bar) 'kiss Mary'.



- (1) The verb 'kiss' in its current V-bar expression maintains a [ $\emptyset$ Fin] feature. In order for the verb to become Finite, it must overtly raise to v' of the light verb  $\nu P$ . This movement is motivated by the  $\nu$ -probe (of  $\nu P$ ) which searches for its closest verbal expression in order to assign it the feature [+Fin]. In addition, the verb 'kiss' attaches to a null causative affix ( $\emptyset$ ) as is attributed to light verbs.

- (2) The nominal subject 'Him' (prior to movement) must raise to Spec-of- $\nu P$  in order to receive NOM case ('He'). This movement too is motivated by the probe  $\nu$ -probe in the sense that the light verb requires there to be a specifier as part of the verb's selective properties. The nearest goal-nominal is the nominal 'him' in its default mode of expression.

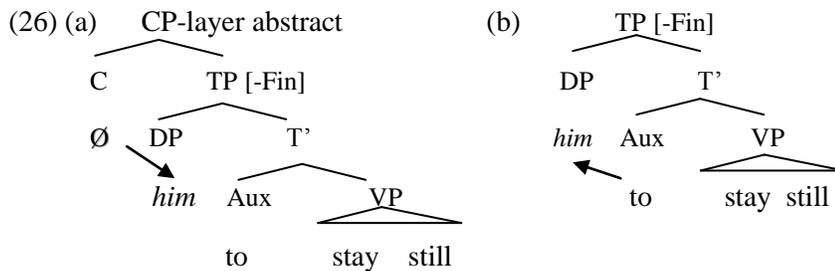
**Spanish: An object raising language**



Objects must raise to the outer spec of *vP*. Why? If we assume that Objects/Subjects raise as determined by a [+/- Fin] vs. [∅ Fin] parameter setting (a local probe-goal mechanism), we then can claim that (i) Subjects raise due to an overtly realized [+Fin] probe-goal (as in English), (ii) Objects raise due to an overtly realized [-Fin] probe-goal (as in Spanish), and (iii) Objects raise covertly (in English) due to [∅ Fin] parameter setting on the Object probe-goal mechanism. As the structure shows, one way to think about case assignment is to follow the verb from main verb [∅ Fin] where it checks the Object, following it up to the *light verb* position [+Fin] where it then checks the Subject. If this analogy is on the right track, then all verbs must move into a *vP* position, motivating case assignments along the way.

Regarding the following literature review on case assignment, the main thrust of the discussion will be based on whether or not we wish to assume a ‘top-down’ **c-command hypothesis** for case assignment (describing a left-to-right c-command ‘by’), or a more economical **structure-building** hypothesis which takes a ‘bottom-up’ (c-command ‘from’) approach. (The two distinctions however seem to melt and become moot when discussed within the overall framework of the **Probe-Goal** relation. In any event, as expressed from the outset, it remains instructive to teeter with the two distinctions to see just how far we can go with shaping our final conclusion. The main difference between the two hypotheses will be whether or not we want to assume higher abstract layers of tree structure which are in all practical measure void of any phono-syntactic material. Hence, in assuming a bottom-up model, trees merge and phrases project only when there is evidence of linguistic material generated for that layer.

Consider in (26a) a CP abstract-layer on top of TP: *I want [him to stay still]*.



In (26a) above, a **null** {∅} C sits on top of TP in order to maintain a left-to-right c-command relation, providing the pronoun with a [-Nom] case. The CP can be speculative in its projection, claiming that notions of **force** such as declarative or interrogative are what is behind the null C. Another account would suggest that the full CP found in structure (26a) above is not only appropriate but required given that we do find required complement clauses being introduced by a [CP] complementizer such as *for*—e.g.,

(27) (a) *I long* [CP *for him to come home*].

(b) \**I long* [TP *him to come home*].

In any event, by assuming the full CP structure, as opposed to a reduced TP structure, we are forced into positing a certain amount of *abstract* phrasal projection whenever a given complementizer (such as *for*) doesn't appear. By claiming this **null comp position**, this also allows us to maintain that such vacuous CP projections are transitive in nature, thus fulfilling the requirement that the complement to its right provide for appropriate [-Nom] case.

So let's turn to the array of examples that can be found with or without the overt complementizer **for**:

(c) *I need* [CP [C *for*] [TP *him to stay still*]]. (C Filled)

(d) *I need* [CP [C  $\emptyset$ ] [TP *him to stay still*]]. (C empty)

(e) *I need* [CP [C  $\emptyset$ ] [TP [T  $\emptyset$ ] [*vP him still*]]]. (T empty)

By taking as the 'null hypothesis' that the structure involved with the expressions above requires a full CP, we then need to ask what of **elliptical** structures with material missing as found in (27e). Well, one way around the issue is to stipulate that elliptical structures are merely phonologically reduced instantiations of their fully fledged syntactic counterparts. What this means is that in cases where there may be optionality regarding specific syntactic material, the overall structure continues to project (say at LF). This renders (27e) the same as (27d, or 27c). Note however that we emphasize the notion of optionality, as the give and take between elliptical and full formed structures.

But what of non-optional reduced structures? For instance, in some dialects of African American English (AAE), there is no optionality to ellipsis, rather the reduced structure is the full grammar onto itself. Surely, such an observation would lead one into supposing that we are dealing now with two separate grammars. (And this is the right way to think about it). So, an argument could be posed suggesting that when a structure such as (27e) above is part of the full, target grammar, and doesn't contain unexpressed antecedents, etc. then, via our **structure building** 'null hypothesis', we must assume only that structure that gets produced gets parsed. Hence, in AAE, the utterance *I need him still* may be analyzed as a *vP* if there is no further

evidence of the more articulated counterpart.

The AAE example is not too far off the mark. It has been reported that where there may be certain deletions regarding clitic formations, such deletions are ‘not optional’, but are rather a ‘systematic’ aspect of AAE grammar. With one eye on the aforementioned ‘for-deletion’ for analogy, consider the required ‘**is**’ **clitic** deletion found in AAE:

- (27) (f) He’s gonna run, I know he **is**. (Standard English)  
(g) He- $\emptyset$  gonna run, I know he **is**. (AAE)  
(= He **is** going to run)  
(h) \*He gonna run, I know he- $\emptyset$  (not permitted in AAE)

In AAE the verb ‘be’ (*is*) deletes only in the environment whereby it could otherwise form as a clitic (i.e., a *medial position* intra-phrasal). As seen in (h), ‘Be’ (*is*) can never delete in AAE when the verb falls at the end of a phrase: *final position* ends of phrases are a non clitic-forming position. This suggests that ‘be’ deletion in AAE is systematic and part of a larger grammar. It is therefore linguistically incorrect to suggest that the deletion in AAE forms a subset of Standard English grammar in ways which suggest AAE is an ‘inferior’ sub-grammar to the Standard English grammar, and that such errors show a mere carelessness toward Standard English. Rather, the correct way to view this is to say that AAE forms its own grammar, autonomous from that of Standard English grammar and that AAE abides by its own sets of rules (as indicated in (27h) above).

So, it may not be the case that we have an inherent tension between providing either a *vacuous* model with abstract ‘top-down’ projections (a CP-projection, thus forcing a TP as well), or a ‘bottom-up’ account that maintains the minimal amount of structure possible (a prosaic *vP*-projection). The way around the tension is to stipulate that the full structure of a given projection must always project whether or not it is in an elliptical form or not. While the notion of **optionality** directly plays into this defining status, non-optionality also serves to define potential reduced phrase structures as made available in dialectal speech.

### 1.2.3 Adverbial Expressions.

There is a second complicating factor that becomes involved with the tension. Notice how such *for*-complementizers are forced into projecting whenever the main verb (*want*) gets separated from its subject of the complement clause (*him*). This separation is caused by the **adverbial expression** *more than anything else* being situated between the main verb (*want*) and lower subject (*him*):

- (28) (a) I need [CP [TP him to be still]]. (adjacent)
- (b) I need [CP [C ~~for~~][TP him to be still]].
- (c) We wanted more than nothing else [**for** him to be still]. (none adjacency)
- (d) I need \*[**for** him to be still].
- (e) I need more than nothing else \*[TP him to be still].
- (f) I need more than nothing else \*[vP him still].

In considering this effect of adjacency, there is further strong syntactic evidence that in fact the full CP projection in (28b) is the probable structure given that the complementizer ‘for’ is required whenever the main verb ‘want’ is separated from the subject of the complement clause *him to be quite*. In addition, and as cited in our opening discussion, if we were to assume a TP (and not a CP), we would also have to assume that a **probing** c-commanding element may find its **goal** either in a lower phase or a higher phrase, (and where it may in fact skip over phrases along the way which do not contain an appropriate goal landing site)—hence a bi-directional c-command relation. (The bi-directional notation is illustrated by c-command ‘by’ vs. c-command ‘from’ as discussed in the following section). In the TP structure found in (26b), no vacuous CP-layer need be assumed since case is now considered as a reflex of the [-Fin] verb (of a head-comp relation and not a spec-head relation).

Given all this, there could be some room to speculate still that [-Nom] case on ‘him’ is indeed assigned by the lower clause (bottom-up) and has nothing to do with the higher Comp ‘for’.

Consider examples (28g-i) below:

- (28) (g) We wished more than anything else [*for* [*him to be safe*]]

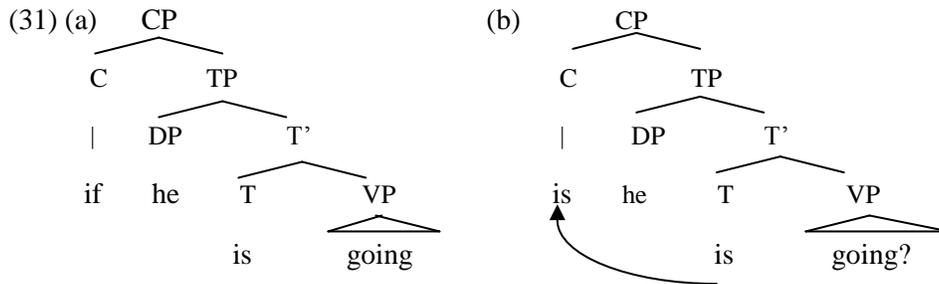
It seems the true constituency is [*him to be safe*] without the Comp ‘for’, and that ‘for’ remains outside the clause.

- (h) We wished more than anything else *for* [it]
- (i) \*We wished more than anything else [it]



The presence of CP is real. The CP ‘if-clause’ blocks any additional CP operation which might merge, such as an Aux inversion.

Consider the structures below:



It seems ‘if’ and ‘is’ occupy the same syntactic slot within CP (i.e., the Head of CP). The fact that native speakers never say e.g. *\*I want to know if is he going to the party?* shows that native speakers have tacit knowledge of a CP>TP configuration.

### 1.3.2 Evidence for TP

Evidence for positing a bottom-up TP for case assignment comes from child language acquisition as well as from certain dialects such as African-American English (AAE) or English Creole (EC), both grammars which suggest that language phrase structure should be built-up layer by layer in a bottom-up fashion, as shown by utterances which contain Case, but no Tense:

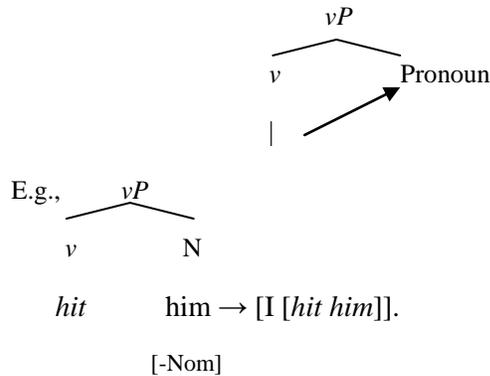
(32) (a) [ $vP$  [ $_{Spec1}$  He] (be) tall]. (AAE)

(b) [ $vP$  [ $_{Spec2}$  What] they do?] (EC)

(See template sentence Tree (7) in Chapter 15).



**(C) Case assignment of Objects ('by' a Transitive Verb): *Left-to-Right***



As can be seen by this account, Subjects derive their case via a directional ‘Right-to-Left’ configuration, mapping onto a syntactic ‘Head-to-Spec’ configuration. Objects, on the other hand, derive their case via a ‘Left-to-Right’ configuration, mapping onto ‘Head-to-Comp’. For left-right configurations, **c-command** seems to work—e.g., for the above Object configuration, the Transitive (Head) verb c-commands the Object pronoun. For Subjects however, c-command is not so straightforward. In short, what seems to be the case under this account is that when there is c-command **‘from’ a position**, we are dealing with Subject Pronouns, (Subjects of either Finite or Infinitive Clauses).

When there is c-command **‘by’ a position**, we are dealing with Object Pronouns.

Consider the following c-command arrangement:

- (i) if c-commanding ‘from’ (*light verb*) *vP* [+Finite], the c-commanding Spec is then a [+Nom] Subject pronoun.
- (ii) If c-commanding ‘from’ a VP [-Finite], the c-commanding Spec is then a [-Nom] Subject pronoun.
- (iii) If c-commanded ‘by’ a Transitive Head, the c-commanded pronoun is then [-Nom].
- (iv) If no c-command relation is formed, [-Nom] Accusative case by default.

*Note:* We are using conventional notation here in showing a functional light verb as *vP* (small italic script ‘v’) and a lexical main verb as VP (with a large script ‘V’).

This manner of case assignment is intuitive on the basis that Subjects of Finite clauses are [+Nom] and Subjects of Non-Finite clauses are [-Nom], as shown below:

**(D) Structural case (the ‘Finiteness Effect’)**

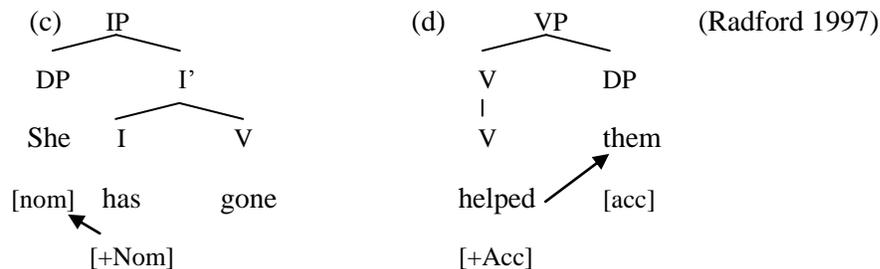
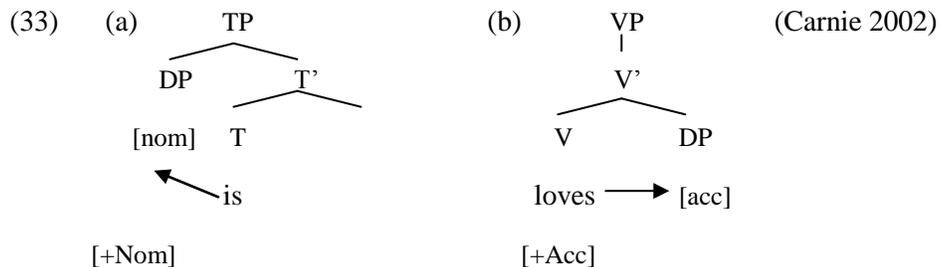
A given pronoun is:

- (i) Nominative if it is the Subject of a Finite Clause,
- (ii) Genitive if it is the Specifier possessor in a possessive structure,
- (iii) Accusative otherwise by default.

As noted above, our account of subject case assignment is not entirely made precise since c-command typically assumes a *left-to-right* configuration, and not a *right-to-left* configuration. Or if ‘sister-to-sister’ configurations are involved, no directionality can be claimed. (See note on c-command in §1.4.5 below). In other words, c-command naturally follows when there is commanded ‘by’ and not commanding ‘from’. Notwithstanding these complications, the intuition that case assignments follow from a finiteness effect stands, and at the very least, our second alternative account makes for a good pedagogy on structural case.

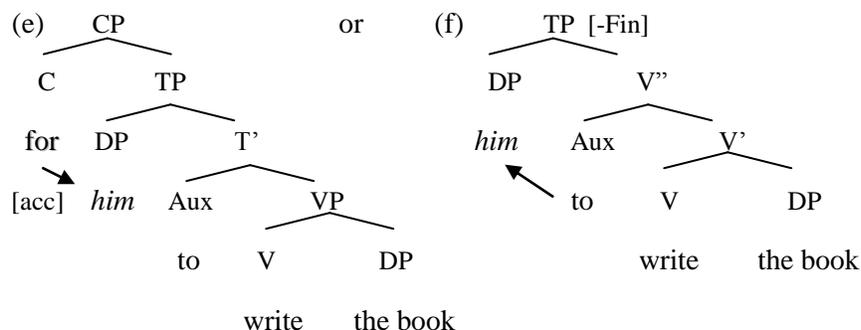
The current syntactic literature on case does support the notion that bi-directionality is assumed as governed by Head-to-Spec and Head-to-Comp.

Consider the following tree diagrams below:



The discussion on directionality also comes in play if we consider how current literature comes to regard the Acc case marking of subjects of infinitive clauses—e.g.,

*I wanted [ (for) him to write the book].*



Example (33e) above shows that it requires an external CP in order to check ACC case of *him* (from a c-command relation)—viz., either an overt transitive preposition (such as *for*) or, if there is no phonological presence of a preposition in C, then a null Prep in C. However, (33f) conversely suggests that *him* could be checked internally via the infinitive verbal particle (*to*) positioned within Aux which is not in a left-to-right c-command relation, but rather in a right-to-left non-c-command relation. (See Tree Template (2) Chapter 15 and Chapter 5, §5.3 for Aux as host to infinitive participles ‘to’). It is in this context that notions of c-command ‘by’ vs. ‘from’ enter into our discussion as would be required if we wish to postulate the minimum of structure possible for a derivation to converge—e.g., the following hypothesis that the lower *vP* determines case (as opposed to the higher TP) falls within this notion of **minimum structure necessary to converge**. In the main, we will come to accept the structure in (33f) over (33e) as will be made clear below.

Having spelled out this second alternative account on case—which swept aside some real theoretical concerns—let us now turn to the more conventional treatment of case assignment, our first account.

#### 1.4. Case Assignment: A Literature Review (a first account)

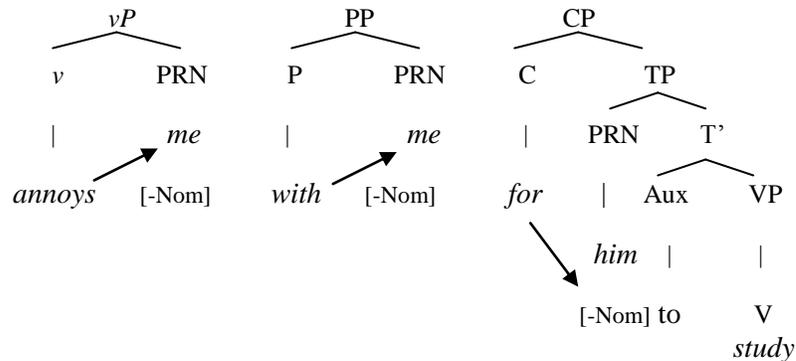
The first and most commonly accepted account is to treat c-command in a more uniform manner by only specifying a ‘left-to-right’ c-command. In so doing, a bit more abstract phrase structure (i.e., the CP) has to be introduced and assumed in order to set up the higher commanding Spec-of-CP above the normal declarative TP structure, thus rendering the left-to-right configuration required. Consider the following traditional analysis of case assignment below.

### 1.4.1 Accusative Case

A given Pronoun (PRN) is assigned **Accusative case** if c-commanded by a **Transitive Head/Verb** (e.g., *hit*, *annoy*) found in the head of *vP*, a **Transitive Preposition** (e.g., *with*, *in*) found in the head of PP, or a ‘Transitive Complementizer’ (e.g., *for*) found in the head of CP. Recall that our definition of transitive here is that the Head/Verb requires a Complement/Argument. (Transitives require an argument in their complement position: e.g., Prepositions require a minus NOM [-Nom] DP (*with me*), transitive verbs require a [-Nom] DP (*John annoys him*), and so on.

For example, consider the transitive structures below:

(34) (a) John [*annoys me*].    (b) John is [*with me*].    (c) I need [*for him to study*].



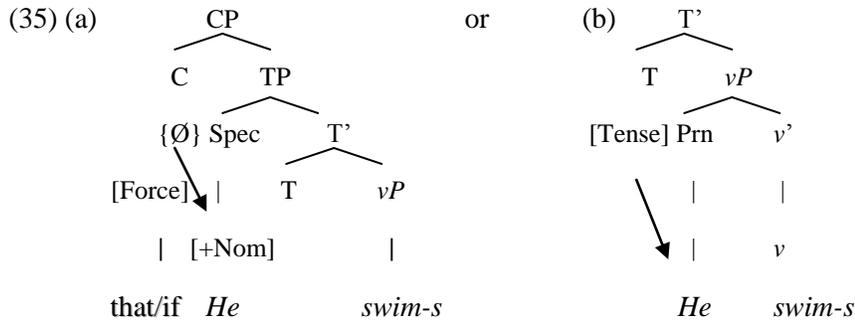
### 1.4.2 Nominative case

A given Pronoun (PRN) is assigned **Nominative case** if c-commanded by an ‘Intransitive Finite Complementizer’ (e.g., *that*, *if*), or a ‘null declarative/(force) main clause complementizer’ { $\emptyset$ } projecting from out of a CP (a CP>TP c-command configuration). (Alternatively, spec-of-*vP* may similarly receive Nom case by virtue of the fact that the local or closest Pronoun is c-commanded by T, an intransitive finite affix [+Fin/Tense] (as shown in (35b) below). The result of selecting (35a) over (35b) below forces us into acknowledging that all declarative main clause TPs are in fact CPs (and here is where the added abstraction lies).

Consider [+Nom] case assignment below as being assigned via the null { $\emptyset$ } declarative-force complementizer (as is found with embedded that/if-clauses):

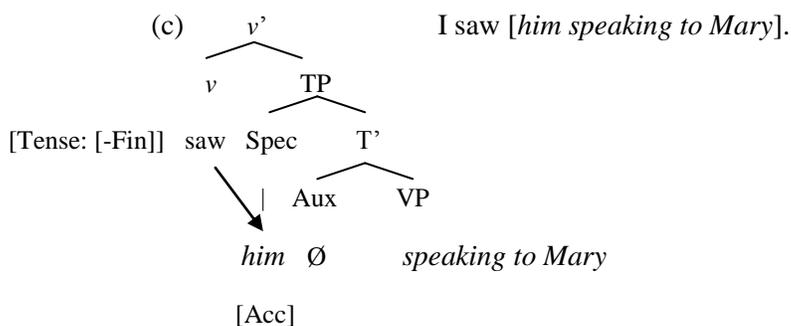
**CP c-command Nom Case**

**TP c-command Nom Case ?**



As a result of the CP c-command account in (35a) above, any *defective* TP that fails to project or extend from a full CP would be demoted to being a [-Nom] projection—similar to what we find with subject of non-finite clauses. Subjects of non-finite clauses do not extend their projection above TP to a CP (the highest overall project is that of a TP), and so as a result of not having the CP layer, (35b) above doesn't apply. (Note: In accepting (35a) over (35b), it may be that the TP structure in (35b) would specify for Tense only: Case being marked by some other means (i.e., default). Hence, the consequence of a non-projecting CP is that the pronoun found in Spec-of-TP—which sits directly under a  $v'$  ( $v$ -bar of  $vP$ )—gets assigned [-Nom] case (by default).

Consider the pronoun of a non-finite clause in (35c) as compared to (35b), with TP marked only for tense and accusative case via [-Fin] tense/default:



### 1.4.3 TP Infinitives as Defective

There are two main reasons to suggest that subjects of the TP Infinitive clause are in some way defective: First, TP Infinitives lack the upper CP layer which is required of all sentences (Force)—i.e., Finite TPs always project a CP layer. Second, Specifiers of TP Infinitives receive their case [-Nom] via a preceding verb outside of its local clause (making the subject of infinitive clauses **exceptionally case marked** (ECM) since case is usually assigned within the same local phrase).

For these two reasons, we can posit a somewhat alternative structure for TP Infinitives by suggesting that they are adjuncts to VPs (i.e., they simply extend and attach to the VP). In other words, Specifiers of Infinitive TPs adjoin to the VP in forming a non-finite clause. This is somewhat counter-intuitive since one typically thinks of a TP as containing Tense and Agreement features, properties usually associated with finite clauses. But in this respect, the non-finite TP is a *defective* clause in that it sits on top of and c-commands a VP (and not a vP), hence it projects only that material associated with the VP. This is one account for why the case of infinitive subjects is [-Nom]. In addition to this, we can account for the very fact that there is no Tense/Agreement [-T/Agr] under a TP/VP by invoking the same argument—e.g.,

(36) (a) I saw [TP/VP [-T/Agr] *her going to school*].

(b) I want [TP/VP [-T/Agr] *them to know the truth*].

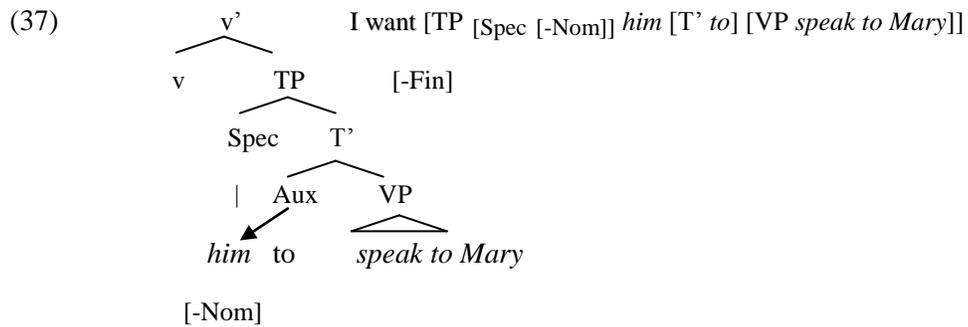
(c) I saw [TP/VP [-T/Agr] *him kick the ball*].

Finally, by suggesting that the overall Infinitive TP is an adjunct to VP, we may, to a certain degree, no longer have the problem of exceptional case marking since adjuncts could be theoretically assumed to be a mere extension of the lower clause.

(*Note*: Why assume a TP at all? you ask. Well, the spec-of-TP is a natural place to host a subject, albeit a subject of an infinitive clause. But there are other ways we could capture this same adjunct relation: namely, by having the mere VP extend an extra Spec position. (**Multi-spec positions**)).

Let's pick up now on our discussions and accounts of case as presented above. While the first account on case is the more commonly held account, we will run with our second/alternative account in the proceeding pages not only due to its simplicity of structure, passing intuition of the finiteness effect, but for its pedagogical application. Our accepted (second) structure-building account is the only account that follows **principles of economy**, such as **shortest move**, **earliness principle**, **minimum of structure**, etc.—all principles motivated by current **minimalist** syntactic theory. Let's just take one principle here and explain.

**Earliness Principle.** The earliness principle basically states that as soon as a formal element is introduced in a derivation, it must immediately proceed to be checked within the nearest relevant phase of that present structure before further tree formations can extend upward. In considering [-Nom] case for example, what this means is that [-Nom] must be checked well before the rest of the tree is formed—checking must be achieved as early as possible in a derivation (which is phase-driven) in a bottom-up manner. Hence [-Nom] subjects of infinitive clauses must be immediately checked via [T' [Aux]] to within the same clause, hence eliminating the need for ECM verbs:

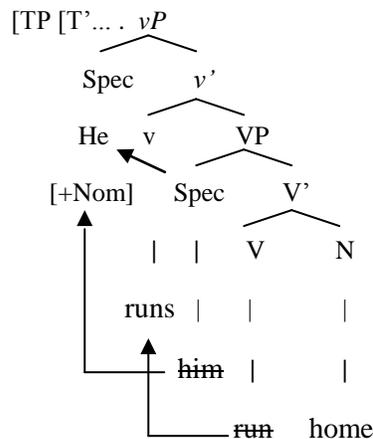


So, let's recap below our second (alternative) 'structure-building' account now having looked at the first account.

#### 1.4.4 Case assignment recap: bottom-up 'structure-building' account

(38) If a spec-of  $vP$ , pronoun = [+Nom]

E.g., *He runs home*



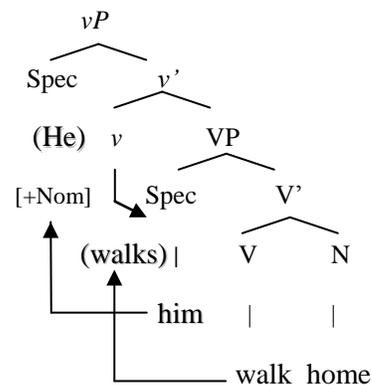
The structure above shows (–strikethrough– for movement) ‘VP-Internal Subject Hypothesis’ (VISH) in which the subject ‘he’ first begins its projection from out of the lower spec-of-VP, as a [-Nom] ‘him’, and subsequently raises to the higher spec-of-*vP* where it receives its proper [+Nom] case (via **spec-to-spec movement**). The verb ‘run’ is shown to raise out of its base-generated non-finite VP slot, subsequently placing into head of *vP* to receive its proper Tense/Agreement

(via **head-to-head movement**) and enters into a local checking configuration with T’. Note that the reduced material as found within VP is consistent with known facts about the proposed **Lexical VP stage-1** as presented in our child language chapter.

*Note:* The additional movement of the [+Nom] subject from out of Spec-of-*vP* and into Spec-of-TP, as well as the checking configuration of the tensed verb insitu in *v*’ but in relation to T’ will later be shown in the sections that follow.

(39) If a Spec-of-VP, pronoun = [-Nom]

e.g., *him walk*



In sum, what we are saying here is that [+Nom] case is a reflex of a spec position being commanded by *vP*, and that [-Nom] case is a reflex of a spec position being commanded by VP. The implications here can be extended to accounting for subjects of non-finite/small clauses which also receive [-Nom] case—e.g.,

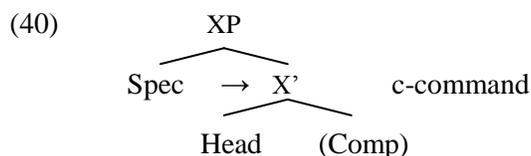
- (i) I want [*him to swim in the mornings*].
- (ii) I need [*her walking more often*].
- (iii) She saw [*him walk home*].

*Note:* It was shown in Chapter 15 that subjects of infinitives clauses are actually positioned as spec of TP though commanded by a VP (instead of a *vP*).

Case is then said to be assigned via movement out of VP and into *vP*: in order for the original base-generated subject (of VP) to receive proper [+Nom] case, it must move and raise up to *vP*, forming a double VP-projection. Small clauses found at the lexical stage-1 are then said to be stuck within the VP as a result of the subject's absence of movement into *vP*, thus assigning to the subject a default [-Nom] case.

### 1.4.5 A note on c-command

In short, what we can say about c-command is that it is a hierarchical configuration which accounts for the relationship between two constituents. Constituent *x* is said to c-command constituent *y* if *x* is no lower than *y* in the structure (if *x* is above *y*). Within a Specifier-Head configuration, we can say that the Spec c-commands its Head in a Spec-Head relation:



In the above structure, the Spec c-commands its Head. The Head doesn't c-command Spec (hence a left-to-rightward relation is imposed). (See Glossary for c-command).

*A caveat:* In our second alternative account on case, we expanded on the notion of c-command by giving it a **bi-directional** configuration—viz., c-commanded 'by' a higher position (for objects) and c-commanded 'from' a lower position (for subjects), with the former entailing a 'left-to-right' c-command, and the latter entailing a 'right-to-left' c-command. The weakness with the above second analysis is that it goes against the grain of what most syntacticians agree on—namely, that c-command should be **uni-directional** ('left-to-right'). Certainly, there are higher issues at play here and to properly detail them would reach far beyond the scope of the present text. Let it suffice to say—with caveat in hand—that for explanatory purposes, we presume the second alternative account is a viable option, at least for the level of syntax assumed of the reader of this text.

### **Further Reading**

For a good literature review of Case: See Radford, A. (2004) *Minimalist Syntax*. Cambridge University Press.

Also see: Koizumi, M (1993) Object Agreement Phrases and the Split-VP Hypothesis. In J.D. Bobaljik & C. Phillips (eds) *Papers on Case and Agreement I. MIT Working Papers in Linguistics*. 18: 99-148.

For Phrase Projection: See: Boeckx, C. (2008) *Understanding Minimalist Syntax*. Blackwell.

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