

# Basque Functional Heads<sup>1</sup>

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## 0. Introduction

This paper makes three claims about Basque grammar. First, it argues that Cinque's (1999) hierarchy of functional heads largely holds for Basque. In a typical pattern, lower morphemes in the hierarchy appear in the reverse order, while higher morphemes appear in Cinque's order. This is explained through roll-up—iterative XP movement through specifier positions—for the lower morphemes but not for the higher ones. Second, it argues for a different view of negative/affirmative word order alternations from that proposed in Laka (1990). Crucially, in affirmative sentences—but not negatives—the rolled-up chunk of lower morphemes fronts. Drawing on Koopman and Szabolcsi's (2000) analysis of verbal modifier raising in Hungarian, it is claimed that this rolled-up chunk raises to spec, NeutP—a phrase which is only projected in neutral clauses. Finally, this approach to affirmative/negative word order differences is extended to embedded clauses, providing an account of the clause-medial position of complementizers in negative sentences.

Part 1 describes the Basque functional heads to be discussed. Part 2 derives the order of these functional heads in terms of Cinque's (1999) hierarchy. Based on this order, it motivates an analysis of affirmative/negative word order differences in matrix clauses. Part 3 discusses the problem of complementizers and attempts to explain their clause-medial position in negative clauses based on the previous analysis of affirmative/negative word order differences in matrix clauses. Part 4 compares the present analysis with Laka's  $\Sigma$ -phrase account of the same facts.

## 1. Basque functional heads

Among others, Basque has the following particles and modals (given in Cinque's proposed order for functional heads):

(1)	al	Mood (Speech act) (Question particle)
	ote	Mod (Eval)
	omen/bide	Mood (Evid)
	behar	Mod (Necessity)
	ohi	Asp (Habit)
	nahi	Mod (Volitional)
	ari	Asp (Prog)
	ahal	Mod (Root) <sup>2</sup>

Basque also has the following inflectional suffixes to the main (non-finite) verb:

(2)	-ko	Tense (Future)
	-t(z)en	Asp (Imperfective)
	-tu, -Ø, -i	Asp (Perfective)

Basque marks past tense on the finite auxiliary with the suffix *-n*. Present tense auxiliaries bear no such suffix, and in this sense the present tense may be said to be unmarked.

The following effort to study Basque functional morphemes using Cinque's hierarchy will crucially depend on the correct labeling of these morphemes within Cinque's framework. Despite the subtlety of difference between some of Cinque's categories, the identity of the above morphemes is surprisingly straightforward. The above labels for *omen* (Mood(evid)), *ohi* ((Asp(Habit)), *ahal* ((Mod(Root))) and *-n* (T(Past)) are similar or identical to labels standardly given in the literature on Basque. They are the same labels used by Cinque in his discussion of Basque examples. Likewise, *-ko* (T(future)) is unambiguously labeled as a future marker in the literature.

The morphemes, *nahi* (Mod(Volitional)), and *behar* (Mod(necessity)), are also routinely treated in the literature as modals of volition and necessity, respectively. Ortiz de Urbina, (1989:23-34), discusses these forms at length and shows that these elements (as well as *ahal*) at times behave alternately as both nominals and verbs. The details of this dual identity are not addressed herein since it is the verbal nature of these morphemes as discussed by Ortiz de Urbina that will be relevant to the present discussion.

The labeling of *-i*, *-Ø*, *-tu* (perfective) and *-t(z)en* (imperfective) is slightly more subtle.

(3) (Zabala and Odriozola 1996:238)

- a. Miren berandu etor-tzen da beti.  
 Miren-A late come-[-pf.]Asp Aux always  
 'Miren always comes late.'

- b. Miren berandu etor(r)-i da gaur.  
 Miren-A late come-[+pf.]Asp Aux today  
 ‘Today Miren came late.’

The constructions exemplified in (3a) and (3b) are referred to in the literature as the “habitual present”<sup>3</sup>, and the “present perfect” respectively. The two types of morphemes—*-i*,  $\emptyset$  and *-tu* on one hand and *-t(z)en* on the other, can never co-occur. Given this, it is standardly assumed (cf. Laka 1989, 1990, Zabala and Odriozola 1996), that the two sets represent different values of an aspectual feature, [ $\pm$ perfective]. In his discussion of Basque examples, Cinque himself interprets *-i* and *-n* (more precisely,  $\emptyset$ ) as perfect suffixes.

Ortiz de Urbina (1992) argues instead that the *-i*,  $\emptyset$  and *-tu* endings are part of the base form of the verb and that perfective and imperfective forms are derived by adding the suffixes,  $\emptyset$  and *-tzen* respectively (in the latter case, a morphological rearrangement operation is required to remove *-i*,  $\emptyset$  and *-tu* before suffixation) (Zabala and Odriozola 1996:238 fn.2). This view has the advantage of accounting for the fact that verbs selected by modals *behar*, *nahi* and *ahal* all obligatorily take *-i*,  $\emptyset$  and *-tu* regardless of the perfectiveness of the action. In other words, when suffixed to verbs selected by modals, *-i*,  $\emptyset$  and *-tu* do not always mark perfective aspect.

Hence, while there seems to be agreement that *-t(z)en* is always an imperfect marker, it is less clear that *-i*,  $\emptyset$  and *-tu* are always perfect markers. In this paper, we adopt the standard view that *-i*,  $\emptyset$  and *-tu*, on one hand, and *-t(z)en* are different values of a single head, Asp(Perfect). However, it should be noted that very little hinges on this commitment for the purposes of the present analysis. If in fact Ortiz de Urbina (1992) is right, and *-i*,  $\emptyset$  and *-tu* before modals are not perfective morphemes, the force of the examples employed here is minimally altered.

The particle, *ote*, is used to express doubt or surprise. Ortiz de Urbina (1989:128) glosses it as “dubitative”. In this sense, *ote* seems similar to Korean *-kwun* as discussed by Cinque (p. 53), which he labels “evaluative”. (However, *-kwun* and *ote* differ in that *ote* may only be used for questions while *-kwun* may be used for declaratives.)

The labeling of the remaining morphemes from (1), *ari*, *al*, and *bide* is consonant with Cinque’s discussion of similar morphemes in other languages in chapters 3 and 4.

To sum up, Cinque’s proposal predicts the above suffixes to be merged in the following order (cf. p.106):

- (4) **al** Mood(speech act)>**ote** Mood(eval)>**omen** Mood(evid)>**-en** T(past)>**-ko** T(future)>**behar** Mod(necessity)>**ohi** Asp(habitual)>**nahi** Mod(volitional)-**t(z)en/-tu** Asp(perfect)>**berri** Asp(retrospective)>**ari** Asp(progressive)>Verb

This is largely in line with Cinque’s own hierarchy for overt heads in Basque, based on examples used in the text.

- (5) Mood(evidential)>T>Mod>Asp(habitual)>Voice>V (p. 165)

## 2. The order of functional heads

### 2.1 Negative sentences

Example (6) shows standard word order for negative sentences in Basque.

- (6) Ez al zio-n galde-tu-ko?  
 Neg. speech act Aux-T(past) ask-Asp(perfect)-T(future)  
 ‘Wasn’t she going to ask him (that)?’

In (6), the first two functional morphemes appear in the predicted order: Mood(speech act)>T(past). However, the final three morphemes appear in the exact opposite order: V>Asp(perfect)>T(future). For OV languages and agglutinating suffixes, in which the predicted hierarchy often appears inverted, Cinque (p. 57) proposes the following derivation, taken from Kayne (1994). This “roll-up” type of movement produces an output order that is the exact inverse of the input order.

- (7) X [<sub>YP</sub>... Y ZP]...→...X [<sub>YP</sub>ZP Y t]...→...[<sub>YP</sub>ZP Y t<sub>ZP</sub>] X t<sub>YP</sub>

If the morpheme cluster below the auxiliary in (6), *galde-tu-ko*, is taken as the output of the roll-up operation in (7)—which it should be under Cinque’s proposal given its head-final nature—then the input order of the morphemes in (6) must be exactly what Cinque predicts. Strikingly, the five functional heads (excluding agreement and negation morphemes) line up in the exact order predicted by Cinque, out of a total of 120 random possibilities. The following examples show that generally speaking, this Cinquean/verb roll-up analysis successfully predicts surface morpheme orders in negative sentences. (Rolled-up chunks appear in brackets.)

(8) Ez ote da [kontura-tu-ko].  
 Neg Mod(eval) Aux realize-Asp(perfect)-T(future)  
 ‘Won’t he realize?’

(9) Ez zu-en [har-tu-ko].  
 Neg Aux-T(past) take-Asp(perfect)-T(future)  
 ‘She wasn’t going to take it.’

Unlike the verbal suffixes in (8)-(9), modals, *behar*, *nahi*, *ohi* and *ari* are represented as separate words in Basque orthography. However, their word order in negative sentences is derivable via roll-up movement just like the above verbal suffixes. The following examples show standard word order for negative sentences with *behar nahi* and *ohi*.

(10) Ez zu-en [har-tu behar].  
 Neg Aux-T(past) take-Asp(perfect) Mod(necessity)  
 ‘She didn’t have to take it’/‘She shouldn’t have taken it’

(11) Ez zu-en [har-tu nahi].  
 Neg Aux-T(past) take-Asp(perfect) Mod(obligation)  
 ‘She didn’t want to take it.’

(12) Normalean, ez nu-en [gosal-du ohi].  
 Normally Neg Aux-T(past) breakfast-Asp(perfect) Mod(habitual)  
 ‘Normally, I wouldn’t eat breakfast.’ (NB: only for Western varieties)

Again, the order of the final three morphemes is the exact opposite of that predicted by Cinque: V>Asp(perfect)>Mod(obligation/necessity) instead of Mod(obligation/necessity)>Asp(perfect)>V.

However, if roll-up movement applies to modal-verb chunks, as it plausibly does to the verb-suffix complexes in (8)-(9), then the underlying morpheme order matches up exactly with Cinque's hierarchy.

## 2.2 Affirmative sentences

At first glance, affirmative sentences in Basque are more difficult to account for under Cinque's proposal. Consider the following sentences.

- (13) Lagun-tzen            omen        zintu-en.  
 Help-Asp(imperfect) Mod(evid) Aux-T(past)  
 'It is said that he helped (imperfect) you.'
- (14) Bazkal-du-ko                    bide        zue-n.  
 Lunch-Asp(perfect)-T(future) Mod(evid) Aux-T(past)  
 'It appears that he was going to have lunch.'

Examples (13) and (14) show standard word order for affirmative sentences in Basque.<sup>4</sup> The morpheme order in (14) is Asp(perfect)>T(future)>Mod(evid)> T(past); the predicted order is Mod(evid)>T(past)>T(fut)>Asp(perfect).

The roll-up derivation discussed earlier can't solve the problem, entirely. Roll-up movement correctly produces *bazkalduko* in (14), but not the rest of the sentence. The reverse order would be \**Bazkal-du-ko zue-n bide*, instead of the attested, *Bazkal-du-ko bide zue-n*.

Instead, it seems that the main verb, *bazkalduko*, is produced by roll-up movement—as in the negative examples—and then raises to the front of the clause. This derivation is made explicit in (15).

- (15)
- |                              |   |
|------------------------------|---|
| du bazkal                    | →roll-up of <i>bazkaldu</i> and merger of <i>-ko</i>          |
| -ko [bazkal]-du              | →roll-up of <i>bazkalduko</i> and merger of particle and Aux. |
| bide zuen [[bazkal]-du]-ko   | →fronting of main verb  |
| [[[bazkal]-du]-ko] bide zuen |   |

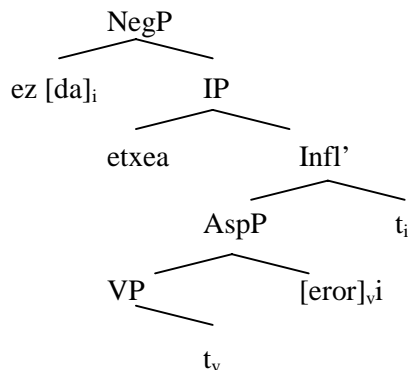
By this interpretation of the facts, Cinque's hierarchy suggests that the negative word order is closer to the underlying order than the affirmative word-order, as Cinque himself notices (p. 189, note 20). This challenges previous assumptions about word order derivations in Basque. Other accounts (cf.

Ortiz de Urbina, 1989:237 and Laka, 1990:29) have taken the affirmative word order as derivationally prior to the negative order. Working within a non-antisymmetric framework, Laka and Ortiz de Urbina propose that the auxiliary verb (*zuen* in (15)) originates to the right of the main verb—as it appears in on the surface in affirmative sentences—and raises in negative sentences.

(16) (Laka 1990:19,29)

- a. ez da etxea erori.  
no has house-the fallen  
'The house hasn't fall down.'
- b. etxea erori da.  
house-the fallen has  
'The house has fallen down.'

(17) (Laka 1990:29)



(17) derives (16a). Crucially, the inflected auxiliary, *da*, head adjoins to Neg. In affirmative sentences, the negative head is absent and the auxiliary does not raise, producing the order in (16b). (We return to Laka's proposal in Part 4.)

Yet, assuming antisymmetry and that the VP is the complement of Aux, then the standard, Basque affirmative order cannot be the underlying order, since the VP sits to the left of Aux<sup>5</sup>. Under antisymmetry, the only way to produce the VP-Aux order is by moving the VP to the left across Aux<sup>6</sup>. On the other hand, the surface order of these constituents in negative sentences—Aux-VP—is necessarily their merged order under antisymmetry.

Modals also appear to raise with the main verb. This pattern in Basque, noted briefly by Cinque, reflects standard word order for affirmative sentences with modals. Example (18) shows that the main verb raises to a position above the particles.

(18)

- a. [Zorrak ordain-du            ahal]    omen        dituzte.  
    debts pay-Asp(perfect) be-able Mod(evid) Aux  
    ‘(It is said that) they can pay off their debts.’ (Ortiz de Urbina 1989, 129)
- b. [Zorrak ordain-du            nahi]    omen        dituzte.  
    debts pay-Asp(perfect) want Mod(evid) aux.  
    ‘(It is said that) they want to pay off their debts.’
- c. [Zorrak ordaindu            behar]    ote        dituzte?  
    debts pay-Asp(perfect) have-to Mod(eval) aux.  
    ‘(Is it possible that) they have to pay off their debts?’

### 2.3 NeutP—the landing site for main verb fronting in affirmative sentences

So far, it has been shown that the rolled-up chunk of lower morphemes, including the main verb, raises in affirmative sentences but not in negative sentences. However, the details of this word order alternation are slightly more subtle.

In addition to negation, *wh*-phrases and focus constructions also block raising of the main verb chunk in Eastern dialects, as discussed by Laka (1990) and Ortiz de Urbina (1985).

(19)

- a. Nork du Jon ikus-i?  
    who Aux John see-Asp(perfect)  
    Who has seen John? (Ortiz de Urbina, 1995)
- b. MIRENEK du Jon ikus-i.  
    Mary Aux John see-Asp(perfect)  
    MARY has seen John. (Ortiz de Urbina, 1995)
- c. Ez du Jon ikus-i.  
    Neg Aux John see-Asp(perfect)  
    ‘She didn’t see John.’
- d. Mirenek Jon ikus-i                    du.  
    Mary John see-Asp(perfect) Aux.  
    ‘Mary has seen John.’ (neutral order)

This pattern is reminiscent of verbal modifier (VM) climbing in Hungarian as described in Koopman and Szabolcsi (2000).

(20) (Koopman and Szabolcsi, 2000:1-2) (bold added)

- a. **Haza** fogok akarni kezdeni menni  
home will-1sg want-inf begin-inf go-inf  
'I will want to begin to go home.'
- b. Nem fogok akarni kezdeni **haza** menni.  
not will-1sg want-inf begin-inf home go-inf  
'I will not want to begin to go home.'

The examples in (20) show that the verbal modifier, *haza*, 'home' obligatorily fronts in neutral finite clauses; it cannot front in negative or focus constructions. To explain this, Koopman and Szabolcsi posit a NeutP head, in complementary distribution with NegP and FocusP. NeutP attracts a verbal projection, VP+ (immediately below AgrP), which in neutral clauses is emptied of all material except the VM through remnant movement. In non-neutral clauses, NegP and FocusP project instead of NeutP; these heads do not attract VP+.

A similar explanation may be posited for Basque. In neutral clauses, a NeutP projects which attracts VP+. However, in Basque nothing has extracted from VP+, and so the entire rolled up chunk preposes. Higher elements, such as mood particles and the inflected Aux. are not carried along since they are above VP+ in AgrP, and above.

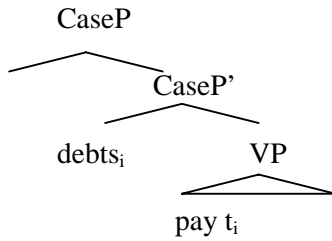
## 2.4 A derivation

The main ingredients for the proposal are now gathered and ready for assembly. The derivation of (18a)—repeated below—begins with (21).

(17a) (Ortiz de Urbina 1989:129)

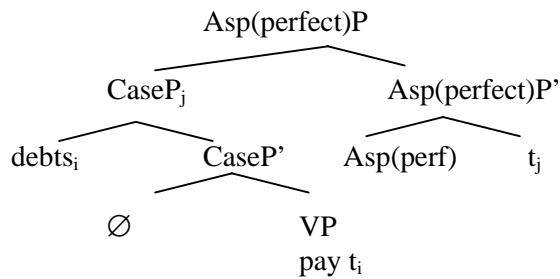
Zorrak ordain-du ahal omen dituzte.  
debts pay-Asp(perfect) be-able Mod(evid) Aux  
'(It is said that) they can pay off their debts.'

(21)



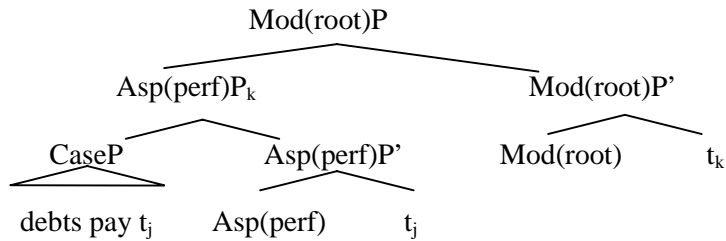
(21) shows merger of CaseP above VP and movement of the object, ‘debts’, to its spec, in order to pick up its (phonetically null) absolutive case morphology. Following Koopman (1996) and Koopman and Szabolcsi (2000), CaseP is taken to be a projection above VP to which overt noun phrases move to check case. It is assumed that other, distinct projections furnish ergative and dative case morphology, however the mechanics of these operations are not addressed herein (cf. Laka 1993).

(22)



(22) shows merger of the perfect morpheme and raising of the object and remnant VP. The verb moves to spec, Asp(perfect)P in order to pick up its perfective morphology, and in so doing, pied-pipes its object sitting in spec, CaseP. Why CaseP should be pied-piped by its complement VP is addressed later.

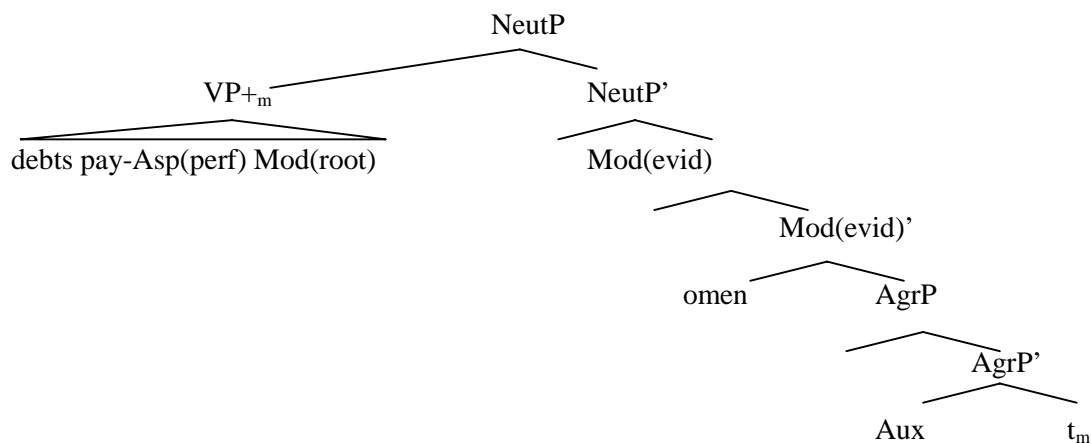
(23)



(23) shows merger of Mod(root) and raising of Asp(perf)P to its spec. As discussed in Part 1, verbs selected by modals must bear a perfect suffix<sup>7</sup>. In more theoretical terms, Mod(root)P attracts Asp(perf) with its [+perfect] feature.

In non-neutral sentences—negatives, and focus and *wh*-constructions—the above morphemes move no further. As discussed earlier, NegP and FocusP, which are projected higher in the clause in non-neutral sentences, do not attract any of the elements in (23). However, in neutral, finite clauses, NeutP is projected instead of NegP and FocusP, and attracts VP+—a head below AgrP. The result of this attraction is the fronting of the main verb in neutral finite clauses. This is shown in (24).

(24)



(24) shows raising of VP+ to spec, NeutP. Here, the label, VP+, is not used in Koopman and Szabolcsi's (2000) precise sense of a projection immediately dominating VP, but rather to denote a projection above the Modals and below AgrP. The present proposal follows Cinque (1999) and (2000)

and departs from Koopman and Szabolcsi in assuming a monoclausal structure for modals and the main verbs they select.

(24) also shows the auxiliary in the head of AgrP. It is assumed that the auxiliary picks up its agreement morphology by head raising through a series of Agr projections (Laka 1993). The complex issues of agreement morphology on the auxiliary are not addressed further in this paper.

## 2.5 Verbal dependents

In the derivation given in (21)-(24), the direct object rolls up with the verb and lower functional morphemes. However, this is not always the case. (25), taken from Ortiz de Urbina (1989), shows the position of objects in affirmative and negative sentences (without focus interpretation).

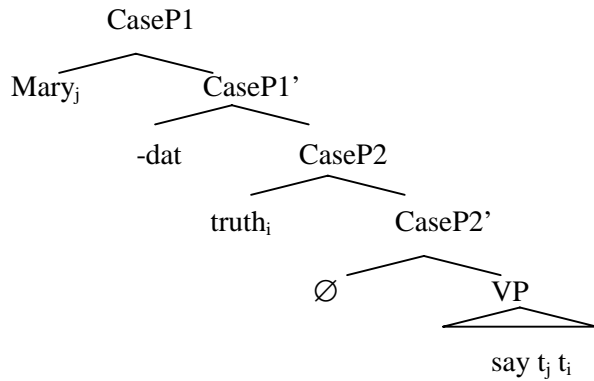
(25) (Ortiz de Urbina 1989:123) (Bold added)

- a. Jonek **Miren-i egia** esan-Ø dio.  
     J.     M-Dat truth say-Asp(perfect) Aux  
     ‘John has told Mary the truth.’
- b. Jonek ez dio **Miren-i egia** esan-Ø.  
     Neg.  
     ‘John hasn’t told Mary the truth.’
- c. Jonek ez dio esan-Ø **Miren-i egia**.  
     ‘John hasn’t told Mary the truth.’

The patterns shown in (25a) and (25b) are accounted for in the derivation given in (21)-(24). In the neutral example, (25a), the objects, *Mireni* and *egia*, ‘truth’, appear before the verb, rolled up and fronted as shown for the direct object in (21)-(24). (25b) is a negative sentence, and the objects again appear before the verb, presumably rolled-up. (Again, since (25b) is non-neutral, the rolled-up chunk does not front)<sup>8</sup>.

The problem is to explain (25c). (25c) is also negative, yet crucially, the objects do not appear to the left of the verb, but rather to the right of it<sup>9</sup>. In terms of the present proposal, the difference seems to be that in (25c), V does not pied-pipe the object(s) in CaseP(s) as it raises to pick up its morphology, but instead leaves it behind. The following steps—akin to (21) and (22) above—illustrate this.

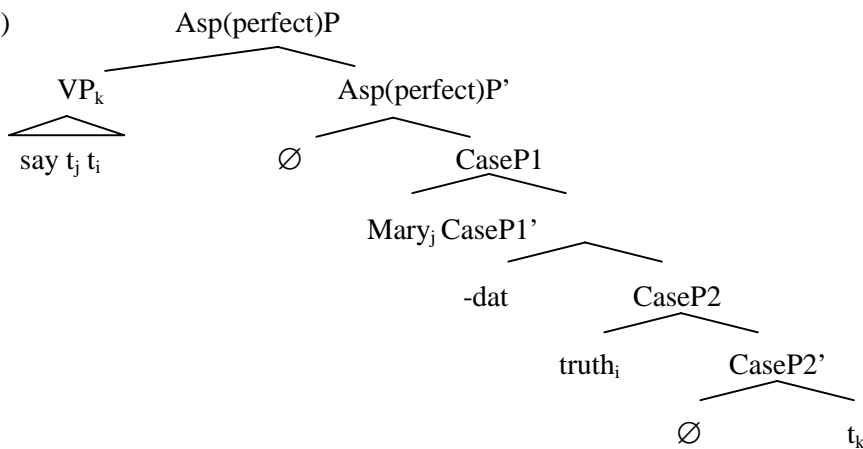
(26)



(26) shows merger of two CasePs above VP and movement of the objects to their respective case positions.

(27) shows the point at which the derivations of (25b) and (25c) diverge. In the earlier derivation (cf (22)), the verb carries along its objects in CaseP1 and CaseP2 as it raises to spec, Asp(perfect)P. This produces the pattern visible in (25b) in which the object(s) roll up with the verb. However, in (27), when the verb raises to pick up its perfective/imperfective morphology, it does not pied-pipe its objects; instead only the remnant VP raises. This accounts for the ordering in (25c).

(27)



Unfortunately, while the derivation in steps in (26) and (27) correctly derives (25c), it cannot be the complete answer since objects can also appear to the right of modal verbs. (28) repeats (25c) with the modal *nahi*, ‘want’ inserted.

- (28) Jonek ez dio esan-Ø nahi **Miren-i egia.**  
 J. Neg Aux say-Asp(perfect) Mod(volitional) Mary-dat truth.  
 ‘John doesn’t want to tell Mary the truth.’

In (28), the modal *nahi*, ‘want’, appears between the objects and the main verb, *esan*, ‘say’. The main verb + perfective aspect has inverted with the modal, but left its dependents behind. In more theoretical terms, (28) suggests that, before the main verb with its perfect aspect morphology raises to the specifier of the modal (as proposed in the derivation in (21)-(24)), the objects must first have extracted from the structure in (27). If the main verb were to raise without the objects first extracting, the unacceptable sequence shown in (29) would result.

- (29)\*Jonek ez dio esan-Ø **Miren-i egia** nahi.  
 J. Neg Aux say-Asp(perfect) Mary-dat truth Mod(volitional).  
 ‘John doesn’t want to tell Mary the truth.’

The contrast between (28) and (29) feels like the same phenomenon visible in the negative/affirmative asymmetry in (25), repeated here.

- (25) (Ortiz de Urbina 1989:123) (Bold added)
- |    |  |             |
|----|--|-------------|
| a. | Jonek <b>Miren-i egia</b> esan-Ø dio.    | Neutral     |
|    | K. M-Dat truth say-Asp(perfect) Aux      |             |
|    | ‘John has told Mary the truth.’          |             |
| b. | Jonek ez dio <b>Miren-i egia</b> esan-Ø. | Non-neutral |
|    | Neg.                                     |             |
|    | ‘John hasn’t told Mary the truth.’       |             |
| c. | Jonek ez dio esan-Ø <b>Miren-i egia.</b> | Non-neutral |
|    | ‘John hasn’t told Mary the truth.’       |             |

The missing pattern in (25) is a neutral order where the objects appear to the right of the main verb and to the left of the Aux. As Laka (1990:18-19) notices, the neutral counterpart to (25c) is sharply unacceptable:

- (30) \*Jonek esan-Ø **Miren-i egia** dio.  
 J. say-Asp(perfect) M-dat truth Aux  
 ‘John hasn’t told Mary the truth.’

In fact, as Laka (1990) discusses, when the main verb precedes the auxiliary, arguments can *never* intervene between them. (In her account of negative/affirmative differences this asymmetry is captured naturally.)

Here again, an unacceptable pattern results when the main verb raises without the objects extracting. Specifically, (30) is predicted to occur when (i) the objects raise to their respective CasePs (cf (25)); (ii) the verb then moves to Asp(perfect)P without pied-piping the objects (cf (25c)); and (iii) the entire VP+ then raises to NeutP (fronting in neutral sentences).

The generalization about the contrasts in (28)/(29) and (25c)/(30) seems to be that objects can only raise when they precede the verb and never when they follow the verb. In more theoretical terms, the objects may raise with the verb (verbal complex) when they sit higher than verb (cf (24) and (27)), but never as a complement.

For the moment, we can offer no explanation for this pattern; we simply stipulate this fact as follows:

(31) *Basque*: Objects cannot raise as complements of the verb.

The problem is to explain why and how the objects extract. Since they have already raised to check case, there appears to be no reason for them to move further.

One possible solution is to use “stacking positions” as proposed by Koopman and Szabolcsi (2000), to explain a similar pattern in Hungarian.

(32) (Koopman and Szabolcsi 2000:45)  
Nem akartam [szét szedni kezdeni] a rádiót.  
Neg wanted-1sg apart take-inf begin-inf the radio-acc  
'I did not want to begin to take apart the radio.'

(32) shows that in non-neutral sentences in Hungarian, infinitivals can invert with certain “restructuring” type verbs (the inverted chunk is shown in brackets). Here, ‘apart take’ has raised and inverted with ‘begin.’ However, when inversion occurs, verbal dependents—‘the radio’ in (32)—must be

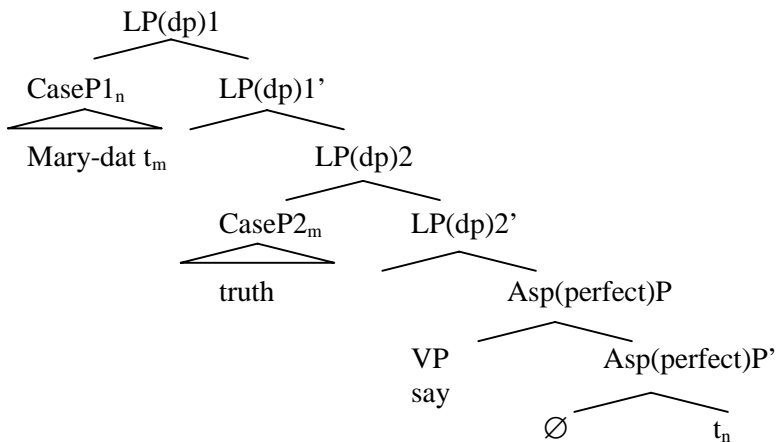
left behind, like in Basque (25c) above. To accommodate these facts, Koopman and Szabolcsi propose “stacking positions” (p. 43): landing sites for the verbal dependents above the verb, which enable the remnant verbal projection (VP+ in their proposal) to raise and invert with the selecting restructuring/modal verb.

Let us return to the problematic data in (28), repeated here.

- (28) Jonek ez dio esan- $\emptyset$  nahi **Miren-i egia.**  
 J. Neg Aux say-Asp(perfect) Mod(volitional) Mary-dat truth.  
 ‘John doesn’t want to tell Mary the truth.’

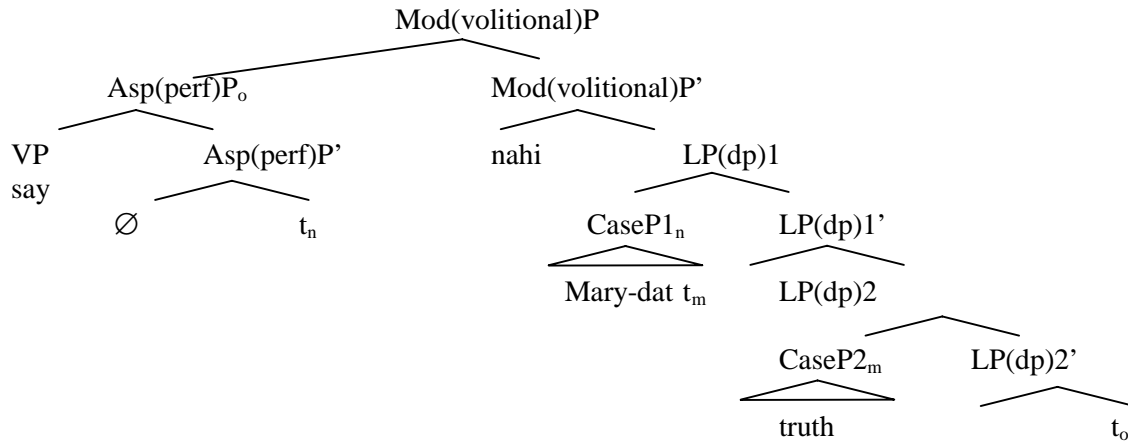
Like in Hungarian, the objects may be assumed to raise to a stacking position—LP(dp)—above AspP. This allows the verb with its perfective morphology to raise to the specifier of the modal as required. (33) continues the derivation left off in (27).

(33)



(33) shows the merger of the stacking positions—LP(dp)1 and LP(dp)2—and raising of the case projections to their specs<sup>10</sup>. Again, these DPs raise in compliance with (31) which forbids objects to raise as complements of the verb. Then, the modal, *nahi* is merged and the main verb + aspect raises to its spec.

(34)



In (34), Asp(perfect)P has raised to spec, Mod(volitional)P to fulfill the morphological needs of the modal as discussed above. This correctly produces the order of the verbs and objects in (28).

As Koopman and Szabolcsi themselves acknowledge, stacking positions go against core assumptions of minimalism, since movement to them does not seem to fulfill any feature checking requirements. However, in light of the evidence the evidence from progressive constructions that roll up operates by XP movement, stacking positions are adopted here as a necessary evil.

## 2.5 Head movement versus phrasal movement

An alternative to the above phrasal-movement analysis of inversion involves head movement. By this approach, the main verb picks up its morphology through multiple head adjunction. A head movement explanation is also in keeping with the observation discussed below that these inverted chunks are impermeable to movement. If the inverted strings are large, head adjoined chunks, then they should be inaccessible to movement under standard assumptions.

However, two facts support the present analysis of inversion in Basque as XP movement rather than head movement. First, full object DPs participate in inversion.

(35) [**nire etxe-a** ikus-i nahi] du  
 my house-abs see-Asp(perf) want Aux.  
 ‘She wants to see my house.’

In (35) showing standard, neutral word-order, the direct object DP ‘my house’ appears at the left edge of the inverted chunk. A head movement account of inversion would seem to require the theoretically spurious step of left-adjointing the phrase ‘my house’ to the verb head.

Second, the morpheme order of progressive constructions seems require the verb to raise past an intervening head to pick up the appropriate morphology.

(36) Ez zen Euskara **ikas-ten** **ari**  
 Neg Aux T(past) Basque study-Asp(imperfect) Asp(progressive)  
 ‘She wasn’t studying Basque.’

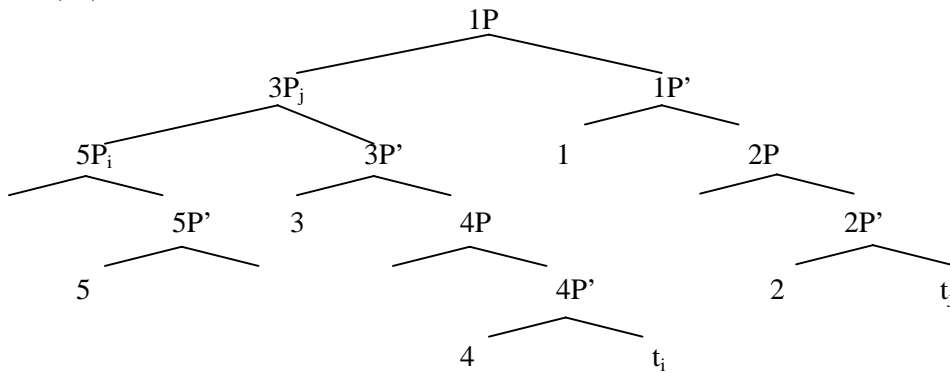
In (36), the main verb bears an imperfect suffix and appears to the left of the progressive morpheme, *ari*. According to the hierarchy in (4), the merged order of the morphemes in (36) is **(t(z)en/-tu Asp(perfect)>ari Asp(progressive)>Verb)**. The main verb then must raise past the particle *ari* in order to pick up the suffix *-t(z)en*. Assuming that *ari* is a head, then the raising of the verb, *ikas* cannot be an example of head movement, since it would have to jump over the head, *ari* in violation of the Head Movement Constraint.<sup>11</sup> Assuming that the [*ari* + V-suffix] construction is like other main verb complex constructions, as it plausibly is, and assuming that the morphology building mechanism is uniform, then (36) suggests that the roll-up operation discussed here is indeed a case of XP movement rather than head movement.

## 2.6 Evidence of movement

Under standard assumptions about movement, the present roll up analysis predicts that movement should not be available into or out of the inverted chunks.

(37) illustrates this.

(37)



In (37), 5P has raised past 4P to the spec of 3P, and 3P has raised to spec, 1P. This produces the output order, [5-3-4]-1-2 with the rolled up chunk in brackets. Assuming no rightward movement, and assuming that parts of specifiers cannot extract, then the only candidate for XP movement is 2P, and the only landing site for 2P among the rolled-up chunk is spec, 4P. Yet, assuming that movement is only possible to a position in a c-commanding node, then spec, 4P is not a possible landing site since 4P does not c-command 2P. By this same reasoning, head movement is also unavailable to positions within rolled-up chunks.

The prediction that movement is not be available among the chunks of inverse-order, lower morphemes is borne out without exception. No material of any kind can intervene among the rolled-up chunks.

(28) Jonek ez dio esan-Ø nahi Miren-i egia.  
J. Neg Aux say-Asp(perfect) Mod(volitional) Mary-dat truth.  
'John doesn't want to tell Mary the truth.'

(28), repeated here, shows that object can appear to the right of the modal. If, contrary to preceding roll-up account of this pattern, the main verb and auxiliary have not inverted—that is if the surface order is the merged order ('say' > 'Mod(volitional)') then at least one specifier position—spec,

Mod(volitional)—should be available as a landing site for the objects. However, (29), also repeated here, shows that movement to such a position is not available.

- (29)\*Jonek ez dio esan-Ø **Miren-i<sub>i</sub> egia<sub>j</sub>** nahi. t<sub>i</sub> t<sub>j</sub>  
 J. Neg Aux say-Asp(perfect) Mary-dat truth Mod(volitional).  
 ‘John doesn’t want to tell Mary the truth.’

Given the relatively free word order of Basque, the unacceptability of (28) is mysterious if the main verb and modal have not inverted.

Support for movement to NeutP in affirmative sentences is supported by scope facts. (18a)-(18c), repeated here, show that the mood particles, *ote* and *omen*, scope over the entire sentence.

- (18)  
 a. [Zorrak ordain-du ahal] omen dituzte.  
 debts pay-Asp(perfect) be-able Mod(evid) Aux  
 ‘(It is said that) they can pay off their debts.’ (Ortiz de Urbina 1989, 129)  
 b. [Zorrak ordain-du nahi] omen dituzte.  
 debts pay-Asp(perfect) want Mod(evid) aux.  
 ‘(It is said that) they want to pay off their debts.’  
 c. [Zorrak ordaindu behar] ote dituzte?  
 debts pay-Asp(perfect) have-to Mod(eval) aux.  
 ‘(Is it possible that) they have to pay off their debts?’

Assuming Kayne’s 1998 proposal that all movement is overt, then these scopal relations presumably reflect reconstruction of the fronted material (in brackets) to their prior position below the mood particles.

However, stronger evidence for fronting comes from the asymmetry in object orderings in negative and affirmative sentences discussed above. (25) and (30) are repeated here.

- (25) (Ortiz de Urbina 1989:123) (Bold added)  
 a. Jonek **Miren-i egia** esan-Ø dio. Neutral  
 L. M-Dat truth say-Asp(perfect) Aux  
 ‘John has told Mary the truth.’  
 b. Jonek ez dio **Miren-i egia** esan-Ø. Non-neutral  
 Neg.  
 ‘John hasn’t told Mary the truth.’  
 c. Jonek ez dio esan-Ø **Miren-i egia**. Non-neutral  
 ‘John hasn’t told Mary the truth.’

- (30) \*Jonek esan-Ø                      **Miren-i egia** dio.  
 J.        say-Asp(perfect) M-dat    truth Aux  
 ‘John hasn’t told Mary the truth.’

In other contexts (cf. (28) and (29)), objects were shown not to be able to raise as complements of the verb (verbal complex). Objects must either raise as rolled-up material higher than the verb, or extract to let the verbal projection raise as a remnant. This pattern lets us predict the unacceptability of (30) only if the verb raises in neutral sentences and does not raise in non-neutral sentences. In (25a), the objects precede the verb, and the verb raises. In (25b) and (25c), the object may either precede the verb or follow it, since the verb does not raise. However, (30)—where the verbal complex raises with its complement objects—is unacceptable.

## 2.7 Complications: *ohi* (Eastern dialects)

So far, the particles and suffixes in (1) and (2), seem to be accounted for unproblematically in Cinque’s theory. However, *ohi* requires additional analysis.

Compare the following forms.

- (38)
- a. Eastern dialects  
 Ez    ohi                      zuen                      bazkal-tzen .  
 Neg Mod(habitual) Aux-T(past) eat-Asp(imperfect)  
 ‘She didn’t usually come.’
- b. Western dialects  
 Ez    zuen                      bazkal-du                      ohi.  
 Neg Aux-T(past) come-Asp(perfect) Mod(habitual)  
 ‘She didn’t usually eat.’

In Western dialects, *ohi* behaves like a modal.<sup>12</sup> Just like the unambiguous modals, *behar* and *nahi*, Western *ohi* requires the main verb to take a perfect aspect marker. Also, Western *ohi* appears clause-finally in negative sentences. In Eastern dialects, *ohi* appears in the slot shared by particles, *omen*, *bide* and *ote*, and the main verb bears an imperfect marker (perhaps for independent reasons, since the imperfect marker is normally used for habitual/repetitive type actions).<sup>13</sup>

The Eastern form, (38a), is problematic for Cinque’s proposal, since the order of functional heads is not tidily derivable via roll up and fronting: *ohi* appears above T(past), but the main verb does not.

One possible explanation is that in Eastern varieties, *ohi* has become reanalyzed as an AdvP. Since habitual adverbs frequently appear at the beginning of a sentence (“Usually, Maria works on Fridays.”), it is conceivable that *ohi* is really an adverb in Eastern varieties.<sup>14</sup> On the other hand, adverbs appearing at the front of the sentence in a “scene-setting” role typically do not appear to the right of negation as in (38a), but rather to the left.

(39) Normalean, ez dira botik-etan erabil-tzen.  
 normal-in, Neg Aux medicine-in use-Asp(imperfect)  
 ‘Usually, they aren’t used in medicines.’

However, unlike such “scene-setting” adverbs, *ohi* can never appear to the left of negation. This fact would seem to make the AdvP reanalysis solution implausible.

(40) \*Ohi, ez zuen bazkal-tzen .  
 Mod(habitual) Neg Aux-T(past) eat-Asp(imperfect)  
 ‘She didn’t usually come.’

A second possible solution is remnant movement—shown in (41)—whereby *ohi* raises after *bazkaltzen* extracts.

(41)  
 [ohi [bazkal-tzen]]] → merger of XP and raising of *bazkaltzen* to its spec.  
 [<sub>XP</sub> bazkal-tzen<sub>i</sub> [ohi [t<sub>i</sub>]]] → merger of Aux and raising of *ohi* to, say, [Spec, T(past)]  
 [ohi [t<sub>i</sub>] [zuen [<sub>XP</sub> bazkal-tzen<sub>i</sub>]]]

This solution has two main defects. First, it is ad-hoc in that remnant movement of this type is not obviously required to derive the other modal word orders seen thus far. Second, it fails to address the correspondence between the position of *ohi* and the morphology on the main verb. Where *ohi* appears in the canonical modal slot (Western varieties), it requires a perfect suffix on the verb just like other modals; where *ohi* appears in particle position, the main verb does not take a perfect suffix.

A third solution is to posit an additional head position for Eastern *ohi*, among the other particle heads, above T(past). By this account, Eastern *ohi* and Western *ohi* are two distinct morphemes.

Although this solution is theoretically undesirable for obvious reasons, Cinque’s discussion of English adverbs, *often* and *twice* (pp.25-28) suggests that such a solution may be independently motivated, at least in the case of adverbs.

Compare the position of particles versus modals in Cinque’s hierarchy. In general, the particle-like heads—*al*, *ote*, *omen*, and *bide*—appear above T(past) and T(present), while the modals—*behar*, *nahi* and *ohi* (Western) appear below the tense heads.

(42)

**al** Mood(speech act)>**ote** Mood(eval)>**omen** Mood(evid)>[?Eastern **ohi** Asp(habitual)]>**-en** T(past)>**-ko** T(future)>**behar** Mod(necessity)>[?Western] **ohi** Asp(habitual)>**nahi** Mod(volitional)-**t(z)en/-tu** Asp(perfect)>**ari** Asp(progressive)>Verb

The latter solution has the advantage of pointing to a unified explanation of the morphological and word-order differences between (38a) and (38b): the tight morphological requirements that modals impose on the main verb are a reflex of their movement and feature-checking relationship. On the other hand, particles do not attract the main verb, and impose no morphological requirements on them. To accommodate this pattern, this latter solution is adopted in this paper.

## 2.8 More complications: scope of particles

(9) and (38) are repeated below.

(9) Ez omen zue-n ur-ik topa-tu  
 Neg Mod(evid) Aux-past water-part find- Asp(perfect)  
 ‘Supposedly, she didn’t find any water.’

(38)

a. Eastern dialects  
 ez ohi zuen bazkal-tzen  
 Neg Mod(habitual) Aux-T(past) eat-Asp(imperfect)  
 ‘She didn’t usually come.’

b. Western dialects  
 ez zuen bazkal-du ohi  
 Neg Aux-T(past) come-Asp(perfect) Mod(habitual)  
 ‘She didn’t usually eat.’

In (9) and (38), the particles *ohi* and *omen* take inverse scope over negation. This can be shown naturally.

(43)<sup>15</sup>

- a. **Ez omen** zinen etorri-ko, baina etorri zara azken-ean.  
 Neg Mod(evid) Aux-T(past) come-T(future) but come Aux end-in.  
 ‘Supposedly, you weren’t going to come, but in the end you’ve come.’
- b. # **Ez omen** zinen etorriko, baina **ez** zara etorri azkenean.  
 Neg.  
 ‘Supposedly, you weren’t going to come but in the end you haven’t come.’

Of the two sentences in (43), only the first makes sense, suggesting that the particle, *omen* does in fact take scope over negation.

This fact potentially indicates more movement than has been proposed so far. Assuming no rightward movement, and no covert movement, then the scope relations here are a product of reconstruction of the negation to a prior position below *omen*. An additional hint that the negative has raised is the fact that it is clitic-like (Laka 1990:30, fn.12). It induces phonological change (devoicing and affrication) on the auxiliary, from which it can never be separated (except by particles and complementizers *ba-* and *bait-* which prefix onto the auxiliary).

One possibility is that negation has raised past the particle from a position just below it.

(44)

Particle Neg Aux → raising of Neg.  
 Neg Particle Aux

This explanation is problematic for several reasons. First, if these particles are heads, as they are assumed to be here, then head movement of Neg across the particle would violate the Head Movement Constraint. On the other hand, if Neg XP-raises past the particle, then a significantly more complicated movement analysis than that proposed herein is required. The verb, objects and other material lower in the clause would need to extract in order for the NegP remnant to be able to raise.

For the time being, no further insight into this problem can be offered.

### 3. Negative/affirmative word order differences in embedded clauses

#### 3.1 The problem

So far, it has been shown that in negative sentences, the auxiliary precedes the main verb while in affirmative sentences the reverse order holds—the main verb precedes the auxiliary. Following Cinque and assuming antisymmetry, we have proposed that the merged order for these constituents is the negative order, Aux-V, and that the affirmative order, V-Aux, is derived by raising of the main verb (to NeutP).

Word orders in embedded clauses will require a more complicated analysis. In embedded clauses, the relative order of Aux and V in affirmatives and negatives is (generally) the same as in matrix clauses. However, crucially, the complementizer always appears suffixed to Aux. The embedded affirmative order is V-Aux-C, and for negatives, Aux-C-V.

(45)

- a. Negative order (Ortiz de Urbina, 1989:140)  
Badakit [**ez** didazu-**la** egia esan]  
I know Neg Aux-Comp truth say  
I know you didn't tell me the truth
- b. Affirmative order  
Badakit [egia esan didazu-**la**]  
I know truth say Aux-Comp  
I know you told me the truth

The problem is to explain how these complementizers attach to Aux. Assuming that the complementizer is merged above (to the left of) the embedded clause associated with it, how does the embedded material come to precede it? Moreover, is it just a coincidence that affirmative/negative word order differences are the same in both embedded and matrix clauses? The following discussion proposes derivations for negative and affirmative embedded orders in turn.

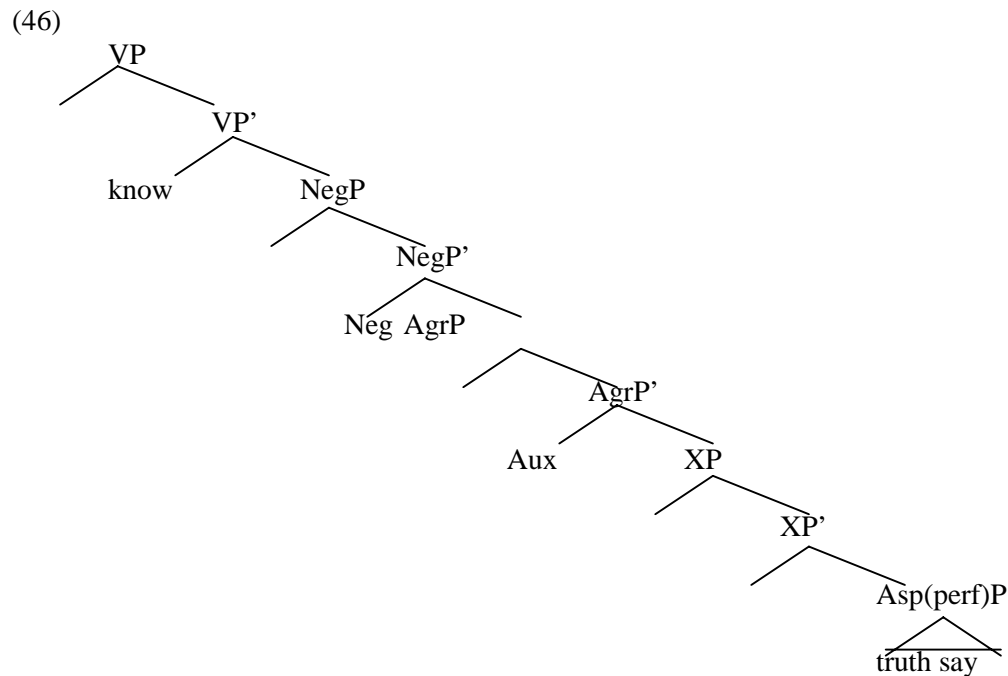
#### 3.2 Negative complement clauses

We adopt Kayne's (1998) proposal that complementizers are not merged directly above the clause they are associated with, but rather above the matrix verb. We further assume that, prior to merger of the complementizer, clausal derivations proceed exactly as described above for matrix verbs; there is

no obvious reason to assume any difference in featural content for lexical material only in the case that it is embedded.

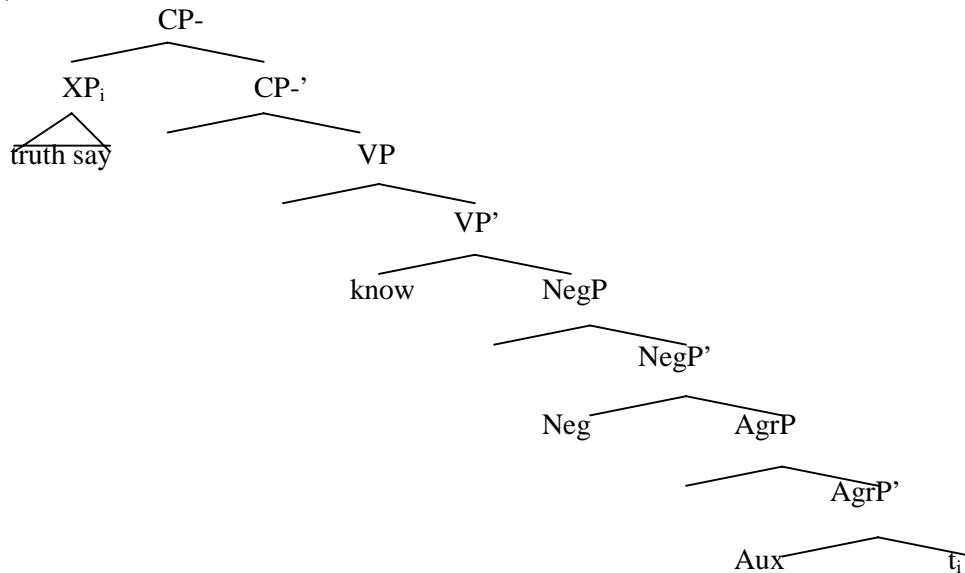
The following is a derivation for (45a), repeated here. (46) picks up the derivation, from the point at which the matrix verb is merged.

(45a)  
 Badakit [ez didazu-la egia esan]  
 I know Neg Aux-Comp truth say  
 'I know you didn't tell me the truth.'



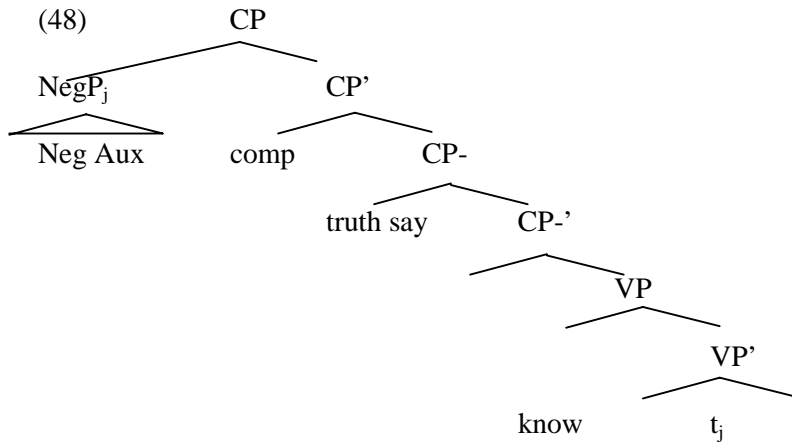
(47) shows merger of CP-, a head immediately below the complementizer, and movement of XP to spec, CP-. XP is a projection dominating AspP, in whose head sits a feature attracted by CP-

(47)

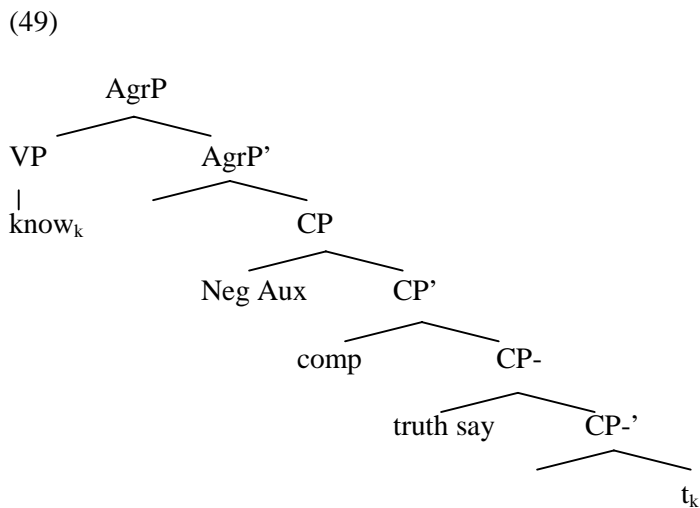


Admittedly, the movement operation between XP and CP- is spurious. More will be said later about the nature of this movement. The label, CP-, is used in observance of the fact that it seems to be features of the Comp system that drive this movement. I will argue that this movement takes place always and only when the CP structure is projected, i.e. whenever there is an overt complementizer<sup>16</sup>. This entails that CPs are not projected in matrix clauses. In fact, this would seem to follow necessarily from Kayne's (1998) proposal that complementizers cannot be merged directly with their associated clause. Since, in matrix clauses, there is no higher verb to intervene between the comp and its clause, a matrix comp would have to be merged directly with its associated clause, in violation of Kayne's suggestion.<sup>17</sup>

(48) shows the merger of CP and attraction of Aux to Spec, CP. Aux raises to satisfy the morphological requirements of the complementizer, which is always suffixed onto the inflected element. (48) shows that the auxiliary also pied-pipes Neg.



Finally, (49) shows merger of the matrix AgrP, and raising of the matrix verb.



### 3.3 Affirmative complement clauses

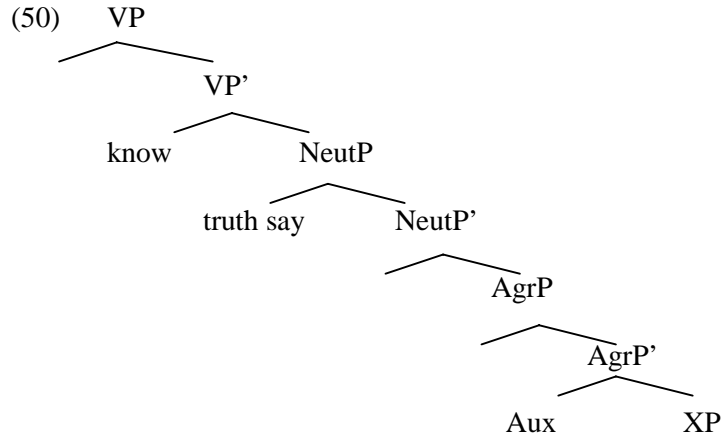
The exact same steps will be used to derive affirmative word orders in embedded clauses. Hence, the fact that the negative/affirmative word order alternations are the same in both matrix and embedded sentences turns out not to be accidental. Negative/affirmative differences in embedded clauses are a reflex of the same operations that produce them in matrix clauses.

The following is a derivation of (45b), repeated here.

(45b)

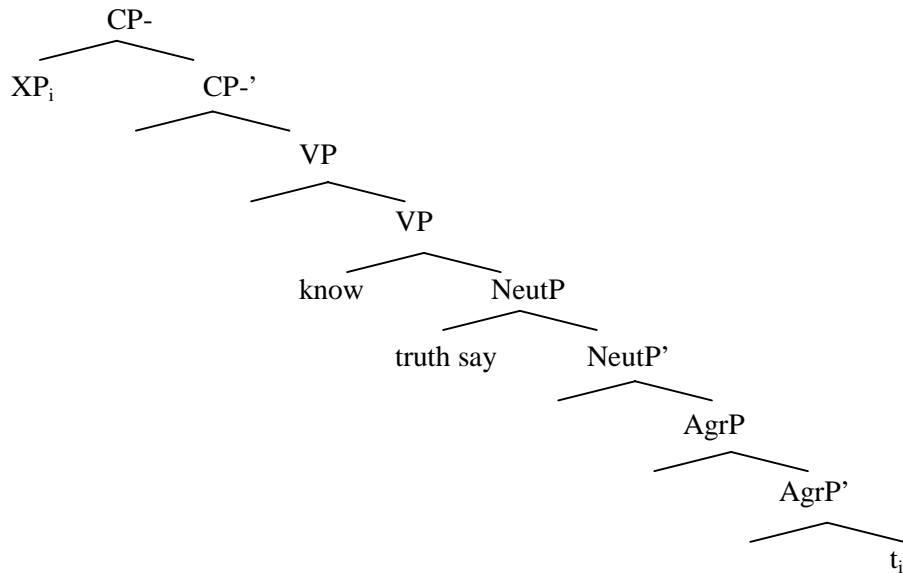
Badakit [egia esan didazu-**la**].  
I know truth say Aux-Comp  
'I know you told me the truth.'

(50) picks up the derivation from the point at which the main verb is merged.



(51) shows merger of CP- and the attraction of XP to its spec. Crucially, since the rolled up lower verb and its object, 'truth say', have already raised to NeutP, the raising of XP in this case carries no lexical material with it, unlike in negative clauses discussed above.

(51)





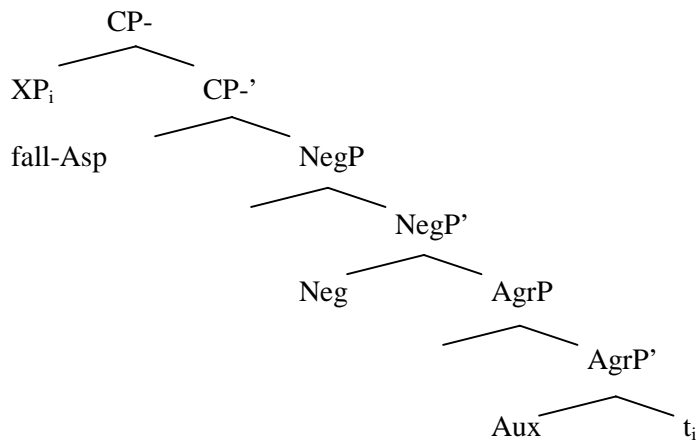
(54) (Laka 1990:43)<sup>18</sup>

- a. [eror-i                    ez    de-n] etxea.  
     fall-Asp(perfect) Neg Aux-comp house-the.  
     ‘The house that hasn’t fallen.’
- b. [\*ez den erori] etxea.

The above analyses of matrix and complement clauses assumed Kayne’s (1998) proposal that complementizers are not merged directly with the clauses associated with them, but are instead merged above the matrix verb. So far, this assumption appears inconsequential: no change in word order would result if the matrix verb were merged below CP. However, in the following derivation, this assumption becomes visible. In the same paper, Kayne proposes that this analysis be extended to relative clauses. The relative complementizer is not merged directly with the verb, but is instead merged above the matrix verb. Nevertheless, the following derivation suggests that the anomalous word order pattern of relative clauses can be explained if, under the present analysis, we do not adopt Kayne’s proposal and instead merge the complementizer directly with the relative clause.

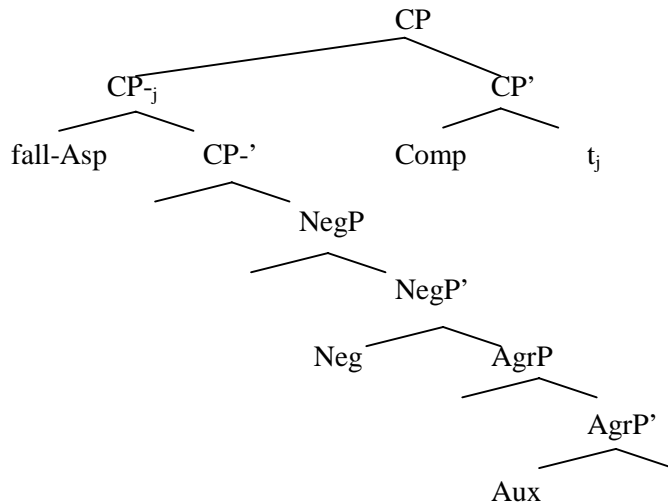
(55) begins a derivation of (54a), picking up with the merger of CP- and the raising of XP to its spec.

(55)



(56) shows the merger of CP, and the raising of the auxiliary to its spec. Now, however, instead of pied-piping just NegP, as in the negative complement clause derived above, it pied-pipes CP- too.

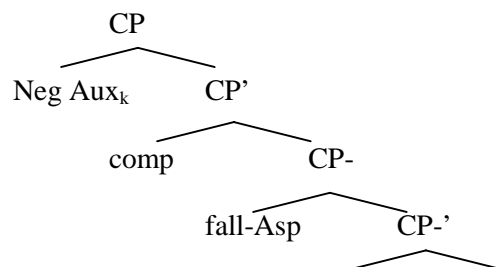
(56)



Why should Aux pied-pipe so much material? Why does it pied-pipe CP- in the relative clause case, but not in the complement clauses discussed above? Perhaps partly because it can be. Since there is no matrix verb between CP- and NegP, the auxiliary can pied-pipe CP- without the derivation crashing. In the above complement clause derivations, if CP- and the matrix verb had been pied-piped to spec, CP, the verb could not have extracted subsequently in order to check its agreement features. (This assumes that parts of specifiers cannot extract.)

Another partial answer to why Aux pied-pipes so much material in (56) is that it has to. The contrast in (54) recalls the descriptive generalization in 2.4 that verbal dependents cannot raise as complements to the verb (cf (25),(28),(29) and (30)). Linearly, the attracted element must be left-adjacent to its attractor. If the auxiliary did not pied-pipe CP- in (56), the result would be a medial complementizer structure, exactly as seen in the case of negative complement clauses above.

(57)



This step is unproblematic. However, when the CP raises to meet up with its selecting DP, the verbal complex in spec, CP- blocks the complementizer from being left-adjacent to the DP. The result is exactly the unattested order in (54b): [Neg-Aux-Comp-Vasp]-DP. The most economical way to avoid this problem is for the Aux to pied-pipe the verb in CP-, as shown in (56).

Hence, the problem of explaining pied-piping in (56) reduces to the same problem of explaining the behavior of verbal dependents in 2.4. We restate the constraint on Basque movement previously given in (31):

(58) *Basque*: Attracted elements must be left adjacent to their attractors.

A theoretically more sophisticated analysis of these facts cannot be offered at this time.

To review, the present analysis claims that the main difference between word orders in complement and relative clauses is that in relative clauses, no matrix material is merged between the complementizer and the relative clause. This allows the auxiliary to pied-pipe a larger chunk in its movement to spec, CP. On the other hand, in complement clauses, the matrix verb is merged between the complementizer and the embedded clause, which prevents the auxiliary from pied-piping material higher than NegP/NeutP.

### 3.5 Independent evidence for CP-

The existence of CP- and concomitant movement operations may be independently motivated.

Hallman (2000) proposes that the absence of V2 in German embedded clauses results from raising of AgrP to spec, TP—the projection immediately below CP—only in cases where C<sup>0</sup> has overt material. (59) illustrates this.

(59) (Hallman 2000)

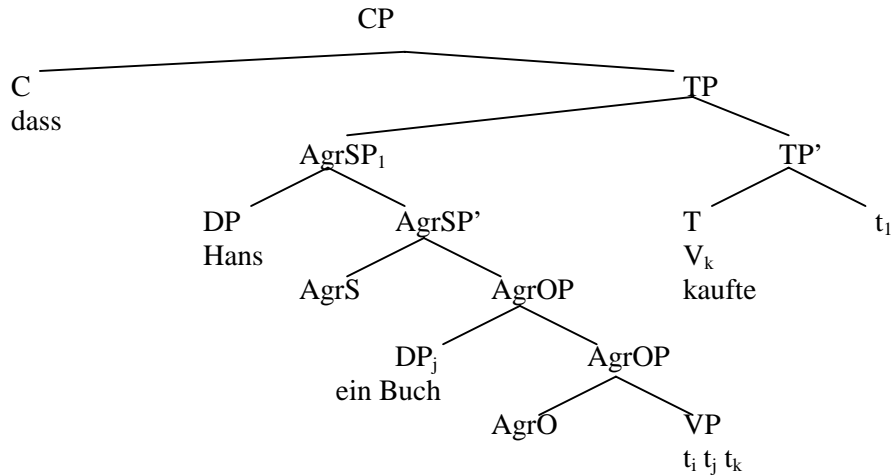
...dass Hans gestern ein Buch kaufte

...that Hans yesterday a book bought

‘...that Hans bought a book yesterday.’

(60) derives (59).

(60)



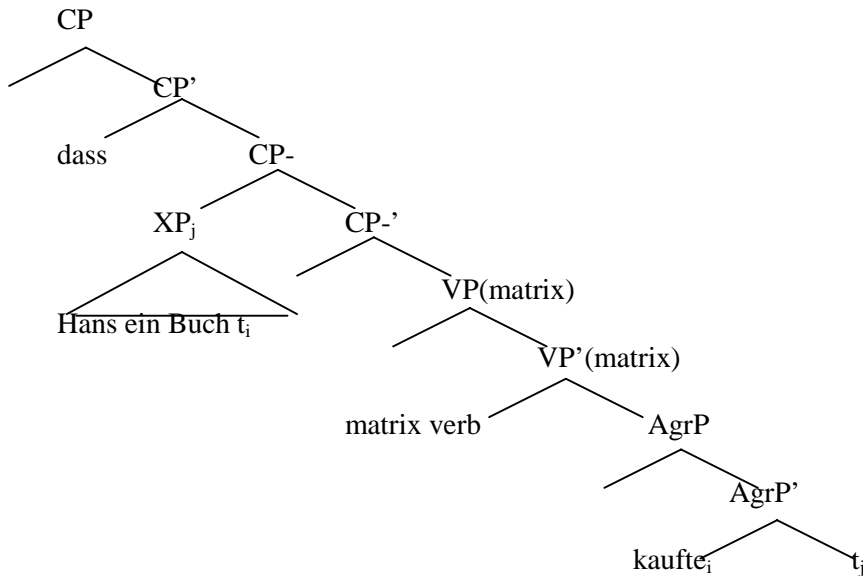
(60) derives the verb-final order found in German embedded clauses. In matrix clauses, the verb again sits in  $T^0$ , however a topic instead of the AgrSP remnant occupies spec, TP. (In Hallman’s proposal, AgrSP is the complement of TP.)

Hallman’s proposal is similar to the present analysis of Basque in that AgrP is attracted to a position just below CP only in embedded contexts. Hallman suggests that this is a selectional requirement that CP imposes on its complement TP: whenever  $C^0$  is filled with phonetic material, TP must attract AgrSP.

Alternatively, these facts could be explained in line with the present proposal for Basque, using spec, CP- instead of spec, TP as the landing site for AgrSP: whenever CP- projects—i.e. in embedded clauses—it attracts the AgrSP remnant. However, in matrix declaratives, CP- and CP do not project, and

the V2 word order results. (The topic presumably sits in Spec, TP as Hallman suggests.) (61) recasts Hallman's basic idea in terms of the present approach.

(61)



In (61), XP moves to spec, CP- as proposed above for Basque. This seems to correctly account for the basic phenomenon in both Basque and German: a chunk of lower morphemes raises to a position below CP only in the presence of an overt complementizer. However, this account faces one major problem. Under the present proposal, the matrix verb is merged below CP- (as shown in (61)). This seems to leave no way for the matrix verb to raise to the matrix clause. Under the standard assumption that *dass* is a head, then head-raising of the matrix verb past *dass* would seem to violate the Head Movement Constraint. On the other hand, if raising of the matrix verb is phrasal movement, then a much more complicated movement analysis is required since the embedded verb, *kaufte*, would need to extract before the matrix verb could raise. If we are to maintain the core assumption that complementizers are merged above matrix verb, and if raising to CP- does in fact obtain in German and Basque as described here, then further analysis of the German facts seems to be required.

### 3.6 Complementizers *ba-* and *bait-*

The complementizers *ba-*, ‘if’ and *bait-* ‘since’ evidence word orders that cannot be captured under the present analysis.

(62)

[Aunitz bazkal-tzen ez ohi **ba-**duzu], zer-gatik zara hain pottoloa?  
Much lunch-Asp(imperf) Neg Asp(habit) if-Aux, what-for Aux so chubby  
If you don’t eat a lot for lunch, why are you so chubby?

(63)

Goxoki bat eman-en<sup>19</sup> diot, [ongi porta-tu omen **bait-**z-en]  
candy one give-T(future), well behave-Asp(perfect) mood(evid) because-AuxT(past)  
‘I’m going to give him a candy, because he evidently behaved well.’

Unlike the suffixal complementizers discussed previously, *ba-* and *bait-* are always prefixed onto the inflected auxiliary. If the inflected auxiliary (and any preceding particles or negation) sits in spec, CP, it is mysterious how the complementizer can precede the auxiliary. Moreover, the position of particles *omen* and *ohi* in (62) and (63) show that head movement of the complementizer cannot fix the problem, since these particles also sit in spec, CP as part of a larger chunk.

Although no solution to this problem is offered here, two additional properties of these morphemes may be pointed out that suggest that they should be treated as special cases. First, *ba-* and *bait-* are the only two complementizers that do not allow additional affixation onto the auxiliary. In contrast, suffixal complementizers *-en* and *-ela* allow additional stacking of the definite article, case, the partitive suffix and postpositions. A second, related property of these elements is that they do not introduce arguments, unlike the suffixal morphemes, *-en* and *-ela*. ‘Because’ is standardly assumed to introduce adjuncts, and ‘if’ is often taken to be contentless.

In light of their special status, *ba-* and *bait-* are set aside in the present discussion.

#### 4. Laka (1990)

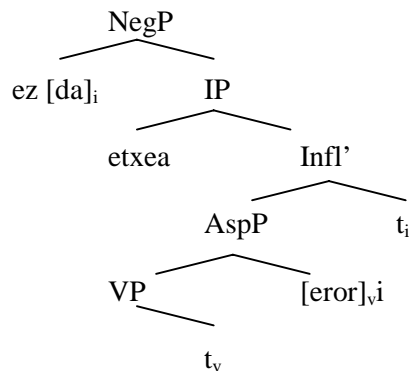
This section reviews Laka's (1990)  $\Sigma$ -phrase account of word order differences between affirmative and negative sentences, and compares it with the present proposal.

(16) and (17) from Laka (1990) are repeated here.

(16) (Laka 1990:19,29)

- c. ez da etxea erori.  
no has house-the fallen  
'The house hasn't fall down.'
- d. etxea erori da.  
house-the fallen has  
'The house has fallen down.'

(17) (Laka 1990:29)

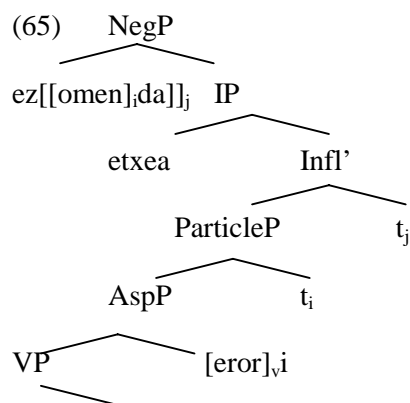


(17) derives (16a). Crucially, the inflected auxiliary, *da*, head adjoins to Neg. (The label NegP is later replaced by  $\Sigma$ P.) In affirmative sentences, the negative head is absent and the auxiliary does not raise, producing the order in (16b).

Laka's proposal straightforwardly accounts for the puzzle discussed in 2.4. When the main verb precedes Aux, the two must be immediately adjacent, but when the main verb follows Aux, arguments may intervene. (16) shows that when the main verb precedes Aux (affirmative sentences), the auxiliary is in the head of Infl; arguments are to the left in either spec, IP or spec VP. However, in negatives, the auxiliary head raises to Neg, past the arguments, producing the order in (16a) where arguments intervene between Aux and the main verb. Laka does not discuss modals such as *nahi*, 'want' which are discussed

in 2.4, however in Laka’s framework, modals might head a left-branching projection between AspP and IP. This would correctly account for the fact that arguments cannot intervene between modals and the main verb. Similarly, although Laka does not address them specifically, the pre-verbal particles, *ohi*, *omen*, *ote*, *bide* and *al*, can also be captured in Laka’s order if the particles head a projection immediately below IP. (64) repeats (62) with the evidential particle, *omen*, inserted.

- (64)
- a. ez **omen** da etxea erori.  
 no Mod(evid) has house-the fallen  
 ‘Supposedly, the house hasn’t fall down.’
- b. etxea erori **omen** da.  
 house-the fallen Mod(evid) has  
 ‘Supposedly, the house has fallen down.’



(65) derives (64a) and (64b). The particle, *omen*, head adjoins to the Aux in IP, and in affirmative sentences it stays there, producing (64a). In negatives, *omen* and the Aux together head-adjoin to negation producing (64b).

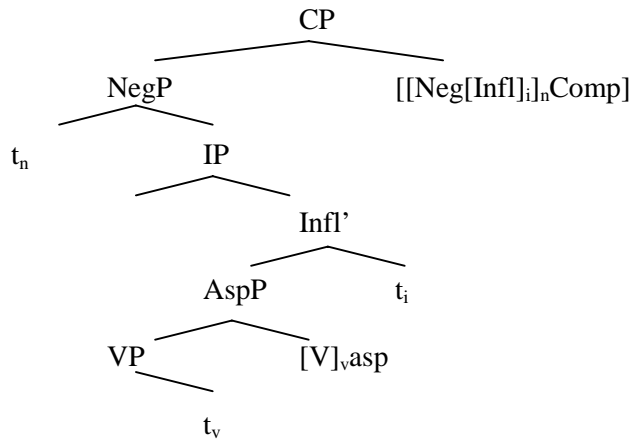
The present proposal makes do with a much more restricted theory of grammar than the  $\Sigma$ -phrase proposal—antisymmetry. However, at least two empirical considerations recommend the present proposal over the  $\Sigma$ -phrase approach.

First, it is unclear how the  $\Sigma$ -phrase approach could accommodate medial complementizer facts discussed in 3.0. Laka proposes a head final (spec-initial) CP above  $\Sigma$ P. (54a), repeated here, and (66) show an example of a relative clause.

(54a) (Laka 1990:43)

[erori ez de-n] etxea  
 fallen no has-that house-the

(66) (Laka 1990:44)



In (66) Aux head adjoins to Neg as usual, and then both head adjoin to the complementizer head.<sup>20</sup>

(45a), showing an example of a clause-medial complementizer is repeated here.

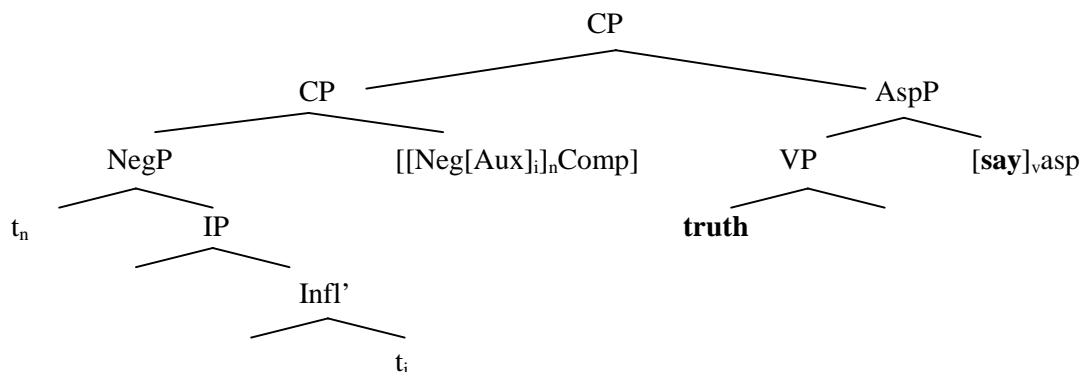
(45a) Badakit [ez didazu-la egia esan]

I know Neg Aux-Comp truth say

I know you didn't tell me the truth

Under Laka's proposal, the elements to the right of the complementizer, 'truth say' are a constituent under AspP, with 'say' head-adjoined to AspP<sup>0</sup>, and 'truth' in spec, VP (cf (63)). To get the right word order in (43a), AspP would seem to have to right-adjoin to CP.

(67)



Even assuming a theory that countenanced this type of adjunction, it is unclear what would motivate this type of movement.

Second, as Ortiz de Urbina (1995:109) observes, Laka's proposal fails to give a unified explanation of the fact that both *wh*-elements and focalized constituents trigger Aux-V orders in Basque. In Laka's proposal, *wh*-phrases move to spec, CP and focalized constituents move to spec, ΣP. (19a) and (19b) are repeated here.

(18) (Ortiz de Urbina 1995:108)

- a. Nork du Jon ikusi?  
who has John seen  
Who has seen John?
- b. MIRENEK du Jon ikusi.  
Mary has John seen.  
Mary has seen John.

Indeed, this problem with Laka's account is more than one of descriptive adequacy. Empirically, it fails to account for the fact that *wh*-phrases and focalized constituents cannot both front. In sentences with both of these, only the *wh*-phrase fronts. The focalized element must be given contrastive intonation.

(68)

- a. Nork eman dio berria PERURI? (Ortiz de Urbina 1989:247)  
Who(E) given has news-the Peter-to  
Who has given the news to PETER.
- b. \*PERURI eman dio berria nork? (Ortiz de Urbina 1989:247)
- c. \*Nork PERURI dio berria eman?

It is unclear how Laka (1990) could accommodate (68) since both Spec of CP and Spec of  $\Sigma$ P should be possible landing sites for movement.

Under the present proposal these facts are handled straightforwardly. Both focalized constituents and *wh*-phrases move to spec, FocP, which along with NegP is in complementary distribution with NeutP. This explains why negatives, *wh*-phrases and focus constructions pattern together in triggering the Aux-V order. Similarly, the fact that only one position is available for both focus constructions and *wh*-phrases explains the data in (68)—i.e. that both types of elements cannot front.

## 5. Conclusion

This paper makes three claims about Basque grammar. First, it argues that Cinque's (1999) hierarchy of functional heads largely holds for Basque. In a typical pattern, lower morphemes in the hierarchy appear in the reverse order, while higher morphemes appear in Cinque's order. This is explained through roll-up—iterative movement through specifier positions—for the lower morphemes but not for the higher ones. Second, based on the discussion Cinque's (1999) proposal in Basque, it argues against Laka's (1990)  $\Sigma$ -phrase account of the affirmative/negative word order differences. Crucially, the present proposal argues that the negative (non-neutral) order is derivationally prior; affirmative (neutral) orders require an additional step in which the main verb and verbal dependents raise. Drawing on Koopman and Szabolcsi's (2000) analysis of a similar phenomenon in Hungarian, it is claimed that the landing site for this movement is NeutP—a phrase which is only projected in neutral clauses. Finally, it is argued that this analysis of affirmative/negative word order differences sheds light on the pattern of clause-medial complementizers in negative embedded clauses.

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### Notes:

<sup>1</sup> Several people were especially helpful in providing judgments for this paper, including Beñat Oyharçabal, Andolin Eguzkitza, Pablo Albizu, Xabier Artiagoitia and Aitziber Atutxa. Wherever possible, the data used herein are drawn from the literature. Other times, native speakers were consulted. In a small number of cases, the author—a non-native speaker of Basque—has provided the data, only in cases where the data are unproblematic.

<sup>2</sup> The position of root modals in his hierarchy is unspecified (cf p.90), although Cinque suggests that they are probably below Mod (volitional). This is fully consistent with the behavior of Basque *ahal*—the permission/ability modal. Nevertheless, given this conceptual uncertainty, the behavior of *ahal* will remain peripheral to the present discussion.

<sup>3</sup> As discussed in detail by Albizu (2000), the “habitual present” necessarily has a habitual or iterative meaning when used with forms for which a synthetic form is available. In such cases, the synthetic form has a progressive meaning.

(i) (Albizu 2000)

a. Patxi orain dator autobusean (progressive-synthetic)

Patxi now come bus-in

‘Patxi is coming on the bus now.’

b. Patxi orain etor-tzen da autobusean (iterative-analytic)

Patxi now come-Asp(imperfect) Aux bus-in

‘Patxi usually comes on the bus now.’

<sup>4</sup> Some focus constructions have a different order. These are omitted from the present discussion. cf. Laka (1990)

<sup>5</sup> Richard Kayne (p.c.)

<sup>6</sup> In fact, this pattern of roll up movement followed by raising is increasingly familiar. Rackowski and Travis (2000) argue that in Malagasy and Niuean, postverbal adverbials roll-up, followed by predicate fronting in which the rolled up chunk (and other higher material) raises to a position just above the Speech Act Phrase. (They argue, contra Cinque, that lower adverbs occupy head positions.) Similarly, Aboh (1999) argues that in Gungbe, lower morphemes in the DP structure roll up, and then raise to spec, DP, skipping NumP. Finally, Koopman and Szabolcsi propose that in neutral orders in Hungarian, a rolled up VP+ raises past several projections on its way to NeutP. Interestingly, nowhere does the reverse pattern seem to appear—long distance raising of an XP past several projections, followed by roll up. No explanation of this (possible) problem is offered here.

<sup>7</sup> In Eastern dialects, verbs selected by this root modal, *ahal* take an imperfect suffix. See note 11.

<sup>8</sup> In affirmative sentences, the objects can follow the verb, however the subject receives focus.

JONEK esan-Ø dio **Miren-i egia.**

J. say-Asp(perfect) Aux M-Dat truth

‘JOHN has told Mary the truth.’

<sup>9</sup> Further consultation with informants is required to determine whether or not this difference is dialectal, however so far it appears not to be.

<sup>10</sup> Alternatively, since the relative order of the objects is preserved, one might posit a single LP(dp). That is, CaseP1 and its complement, CaseP2 might move together to spec, LP(dp).

<sup>11</sup> Depending on where root modality is located in the hierarchy, the same pattern may hold for the possibility/permission modal *ahal* in Eastern dialects. In these varieties, *ahal* can take an imperfect suffix on the main verb, e.g. *Egi-TEN ahal duzu*—‘You can do (it).’ Cinque suggests (p.60) that root modals may be very low in the hierarchy. If they are lower than perfect/imperfect suffixes, then, as in the case of *ari*, the main verb would need to jump over another head to pick up its morphology.

<sup>12</sup> In fact, the differences between Eastern and Western forms of *ohi* might be an areal effect. In Western dialects, which are lexically and phonologically influenced by Spanish, the modal-like behavior of *ohi* parallels that of the Spanish habitual modal *soler*. In contrast, most Eastern dialects—where *ohi* is a particle—are phonologically and lexically influenced by French which lacks a habitual modal of the *soler* type.

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<sup>13</sup> In a footnote (29, p.141) Ortiz de Urbina notes that de Rijk (p.c.) also notices that *ohi* is modal-like in the West and particle-like in the East.

<sup>14</sup> Guglielmo Cinque, (p.c.)

<sup>15</sup> This observation and a useful discussion of these facts were provided by Xabier Artiagoitia (p.c.).

<sup>16</sup> In Wh questions, these Comp heads are not projected, since, as discussed earlier, wh-elements sit in FocusP. Recall that Wh-elements trigger the same word order effects that focalized constituents do (cf (16)).

<sup>17</sup> Richard Kayne, (p.c.) Houngues reports that in Mína wh-questions, a *that*-like element is possible (Houngues 1997:134)

m<sup>ɛ</sup> k<sup>ɛ</sup> (yé) Sossi kp<sup>ɛ</sup> ès<sup>ɛ</sup> ò  
who that Sossi see yesterday Typ.  
'Who did Sossi see yesterday?'

Houngues alternately glosses *yé* as 'that' and as a focus marker. If it is a complementizer, as the gloss 'that' suggests, then this would seem to be evidence of a complementizer merged directly with its associated clause, contra Kayne (1998).

<sup>18</sup> Also, for some speakers, embedded negative clauses headed by *ba-*, fail to evidence inversion.

(i) (Zubiri and Zubiri, 1995, p.655)

a. egin nahi ez ba-du,...

make want Neg if-Aux.

'If she doesn't want to do (it),...'

b. \*ez ba-du egin nahi

However, Ortiz de Urbina (1989, p. 140, fn. 27) explicitly reports that this is not the case for his Basque.

(ii) ez ba-didazu egia esa-ten, ...

Neg if-Aux truth say-Asp(imperfect)

'If she doesn't tell me the truth...'

<sup>19</sup> In Eastern dialects, *-en*, rather than *-ko* is the future marker. This is the third of three homophonous morphemes of the form *-en* discussed in this paper: a complementizer that immediately follows the auxiliary; a past tense morpheme that also immediately follows the auxiliary; and a future marker that immediately follows the main verb.

<sup>20</sup> Note that since Aux and Neg must head adjoin to the left of the complementizer, Laka's analysis share's the present analysis' inability to account for the prefixal complementizers, *ba-* and *bait-*.