

TOPIC, FOCUS AND ADVERB POSITIONS IN CLAUSE STRUCTURE

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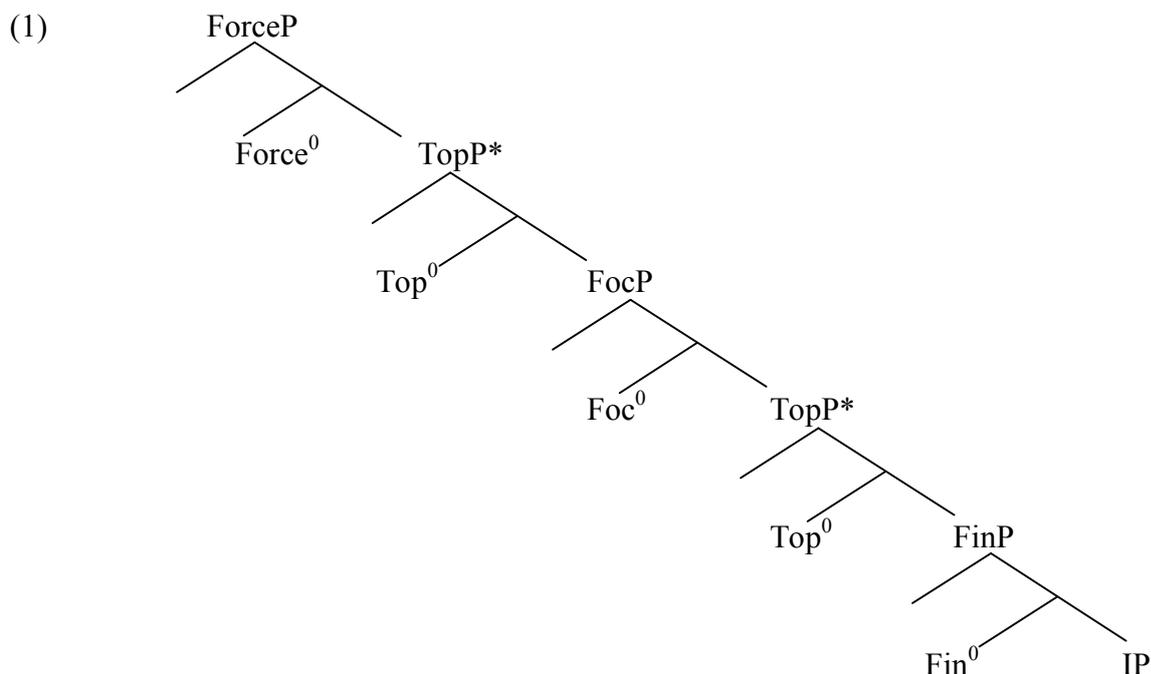
1. Introduction

In §2 we look at the C-system, paying particular attention to Force and Focus in interrogatives, and the position of Force/Focus vis-à-vis other functional projections. (We also try to ‘tweak’ the Rizzi picture of the left periphery to make it accommodate some other projections.) §3 deals with the evidence for a ‘low’ Focus projection, in the left periphery of VP; here we also offer an explanation of the seemingly very different positions where this Focus surfaces (in linear terms) in OV and VO languages. §4 is about IP-internal Topic positions and scrambling. In the concluding section, §5, we point out that Chomsky’s recent writings appear to be suggesting that Topic and Focus are the ‘prime movers’ in displacement.

2. Force, Focus and Other Projections in the ‘C-space’

In the early days of transformational grammar it was customary to say that in a language like English, a *wh*-phrase moves into COMP; after “Barriers” (Chomsky 1986) we began saying that it moves into Spec, CP. But evidence was accumulating, even at the time Chomsky was writing “Barriers”, that there were multiple positions in the space above IP, call it the ‘C-space’. (See, e.g., Reinhart (1981), Bayer (1984).)

Rizzi (1997) made an attempt to actually spell out the positions in the C-space in an exhaustive way. Rizzi proposed that there was (in this space) an element expressing the Force of the clause: i.e. whether it is declarative, interrogative, relative, or other. There was another element which expressed the Finiteness status of the clause: i.e. whether it is finite or non-finite. Rizzi positioned these elements (respectively) in the upper and lower edge of the C-space. In between, he postulated an optional Focus position and multiple Topic positions. The tree diagram looked like this (= Rizzi’s (41)):



In Italian, a relative operator occurs to the left of a topicalized element, and a question operator to its right ((2)-(3) = Rizzi's (42)-(43)):

- (2) a. Un uomo a cui, il premio Nobel, lo daranno senz'altro
 'A man to whom, the Nobel Prize, they will give it undoubtedly'
- b. * Un uomo, il premio Nobel, a cui lo daranno senz'altro
 'A man, the Nobel Prize, to whom they will give it undoubtedly'
- (3) a. * A chi, il premio Nobel, lo daranno?
 'To whom, the Nobel Prize, will they give it?'
- b. Il premio Nobel, a chi lo daranno?
 'The Nobel Prize, to whom will they give it?'

These facts are explained, Rizzi pointed out, if the relative operator is in ForceP and the question operator is in FocP in a configuration like (1).¹

Rizzi suggested that Force and Finiteness can be specified syncretically, on a single head, in a language; thus the English complementizer *that* can normally express both Force and

¹ Strictly, according to (1), it should be possible to have a topicalized element even *below* FocP; so (3a) ought to be fine. But the lower Topic position (Rizzi argues) is possible only when FocP is not filled by a question operator (for reasons having to do with I-to-C movement, see Rizzi (1997) for details).

Finiteness, i.e. is both +Decl and +Fin. But when the Topic-Focus area is activated, it is pure Force and is realized in the Force head, thereby preceding any topicalized element:

(4) I think that next year, John will win the prize.

In Jayaseelan (2001b), I suggested that interrogative Force is expressed by the disjunction operator. This is transparent in many languages. In Malayalam the disjunction marker is *-oo*; the same *-oo* shows up at the end of a question clause, as a question particle:

(5) a. John-oo Bill-oo Peter-oo

‘John or Bill or Peter’

b. Mary wannu-oo ?

Mary came -Q

‘Did Mary come?’

In Sinhala, *d̄d̄* is the disjunction marker and also the question particle:

(6) a. mahattea -t̄d̄ tee d̄d̄ koopi d̄d̄ oone ?

mister -DAT tea Q coffee Q necessary

‘Does the mister want tea or coffee?’

b. Chitraee pot̄d̄ kieuwa d̄d̄ ?

Chitrathis book read Q

‘Did Chitra read this book?’ (Gair 1970, cited in Bayer 2004)

In Japanese, *ka* is the disjunction marker and also a question particle:

(7) a. John-ka Bill-(ka)-ga hon-o katta

John-Q Bill-Q -NOM books bought

‘John or Bill bought books.’ (Kuroda 1965, cited in Bayer 2004)

b. Dare desu ka ?

who is Q

‘Who is it?’ (Baker 1970)

What about English? On the face of it, English appears to have (only) a null disjunction operator. But evidence from some West Germanic dialects suggests that the disjunction operator English employs in its questions is *if* (Jayaseelan 2005). The *if* is ‘silent’ when a *wh*-phrase moves up next to it, but otherwise surfaces.² Let us say that in English questions, the

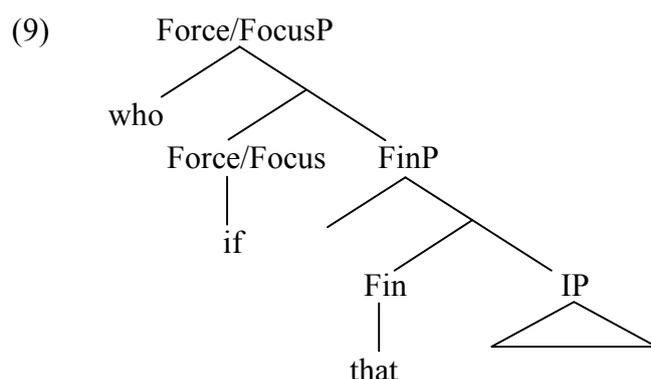
² ‘Whether ...’ could be underlyingly ‘whether if ...’; and just in this case, either the *wh*-phrase or *if* can be silent:

Force and Focus heads are syncretic; and that it is the Focus feature on the head of the ForceP – namely *if* – that “pulls up” a *wh*-phrase to the Spec position.

The West Germanic dialect data that I referred to are the following. In “colloquial substandard Dutch” we get a sentence like (8) (from Bayer (2004), who cites E. Hoekstra (1993)):

- (8) Ze weet [wie [of [dat [hij had willen opbellen]]]]
 she knows who if that he had wanted call
 ‘She knows who he wanted to call.’

Note the ‘who – if – that’ sequence. We can postulate the following structure:³



It has been suggested (Bayer 2004: §8; see also his references) that an embedded clause has no force layer (ForceP). The argument is that an embedded clause is not an utterance and therefore cannot have illocutionary force; an embedded question (e.g.) does not denote a question, it can only ‘refer’ to a question. (This claim is of course contrary to the position of Rizzi, who postulates a uniform C-system for every clause.)

However it is perhaps a mistake to identify Rizzi’s notion of Force with the illocutionary force of speech act theory. In Jayaseelan (2001b) I argued that the “question meaning” of a direct question – namely a request for information – is actually a matter of pragmatics. The

- (i) a. I don’t know ~~whether~~ if John will come.
 b. I don’t know whether ~~if~~ John will come.

³ In Middle English, like in the Dutch dialect illustrated above, *that* was clearly just the head of FinP and carried no meaning of declarative force, cf. (i) (from Bayer 2004, who cites Schleicher 1858):

- Middle English
 (i) men shal wel knowe who that I am
 ‘One shall well know who I am.’

Note that *that* cooccurs with, and surfaces to the right of, *who*. We must assume that it has undergone reanalysis in Modern English, moving up to become the head of ForceP and expressing declarative force.

syntax itself only presents a disjunction, a partition of a domain of discourse (if we assume the partition theory of question semantics (Higginbotham 1993, Higginbotham and May 1981)). And the partition is implemented by a disjunction operator, which we saw is invariably present in a question clause (whether embedded or matrix). Disjunction (then) is the force of a question clause; which was indeed our rationale for deciding to generate the disjunction operator as the head of ForceP. This ForceP must be present in an embedded clause no less than in a matrix clause.

However there do seem to be differences between the left peripheries of matrix and embedded clauses. One such difference is presented by the so-called “quotative” complementizer. Consider the following Malayalam sentences:

- (10) a. John [Mary wannu enn̄] paRaññu
 John Mary came COMP said

‘John said that Mary came.’

- b. John [Mary wannu-(w)oo enn̄] coodiccu
 John Mary came -Q COMP asked

‘John asked whether Mary came.’

enn̄, as a complementizer, is indifferent to the force of its complement, i.e. whether its complement is (e. g.) declarative or interrogative. Therefore it cannot be generated in ForceP. It cannot be generated in FinP either, for two reasons. Firstly, FinP in Rizzi’s schema is the lowest projection in the C-space, but *enn̄* must be generated fairly high: note that in (10b), *enn̄* follows the question particle *-oo*. Which argues – given the OV order of the language – that *enn̄* is generated higher than *-oo*. A second (and more compelling reason) is that *enn̄* is indifferent to the finiteness status of its complement; in fact, it does not even require its complement to be a clause:⁴

- (10) c. meSiin “Grrr ...” enn̄ śabdham uNDaakki
 machine COMP sound produced

‘(The) machine made (a) sound “Grrr ...”.’

So, where do we generate the “quotative”? It must apparently be generated higher than ForceP, if *-oo* heads ForceP.

In fact the quotative is the highest element in the embedded clause – except for one other

⁴ *Enn̄* does not occur (however) in a relative clause (as we show directly), nor in an infinitival complement:

- (i) ñaan awa_n-ooD̄ [PRO pook-uwaan (*enn̄)] paRaññu
 I he -to go -INF said

‘I told him to go.’

element. There is an affixal element *-a* in the language, which is treated as a ‘relativizer’, because it occurs at the end of the relative clause:

- (11) [JohnkaND-a] kuTTi
 John saw -RELAT child
 ‘(the) child that John saw’

The relative clause does not allow *enn∂* to occur in it, cf. (12a) and (12b) which show that *enn∂* and *-a* in either order is unacceptable in a relative clause. So one might surmise that *enn∂* and *-a* are generated in the same slot, for which they compete. But this is not correct; for in the noun complement clause, *enn∂* and *-a* must occur, in that order, cf. (13):

- (12) a. * [John kaND-a enn∂] kuTTi
 John saw -RELAT COMP child
 b. * [John kaNDu enn -a] kuTTi
 John saw COMP-RELAT child

- (13) [John wannu enn -a] waartta
 John came COMP -RELAT news
 ‘(the) news that John came’

In (14), we see the relative order of the question particle, the quotative, and the *-a* affix:

- (14) [John wannu-oo enn -a] coodyam
 John came -Q COMP -RELAT question
 ‘(the) question whether John came’

So (in effect), it appears that there is structure above ForceP, given our assumption that the question particle is in ForceP: there must at least be a position for the quotative, and another position for the relativizer *-a*. It seems a reasonable assumption that the Malayalam relativizer *-a* occupies the same position as the English or Italian relative pronoun (operator); since both appear to have the same requirement of being adjacent to the ‘head’ of the relative clause. This in turn suggests that in Rizzi’s Italian example (2a) (repeated here), the relative operator may not be in ForceP at all:

- (2) a. Un uomo a cui, il premio Nobel, lo daranno senz’altro
 ‘A man to whom, the Nobel Prize, they will give it undoubtedly’

Possibly ForceP only distinguishes between interrogatives and declaratives.

All, or some, of what we said about the quotative element of Malayalam (Dravidian generally) could also be true of the quotative in Korean (example from Bayer 2004: 64):

- (15) a. akasi -nun [[[ku-ka mwues-ul mek-kess] -nya]-ko] mwulessta
waitress-TOP he-NOM what -ACC eat -want -Q -QUOT asked

‘The waitress asked what he wanted to eat.’

- b. Bill-um [[[John-i wa -ss] -nya] -ko] mwulessta
Bill-TOP John-NOM come-PAST -Q -QUOT asked

‘Bill asked whether John had come.’

Given the universalist claims about the functional hierarchy, should we look for a ‘hidden’ quotative in other languages as well? I will leave this question open.

3. A Focus Phrase above vP

An important claim embedded in the Rizzi analysis of the C-system is that a *wh*-phrase that moves into COMP, moves into the Spec of a FocP. We can try to generalize this claim and say that all *wh*-movement is into a Focus position.

We now look at some languages that do not move their *wh*-phrases into COMP but nevertheless do move them into a fixed position. We shall try to show that these languages too move their *wh*-phrases into a Focus position, although the Focus position (in this case) is elsewhere than in COMP.

3.1. *Wh*-movement in Malayalam

Many languages have a requirement that a *wh*-phrase should be contiguous to V. In Malayalam, the natural way to ask a question is by clefting: the *wh*-phrase is moved into the cleft focus:

- (16) aar∂ aaN∂ [ninn-e talli -(y)at∂] ?
who is you -ACC hit(PAST) -nominalizer

‘Who is it that hit you?’

But a non-cleft question also is possible under a fairly strict condition: the *wh*-phrase must be placed immediately to the left of V.

- (17) a. ninn-e aar∂ talli ?
you -ACC who(NOM) hit(PAST)

‘Who hit you?’

- b. * aar∂ ninn-e talli ?
who(NOM) you -ACC hit(PAST)

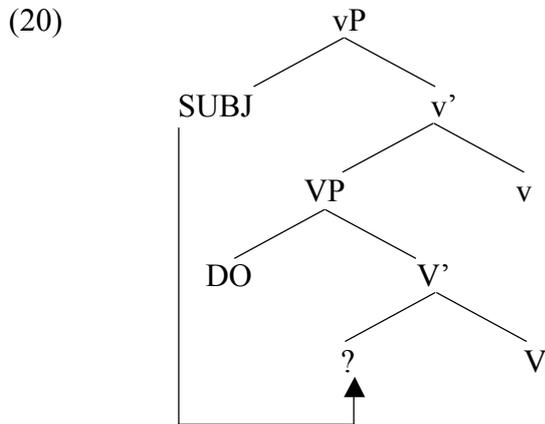
(18) a. iwiDe aarð uNDð ?
 here who(NOM) is (existential)
 ‘Who is here?’

b. * aarð iwiDe uNDð ?
 who(NOM) here is (existential)

(19) a. awan ewiDe pooyi ?
 he(NOM) where went
 ‘Where did he go?’

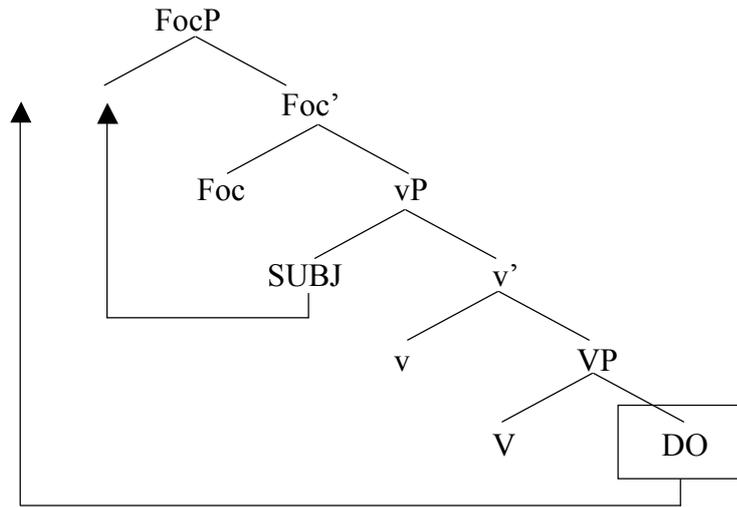
b. * ewiDe awan pooyi ?
 where he(NOM) went

The question is: how do we get the *wh*-phrase next to V? If we assume an underlying head-final order in the VP, as is traditionally done in South Asian linguistics, the problem becomes very acute. We have to do two unacceptable things: we have to generate a COMP-like position ‘within’ VP; also, in a sentence like (17a) or (18a) in which the *wh*-phrase is the subject, we have to lower the subject NP into this position. This is shown in (20):



But – as argued in Jayaseelan (1996, 1999, 2001a) – these problems can be avoided if we assume (following Kayne 1994) that the universal underlying order is Specifier-Head-Complement; and that in languages exhibiting a surface OV order, V’s complements have all moved out of the VP. Now if we postulate a FocP above vP, we get the results we want. In a sentence like (17a), the subject NP, being a *wh*-phrase and so being marked [+ Focus], will move into Spec, FocP. The verb’s complement, the DO, will move past it by the “VP-vacating” movement that is necessary to obtain the surface OV order:

(21)



This is a strong argument for postulating a FocP immediately above vP, and also for adopting the Kaynean proposal about an invariant Head-Complement order.

3.2. Word Order in Kirundi

We now look at an interesting word-order phenomenon in a Bantu language, Kirundi, which has been described in Ndayiragije (1999). Kirundi is an SVO language. But it has two marked word orders in which the subject follows the verb and the object and acquires a contrastive focus reading. (22a) shows the neutral order, and (22b) and (22c) illustrate the marked orders (Ndayiragije 1999: ex. (1)):⁵

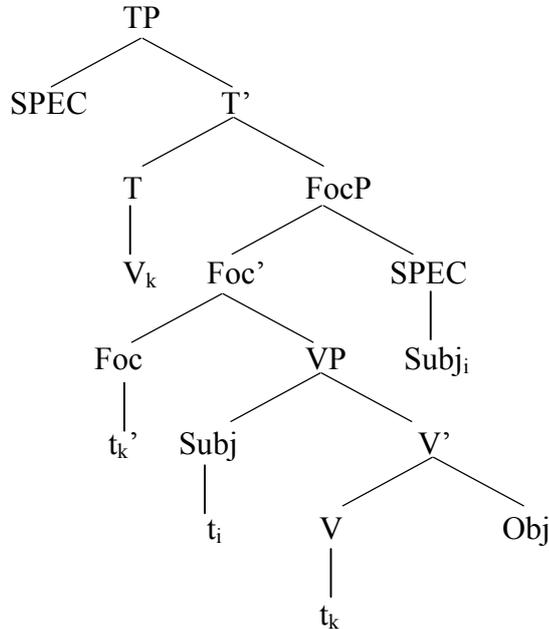
- (22) a. Abâna ba-á -ra-nyôye amatá SVO
 children 3P-PST-F -drink:PERF milk
 ‘Children drank milk.’
- b. Amatá y -á -nyôye abâna OVS
 milk 3S-PST-drink:PERF children
 [Lit.: ‘Milk drank children.’]
 ‘Children (not parents) drank milk.’
- c. pro_{exp} ha -á -nyôye amatá abâna (Exp)VOS
 LOC -PST-drink:PERF milk children
 [Lit.: ‘There drank milk children.’]
 ‘Children (not parents) drank milk.’

⁵ Parallel facts have been noted in some other Bantu languages. The OVS order has especially caught the attention of linguists; see (e.g.) Ura (2000), who describes it under the name ‘inverse’. Ura’s account of this structure however fails to note, or at least does not give any importance to, the focusing effect on the postposed subject.

The interesting question is, how does the postposed subject become contrastively focused? Is there a Focus position at the end of the clause? If so, how do we generate it?

Ndayiragije's solution is given in (23):

(23) (= Ndayiragije's (2))



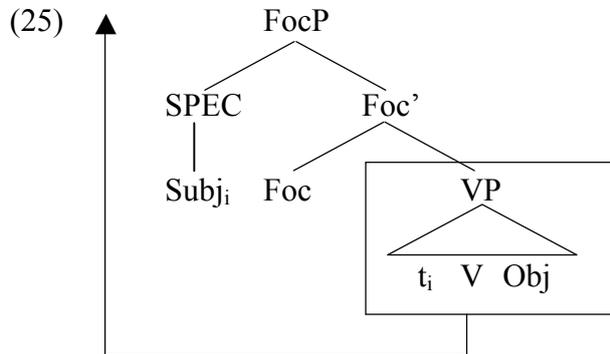
He postulates a FocP above VP, which has its SPEC position to the right of the head; and he moves the subject into it. Since FocP is the only phrase in the tree which has this peculiar position of the SPEC, he suggests that “this unique behavior of FocP is related to prosodic properties of theme-rheme structures, which in many cases (such as English heavy NP shift) involve rightward extraposition” (p. 400: fn. 1). We shall see that the analogy to English heavy NP shift is indeed sustainable; but at the same time, we shall show that we do not need a right-of-head SPEC position.

Given (23), two things can happen. The object can move to SPEC, TP, triggering object-verb agreement, to yield (22b); or SPEC, TP can be filled by an expletive *pro*, triggering locative agreement, to give us (22c). Although (23) makes the subject the focus, actually any phrase can be focused. Consider (24): this sentence has apparently the neutral word order but has the meaning of contrastive focus on the object; we must conclude that the object has been moved into Spec, FocP.⁶

- (24) Abâna ba -á -nyôye amata SVO (Focus: Obj)
 children 3P -PST -drink:PERF milk
 ‘Children drank milk (not water).’

⁶ This “invisible” movement of the object is indicated only by the *absence* of an “antifocus” marker *ra*; contrast (22a) and (24). The absence of *ra* signals that some phrase is focused.

In Jayaseelan (2001a: fn. 4), a solution was proposed for the right-edge occurrence of Focus in Kirundi, that did not involve any non-canonical X'-configuration. Kayne (1998) has argued for an operation of 'remnant VP-preposing' that applies in some SVO languages like English. If we assume that Kirundi also has this rule, its application after the movement of the focused phrase into Spec, FocP should give us the order that we want; e.g. if the subject is focused, we get the movement indicated in (25):



This proposal correctly predicts that the focused phrase will show up to the right of all other elements in the VP. E.g. a focused object follows a VP-internal adverbial, cf. (26a) (= Ndayiragije's (49c)); and it follows a clausal complement exhibiting object control, cf. (26b) (= Ndayiragije's (50b)):

- (26) a. Yohani a -á -oógeje néézá imiduga
 John 3S -PST-wash:PERF well cars
 'John washed cars well (not trucks).'
- b. Yohani a -á -zanye t_i [CP PRO_i kurisha] inka_i
 John 3S -PST-bring:PERF INF-graze cows
 'John brought cows (not goats) to graze.'

3.3. A VP-peripheral Focus Position in English

We now go on to show that English too has a FocP above vP. Indeed, if the phase theory is correct (Chomsky 2000), this FocP could be just the "escape hatch" needed by a *wh*-phrase to come out of a vP (Jayaseelan 2004).

3.3.1. Pseudogapping

There is a phenomenon variously known as 'incomplete VP deletion' (Jayaseelan 1990), 'VP-subdeletion' (Kayne 1994) and 'pseudogapping' (Lasnik 1995, 1999), in which a deletion rule that looks like VP Deletion leaves behind a remnant (examples from Sag 1976):

- (27) a. Mary hasn't dated Bill, but she has Harry.

- b. Speaker A: Gee, I've never seen you on campus before.
 Speaker B: Yeah! Neither have I you.

The remnant is sometimes in the 'middle' of the deleted VP, as in Speaker B's response in (27b):

(27b') Speaker B: Yeah! Neither have I [_{VP} ~~seen YOU on-campus-before~~]

Note that the remnant receives contrastive stress; in fact, if there is no contrastive stress on the remnant, pseudogapping is ungrammatical:

- (28) Speaker A: Has she dated Bill?
 Speaker B: * Yes, she has Bill. (Cf. No, she has Harry.)

There have been several accounts of this phenomenon. In Jayaseelan (1990) I proposed that the focused phrase is moved out of the VP by a right-adjunction operation, after which the VP is deleted. Lasnik (1995, 1999) proposed moving the remnant to the left. But Lasnik's account ignored the focus requirement on the remnant phrase: he moved the phrase to AGR₀P, and the motivation for the movement was Case-checking. My second account in Jayaseelan (2001a) – which I still wish to maintain – appealed to a FocP above vP in English. The contrastively stressed phrase is moved to Spec, FocP; after which the VP is deleted:

(29) Neither have I [_{FocP} you_i Foc⁰ [_{VP} ~~seen t_i on-campus-before~~]]

This account neatly explains the focus requirement on the remnant phrase.

3.3.2. Clause-final Focus Marker

Let us take a quick look at another instance of the VP-peripheral Focus position in English. Consider a floated focus marker like *himself*, *herself* etc., which can occur in all the positions in which a floated quantifier can occur, and in addition at the end of the clause:

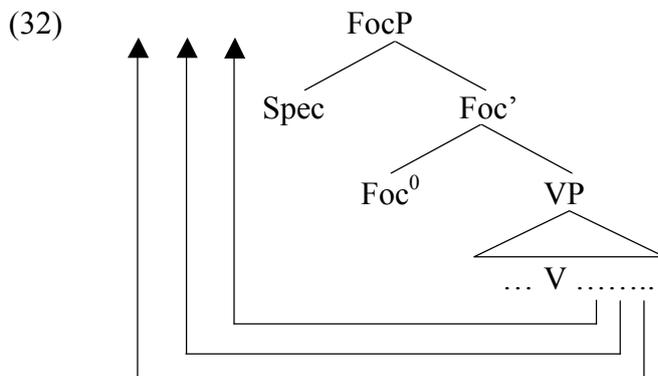
- (30) a. John (himself) may (himself) have (himself) done it (himself).
 b. They (all) may (all) have (all) done it (* all).

Sportiche (1988) proposed that a floated quantifier is 'stranded' by the raising subject in the Spec of a VP; let us say the same thing about a floated focus marker. But the remaining problem is: how do we generate the position of the focus marker at the end of the clause? There is a straightforward solution if we postulate a FocP above VP (as argued in Jayaseelan 2001a): let us say that a subject NP which contains a focus marker can move into the Spec of FocP, and strand the focus marker there when it moves up further. Combined with remnant VP-preposing (Kayne 1998), we get the desired word order:

- (31) a. [VP John himself did it]
=> raising of subject to Spec, FocP
- b. [_{FocP} [John himself]_i F⁰ [VP t_i did it]]
=> remnant VP-preposing
- c. [_{XP} [VP t_i did it]_j X⁰ [_{FocP} [John himself]_i F⁰ t_j]]
=> raising of subject to Spec, IP, stranding focus marker
- d. John_k ... [_{XP} [VP t_i did it]_j X⁰ [_{FocP} [t_k himself]_i F⁰ t_j]]

3.4. The Surface Position of Focus in OV and VO Languages

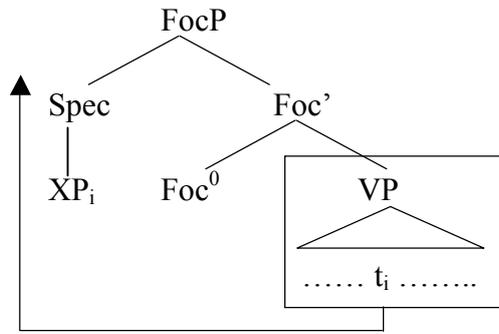
We have seen that both SOV and SVO languages have a FocP above vP. But a point to note is that in an SOV language a focused phrase shows up to the immediate left of V (cf. the Malayalam *wh*-phrase), whereas in an SVO language it shows up at the end of the clause, i.e. the right periphery of VP (cf. a focused phrase in Kirundi or English). These facts are currently accounted for (in Kaynean circles) by postulating completely dissimilar types of operations: OV languages have “VP-vacating movements” – or a single VP-vacating movement – which move all elements that are to the right of V out of the VP and to the left of the Focus position:⁷



In a VO language, there is an operation of “remnant VP-preposing” which moves the whole VP (after focus movement) to the left of the Focus position:

⁷ This movement was illustrated earlier, in (21).

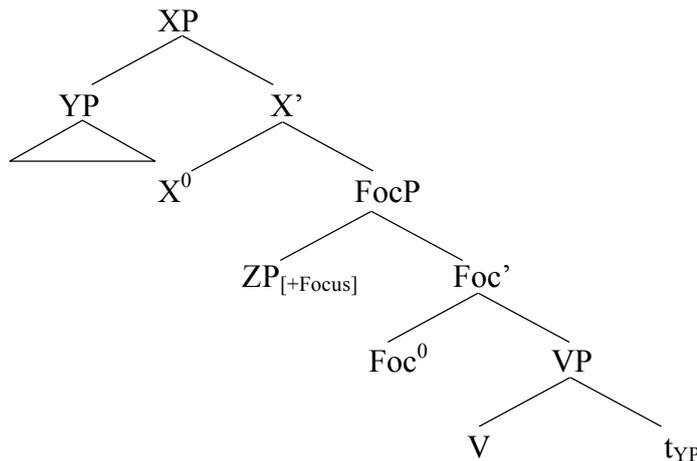
(33)



Neither of these movements is (currently) well-motivated. But actually, given the assumption of distributed morphology that verbs – more generally, roots – pick up their inflections by phrasal movement (Koopman and Szabolcsi 2000, Julien 2003), we are now in a position to motivate these movements, and also unify them.

By common assumption, inflection of V is generated higher than V; cf. the position of IP (or TP) vis-à-vis VP in clause structure. To bring V close to I, two movements are necessary if only phrasal movement is admissible: First we have to move all the elements which are to the right of V in the VP – actually, V's complement (a single constituent), given binary branching – out of the VP, so that V will be the rightmost lexical element in the VP. We will call this first movement 'stacking', following Koopman and Szabolcsi (2000). The target of stacking, we shall simply show as XP; it is a phrase whose only function is to host the stacked material. If a FocP is generated above VP, stacking takes place to the left of FocP.⁸

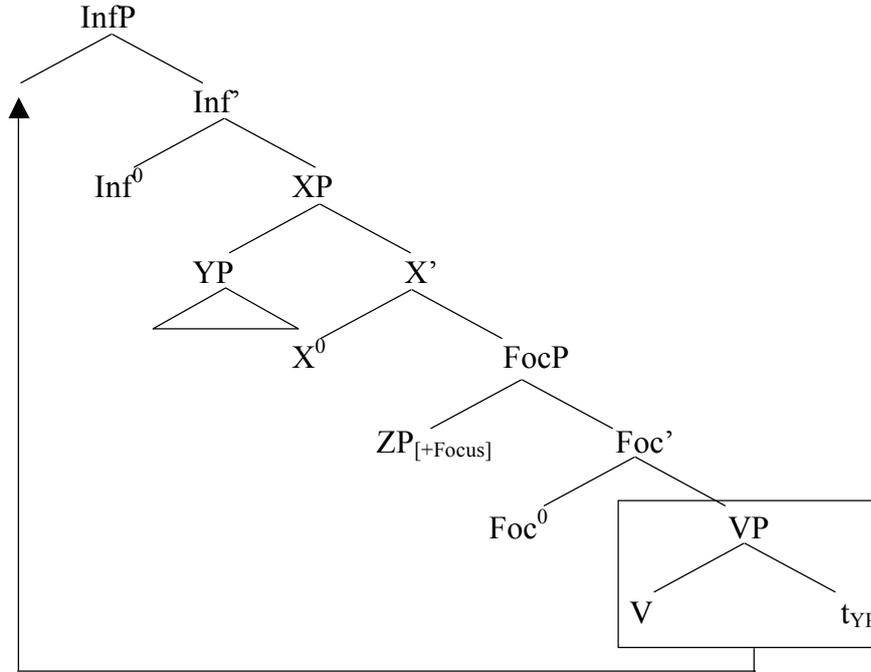
(34)



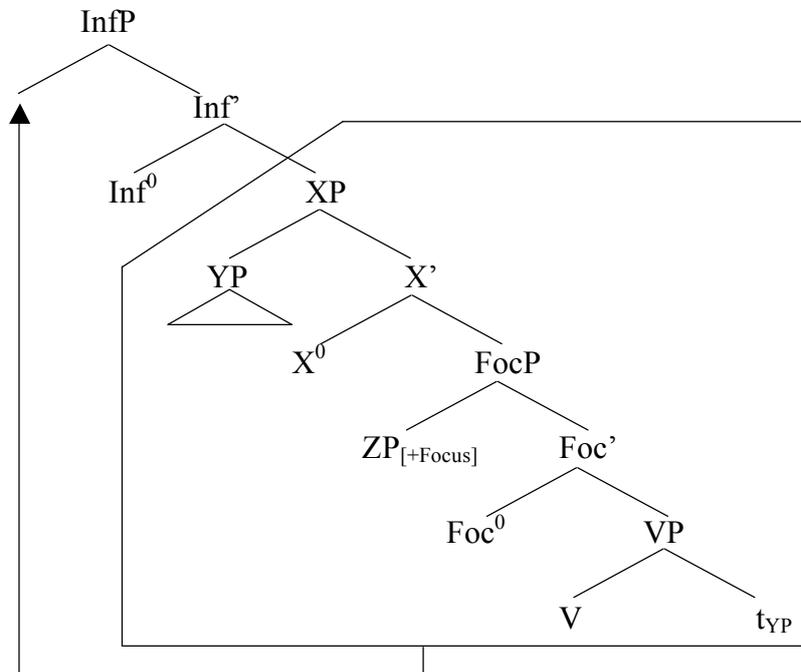
Now Inf(lection) is merged, projecting an InfP. In order to bring about a configuration in which V is contiguous to Inf(lection), we have two options. We can move just the VP – 'stranding' XP and FocP – to Spec, InfP. Alternatively, we can have the VP 'pied-pipe' the material to its left – XP and FocP – to Spec, InfP. Cf. (35a) and (35b):

⁸ In (34) we have ignored the v/V 'split', also the position of Subject, which in an ergative vP will be to the left of v. Showing the full structure will not affect our argument in any way.

(35) a.



b.



(35a) gives us the string:

(35a') V – (t_{YP}) – Inf – YP – (X) – ZP_[+Focus] – (Foc) – (t_{VP})

(Elements that contain no lexical material are enclosed in brackets.) ‘V – Inf’ (ignoring trace) will be perceived as an inflected verb. This is followed by the complements of V, ‘YP’; and at the right edge – after the complements – comes the focused phrase, ‘ZP_[+Focus]’. This is the order of English.

(35b) yields the string:

(35b') YP – (X) – ZP_[+Focus] – (Foc) – V – (t_{YP}) – Inf

Again, 'V – Inf' will be perceived as an inflected verb; but now it is at the end (or right edge) of the string. It is immediately preceded by the focused phrase, 'ZP_[+Focus]'; which in turn is preceded by the complements of V, 'YP'. This is the order of Malayalam.

VO languages are 'stranding' languages, and OV languages are 'pied-piping' languages.

4. IP-internal Topics and Scrambling

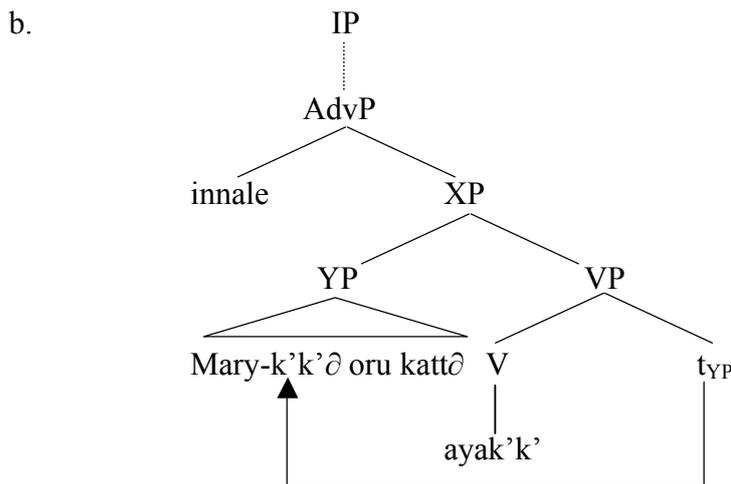
4.1. Adverbs, Stacked Elements, Scrambling

Cinque (1999) postulated a number of adverb positions above the lexical VP. Where are these adverb positions, one might ask, with respect to the landing sites of the two movements that we talked about, namely stacking and remnant VP-preposing?

In Malayalam, stacking takes place before any adverb is merged; so that in the neutral order, adverbs precede the verb's complements, cf. (36a). This order is derived as shown in (36b):

(36) a. John innale Mary-k'k'∂ oru katt∂ ayacc-u
 John yesterday Mary-DAT a letter send -PAST

'John sent Mary a letter yesterday.'



However a complement can sometimes be seen preceding an adverb. Thus (36a) has a variant like (37):

(37) John Mary-k'k'∂ innale oru katt∂ ayacc-u
 John Mary-DAT yesterday a letter send -PAST

This kind of change in word order is ascribed to a rule called 'scrambling'. Scrambling used to be thought of as a purely optional rearrangement of the verb's arguments and adjuncts in

OV languages, which had little or no semantic consequences. But this has been shown to be not true of scrambling in certain languages, or rather certain families of languages; e.g. it is not true of Germanic OV languages, or Dravidian languages.

4.2. The Semantics and Syntax of Scrambling

It was work in Germanic linguistics (I believe) that first turned up the fact that a complement which moved to the left of an adverb showed definiteness/specificity effects. Consider the following Dutch example (Zwart 1996: 91):

(38) a. ... dat Jan gisteren een meisje gekust heft
 that John yesterday a girl kissed has
 ‘... that John kissed a girl yesterday.’

b. ... dat Jan een meisje gisteren gekust heft
 that John a girl yesterday kissed has
 ‘... that John kissed a (particular) girl yesterday.’

In (38a) ‘a girl’ can have an existential reading; but in (38b) it can only be interpreted as referring to a specific girl.

An interesting example from German is discussed in Diesing (1992: 112):

(39) a. das Otto immer Bucher uber Wombats schreibt
 that Otto always books about wombats writes
 ‘Otto always writes books about wombats.’

b. # das Otto [Bucher uber Wombats]_i immer t_i schreibt
 that Otto books about wombats always writes
 # ‘Books about wombats, Otto always writes.’

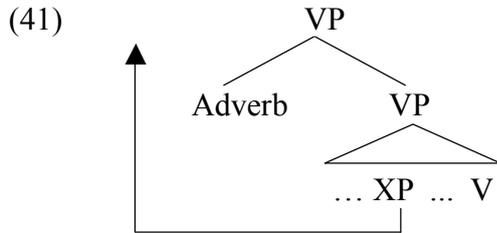
In (39), the verb is a verb of creation: the books come into existence only as a result of the writing. Therefore (39b) is semantically odd, since the scrambled position forces a specific or generic reading on ‘books’. (I have tried to reproduce this effect in the English translation by using Topicalization.) The German contrast can be readily replicated in Malayalam:

(40) a. Mohanan eppoozhum aanakaL -e pattiyuLLa kaThakaL ezhut-um
 Mohanan always elephants -ACC about stories write-FUT
 ‘Mohanan always writes stories about elephants.’

- b. # Mohanan_i [aanakaL -e pattiyuLLa kaThakaL]_i eppoozhum t_i ezhut-um
 Mohanan elephants-ACC about stories always write-FUT
 # ‘Stories about elephants, Mohanan always writes.’

(In Japanese, there is no such contrast (Sauerland 1998).)

Traditional German linguistics assumed an underlying OV order in the VP, and adverbs were taken to be left-adjoined to the VP; therefore scrambling would have been represented (under this view) as in (41):

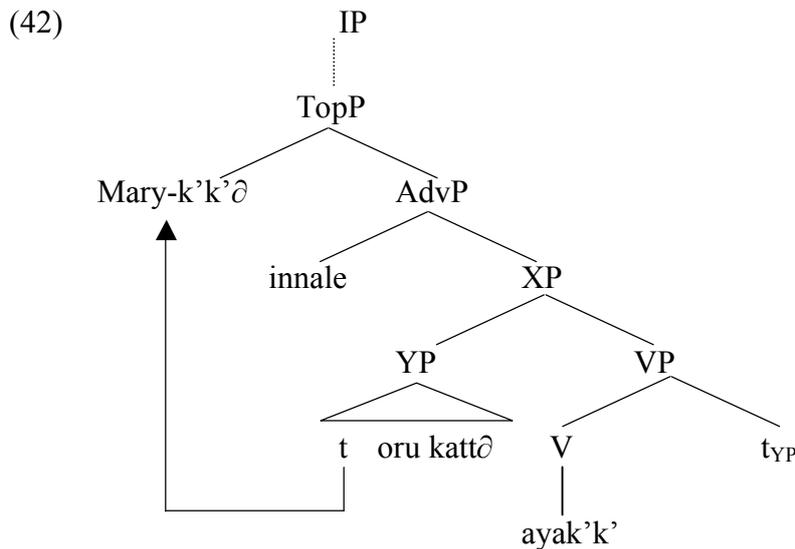


Assuming this structure, Diesing (1992, 1997) offered an explanation of the scrambling facts in terms of what we may call an “avoidance strategy”. The VP (she claimed) is the domain of existential closure. A definite NP must *not* be existentially interpreted and so must move out of the VP in order to ‘escape’ existential closure. However, an indefinite NP may either remain in the VP and get an existential interpretation; or it may scramble out of the VP and get other types of interpretation, e.g. a specific interpretation.

It is unclear how Diesing’s account will work if the verb’s complements in their ‘canonical’ positions have already moved out of the VP by stacking, as we have argued is the case.

But actually, a simple explanation of the scrambling facts is possible (Jayaseelan 1999, 2001a): all we need to do is to postulate a Topic position above the adverb position. Note how, in (39b) and (40b), we have reproduced the semantic oddity of the German and Malayalam sentences in the English translation by means of (plain) Topicalization in the left periphery of the clause. So it is a reasonable guess that what is happening in the German or Malayalam sentence is (just) Topicalization, although the movement (in their case) is to an IP-internal position.

Assuming (then) a TopP above an adverb position, we can represent scrambling in (37) as follows:



In our examples (37)-(40), the adverb served as a diagnostic of scrambling. But if the adverb position is unfilled, we can still tell when clause-internal scrambling has taken place. The base order of a ditransitive verb's complements (in German, Dutch or Malayalam) is 'IO – DO'; so, if we encounter the inverse order 'DO – IO', we can conclude that DO has been moved to the left (scrambled). And we can expect DO (in this case) to show the definiteness/specificity effects of scrambling.

This constraint on the scrambled DO was noticed by German linguists: Lenerz (1977: 54), cited in Abraham (1986: 17), stated it as a filter:

(43) * DO [– def] + IO [+ / – def]

Abraham (1986: 18) provides the following example of this filter; the (a) sentence gives the neutral order, the (b) sentence is acceptable, but the (c) sentence is ungrammatical:

- (44) a. ich habe meinem Bruder einen / den Brief geschickt
 I have my-DAT brother a / the letter sent
 'I have sent my brother a / the letter.'
- b. ich habe den Brief meinem Bruder geschickt
 I have the letter my-DAT brother sent
- c. * ich habe einen Brief meinem Bruder geschickt
 I have a letter my-DAT brother sent

In Malayalam, I shall give just one example of the definiteness/ specificity effect that obtains in the inverse order 'DO – IO':

- (45) a. $\tilde{n}aan$ oru maratt-in \hat{o} weLLam ozhiccu
 I a tree -DAT water poured
 ‘I poured water to a tree.’
- b. $\tilde{n}aan$ weLLam oru maratt-in \hat{o} ozhiccu
 I water a tree -DAT poured
 ‘I poured the water to a tree.’

In Malayalam, the definite article is null. Therefore a form like *weLLam* ‘water’ is ambiguous between a definite and an indefinite reading. In the (a) sentence, which has the canonical order, the most natural interpretation of *weLLam* is as ‘(some) water’, i.e. the NP is indefinite. But in the (b) sentence, the only permissible interpretation of *weLLam* is as ‘the water’; i.e. the NP is obligatorily definite.

4.3. Scrambling and Parasitic Gaps

In support of our claim that the scrambled position is a Topic position, I now give an argument from the licensing of parasitic gaps. As is well-known, a Topic can license a parasitic gap:

- (46) a. I filed these papers without reading *(them).
 b. These papers_i I filed t_i, without reading e_i.

These papers, when it is in its base position, cannot license a parasitic gap; therefore the coreferential pronoun *them* is not omissible in the (a) sentence. But when *these papers* is topicalized, *them* is omissible as shown in the (b) sentence.

Now it has been noted in the Germanic OV languages that a scrambled NP can license a parasitic gap. Cf. the following Dutch sentence (Zwart 1996: 50):

- (47) ... dat Jan Marie_i zonder e_i aan te kijken_{t_i} gekust heft
 that John Mary without on to look kissed has
 ‘... that John kissed Mary without looking at her.’

In Modern Persian, a DO which is indefinite and non-specific follows an IO; but a definite or specific DO precedes an IO and is marked by a special marker *râ* ((48) and (49) from Karimi 1999):

- (48) a. Kimea barâ man (ye) ketâb xarid
 Kimea for me (a) book bought
 ‘Kimea bought (a) book for me.’

- b. Kimea un ketâb ro barâ man xarid
 Kimea that book RÂ for me bought
 ‘Kimea bought that book for me.

We can explain this by saying that *râ* is a topic marker, presumably generated in the head of TopP; and that a definite or specific DO is obligatorily topicalized (scrambled) in Modern Persian. Interestingly, a DO can license a parasitic gap just in case it is marked by *râ*, cf.:

- (49) a. Kimea [_{NP} ye kârgar ro]_i [_{CP}ghablaz inke pro e_i estexdâm be -kon-e]
 Kimea a worker RÂ before that hiring SUBJ -do -3SG
 be kâr vâdâsht
 to work forced
 ‘Kimea forced a (specific) worker to work before hiring (her).’

- b. * Kimea [_{NP} ye kârgar]_i [_{CP}ghablaz inke pro e_i estexdâm be -kon-e]
 Kimea a worker before that hiring SUBJ -do -3SG
 be kâr vâdâsht
 to work forced

(It is difficult to demonstrate the existence of a parasitic gap in Malayalam or Japanese, because these languages freely allow an empty pronoun (pro) in all argument positions.)

To conclude this section: There are apparently multiple Topic positions, which moreover need not all cluster together but can be ‘distributed’ among the adverb positions:

- (50) John Mary-k’k’ð oru pakSe aa kattð innale ayaccu-kaaNum
 John Mary-DAT perhaps that letter yesterday sent -may have
 ‘John may have perhaps sent that letter to Mary yesterday.’

The Focus positions (on the other hand) – in languages which allow multiple Focus positions – appear to cluster together, cf.:

- (51) nin -akkð innale aarð entð tannu ?
 you-DAT yesterday who what gave
 ‘Who gave you what yesterday?’

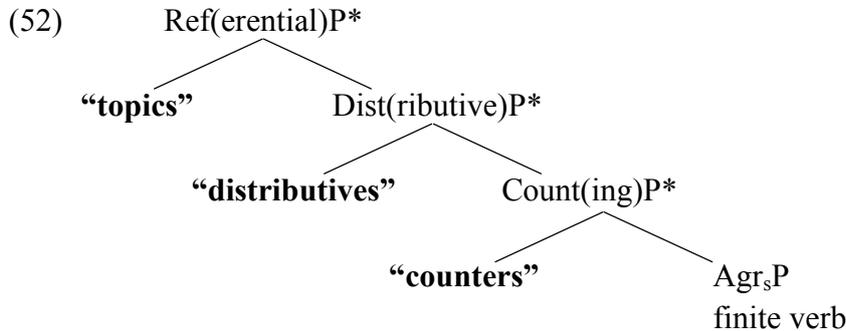
5. Hungarian Quantifier Order

In this section we shall look at the ordering of quantifiers in languages, in order to suggest that the ‘Topic-(Adverb)-Focus’ configuration that we postulated above vP is replicated by quantifier order.

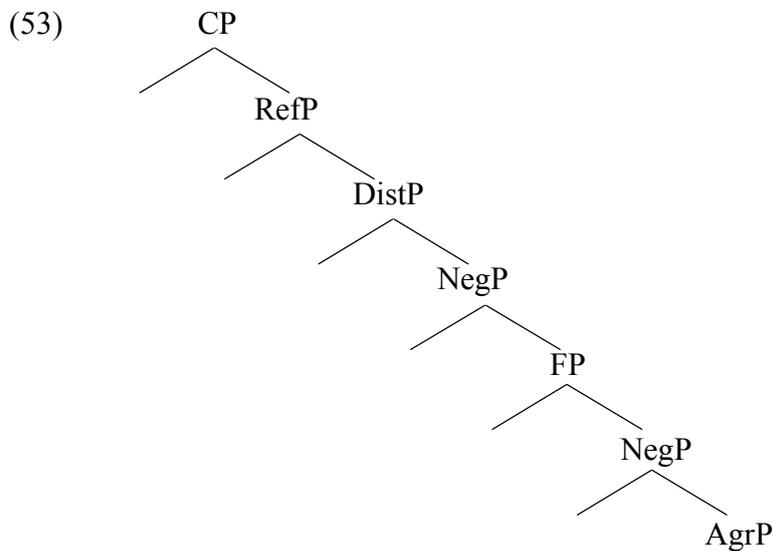
Beghelli and Stowell (1997) proposed particular positions for quantifiers in the clause

structure, at LF. Interestingly, these positions are testified in the *overt* syntax in Hungarian. Hungarian is a language which “wears” its scope relations “on its sleeve”: all scope relations are made visible in the overt syntax. We can therefore look at Hungarian quantifier order as a way of accessing the universal order of quantifiers in languages.

Brody and Szabolcsi (2003) represent Hungarian quantifier order – using Beghelli and Stowell’s schema and their terms – as follows ((52) adapted from Brody and Szabolcsi’s (4)):



We can compare this with a representation of Hungarian clause structure in Koopman and Szabolcsi (2000) ((53) adapted from Koopman and Szabolcsi’s ex. (1), p. 7):



Koopman and Szabolcsi (p. 7) explain their functional projections in the following terms: ‘Ref(erenial)P is the position of names, definites, and wide scope indefinites; Dist(ributive)P is the position of universals and a set of other operators. ... FP is the position for emphatic or contrastive focus as well as modified numeral QPs.’ They illustrate these positions with the following sentence (p. 7):

(54) [_{RefP} Két fiúval [_{DistP} minden problémáról [_{FP} egy lány [_{AgrP} beszélt ...]]]]
 two boy-with every problem-about a girl talked

‘There are two boys x such that for every problem y , it was a girl who talked about y with x .’

The two schemas illustrated above are (of course) compatible and can be collapsed. The ‘CountP’ position of (52) is the same as ‘FP’ in (53): Brody and Szabolcsi explicitly state (fn. 3) that ‘what we say about counting quantifiers carries over to focus.’ Negation and Focus appear to “go together” in Hungarian (as in many languages); let us (tentatively) collapse them into a single position, and call it ‘Neg/FocP’.

‘RefP’ is obviously the same as what we called ‘TopP’. Interestingly, Brody and Szabolcsi note that ‘quantifiers in RefP can be followed by unfocused adverbs like *tegnap* ‘yesterday’, those in DistP cannot’ (p. 21).

The close correspondence of the Hungarian quantifier order (and clause structure) to our ‘Topic-(Adverb)-Focus’ configuration should now be obvious. Of course, we have nothing corresponding to ‘DistP’ in our schema; so this position must be added. Let us identify ‘DistP’ with the position for the disjunction operator postulated in Jayaseelan (2001b), and with the position for the adverbial particles ‘only’ and ‘even’ in Kayne (1998). The rationale for this identification is that the distributive quantifier ‘every’, and the adverbial particles ‘only/even’, contain a disjunction operator (Jayaseelan 2004).

Brody and Szabolcsi’s diagram (52) shows the quantifier positions ranged above Agr_sP; but they go on to claim that ‘the operator series Ref-Dist-Count reiterates itself above all inflectional heads and possibly above the verbal heads’ (p. 22). Although they make this claim specifically for Hungarian, it would appear that the reiteration that they speak of is wide spread among languages. From this vantage point, we can now hazard a guess that what Rizzi discovered as the C-system (the “fine structure of the left periphery”) is just the replication of this schema above the inflectional head T⁰.

6. Conclusion

In the recent writings of Chomsky (Chomsky 2000, 2001, 2004, 2005), what are called “edge properties” have acquired prominence. In “Minimalist Inquiries” (Chomsky 2000) it is suggested that the phase heads C⁰ and v⁰ may be optionally assigned an EPP feature, and as a reflex of this feature, ‘P-features’ (peripheral features), the latter spelt out as ‘force, topic, focus, etc.’ (op. cit.: 108; see also fn. 50 and accompanying text). The list ‘force, topic, focus’ is clearly meant to be an echo of Rizzi’s (1997) analysis of the C-system; in fact, in “Derivation by Phase” (Chomsky 2001) it is stated (see fn. 6) that ‘T and C [are] cover terms for a richer array of functional categories’. This last characterization can be extended to v⁰ too. Because later in the same paper, while talking about Object Shift in Scandinavian, Chomsky suggests that ‘the EPP position of v*P is assigned INT’, INT being ‘new information,

specificity/ definiteness, focus, etc.’ (see (54i), (57)). Now, ‘specificity/definiteness’ can be interpreted as topic; so we are in effect saying that there is a Topic/Focus configuration in the left periphery of the vP phase too, substantially like what there is in the left periphery of the CP phase. (This parallelism between CP and vP is by now a familiar idea; see, among others, Jayaseelan (2001a, 2004), Belletti (2003).)

Chomsky (more recently) seems to be veering round to the idea that all phrasal movement (what he calls ‘displacement’) is induced by ‘scopal and discourse-related properties (new/old information, specificity, etc.)’ (“Beyond Explanatory Adequacy”, Chomsky 2004). His position is that this ‘displacement’ property is what distinguishes natural language systems from the artificial languages of Logic, etc. (See also Chomsky (2005).)

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