Prosody as an argument for a layered left periphery[1]

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1. Introduction

Van Heuven and Haan (2000, 2002) did experimental work investigating the functional hypothesis that phonetic/prosodic interrogativity marking is stronger in inverse proportion to the (number of) lexico-syntactic markers used for the expression of a particular question type. If statements (ST) are taken as the unmarked structure, wh-questions (WH) signal interrogativity by means of both inversion and a wh-word, yes/no- questions (YN) by means of inversion alone and declarative questions (DE) have no special lexico-syntactic means to signal interrogativity. Hence, the functional hypothesis was that the prosodic signalling of interrogativity would be stronger for DE-questions, less so for YN-questions and even less so for WH-questions, as illustrated by the sequence in (1).

(1) DE > YN > WH > ST

Van Heuven and Haan's experimental research confirmed this hypothesis. Interestingly, a closer look at how clause typing is encoded in syntax and more in particular within cartography (Rizzi 1997, Cinque 1999, Haegeman 2012), indicates that the hierarchy in (1) is also present in syntax. More concretely, increased prosodic interrogativity marking seems to go hand in hand with the activation of more syntactic structure. From a syntactic point of view the results from these phonological experiments can be read 1° as an extra argument for a cartographic or layered approach to the left periphery and 2° as an incentive to further research on the syntax-prosody interface, more in particular on the extent to which functional projections are visible in the mapping from syntactic to prosodic structure (Selkirk 2011, Elfner 2012). In what follows I contribute mainly to the first point and I discuss how the prosodic sequence in (1) is reflected in the functional hierarchy in syntax.

2. Clause typing and the left periphery

2.1. CP

Chomsky and Lasnik (1977) suggest that every clause needs to be typed in syntax. Clause typing of interrogatives has been argued to be encoded in C° (see Katz and Postal 1964, Baker 1970, Bresnan 1972, Cheng 1991), either due to the presence of a Q particle or due to movement of a wh-constituent to SpecCP. For YN-questions, it is usually assumed that finite verbs move to C°; in wh-questions the wh-word in addition also moves to SpecCP. The

derivation for a sample wh-question *Wat kocht Jan* 'What did John buy?' in Dutch is given in (2).
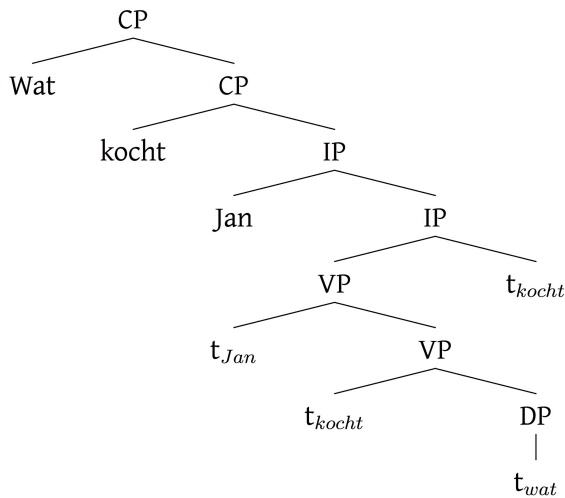
(2)

However, with this take on CP it is hard to account for data like those in (3) (from my own Flemish dialect), where at least two complementizers can be used in a main clause, and it is nearly impossible to capture data with a subordinated clause like those from Strijen Dutch, (4). In (4) the complementizers *of* and *dat* are separated by a wh-constituent *met wie*, thus making it impossible to treat them as one complex complementizer hosted by C° (van Craenenbroeck 2010:32-33).

(3) En   of   dat   hij   er   zin   in   heeft!
    And   if   that he   r-pron   pleasure   in   has
    'For sure he feels like it!' (Aalst, author's dialect)
(4) Ik weet   nie of   met   wie   dat   Jan oan   et   proate was.
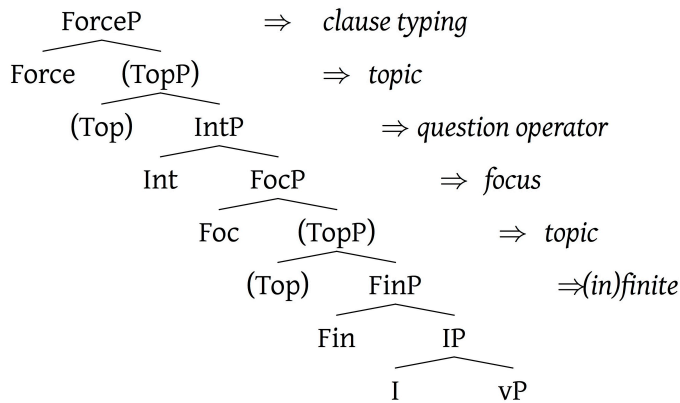   I   know   not if   with who   that   John on   it   talk.INF was
    'I don't know who John was talking to.'

Data like (3) and (4) suggest that more positions are available in the left periphery of a clause. However, before I come back to the Dutch data in (3) and (4), I make a little detour to Italian, for which Rizzi (1997, 2001) proposed a split CP.

2.2. Rizzi's split CP

Rizzi (1997, 2001) proposes to split CP into different layers, visualized in the tree structure in (5).

```
        ForceP              ⇒   clause typing
       ╱‾‾╲
   Force    (TopP)          ⇒   topic
           ╱‾‾╲
       (Top)   IntP             ⇒ question operator
              ╱‾‾╲
          Int    FocP           ⇒   focus
                ╱‾‾╲
            Foc    (TopP)       ⇒   topic
                  ╱‾‾╲
              (Top)   FinP          ⇒(in)finite
                     ╱‾‾╲
                 Fin    IP
                       ╱‾‾╲
                      I    vP
```

(5)

In this structure, ForceP, which hosts Italian *che* 'that' (but not Dutch 'dat', cf. below), is the layer dedicated to clause typing. However, this position is not always overtly filled, since clause typing can also happen via lower positions interacting with Force°. ForceP mediates between the surrounding discourse and the propositional content expressed in IP. FinP is a layer reflecting the (non)finiteness of the propositional content expressed in IP. In between these layers Rizzi (1997) argues there is a Focus Phrase, hosting focalised constituents or wh-arguments, and two optional positions for topicalized constituents. By means of these focus and topic layers, Rizzi (2001: 289-91) was able to identify an extra layer, Interrogative Phrase (IntP), in the left periphery. This layer hosts the subordinate complementizer *se* 'if' in Italian, and is responsible for YN-questions. *Che* 'that' and *se* 'if' can both be followed, but not preceded, by a focus phrase, as in (6)-(7) respectively.

(6) a. Credo che QUESTO avreste dovuto dirgli (non qualcos'altro).
    'I believe that THIS you should have said to him, not something else.'
   b. *Credo QUESTO che avreste dovuto dirgli (non qualcos'altro).
    'I believe THIS that you should have said to him, not something else.'

(7) a. Mi domando **se** QUESTO gli volessero dire (non qualcos'altro).
    'I wonder if THIS they wanted to say to him, not something else.'
   b. *Mi domando QUESTO **se** gli volessero dire (non qualcos'altro).
    'I wonder THIS if they wanted to say to him, not something else.'

However*, se* 'if' can be followed and preceded by a topic, (8), while this is not possible for *che* 'that' (9). *Che* 'that' can only be followed by a topic (9).

(8) a. Mi domando se questi problemi, potremo mai affrontarli.
    'I wonder if these problems, we will ever be able to address them'
   b. Mi domando, questi problemi, se potremo mai affrontarli.
    'I wonder, these problems, if we will ever be able to address them'

(9) a. Credo **che** a Gianni, avrebbero dovuto dirgli la verità.
    'I believe that to Gianni, they should have said the truth to him'

b. *Credo, a Gianni, **che** avrebbero dovuto dirgli la verità.
   'I believe, to Gianni, that they should have said the truth to him'

On the basis of these data Rizzi concludes that *se* 'if' is the head of IntP, a position below ForceP hosting a question operator in between two optional TopPs.

The one-layered CP we started out with has hence been split up in four functional projections (FinP, FocP, IntP and ForcP) and two optional topic positions.

2.3. A split CP for Dutch

In line with proposals by Hoekstra and Zwart (1994, 1997), Bennis (1997, 2000) and Van Craenenbroeck (2010), who – in spite of using different labels - all argue for a split CP in Dutch, I want to suggest that *of* 'if' heads IntP, *met wie* 'with who' is in SpecFocP and (following Haegeman 1996) *dat* 'that' is in Fin°, as in (10):

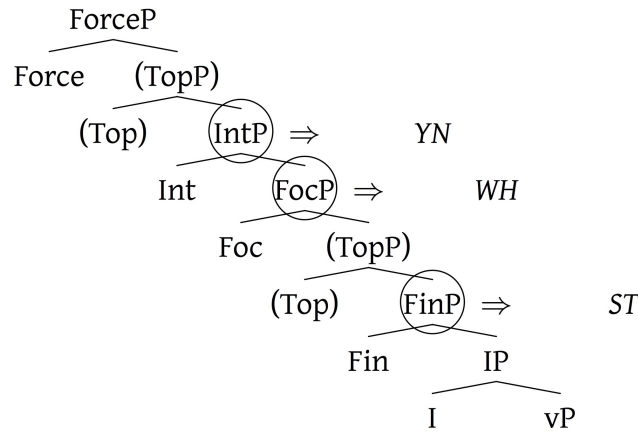(10)   [ForceP [IntP [Of] [FocP met wie [FinP [dat] [TP hij dat leuk vindt]]]]

Moreover, I want to hypothesize that the sentence in (3) provides even more support for the richly layered CP as proposed by Rizzi and more in particular for the presence of Force° in Dutch. Without *en* 'and' the sentence in (3) becomes sharply ungrammatical as an exclamation, as exemplified by (11a), whilst being perfectly grammatical as a question, (11b).

(11)   a. *Of dat hij er   zin   in   heeft!
            if that he r-pron   pleasure in   has
        b. Of   dat   hij   er   zin   in heeft?
            If   that   he   r-pron pleasure   in has
            `Whether he finds joy in it?'

En is hence not a regular coordinator in (3), but types the clause in a crucial way as an exclamative clause, a fact which is explained by putting it in Force°. The fact that without *en* the clause gets typed as a YN-interrogative, follows naturally if *of* 'if' is in Int°, the position dedicated to YN-questions. Putting these observations together, we arrive at the structure in (12) for the left periphery of the clause in (3):

(12)   [ForceP [En] [IntP [of] [FocP [FinP [dat] [TP hij er zin in heeft]]]]]

With Rizzi's sequence in place and after applying it to Dutch, it becomes clear that part of the sequence in (1), namely YN>WH>ST, which was established on the basis of prosody, is also part of the functional sequence, as illustrated in (13).

```
                    ForceP
                  ⟋      ⟍
            Force      (TopP)
                     ⟋    ⟍
               (Top)    (IntP)  ⇒        YN
                       Int    (FocP) ⇒      WH
                           ⟋    ⟍
                      Foc      (TopP)
                            ⟋    ⟍
                       (Top)    (FinP) ⇒         ST
                              Fin    IP
                                   ⟋  ⟍
                                 I     vP
```

(13)

IntP is activated in YN-questions, FocP in WH-questions and FinP in regular declarative statements.[2] The only type of question Rizzi's left periphery does not tackle is the DE-question. In the next section I explore this type of question.

3. Beyond CP: a speech act layer

In this section I argue that DE-questions activate a speech act layer on top of the complex CP, which is responsible for the speaker-hearer relations, and which hosts pragmatic particles.
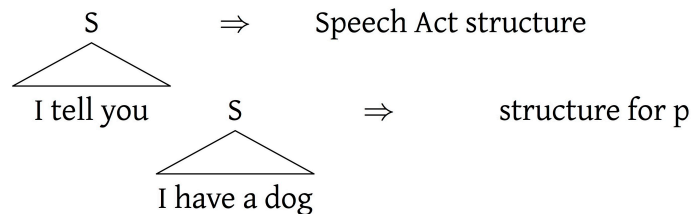
    The Dutch particle *hé* `isn't it' is compatible with DE-questions, but incompatible with ST, YN and WH, as shown in (14). In other words, this question particle shares a property with DE-questions that the other clause types do not have.

(14)   a. *De bus vertrekt, hé.   ST
           b. *Aan welke halte vertrekt de bus, hé?   WH
           c. *Vertrekt de bus aan halte 5, hé?   YN
           d. De bus vertrekt aan halte 5, hé?   DE

Van Heuven and Haan (2003) define this property of *hé* as a confirmation seeking property. In experimental research they found 1) that YN is information seeking, 2) that DE can be used to seek confirmation or information and 3) that the presence of *hé* in a DE-question turns this question into an exclusively confirmation-seeking question. In other words, DE can either fulfil the information seeking role of YN, or a different confirmation seeking role, which it systematically realizes in the presence of the question particle *hé*. Given that we already know which projection needs to be activated for a YN-question, a closer look at *hé* will shed more light on which part of the structure is involved in DE-questions.

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[2] In line with Starke (2004: 260-262) I assume that all features of the functional sequence are always present for the interpretative component (LF), but that unmarked values, like [-wh], [-neg], [-foc], can be dropped in syntax due to the fact that they are interpretatively recoverable.

Question particles like *hé* bring us to how clause type interacts with speech acts and to how speech acts are encoded in syntax. Ross (1970) proposed the following deep structure for a sentence like *I have a dog*, **Fout! Verwijzingsbron niet gevonden.**.

```
        S        ⇒    Speech Act structure
       /\
      /  \
  I tell you    S      ⇒        structure for p
               /\
              /  \
          I have a dog
```

(15)

Recent research by Speas and Tenny (2003), Hill (2013), Haegeman and Hill (2013) and Heim et al (2014) revives Ross' hypothesis. Haegeman & Hill (2013) discuss data from West Flemish (WF) that show that particles like *nè(m), wè , zé/zè* establish a relationship between speaker and hearer, either in terms of attention-seeking or bonding (Haegeman and Hill 2013: 372-373). For this reason, they call them speech act particles. Attention seeking particles, like *zé*, have a rising intonation, come in clause initial and clause final position, (16a) and (16e), whilst particles like *zè,* with falling intonation, come exclusively in clause final position (16b-d-e). *Zè* has an evidential reading.

(16) a. *Zé,Valère is doa!*
          zé Valère is there
          `Look, Valère is there!'
      b. *Valère is doa zè.*
          Valère is there *zè*
          `Valère is there, as you see.'
      c. *∗Zè, Valère is doa*.
      d. *Zé, Valère is doa zè*.
      e. *Valère is doa zè, zé*.
   f. *∗Valère is doa zé, zè*.

Haegeman and Hill (2013:383) show that speech act particles are main clause phenomena, cf. (17), and that when in initial position the particles occur before the finite verb, (18).

(17) a. *Je zei [né   dat   da   roare   was].
          He said   né   that   that strange was
         `He said that was strange.'
      b. Je zei [dat da roare was] né.

(18) a. Né, dienen   medalie   een me

né   that   medal   have we
`There we are, the medal is ours.'

These data suggest that speech act particles must be part of a high layer in the extended left periphery of main clauses. Haegeman and Hill (2013) propose that there is a Speech Act Phrase (SAP) on top of Rizzi's ForceP, which can itself be divided into two different layers.
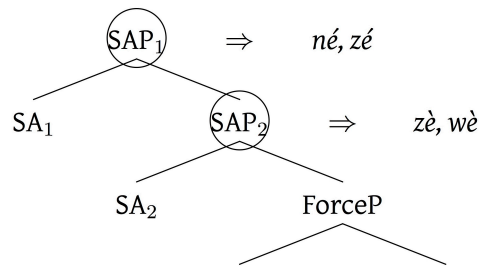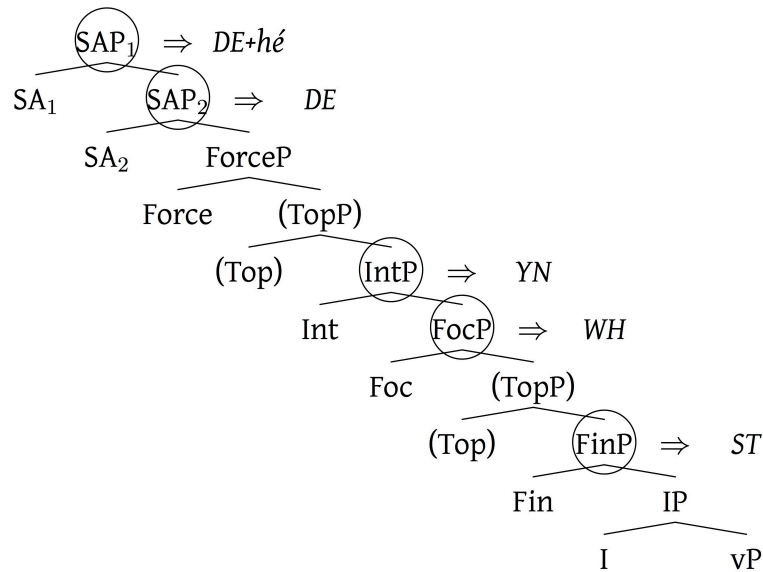

(19)

Following Hill (2007) they assume that the lower layer is hearer related and the upper layer speaker related. The lower layer hosts the particles with a falling intonation contour, the upper one those with a rising contour. Support for this analysis comes from the fact that particles with falling intonation and rising intonation can co-occur, as shown in (16d-e) above, but two particles with rising or falling intonation cannot co-occur, (20).

(20)   a. Né, men artikel is gedoan wè (*zé).
       b. *Men artikel is gedoan wè (*zè) (né).

Haegeman and Hill (2013:376) emphasize that there is a difference between clause typing particles and the particles they discuss. Nevertheless, even if they do not type the clause, there is often a connection between the speech act particle and a particular clause type. We made a similar observation for Dutch *hé*, which selects the DE- clause type but does not type the clause as DE. Moreover, also *hé* is a main clause phenomenon, i.e. it cannot occur in embedded sentences.

(21)   *Ik hoorde hé dat de bus aan halte 5 vertrekt?

Adopting these two layers, we can now assume that DE-questions with *hé* activate the speaker related confirmation seeking SAP1-layer, and DE-questions in their information seeking role the SAP2-layer. The tree in **Fout! Verwijzingsbron niet gevonden.** illustrates how the entire prosodic sequence in (1) is mirrored in the functional sequence.

```
SAP₁  ⇒  DE+hé
SA₁   SAP₂  ⇒   DE
      SA₂   ForceP
         Force   (TopP)
              (Top)   IntP  ⇒   YN
                   Int   FocP  ⇒  WH
                      Foc   (TopP)
                         (Top)   FinP  ⇒   ST
                              Fin      IP
                                    I      vP
```

(22)

Obviously, this observation raises many different questions and further issues. Still, the parallel between the hierarchy established on prosodic grounds, given in (1) above, and the syntactic hierarchy in (22), is striking. A more detailed study of the syntax-prosody interface may well shed more light on this intriguing parallel.

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