Locality and the distribution of main clause phenomena[1]
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1. Finite subordinate clauses and MCP

1.1. The data

Ever since Emonds's (1970) seminal dissertation, it has been acknowledged that a range of syntactic phenomena – the so called M(ain) C(lause) P(henomena) –are by and large restricted to occurring in root clauses (see Heycock 2006 for a survey of MCP). Emonds's initial work focussed on the identification of such MCP and on the syntactic factors that underlie their restricted distribution. Hooper and Thompson (1973) pointed out that the MCP identified by Emonds are sometimes embeddable and argue the crucial licensing factor for MCP to be a semantic/pragmatic one: MCP depend on assertion. Assertion is a property of declarative root clauses; in order to be compatible with MCP, embedded clauses must be asserted (see also, among others, Green 1976, 1980, 1996). A corollary is that clauses that are presupposed (i.e. not asserted) are incompatible with MCP. This means that, among others, temporal clauses complement[2] clauses of factive predicates, subject clauses and complements to N are incompatible with MCP. The assertion hypothesis has found a following in the literature (for recent proposals see e.g. Green 1996, Krifka 2001) and recently attempts have been made to 'syntacticize' it in the sense of Cinque and Rizzi (2008, 2010) by associating the concept of Assertion with a specific functional projection in the left periphery. Clauses that are not asserted are then taken to lack the relevant projection (Haegeman 2006a). In this proposal, the availability of MCP is then related to the richness of the structure of the left periphery and domains incompatible with MCP are structurally truncated. (cf. Kuroda (1992) for an early account, also de Cuba (2007), de Cuba and Ürögdi (2010, to appear); see also Basse (2008) for a Minimalist reinterpretation in terms of defective phases)

In this paper I will explore an approach to the distribution of MCP according to which the clausal reduction postulated in recent accounts does not have to be stated independently but can be derived in the syntax. My central hypothesis is that MCP are excluded from clausal domains that are derived by the movement of a TP-internal clause typing operator to the left periphery. In this view the ban on MCP in such domains – and the apparent unavailability of the projections that host them - follows from locality conditions on movement.

In the remainder of this section I provide a survey of the clause types that are generally agreed to be incompatible with MCP, and I provide illustrations from the secondary literature. The paper concentrates on English and the main clause phenomenon I focus on in this paper is argument fronting. However, the observations and the analysis carry over to VP-preposing, preposing around *be*, and locative inversion.[3] This section also shows that the unavailability of MCP is not to be ascribed to the fact that the relevant domains lack a left periphery.

1.1.1. COMPLEMENTS OF FACTIVE PREDICATES
Argument fronting is ungrammatical in the complement clauses of factive predicates, as illustrated in the following examples from the literature (brackets mine):[4]

(1) a   (%)*John regrets [that this book Mary read]. (Maki *et al*, 1999: 3, their (2c))

     b   *I regret [that Mary, my antics upset as much as they did]. (Alrenga 2005: 179 (16b))

     c   *Mary realizes [that this book, John read]. (Hegarty 1992: 52, n. 19, his (iii))

     d   *John regretted that *Gone with the Wind*, we went to see. (Watanabe (1993: 525)) 730))

Other MCP too are incompatible with the complement clauses of factive predicates: (1e) illustrates VP-preposing, (1f) and (1g) illustrate preposing around *be*, (1h) illustrates locative inversion.

(1)   e   *Sally plans for Gerry to marry her, and it bothers me that marry her he will (Hooper and Thompson 1973: 479 their (102°))

     f   *Harry was annoyed that even more corrupt was the Republican Party. (Hooper&Thompson 1973: 479 their (105))

     g   *I forgot that playing in the concert was Artur Rubinstein. (Hooper&Thompson 1973: 479 their (106))

     h   *The guide was surprised that beyond the next hill stood a large fortress. (Hooper&Thompson 1973: 479 their (107))

1.1.2. CLAUSAL COMPLEMENTS OF NOUNS
Clausal complements of nouns are incompatible with MCP: (3) illustrates argument fronting.

(3)   a   *I resent the fact that each part he had to examine carefully. (Hooper&Thompson 1973: 479 their (109))

     b   *A warning that flights to Chicago travellers should avoid will soon be posted. (Emonds 2004: 77, (2c))

     c   *John raised the possibility that Mary, your antics would upset. (Alrenga 2005: 179, his (15c))

     d   *A promise that defective sets the company will fix has been made by John. (Emonds 2004: 77, note 3, his (ii))

Again, other MCP are also excluded from complements to N:

(3)   e   *The announcement that speaking at today's luncheon will be our local congressman turned out to be false. (Hooper & Thompson 486: their (173))

     f   *The claim that on the wall hangs a portrait of Mao is still unsubstantiated. (Hooper & Thompson 486, their (174))

1.1.3. SENTENTIAL SUBJECTS
MCP are also incompatible with finite clauses that occupy what seems to be the canonical subject position:

(4)   a   *That this book, Mary read thoroughly is true. (Authier 1992: 332, his (17b))

     b   *That Mary, your antics will upset is obvious. (Alrenga 2005: 179 his (15e)

     c   *That a rabbit he pulled out of the hat seemed to confuse him. (Green 1996: 6)

     d   *That over the entrance should hang the gargoyle was written in the plans. (Hooper&Thompson 1973: 479, their (69))

     e   *That playing in tomorrow's concert will be Artur Rubinstein is certain. (Hooper&Thompson 1973: 479, their (71))

There is debate about the precise position of such subject clauses, I return to it in section 5.1.

1.1.4. ADVERBIAL CLAUSES

As shown by Hooper and Thompson (1973) and also in later work (see Haegeman 2003), adverbial clauses also resist MCP:

(5)   a   *When this song I heard last week, I remembered my first love.
          b   *If these exams you don't pass, you won't get the degree.
          c   *While this abstract I was reading, I remembered a paper I had read about this.
          d   *Since his new abstract I have read, I keep thinking about his earlier paper.

Again, such clauses resist other types of MCP:

(5)   e.   * We were all much happier when upstairs lived the Browns. (Hooper and Thompson 1973:495 (their (253))
          f   * When/if passed these exams you have, you'll get the degree.
          g   * While present at the meeting were the company directors, nothing of substance was ever said.

Note, though, that not all adverbial clauses are incompatible with MCP. In (6a) an argument is fronted in a *while* clause, in (6b) an argument is fronted in a *since* clause

(6)   a   And yet some popular things are so brilliant, like *The Simpsons* and the Angel of the North. While other brilliant things hardly any one buys – I'd put my friend's first novel and sherry in this category. (Observer 6.12.09 page 34 col 2)
          b   It is amazing how this view could have spread about someone who changed the image of causes like Aids and landmines, and in doing so showed a possible new role for the royals. It is particularly ironic since so much of what Diana did for her fellow humans she did with no concern for publicity whatsoever. (*Guardian*, G2, 31.8.4 page 9 col 2)

However, as I have argued extensively elsewhere (Haegeman 2003), the adverbial clauses illustrated in (6) differ from those illustrated in (5) not only with respect to their internal syntax in that they allow MCP, but also with respect to their external syntax, in that they are less integrated with the clause they are associated with. So, for instance, the *while* clause in (5c) is a temporal clause and specifies the event time of the associated clause, but the *while* clause in (6a) is contrastive. Similarly, the *since* clause in (5d) is temporal while that in (6b) introduces a rationale clause. I have labeled temporal and conditional adverbial clauses as 'central' adverbial clauses and the less integrated concessive and reason adverbial clauses as 'peripheral' adverbial clauses, a terminology that is intended to reflect their different degrees of integration to the associated clause.

1.2. Evidence for a left periphery

Though the clausal domains illustrated in section 1.1. are all incompatible with argument fronting and with other MCP in English, we cannot conclude from this that they lack a left periphery altogether. All these clause types are compatible with adjunct fronting in English, and in Romance languages they are compatible with CLLD. I will briefly illustrate this in the next sections.

1.2.1. ADJUNCT FRONTING

Embedded domains resisting MCP display an adjunct argument asymmetry in that the domains which are incompatible with argument fronting remain compatible with sentence initial circumstantial adjuncts. The relevant data are given in (7)-(10). (7) illustrates clausal complements of factive predicates, (8) illustrates clausal complements of nouns, (9) illustrates subject clauses and (10) illustrates adverbial clauses:

(7) a   John regrets that last week Mary did not turn up for the lecture.
     b   … so it's not surprising that throughout history we've taken some bad turns. (The monks of New Skete. 1999. *In the spirit of happiness*. Little, Brown, and Company. 181.) (Santorini 2001)

(8) a   I resent the fact that last week Mary did not turn up for the lecture.
     b   but nothing could alter the fact that on the previous evening he had got engaged to be married to a girl without a bean (P.G. Wodehouse. 1960. *The most of P.G. Wodehouse*. Simon and Schuster. 521.) (Santorini 2001)
     c   I am choosing to ignore the rumour that for next year's festival they're thinking of having red carpet, a ribbon and Heather Mills. (*Observer Magazine* 6.9.9 page 7 col 3)

 (9) a   That in year one we won't make any profits is quite likely.
      b   That later on she moved into student accommodation is quite normal.

 (10) a   When last week I heard this song, I remembered my first love
       b   If on Monday the share price is still at the current level …

1.2.2. CLLD

A second asymmetry displayed by the relevant embedded clauses is that between argument fronting in English and CLLD in Romance. Indeed, while resisting argument fronting in English, the clause types illustrated above allow CLLD: (11) illustrates clausal complements of factive predicates, (12) clausal complements of Ns, (13) subject clauses and (14) adverbial clauses (see also Haegeman 2006a for more examples):

(11) a   Jean regrette   que son texte tu ne l'aies   pas encore lu.
           Jean regret-3SG that his text you *ne* it have-SUBJ-2SG not yet read-PART.
           'Jean regrets that you haven't read his text yet.'
      b It   Mi dispiace
           me displease-3SG
           che questo problema gli studenti   non l'abbiano   potuto risolvere.
           that this problem   the student-PL *non* it have-SUBJ-3PL can-PART solve
           'I am sorry that the students have not been able to solve this problem.'

        c It   E' strano che questo problema gli studenti non l'abbiano potuto risolvere.
                be-3SG strange that this problem the student-PL *non* it have-SUBJ-3PL can-PART
                solve
                'It is strange that the students have not been able to solve this problem.'

(12) a   Je souligne   le fait que chaque partie il faudra   l'examiner   en détail.
             I underline-1SG the fact that each part it must-FUT-3SG it examine-INF in detail
             'I underline that each part must be examined carefully.'   (French)
      c   Ho appena visto l'annuncio che questo libro, non l'addoterrà
             have-1SG just see-PART the announcement that that book *non* it-adopt-FUT-3SG
             più per il suo corso.
             any more for the his course.
             'I have just seen the announcement that he won't be adopting this book for his
             course any longer.'   (Italian)

(13) a   Que ce texte-ci, ils ne l'aient pas accepté ne m'étonne pas.
             that this text here, they *ne* it have-SUBJ-2PL not accepted *ne* me surprise-3SG
             not.
             'I am not surprised that they should not have accepted this text.' (French)
      b.I   Che questo problema, i professori non l'abbiano   potuto risolvere
            That this problem, the professor-PL *non* it have-SUBJ-3PL can-PART solve
            mi sembra improbabile. [5]
            me seem-3SG unlikely
            'It seems unlikely to me that the professors should not have been able to solve
            this problem.'   (Italian)
      c   Che questo problema, il governo non lo voglia   discutere
            that this problem, the government *non* it want-SUBJ-3SG discuss
            mi sembra probabile.
            me seem-3SG likely
            'It seems to me to be likely that the government will not want to discuss this
            problem.'   (Italian)

(14) a   Quand cette chanson je l'ai entendue…   (French)
             When this song I it-have-1SG heard-PART-FSG
      b   Se la stessa proposta la fa anche l'altro candidate, …   (Italian)
             If the same proposal it makes also the other candidate (Cardinaletti 2008)

From the data above we conclude that the reduction of the left periphery associated with, say, factive predicates is somehow selective in that while arguments cannot be fronted in English, CLLD is available in Romance as well as adjunct fronting in English. However, in terms of the account elaborated by Rizzi (1997), this is puzzling: in his analysis argument fronting qua topicalisation, adjunct fronting and CLLD in Romance all target TopP. Unless one can diversify the relevant topic projections, it is then not clear why CLLD and adjunct fronting should be available in a context in which argument fronting remains banned. To capture the asymmetries discussed here, Haegeman (2003, 2006a, b) provides a proposal for a selective truncation of the left periphery. In the present paper I will show that the selective truncation need not be stated as it is a byproduct of the internal syntax of the relevant clause types and follows from locality constraints on movement.

1.3. Organization of the paper

The remainder of the paper is organized as follows. Section 2 presents the core hypothesis of the paper. Section 3 deals with clauses associated with factive predicates, section 4 deals with N-complements and section 5 deals with subject clauses. Section 6 extends the empirical domain of the discussion to embedded clauses in Dutch, section 7 introduces issues for future research and section 8 is a conclusion.

2. The hypothesis: an intervention account

2.1. The double asymmetry

Summarizing the data displayed in section 1.1. and 1.2., the embedded clauses which resist MCP and which are under examination here display two asymmetries; (i) an adjunct argument asymmetry (15a/b) and (ii) an asymmetry between fronted arguments and CLLD (15a/c):

(15) a   Eng *   [$_{CP}$ -argument …………..   .   t…….
      b   Eng √   [$_{CP}$ - adjunct…………………   t…….
      c   Rom √   [$_{CP}$ - CLLD……………………   t…….

The double asymmetry in (15) is not novel, nor is it specific to the clause types examined here. It is familiar from the literature on locality and is typically found in domains in which *wh*-movement has applied: argument fronting in English leads to severe intervention effects in interrogative clauses (16a) and relative clauses (17a), adjunct fronting (16b, 17b) and CLLD (16c, 17c) do not give rise to the same intervention effects. [6]

(16) a   *I don't know when, your text, we will be able to discuss in the next couple of weeks.
      b   I don't know when, in the next couple of weeks, we'll be able to discuss your text.
      c   Je ne sais pas quand, ton texte, on pourra le discuter.
          I *ne* know not when, your text, one can-FUT-3SG it discuss
          'I don't know when we will be able to discuss your text.'
 (17) a   *This is a student to whom, your book, I would recommend.
      b   I met the author who, last year, began to write this new column.
      c   Voici l'étudiant   à qui   ton livre je le donnerais.
          this is the student to whom your book I it give-COND-1SG

The double asymmetry found in relation to short movement (15) is also found in the context of long movement, as illustrated in (18). Fronted arguments block long movement (18a), while neither fronted adjuncts (18b) nor CLLD (18c) give rise to intervention:

(18) a   *??These are the patients to whom Mary suggested that the cooked vegetables we should give in the present circumstances.
      b   These are the patients to whom Marty suggested that in the present circumstances we should give the cooked vegetables.
      c   ?Chi credi che Maria la voterebbe?
          Who think-2SG that Maria her vote-COND-3SG (Alexopoulou et al 2004: 350: (64))

Observe that the double asymmetry described above and illustrated in (16)-(18) has not been taken as evidence for proposing a structural reduction of the left periphery. Rather it is seen as resulting from violations of locality: the moved *wh*-operator cannot cross a fronted argument in English, while the CLLD argument and the initial circumstantial adjunct do not give rise to intervention. (See Haegeman 2010 for an approach to locality based on Starke 2001 and Rizzi 2004.) Similarly, the double asymmetry has also not been analyzed as being due to an absence of 'Assertion' or to presuppositional effects, though of course it is true that, for instance, *wh*-questions are not assertions and that they presuppose the content of the IP domain. The intervention asymmetries that arise in the context of *wh*- movement are summarized in (19).

(19)   a   Eng   *$wh_{INT/REL}$-constituent - argument ………….   t…….
       b   Eng   *$wh_{INT/REL}$-constituent ……………argument …   t…….
       c   Eng   √$wh_{INT/REL}$-constituent - adjunct…………………..   t…….
       d   Eng   √$wh_{INT/REL}$-constituent …………….adjunct………   t…….
       e   Rom   √$wh_{INT/REL}$-constituent - CLLD……………………   t…….
       f   Rom   √$wh_{INT/REL}$-constituent …………   CLLD……… t…….

I propose now to use the double asymmetry in (19) as a diagnostic for detecting intervention effects, and hence for detecting (operator) movement. The various clause types under examination in this paper (1)-(5) are incompatible with argument fronting while allowing fronted adjuncts and CLLD (15). The fact that the asymmetries in the clauses that resist MCP are identical to those found in movement contexts suggests that what we are witnessing a side effect of movement.

2.2. A movement account?

With respect to the absence of MCP in adverbial clauses, I have proposed in earlier work (2007, 2009, 2010) that the asymmetries between argument fronting, adjunct fronting and CLLD be taken as diagnostic evidence for the moment derivation. My proposal builds on many earlier proposals in the literature according to which temporal adverbial clauses are derived by *wh*-movement (Geis 1970, 1975, 1985, Larson 1987, 1990 etc). Observe that a movement analysis can provide an account for the ambiguity of examples such as (20a), in which the temporal operator receives either an interpretation in relation to the main clause ('high construal') or in relation to the embedded clause ('low construal'). The two readings are schematically represented in (20b) and (20c) respectively. I refer to the literature for discussion (Larson 1987, 1990, Demirdache and Uribe Etxebarria 2004).

(20)   a   I saw Mary in New York when she claimed $_{that}$ she would leave.
           (i)   high construal: 'I saw her at the time that she made that claim.'
           (ii) low construal: 'I saw her at the time of her presumed departure.'
       b   [$_{CP}$ when [she claimed [$_{CP}$ that she would leave] t]]
       c   [$_{CP}$ when [she claimed [$_{CP}$ t that [she would leave t]]]]

Only high construal is available in (20d) because low construal would have to derived by movement of the temporal operator *when* from within the complex DP headed by *claim* (cf. (20e,f)):

(20)   d   I saw Mary in New York when she made the claim that she would leave.

        (i)   high construal: 'I saw her at the time that she made that claim.'
        (ii)   *low construal: 'I saw her at the time of her presumed departure.'
   e   [CP when [she claimed [CP that she would leave] t]]
   f   *[CP when [she made [DP the claim [CP t that [she would leave t]]]]]

I have also extended (Haegeman to appear) the movement account to conditional clauses (in line with Bhatt and Pancheva 2006). I have proposed that conditional clauses are derived by the leftward movement of an operator that originates in the Mood$_{IRREALIS}$ projection. This analysis not only accounts for the observed asymmetries in conditional clauses, but it also accounts for the restricted availability of high mood markers in the sense of Cinque (1999). For reasons of space I cannot further elaborate these accounts here and refer to the papers cited.

If (19) is a diagnostic for movement, then it would follow that the movement derivation should also be invoked to account for the absence of argument fronting in embedded finite *that* clauses, which display the same double asymmetry. Of course, in such *that* clauses no overt operator has been moved to the left periphery, but this need not be an obstacle: while in temporal *when* clauses an overt operator, *when*, has arguably moved to the left periphery, I have also adopted the hypothesis that in other adverbial clauses, such as, for instance, *if* clauses and temporal clauses introduced by a preposition (*before, after, until, since*) a null operator is moved to the left periphery. Obviously, if it can be substantiated that the finite *that* clauses under discussion also contain an empty operator in their left periphery and if that operator has moved from within TP to the left periphery of these clauses then the observed double asymmetry can be made to follow from locality. Indeed, for each of these clause types discussed, there are already proposals in the literature that (i) the relevant *that* clauses have an operator in their left periphery and (ii) that this operator has moved from a TP-internal position.

The strategy adopted in this paper is fully in line with the guidelines set out in the cartographic perspective.

> The cartographic studies can be seen as an attempt to "syntacticize" as much as possible the interpretive domains, tracing back interpretive algorithms for such properties as argument structure […] scope, and informational structure (the "criterial" approach defended in Rizzi 1997 and much related work) to the familiar ingredients uncovered and refined in half a century of formal syntax. To the extent to which these efforts are empirically supported, they may shed light not only on syntax proper, but also on the structure and functioning of the cognitive systems at the interface with the syntactic module. (Cinque & Rizzi 2010:63)

In what follows I will extensively rely on 'familiar ingredients uncovered and refined in half a century of formal syntax'. The core ingredient of my analysis is the hypothesis that locality restrictions are pervasive in the narrow syntax and that they determine and restrict the operations available in syntactic domains (Rizzi 1990).

3. Null operator movement in complements of factive predicates.

3.1. An operator in the left periphery

A first ingredient in the movement analysis of clausal complements of factive predicates is the hypothesis that they host an operator in their left periphery.

In the literature it has long been observed that complement clauses of factive predicates are islands for extraction (21a), a property that distinguishes them from *that* clausal complements of non-factive predicates (21b)

(21)   a   *How did you notice [that Maria fixed the car___]? (Hegarty 1992: 1, (2b))
          b   How do you suppose [that Maria fixed the car___]? (Hegarty 1992: 1, (1b))

In the earlier literature the island properties of such clause types have already been associated with properties of their left periphery, and this property has been related to their incompatibility with MCP. Iwakura (1978), for instance, suggests there is a correlation between the fact that complements of factive verbs resist extraction and the fact that they are incompatible with MCP and formulates the generalisation in (22):

(22)   When complement sentences disallow extraction of their internal constituents, they also disallow application of root transformations. (Iwakura 1978: 357, (50))

Melvold (1986, 1991: 104), Hegarty (1992), Watanabe (1993), Roussou (1993, 1994, 2000, 2010), Bianchi (2000: 95) and Zubizaretta[7] (1999, 2001), among many others, assume that tensed factive complements contain a null operator in their left periphery, a hypothesis which allows them to account for the fact that they are islands for extraction since the left peripheral operator will intervene in extraction.[8] According to Melvold (1986, 1991), complements of factive predicates are event arguments (as opposed to proposition-type arguments); they are associated with an operator in their left periphery, which is responsible for their referential function. The relevant operator blocks extraction:

> Event-arguments have a referential function. Therefore, we will argue that the event position in the complement of a factive verb *is bound by a different kind of operator*. ..., the definite complementizer licenses an iota operator in the SPEC of COMP, thus making the sentence into a term which identifies a particular 'event-object' in the world. (Melvold 1991: 104, my italics).
> What distinguishes the complements of factives is the presence of the operator in the Spec of CP. We assume that this operator is licensed by the [+definite] functional element either at D-structure or at LF and that it binds the open event-position (<e> position) in the complement. … if the operator is licensed at S-structure, then SPEC is not available as a landing site for an extracted element. (Melvold 1991: 104).

3.2. Operator variable binding

The second ingredient of the movement analysis outlined above is that there should be a relation between the operator in the left periphery and a TP-internal position. It will be because of that relation that intervention effects will arise when arguments are fronted in English. Again there are proposals in the literature in line with this analysis.

As also seen in the quotations in the preceding section, Melvold proposes that the null operator (for her an iota operator) in the left periphery of clausal complements of factive predicates binds a TP-internal position (namely the event-variable). Adopting and adapting her proposal, I suggest that the operator in the left periphery of factive complements is merged in a TP-internal position and moves to the left periphery. The ungrammaticality of argument fronting (as well as other MCP) in complements of factive predicates (1) will then be due to an intervention effect. As before, adjunct fronting (7) and CLLD in Romance (11) do not give rise to intervention and are correctly predicted to be grammatical.

3.3. Factivity, familiarity and definiteness

By invoking the feature [+definite] to characterise the complements of factive predicates and by assigning these complements a referential function, Melvold (1991: 104) aligns complements of factive predicates with nominal complements (cf. the quotation in section 3.1.). Her proposal is in line with one generative approach to factive complements dating back to Kiparsky and Kiparsky (1970) according to whom factive predicates select an NP complement with a null definite nominal head: [9]

(23)

```
          NP
        /    \
       N      S'
       |
      Fact
      [+def]
```
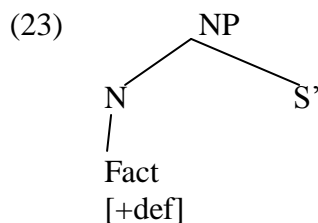
For an early explicitation of the semantic parallelism between complements of factive predicates and those of nominals, see for instance Kempson (1975), who writes:

> All propositional arguments in the semantic interpretation of a sentence whose truth is entailed are represented as falling within the scope of the 'spec' quantifier, which also binds object-variables, according to the schema (SpecX$_i$) ([P] X$_i$). Their semantic representation is thus closely analogous to specific noun phrases. In the case of factive verbs and adjectives, this semantic parallel is explicitly reflected in the syntactic representation, which contains an underlying definite noun phrase. The feature of definiteness is specified at the level of deep structure since the definite articles in phrases such as *the fact that Mary came* are never anaphoric... Indeed this type of construction demands the definite article: *a fact that Mary came* is ungrammatical as a noun-phrase construction...The semantic interpretation of the entailed complements of factives in both positive and negative sentences is then predicted by rules of interpretation which are independently justified.
> (Kempson 1975: 134-135)

Since Kiparsky and Kiparsky (1970), it has standardly been proposed in the literature that the distinctive semantic property that sets apart the embedded clauses in (21a) and (21b) above is 'factivity', more specifically the truth of the embedded proposition in (21a) is taken to be presupposed. Hegarty (1992), however, argues that factivity/presupposition is not the crucial factor in determining extraction possibilities. Instead, he argues that the extraction asymmetry in (21) depends on the informational status of the embedded clause. Extraction is

ungrammatical from a clause which has the property of 'being discourse bound, that is of having already been introduced into a discourse' (Hegarty 1992: 8). So, for him, familiarity replaces factivity as the determining property.

Hegarty proposes that with predicates of the 'factive type', familiarity is syntactically marked (1992:13), and like Melvold (1991), he invokes 'definiteness' as a characteristic semantic property of the relevant clause type: 'familiar complement clauses are akin to definite nominals' (Hegarty 1992: 26).[10]

The nominal quality of complements of factive predicates is reflected in the pro-forms associated with them. As already discussed in Kiparsky and Kiparsky (1970) and also in De Cuba and Ürögdi (2010: 46), clausal complements of non-factive verbs are replaced by *so* or by *it,* but complements of factive verbs can only be replaced by *it*.

(24)   a   John supposed [that Bill had done it], and Mary supposed [it/so] too.
       b   John regretted [that Bill had done it], and Mary regretted [it/*so] too.
           (Kiparsky and Kiparsky 1970: 326)

De Cuba and Ürögdi (to appear: 15) further point out that in English *it*-clefts "only specific clefted XPs are compatible with the *wh*-pronoun 'which'." This is illustrated in (25a). In (25b) the predicate *a doctor* is not specific and is incompatible with *which.*

(25)   a   It's this book which I want to read.
       b   It's a doctor that/*which I want to become.

Clausal complements of factive predicates are compatible with *which* (25c), but complements of non-factive verbs are not (25d):

(25)   c   It's that John didn't show up which I resent.
       d   It's that John didn't show up that/*which I believe (de Cuba & Ürögdi to appear, 15, their (25), 2009)

Along similar lines, Kalluli (2006) presents evidence from Albanian to show that a clitic pronoun that typically picks up a referential DP doubles a complement of a factive predicate.[11]

From the literature surveyed above a consensus emerges that, though clausal, complements of factive predicates are characterised by nominal properties. As I will show in the next section, in some languages complements of factive predicates actually display the syntax of complex nominals.

3.4. Cross linguistic evidence

At this point, the motivation for my hypothesis that complements of factive predicates are derived by operator movement is theory-internal: postulating a null operator in the left periphery accounts for the ban on extraction from complement clauses of factive predicates and the movement derivation will also allow us to predict that MCP are excluded. Suggestive empirical support for this hypothesis is available from languages in which factive complement clauses look superficially similar to relative clauses. These data also provide further support for the nominal properties of factive complements.

Collins (1994) and Aboh (2005) show that the internal syntax of complements of factive predicates (26a) is similar to that of relative clauses (26b). Observe crucially that in

both clause types the same relative determiner *de* is instantiated. I refer to Aboh's own discussion for more details.

(26) a [Àgásá dàxó lɔ̀ lɛ [de mí wlé]] vɛ ná Kòfi (Aboh 2005: 266 (4))
crab big Det Num that[REL] 1PL catch hurt for Kofi
'The fact that we caught the aforementioned big crabs hurt Kofi.'
*'The aforementioned big crabs that we caught hurt Kofi.'

  b Kòfi wɛ xɔ̀ [àgásà dàxó [de mí wlé] lɔ̀ lɛ] (Aboh 2005: 266 (3c))[12]
Kofi FOC bought crab big that[REL] 1PL catch Det Num
'Kofi bought the (aforementioned) big crabs that we caught.'

  c [Wlé [de mí wlé àgásá dàxó lɔ̀ lɛ]] vɛ ná Kòfi.
(Aboh 2005: 279 (29a))
Catch that[REL] 1PL catch crab big Det Num hurt for Kofi
'The fact that we CAUGHT the (aforementioned) big crabs hurt Kofi.'

Along similar lines, Krapova (2008, 2010) discusses the distribution of the Bulgarian invariant subordinator *deto* which 'can be used in headed relative clauses [27a], as well as a subordinating conjunction introducing complement clauses of some emotive predicates, where it alternates with the standard complementizer *če* [27b].'

(27) a Tova e ženata, deto (ja) snimax včera
This is woman-the that her-CL-ACC took-picture-1SG yesterday
'this is the woman that I photographed yesterday.'

  b Sažaljavam, deto/če ne možax da dojda
Regret-1SG that not could -1SG come-1SG
'I'm sorry that I couldn't come.'(Krapova 2008: 1, her (1))

She observes that verbs selecting complements introduced by *deto* are a subset of factive verbs:

> I would like to suggest, following standard treatments of factive clauses, which, after Kiparsky and Kiparsky's (1971) analysis, posit a nominal projection (a D head) above CP, that *deto* complements too contain an (expletive) D head realized by the demonstrative pronoun *tova* 'this' referring to the content of the proposition contained in the *deto*-clause. However, given the subcategorization requirements of the predicates which may select for a deto-clause, I further propose that the 'factive' DP structure is actually embedded in a PP headed by the preposition *za* 'for', as illustrated in (27c). Both the demonstrative and the preposition can be null (or deleted), giving the impression that we are dealing with a complement clause (Krapova 2010: 1267)

(27) c Săžaljavam/Jad me e/ Măcno mi e… [PP [P za/Ø] [DP tova Ø [CP deto…]]
(Krapova 2010, her (61))

These kinds of references could be multiplied, and obviously more subtle discussion is required for a detailed comparative analysis, but the Gungbe data and Bulgarian data provide initial empirical support for the movement derivation of factive complements. The data also support accounts which propose that complement clauses of factive predicates are embedded in a nominal structure,[13] and hence favour the view that they can be assimilated to (free) relatives. This precise point of analysis needs further study though. Note for instance that

Grosu (1994) argues that free relatives may not be formed by null operators. See Haegeman and Ürögdi (2010).

4. Clausal complements of N

As seen before, clausal complements of N resist argument fronting, while remaining compatible with initial adjuncts as well as with CLLD (see (3)). Given the reasoning adopted so far with respect to the origin of the double asymmetry, it is natural to extend to such clauses the movement account elaborated for the adverbial clauses discussed and for complement clauses of factive predicates and to propose that the asymmetries are the result of locality constraints on movement. Again, this proposal has precursors in the generative literature.

Stowell (1981: 198-203) was the first to point out that what are referred to as clausal complements to N do not have the thematic relation to N that complement clauses have with respect to a selecting V. He proposes that clausal complements to N have an apposition relation to N, and that they occupy an adjoined position (see also Kayne 2008a, 2008b). If 'clausal complements of Ns' are actually in an adjoined rather than a complement position, such clauses are already being brought closer syntactically to relative clauses.

With respect to the ungrammaticality of extraction in (28), Nichols (2003) points out that if clausal complements of N are adjuncts, then their island status follows:

(28)   *Which ticket$_i$ did Sonia deny the claim that she had misplaced t$_i$?
         (Nichols 2003: 156: her (3b))

She further explores the adjunct analysis and elaborates a relativization account for clausal complements to N:

> The behavior of referential NPs suggests the hypothesis that the ungrammaticality of referential *wh*-extraction in [28] may be due to the fact that the subordinate clause in [29a] is a type of adjunct clause. If the subordinate clause in [29a] below is an adjunct, then a further reasonable hypothesis is that this is a relative clause adjunct, with a structure similar to that of the relative clause in [29c]. In [29c] the nominal head corresponds to a gap in the subordinate clause associated with an argument position (here direct object). In [29a] there is no nominal argument position gap, although there is another argument variable in the subordinate clause for relativization. This is the event argument (or event variable, [references omitted, lh]) in [29d].

> [29]   a   The claim [that Sonia had misplaced the lottery ticket]
>   b   The train [that John missed]
>   c   [$_{DP}$ the train$_i$ [$_{CP}$ Ø$_i$ [that [$_{IP}$ John missed t$_i$]]]]

> [29]   d   Sonia bought a lottery ticket in Rhode Island.
>   ∃e [buying(e) & Agent (Sonia) (e) & Theme (lottery ticket) (e) & in (RI) (e)]

> The subordinate clause associated with the noun *claim* in [29a] may be represented as a relativization of this event argument and therefore as a canonical relative adjunct [note omitted, lh], as in [29e]:

[29]   e   [DP the claim$_i$ [CP Ø$_i$ [that [IP Sonia [e$_i$ [had bought the lottery ticket]]]]]]]

(Nichols 2003: 156-157)

Nichols (2003: 163,n.2) herself does not take a position with respect to whether the relation between the null operator Ø$_i$ and the event variable e$_i$ is created by movement, but in the light of my discussion above, I will adopt the view that it is, and that clausal complements of Ns are also hidden relatives. Thus, (29e) is replaced by (29f):

(29)   f   [DP the claim$_i$ [CP Ø$_i$ [that [IP Sonia [t$_i$ [had bought the lottery ticket]]]]]]]

Nichols (2003: 161-2) provides cross linguistic support for the relativization analysis of clausal 'complements' to N from Burmese, in which 'attitude nominal subordinate clauses … are formally similar to relative adjuncts'. For reasons of space I do not reproduce her data here and I refer Nichols (2003: 161-2), also Nichols (2001) for evidence and discussion.
     A more recent implementation of the hypothesis that complement clauses to N are hidden relatives is found in Arsenijević (2009a,b), who elaborates an analysis according to which complements of nouns such as *claim* involve relativization of 'Force'. He proposes that (30) has the representation in (31). I refer to his own paper for more details.

     (30)   the claim that John kissed Mary
(31) [DP the claim$_{[Force:claim]}$ [ForceP [SpecForceP [Var]] that$_{[\Lambda]}$ [IP John kissed Mary]]]

(Arsenijević 2009a: 40-41)

If we adopt a relativization analysis along the lines suggested in the literature, then, departing from Arsenijević's own account and assuming the operator is merged TP-internally, intervention effects are predicted and the ungrammaticality of MCP (3) follows.[14]

5. Subject clauses

5.1. Do subject clauses exist?
In an influential paper, Koster (1978) argued that what appear to be 'subject clauses' do not actually occupy the canonical subject position and are located in a peripheral topic position with the canonical subject position occupied by a null operator. See Alrenga (2005) for an update. Accordingly, (32a) does not have the representation in (32b) but rather that in (32c):

(32)   a   That these nouns behave differently is captured by this formulation of the rule.
        b   [TP [CP that these nouns behave differently] is captured t$_1$ by this formulation of the rule]
        c   [TopP [CP that these nouns behave differently] OP$_1$ [TP t$_1$ is [captured t$_1$ by this formulation of the rule]]]

Koster's hypothesis is based on a number of arguments, which have often been repeated in the literature, but which have also been challenged. I discuss them briefly here.

5.1.1.SUBJECT CLAUSES AND INVERSION

A first argument in favour of the idea that clauses (i.e. CPs) cannot occupy the canonical subject position is the observation that a subject clause is incompatible with subject auxiliary inversion (SAI) as shown in (33a). According to this view, the ungrammaticality of (33a) receives the same explanation as that of (33b):[15]

(33) a   *Who did [that John left early] disappoint?
      b   *To whom did [this book] you give?

However, Davies and Dubinsky (1999, 2000) argue that the degradation of (33a) is not syntactic but rather that it is related to processing effects. In support of their claim is the observation that (34) is felt to be as unacceptable as (33a), even though the constituent to the right of the inverted auxiliary in (34) is not a clause but a DP, which should legitimately be allowed to occupy SpecTP:

(34)   *Who did [$_{DP}$ the fact that John left early] disappoint?

Davies and Dubinsky (2000) show that the degradation of examples such as (33a) can be reduced with appropriate contextual priming and they provide the following example:

(35)   A: I tried to convince Dave that the world is flat, but he wouldn't buy it.
       B: ??Is [that the world is round] all that surprising to anyone any more?
              (Davies and Dubinsky 2000: 7, their (21))

Delahunty (1983: 382-382) provides a range of English examples with clausal subjects to the right of an inverted auxiliary: (36a)-(36d) are just a few of his examples, the bracketing is mine.[16]

(36)   a   To what extent did [that Fred failed to show up] anger those of his devoted fans who had waited by the stage door since dawn the previous day? (Delahunty 1983: 382, his (11))
       b   Why does [that Fred wants to marry her] so upset Mary's mother, father , brothers, sisters and four grandparents that they haven't ceased to harangue her about it since they discovered the proposal? (Delahunty 1983: 383, his (12))
       c   Who does [that Fred left early] bother so greatly that he refuses to visit us any more? (Delahunty 1983: 385 , his (22a))
       d   Does that [Fred lied to them] bother all of the people who bought stock in this company? (Delahunty 1983: 387, his (31a))

5.1.2. SUBJECT CLAUSES AND TOPICALISATION

In further support of his topicalisation analysis of clausal subject, Koster advances the observation that, in English, argument fronting is incompatible with clausal subjects, with (37a) as an illustration. In the hypothesis that all subject clauses are topicalised, (37a) would be an instance of double topicalisation: both the clause *that he reads so much* and the DP *such things* would be topicalised. Double argument topicalisation being ungrammatical in English (37b), (37a) is correctly predicted to be ungrammatical.

(37)   a   *[Such things], [that he reads so much] doesn't prove. ((Koster 1978, his (5b),
                 Davies and Williams 2000: 8, their (25))
        b   *[John], [this book], I will give to.

But once again, Davies and Dubinsky (2000) point out the equally degraded status of (37c),
in which there only one constituent, the DP *such things* has been fronted. The constituent *the
fact that he reads so much* is a complex DP in the canonical subject position. Thus the
ungrammaticality of (37c), which seems analogous to that of (37a), remains unaccounted for:

(37)   c   *[Such things], [the fact that he reads so much] doesn't prove. (Davies and
                 Williams 2000: 8, their (26))

Davies and Dubinsky again attribute the degradations in (37a) and (37c) to processing effects,
specifically the relative weight of the predicate and the subject. They show that once the
predicate is made heavier, sentential subjects are at least marginally compatible with a fronted
argument topic:

(38)   ??[Ted], [that John's a fool] bothers to no end, not Horatio. (Davies and Dubinsky
        2000: 8, their (28a))

Miller (2001) offers corpus-based evidence that, once considerations of information structure
are taken into account, subject clauses may be compatible with the fronting to their left of
another argument of the clause. He provides the contrast in (39). In both examples,
appropriate care has been taken to create the right discourse situation. In (39a), the clausal
complement of the verb *learn* is fronted, in addition to which a second argument, the PP *from
his observation of ducklings,* is fronted. The result is ungrammatical, as is to be expected
since this would be a case of double argument fronting. In (39b), on the other hand, the
fronting of an argument, the PP *from his first theorem*, in the presence of a sentential subject,
that the two lines are parallel, is not degraded. I refer to Miller's own paper for detailed
discussion:

(39)   a   Through a detailed observation of gulls, Lorenz thought he had shown that the
                 image of the mother was acquired. This conclusion turned out to be based on a
                 series of misinterpretations. *On the other hand, from his observations of
                 ducklings, that the image of the mother is innate, we have since learned, though
                 Lorenz himself never noticed this. (Miller 2001, his (21a))
        b   Descartes claimed that the two lines in figure C were parallel and provided a
                 proof based on his second theorem. This proof was in fact mistaken. From his
                 first theorem on the other hand, that the two lines are parallel certainly does
                 follow, but remarkably, Descartes apparently never noticed this. (Miller 2001:
                 his (20)

5.1.3. SUBJECT CLAUSES IN ECM COMPLEMENTS

In further support of Koster's claim that subject sentences do not exist, it has also been
pointed out that ECM clauses (40a) and small clauses (40b) cannot have a clausal subject: [17]

(40)   a   *John believes [that the cult members cloned a human baby] to be true.
             (Alrenga 2005:185 (35a); also in Takahashi 2009: 21)
        b   *Many people now consider [that the Giants will win the World Series]
             unlikely. (Alrenga 2005:185 (35b))

Judgements are again unclear, however. For instance, two native speaker informants I consulted rated both examples in (41), with clausal subjects for small clauses, as fully acceptable (5 on a scale of 1-5):

(41)   a   I found [that no one left such a boring party early] remarkable.
        b   I thought [that no one would leave such a boring party early] unlikely.

Observe, however, that, in marked contrast, the relevant speakers did not accept MCP in clauses functioning as a subject of a small clause. They gave both (41c) and (41d) the lowest score (1 out of 5).

(41)   c   *I found [that such a boring party no one left early] remarkable.
        d   *I thought [that such a boring party no one would leave early] unlikely.

In line with the discussion in the literature, I will thus provisionally assume that clausal subjects may occupy the canonical subject position, at least for some speakers.

5.2. Subject clauses and MCP

We have seen that subject clauses are incompatible with MCP (cf. (4)). Some caution is required here. (4c), repeated in (42) for convenience, in fact is independently expected to be ungrammatical, because the subject clause is the argument of a factive predicate, and such clauses have also been argued to be incompatible with MCP.

(42)   *That a rabbit he pulled out of the had seemed to confuse him. (Green 1996: 6)

Following Aboh's (2005) and Krapova's (2008) analyses of complements of factive predicates, I proposed in section 3 that such complements are actually (hidden) relative clauses in which an (event) operator moves to the left periphery. This analysis leads to the correct prediction that the left periphery of 'factive' subject clauses will not be available for 'MCP'. Indeed Aboh's own (25b) is one of a sentential subject clause.
        The remaining examples in (4), repeated in (43), do not contain factive predicates in the narrow sense, in that the predicate presupposes that the clause is true regardless of the polarity of the matrix clause.

(43)   a   *That this book, Mary read thoroughly is true. (Authier 1992: 332, his (17b))
        b   *That Mary, your antics will upset is obvious. (Alrenga 2005: 179 (his 15e))
        c   *That over the entrance should hang the gargoyle was written in the plans.
             (Hooper&Thompson 1973: 479 their (69))
        d   *That playing in tomorrow's concert will be Artur Rubinstein is certain.
             (Hooper&Thompson 1973: 479 their (71))

Still, it turns out that by the very fact of occupying the canonical subject position clausal subjects seem to become unable to be asserted. (see also discussion in Kiparsky & Kiparsky 1970, Hooper&Thompson 1973: 476, (12b)), as shown also by (44), in which the predicate itself establishes the truth value of the subject clause. While not presupposed to be true, the subject clauses in (44) are also not asserted in Hooper and Thompson's terms. The examples will only be appropriate in a context where the content of the subject clause is necessarily discourse old information, i.e. it is not asserted. The same can be observed in (45) in which the predicate is *certain*. Neither (45a) nor (45b) take it for granted or presuppose 'that John has finished the job on time', in the narrow sense that the truth value of the subject clause is independent of the polarity of the matrix clause, but only in (45b) can the content of the extraposed clause be discourse new.

(44) a   [That Mary read this book thoroughly] is true.
      b   [That Mary read this book thoroughly] is not true.
(45) a   [That John has finished the job on time] is (not) certain.
      b   It is (not) certain [that John has finished the job on time].

On the basis of a range of naturally occurring examples, Miller (2001) shows that 'non-extraposition requires that the content of the subject be discourse-old or directly inferrable. If the content is discourse-new, then extraposition is necessary.' (Miller 2001:1).[18] Obviously the concept 'discourse old' is closely related to the properties 'familiar' and 'discourse bound', which Hegarty (1992) associated with the complements of factive predicates. I return to this point in the next section.

5.3. Familiarity, definiteness and subject clauses

As already discussed above, several authors (Melvold 1986, 1991, Hegarty 1992, Roussou 1993, 1994, 2010 *etc*) associate finite complement clauses of factive predicates with 'definiteness' and 'referentiality'. 'Definiteness' and 'referentiality' are not properties naturally associated with the functional level of CP, rather these properties are characteristically associated with constituents of the category DP. In order to encode the definiteness of such clausal complements I adopted the proposal that the clausal complement of a factive predicate is dominated by a silent nominal layer, containing a [+definite] D, and is a hidden relative.

Subject clauses are also 'discourse old' or 'familiar'; hence, following the reasoning outlined above, they too are [+definite], and we can propose that they are also hidden DPs. This is proposed, among others, by Davies and Dubinsky (2000):

all subjects be DPs – importantly this induces a DP node dominating non-NP subjects. Under this analysis, sentential subjects have the structure shown in [46]:

[46]   [_DP ɩ [that Selby lost it]] is quite apparent.

Davies and Dubinsky (2000: 9)

I refer to Davies and Dubinsky's paper for more discussion. Among their arguments in favour of treating clausal subjects as DPs are, for instance, the observations that a coordination of

such clauses can trigger plural agreement (47a), and that subject clauses can host emphatic reflexives (47b):

(47)   a   [[$_{CP}$ That the march should go ahead] and [that it should be cancelled]] have been argued by the same people at different times.

        b   That Leslie arrived drunk itself put Kelly in a foul mood.
               (Davies and Dubinsky 2000: 9, their (30b,c))

As comparative empirical support for the proposal that subject clauses are dominated by DP, Takahashi (2009) offers, among other things, the following Modern Greek example (from Roussou 1993: 78), in which the clause is associated with an overt determiner. For similar structures with overt D in Spanish see Picallo (2002).

(48)   [$_{DP}$ to [$_{CP}$ oti   ethis   filus]]   simeni   pola.
        The   that have-2SG friends-ACC mean-3SG much
        'That you have friends means a lot.'

5.4. Subject clauses as hidden relatives

Taking stock of the survey of the literature in sections 4 and 5. we can extract the following ingredients:
- in at least some languages, factive clauses have the syntax of relatives (Aboh 2005, Krapova 2008, 2010);
- the opposition factive vs. non-factive can be replaced by the distinction familiar-novel (Hegarty 1992, de Cuba 2007);
- (non-extraposed) subject clauses are associated with familiarity (Miller 2001);
- familiarity is syntactically encoded by the feature [+definite];
- [+definite] is a nominal feature;
- a subset of embedded clauses have been argued to be hidden definite DPs (Davies and Dubinsky 2000, Takahashi 2009).

The various points mentioned here can be integrated into the overarching proposal according to which, like complements of factive predicates, clausal subjects are dominated by DP, with a 'definite' D. On this assumption we capture the fact that subject clauses convey familiar information: they are 'definite'.

Now let us return to the main point of the discussion, namely the fact that non-extraposed subject clauses display what I referred to as the double asymmetry.

(49)   a   *That this book, Mary read thoroughly is true. (Authier 1992: 332, his (17b))
        b   *That Mary, your antics will upset is obvious. (Alrenga 2005: 179 (his 15e)
        c.   *I found [that such a boring party no one left early] remarkable.
        d.   *I thought [that such a boring party no one would leave early] unlikely.

(50)   a   That in year one we won't make any profit is quite likely.
        b.   Che questo problema, i professori non l'abbiano potuto risolvere[19]
            That this problem, the professors *non* it have-SUBJ-3PL can-PART solve
            mi sembra improbabile.   (Italian)
            me seem-3SG unlikely

'It seems to me to be unlikely that the professors should not have been able to solve this problem.'

In section 2, I have used the double asymmetry in (49)-(50) as a diagnostic for intervention effects and hence for movement. More precisely I have used this type of evidence to postulate that central adverbial clauses as well as complements of factive predicates are derived by the leftward movement of a non overt operator from TP to the CP layer.

Adopting proposals that have been around in the literature (Davies and Dubinsky 2000, Takahashi 2009) I propose that subject clauses are covert DPs with a definite determiner. Furthermore, adopting the hypothesis that subject clauses have an operator in their left periphery which has been merged in a TP-internal functional projection and moved to the left periphery, the internal structure of such DP-dominated CPs can be assimilated to that of relativized DPs. If, like complement clauses of factive predicates, subject clauses are (hidden) relativized DPs, we correctly predict the double asymmetry. In addition we also derive the fact that subject clauses are interpretively similar to referential DPs.

6. Comparative data

6.1. Dutch complement clauses in the middlefield

Barbiers (2000:192) observes that while all clausal complements in Dutch can be extraposed (51a,c,e), only clausal complements whose content is familiar may occupy a position in the middle field (51b,e,f):[20]

(51)   a   Jan zal nooit toegeven [dat ie gelogen heeft].
             Jan will never admit that he lied has
             'John has lied and he will never admit that.'
        b   Jan zal [dat ie gelogen heeft] nooit toegeven.
             Jan will that he lied has never admit
             'John has lied and he will never admit that.'
        c   Jan zal wel vinden [dat Piet geschikt is].
             Jan will well find that Pete eligible is
             'John will have the opinion that Pete is eligible.'
        d   *Jan zal [dat Piet geschikt is] wel vinden.
             Jan will that he eligible is well find
        e   Jan zal je vertellen [dat ie haar gezien heeft].
             Jan will you tell [that he her seen has]
             'Jan will tell you that he has seen her.'
        f   Jan zal [dat ie 'r gezien heeft] niet aan jou vertellen.
             Jan will that he her seen has not to you tell
             I. *'John will not tell you that he has seen her.' (which may or may not be true.)
             II. 'John has seen but he will not tell you that.'(factive)

Barbiers (2000: 192) points out that (51b) and (51f) are perhaps marginal for some speakers but that to the extent that they are acceptable, the embedded clause must have a factive reading. It is not clear to me, though, that the middlefield position enforces a factive reading in the narrow sense, i.e. a reading in which the content of the clause is taken to be true. For

instance, consider (52): both extraposed (52a) and non-extraposed (52b) variants are acceptable to me, though (52b) is without doubt the more marked. The non-extraposed variant (52b) does not necessarily presuppose that the content of the non-extraposed complement clause is a fact or taken to be true. Indeed, the negation of the matrix verb (52c/d) is compatible with a reading according to which the proposition 'that KBC will get subsidies' is doubted.

(52)   a   De regering heeft reeds bevestigd [dat KBC extra subsidies zal krijgen].
            the government has already confirmed that KBC extra subsidies will get
            'The government has already confirmed that KBC is to receive extra
            subsidies.'
       b   De regering heeft [dat KBC extra subsidies zal krijgen] reeds bevestigd.
            the government has that KBC extra subsidies will already confirmed get
            'The government has already confirmed that KBC is to receive extra
            subsidies.'
       c   De regering heeft nog niet bevestigd [dat KBC bank extra subsidies zal
            krijgen].
            the government has not yet confirmed that KBC bank extra subsidies will get.
            'The government has not yet confirmed that KBC is to receive extra subsidies.'
       d   De regering heeft [dat KBC bank extra subsidies zal krijgen] nog niet
            bevestigd.
            the government has that KBC bank extra subsidies will get not yet confirmed
            'The government has not yet confirmed that KBC is to receive extra subsidies.'

What is clear though is that the content of the bracketed clauses in the middlefield in (52b) and (52d) must be taken to be familiar/discourse old. This interpretation would follow on the assumption that the complement clauses in (52b) and (52d) occupy the TP-internal position typically associated with shifted familiar definite object DPs and that they are themselves also dominated by DP.

        When a clause occupies what seems to be the canonical subject position in Dutch, it is also associated with the familiarity reading. For me, (53a) and (53b) with non-extraposed clauses in subject positions, are admittedly marginal, possibly due to processing complexity (see Delahunty (1983), Davies and Dubinsky (2000)), but to the extent that they are acceptable, the content of the subject clause -'KBC is going to receive extra subsidies'- is familiar.

(53)   a   ?Ik weet niet of [dat KBC extra subsidies zou krijgen] verwacht werd.
            I know not whether that KBC extra subsidies would obtain expected was
            'I don't know if it was expected that KBC was going to get extra subsidies.'
       b   ?[Dat KBC extra subsidies zal krijgen] wordt niet verwacht.
            that KBC extra subsidies will get is not expected
            'That KBC will get extra subsidies is not expected.'

In these examples, once again it is not strict 'factivity' that is at stake: (53b) remains compatible with a scenario in which the speaker does not believe that KBC will get extra subsidies, but what is crucial is that the proposition 'KBC will get extra subsidies' is familiar in the sense that the proposition is not new to the discourse.[21]

6.2. Factive complements in Meiteilon.

Kidwai (2010) discusses complement clauses in Meiteilon. In this language two embedded complementizers are distinguished: *háybə* and *háynə,* the former typically associated with factive complements as illustrated in (54a), in contrast with the complement of *think* in (54b). As shown in (54c), and discussed in Kidwai (2010) the choice of complementizer determines the interpretation. (54) is Kidwai's (30), which is taken from Singh (2000).

(54)   a.   [məhák thəbək əsi təw-gə-də-bə-ni háybə/*háynə] cumm-í
           he   work   this do-POT.EPST.IRR.COP   COMP   true-IND
           'It is true that he did this work.'
       b.   [məhák pərikha ŋəm-gə ni   *háybə/háynə] əy khəll-í
           he   exam   pass-POT COP   COMP   I   think-IND
           'I think that he will pass the exam.'
       c.   [məhák hidak əma ca-gə-də-bə–ni   háybə/háynə] əy niŋsiŋ-í
           he   tablet one take-POT.COP.EPST.IRR.COP COMP   I   remember-IND
       (a)   'I remember that he should take a tablet.' (C = *háybə*)
       (b)   'I reminded him that he should take a tablet.' (C = *háynə*)
               (from Singh 2000)

Kidwai's own labelling of (54a) as 'factive' suggests an interpretation in terms of Hegarty's 'familiarity' reading, since presumably the negation of (54a) would not still presuppose the truth of the complement clause.

The Meiteilon data offer a number of points of interest for the current discussion.

(i) As discussed extensively in Kidwai (2010), the distribution of Meiteilon complement clauses depends on the choice of complementizer.In particular, factive complements can be shown to have nominal properties (Kidwai 2010: (42), see her (36) for the data). This is in line with the analysis outlined here for complements of factive predicates.

(ii) The morphological composition of the Meiteilon complementizer *háybe* is of interest too. Kidwai (2010: 56) says: 'it can be no accident that *-bə* on *háybə* is homophonous with the *irrealis -pə*, identified in the previous sections as the head of Mood$_{IRREALIS}$'. The label 'Irrealis' for the morpheme *–be* is actually proposed by Kidwai (2010) herself. In the descriptive grammars of Meiteilon, the morpheme *-bə* is referred to as a 'nominalizer' and *-bə* clauses behave like nominals, in that, for instance, they can display case morphology and are used as temporal adverbial adjuncts (see Kidwai 2010: (21) for examples). The observed nominal properties of complement clauses of factive verbs, as well as those of temporal clauses in (21), are in line with the analysis outlined here.

(55)   a.   nəkhoy-nə   čət-**pə**-du-də   əy-su yáw-ge
           2P.HON.CONTR   go-IRR.PDET.LOC   I.also participate-OPT
           'When you go, I will go too.'
       b.   skul   kə-**bə**-də-nə   əy-nə   layrik pú-y
           school attend-IRR.LOC.INST I-CNTR   book carry-IND
           'When I go to school, I carry my books.'

(iii) As mentioned, Kidwai (2010) argues that the morpheme *-bə* be identified as an Irrealis C-head in the sense of Cinque (1999), while in the traditional descriptive literature this is referred to as a nominalizing head. Following the analysis proposed above for factive

complements the two labels 'nominalizer', ' and 'Irrealis' – are not necessarily contradictory. On the one hand, we can adopt the hypothesis that factive complements consistently are 'nominalised' in the sense that, like temporal adverbial clauses and conditional clauses, factive clauses involve a relativization strategy. The observation that the Meiteilon complementizer introducing factive complements contains the morpheme independently associated with Irrealis morphology is then in line with my own hypothesis according to which the relevant operator that derives the factive complement originates in the projection that also hosts the (Ir)realis marker. This conclusion is also fully in line with my own analysis of conditional clauses (Haegeman: to appear), according to which the operator moved to derive conditionals originates in IrrealisP. Meiteilon *haybe* would characterize a C head that agrees with and attracts the (Ir) realis operator.

7. For further research: the generalized relativization analysis of complement clauses

In the recent literature, a number of authors (Kayne 2008a, b, Manzini 2008, Arsenijević 2009a) have proposed that all *declarative* complement clauses are to be analyzed as hidden relatives. For instance, for Arsenijević (2009a) the verb *claim* is actually derived in the syntax from the combination of a light verb which incorporates a nominal element *claim*. So *claim* roughly equates *make the claim*. This means that the clause embedded under *claim* would have to be assimilated to complement clauses of N, as discussed above.

(56) a   claimed that John kissed Mary
       b   claimed = made the claim that….

Clearly if complement clauses are uniformly reanalysed as hidden relatives, we need to be able to set apart those that allow MCP from those that don't. To do this, the hypothesis could be formulated that in clauses compatible with MCP, the relativization target is high up in the of the complement clause and hence the path of operator movement that derives the clause will not interfere with the movement operations that derive MCP. Arsenijević's own proposal that what is relativized is 'Force' would certainly be compatible with such a proposal, though, his analysis will have to be amended for complement clauses associated with N and which resist MCP.

      A similar account could be invoked to account for the observation that central adverbial clauses are incompatible with MCP while peripheral adverbial clauses, like those in (6), repeated in (57a,b) and supplemented with additional examples, do allow them (see Haegeman 2003, 2006a,b). Concretely, while the proposal is that the central adverbial clauses are derived by the relativization of a TP internal operator; peripheral adverbial clauses are derived by the relativization of a high (Force) operator, which will not be blocked by other MCP in the left periphery.

(57) a   And yet some popular things are so brilliant, like *The Simpsons* and the Angel of the North. While other brilliant things hardly any one buys – I'd put my friend's first novel and sherry in this category. (Observer 6.12.09 page 34 col 2)
       b   It is amazing how this view could have spread about someone who changed the image of causes like Aids and landmines, and in doing so showed a possible new role for the royals. It is particularly ironic since so much of what Diana did

for her fellow humans she did with no concern for publicity whatsoever. (*Guardian*, G2, 31.8.4 page 9 col 2)

c   I think we have more or less solved the problem for donkeys here, because those we haven't got, we know about. (*Guardian*, G2, 18.2.3, page 3, col 2).

d   We don't look to his paintings for common place truths, though truths they contain none the less. (*Guardian*, G2, 18.02.3, page 8, col 1)

e   Naturally, my carrots, peas, beans, potatoes, lettuces and tomatoes have a taste beyond compare , although whether it is because they are organic or just mine I am not sure. (*Guardian* 6.11.3. page 2, col 1)

e   His face not many admired, while his character still fewer felt they could praise. (Quirk et al 1985: 1378)

g   If some precautions they did indeed take, many other possible measures they neglected.

For reasons of space, I will not elaborate upon this point, although it is clearly of interest.

8. Conclusion

In this paper I argue that the restrictive distribution of MCP in a range of embedded clauses can be accounted for in terms of locality effects of movement. Basing my account extensively on the literature, I propose a movement analysis for complement clauses of factive predicates, for complement clauses of N and for subject clauses. It is shown that the clauses that resist MCP are characterised by a 'familiarity' reading. Again adopting earlier analyses, I propose that this is due to the fact that such clauses are hidden relatives and that familiarity is the outcome of the definiteness feature on the D-head.

References

Aboh, Enoch. 2005. Deriving relative and factive constructions in Kwa. In L. Brugè, G. Giusti, N. Munaro, W. Schweikert , and G. Turano eds., *Contributions to the thirtieth Incontro di Grammatica Generativa*. Libreria Editrice Cafoscarina, Venezia. 265–285.

Adams, Marianne. 1985. Government of empty subjects in factive clausal complements. *Linguistic Inquiry* 16: 305-313.

Adger, David, Cécile DeCat and Georges Tsoulas, eds. 2004. *Peripheries*. Kluwer : Dordrecht.

Alexopoulou, Theodora, Edit Doron and Caroline Heycock. 2004. Broad subjects and clitic left dislocation, In: Adger et al (eds.), 329-298.

Alrenga, Peter. 2005. A sentential subject asymmetry in English and its implications for complement selection. *Syntax* 8: 175-207.

Arsenijević, Boban. 2009a. Clausal complementation as relativization. *Lingua* 119: 39–50

Arsenijević, Boban. 2009b. Correlatives as types of conditional. Lipták, ed., 131-156.

Authier, Jean.-Marc. 1992. Iterated CPs and embedded topicalisation. *Linguistic inquiry* 23: 329-336.

Barbiers, Sjef. 2000. The right periphery in SOV languages. English and Dutch. In Peter Svenonius (ed.), *The Derivation of OV and VO*. Amsterdam, New York: John Benjamins, 181-219.

Basse, Galen. 2008. Factive complements as defective phases. Proceedings of the 27th West Coast Conference on Formal Linguistics, ed. Natasha Abner and Jason Bishop, 54-62. Somerville, MA Cascadilla Proceedings Project.

Belletti, Adriana. 2001. Inversion as focalisation. In Aafke Hulk and Jean Yves Pollock (eds). *Subject Inversion in Romance and the Theory of Universal Grammar*. Oxford and Boston: OUP. 60-90

Belletti, Adriana. 2003. Aspects of the low IP area. In Luigi Rizzi, ed. *The Structure of CP and IP*. Boston and Oxford: Oxford University Press. 16-51.

Bhatt, Rajesh and Roumyana Pancheva. 2006. Conditionals. In Martin Everaert and Henk van Riemsdijk (eds). *The Blackwell Companion to Syntax*. Vol 1: 638-687.

Bianchi, Valentina. 2000. On time adverbials. *Italian Journal of Linguistics* 12.1, 77-106.

Büring, Daniel. 1995. On the base position of embedded clauses in German. *Linguistische Berichte* 159: 370-379.

Cardinaletti, Anna. 2008. On a (wh-) moved Topic in Italian, compared to Germanic. Paper presented at the *Comparative Germanic Syntax Workshop*, Stuttgart.

Cinque, Guglielmo. 1990. *Types of A'-dependencies*. Cambridge: MIT Press

Cinque, Guglielmo. 1999. *Adverbs and Functional Heads*. Oxford University Press: Oxford and New York.

Cinque, Guglielmo and Luigi Rizzi. 2008. The cartography of syntactic structures. *STiL – Studies in Linguistics* Vol. 2, 2008. *CISCL Working Papers*. http://hdl.handle.net/ 10278/895. http://www.ciscl.unisi.it/doc/doc_pub/cinque-rizzi2008- The_cartography_of_Syntactic_Structures.pdf

Cinque, Guglielmo and Luigi Rizzi. 2010. *The Oxford Handbook of Grammatical analysis*, edited by Bernd Heine and Heiko Narrog. 51-65.

Collins, Chris. 1994. The factive construction in Kwa. *Travaux de recherche sur le creole haitien* 23: 31-65. Universite du Quebec a Montreal.

de Cuba, Carlos Francisco. 2007. On (Non)Factivity, Clausal Complementation and the CP-Field. Ph.D. diss: Stony Brook University.

De Cuba, Carlos and Barbara Ürögdi. 2009. Roots and Radicals: the Referentiality of clauses. Paper presented at the Roots conference, ZAS Berlin, 2-4 September.

De Cuba, Carlos and BarbaraÜrögdi. 2010. Clearing up the 'Facts' on complementation. *University of Pennsylvania Working Papers in Linguistics* 16, 1, 41-50.

De Cuba, Carlos Fransisco and Barbara Ürögdi. to appear. Eliminating factivity from syntax: Sentential complements in Hungarian. To appear in *Approaches to Hungarian*. ed. Marcel den Dikken and Robert Vago. Amsterdam and New York: John Benjamins.

Davies, William and Stan Dubinsky. 1999. Sentential subjects as complex NPs: New reasons for an old account of subjacency. *Chicago Linguistic Society* 34: 83-94.

Davies, Willliam and Stanley Dubinsky. 2000. Why sentential subjects do so exist (but are nonetheless kinda weird. Paper presented at Southeastern conference on Linguistics (SECOL).

Davies, William and Stanley Dubinsky. 2001. Functional architecture and the distribution of subject properties. In Davies, W and S. Dubinsky, eds. *Objects and other subjects*. Dordrecht: Kluwer. 247-280.

Delahunty, G, 1983. But sentential subjects exist. *Linguistic Analysis* 12.

Demirdache, Hamida and Myriam Uribe-Etxebarria (2004) The syntax of time adverbs. In Jaqueline Guéron and Jacqueline Lecarme (eds). *The Syntax of Time*. Cambridge: MIT press.143-180.

Emonds, Joseph. 1970. Root and structure-preserving Transformations. Ph.D. diss: MIT.

Emonds, Joseph. 1976. *A Transformational Approach to English Syntax.* New York: Academic Press.

Emonds, Joseph. 2004. Unspecified categories as the key to root constructions. In Adger et al (eds.), 75-121.

Gärtner, Hans Martin. (2001). Are there V2 relative clauses in German? *Journal of Comparative Germanic* Lingusitics 3: 97-141.

Geis, Michael. 1970. *Adverbial subordinate clauses in English*. Ph.D. Diss. Cambridge: MIT.

Geis, Michael. 1975. English time and place adverbials. *Working papers in Linguistics 18, Ohio State University*. 1-11.

Geis, Michael. 1985. The syntax of conditional sentences. In Michael Geis, ed. *Studies in Generalised phrase structure grammar.* 130-159. Columbus, OH: Department of Linguistics, OSU.

Green, Georgia M. 1976. Main clause phenomena in subordinate clauses. *Language* 52: 387-97.

Green, Georgia M. 1980. Some wherefores of English inversion. *Language* 56: 582-601.

Green, Georgia. M. 1996. Distinguishing main and subordinate clause: the ROOT of the problem. Ms. University of Illinois.

Grosu, Alexander (1994) *Three Studies in Locality and Case*. New York: Routledge.

Grosu, Alexander and Sandra Thompson (1977) Constraints on the distribution of NP clauses. *Language* 53: 104-155.

Haegeman, Liliane. 2003. Conditional clauses: External and internal syntax. *Mind and Language* 18: 317-339.

Haegeman, Liliane. 2006a. Argument Fronting in English, Romance CLLD and the Left Periphery. In Raffaella Zanuttini, Hector Campos, Elena Herburger, and Paul Portner (eds.) *Negation, Tense and Clausal Architecture: Cross-linguistic Investigations*. Georgetown University Press, 27-52.

Haegeman, Liliane. 2006b. Conditionals, factives and the left periphery. *Lingua* 116: 1651-1669.

Haegeman, Liliane. 2007. Operator movement and topicalisation in adverbial clauses. *Folia Linguistica*.

Haegeman, Liliane. 2009. Main clause phenomena and the derivation of adverbial clauses. Proceedings of the 18th International Symposium on Theoretical and Applied Linguistics (ISTHAL). Aristotle University of Thessaloniki (4-6 /05/ 2006).

Haegeman, Liliane. 2010. The internal syntax of adverbial clauses. In Kleanthes Grohmann & Ianthi Tsimpli (eds.). *Exploring the left periphery*. *Lingua* thematic issue. 123: 628-648.

Haegeman, Liliane. To appear. The movement derivation of conditional clauses. *Linguistic Inquiry.* 41,4.

Haegeman, Liliane and Ürögdi Barbara. 2010. Referential CPs and DPs: An operator movement account. Presented at GLOW Asia, Bejing.

Hegarty, Michael. 1992. Familiar complements and their complementizers: On some determinants of A'- locality. Unpublished manuscript: University of Pennsylvania.

Heycock, Caroline. 2006. Embedded root phenomena. In Martin Everaert and Henk van Riemsdijk (eds). *The Blackwell Companion to syn*tax. Vol II: 174-209.

Hooper, John and Sandra Thompson. 1973. On the applicability of root transformations. *Linguistic Inquiry* 4: 465-97.

Iwakura, Kunihiro. 1978. On root transformations and the structure preserving hypothesis. *Linguistic Analysis* 4: 321-364.

Jugnet, Anne. 2008. *L'extraposition des complétives objet en anglais.* PhD. Thesis : Université Charles de Gaulle, Lille III.

Julien, Marit. 2008. Embedded V2 in Norwegian and Swedish. *Working Papers in Scandinavian Syntax* 80: 103-161.

Kalluli, Dalina. 2006. Triggering factivity: Prosodic evidence for syntactic structure. In D. Baumer, D. Montero and M. Scanlon (eds). *Proceedings of the 25th West coast Conference on Formal Linguistics*, 211-219. Sommerville, MA, Cascadilla Proceedings Project.

Kayne, Richard. 2008a. Why Isn't This a complementizer?. NYU. Ms.

Kayne, Richard. 2008b. *Antisymmetry and the lexicon.* NYU Ms.

Kempson, Ruth. 1975. *Presupposition and the Delimitation of Semantics.* Cambridge: Cambridge University Press.

Kidwai, Ayesha. (2010) The cartography of phases: fact and inference in Meiteilon. Ms. Jawarhalal Nehru University

Kiparsky, Paul and Carol Kiparsky. 1970. Fact. In Bierwisch, M. and K. Heidolph, eds., *Progress in Linguistics*. Berlin: Mouton. 143-73.

Koster, Jan. 1978. Subject sentences don't exist. *Linguistic Analysis*.

Krapova Iliana. 2008. Bulgarian relative clauses with the invariant complementizer *deto*. Paper presented at the Third Annual Meeting of the Slavic Linguistics Society. The Ohio state University, Columbus, Ohio, USA, June 10-12, 2008.

Krapova, Iliana. 2010. Bulgarian relative and factive clauses with the invariant complementizer *deto* 'that'. *Lingua* 120: 1240–1272

Krifka, Manfred. 2001. Quantifying into questions acts. *Natural Language Semantics* 9: 1-40.

Kuroda, S.Y . 1992. *Japanese Syntax and Semantics*. Kluwer: Dordrecht

Larson, Richard. 1987. 'Missing Prepositions' and the analysis of English free relative clauses. *Linguistic Inquiry* 18: 239-266.

Larson, Richard. 1990. Extraction and multiple selection in PP. *The Linguistic Review* 7: 169-182.

Lebeaux, David. 1998. Where does Binding Theory apply? Technical report NEC.

Lipták, Anikó, ed. 2009b. *Correlatives Cross-linguistically*. Amsterdam/Philadelphia: John Benjamins.

Maki, Hideki, Lizanne Kaiser, & Masao Ochi. 1999. Embedded topicalization in English and Japanese. *Lingua* 109: 1-14.

Manzini, Rita. 2008. The Romance *k*-complementizers. University of Florence, ms.

Melvold, Janis. 1986. Factivity and definiteness. Draft. MIT dept of linguistics and Philosophy.

Melvold, Janis. 1991. Factivity and definiteness. In Lisa Cheng & Hamida Demirdache, (eds.), *More Papers on Wh-Movement*, *MIT Working Papers in Linguistics.* No. 15. MIT: Cambridge, Mass. 97-117

Miller, Philip. 2001. Discourse constraints on (non) extraposition from subject in English. *Linguistics* 39: 683-701.

Miyagawa, Shigeru. 2004. The nature of weak islands. Ms. MIT.

Munsat, Stanley. 1986. *Wh*-complementizers. *Linguistics and Philosophy* 9: 191-217.

Nichols, Lynn. 2001. *The syntax and morphosyntax of propositional attitude complementation*. Harvard, Cambridge Mass. Ms.

Nichols, Lynn. 2003. Attitude evaluation in complex NPs. In Andrew Carnie, Heidi Harley and MaryAnn Willie (eds), *Formal Approaches to Function in Grammar*. 155-164. Amsterdam: John Benjamins.

Picallo, Carme. 2002. Abstract agreement and clausal arguments. *Syntax* 5: 116-147

Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge: MIT Press.

Rizzi, Luigi. 1997. The fine structure of the left periphery. In Liliane Haegeman (ed), *Elements of Grammar*. Dordrecht: Kluwer. 289-330

Rizzi, Luigi. 2001. On the position "Int(errogative)" in the left periphery of the clause. Ms. University of Siena.

Rizzi, Luigi. 2004. Locality and left periphery. In Adriana Belletti,(ed.) *Structures and Beyond. The Cartography of Syntactic Structures*, vol. 3, Oxford University Press. Oxford.

Roussou, Anna. 1993. Nominalized clauses in the syntax of modern Greek. *UCL Working Papers in Linguistics* 3: 77-100.

Roussou, Anna. 1994. *The syntax of complementisers*. Ph.D.Diss: UCL.

Roussou, Anna. 2000. On the left periphery. Modal particles and complementizers. *Journal of Greek Linguistics* 1: 65-94.

Roussou, Anna. 2010. Selecting complementizers. In *Exploring the Left Periphery*, Kleanthes K. Grohmann and Ianthi-Maria Tsimpli (eds). *Lingua* 120: 582-603.

Santorini, Beatrice. 2001. (Un?)expected main clause phenomena. http://www.ling.upenn.edu/~beatrice/examples/mcp.html

Sawada Miyuki and Richard Larson. 2004. Presupposition and root transforms in adjunct clauses. K. Moulton and M. Olfs (eds) *Proceedings of NELS 34* , GLSA, UMASS, 517-128.

Shaer, Benjamin and Werner Frey. 2004. 'Integrated' and 'non-integrated' left peripheral elements in German and English. In Benjamin Shaer, Werner Frey and Claudia Maienborn (eds). *Proceedings of the Dislocated Elements Workshop*, ZAS Berlin, November 2003. *ZAS Papers in Linguistics* 35, Vol 2, 465-502.

Singh, C.Y. 2000. *Manipuri Gramm*ar. New Delhi: Rajesh Publications.

Starke, Michal. 2001. Move dissolves into Merge: a theory of locality. Ph.D. diss. University of Geneva. http://theoling.auf.net/papers/starke_michal/

Stowell, Tim. 1981. *Origins of Structure*. Ph.D. Diss. Cambridge MIT.

Takahashi, Shoichi. 2009. The hidden side of nominal complements. Paper presented at GLOW 2009., Nantes. http://www.l.u-tokyo.ac.jp/~s_t/clausal_complements.pdf

Urmson, J.-O. 1963. Parenthetical verbs. In Caton, C. (Ed.), *Philosophy and Ordinary Language.* Urbana: University of Illinois Press, 220-240.

Watanabe, Akira. 1993. Larsonian CP recursion, factive complements, and selection. *NELS* 23, 523-537.

Zubizaretta, Maria-Luisa. 1999. Word order in Spanish and the nature of nominative case. In Kyle Johnson & Ian Roberts (eds), *Beyond Principles and Parameters. Essays in Memory of Osvaldo Jaeggli*. 223-250. Dordrecht: Kluwer.

Zubizaretta, M.-L 2001. "Preverbal subjects in Romance interrogatives." In A. Hulk and J.Y Pollock, eds. *Subject inversion in Romance and the Theory of Universal Grammar*. Oxford Studies in Comparative Syntax. New York: Oxford University Press.183-204.

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[1]

[2]   The term 'complement' is used in a loose sense and will also include subject clauses. See section 4 for specific discussion of subject clauses.

[3] In addition to the domains discussed, relative clauses also have restrictions on the distribution of MCP. I will not discuss these in detail here and refer the reader to Hooper and Thompson's own work (Hooper and Thompson 1973: 489-491) as well as to Bianchi (2000). I hope to return to these in future work.

[4] Judgements are not always as clear as one would like them to be. One of the complicating factors is that so-called factive predicates sometimes display dual behaviour. The verb *regret*, for instance, is often cited as the prototypical factive verb selecting a complement clause whose content is presupposed. However, this verb may have a reading in which it does not simply express the subject's attitude to a particular 'fact'; it can also be used in a sense corresponding to 'regret to say' or 'express one's regrets that'.

(2)   a   We regret that due to a funding shortage there will no longer be any drinks available at the bar for non-members.

Informally speaking, in this reading *regret* becomes like a speech act verb, which will license MCP in its complement.

(2)   b   I regret that those details, I cannot reveal to non-members.

For similar discussion of variable judgements on topicalisation in factive complements I refer to Urmson (1963); Maki et al (1999); Gärtner (2001: 127-28); Shaer and Frey (2004: 486).

[5] Thanks to Nicola Munaro and Luigi Rizzi for the judgements on these sentences.

[6] For discussion of locality restrictions see Rizzi (1990, 2004).

[7] Zubizaretta (2001:201) writes:

It is likely that factive predicates, which presuppose the truth of their propositional complement, contain an Ass(ertion) operator in its [sic] CP. This operator is lexicalised by the complementizer, which explains why it must be obligatorily present [cf. *John regrets *(that) Mary is bald*]. Complements of propositional attitude verbs lack an Ass operator, therefore, their complementizer may be absent in some languages [cf. *John thinks (that) Mary is bald*]. (Zubizaretta 2001: 201).

The claim that the complements of factive predicates are assertions seems at odds with the standard assumption in the literature and indeed with Zubizaretta's own claim that factive predicates presuppose the truth of their propositional complement. However, observe that once again she adopts the idea that there is an operator in their left periphery, which will account for the island status of complements of factive predicates.

[8] Munsat (1986) proposes that the complementizer of factive predicates differs from that of non-factive predicates: the former is a 'wh-that', the latter is plain '*that*'. I refer to his work for more discussion.

[9] For related early proposals see also Emonds (1976), see references in Grosu and Thompson (1977: 121-2), Iwakura (1978), and for German see Büring (1995).

[10] Following Hegarty (1992), De Cuba (2007: 60) replaces the distinction between factive vs. non-factive complement taking predicates by the distinction between 'Novel complement taking predicates' and 'Familiar complement taking predicates.' Like Haegeman (2006a), DeCuba proposes that 'novel' predicates select a more structurally complex sentential complements than 'familiar' predicates.

[11] For early proposals that the complements of factive verbs are nominal see also Adams (1985).

[12] Shaded characters are used to represent characters for which I was not able to obtain the correct font.

[13] Emonds (2004) proposes that MCP are restricted to complements of V and A. If the complements of factive predicates are in fact complex nominals, then these clauses are not selected by V and hence it is expected that they are incompatible with MCP.

[14] Observe, though, that the binding effects which distinguish between 'complement clauses to N' and relative clauses which were discussed in Lebeaux (1998) need to be reconsidered.

[15] Patterns such as (33), with an 'internal' clause (Grosu and Thompson 1977) received a lot of attention in the 1970s. I cannot do justice to the debate and refer to Grosu and Thompson 1977 for an overview of the data and the analyses proposed at the time.

[16] The judgements are not uniform; Grosu and Thompson (1977) reject such examples as does Rachel Nye (p.c.).

[17] The pattern in (40) also falls under the 'internal S' pattern of Grosu and Thompson (1977).

[18] For a survey of information status and extraposition of object clauses see Jugnet (2008).

[19] Thanks to Nicola Munaro and Luigi Rizzi for the judgements on these sentences.

[20] Büring (1995) gives the following for German:

(i)   ?Peter hat [$_{CP}$ dass er gekommen ist] bereut. (1995: 371, his (1a))
       Peter have-3SG that he come-PRT is-3SG regret-PRT
       'Peter has regretted that he came.'

(ii)   *? Peter hat [$_{CP}$ dass du gekommen bist] gesagt. (1995; 379, note 1, (ia))

Peter have-3SG that you come-PRT be-2SG say-PRT

'Peter has told me that you came.'

(iii)   Ich habe [$_{CP}$ dass er gegangen ist] nicht verstanden (1995: 372, (4b))

I have-1SG that he go-PRT is-3SG not understand-PRT

'I have not understood that he went.'

Büring (1995: 379, note 1) discusses some other factors influencing the positioning of the clause.

Unexpectedly, Büring considers extraction from complement claues in the middlefield relatively acceptable:

(iv)   Wen$_1$ hast du [$_{CP}$ dass Maria t$_1$ liebt] geglaubt? (Büring 1995: 377, (19b))

Who have-2SG you [that Maria love-3SG believe-PRT

'Who did you think that Mary loves?'

I find the Dutch equivalent of (iv) strongly degraded.

[21] The question arises as to which position is occupied by these clausal complements in the middlefield. One option that I intend to explore in future work is that the clause occupies a TP internal TopP in the sense of Belletti (2001, 2003). This hypothesis has important consequences, though, in that the discourse familiar/given status of the clause would then also be related to its position, as well as by virtue of the 'nominal' D-component of the clause. See also Haegeman and Ürögdi (2010) for discussion.