

The syntax of conditional clauses

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This paper shows that the movement derivation of conditional clauses (Bhatt and Pancheva 2002, 2006, Arsenijević 2006, Lecarme 2008) allows us to account for the fact that Main Clause Phenomena are excluded in conditional clauses because this follows from intervention effects. Moreover, the cartographic implementation of the analysis proposed predicts the incompatibility of conditional clauses with the speaker oriented modal expressions as well as the fact that conditional clauses lack the low construal reading which is found in (some) temporal adverbial clauses (cf. Bhatt and Pancheva 2002, 2006). The paper thus reinterprets one of the potential objections against the movement account of conditional clauses into an argument in favour.

1. Introduction

By analogy with the proposals for the derivation of temporal clauses, some authors have proposed that conditional clauses be derived by leftward operator movement (Lycan 2001, Bhatt and Pancheva 2002, 2006, Arsenijević 2006). This paper provides supporting evidence for this analysis. On the one hand, the movement analysis of conditional clauses immediately accounts for the fact that Main Clause Phenomena are excluded in conditional clauses, whereas sentence initial circumstantial adjuncts are allowed. Moreover, the cartographic implementation of the analysis elaborated here also predicts that high modals (in the sense of Cinque 1999) are excluded in conditional clauses and that conditional clauses lack the low construal reading which is found in (some) temporal adverbial clauses. The latter point means that the paper removes one of the original obstacles for the movement account of conditional clauses.

The paper is organized as follows: Section 2 summarizes the arguments in favour of the hypothesis that temporal *when* clauses are derived by *wh*-movement of a temporal operator to the left periphery and argues that the adjunct-argument asymmetry with respect to fronting operations, discussed in Haegeman (2007, to appear a,b) offers further support for this analysis. Section 3 discusses the extension of the movement analysis to conditional clauses and discusses the lack of low construal readings, which has sometimes been taken as an argument against the movement derivation of conditional clauses. Section 4 discusses the absence of high modal expressions in conditional clauses, a phenomenon often noted in the literature, and

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shows how it can be made to follow from a particular implementation of the movement analysis of conditional clauses. It is also shown that this particular implementation accounts for the absence of low construal readings. Section 5 discusses comparative evidence with respect to the extent to which emphasis markers may or may not be present in conditional clauses. Section 6 is a brief summary.

2. Background: adverbial clauses as free relatives

2.1. Starting point: the movement derivation of temporal adverbial clauses

In the literature it has been proposed at various points (Geis 1970, 1975; Enç 1987: 655; Larson 1987, 1990; Dubinsky & Williams 1995; Declerck 1997; Demirdache & Uribe-Etxebarria 2004: 165-170, Lecarme 2008) that temporal adverbial clauses (1) are derived by *wh*-movement of a temporal operator (e.g. *when*) to the left periphery. One prime argument for this hypothesis is the observation that the *when*-clause in (1) is ambiguous between a high construal and a low construal of the temporal operator:

- (1) I saw Mary in New York when [_{IP} she claimed [_{CP} that [_{IP} she would leave]]]
- (i) high construal: at the time that she made that claim
- (ii) low construal: at the time of her presumed departure

Adopting the movement analysis, high and low construal can be represented as (2a) and (2b) respectively (Larson 1987, 1990). There are a number of different implementations, but these are not relevant for the present discussion.

- (2) a. I saw Mary in New York [_{CP} when_i [_{IP} she claimed [_{CP} t_i that [_{IP} she would leave]]] t_i]]
- b. I saw Mary in New York [_{CP} when_i [_{IP} she claimed [_{CP} t_i that [_{IP} she would leave t_i]]]]]

As shown by Larson (1990: 170), going back to Geis (1970, 1975), the temporal operator *when* can be extracted from the complement clause of *claimed* in (1/2b), giving rise to the low construal reading. Extraction of the same operator from the complement of the N *claim* in (3), an island for extraction, will give rise to a violation of the Complex Noun Phrase Constraint (i.e. the ban on extraction from complex NPs) and hence lead to ungrammaticality (cf. Demirdache and Uribe-Etxebarria (2004: 165-176)). Thus the low construal reading is not available in (3).⁶

- (3) I saw Mary in New York
when [_{IP} she made [_{DP} the claim [_{CP} that [_{IP} she would leave]]]]]
- (i) high construal: at the time that she made that claim
- (ii) low construal: *at the time of her presumed departure

2.2. Additional support for the movement analysis

In my own work (Haegeman 2007a, to appear a,b) I have offered additional syntactic evidence for the movement analysis of temporal adverbial clauses. Such an analysis,

⁶ High/low construal is also available with *before*, *until*, (temporal) *since* (Larson 1990: 170). Low construal is unavailable with *while*:

(i) I didn't see Mary in New York while she said she was there. (Geis 1970, Stump 1985, Larson 1990: 174, (11a))

See also Citko (2000), Lipták (2005), Stephens (2006). I refer to Haegeman (to appear) for discussion.

coupled with a theory of locality on movement, allows us to predict that adverbial clauses are incompatible with syntactic phenomena usually referred to as Main Clause Phenomena (MCP) in the literature. One instance of such MCP, which I have discussed in some detail, concerns argument fronting. English adverbial clauses are incompatible with argument fronting (cf. Maki et al 1999). The ungrammaticality of (4a) follows directly from the movement account: operator movement of *when* would be blocked by the fronted argument *this song*.⁷

- (4) a. *When this song I heard, I remembered my first love.

Furthermore, I have shown that there is an argument/adjunct asymmetry with respect to the left periphery of temporal adverbial clauses: while argument fronting is ungrammatical in English temporal adverbial clauses (4a), circumstantial adjuncts may precede the subject:

- (4) b. When last year she started to write this column, I thought she would be fine.

This contrast also follows from the movement analysis, because it is independently known that operator movement may cross a circumstantial adjunct while it may not cross an argument in the left periphery. (5) illustrates this contrast for relative clauses (see Browning 1996, Rizzi 1997 for discussion).

- (5) a. These are the students who in the next semester will study these texts.
b. *These are the students who these texts will study in the next semester.
c. There was a time when at university level they did not teach these courses.
d. *There was a time when these courses they did not teach at university level.

While argument fronting is ungrammatical in temporal adverbial clauses in English, clitic left dislocation (CLLD) is not excluded in Romance. For instance in French (6) the CLLD constituent *cette chanson* ('this song') is found in the left periphery of the temporal clause. The French example (6) contrasts with English (4a):⁸

- (6) Quand cette chanson je l'ai entendue, j'ai pensé à mon premier amour.
when this song I it have heard-FSG, I have thought of my first love
'When I heard this song, I thought of my first love.'

Once again under the movement analysis of temporal adverbial clauses the contrast between English topicalisation and French CLLD is not surprising, since CLLD is independently known to give rise to fewer intervention effects than English argument fronting. For instance, while English argument fronting is ungrammatical in an embedded interrogative *when* clause, CLLD is grammatical in the same environment in French:⁹

⁷ For comparative data see Abels and Muriungi (2008).

⁸ Not all French speakers accept this example.

⁹ Observe that CLLD does block subject extraction in French. I will not dwell on this point here, which is tangential to the discussion. See Rizzi (1997) and Delfitto (2002) for discussion.

- (7) a. *I wonder when this song I heard before.
 b. Je me demande quand cette chanson je l'ai entendue.¹⁰ (French)
 I myself ask when this song I it have heard-FSG
 'I wonder when I heard this song before.'

These data also show that adverbial clauses must allow at least some left peripheral projections. In addition it has been observed that in French stylistic inversion is allowed in temporal clauses, at least for some speakers. If, as argued by Kayne and Pollock (2001), stylistic inversion involves an important chunk of the left periphery, these data too demonstrate that the left periphery is available in temporal clauses.

- (7) c. %Je voulais partir quand sont arrivés les enfants.
 I want-PAST-1SG leave when be-3PL arrive-PART-PL the children
 'I wanted to leave when the children arrived.' (Lahousse 2003 : 280, (1))

Hence, accounting for the lack of argument fronting in temporal clauses by claiming that the left periphery in general or the topic projection in particular is not available will not be an option.

As mentioned, so-called Main Clause Phenomena in general (Hooper & Thompson 1973, Green 1976, 1996, Emonds 1976, 2004) are barred from temporal adverbial clauses: (8a) illustrates Locative Inversion (for recent discussion see among others, Culicover & Levine 2003, Rizzi & Shlonsky 2006 and reference cited there), (8b) illustrates preposing around *be* (Hooper & Thompson 1973: 467; Emonds 1976), (8c) illustrates VP preposing (Hooper & Thompson 1973:466; Emonds 2004: 78).

- (8) a. *We were all much happier when upstairs lived the Browns.
 (Hooper & Thompson 1973: 496 (their (253)))
 b. *When present at the meeting were the company directors, nothing of
 substance was ever said.
 c. * When passed these exams you have, you'll get the degree.

As the MCP illustrated in (8) are usually also taken to implicate movement to the left periphery, their incompatibility with adverbial clauses follows from the movement account: the movement required to derive the MCP in (8) will interfere with the operator movement which derives the temporal clause. I will not pursue the discussion of the intervention effects in temporal adverbial clauses in this paper and refer to my own work (Haegeman 2007a, to appear a/b).

3. Conditional clauses as free relatives (Bhatt & Pancheva 2002, 2006, Arsenijević 2006, Lecarme 2008, Tomaszewicz to appear)

3.1. Conditional clauses are derived by movement

The argument/adjunct asymmetry observed in relation to fronting operations in temporal adverbial clauses is also found in conditional *if* clauses, as shown in (9):

¹⁰ Not all speakers accept this example. Thanks to Amélie Rocquet for judgement.

- (9) a. *If these exams you don't pass, you won't get the degree.
b. If on Monday the share price is still at the current level then clearly their defence doesn't hold much water. (*Observer*, 11.7.4, Business, p. 22 col 5)

In addition to argument fronting (9a), the other MCP illustrated in (8) above are also illicit in conditional clauses: (10a) illustrates Locative Inversion, (10b) illustrates preposing around *be*, (10c) illustrates VP- preposing.

- (10) a. *If upstairs live his parents things will be much simpler.
b. *If present at the party are under age children, they won't be able to show the X-rated films.
c. *If passed these exams you had, you would have had the degree.

If, like temporal adverbial clauses, conditional clauses are derived by operator movement, then the adjunct/argument asymmetry in (9) and the fact that MCP are ungrammatical (10) follows. A movement analysis of conditional clauses has been proposed by Bhatt and Pancheva (2002, 2006), Arsenijevic (2006), Lecarme (2008) and Tomaszewicz (to appear).¹¹

Bhatt and Pancheva (2002, 2006) argue for the derivation of conditional clauses in terms of movement of a World operator to SpecCP. They say: 'Our proposal that [conditional clauses] are interpreted as free relatives amounts to the claim that they are definite descriptions of possible worlds.' (Bhatt & Pancheva 2006: 655). (11a) would be derived by the leftward movement of a World operator, as shown in representation (11b):

- (11) a. If John arrives late
b. [_{CP} OP_w C° [John arrives late in w]]

As was the case with temporal clauses, the intervention effects illustrated in (9) and in (10) thus offer empirical support for Bhatt & Pancheva's proposal.

The movement analysis of conditional clauses finds cross-linguistic support. I provide some illustrations here. For Italian conditional clauses, Cardinaletti (2008) contrasts the distribution of 'resumptive preposing', a leftward movement without clitic resumption whose syntactic properties Cardinaletti shows are similar to English topicalisation, and CLLD. Resumptive preposing is not, and CLLD is, compatible with conditional clauses:

- (12) a. *Se la stessa proposta fa anche l'altro candidato, non otterrai quel posto
If the same proposal makes also the other candidate, *non* obtain-FUT-2SG
that position (Cardinaletti 2008: (19a))
b. Se la stessa proposta la fa anche l'altro candidato, non otterrai quel posto
If the same proposal it makes also the other candidate, *non* obtain-FUT-2SG
that position (Cardinaletti 2008: (22a))

Following the movement account elaborated here, the ungrammaticality of (12a) can be ascribed to an intervention effect. On the other hand, (12b) remains grammatical because in general CLLD does not lead to the same type of intervention effects (cf. Haegeman 2008).

¹¹ For discussion of the semantics see also von Stechow and Iatridou (2002, 2003).

Similarly, in his discussion of Italian conditional clauses, Bocci (2007: 15, his (32)) provides the following contrast: while CLLD is possible (as we have seen), focalization is degraded.

- (13) a. Se l'esame scritto non lo supera, non otterrà il diploma.
 If the written exam [s/he] does not it-pass, [s/he] will not get the diploma.
 b. ??Se LA PROVA ORALE non supera, non otterrà il diploma!
 If THE ORAL EXAM [s/he] does not pass, [s/he] will not get the diploma!

Once again, adopting a movement account of conditional clauses, the ungrammaticality of (13b) follows from an intervention effect.¹²

3.2. Additional support

3.2.1. Temporal adverbial clauses and conditional clauses

The movement analysis proposed here aligns conditional clauses with temporal adverbial clauses. Anecdotal support for this comes from the observation that in many languages the prototypical 'conjunction' to introduce a temporal adverbial clause is isomorphic with that which introduces a conditional. This is the case, for instance, in German: Bhatt and Pancheva (2006) give (14), their (7a). The conjunction *wenn* introduces both conditional (14a) and temporal (14b) clauses:

- (14) a. Wenn Steffi gewinnt, wird gefeiert. (German)
 if Steffi wins AUX- PASSIVE celebrate-PART
 'If Steffi wins, there is a celebration.'
 b. Wenn Steffi kommt, fangen wir an zu spielen.¹³
 'when Steffi arrive-3SG, begin-1PL we to play
 'When Steffi arrives, we begin to play.'

Bhatt and Pancheva (2006: 657) comment: 'There seems to be no evidence suggesting that the syntactic behavior of *wenn* is different in conditional and in temporal clauses, i.e., it does undergo A'-movement in both cases. (Bhatt & Pancheva 2006: 657).

In West Flemish (WF) too, the conjunction *oa* serves to introduce both a temporal clause and a conditional clause:

- (14) c. Kgoan kommen oa-j doa zyt.
 I go-1SG come if-you there be-2SG
 'I'll come if/when you are there'.

¹² Observe that conditional clauses may be a testing ground for syntactic analyses. For instance, in Italian, prepositional complements of verbs in the left periphery may appear with (ia) or without (ib) an IP-internal resumptive clitic:

- (i) a. Col capo non ci parla. (Garzonio 2008 : 7)
 With-the boss not clitic speak
 'He doesn't speak with the boss.'
 b. Col capo non parla.

Garzonio (2008) shows that in conditional clauses, when prepositional complements are dislocated only the variant with the clitic is available.

- (ii) ?Se, col capo, non *(ci) parli, non puoi capire il problema.
 If with-the boss not *(clitic) speak-2sg, not can-2sg understand the problem.
 'If you don't talk to the boss, you cannot understand the problem.'

Garzonio concludes that the clitic-less construction is analogous to English argument fronting.

¹³ Thanks to Amelie Roquet for help with the German examples.

In line with Bhatt and Pancheva (2002, 2006), Lecarme (2008) also assumes that conditionals are ‘modalized free relatives’ (2008: 210).

3.2.2. *Yes no questions and conditionals*

Further support for postulating an operator in the left periphery of conditional clauses may be derived from their formal parallelism with *yes/no* questions. Consider the data in (15):

- (15) a. I asked him if he had said that he would leave.
b. If he had said that he would leave...
c. Had he said that he would leave?
d. Had he said that he would leave....

Embedded *yes/no* questions are introduced by the conjunction *if*; the same conjunction is used for conditionals (15a,b). As shown by (15c,d) above, I-to-C movement which typically derives root *yes no* questions may be used to derive a conditional clause (see Bhatt & Pancheva 2006: 657-661 for discussion). It may be postulated that in cases of inversion, I-to-C movement is triggered by a checking relation between a head feature of I and the operator in the left periphery. In the case of *yes/no* questions and of conditional clauses, the relevant operator would have to be non overt.

Support for postulating a non-overt interrogative operator in the left periphery is to be found in the Germanic Verb Second (V2) languages. The Dutch analogue of (15c), (16a), shows that in V2 languages, direct *yes/no* questions constitute an apparent exception to the V2 constraint in that here the fronted verb seems to be the first constituent. On the assumption that *yes/no* questions contain an abstract operator in their left periphery (16b), the V2 constraint can be fully maintained: the null operator occupies the initial position and the finite verb is in second position. If we also assume that the relevant operator originates in a lower position, then *yes/no* questions can be derived by operator movement.¹⁴ Recent authors who postulate there is a null operator in the left periphery of *yes no* questions include Barbiers (2007: 102-103 for arguments from Dutch), and Den Dikken (2006: 729).¹⁵ If root *yes/no* questions, which display SAI, are derived by the movement of a null operator to their left periphery, the formally identical conditional clause in (16c) could by analogy also be said to contain an operator in its left periphery which is, by assumption, moved from a lower position:

- (16) a. Had hij gezegd dat hij zou vertrekken?
had he said that he would leave
b. [_{CP} OP [_{V_{fin}} had] [_{TP} Subject ... top]]
c. Had hij gezegd dat hij zou vertrekken, ik zou teruggebeld hebben.
had he said that he would leave, I would back-called have
‘Had he told me he was leaving, I would have called him back.’

If direct *yes/no* questions are derived by the movement of an abstract operator to their left periphery, the relevant operator may be taken to also be present in indirect *yes/no* questions and the movement analysis can be extended to the derivation of

¹⁴ See however Rizzi (2001) for a different account for embedded *yes/no* questions in Italian.

¹⁵ But see Roberts and Roussou (2002:41) for a different viewpoint.

As has been noted by Geis (1970) and Larson (1987), the unavailability of long distance construals is what distinguishes if clauses in English from when clauses. This difference is standardly attributed to the possibility to move the wh-pronoun when long-distance, which correlates with the long distance construal. In the case of if clauses, on the other hand, the option of long-distance movement does not exist, since if, being a complementizer, is base generated in C°. (Citko 2000:6)

That conditionals are not derived by operator movement is, however, not the conclusion drawn by Bhatt & Pancheva (2002, 2006), who, in spite of the fact that conditional clauses resist low construal, adopt a movement account. To account for the absence of low construal, Bhatt & Pancheva (2002, 2006) propose that the moved World operator must locally bind its variable.¹⁹

Recall that Arsenijević (2006) treats conditional clauses on a par with *yes/no* questions. This parallelism is confirmed with respect to the locality of the operator movement: like conditionals, *yes/no* questions do not allow for a low construal reading of the operator.²⁰ In the embedded *yes/no* interrogative in (20), the question bears on the polarity of the proposition introduced by *if* ('he said') and not on the proposition embedded under *said* ('he would leave'). See also section 4.3.3.

(20) I wonder if he said he would leave.

4. Modal expressions and conditional clauses

4.1. Restrictions on modal expressions in conditional clauses

It has often been observed in the literature that certain 'high' modal expressions are incompatible with conditional clauses. Typically, expressions of speech act modality (21a), evaluative modality (21b,c), evidential modality (21d) and epistemic modality (21e,f) lead to ungrammaticality when they appear in conditional clauses.

- (21) a. ??*If frankly he's unable to cope, we'll have to replace him.
b. * If they luckily /fortunately arrived on time, we will be saved.
(Ernst 2007: 1027, Nilsen 2004).
c. *If the students apparently can't follow the discussion in the third chapter, we'll do the second chapter.
d. *If George probably comes, the party will be a disaster.
e. *John will do it if he may/must have time.
(Declerck & Depraetere 1995: 278, Heinämäkki 1978: 22, Palmer 1990: 121, 182)

The data are complex and I refer to Ernst (2008) for subtle discussion of complicating factors, but as a general trend it seems clear that such expressions of modality are not easily compatible with conditional clauses. The restriction on modals in conditional clauses is not English specific. For example, Lahousse (2008: 22) and Ernst (2008:10)

¹⁹ Low construal is available with conditionals formed by relativization:

(i) I will leave in any circumstance in which you say you'll leave. high/low
(Bhatt & Pancheva 2002: 13, a-c their (50), d,e: their (51); 2006: 655-6: their (47))

I assume that such conditionals are genuine relative clauses.

²⁰ In a different context, this point was also made in Ingham (2008).

discuss the same constraints in French; Ernst (2008: 10) also illustrates the constraint for Dutch and Chinese; Tomaszewicz (to appear) shows the same restrictions in Polish.

If we assume with Cinque (1999) that the high modal expressions illustrated above are IP-internal, then it is at first sight not clear how their unavailability in conditionals can follow from some particular constraint on the left periphery of conditionals. However, in terms of their interpretation the relevant modal markers are all associated with the speaker's point of view and modify the assertive force. If MCP can be argued to depend on speaker assertion, the absence of the modal markers, which all implicate the point of view of the speaker (cf. Tenny 2000: 29), might be seen as another instantiation of the absence of MCP in conditional clauses (cf. Heycock 2006: 188).

The absence of modal markers seems to correlate with the absence of argument fronting (and of MCP in general). There have been explicit proposals to relate the two phenomena (Krifka 2001): the quotation below is from Bayer (2001). For discussion of the correlation between modal markers and topicalisation see also Whitman (1989) and Hrafnbjargarson (2008).

... this form of [emphatic, lh] topicalisation is the grammar's reflex of the speech act to be performed_ and is as such on a par with German constructions involving modal particles like aber, denn, doch, ja etc. Modal particles supply features which interact with other features such as [WH] yielding a wide range of illocutionary forces. Bayer, 2001: 14-15)
. ...if emphatic topicalisation belongs to the class of grammatical means of force projection in the sense of Rizzi (1997), its root clause property and strict left peripherality [in Bavarian] are not surprising.' (Bayer, 2001: 14-15, italics mine)

In Haegeman (2006a,b,c) I relate the distribution of modal markers and that of MCP in English by arguing that both depend on the availability of assertion, and I formalize this by postulating an independent projection ForceP in the left periphery. Below I will explore two alternative accounts that derive the absence of high modal markers in conditional clauses from the movement account of conditional clauses. The first proposal, elaborated in Haegeman (to appear c), fits in with proposals in Haegeman (2006b,c) and relates the availability of the high modal markers directly to the syntactic encoding of illocutionary force. The second account explores a proposal put forward in Haegeman (2007a) and adopts Cinque's approach to the adverbial hierarchy.

4.2. ForceP and the licensing of high modals

Formalizing an intuition going back to Hooper and Thompson (1973), Haegeman (2006b,c) proposes that assertion is syntactically encoded in a specialized projection to encode illocutionary Force, here labeled ForceP. In the literature, there is a convergence that speech act is encoded by a functional projection high in the left periphery (cf. Ernst (2002: 70ff); Speas and Tenny (2003); Meinunger (2004), Hill (2007a,b); Abraham (2008)) and many others) as in (22a). Adopting the split CP hypothesis (Rizzi 1997) and following Bhatt & Yoon (1992), Rizzi (1997: note 6), and others, Haegeman (2006b,c) makes a distinction between the functional head 'Force' and the head hosting the subordinating conjunction, labelled 'Sub'. (cf. Haegeman

2002, 2003a).²¹ In assertive declarative clauses Force hosts an abstract Assertion operator.

(22) a. [_{SubP} [_{ForceP} OP [_{FinP} [_{TP} Sheila has left the office]]]]

Not all ‘declarative’ clauses are assertive. Temporal adverbial clauses and, crucially for our purposes, conditional clauses are a case in point: while they might be argued to be ‘declarative’, crucially they are not assertions. Haegeman (2006b,c) proposes that the left periphery of such adverbial clauses is impoverished and lacks the Assertion operator: either because the projection ForceP is absent, or, alternatively, because ForceP is projected but lacks the Assertion operator in its specifier.

The absence of the Assertion operator in conditional clauses was stipulated in the earlier account and seen as a direct correlation of the fact that such clauses are not interpreted as assertions. In the present account the unavailability of the Assertion operator follows from the intervention effect. In order to derive the conditional clause, i.e. a free relative, I propose that a TP-internal operator moves to the left periphery (say to the specifier of Sub²²). But if the assertion operator occupies SpecForceP then on its way to the left periphery the ‘conditional’ operator would have to cross the Assertion operator (OP). By intervention, the Force operator blocks the movement of the conditional operator. This is schematically represented in (22b), where the asterisk should be related to the representation.

(22) b. *John will leave [_{SubP} OP_{COND} if [_{ForceP} OP_{ASS} [_{FinP} [_{TP} Sheila leaves the office ~~OP~~]]]]

In Haegeman (2006b,c, to appear b) I propose that high modals are licensed by the assertion operator for their licensing. Hence, if the Assertion operator in ForceP is unavailable in conditional clauses as an effect of the movement of the conditional operator, it will follow that the high modals will not be licensed. The account in Haegeman (2006b,c) also postulated that argument fronting in English depended on the availability of the operator in ForceP. In that account, the movement account of adverbial clauses had not yet been adopted. As discussed above, assuming the movement account of adverbial clauses we derive the absence of argument fronting without recourse to the Assertion operator.

The analysis developed in this section hinges on the assumption that illocutionary force is encoded in a specific projection in the left periphery and that high modals are directly licensed by the Assertion operator associated with this projection. In the next section, I propose an alternative which derives the absence of high modals directly from the adverbial hierarchy postulated in Cinque (1999).²³

²¹ For similar proposals see also Roussou (2000), Bentzen *et al* (2007a,b, 2008), Hernanz (2007a,b), and Julien (2008).

²² Benincà (2001) shows that the *wh*-constituent of free relatives moves as high as that of headed relatives.

²³ A prediction of this account is that in structures lacking a left periphery, high modals should not be available. A potential problem is that epistemic modals remain available in diary style null subject sentences as those illustrated in (i) for which it has been proposed that they are truncated structures (TP/SubjP) (cf. Haegeman 1997, 2007b).

(i) Must be hot in Panama.

Must be somebody waiting for you. (Quirk *et al* 1985: 896-7)

Obviously the conclusions drawn from such data depend on the analysis adopted.

4.3. Intervention and the licensing of high modals

4.3.1. Cinque's Specifier approach to adverbials

Cinque (1999) proposes that adverbials be merged as specifiers of hierarchically organised specialized functional projections which constitute the backbone of the clausal structure and that the heads of the relevant modal projections also host modal auxiliaries. The layered structure represented in (23) is located in the TP domain (see Cinque 199: 84)

- (23) MoodP_{speech act} > MoodP_{evaluative} > MoodP_{evidential} > ModP_{epistemic} > TP (Past) > TP(Future) > MoodP_{irrealis} > ModP_{alethic} > AspP_{habitual} > AspP_{repetitive} > AspP_{frequentative} > ModP_{volitional} > AspP_{celerative} > TP (Anterior) > AspP_{terminative} > AspP_{continuative} > AspP_{retrospective} > AspP_{proximative} > AspP_{durative} > AspP_{generic/progressive} > AspP_{prospective} > ModP_{obligation} > ModP_{permission/ability} > AspP_{completive} > VoiceP > AspP_{celerative} > AspP_{repetitive} > AspP_{frequentative} (Cinque 2004: 133, his (3))

Based on data from Koster (1978), Cinque (1999) shows that adverbials obey rigid ordering constraints. As shown by Koster, the evaluative adverbial *helaas* ('unfortunately') precedes the epistemic adverbial *waarschijnlijk* ('probably') (24a). The alternative order (24b) is ungrammatical.

- (24) a. Hij is helaas waarschijnlijk ziek. (Koster 1978: 205-209)
 MoodP_{evaluative} > ... > ModP_{epistemic}
 he is unfortunately probably ill
 b. *Hij is waarschijnlijk helaas ziek.
 *ModP_{epistemic} > MoodP_{evaluative}

Movement of an adverb lower in the hierarchy across an adverb higher in the hierarchy disturbs the rigid ordering constraints and leads to ungrammaticality. This is illustrated in (24c,d). In Dutch a root V2 clause may have a modal adverb as its first constituent. Let us assume that this order is derived by movement of the adverb to the left periphery. When more than one such high adverb is available, the highest adverb moves to first position. A lower adverb cannot cross a higher adverb to become the first constituent. Thus (24c) is grammatical: here the leftmost adverb *helaas* ('unfortunately') has been fronted. (24d) is ungrammatical: it would have to be derived by moving *waarschijnlijk* ('probably') across the leftmost evaluative adverb *helaas*, leading to an intervention effect. Thus in this account, the ungrammaticality of (24c) and (24d) is derived syntactically and follows from an intervention effect on the movement of the adverbial. For the locality restrictions on such adverbials see also Rizzi (2004).

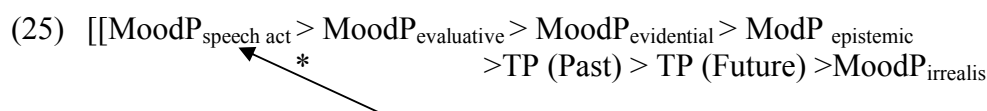
- (24) c. Helaas is hij waarschijnlijk ziek. .
 MoodP_{evaluative} > ... > ModP_{epistemic}
 d. *Waarschijnlijk is hij helaas ziek.
 *ModP_{epistemic} > ... MoodP_{evaluative}

4.3.2. Absence of high modals in conditional clauses

In his discussion of the ban on high modals in conditional clauses, Ernst (2008) says that the 'F –Spec account [such as Cinque's account outlined above, lh] has nothing to say about why SpOAs [Speaker oriented adverbs, lh] are usually bad in ...the antecedents of conditionals.' (Ernst 2008: 7). He continues: 'Such facts may be treated

as a purely semantic matter (...) but for the F-Spec approach a semantic explanation must be an add-on to the basic syntactic account' (Ernst 2008: 7). In what follows I will show that Ernst's conclusion is not inevitable and that the F-spec hypothesis coupled with a movement account for conditional clauses can handle the observed patterns. In order to do this, I first reinterpret the analysis of conditional clauses as free relatives (Bhatt & Pancheva's (2002, 2006), Arsenijevic 2006, Lecarme 2008: 210, Tomaszewicz to appear) in terms of Cinque's articulated structures of TP. Concretely let us assume that Bhatt and Pancheva's (2002, 2006) World operator which moves to the left periphery to derive a conditional clause originates in the Cinque's MoodP (irrealis) (Haegeman (2007a) is a first proposal along these lines and see also Tomaszewicz (to appear) for an application to Polish). Informally speaking, Irrealis mood is used 'when the speaker doesn't know if the proposition is true' (Cinque 1999: 88); it signals that the event is not realised, i.e. is not true in the actual world of the discourse (cf Tomaszewicz (to appear), Willmot (2007) and Lahousse (2008:23) on the relevance of the realis/irrealis mood for conditionals).

Since it originates in SpecMoodP_{IRREALIS}, the moved Irrealis operator belongs to the class of high modal markers in Cinque's approach, and crucially, it shares features with these high modal markers. If we assume an approach to intervention according to which a constituent with the feature α blocks extraction of a constituent with the same feature in its c-command domain (for discussion in terms of cartographic approaches see, among others Rizzi 2004, Friedmann, Belletti and Rizzi 2009), this implementation of the movement approach to conditional clauses leads to the prediction that conditional clauses will be incompatible with modal expressions which are located higher than Mood_{IRREALIS}, i.e. that conditionals are incompatible with expression of speech act mood, evaluative mood, evidential mood and epistemic modality. This is so because in the same way that intervention rules out the reordering of the high modal expressions (24c,d), movement of the Mood_{Irrealis} operator across the higher adverbs leads to intervention effects. (25) is a schematic representation. The role of modals as interveners on operator movement is also signalled in Agouraki (1999: 30). I refer to her paper for discussion.



Observe that this account remains compatible with the fact that circumstantial adjuncts can be fronted in conditional clauses (9b). Circumstantial adjuncts should be set apart from the adverbs associated with Cinque's hierarchy:

If AdvPs proper occupy the specifier position of distinct functional projections above the VP...it seems natural not to assume the same for circumstantial phrases. This is particularly natural if the rigid ordering of AdvPs is a consequence of the rigid ordering of the respective functional heads. (Cinque 1999: 29, also: pp. 15-16 and 28-30).

As shown by Dutch (26a), the circumstantial adjunct *vandaag* ('today') has no fixed position vis-à-vis the high modal adverbs and may be interspersed among them. As shown by (26b) *vandaag* also does not block the movement of a high adverb to the left periphery:

- (26) a. Hij is (vandaag) helaas (vandaag) waarschijnlijk (vandaag) ziek.
 He is (today) unfortunately (today) probably (today) sick
 b. Waarschijnlijk/Helaas is hij vandaag ziek.
 Probably/unfortunately is he today sick

Clearly, in terms of the account proposed here circumstantial adjuncts of the type *vandaag* ('today') must belong to a different class (in terms of Rizzi 2004) than the modal expressions (adverbs as well as auxiliaries) and are hence featurally distinct. If the two types of adjuncts are featurally distinct, then circumstantial adjuncts should not give rise to intervention effects with respect to the modal expressions.

Though it is of independent interest, I will not explore the contrast between modal adverbs and temporal adjuncts any further in this paper, but note that, for instance, the former cannot be clefted (27a), while the latter can (27b,c):

- (27) a. *It is probably/obviously/fortunately/frankly that he left.
 b. It was yesterday/only recently that he left.
 c. It was initially that I was rather against the idea

(Davies 1967: 5, (1a)8)

Furthermore, modal adjuncts cannot undergo *wh*-movement, while temporal adjuncts can (cf. Cinque (1999: 17)). While the epistemic adjective *probable* can be the basis of a *wh*-interrogative (28a), its adverbial parallel *probably* cannot be questioned (28b). Similarly, the adjective *fortunate* can be the basis of a *wh*-exclamative, while the adverbial *fortunately* cannot (28c,d). The restriction on *wh*-movement of these adverbials itself remains subject to future research. One option is to assume that high adverbs are operators merged in their scope position and that they cannot undergo further movement. In contrast, circumstantial adjuncts have been argued to have a predicative relationship with the constituent which they modify (see Hinterhölzl (to appear) for a precise implementation).

- (28) a. How probable/likely is it that he will be there?
 b. *How probably/likely will he be there?
 c. How unfortunate that he will not be there!
 d. *How unfortunately he will not be there.
 e. How recently did he tell you that?

Another contrast is that in general the high modal adverbs cannot undergo long movement (see Cinque 1999: 18 for discussion). In (29) the fronted adverbs must be construed with the matrix clause ('he thinks') and cannot have low construal.

- (29) a. Frankly, I do not understand that he wants to leave.
 b. Probably/obviously/fortunately, he thinks that Mary will come.

Circumstantial adjuncts, in contrast, do undergo long movement (cf. Haegeman (2003b), for an early discussion of long moved adjuncts see Postal and Ross 1971, Cinque 1990: 93-95, Bouma, Malouf and Sag 2001, Hukari and Levine 1995):

- (30) By tomorrow I think the situation will be clear.

There are a number of proposals in the literature to differentiate circumstantial modifiers from modal adverbials. For instance Alexiadou (1997) proposes that circumstantial adjuncts are complements to V, Laenzlinger (1996: 107) distinguishes quantifier adverbs such as the high modal adverbs from qualifier adverbs like circumstantial adjuncts on the basis of French data, Cinque (1999: 29) discusses some options to make the distinction, see also Cinque (2004) and Hinterhölzl (to appear) for discussion of the syntax of prepositional circumstantial adjuncts.

4.3.3. Conditionals lack low construal

Recall that unlike temporal adverbial clauses, conditional clauses do not allow low construal readings (Bhatt & Pancheva 2002, 2006: 655, Geis 1970). Bhatt and Pancheva (2002, 2006) attribute this to a restriction on the specific properties of the World variable which, in their approach, must be locally bound. Put differently, unlike the temporal operator in adverbial clauses, the conditional operator moves locally. Bhatt and Pancheva's requirement that the variable bound by the conditional operator must be locally bound can now be made to follow from the implementation of the movement account proposed above. We assume that Bhatt and Pancheva's World operator (my Irrealis operator) originates in the specifier of Mood_{IRREALIS} and that the operator shares relevant features with the high modal expressions in the Cinque hierarchy. In other words the Operator_{IRREALIS} belongs to the same class as the 'high' expressions of modality in the Cinque hierarchy (23). Since the high modal (speech act, evidential, evaluative, epistemic) operators are seen not to undergo long movement (29), we can speculate that whatever property excludes the relevant long movement²⁴ also excludes high movement of the Operator_{IRREALIS} that derives conditional clauses.²⁵

4.4. Yes/ no questions

Recall that in line with Bhatt and Pancheva (2002, 2006) and Arsenijević (2006), this paper postulates there is a parallelism between the derivation of conditional clauses and that of *yes/no* questions, which I assumed would also be derived by the leftward movement of an operator. If the operator involved in deriving *yes/no* questions also originates in the specifier of the Mood_{IRREALIS} projection, we correctly predict the observation (McDowell (1987), Barbiers (2006)) that that *yes/no* questions are incompatible with the high modal markers.

- (31) a. *Must he have a lot of money?
b. *Will he probably win the race?

²⁴ It could be that the adverbials, being non-referential and unable to combine with a referential feature, are incompatible with the topic or focus feature that can drive long movement. This needs to be looked at in future research.

²⁵ Bhatt and Pancheva observe that low construal is available with conditionals formed by relativization:

- (i) I will leave in any circumstance in which you say you'll leave. high/low
(Bhatt & Pancheva 2002: 13, a-c their (50), d,e: their (51); 2006: 655-6: their (47))

I will assume that in such cases the *wh*-operator (*in which*) originates as a circumstantial adjunct and hence will have share properties with circumstantial adjuncts. One such property is that circumstantial adjuncts can undergo long movement:

- (ii) Under these circumstances I don't think he will agree to your proposal.

5. Emphatic polarity as an MCP

The movement account of conditional clauses has further explanatory potential. A number of recent papers have highlighted that emphatic affirmation/denial may be associated with a specific structure in the left periphery. I illustrate some such patterns below. The patterns discussed here have been argued by the relevant authors to implicate an operator in the specifier of FocP in the left periphery. A movement account of conditional clauses predicts correctly that such expressions of emphatic affirmation are excluded from the conditional clauses: the focus operator which is required for the expression of emphatic affirmation/denial will interfere with the movement of the Irrealis operator for the conditional clause.

5.1. Emphatic polarity *bien/si* in the Spanish left periphery (Hernanz 2007a,b)

Hernanz (2007a,b) discusses the expression of emphatic affirmation by means of *bien* in Spanish. She proposes that when expressing emphatic affirmation *bien* is a *wh*-operator which is merged in SpecPolP and moves to specFocP. Hernanz (2007b: 131-139). (32a) has the representation in (32b):

- (32) a. Pepito bien ha comido pasta. (Hernanz 2007b : 135 (68))
 Pepito *bien* has eaten pasta
 b. [ForceP [TopicP Pepito_j [FocusP *bien* [PolP t_i [IP $e_j \dots$]]]]]

If conditional clauses are derived by leftward movement of an Irrealis operator we correctly predict their incompatibility with emphatic *bien*: indeed, the very presence of the operator in SpecFocP should suffice to rule out the sentence.

- (32) c. Si Pepe (*bien) acaba a tiempo su tesis, ya te lo haré saber.²⁶
 If Pepe (*well) finishes the thesis on time, I'll let you know

5.2. Sentence final emphatic negation in the Veneto dialect (Zanuttini 1997, Poletto 2008, 2009)

In the Veneto dialect (Poletto 2008, Zanuttini 1997) a sentence final stressed particle *NO* ('no') serves to express emphatic negation.

- (33) a. No ghe so ndà NO. (Poletto 2008)
 Not there are gone NOT
 'I did not go there'

To account for the final position of *NO* in (33a) (her (9)), Poletto (2009:6) proposes

According to this analysis, NO is always moved from within the NegP where it originates [note omitted] to a Focus position, which, following standard assumptions on the structure of the clause in Italian is located low in the CP area. When NO is in first position, the sentence there is no IP fronting. When NO is in sentence final position, this is the result of a movement of the whole IP to a position, GroundP, which is located in the Topic field, higher than Focus (again following standard assumptions on the CP layer) [note omitted]

²⁶ Thanks to M. Lluisa Hernanz for help on the data. Hernanz (2007a,b) shows that *bien* is incompatible with temporal adverbial clauses.

- (33) b. [_{SpecGroundP} [_{IP} no ghe so ndà] [_{Ground°} [_{CPFocus} NO] [_{FinP} [_{IP} ~~no ghe so ndà~~]]] [_{Fin°} [_{IP} ~~no ghe so ndà~~]]] (Poletto 2009:6, (13))

Predictably sentence-final *NO* will not be compatible with conditional clauses, the movement triggered by *NO* blocks the operator movement required to derive the conditional clause:

- (33) c. Dovrebbe finire il lavoro per stasera.
Must-COND-3SG finish the work for tonight.
*Se non lo finisce NO, lo faccio io.
If *non* it finish-3SG NO it do-1SG I (C. Poletto, pc. 22.10.08)
- d. *Se non viene NO...
If not comes NO
If he is not coming,... (Poletto 2009: 9, her (37b))

5.3. Sentence final *ni* in Nupe (Kandybowicz 2007, 2008)

Kandybowicz (2007, 2008) discusses sentence final *ni*: in Nupe. The semantic contribution of *ni*: in (34a, b) is ‘to reinforce the polarity of the clause/add emphasis to the asserted truth or falsity of the sentence.’ (2008: 33) He proposes that *ni*: is the expression of the left peripheral head Foc^0 , which attracts ΣP to its specifier (34c). Once more the movement account of conditional clauses advanced here correctly predict that emphatic *ni*: will be incompatible with conditional clauses:

- (34) a. Musa ba nakàn ni:. (Kandybowicz 2008 : chapter 2 : (22))
Musa cut meat ni
‘Musa actually cut the meat.’
- b. Musa ba nakàn à ni:. (Kandybowicz 2008 : chapter 2 : (23))
Musa cut meat NEG ni
‘Musa did not actually cut the meat.’
- c. [_{FocP} [_{ΣP} Musa ba nakàn [_{Σ} à] [_{Foc} ni:] [_{ΣP} ...]
- d. *Musa gá ba nakàn ni:, Gana à du u:²⁷
Musa COND cut meat FOC Gana FUT cook 3RD.SG
‘If Musa DID cut the meat, then Gana will cook it.’

5.4. Emphatic polarity in conditional clauses.

At this point it is important to add that not all cases of what might be labeled ‘emphatic polarity’ are incompatible with conditional clauses. In particular, English emphatic *do* is compatible with conditionals, as is the negative particle *en* in colloquial variants of Flemish and in Flemish dialects, which according to Haegeman (2001, 2002) and Breitbarth & Haegeman (2008) is a marker of emphatic polarity. It follows that apparently emphasis on polarity is not necessarily a MCP.

- (35) a. If it does rain, you should water the flower bed.
b. Oa’t nie en regent, moe-j de blommen wouter geven
if it not *en* rains, must you the flowers water give
(Breitbarth & Haegeman 2008)

²⁷ Thanks to Jason Kandybowicz for the data.

One essential difference between the expressions of emphatic polarity which are incompatible with conditional clauses and those that are compatible with them is the fact that the former are part of the left periphery while the latter can be argued to be IP internal. (cf. Duffield (2007) for *do* insertion in English and Haegeman (2002) for an analysis of emphatic polarity *en* in Flemish). The contrast between polarity emphasis that leads to intervention effects and that which does not can be compared to the difference between focalization qua movement, which is an MCP, and focalization in situ, which is not:

(35) c. If you invite JOHN, you'll regret it.

Expressions of emphasis that do not give rise to MCP effects are found elsewhere and definitely deserve investigating further. See also the discussion on verb doubling in Nupe in Kandybowicz (2008).

6. Summary

The paper elaborates Bhatt and Pancheva's (2002, 2006) proposal that like temporal adverbial clauses, conditional sub-clauses are derived by operator movement to the left periphery. It is shown that this proposal can account for the absence of MCP in conditional clauses. A particular implementation of the proposal in terms of Cinque's articulated TP allows one to account for the absence of high modal markers in conditional clauses and for the observation that low construal is incompatible with conditional clauses, an observation due to Geis (1970, 1985). The paper also further explores the parallelism between conditional clauses and *yes/ no* questions elaborated in Bhatt and Pancheva (2002, 2006), and in Arsenijević (2006).

To the extent that the analysis proposed here succeeds in offering a syntactic account of what might previously have been considered phenomena that purely belong to the domain of semantics/pragmatics (cf. Lahousse 2008 for such an approach and for references), the paper is a contribution to the cartographic research program as laid out recently by Cinque and Rizzi (2008: 39):

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.

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