The movement derivation of conditional clauses

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Abstract[*]

By analogy with the movement analysis of temporal clauses, some authors have proposed that conditional clauses be derived by leftward operator movement (Bhatt and Pancheva 2002, 2006, Arsenijević 2009). This movement analysis of conditional clauses is shown to account for the incompatibility of Main Clause Phenomena and conditional clauses in terms of intervention effects. The cartographic implementation of this analysis predicts that conditional clauses will be incompatible with speaker-oriented modal expressions and that conditional clauses lack the low construal reading found in temporal clauses (Bhatt and Pancheva 2002, 2006). Thus the absence of low construal in conditional clauses, which was initially taken to be an obstacle for the movement account of conditional clauses (cf. Citko 2000), becomes an argument in favor.

Key words: conditional clauses, irrealis operator, intervention, cartography, modality

1. Introduction

By analogy with the proposals for the derivation of temporal clauses, some authors have proposed a movement derivation for conditional clauses (Bhatt and Pancheva 2002, 2006, Arsenijević 2009). This paper provides supporting evidence for this analysis. It is shown that the movement analysis of conditional clauses accounts for the observation that Main Clause Phenomena (MCP) are excluded in conditional clauses, while sentence-initial circumstantial adjuncts are allowed. Moreover, the 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 found in (some) temporal 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 for the hypothesis that temporal *when* clauses are derived by *wh*-movement of a temporal operator to the left periphery. It is argued that the adjunct-argument asymmetry with respect to fronting operations, discussed in Haegeman (2007, 2009, to appear a) offers further support for this analysis. Section 3 discusses the extension of the movement analysis to conditional clauses. The lack of low construal readings, which has sometimes been taken as an argument against the movement derivation of conditional clauses, is also highlighted. Section 4 discusses the absence of high modal expressions in conditional clauses and shows how it can be made to follow from a cartographic implementation of the movement analysis. In addition, this particular implementation accounts for the absence of low construal. Section 5 briefly discusses "peripheral" conditional clauses, which are compatible with MCP. Section 6 is a 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 and Williams 1995, Declerck 1997, Demirdache and Uribe-Etxebarria 2004:165-170, Lecarme 2008) that temporal adverbial clauses are derived by *wh*-movement of a temporal operator (e.g. *when*) to the left periphery. The prime argument for this is the observation that the *when*-clause in (1) is ambiguous between a high construal and a low construal of the temporal operator: in the first, the temporal clause bears on the time of making the claim, in the second it bears on the time of here presumed departure. [1] 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.

(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.

(2) a. I saw Mary in New York [$_{CP}$ when$_i$ [$_{IP}$ she claimed [$_{CP}$ 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 discussed 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 complex NP

headed by *claim* in (3) will give rise to a violation of the Complex Noun Phrase Constraint and hence lead to ungrammaticality (cf. Johnson 1988, Demirdache and Uribe-Etxebarria 2004:165-176). Thus the low construal reading is not available in (3).

(3) I saw Mary in New York when she made [the claim that she would leave]

2.2. Additional support for the movement analysis

Haegeman (2007, 2009) offers additional evidence for the movement analysis of temporal clauses: this analysis, coupled with a theory of locality on movement, predicts the incompatibility of temporal clauses with MCP, such as argument fronting (cf. Hooper and Thompson 1973). The ungrammaticality of argument fronting in English (4a) and (4b) follows directly from the movement account: operator movement of *when* is blocked by the fronted argument *this column* (for comparative data, cf. Maki et al. 1999). Furthermore, there is an argument/adjunct asymmetry with respect to the left periphery of temporal clauses: while argument fronting is ungrammatical in English temporal clauses (4a,b), circumstantial adjuncts may precede the subject (4c):

(4) a. * When this column she started to write last year, I thought she would be fine.
b. * When this song I heard, I remembered my first love.
c. 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. The sentences in (5) illustrate this asymmetry for relative clauses (see Browning 1996, Rizzi 1997 for discussion).[2]

(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 clauses in English (4b), clitic left dislocation (CLLD) is not excluded in Romance, as shown in French (6) with CLLD of *cette chanson* ('this song') in the temporal clause.[3]

(6) Quand cette chanson je l' ai entendue, j' ai pensé à toi.
when this song I it have-1SG heard-PART-FSG, I have-1SG think-PART on you
'When I heard this song, I thought of you.'

Once again, under the movement analysis of temporal clauses the contrast between English topicalization and French CLLD is not surprising, because 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 (7a), CLLD is grammatical in the same environment in French (7b).[4] The availability of CLLD also shows that adverbial clauses must allow at least some left peripheral projections. It has also observed that in French Stylistic Inversion is allowed in temporal clauses, at least for some speakers (7c). If, as in Kayne and Pollock 2001,

Stylistic Inversion involves the left periphery, (7c) also demonstrates that the left periphery is available in temporal clauses. Thus, 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.

(7) a. * I wonder when this song I have heard.

b. Je me demande quand cette chanson je l' ai entendue.[5]
I myself ask when this song I it have-1sg heard-PART- FSG
'I wonder when I heard this song before.'

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, her (1))

As mentioned, MCP (Hooper and Thompson 1973, Green 1976, Emonds 1976, 2004) are barred from temporal clauses: (8a) illustrates locative inversion (for discussion see among others, Culicover and Levine 2003, Rizzi and Shlonsky 2006, and references cited there), (8b) preposing around *be* (Hooper and Thompson 1973:467, Emonds 1976), and (8c) VP preposing (Hooper and Thompson 1973:466, Emonds 2004:78).

(8) a. * We were all much happier when upstairs lived the Browns. (Hooper and Thompson 1973:495 (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.

The MCP illustrated in (8) are usually also taken to be derived by movement to the left periphery. Their incompatibility with temporal 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 clauses and refer to my own work (Haegeman to appear a).

3. Conditional clauses as free relatives

3.1. Conditional clauses are derived by movement

The argument/adjunct asymmetry observed in relation to fronting operations in temporal clauses is also found in conditional *if* clauses, as shown in (9). The other MCP illustrated in (8) above are also illicit in conditional clauses: (10a) illustrates locative inversion, (10b) shows preposing around *be*, and (10c) VP-preposing.

(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)

(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 clauses, conditional clauses are derived by operator movement, the adjunct/argument asymmetry in (9) and the fact that MCP are ungrammatical (10) follow.

A movement analysis of conditional clauses has been proposed by Bhatt and Pancheva (2002, 2006), Arsenijević (2009) and Tomaszewicz (2009).

Bhatt and Pancheva (2002, 2006) argue that conditional clauses are derived by movement of a World Operator to Spec,CP. 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 and Pancheva 2006:655). (11a) would be derived by the leftward movement of a World Operator, as shown in (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 and 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 CLLD with that of "resumptive preposing", a leftward movement without clitic resumption whose syntactic properties Cardinaletti shows are similar to English topicalization. Resumptive preposing (cf. (12a)) is not, and CLLD (cf. (12b)) is, compatible with conditional clauses:

(12) a. * Se la stessa proposta fa anche l' altro candidate,…
if the same proposal make-3SG also the other candidate
'If the other candidate also makes that proposal,…'
(Cardinaletti 2008:(19a))

b. Se la stessa proposta la fa anche l' altro candidate,…
if the same proposal it make3SG also the other candidate
'If the other candidate also makes that proposal,…'
(Cardinaletti 2008:(22a))

Following the movement account elaborated here, the ungrammaticality of (12a) can be ascribed to an intervention effect. (12b) remains grammatical because in general CLLD does not lead to the same type of intervention effects (cf. Cinque 1990, Haegeman to appear a).

In his discussion of Italian conditional clauses, Bocci (2007:15, his (32)) shows that while CLLD is possible, focalization is degraded. Again, adopting a movement account of conditional clauses, the ungrammaticality of (13) is due to an intervention effect.[6]

(13) ?? Se LA PROVA ORALE non supera, non otterrà il diploma!
if THE EXAM ORAL [s/he] not pass-3SG, [s/he] not obtain-FUT-3SG the diploma
'If he/she doesn't pass the oral exam, he/she won't get the diploma!'

3.2. Additional support

3.2.1. Temporal clauses and conditional clauses

The movement analysis aligns conditional clauses with temporal 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 introducing a conditional. This is the case, for instance, in German. Bhatt and Pancheva (2006) give (14), their (7a): *wenn* introduces both conditional (14a) and temporal (14b) clauses. 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 and Pancheva 2006:657). In West Flemish (WF) too, the conjunction *oa* serves to introduce both a temporal clause and a conditional clause, as shown in (14c).

(14) a. Wenn Steffi gewinnt, wird gefeiert.
if Steffi win-3SG , AUX- PASSIVE-3SG celebrate-PART
'If Steffi wins, there is a celebration.'

b. Wenn Steffi kommt, fangen wir an zu spielen. [7]
when Steffi arrive-3SG, begin-1PL we to play
'When Steffi arrives, we begin to play.'

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

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 conjunction also used for conditionals (15a,b). As shown by (15c,d), I-to-C movement, which typically derives root *yes/no* questions, may be used to derive a conditional clause (see Bhatt and Pancheva 2006:657-661 for discussion). Let us postulate that I-to-C movement is triggered by a checking relation between a head-feature of I and the conditional operator in the left periphery. In *yes/no* questions and 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) in (16a) shows that in V2 languages, direct *yes/no* questions constitute an apparent exception to the V2 constraint in that 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 maintained: the null operator occupies the initial position and the finite verb is in second position. If we also assume that the operator originates in a lower position, *yes/no* questions can be derived by operator movement.[8] Authors who have postulated a null operator in the left periphery of *yes/no* questions include Barbiers (2007:102-103) and den Dikken (2006:729). If root *yes/no* questions, which display SAI (cf. (16a)), are derived by the movement of a null operator to their left periphery (16b), the formally identical conditional clauses (cf. (16c)) could by analogy also be said to contain an operator in their left periphery which is, by assumption, moved from a lower position:

(16) a. Had hij gezegd dat hij zou vertrekken?
have-PST-3SG he said that he will-PST-3SG leave

b. $[_{CP}$ OP $[_{Vfin}$ had] $[_{TP}$ Subject … t_{op}]]

c. Had hij gezegd dat hij zou vertrekken, ik zou….
have-PST-3SG he said that he will-PST-3SG leave, I will-PST-1SG…
'Had he told me he was leaving, I would ...'

If direct *yes/no* questions are derived by the movement of an abstract operator to the left periphery, this operator may be taken to also be present in indirect *yes/no* questions and the movement analysis can be extended to the derivation of indirect *yes/no* questions. Once again, the same derivation could then be appealed to for the derivation of the conditional analogue introduced by *if* (17).[9]

(17) a. I wonder if he said he would leave.

b. $[_{CP}$ Op if [he said he would leave t_{op}]]

A movement analysis for the derivation of *yes/no* questions accounts for the fact that English argument fronting is excluded from embedded *yes/no* questions.[10]

(18) a. * Bill asked if such books John only reads at home.
(Schachter 1992:108 (16a))

b. ??/* John knows whether this book Mary read.
(Maki et al. 1999:9, note 8, their (i))

Based on the parallelisms between *yes/no* questions and conditional clauses, Arsenijević (2009) analyzes a conditional clause as the relative variant of a *yes/no* question. In the following extract Liptàk (2009:32) summarizes his position:

> Conditionals are analyzed as *yes-no* relative clauses, restrictive clauses in which the truth value of a proposition is restricted. The proposition represented by the conditional clause restricts the set of worlds compatible with the proposition represented by the head clause. Syntactically, the locus of modification is a functional projection called *WorldP*, the projection that specifies the truth value of clauses by containing the feature *world* with a value [actual] or [possible]. (Lipták 2009:32)

3.3. Absence of low construal

The initial motivation for the movement account of temporal adverbial clauses was the availability of low construal readings in (2a). This argument, however, does not transpose to conditional clauses. Bhatt and Pancheva observe that, unlike temporal clauses, conditional clauses do not allow the low construal found with temporal adverbial clauses (see also Geis 1985, Bhatt and Pancheva 2002, 2006):

(19) a. I will leave if you say you will.

b. Had he said he would leave, I would have left.

(cf. Bhatt and Pancheva 2002:13, a-b based on their (50a,c), (51e), 2006:655-6: based on their (47a,c, their (48b))

In WF (20) the adverbial clause may have a temporal reading ('when') or a conditional reading ('if'). In the former reading both high and low construal are available, but in the conditional reading low construal is not available. Similar facts hold for other languages, e.g. German *wenn* (Bhatt and Pancheva 2002) and Polish *jak* (Citko 2000).

(20) Ge moet kommen oan-k jen zeggen da-j moe kommen.
you must-2SG come when-I you say-1SG that-you must-2SG come
'You must come when/if I tell you to.'

The absence of low construal in conditionals as opposed to its availability in temporal clauses has indeed been taken by some (cf. Geis 1970, Larson 1987, Citko 2000:6) as evidence against the movement derivation of conditional clauses. This is, however, not the conclusion drawn by Bhatt and Pancheva (2002, 2006), who adopt a movement account in spite of the absence of low construal in conditional clauses. To account for the absence of low construal, they propose that the World Operator must locally bind its variable.[11]

Recall that Arsenijević (2009) 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 a low construal reading of the operator (cf. Ingham 2008). In the embedded *yes/no* interrogative in (21), 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'). I return to this point in section 4.2.3.

(21) 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 "high" modal markers, such as expressions of speech act modality (22a), evaluative modality (22b), evidential modality (22c) and epistemic modality (22d,e), are incompatible with conditional clauses.

(22) 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 and Depraetere 1995:278, cf. Palmer 1990:121, 182.)

The data are complex and I refer to Ernst (2009) for subtle discussion of complicating factors, but as a general trend such expressions of modality are not easily compatible with conditional clauses. This restriction is not English specific: Lahousse (2008) and Ernst (2009) discuss the same constraints in French, Ernst (2009) illustrates the constraint for Dutch and Chinese, Tomaszewicz (2009) shows the restrictions in Polish.

If we assume with Cinque (1999) that the relevant high modal expressions are IP-internal, then it is at first sight not clear how their unavailability in conditionals can follow from a 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 high modal markers seems to correlate with the absence of argument fronting (and of MCP in general). Whitman (1989) and Bayer (2001) propose that there is a correlation between the two phenomena. I refer to their papers for discussion. For a recent discussion of the correlation between modal markers and topicalization see also Hrafnbjargarson (2008). In earlier work (Haegeman 2006a,b,c) I have related the distribution of high modal markers and that of MCP in English by arguing that both depend on the availability of speaker's assertion, and I have formalized this by postulating an independent projection ForceP in the left periphery.[12] Here I explore an alternative account that derives the absence of high modal markers in conditional clauses from a specific implementation of the movement account in which a crucial ingredient is Cinque's cartographic approach to the adverbial hierarchy.

4.2. Intervention and the licensing of high modals

4.2.1. Cinque's Specifier approach to adverbials

Cinque (1999) proposes that adverbials be merged as specifiers of hierarchically organized 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) corresponds to the IP domain:

(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 Koster (1978), Cinque (1999) shows that adverbials obey rigid ordering constraints: for instance, in Dutch (24) evaluative *helaas* ('unfortunately') precedes epistemic *waarschijnlijk* ('probably') (24a). The alternative order (24b) is ungrammatical. 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 high adverb is available, the highest adverb in the hierarchy (23) moves to first position. A lower adverb cannot cross a higher adverb to become the first constituent. (24c) is grammatical: here the highest, i.e. leftmost, adverb *helaas* ('unfortunately') has been fronted. (24d) would have to be derived by moving *waarschijnlijk* ('probably') across the leftmost adverb *helaas*, leading to an intervention effect. Thus, in this account, the ungrammaticality of (24b) and (24d) is due to an intervention effect on the movement of the adverbial. For the locality restrictions on such adverbials see also Rizzi (2004).

(24) a. Hij is helaas waarschijnlijk ziek. (Koster 1978:205-209)
he is unfortunately probably ill

‘He is unfortunately probably ill.’

b. * Hij is waarschijnlijk helaas ziek.

he is probably unfortunately ill

c. Helaas is hij waarschijnlijk ziek. .

unfortunately is he probably ill

‘Unfortunately, he’s probably ill.’

d. * Waarschijnlijk is hij helaas ziek

probably is he unfortunately ill

4.2 2. The hypothesis: IrrealisP and the derivation of conditionals

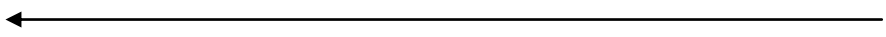
In his discussion of the ban on high modals in conditional clauses, Ernst (2009) says that the “F-Spec account [such as Cinque’s account outlined above, lh] has nothing to say about why SpOAs [Speaker-oriented adverbs, lh] are usually bad in …the antecedents of conditionals.” (Ernst 2009:504). He continues: “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 2008:504). Ernst’s conclusion is not inevitable. I will show 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 refine the analysis of conditional clauses as free relatives (Bhatt and Pancheva 2002, 2006, Arsenijević 2009, Lecarme 2008:210) in terms of Cinque’s articulated IP. My hypothesis is 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). 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 realized, i.e. is not true in the actual world of the discourse

(cf Tomaszewicz 2009, Willmott 2007 and Lahousse 2008:23 on the relevance of the realis/irrealis mood for conditionals). I will provide cross-linguistic evidence for the hypothesis in section 4.4.

Because, by hypothesis, 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 (see also section 4.4.). If we assume a feature-based approach to locality (Starke 2001) according to which a constituent with the feature α blocks extraction of a constituent with the same feature in its c-command domain (cf. among others Rizzi 2004, Friedmann, Belletti and Rizzi 2009), this implementation of the movement approach to conditional clauses leads to the prediction that such clauses will be incompatible with modal expressions located higher than Mood$_{irrealis}$, i.e. that conditional clauses 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 (24b,d), movement of the Mood$_{irrealis}$ operator across the higher adverbs leads to intervention effects. (25) is a schematic representation. For a discussion of modals as interveners on operator movement, see also Agouraki (1999:30).

(25) * MoodP$_{speech\ act}$>MoodP$_{evaluative}$>MoodP$_{evidential}$> ModP$_{epistemic}$>

TP (Past) > TP (Future) >MoodP$_{irrealis}$



My account remains compatible with the fact that circumstantial adjuncts can occur in the left periphery of conditional clauses (cf. (9b)). There is ample evidence that circumstantial adjuncts should be set apart from the adverbs associated with Cinque's hierarchy (Cinque

1999:29, 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. Clearly, in terms of the account proposed here circumstantial adjuncts of the type *vandaag* ('today') must belong to a different class (following Rizzi 2004) than the modal expressions (adverbs as well as auxiliaries) and they are hence featurally distinct. If the two types of adjuncts are featurally distinct, circumstantial adjuncts do not give rise to intervention effects with respect to the modal expressions.

(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

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 there is additional evidence to keep the two apart. For instance, the modal adverbs cannot be clefted (27a), while circumstantial adjuncts can (27b,c). Modal adjuncts cannot undergo *wh*-movement, while temporal adjuncts can (cf. Cinque 1999:17). While an epistemic adjective 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). Temporal adverbs (including those in *-ly*) can be questioned (28e). The restriction on *wh*-movement of the high adverbials 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 (2009) for a precise implementation).

(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 1967:8 (1a))

(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 was the page updated?

Another contrast – and a crucial one for the discussion here – is that the high modal adverbs cannot undergo long movement (see Cinque 1999:18). 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 (Haegeman 2003b, for earlier discussions of long moved adjuncts see Postal and Ross 1971, Cinque 1990:93-95, Hukari and Levine 1995, Bouma, Malouf and Sag 2001):

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

b. Next year the President believes that there will be a definite improvement in the functioning of the financial system.

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 (2009) for discussion of the syntax of prepositional circumstantial adjuncts.

4.2.3. Conditionals lack low construal

Recall that unlike temporal adverbial clauses, conditional clauses do not allow low construal readings (Bhatt and 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. In terms of the analysis developed here, unlike the temporal operator in adverbial clauses, the conditional operator moves locally. Bhatt and Pancheva's requirement that the variable in the conditional clause must move locally now follows directly from my implementation of the movement account. I assume that Bhatt and Pancheva's World Operator (i.e. my Irrealis operator) originates in the specifier of $Mood_{irrealis.}$ and that it shares relevant features with the high modal expressions (speech act, evidential, evaluative, epistemic) in the Cinque hierarchy (23). In other words, $Operator_{Irrealis}$ belongs to the same class as the high expressions of modality in the

hierarchy. Since the high modal operators are seen not to undergo long movement (29), we deduce that whatever property excludes the relevant long movement will also exclude high movement of the $\text{Operator}_{\text{irrealis}}$ that derives conditional clauses.

4.3. *Yes/ no* questions

Recall that like Bhatt and Pancheva (2002, 2006) and Arsenijević (2009), I assume there is a parallelism between the derivation of conditional clauses and that of *yes/no* questions, which 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 $\text{Mood}_{\text{irrealis}}$ projection, we correctly predict that that *yes/no* questions are incompatible with the high modal markers (McDowell 1987, Barbiers 2006).

(31) a. * Must he have a lot of money?

b. * Will he probably win the race?

4.4. IrrealisP and the derivation of conditionals: Evidence from (West)Flemish

4.4.1. The extraction site of the conditional operator is not VP-internal

Bhatt and Pancheva (2002, 2006) derive conditional clauses by the leftward movement of the World Operator. They provide the representation in (11b) repeated here as (32):

(32) $[_{\text{CP}}\ \text{OP}_{\text{w}}\ \text{C}^{\circ}$ [John arrives late in w]]

Bhatt and Pancheva (2002, 2006) do not make precise the exact launch site of this operator ('in w') or its landing site. In an antisymmetric view of clause structure without right adjunction, the sentence-final position of the variable (*in w*) in (32) might be taken to mean that the variable is VP-internal, i.e. the conditional operator would be extracted from VP, in marked contrast to the proposal developed so far. However, if the conditional operator were indeed extracted from VP, conditional clause formation should be impossible in contexts in which extraction from VP itself is blocked for independent reasons. Two arguments show that this prediction is incorrect and that the launch site is not VP-internal.

First observe that if the conditional operator moved from within VP is non-argumental and non-referential, the most plausible assumption, then assuming that the operator is not an argument of the verb and following standard arguments (cf. Rizzi 1990), the movement of the operator will be subject to inner islands, and hence, like adjunct operators, it will be blocked by an intervening sentential negation. In other words, conditional clauses should then be impossible with sentential negation. This prediction is incorrect: the extraction of adjunct *how* across sentential negation is degraded in (33a) but conditional clauses can be negative, showing that the extraction of the conditional operator is not hampered by an intervening sentential negation (cf. (33b)):

(33) a. * How did you say that he did not repair the car?

b. If he does not repair the car, we'll have to postpone the trip.

A similar conclusion is drawn from ellipsis data, and more particularly from the distribution of the VP-anaphora pattern referred to as "British *do*" (Haddican 2006) and its contrast with "regular" VP ellipsis. As discussed in detail in the literature on VP ellipsis

(Aelbrecht 2009, 2010 for a recent survey), VP ellipsis is compatible with extraction (34), arguing for an analysis according to which the ellipsis site contains internal structure.

(34) a. I know how fast Adam can run but I didn't remember how fast Hillary could. (based on Aelbrecht 2009:192, her (43d))

b. Although I don't know who Thomas will visit I know who Aga will. (Aelbrecht 2009:212, (83b))

Consider now the data in (35), which illustrate a phenomenon referred to as "British *do"*, in which an elided VP is picked up by non-finite *do* (see Haddican 2006, Baltin 2007 and Aelbrecht 2009, 2010 for recent discussion). As shown by (35b,d), zith respect to extraction, VP ellipsis in (34) contrasts with the British English *do.*

(35) a. I don't know if Bill has finished the essay. He may have done. I'll ask him.

b. *I know how fast Adam can run but I didn't remember how fast Hillary could do.

c. *Although I don't know who Thomas will visit I know who Aga will do. (Aelbrecht 2009:212, (83a))

Various analyses are available for British *do*, which need not concern us here (see Aelbrecht 2009, 2010). Crucial for our purposes is that extraction is incompatible with British *do.* If conditional clauses did involve extraction of the conditional operator from VP then they should be incompatible with British *do*, contrary to fact:

(36) He did not talk to her. If he had done, things would have been more complicated still.

We conclude that if the conditional clause is formed by movement – the hypothesis adopted – the relevant movement cannot have been launched from within VP; rather it must have been launched from a higher position, one which is not affected by whatever process derives British *do* (i.e. substitution as in Haddican (2006) or VP ellipsis as in Aelbrecht (2009, 2010)). My hypothesis, according to which conditional clauses implicate leftward movement of the Irrealis operator, is compatible with the data in (36).

4.4.2. The Irrealis operator

In order to account for the incompatibility of high (epistemic, evaluative, evidential and speaker related) modals with conditional clauses I have formulated the hypothesis that (i) the operator which moves to derive conditional clauses is merged in (Cinque's) IrrealisP, and (ii) that the operator shares syntactic properties with the high modals. Put differently, the relevant operator starts out in a position above Cinque's low modals and below his high modals, and it patterns with the high modals. If the relevant operator starts from Cinque's IrrealisP, there will be no intervention effects for the low, deontic, modals but intervention will arise with respect to high modals. The crucial role of Irrealis in conditionals in itself is not new; in the literature the category Irrealis standardly plays a role in the classification of conditionals (see Willmott 2007 for a survey of the literature).

The question arises[13] whether there is any empirical evidence for the proposal that the Irrealis operator plays a role in the derivation of conditionals and for the assumption that the operator which is moved to derive conditional clauses is modal in nature and

shares crucial properties with high modals.[14] Flemish conditionals provide support for these hypotheses. In particular, many Flemish dialects have a conditional auxiliary, *moest* ('had to'), which is used in conditional antecedents as in (37a) (cf. Boogaert 2007). Conditional *moest* can also move to the left periphery (37b):

(37) a. Als hij dat moest weten, dan zou hij boos zijn.
if he that must-PAST-3SG know then will-PAST-3SG he angry be
'If he knew that, he would be angry'.

b. Moest hij dat weten, dan zou hij boos zijn.
must-PAST-3SG he that know then will-PAST-3SG he angry be
'Were he to know that, he would be angry.'

The specific use of *moest* illustrated here is restricted. It is mainly found in conditional clauses. Conditional *moest* is not available in other adverbial clauses. For instance, in the *voordat* ('before') clause in (37c) *moest* can only have the deontic reading. Furthermore, when conditional *moest* is used in main clauses, these get a non-assertive, conditional reading (37d). The syntax of main clause *moest* is subject to future research.

(37) c. Voordat ze dat moest doen, werkte ze in de
before.that she that must-PAST-3SG do, work-PAST-3SG she in the
toonzaal.
showroom
'Before she had to do that, she worked in the showroom;'

d. Hij moest een keer bellen!

he must- PAST-3SG one time call

'What if he calls?!'

I propose that Flemish conditional *moest* be analyzed as an overt spell-out of the Irrealis head. I assume that in both (37a) and (37b) a null operator moves to the left periphery, in line with the earlier proposal, and that in (37b) the modal head also moves to the left periphery.

4.4.3. Conditional *moest* patterns with modals

Conditional *moest* is formally identical to the past tense of the modal *moeten* in its deontic use (38).

(38) a. He moet dat weten.
He must-3SG that know
'He must know that.'

b. Hij moest dat weten.
He must-PAST-3SG that know
'He had to know that.'

Conditional *moest* shares the syntactic properties of all other modals in Flemish – both low deontic modals and high epistemic modals – in that it gives rise to Verb Raising (VR), the typical formation of the sentence-final cluster, and to Verb Projection Raising (VPR), in which case non-verbal material ends up in the cluster (see Haegeman and van Riemsdijk 1986). (39a) illustrates VR and (39b) illustrates VPR with conditional *moest.* The

sentences in (40) illustrate VR and VPR with deontic *moet*, and (41) illustrates the patterns with epistemic *moet.*

(39) a. Als hij zijn tekst moest vergeten,…
if he his text must-PAST-3SG forget
b. Als hij moest zijn tekst vergeten,…
if he must-PAST-3SG his text forget
'If he should forget his text,…'

(40) a. Als hij zijn tekst moet meebrengen,…
if he his text must-3SG with-bring
b. Als hij moet zijn tekst meebrengen,…
if he must-3SG his text with- bring
'If he has to bring his text,…'

(41) a. Ik denk dat hij die tekst moet gekend hebben.
I think-1SG that he that text must-3SG know- PART have
b. Ik denk dat hij moet die tekst gekend hebben.
I think-1SG that he must-3SG that text know-PART have
'I think he must have known that text.'

Like deontic *moeten* (42a) and epistemic *moeten* and *kunnen* ('can') (42b), conditional *moest* (42c,d) is a raising verb. Witness the fact that it allows for weather *het* ('it') as its subject:

(42) a. Het moet regenen (anders sterven de planten).

it must-3SG rain (otherwise die the plants)

'It has to rain, otherwise the plants will die.'

b. Het moet/kan geregend hebben (want de baan is nat).

it must/can-3SG rain-PART have (because the road is wet)

'It must/may have rained, 'cos the road is wet.'

c. Als het moest regenen,…

if it must-PAST-3SG rain…

'If it should rain,…'

d. Moest het regenen,…

must- PAST-3SG it rain…

'Should it rain,…'

Further evidence for the raising analysis of modals is that in existential constructions with VPR the indefinite subject can remain within the VPR cluster, both with deontic *must* in (43a) and *keunen* ('can') in (43b) and with conditional *moest* in (43c):[15]

(43) a. …dan der moesten meer studenten zyn

that-PL there must-PAST-3PL more students be

'…that there had to be more students.'

b. …dan der keunen meer studenten zyn

that-PL there can-3PL more students be

'…that there can be more students'

c. Oan der moesten meer studenten zyn,…

if-PL there must-PAST-3PL more students be

‘Should there be more students…’

4.4.4. Conditional *moest* is higher than deontic modals

Flemish conditional *moest* is compatible with deontic modals, both when IP-internal and in inversion contexts: (44) illustrates its co-occurrence with *kunnen* (‘can’); (45) shows the co-occurrence with deontic *moeten* (‘must’): the finite – hence higher – occurrence of *moest* is the conditional auxiliary and the non-finite – hence lower – occurrence has the deontic reading. The examples in (46) illustrate its co-occurrence with volitional *willen* (‘want’):

(44) a. Als hij dat moest kunnen doen,…
if he that must-PAST-3SG can do
‘If he were able to do that,…’

b. Moest hij dat kunnen doen, …
must-PAST-3SG he that can do
‘Could he do that…’

(45) a. Als hij dat moest moeten doen,…
if he that must-PAST-3SG must do
‘If he were obliged to do that, …’

b. Moest hij dat moeten doen,…
must-PAST-3SG he that must do
‘Were he obliged to do that,…’

(46) a. Als hij dat moest willen doen,…
if he that must-PAST-3SG want do

‘If he were willing to do that,…’

b. Moest hij dat willen doen,…

must-PAST-3SG he that want do

‘Were he willing to do that,…’

From the order of the auxiliaries in the above examples and from the fact that conditional *moest* is finite, we conclude that conditional *moest* is located above low modals such as ability *kunnen* (‘can’), deontic *moeten* (‘must’) and volitional *willen* (‘want’).

Conditional *moest* is incompatible with epistemic *moeten*, as is expected if conditional clauses are intrinsically incompatible with epistemic *moeten:* in (47) the epistemic reading is not available for either the first or the second occurrence of *moest*.

(47) Als hij moest moeten komen,…

if he must-PAST-3SG must come

‘If he should have to come,…’

4.4.5. Conditional *moest* patterns with high modals

Conditional *moest* is compatible with the low modals and it is located higher than the low modals. However, while conditional *moest* shares properties with all the modals, it can be set apart from the low modals in that while the latter allow for ellipsis of their complements (Aelbrecht 2009, 2010) as illustrated in (48), conditional *moest* does not allow M(odal)C(omplement)E(llipsis), neither when IP-internal (cf. (49a)) nor when inverted (cf. (49b)):

(48) a. Hij wilde niet komen, maar hij moest Ø.
he want-PAST-3SG not come but he must-PAST-3SG
'He did not want to come but he had to.'

b. Hij moet komen maar hij kan niet Ø.
he must-3SG come but he can-3SG not

(49) a. Hij zal niet komen, denk ik. Maar als hij moest *(komen),…
he will-3SG not come think I but if he must-PAST-3SG come
'He won't come, I think. But if he should come'

b. Hij zal niet komen, denk ik. Maar moest hij *(komen),.…
he will-3SG not come think I but must-PAST-3SG he come
'He won't come, I think. But should he,…'

The incompatibility with MCE sets *moest* apart from the low modals. But, importantly for our discussion, it aligns *moest* with high modals. As shown by Aelbrecht (2009, 2010), Flemish epistemic modals are also incompatible with MCE (50); Flemish evidential *zou* ('should') illustrated in (51) also does not allow MCE:

(50) A: Is Jan thuis?
is Jan home
'Is Jan at home?'

B: Hij moet *(thuis zijn), zijn fiets staat voor.
he must home be, his bicycle stands in.front
'He must be, his bicycle is standing in front of the house.'

(51) a. Hij zou al vertrokken zijn.

he would already left be

'Allegedly, he's already left.'

b. A Wanneer vertrekt Jan?

when leaves Jan

'When is Jan leaving?'

B Hij zou al *(vertrokken zijn).

he would already left be

Cinque (1999:123, his (55)) shows that the high modal adverbs cannot be in the scope of negation (see his work for more examples):

(52) a Non ho francamente altro da aggiungere.

non have-1SG frankly other to add-INF

'I haven't frankly anything else to add.'

b. Gianni non è probablimente in grado di aiutarci.

Gianni *non* be-3SG probably able to help-us

'Gianni isn't probably able to help us.'

The same restriction holds for conditional *moest*. In WF, the preverbal negative particle *en* marks the scope of sentential negation (Lindstad 2007 for Flemish *en* as a scope marker). Whereas the particle *en* is compatible with deontic *moest* (53a), it is not compatible with irrealis *moest*, whether the auxiliary has undergone inversion or not (53b,c):

(53) a. Oa-se da nie (en) moet doen,…

if-she that not *en* must-PAST-3SG do

‘If she doesn’t have to do that,…’

b. Oa-se da nie (*en) moest geweten een,…
if-she that not *en* must-PAST-3SG know-PART have
‘If she hadn’t known that,…’

c. (*En) moest ze da nie geweten een,…
en must-PAST-3SG she that not know-PART have
‘If she hadn’t known that,…’

On the basis of these examples we observe that *moest*, the conditional auxiliary which encodes irrealis in Flemish and which can be seen to be able to undergo head-movement to the left periphery in conditional clauses, (i) patterns syntactically with all Flemish modal auxiliaries in terms of the availability of VR and VPR, (ii) is compatible with Cinque’s low modals, (iii) is located higher than these low modals, and (iv) shares properties with the high modals, which set it apart from the low modals. Finally (v) unlike the high modals, conditional *moest* is compatible with conditional clauses. Thus *moest* has exactly the properties which I ascribe to the Irrealis operator.

4.4.6. Conditional *mocht* in standard Dutch

In Standard Dutch, the modal *mochten* (‘might’) is used in irrealis conditional clauses (54a) and undergoes inversion with the subject (54b) (Boogaert 2007). Dutch conditional *mocht* is compatible with deontic modals (cf. (55)). As before, Dutch root modals allow MCE (Aelbrecht 2009, 2010) but conditional *mocht* does not allow MCE (cf. (56)):

(54) a. Als hij dat niet mocht weten,…

if he that not may-PAST-3SG know

'If he should not know that…'

b. Mocht hij dat niet weten, …

may- PAST-3SG he that not know

'Should he not know that,…'

(55) a. Als hij dat mocht kunnen/willen/moeten doen,…

if he that may-PAST-3SG can/ want/ must do

'If he should be able/want/have to do that,…'

b. Mocht hij dat kunnen/ willen/moeten doen, …

may-PAST-3SG he that be.able.to/want/ have.to do

(56) a. Hij zal niet komen, denk ik. Maar als hij mocht *(komen),…

he will not come think I but if he may-PAST come

b. Hij zal niet komen, denk ik. Maar mocht hij *(komen),…

he will not come think I but may-PAST he come

I conclude that the Dutch irrealis auxiliary *mocht* which is implicated in the derivation of conditional clauses in Dutch shares syntactic properties with all Dutch modals. It is compatible with and higher than the low modals, but it crucially differs from these in that it does not license MCE. The latter property, it shares with the high modals. Thus in terms of a cartographic approach the relevant auxiliary must again be higher than the low modals and lower than the high modals, with which it shares crucial properties.

5. Peripheral conditionals

In my previous work (Haegeman 2003a, 2006a,b,c) I have distinguished between "central" conditional clauses and "peripheral" conditional clauses. Central conditionals express a condition for the realization of the state of affairs in the main clause. The conditional clauses discussed so far in this paper are central. The following attested examples illustrates peripheral conditional clauses.

(57) a. If I'm no longer going to be arrested for possessing cannabis for my own consumption ('Cannabis laws eased in drugs policy shake-up', October 24), shouldn't I be able to grow my own? (Jason Cundy, Letter to the editor *Guardian*, 25.11.1, page 9, col. 8)

b We are seeing a fall in the incidence of crime, particularly serious crime, and I think we're right to say 'What's going on?' If crime is falling, why are we seeing a continuing rise in the prison population. (*Guardian*, 1.11.1, page 2, col.6)

Typically, in the above conditional clauses the speaker is not expressing a condition for the realization of the event in the main clause, but he or she is making accessible an assumption which provides the privileged background for the processing of the associated main clause. Peripheral conditionals are often echoic (Declerck and Reed 2001:83) and can be said to structure the discourse background of the associated clause. Unlike central conditional clauses, peripheral conditional clauses are compatible with argument fronting (58a) and with high modal markers, such as markers of epistemic modality (58b) (Haegeman 2006a):

(58) a. If some precautions they have indeed taken, many other possible measures they have continued to neglect.

b. If Le Pen will probably win, Jospin must be disappointed. (Nilsen 2004:811:note 5)

There are several ways to analyze the contrast between peripheral conditionals and central conditionals. Since they do not express a condition for the event in the main clause, but introduce contextually salient propositions, one might postulate that peripheral conditional clauses are not derived by movement of a conditional operator.[16] A number of implementations of this idea are conceivable. One is that in peripheral adverbial clauses *if* is a simple connective and that the clause it introduces does not contain an operator in its left periphery at all, or, alternatively, that there is an operator in the CP domain which is merged directly as the specifier of the head that hosts the connective and crucially, that the operator has not been moved from within IP to CP. If there is no operator in peripheral adverbial clauses, then there will be no intervention effect with respect to other fronting operations and we predict that they will be compatible with MCP. If an operator is merged high in the CP domain, it will not interfere with movement to relatively lower positions in the left periphery or with the availability of adverbials in the (high) IP layer.

Alternatively, peripheral conditional clauses might be derived by movement of a conditional operator but the movement in question takes place in a higher stretch in the left periphery which does not overlap with the stretch affected by argument fronting. In central conditional clauses, MCP such as argument fronting are excluded because the fronted constituent is located on the movement path of the conditional operator, which originates in Spec,$\text{Mood}_{\text{irrealis}}$, i.e. within the IP domain of the adverbial clause. Intervening fronted

arguments occupy a position higher than the starting point of the moved temporal operator and lower than its landing site. Peripheral *if* clauses could be paraphrased as 'if it is true that', 'if we can admit that'. Such peripheral *if* clauses are arguably associated with speaker anchoring and with illocutionary force (for more discussion see Haegeman (2003a, 2006a, 2006b, 2007), and also Komagata (2003)). If the illocutionary force is syntactically encoded, then peripheral *if* clauses might be argued to contain a conditional operator, but one associated with the speech act. One might then propose that in peripheral conditional clauses a conditional operator associated with the high speech act phrase in the left periphery moves to a yet higher clause typing position in the left periphery. If the relevant operator movement takes place in a syntactic domain higher than the domain of argument fronting (and other fronting operations involved in MCP) there will not be any intervention effects. For arguments in favour of high speaker related projections see, among others, Benincà (2001), Hill (2006, 2007a:177, 2007b), Haegeman (to appear c) etc.

It is clear that the choice of analysis will have repercussions for the structure of the left periphery and in particular for the question whether and how the syntax represents illocutionary force and force modifiers. This issue goes beyond the goals of this paper.

6. Summary

Adopting Cinque's F-Spec account to modal markers (1999), this paper elaborates on the proposal that, parallel to temporal adverbial clauses, conditional subclauses are derived by operator movement to the left periphery. The proposal accounts for the absence of MCP in conditional clauses. The particular implementation of the proposal also accounts for the absence of high modal markers in conditional clauses and for the incompatibility of low construal with conditional clauses (Geis 1970, 1985).

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. 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.

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1 Low construal is unavailable in *while*-clauses. See Geis 1970, Johnson 1988, Larson 1990: 174, Citko 2000, Liptàk 2005. This is subject to further research.

2 As pointed out by Guglielmo Cinque (p.c.), the asymmetry follows from the assumption that the adjuncts are merged in the left periphery. For details on such a derivation see also Haegeman (2003a).

3 Thanks to Michal Starke for judgments and to Amélie Rocquet for the discussion of French. Not all French speakers accept this example.

4 CLLD does block subject extraction in French. This point is tangential to the discussion. See Rizzi (1997) and Delfitto (2002) for discussion.

5 Not all speakers accept such examples.

6 In Italian, prepositional complements of verbs in the left periphery may appear with (cf. (ia)) or without (cf. (ib)) an IP-internal resumptive clitic. Garzonio (2008) shows that in conditional clauses, when prepositional complements are dislocated only the variant with the clitic is available (cf. (ii)) and concludes that the clitic-less construction is analogous to English argument fronting. See also Cruschina (2010).

(i) Col capo non (ci) parla. (Garzonio 2008: 7)

With-the boss not (clitic) speak-3SG

'He doesn't speak with the boss.'

(ii) ? Se, col capo, non *(ci) parli,…

if with-the boss not *(clitic) speak-2sg, ….

'If you don't talk to the boss, ...'

[7] Thanks to Amélie Rocquet for help with the German examples.

[8] For the movement analysis, cf. among others Larson (1985), den Dikken (2006: 729). For alternatives see also Rizzi (2001) and Roberts and Roussou (2002:41).

[9] I assume that *if* is merged in C.

[10] The data are more complex, cf. Maki et al. (1999: 9, note 8).

[11] Low construal is available with conditionals formed by relativization. I assume that the *wh*-operator (*in which*) originates as a circumstantial adjunct and, like circumstantial adjuncts (cf. text-examples (30)), it can undergo long movement (Haegeman 2003b).

(i) I will leave in any circumstance in which you say you'll leave.

(Bhatt and Pancheva 2002: 13, a-c their (50), d,e: their (51); 2006: 655-6: their (47)).

[12] For a variant of this proposal that is compatible with the movement account of conditional clauses see also Haegeman (to appear b). For reasons of space I cannot develop this alternative here.

[13] Thanks to an anonymous reviewer for *Linguistic Inquiry* for bringing this issue up.

[14] In an elaboration of my proposal, Tomaszewicz (2009) discusses Polish data (see also Migdalski 2006, 2010), in which a conditional particle *by* is argued to move

from an IP-internal Mood position to the C-domain. For reasons of space I do not repeat the data here and I refer to her paper for discussion.

[15] The order is hard to show with epistemic *moest*, which is by and large confined to main clauses, in which *moest* is in second position and the effect of VPR on the distribution of the subject is not visible.

[16] Declerck and Reed (2001) and Lahousse (2008) refer to peripheral conditionals as performative conditionals.

Peripheral adverbial clauses are syntactically less integrated than central adverbial clauses and hence manifest other scopal properties (binding, scope, temporal and modal subordination etc cf. Haegeman 2003a). One way of integrating such clauses to the associated clause would be to adopt the 'paratactic' projection (πP) as in Gaertner (2001). The conjunction *if* could, for instance, be inserted in π, as proposed for German *weil* by Gaertner (2001: 107).