

The syntactic position of Polish *by* and Main Clause Phenomena*

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I show that the position of the irrealis particle *by* in Polish conditionals correlates with constraints on Main Clause Phenomena (MCP). When *by* is in C^0 , MCPs are precluded; when it is in a lower position, MCPs are available. I suggest that the movement of *by* to C^0 accompanies the A' -movement of a world operator in conditional clauses (Bhatt & Pancheva 2006). The operator movement acts as an intervener for MCPs (Haegeman 2007, 2010a, 2010b). I present evidence from MCPs such as contrastive *to*-topicalization, long extraction of adjuncts, speaker-oriented adverbs and the availability of correlativization. The different syntactic position of *by* is supported by evidence from the behavior of *wh*-pronoun-type vs. complementizer-type counterparts of *if*.

1. Introduction

Polish counterfactual conditional clauses ‘*if P, Q*’ contain the so-called irrealis particle *by* in both the antecedent *P* and the consequent *Q*. However, it is only in the antecedent that *by* is obligatorily placed in second position, forming a part of the ‘counterfactual *if*’, *gdyby*. I show that the syntactic position of *by* in those cases is C^0 and I suggest that movement of *by* to C^0 accompanies the movement of the world operator postulated by Bhatt and Pancheva (2006) for the derivation of conditional clauses. The syntactic diagnostics for operator movement involve constraints on Main Clause Phenomena (MCP) as proposed by Haegeman (2007, 2010a, 2010b, this volume). I test my proposal against a selection of constraints on MCP in Polish: contrastive *to*-topicalization, long extraction of adjuncts, the interpretation of speaker-oriented adverbs and the availability of correlativization.

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1.1 Conditionals as free relatives

Conditional clauses have been argued to involve A'-movement of an operator to Spec, CP in a way parallel to relative clauses and *wh*-questions. The commonalities in structure have been linked to similarities in interpretation (Geis 1985; Larson 1985; Bhatt & Pancheva 2006). Specifically, Bhatt and Pancheva (2006) analyze *if*-clauses as free relatives of possible worlds.

Bhatt and Pancheva demonstrate interpretative parallelisms between questions, free relatives and conditionals. Questions are interpreted as sets of propositions where the variable abstracted over (as a result of *wh*-movement) has been existentially quantified (Hamblin 1973; Karttunen 1977) (1b). Free relatives of individuals are interpreted as definite descriptions, (1c), i.e. with the variable abstracted over being bound by a definite operator (Izvorski 2000). Conditionals are interpreted as free relatives – definite descriptions of possible worlds (2).

- (1) what John bought
 a. LF: $wh_x C^0$ John bought x
 b. $\lambda p [p = \exists x[\text{John bought } x]] \implies$ question
 c. $\iota x [\text{John bought } x] \implies$ free relative
- (2) if John arrives late
 a. LF: $Op^w C^0$ John arrives late in w
 b. $\iota w [\text{John arrives late in } w] \implies$ conditional

The conditional C^0 has features that distinguish it from other types of clauses. In some languages these features may be lexicalized by *if* or they may be in a checking relationship with the operator in C^0 's specifier. In languages where the counterpart of *if* is a *wh*-pronoun, e.g. *wenn* in German (Bhatt & Pancheva 2006), *jak* in Polish (Citko 2000), *oa* in West Flemish (Haegeman 2010b), this pronoun undergoes *wh*-movement and is merged in the specifier of CP. Lexical counterparts of *if* are merged in C^0 . The differences in interpretation between free relatives, *wh*-questions and conditionals result from the different nature of the operator-variable binding relation, which is syntactically encoded as different features in C^0 , but their internal syntax is essentially the same in the sense that it involves movement of an operator to Spec, CP.

1.2 Operator movement and intervention effects

Operator movement to Spec, CP has been argued in Haegeman (2007, 2009, 2010a, 2010b) to explain the common syntactic behavior of a range of clauses with respect to Main Clause Phenomena (MCP). For example, *if*-clauses and *when*-clauses are incompatible with such MCP as argument fronting (cf. Hooper & Thompson 1973) or high speaker-oriented adverbs (cf. Heycock 2006). Haegeman derives both restrictions from her implementation of the operator movement account of Bhatt and Pancheva (2006).

If- and *when*-clauses are derived by leftward movement of a TP-internal clause-typing operator, which intervenes for additional movements to the left periphery. Topicalization is an overt A'-movement with semantic import (i.e. it establishes an operator-variable relation), therefore, the world operator cannot move across it (3)–(4).

(3) *When/if these exams you have passed, you'll get the degree.
 (Haegeman 2003)

(4) a. [CP Op_i if [XP_j [TP ... t_i ... t_j...]]]

b. [CP *when*_i C⁰ [XP_j [TP ... t_i ... t_j...]]]



The infelicity of adverbials expressing speaker attitude in non-root contexts, e.g. (5), can be seen as a non-structural phenomenon dependent on illocutionary force, with MCP being dependent on speaker assertion (Heycock 2006).

(5) ??* When/if frankly he is unable to cope, we'll have to replace him.
 (Haegeman 2010a)

Haegeman (2010a) reinterprets the semantic facts in terms of syntactic locality restrictions. She extends the account in Bhatt and Pancheva (2006), proposing that syntactically the world operator originates in the projection characterized in terms of Cinque's (2004) hierarchy as MoodP_{IRREALIS}, immediately below T. Speaker-oriented adverbs block the movement of the operator because they share with it formal modality-related interpretive features (assuming a feature-based approach to locality restrictions on movement, e.g. Starke 2001).

(6) [CP...*frankly/luckily/fortunately*^{+MODAL} ...[TP...Op^{+MODAL}...]]



Haegeman uses data like (3) and (5) as diagnostics for intervention effects and hence for detecting operator movement.

I show that the internal syntax of counterfactual *if*-clauses in Polish is directly reflected in the syntactic position of the irrealis particle 'by'. I use MCP as diagnostics for the position of *by* showing that its syntactic position is conditioned by the clause type – i.e. whether or not the derivation of the clause involves operator movement.

1.3 Types of conditional adverbials

If-clauses fall into three types depending on their interpretation with respect to the main clause. In *hypothetical* conditionals (*event* conditionals in Haegeman 2003) the antecedent specifies the circumstances in which the proposition expressed in the

matrix clause is true (Bhatt & Pancheva 2006). In (7) the possible worlds/situations in which Andrea arrives late are those possible worlds/situations in which Clara gets upset. Hypothetical conditionals themselves are of two kinds: (7) is an *indicative* conditional, while (8) is a *counterfactual* conditional (CFC) describing a situation that is counter to fact.

- (7) If Andrea arrives late, Clara will get upset. (B&P 2006)
 (8) If Andrea had arrived late, Clara would have been upset.

In *relevance* conditionals, such as (9), the *if*-clause clearly does not express circumstances in which the proposition expressed in the matrix clause is true, but rather sets up a relevant context for the main clause.

- (9) If you are thirsty, there is beer in the fridge. (B&P 2006)

In the third type, called *factual* (Iatridou 1991) or *premise* conditionals (Haegeman 2003), the antecedent carries an additional presupposition that someone other than the speaker believes that the proposition in the *if*-clause is true (Iatridou 1991), e.g. (10).

- (10) If Fred is (indeed) so smart, why didn't he get the job? (B&P 2006)

The antecedent in a factual conditional has an independent illocutionary force (Haegeman 2003), and notably, in some languages, the complementizers used in factual conditionals can be distinct from those in hypothetical conditionals: e.g. Bulgarian *štom* 'when, given that' (vs. *ako* 'if', Laskova this volume), Polish *skoro* 'since, given that' (vs. *jesli, jak*).

Hypothetical conditionals differ from factual and relevance conditionals both in their internal and external syntax.¹ The clause-internal operator-movement to Spec, CP is needed to derive hypothetical conditionals, but not factual or relevance conditionals (Bhatt & Pancheva 2006).

In terms of their external syntax, hypotheticals are either TP-adjoined or VP-adjoined (Iatridou 1991), whereas factual and relevance conditionals involve CP adjunction or coordination of two CPs, which correlates with their independent illocutionary force (Haegeman 2003).

1. See Coniglio & Zegrean (this volume) for an account on which the internal syntax of peripheral adverbial clauses, such as factual conditionals, vs. central adverbial clauses differs in the feature composition of the highest projections of the CP layer. On a similar note Frey (this volume) proposes a dedicated Force-projection.

1.4 Counterfactual conditionals (CFCs)

A key feature of counterfactual ‘*if P, Q*’ conditionals (CFCs), as in (11), is the obligatory use of irrealis markers or past tense morphology with a modal rather than a temporal meaning, named “fake past” in Iatridou (2000, 2010). The presence of the same irrealis or “fake past” morphology in both *P* and *Q* clauses, e.g. (11), can be seen as an important indicator that in the relevant respect the internal syntax of the two clauses is the same.

- (11) a. If I were rich, I would buy a Jaguar. Present CF
 b. If I had been rich, I would have bought a Jaguar. Past CF

Thus, for instance, Arregui (2008) and Ippolito (2008) suggest that the “fake past” morpheme is not interpreted inside each *P* and *Q*, but only once outside of the conditional, c-commanding both the antecedent and the consequent (this allows for the properties of times to be manipulated by the modal shifting of the reference time).

- (12) Past_{*i*} [*would* λ_{*i*} [*if* ... t_{*i*} ...]] [λ_{*i*} [*if* ... t_{*i*} ...]]

Similarly, Asarina (2006) notes that in Russian CFCs (13), the clitic *by* and the participial form of the verb, which she identifies as the “fake past”, are found in both *P* and *Q*. She interprets this as evidence that both *P* and *Q* contain a functional element with an Excl(usion) feature (following Iatridou 2000), which selects *by* as the subjunctive head.

- (13) *Esi by Petja sël jabloko, on by {vchera/*
 if SUBJ Peter ate.PRF apple, he SUBJ yesterday/
segodnja/zavtra} {*vyzdorovil /vyzdoravlival*}.
 today/tomorrow got-better-PRF /got-better-IMP
 ‘If Peter ate an apple, he would get/be getting better today/tomorrow.’
 ‘If Peter had eaten an apple, he would have got/been getting better
 yesterday.’

In this paper I provide arguments that the internal syntax of *P* and *Q* in Polish CFCs is different. Some of the evidence involves the availability of Main Clause Phenomena (MCP) in *Q*, the main clause, but not in *P*, the antecedent (see also Tomaszewicz 2009). Importantly, the mere presence of *by* is not sufficient to rule out MCP in the antecedents of CFCs, because *by* is also found in main clauses and in the antecedents of factual conditionals, both of which do exhibit MCP (as discussed in Haegeman 2010a, 2010b). What matters is not the presence of *by* but its syntactic position, i.e. whether or not it has moved to C⁰ accompanying operator movement.

2. Conditionals in Polish

The irrealis/subjunctive particle *by* in Polish is characteristic of the so-called “conditional mood” (14), which, in contrast to the indicative (15), has no temporal distinctions, and carries the meaning of the English modal *would*. The particle *by* co-occurs with the same participial form that is found in the past tense (displaying aspectual distinctions) (15b), as well as in the future tense (15c). *by* can either follow or precede the participle in the matrix clause as shown in (14). It is an enclitic (Migdalski 2006).²

- (14) “Conditional”/Irrealis mood
Janek {kupiłby /by kupił} Jaguara.
 Janek buy.PRF.PRT.by3SG /by3SG buy.PRF.PRT Jaguar
 ‘Janek would buy a Jaguar’
- (15) *Indicative mood*
- a. *Janek kupuje Jaguara. Present*
 Janek buys Jaguar
 ‘Janek is buying a Jaguar’
- b. *Janek Ø kupił Jaguara Past, perfective*
 Janek PST3SG. buy.PRF.PRT Jaguar
 ‘Janek bought a Jaguar’
- c. *Janek kupi Jaguara. Future, perfective*
 Janek buy.PRF.FUT3SG. Jaguar
 ‘Janek will buy a Jaguar’

By and the participial verb form are obligatory components of counter-factual conditionals (16), while in indicatives any of the verbal forms in the indicative mood illustrated in (15) can appear (e.g. future (17)).

- (16) *Hypothetical counterfactual conditionals (CFCs):*
Gdyby Janek kupił Jaguara, to by nim
 when.by3SG Janek buy.PRT J. then by3SG. it
jeździł do pracy.
 drive.PRT to work
- a. ‘If Janek bought a Jaguar, then he would drive it to work’
 b. ‘If Janek had bought a Jaguar, then he would have been driving it to work.’

2. It is a convention to write ‘*by*’ “together” with the participle when it follows it.

(17) *Hypothetical indicative conditionals:*

Jeśli Janek kupi Jaguar, to będzie nim
 If Janek buy.FUT3SG J. then FUT.IMP3SG it

jeździł do pracy.
 drive.PRT to work

drive.PRT to work

'If Janek buys a Jaguar, then he will be driving it to work'

Crucially, *by* is also found in factual and relevance conditionals, but it is exclusively in CFCs that it has to appear in second position in the antecedent clause, in contrast to the main clause, where it can either precede or follow the verb and other constituents as shown in (18). This requirement resembles the "V2 effects" in Germanic, discussed in the papers by De Vries, Franco and Migdalski in this volume.

(18) a. *Gdyby Janek kupił Jaguar, ...*

when.by3SG Janek buy.PRT Jaguar

... to by Marek(by) nim jeździł(by) do pracy.

then by3SG Marek(by) it drive.PRT(by) to work

'If Janek bought a Jaguar, Marek would drive it to work.'

b. **Gdy Janek by kupił Jaguar, ...*

c. **Gdy Janek kupiłby Jaguar, ...*

d. **Gdyby Janek kupiłby Jaguar, ...*

In the antecedent of a factual conditional, *by* is just as free as in the main clause. As mentioned before, Polish has a special complementizer *skoro* ('given that', 'since') that unambiguously marks the conditional clause as factual. What is presupposed to be true in (18a), where the perfective form of the verb is used without *by*, is that Janek bought a Jaguar (i.e. past interpretation). In (18b), where there is *by* in the antecedent, it is presupposed that Janek will be willing to buy a Jaguar (i.e. a modal interpretation).

(19) *Factual conditionals:*

Skoro/Jeśli Janek Ø kupił Jaguar, to by nim

Since/If Janek AUX3SG buy.PRT Jaguar then by3SG it

jeździł do pracy.

drive.PRT to work

'If (indeed) Janek bought a Jaguar, he would drive it to work.'

(20) *Skoro/Jeśli Janek kupiłby Jaguar, to by nim*

Since/If Janek buy.PRTby3SG Jaguar then by3SG it

jeździł do pracy.

drive.PRT to work

'If (indeed) Janek would buy a Jaguar, he would drive it to work.'

The possibilities for the placement of *by* in the factual antecedents in (21) clearly contrast with those in the CFCs in (18).

- (21) *Skoro/Jeśli by Janek (by) kupił(by) Jaguara, ...*
 Since/If *by*3SG Janek buy.PRT Jaguar

Neither is *by* restricted to second position in the *if*-clause in relevance conditionals (22).

- (22) *Piwo jest tutaj, jeśli by Janek (by) miał(by) ochotę.*
 beer is here if *by*3SG Janek have.PRT desire
 ‘The beer is here, if Janek feels like it.’

The above data suggest the following generalization: in the CF antecedent, *by* obligatorily occurs in second position, while in the consequent it can appear anywhere in the clause, as schematized in (23a–b). Importantly, two instances of *by* within the same clause are not allowed (23c), which can be taken as evidence for its movement.

- (23) CFCs
 a. *if+by ... verb ... then ... verb+by/by verb*
 b. **if ... verb+by ... then ...*
 c. **if+by ... verb+by ... then ...*

In the *if*-clause of factual and relevance conditionals, *by* can occur either pre- or post-verbally (24a–b); its double occurrence is not allowed (24c).

- (24) *Factual/Relevance Conditionals*
 a. *if ... verb+by ... then ... verb+by/by verb ...*
 b. *if ... by verb ... then ...*
 c. **if+by ... verb+by ... then ...*

What is the base position of *by*? As shown above in (14), in the conditional mood *by* appears preceding or following the participial form of the verb. Traditionally, *by* is regarded as an auxiliary. However, Migdalski (2006) observes that the conditional auxiliary (e.g. *ty byś*, ‘you would’ in (25)) can be seen as made up of an invariant particle *by* and past tense auxiliaries, which are suffixes (e.g. 2nd Person Singular *-ś*).

Migdalski (2006) proposes that *by* originates in MoodP immediately below TP. From Mood⁰ it obligatorily moves to T⁰ where, on his account, past tense auxiliaries are hosted. When *by* is in the post-verbal position, it is the participle that has raised to adjoin to the *by*+aux complex in T (25). In CF *if*-clauses (and in subjunctive complements not discussed here), Migdalski proposes that the *by*-based auxiliary is attracted by a subjunctive feature in the head Mod immediately below C⁰ (26).

- (25) [_C [_{TP} *Ty* [_T *kupił_j+by_i+ś*] [_{MoodP} [_{Mood} *t_i*] [_{VP} *t_j Jaguara*]]]]]
 you buy.PRT+*by*+AUX2SG Jaguar
 ‘You would buy a Jaguar’

- (26) [_C *gdy* [_{ModP} *by*_i+*ś*_j] [_{TP} *ty* [_T <*t*_i' + *t*_j>] [_{MoodP} *t*_i [_{VP} *kupit* J.]]]]
 when *by*+AUX2SG you buy.PRT J.
 'If you (had) bought a Jaguar, ...'

More support for the view of *by* as an invariant modal particle comes from the fact that it can co-occur with infinitives (27) and impersonal constructions (28), which do not have auxiliaries.

- (27) *A gdyby kupić Jaguara?*
 and when.*by* buy.INF Jaguara
 'What if we buy a Jaguar?'/ 'How about buying a Jaguar?'
- (28) *A gdyby kupiono Jaguara?*
 and when.*by* buy.Impers Jaguara
 'What if they bought a Jaguar?' (generic reading)

In the next section I link the facts about the morphological make-up of Polish CFCs together with Migdalski's proposal, and the operator movement derivation of conditional clauses of Bhatt and Pancheva (2006), resulting in syntactic intervention effects as proposed in Haegeman (2007, 2009, 2010a, 2010b).

3. Polish conditionals and Main Clause Phenomena

I propose that the fronting of *by* is not just triggered by a feature of some left-peripheral projection in Polish counterfactual *if*-clauses, but is a reflection of the independently proposed operator movement for the derivation of conditional clauses. The operator is situated in Spec, CP and the *by* particle moves to C⁰ due to a requirement that C⁰ be filled, (29a).³ The distribution facts presented above correlate with the movement account, since exactly in those types of clauses where operator movement does not happen, the position of *by* is free, i.e. in factual/relevance conditionals and in main clauses (cf. (23)–(24)). Only in CF conditionals is the second position of *by* the C⁰ position. In all other types of clauses, *by* can surface as the second constituent in the clause, but its syntactic position is lower (29b).⁴

3. *By* cannot appear in indicatives, (17), (its presence induces a CFC (16) or factual reading (19)), but standard diagnostics such as MCP provide evidence for operator movement in indicative conditionals, e.g. (34).

4. See also Laskova's (this volume) analysis of Bulgarian subjunctive mood: the non-past verbal form in Bulgarian and, as I argue, *by* in C⁰ in Polish, do not occur in *štom*(BG)/*skoro*(PI) factual conditionals.

- (29) a. [CP Op_i [C⁰ *by* [XP_j [TP ... t_{by}... t_i ... t_j...]]]]
-
- b. [CP C⁰ [*by* [XP_j [... t_j...]]]]
-

My proposal predicts that in those clauses where *by* is restricted to second position, immediately following the complementizer, we observe syntactic intervention effects with other movements (29a). In those clause types where *by* is free and no operator movement takes place, no intervention effects should occur, even if *by* is in second position on the surface (29b). In this section I verify this prediction against a selection of Main Clause Phenomena (MCP).

I further observe that only those conditionals where the second position of *by* is the result of operator movement (29a), but not (29b), can enter into correlative structures, as only those conditionals are free relatives over worlds (Bhatt & Pancheva 2006).

3.1 MCP: Contrastive *to*-topicalization

Argument fronting is one of the canonical MCP (Hooper & Thompson 1973). Haegeman (2007, 2010a, 2010b, this volume) argues that restrictions on argument fronting in conditional and temporal adjuncts follow straightforwardly on an operator-movement account (recall the structures in (4)). This means that the same kinds of restrictions are to be found cross-linguistically. For Polish I identify two fronting operations that appear to be blocked in hypothetical *if*- and temporal *when*-clauses: contrastive *to*-topicalization and long extraction of adjuncts.

I first demonstrate that contrastive *to*-topicalization in Polish is a root phenomenon. Similarly to Dyakonova (2009) for Russian and Tajsner and Cegłowski (2006) for Polish, I treat the uninflected demonstrative *to* as a marker of contrastive topicalization in the left periphery of the clause. *To* always follows a topicalized constituent. On my analysis, a *to*-marked topic has to be discourse licensed – it either needs to refer to an entity that has been evoked in the discourse and/or is inherently identifiable, or to an entity that is going to be contrasted with another in the immediate discourse context. In the English example in (30), the discourse licenses the use of a definite description referring to an entity that has not been previously introduced (a so-called “inferred definite”), but it does not license topicalization (Ward & Prince 1991). Accordingly, a *to*-marked topic in Polish, ‘menu’ in (31), is infelicitous unless it is contrastive.

- (30) a. John went into a restaurant and he asked for the menu.
 b. #John went into a restaurant and the menu he asked for.

(Ward & Prince 1991, p.174)

- (31) *Janek poszedł do restauracji i pro o menu to*
 Janek went into restaurant and about menu *to*
poprosił, #(ale o kartę win nie.)
 asked but about list of.wines not
 ‘Janek went to a restaurant and asked for the menu (but not for the wine list).’

It is also not enough for the topic to be given – in (32) ‘letters’ have been introduced in the discourse, but only in (33) are ‘letters’ contrasted with ‘packets.’ and here *to*-marking becomes felicitous.

- (32) Q: *Kto wysłał listy?*
 who sent letters
 ‘Who sent the letters?’
 A: *Listy (?#to) wysłała Maria.*
 letters *to* sent Maria
 ‘Maria sent the letters.’
- (33) Q: *Kto wysłał listy a kto paczki?*
 who sent letters and who packets
 ‘Who sent the letters and who sent the packets?’
 A: *Listy to wysłała Maria, a paczki to Anna.*
 letters *to* sent Maria and packets *to* Anna
 ‘Maria sent letters and Anna packets.’

In many languages, topicalization is not allowed in *when*- and *if*-clauses, but this restriction depends on the syntactic nature of the process. It is not allowed in English or in Korean, but Romance languages allow the marking of topics via clitic left dislocation (Haegeman 2006). The latter does not involve movement, but base generation at the edge of the clause, so its availability is correctly predicted by the operator movement account.

In Polish, contrastive *to*-marked topics are not allowed in *if*- and *when*-clauses (34), nor in relative clauses (35). Scrambling, however, is allowed, as (36) shows, which may indicate that the constituents preceding the subject are in low topic/focus positions, i.e. below TP with subject in the base position (Note that although standardly scrambling is thought to be A'-movement, clause-bound scrambling also behaves like A-movement, Mahajan 1990).

- (34) *Kiedy/Jeśli listy (*to) Maria wyśle Jankowi,*
 when/if letters *to* Maria will.send to-Janek

*a paczki (*to) Anna ...*
and packets (to) Anna

Intended reading: 'As for the letters, when Maria sent them to Janek, and as for packets, when Anna sent them...'⁵

- (35) *Dzień, w którym listy (*to) Maria wyśle Jankowi.*
day in which letters to Maria will.send to-Janek
'The day when Maria will send the letters to Janek'
- (36) *Kiedy/Jeśli listy jutro Jankowi Maria wyśle, ...*
when/if letters tomorrow to-Janek Maria will.send
'When/If Maria sends letters to Janek tomorrow, ...'

Since *to*-topicalization does not allow a resumptive pronoun (37), the topic must be fronted from a low position, and not generated in the left periphery.

- (37) *Listy to Maria wysyłała (*je) codziennie.*
letters to Maria sent them everyday
'As for the letters, Maria sent them every day.'

Factual *if*-clauses do allow '*to*' marked topics as expected:

- (38) *Skoro/Jeśli listy to Maria wysyłała, a paczki to Anna...*
since letters to Maria sent and packets to Anna
'As for the letters, given that Maria sent them to Janek, and Anna sent the packets...'

Assuming that *to* is situated in some functional head above TP, and contrastively topicalized constituents move to its Spec, their movement is blocked by the movement of an operator in *if*- and *when*-clauses (39–40).

- (39) *Gdybyś mejla (*to) napisał (a nie list)*
when.by2SG email to write.PRT and not letter
'As for an email, if you wrote it, but not a letter, ...'
- (40) [_{CP} Op_i [_C⁰ *by* [_{XP}_j (**to*) [_{TP} t_{by}.... t_i t_j....]]]]
-

The same blocking mechanism can be observed with long distance fronting of adjuncts (as observed for English in Haegeman 2007).

5. The sentences in (34)–(35) only allow the reading where *to* marks Maria as focus yielding an interpretation similar to that of clefts in English. *To* preceding a noun marks it as focus; following a noun, it marks it as topic.

3.2 MCP: Long extraction of adjuncts

In the hypothetical conditional, the long-moved adjunct reading seen in (41) is not possible – (42) can only receive the implausible reading where the adjunct ‘by deception’ modifies the verb of saying.

- (41) *Podstępem, Janek stwierdził, że nie zwyciężymy.*
 by-deception Janek contended that not we.will.win
 ‘By deception, Janek contended, we will not win.’
- (42) #*Gdyby podstępem, Janek stwierdził, że nie*
 when.by by-deception Janek contended that not
zwyciężymy to zrobmy jak nam każe.
 we.will.win then let’s-do how us orders
 ‘If Janek contended by deception that we will not win, let’s do what he says.’
- (43) *Skoro podstępem, Janek stwierdził, że nie zwyciężymy*
 since by.deception Janek contended that not we.will.win
to zrobmy jak nam każe.
 then let’s.do how us orders
 ‘Since Janek contended that we will not win by deception, let’s do what he says.’

The factual conditional in (43) does allow for the adjunct to be interpreted in its base position, indicating that its internal syntax is the same as in (41).

3.3 MCP: Speaker-oriented adverbs

Polish hypothetical conditionals do not allow high speaker-oriented adverbs, whereas factual conditionals do, as I have shown in Tomaszewicz (2009). Here I present a novel argument concerning the restriction on the interpretation of evaluative adverbs in CFCs.

An adverb such as *luckily* typically receives a speaker-oriented reading in the matrix clause, e.g. in (44) in a situation where Janek was looking for me, it was obviously not lucky for him that he did not meet me, but it was lucky for me, the speaker.

- (44) *Na szczęście Janek mnie nie spotkał.*
 on luck Janek me not met
 ‘Luckily, Janek did not meet me.’

Interestingly, in the CFC in (45) the same adverb *na szczęście* can only scope under negation – the only interpretation is such that it was lucky for Janek to have met me, with no implication that it was also lucky for me (e.g. we can continue (45) with ‘although I was not happy about meeting him’).

- (45) *Janek by zablądził, gdyby na szczęście mnie nie spotkał.*
 Janek *by* get.lost when.*by* on luck me not meet
 ‘Janek would have lost his way, but luckily (for him) he met me.’

Moreover, *na szczęście* (‘luckily’) cannot occur without negation, even though (45) should in principle be able to express that it would be lucky for Janek to have found a map. This contrasts with the interpretation of the factual conditional in (47), where *luckily* has to scope over negation, and a continuation ‘although I wouldn’t care if he had’ would be infelicitous.

- (46) *Janek by odnalazł drogę, gdyby (#na szczęście) znalazł mapę.*
 Janek *by* find way when.*by* on luck find map
 ‘Janek would have found his way, if (#luckily) he had found the map.’
- (47) *Skoro Janek na szczęście by mnie nie spotkał, ...*
 Since Janek on luck *by* me not meet
 ‘Given that Janek, luckily, would have not met me.’

The clear difference in scope between (45) and (47) indicates that the adverbial phrase is merged in two different positions. In the factual conditional, just like in the matrix clause, it is merged in a left-peripheral position responsible for the speaker-oriented interpretation. In the CF conditional it can only be merged in some position lower than negation such that it does not block the movement of the operator.

In this section I have shown that hypothetical and factual conditionals differ in their internal syntax.⁶ Hypothetical *if*-clauses and temporal *when*-clauses show restrictions on MCP: contrastive *to*-topicalization, long extraction of adjuncts and the restrictions on the interpretation of evaluative adverbs.

3.4 Movement of *by* in CFCs

It is evident that the incompatibility of hypothetical *if*-clauses with *to*-topicalization, long movement of adjuncts and high speaker-oriented adverbs is not due to the presence of *by*, but rather to the fact that *by* is restricted to second position. Moreover, the above restrictions on MCP obtain both in indicative (e.g. contrastive *to*-topicalization in (34)) and in CF conditionals, which shows that MCP are blocked by the movement of the operator, not of ‘*by*’. It is a separate property of CF *if*-clauses that the particle is obligatorily placed in second position.

My claim is that the position of *by* in CFCs reflects the operator movement that derives hypothetical conditionals. In those *if*-clauses that do not allow MCP, *by* appears

6. Relevance conditionals pattern with factual conditionals, but due to space limits I have left them out of the discussion.

exclusively in second position because it is attracted to C^0 , fulfilling an independent requirement that the head position of the specifier to which the operator has moved is to be filled.

Indicative hypotheticals are also derived by operator movement as the MCP diagnostics indicate, but since *by* does not occur in them at all (recall (17)), the requirement for a filled C^0 appears to be specific to CFCs.

Consequently, *by* is never in C^0 in CF main clauses or in factual/relevance conditionals – it can surface in second position simply because as an enclitic it can attach to any constituent in the clause. In all clauses that do exhibit MCP, *by* is in a position lower than C^0 and functions as a modal (interpreted as the counterfactual *would*). Support for my proposal comes from the asymmetries in the behavior of *by* with respect to the two counterparts of *if* in Polish: *wh*-pronouns and the complementizer *jeśli*.

In indicative hypotheticals Polish standardly uses *jeśli* ('if'), and in more colloquial speech *jak* ('how') (48).

- (48) *Jeśli/Jak nie będzie poprawy, to czeka mnie operacja.*
 If/how not will.be improvement, then awaits me surgery
 'If there is no improvement, surgery awaits me.'




In CFCs *gdyby*, *jeśli by*, and *jakby* are found in the *if*-clause (49a). I analyze the *gdy* morpheme as a *wh*-word, since the same morpheme functions in *when*-clauses as an exact counterpart of *kiedy*, interrogative 'when' (49b), even though in questions only *kiedy* is used (49c).

- (49) a. *Gdy/Jeśli/Jakby Janek kupił Jaguara, ja bym kupił BMW.*
 when/if/how.by Janek buy Jaguar I by buy BMW
 'If Janek bought a Jaguar, then I would buy a BMW.'
 b. *Gdy/Kiedy Janek kupił Jaguara, ja kupilem BMW.*
 when/when Janek bought Jaguar I bought BMW
 'When Janek bought a Jaguar, I bought a BMW.'
 c. *(*Gdy)/Kiedy Janek kupił Jaguara?*
 when/when Janek bought Jaguar
 'When did Janek buy a Jaguar?'

I analyze *jeśli* as a complementizer in the head position. Interestingly, the morpheme *-li* inside of *jeśli* functioned as a *yes/no*-question particle in Old Polish, as it still does in other Slavic languages, and such particles are standardly treated as spelling out features of the C-head, i.e. are base generated in C^0 .⁷

7. In Bulgarian the complementizer *li* is used to form conditionals.

My movement account of *by* predicts that *gdy* ('when') and *jak* ('how') should undergo *wh*-movement to Spec, CP, and *by* should then move as a head to C⁰, i.e. be obligatorily cliticized onto *gdy* and *jak* (50a–b). In conditionals containing *jeśli*, on the other hand, *by* should be free to appear in any position, i.e. as an enclitic it could appear in a surface second position, but that position could not be C⁰, which is already occupied by *jeśli* (50c).

- (50) a. [CP *gdy* [C⁰ *by* [TP ... t_{by}... t_{gdy} ...]]]

- b. [CP *jak* [C⁰ *by* [TP ... t_{by}... t_{jak} ...]]]

- c. [CP [C⁰ *jeśli* [... *by*... [TP ... t_{by}...]]]]


This prediction is borne out. The particle cannot be split from *wh*-words (51), but the same configuration is perfectly grammatical with *jeśli* (52).

- (51) *Gdy/Jakby Janek (*by) nam pomógł, skończylibyśmy już.*
 when/how.by Janek us help finish.by already
 'If Janek (had) helped us, we would (have) finish(ed) already.'
- (52) *Jeśliby Janek (by) nam pomógł, skończylibyśmy już.*
 if.by Janek us help finish.by already
 'If Janek helped us, we would finish earlier.'

As shown before (Section 2, (21)), factual conditional clauses behave similarly (*by* can either follow or precede the subject), but, interestingly, it is not the case that the obligatory second position of *by* distinguishes between hypothetical and factual conditionals. This is predicted on my proposal – the operator movement distinguishes hypotheticals from factuais, but the movement of *by* itself is a separate phenomenon. *By* is attracted to C⁰ as a morpho-syntactic requirement in CFCs, but at the same time it has some semantic consequences.

Jeśli+*'by'*-based conditionals have a *future-less-vivid* (FLV) interpretation (Iatridou 2000); e.g. in (52a–b) the speaker is hypothesizing about the future, that with Janek's help they would finish faster. FLV conditionals are not about situations counter to fact – *P* and *Q* can happen but are considered unlikely – yet they are grouped with CFCs because in many languages they receive the same CF morphological marking (Iatridou 2010).

Notably, although both *jeśli+‘by’* and *gdyby*-based conditionals can have the FLV interpretation as in (52), only *gdyby*-conditionals can be about counterfactuality to past or present. When it is known that *P* did not happen and thus *Q* is not possible (past counterfactuality), only *gdyby* can be used (53). With remote possibilities (the FLV interpretation), either is fine (53).

- (53) *Niestety, nie wygrałem. Gdybym/(#jeślibym) wygrał,*
 unfortunately not I.won when.by/if.by win
kupiłbym Jaguara.
 buy.by Jaguar
 ‘Unfortunately, I didn’t win. If I had won, I would have bought a Jaguar.’
- (54) *Może wygram. Gdybym/Jeślibym wygrał, kupiłbym Jaguara.*
 maybe will.win when.by/if.by win buy.by Jaguar
 ‘I may win. If I won, I would buy a Jaguar.’

Also in present CFCs, only ‘*gdyby*’ may be used (55). Whenever, *P* is completely ruled out at present, *jeśli+by* cannot be used.

- (55) *Arek zmarł w zeszłym roku. Gdyby/#Jeśliby*
 Arek died in last year when.by/if.by
był tu teraz, pomógłby nam.
 be here now help.by us
 ‘Arek died last year. If he was here now, he would help us.’
- (56) *Nie martwiłbym się, gdyby/#jeśliby Marek był starszy,*
 not worry.by1 self when.by/if.by Marek be older
ale a dopiero 13 lat.
 but has only 13 years
 ‘I wouldn’t be worried, if Marek was older, but he is only 13.’

The difference between *gdyby* and *jeśli+by* conditionals lies in their interpretation. I suggest that the interpretative difference can be linked to syntax. *Gdyby* conditionals are underspecified for the FLV, past CF and present CF interpretation. How to derive the semantics of FLV vs. CF conditionals based on the different positions of *by* is, however, outside the scope of this paper.

The obligatory second position of ‘*by*’ following the *wh*-words *gdy* and *jak*, and its free position together with *jeśli*, the complementizer counterpart of *if*, support the view that operator movement is coupled with an independent requirement that the C^0 position in CFCs be filled.⁸ The different ‘flavors of counterfactuality’ that result

8. Note that in indicatives *by* cannot appear, and the presence of *jak* does not give rise to any V2 effects.

from the position of *by* as described above seem to be a side-effect of the underlying syntactic structure.

Importantly, without assuming operator movement, the need for the fronting of *by* whenever a CF *if*-clause contains *gdy* or *jak*, as opposed to *jeśli*, does not receive a principled explanation. If our only assumption is that the complementizer position needs to be “marked” in CFCs (i.e. there is a morphosyntactic requirement of a counterfactual C^0 , whether or not there is operator movement), the FLV conditionals with *jeśli* should also contain *by*, as the CF marker, in a left-peripheral position, because *jeśli* alone also forms indicative conditionals.

3.5 Operator movement and correlativization

I show that only those *if*-clauses where the movement of *by* accompanies the movement of an operator can enter into correlative structures. This provides another argument for the distinction between hypothetical and factual/relevance conditionals.

As free relatives over possible worlds, conditionals are predicted to be able to enter into correlative structures as proposed in Bhatt and Pancheva (2006). Correlative adjuncts are outside of the clause they modify and are co-indexed with a proform within it.

- (57) [free relative]_i [... proform_i ...] ==> correlative

Correlative structures result in restrictive modification abstracting over an individual, a degree, a location or a world variable.⁹ In Polish, where correlativization is a productive strategy, we find a temporal demonstrative *wtedy* (‘this time’) in the main clause (in addition to *to* functioning as ‘then’) as a counterpart to the interrogative *kiedy* (‘when’). The same demonstrative element *wtedy* is found in conditional correlatives, see (59).

- (58) *Wtedy pojedziemy, kiedy skończymy.*
 this.time will.leave.3PL when will.finish.3PL
 ‘We will leave, when we finish.’
- (59) *Gdyby Janek nam wczoraj pomógł, to wtedy*
 when.by Janek us yesterday help then this.time
skończylibyśmy wcześniej.
 finish.by earlier
 ‘If Janek had helped us yesterday, we would have finished earlier.’

9. Iatridou (1991) and Izvorski (1996) argue that the proform introduces a presupposition that the relevant alternatives to the free relative do not make the main clause true.

The demonstrative is incompatible with factual conditionals, see (60), which shows that the demonstrative needs to be co-indexed with a clause where variable abstraction has taken place.

- (60) *Skoro/Jeśli Janek by nam wczoraj pomógł, to w takim*
 since/if Janek *by* us yesterday help then in that
*razie/*wtedy skończylibyśmy wcześniej.*¹⁰
 case/this.time finish.by earlier
 ‘Given that Janek would have helped us yesterday, we would have finished earlier.’

In those clauses where the fronting of *by* is obligatory, variable abstraction has taken place and *by* moved to C^0 accompanying the world operator movement to Spec, CP. This is exactly those clauses that allow for the correlative *wtedy* (61a). Factual conditionals are incompatible with the correlative since no variable abstraction has taken place and the placement of *by* is regulated by prosodic factors (61b).

- (61) a. [jeśli/gdyby ...]_i [to wtedy_i ...] ==> hypothetical
 b. *[skoro/jeśli ...]_i [to wtedy_i ...] ==> factual

We can conclude that correlatives provide an additional argument that the surface second position does not have to indicate that *by* has raised to C^0 . However, every time *by* is in C^0 we get a CFC. Hypothetical conditionals are derived through operator movement, and an additional requirement that the C-head is filled in CFCs triggers the movement of *by*.

4. Conclusion

I have shown that *P* and *Q* in Polish counterfactual conditionals (CFCs) are of a different syntactic clause type, despite the same CF morphological ingredients. Bhatt and Pancheva (2006) propose that the antecedent *P* has the structure of a free relative and is derived by the movement of an operator to Spec, CP, while no such movement occurs in *Q*, the main clause. I argued that in Polish the position of the irrealis particle *by* reflects the movement of the operator, due to the requirement that the head position of the specifier occupied by the operator be filled. This accounts for the fact that *by* must appear in C^0 in those CFCs where the counterpart of *if* is a *wh*-word, but in those conditionals where the counterpart of *if* is a complementizer, *by* is free to occupy any

10. This sentence is actually not bad if *wtedy* (‘this time/then’) refers to yesterday, but this is not the ‘correlative reading’.

position in the clause, as the requirement that C^0 is filled is satisfied by the complementizer. That *by* is attracted to C^0 as a result of operator movement also explains why exactly those *if*-clauses where *by* is obligatorily in second position are incompatible with such Main Clause Phenomena (MCP) as contrastive *to*-topicalization, long extraction of adjuncts and speaker-oriented adverbs. As proposed by Haegeman (2007, 2010a, 2010b, this volume) the constraints on MCP are a syntactic consequence of operator movement. A syntactic and semantic consequence of operator movement is the availability of the correlativization strategy (Bhatt & Pancheva 2006), and I have demonstrated that the same type of *if*-clause that exhibits restrictions on MCP (i.e. hypothetical conditionals as opposed to factual/relevance conditionals) is available for correlativization.

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