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Edited by Lobke Aelbrecht, Liliane Haegeman and Rachel Nye
Main Clause Phenomena

New Horizons

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INTRODUCTION

Main Clause Phenomena and the privilege of the root*

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1. Main clause phenomena: The familiar view

In his seminal work, Emonds (1970, 1976)\(^1\) distinguishes two classes of transformations: ‘structure-preserving’ transformations and ‘root’ transformations. The former ‘preserve structure’ in the sense that a constituent of a specific category is moved to a position which hosts constituents of the same category and which is independently projected in every sentence. For instance, the movement of the object to the subject position in passive sentences is structure-preserving, as subject positions are nominal positions generated independently of passivization. Root transformations, on the other hand, can create new positions at the root of the sentence (‘S’). Parenthetical formation and tag questions typify such root transformations (Emonds 1976:2, (2)). In the literature, operations that are restricted to root domains have also been referred to as Main Clause Phenomena (MCP), and the terms have often been used

* This term is borrowed from Rizzi (1992, 2005, 2006), where it relates to the phenomenon of root deletions.

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1. Emonds’ (1970) dissertation was published as Emonds (1976). Henceforth we refer to the published version.
interchangeably. The proper characterization of root transformations, or MCP as they are now widely referred to, and of the contexts in which they can occur, has been debated.

One characteristic feature of root transformations is that they are by and large restricted to non-embedded domains. However, Hooper & Thompson’s (1973) influential paper shows that patterns identified by Emonds as root transformations are permitted in a restricted set of embedded contexts, a point acknowledged by Emonds himself (1976: 7, Note 6), and one to which he has returned in subsequent work (Emonds 2004, this volume).

In terms of the phenomena themselves, the MCP literature often focuses primarily on the English data discussed in Emonds (1976) and Hooper & Thompson (1973), and treats MCP as a homogeneous phenomenon. The papers in this volume include novel data drawn from a range of languages, extending the inventory of MCP. On the basis of the expanded data set, we are led to the conclusion that MCP are better conceived of as a cluster of phenomena that do not necessarily fall under a single analysis.

The remainder of this section focuses on the traditional take on MCP as it has been shaped by Hooper & Thompson (1973, henceforth H&T). We present some of the patterns typically considered to be MCP and summarize H&T’s account for their distribution. Section 2 returns to Emonds’ original observations. Section 3 elaborates on the distinctions made between types of MCP, and discusses left periphery ellipsis. This phenomenon appears to distribute like MCP, yet seems to have escaped the attention of most linguists working in this domain since Emonds.

1.1 A first inventory of MCP

One pattern identified as a MCP by Emonds (1976) and Hooper & Thompson (1973) is Negative Constituent Preposing, exemplified in (1a) (H&T: 466, their (3)). This involves fronting of a negative constituent in combination with Subject Auxiliary Inversion (SAI), and generally only occurs in root contexts, see (1b) (H&T: 466, their (4)). As (2) shows, however, not all non-root contexts disallow Negative Constituent Preposing.

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2. The term ‘Main Clause Phenomena’ (MCP) has gained currency over Emonds' original label 'Root Transformations' in recent years, as the term 'transformation' is not used in current implementations of the generative framework. 'Root Phenomena' is another more recent label for the phenomena under discussion here. See Section 3 of this paper, and Miyagawa (this volume) however, for some discussion of a typology that uses the terms 'Root Phenomena' and 'MCP' to set apart two different categories.
(1) a. I’ve been out of work before, but never have I had to borrow any money.
   b. *The fact that never has he had to borrow any money makes him very proud.

(2) a. Robert was quite nervous, because never before had he had to borrow any money. (H&T: (5))
   b. Alice vowed that under no circumstances would she loan me the key. (H&T: (5))

Other MCP listed by H&T include VP Preposing (cf. (3)), Prepositional Phrase Substitution (cf. (4)) and Topicalization (cf. (5)). The b-examples below provide an embedded context where the patterns are illicit, while the c-examples illustrate the fact that some embedded clauses do allow them. H&T note that by giving more importance to a particular element in the sentence, all of these movement rules create “a more emphatic sentence” (H&T: 469). All examples are taken from H&T.

(3) a. Sally plans for Gary to marry her, and marry her he will.
   b. *Sally plans for Gary to marry her, and it bothers me that marry her he will.
   c. Sally plans for Gary to marry her, and he vows that marry her he will.

(4) a. On the wall hangs a portrait of Mao.
   b. *The guide was surprised that beyond the next hill stood a large fortress.
   c. The scout reported that beyond the next hill stood a large fortress.

(5) a. This book you should read.
   b. *It was impossible that each part he had examined carefully.
   c. The inspector explained that each part he had examined very carefully.

1.2 A semantic restriction on MCP

H&T argue that the restriction of MCP to (declarative) matrix clauses and certain types of embedded contexts “is a natural consequence of their emphatic function, since many embedded sentences cannot be emphatic” (H&T: 472): MCP are restricted to asserted clauses because the particular emphasis they encode is incompatible with non-asserted clauses, e.g. questions, imperatives and presupposed embedded clauses. Declarative main clauses are (speaker) assertions, and are hence compatible with MCP.

3. For more MCP and examples, see H&T.

4. H&T observe that some speakers find the b-sentences more acceptable than others. Speaker variation in the acceptability of MCP in certain contexts is an interesting and under-researched topic, but one which we are unable to give the attention it deserves.
In addition, those embedded clauses which qualify as assertions also allow MCP. The relevant embedded contexts include sentential complements of verbs of saying or thinking. On at least one reading, the complement clause of such verbs is not presupposed, but conveys a reported assertion, with the matrix predicate functioning as a parenthetical. Amongst embedded clauses incompatible with MCP are complements of emotive verbs: such clauses are presupposed, and presupposition and assertion are taken to be mutually exclusive (H&T: 479). With respect to factive verbs such as realize, know etc., which are standardly assumed to have a presupposed complement, H&T point out that in fact these verbs have at least one reading on which their complement is asserted, and in such cases MCP are licit.

The claim that MCP are restricted to assertive contexts captures their distribution: MCP are prohibited in questions, in complements that are reduced clauses (infinitives, gerunds5 and subjunctive clauses) and in complements of nouns such as claim, report, announcement and idea, because such clauses are not asserted (see H&T: 484–485). In addition to complement clauses, H&T also discuss restrictive and non-restrictive relative clauses (see Rutherford 1970), as well as adverbial clauses, and argue that there too, the notion of assertion plays a role in determining whether or not MCP are available.

To sum up, H&T take a semantic-pragmatic approach to the restriction on MCP: by virtue of their emphasizing function, MCP depend on assertion and are excluded from presupposed clauses, because “it is not appropriate to emphasize elements of a sentence whose proposition is already known, whose truth is presupposed, and whose content is relegated to the background” (H&T: 495).

1.3 A broader view of MCP?

One concern with Hooper & Thompson’s (1973) analysis, and with subsequent work that pursues their semantic-pragmatic approach, is that, as noted by Heycock (2006: 190), a fully operational definition of assertion is not available. H&T set assertion against presupposition, and claim that only assertions are compatible with MCP. However, they also note that some clauses can neither be considered asserted nor presupposed, for instance those associated with predicates such as likely or impossible. Such clauses also exclude MCP. On the other hand, for adverbial clauses, being non-presupposed is argued to be sufficient to allow MCP (H&T: 494).

A second and more important issue with H&T’s discussion of MCP concerns the demarcation of MCP, i.e., syntactic phenomena whose distribution is by and large

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5. Culicover & Levine (2001) signal that “Gerundive clauses are rather more tolerant of topicalization than infinitive clauses” (2001:297). Given that gerunds are usually taken to be factive (cf. Kiparsky & Kiparsky 1970), their compatibility with topicalization is surprising under H&T’s account.
restricted to root contexts. Whilst H&T’s discussion might give the impression that MCP constitute a homogenous class of phenomena, an even broader range of syntactic phenomena with a similarly restricted distribution can be found. It does not appear that these can all be captured in terms of the property of emphasizing an element in the clause, nor are they all obviously tied to assertion. Such phenomena will be discussed in Section 3. Moreover, unlike the operations exemplified in (1)–(5), some of the phenomena we discuss are genuinely restricted to root clauses and are not embeddable at all.

Before introducing new instances of MCP, we turn to Emonds’ (1976) original syntactic approach to root transformations. Whilst much of the MCP literature subsequent to H&T has primarily been concerned with the subset of root phenomena which they identified as MCP, and which have come to be seen as the prototypical cases, Emonds in fact already points out a considerably wider range of phenomena which could potentially be considered as cases of MCP.

2. Back to the roots: Emonds (1976)

2.1 A syntactic classification of transformations

Emonds (1976) is an attempt to elaborate a principled typology of syntactic ‘transformations’, i.e., operations that modify the structural representation. He identifies both ‘structure-preserving’ transformations, and ‘root’ transformations.6

The former do not modify the structure. As discussed above, the movement of the direct object argument in passive sentences from the complement position of the VP to the subject position is structure preserving because the subject position (SpecIP or SpecTP in current terminology) is independently generated as an NP position.

Root transformations operate on the root S node, hence they can only apply in a root sentence, defined by Emonds (1976:2) as “an S that is not dominated by a node other than S”.7 From Emonds’ discussion it transpires that he does not conceive of ‘root transformations’ as a homogeneous group. He distinguishes three subcategories (Emonds 1976:42):

(6) a. COMP substitution rules, which do not induce comma intonation;
   b. Root transformations that induce comma intonation;
   c. Inversion Rules.

6. Emonds also identifies a third type, ‘local’ transformations. Since these are not crucial for our current discussion, we leave them aside here.

7. In this paper we limit our discussion to the core of his original account. We leave it to Emonds himself to discuss his current position (Emonds this volume).
Root transformations of type (6b), include tag formation, right and left dislocation, and parenthetical formation. The inversion rules of (6c) cover subject auxiliary inversion for question formation and negative inversion. For reasons of space we limit our discussion in this paper to the first type of root transformations, (6a), namely COMP substitution rules. Although categorized as a subset of ‘root’ transformation (Emonds 1976:42), such transformations also ‘preserve structure’ as they move a constituent to a position ‘COMP’, which is independently available in the base.

2.2 COMP substitution rules

According to Emonds, “there is evidence that all the root transformations that front phrasal constituents without inducing comma intonation are substitutions for the sentence-initial COMP node” (Emonds 1976:43). Such fronting operations are also the transformations which H&T choose to focus upon, some of which are illustrated above in (1)–(5). The crucial evidence for the claim that these transformations front a constituent to a single designated position (‘COMP’) is that combining two or more such fronting operations leads to ungrammaticality. For instance, VP preposing is incompatible with topicalization (see (7)) (Emonds 1976:41, his (49), cf. also Breul 2004:199–205 for a detailed survey of multiple fronting in English). A second argument for analysing these fronting operations as movement to COMP is that they are incompatible with \textit{wh}-fronting, itself by hypothesis movement to COMP, see (8) (cf. Breul 2004:201–203).

\begin{itemize}
\item \textbf{(7)} *He said I would like her and her like I do.\footnote{Some speakers accept some instances of multiple fronting (see Radford 2010). See Breul (2004:199–205) for discussion, and Haegeman (this volume) for an intervention account of the restrictions on multiple fronting.}
\item \textbf{(8)} *Robin knows where, the birdseed, you are going to put. (Culicover 1991:5, his (6c))
\end{itemize}

In other words, such fronting operations, including \textit{wh}-fronting, can be analysed as substitutions for a position generated in the base (Emonds 1976:43, (51)). The
conditions on such transformations are thus syntactic: they depend on the specific availability of COMP. Observe that Emonds’ syntactic analysis does not by definition ban such transformations from embedded domains: their availability will depend on the syntactic properties of the embedded domains and ought to be available in the case that an embedded COMP can host the fronted constituent.

2.3 Deletions as MCP

In the final chapter of his book, Emonds turns briefly to a set of deletion rules which, like root transformations, “apply only in independent clauses” (Emonds 1976:244). He observes that “such rules appear to delete just those constituents (COMP, NP, and AUX) that are immediately dominated by S; this is reminiscent of the fact that root transformations attach constituents immediately under root Ss” (Emonds 1976:244).

\[(9)\]
\[
\begin{align*}
\text{a. Deletion of the subject NP } & \text{you and the auxiliary } \text{will} \text{ in subjectless imperatives:} \\
& \text{(You will) Please come in immediately.}
\end{align*}
\]
\[
\begin{align*}
\text{b. Non-availability of the complementizers } & \text{that} \text{ and } \text{whether} \text{ in main clauses (i.e., their appearance in dependent clauses only):} \\
& \text{(*That) John will arrive soon.}
\end{align*}
\]
\[
\begin{align*}
\text{c. Deletion of the auxiliaries } & \text{be, have, and } \text{do} \text{ sentence-initially:} \\
& \text{(Schmerling 1973)}
\end{align*}
\]
\[
\begin{align*}
& \text{(Are) You feeling pretty lonely?}
\end{align*}
\]
\[
\begin{align*}
\text{d. Deletion of the subject } & \text{you} \text{ after deletion of the auxiliary:} \\
& \text{((Are you) Feeling pretty lonely?}
\end{align*}
\]

The similarity in distribution these deletions show to ‘classic’ MCP has barely been pursued in the subsequent literature. One notable exception is Green (1976), who refers to the deletion operations listed in (9c,d) as ‘truncations’, adding subject omission as in ‘Went downtown yesterday’ to the inventory (see also Schmerling 1973 & Thrasher 1977). Green (1976) notes that unlike certain other MCP, which are available in a restricted set of embedded domains, these ‘truncations’ are strictly non-embeddable.

The question arises as to what it is about the root domain that makes it the privileged domain for such deletions, and to what extent a unified account of these and other MCP is possible, or desirable. In Section 3.1 we consider distributional differences amongst MCP, whilst in Section 3.4 we pay closer attention to root deletions.

in terms of intervention effects on movement: in (8) above, for instance, the topicalized constituent blocks wh-movement (see Rizzi 1990 and much subsequent work for elaboration). See also Haegeman (this volume).
3. Towards a typology of MCP

A main strand of the MCP literature is concerned with the attempt to characterize and account for the environments in which MCP are permitted. Since Emonds (1976), comparatively little attention has been paid to the question of the extent to which MCP constitute a homogeneous class. On closer inspection, the concept MCP appears to encompass an array of distinct phenomena for which a unified analysis is not readily available. Firstly, not all MCP distribute alike: as shown by Miyagawa (this volume), a distinction emerges between H&T-type MCP, which are possible in a restricted set of embedded domains, and ‘genuine’ root transformations which are incompatible with embedding. Secondly, not all MCP have the same emphatic function. Left edge ellipsis phenomena, which pattern with root transformations, are a case in point. Including these in the discussion inevitably raises new questions about the privileged status of the root.

3.1 MCP vs. root phenomena

Miyagawa (this volume) contributes to the debate on the non-unitary nature of MCP (cf. Green 1976), providing empirical data that shed new light on a possible typology. He distinguishes MCP of the type discussed by H&T, which occur both in matrix clauses and in a subset of embedded clauses, from ‘genuine’ root phenomena which are restricted to root contexts, i.e., in non-embedded clauses. For Miyagawa, MCP and root phenomena are syntactically distinct, stemming from different structures and giving rise to different effects.

To account for the distribution of H&T-style MCP, which occur in a subset of embedded domains as well as root environments, Miyagawa adopts the syntactic intervention approach of Haegeman (2010a,b, this volume). The relevant transformations coincide to a large extent with those for which Emonds adopts a movement to COMP analysis, which would currently be seen in terms of movement to (an articulated) CP.

Miyagawa’s root phenomena, on the other hand, are strictly unembeddable. Unlike H&T-style MCP, root phenomena do not seem to create information structure-related effects such as focusing or topicalization, but rather involve encoding the relationship between speaker and hearer. He argues that the more restricted ‘genuine’ root phenomena depend on the availability of an additional structural layer

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11 Miyagawa reverts to H&T’s original assertion vs. non-assertion contrast to account for the distribution of attitudinal adverbials, which share the distribution of MCP but do not seem to involve movement to the left periphery. Haegeman (2010b) shows that their distribution can also be derived by considerations of locality.
above the CP, which serves to anchor the utterance to speaker and to the discourse context. When the relevant structural layer is unavailable, ‘strictly’ root phenomena are illicit. To implement this proposal, Miyagawa adopts an updated version of Ross’ (1970) performative analysis, according to which there is a speech act projection (SaP) dominating CP (cf. Speas & Tenny 2003; Haegeman & Hill 2010).¹²

Other linguistic phenomena can be argued to pattern with Miyagawa’s ‘root phenomena’, such as certain left peripheral discourse particles and interjections which occur only in root environments. Though using various implementations, Munaro & Poletto (2003, 2009), Hill (2007a,b; 2009), del Gobbo & Poletto (2008), Munaro (2010), Haegeman & Hill (2010), and Poletto and Zanuttini (2010) for instance, all analyze particles on the clause edge as instantiations of a structural layer dominating CP, which encodes anchoring of the clause to the discourse. This discourse anchoring may also be relevant to the phenomenon of left edge ellipsis, discussed below.

It remains to be seen whether ‘MCP’ and the more restricted root phenomena have shared properties, and also to what extent the class of root phenomena itself is homogenous.

### 3.2 V2 and the typology of MCP

A further issue which arises is how verb second (V2) effects, frequently also considered to be a case of MCP (cf. Emonds 1976: 25–26), fit into the typology. It is well-known that whilst V2 is obligatory in main clauses (cf. (10)) in languages such as Dutch and German, it is excluded from embedded clauses introduced by an overt complementiser (cf. (11)).¹³

(10) *Hij zei dat [dit boek had Lisa gelezen].
    he said that this book had Lisa read
    ‘He said that this book Lisa had read.’

(11) *Hij zei dat [dit boek had Lisa gelezen].
    he said that this book had Lisa read
    ‘He said that this book Lisa had read.’

In the Mainland Scandinavian languages (Danish, Swedish, Norwegian), however, the situation is different: whilst V2 is similarly obligatory in main clauses, it can

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¹² The hypothesis that there is structure dominating CP which encodes the speech event is also reminiscent of Banfield (1982). More recent syntactic implementations of the same idea are found in Zanuttini (2008) and Sigurðsson (2004, 2011).

¹³ Dutch and German differ in that in the latter the complementizer introducing the embedded clause can sometimes be omitted, triggering embedded V2.
also optionally occur in embedded clauses which are the complement to particular matrix predicates, such as say (cf. (12), example (5b) from Wiklund et al. (2009)). These turn out to be precisely those complement clauses which H&T identified as accepting MCP.14

\[(12)\]  
\[
\text{Han sa att } [\text{den här boken hade Lisa läst}].
\]

he said that this here book-the had Lisa read

[Swedish, embedded clause V2]

‘He said that this book Lisa had read.’

In other words, in Miyagawa’s terms, in some languages V2 appears to distribute like a ‘real’ root phenomenon and in others it distributes like an instance of MCP, i.e., with restricted embeddability.15 Migdalski (this volume) independently reaches the conclusion that “V2 encompasses a number of different operations”. Yet there is no indication of any corresponding difference in interpretation for the two types of V2. Dutch V2 is a true root transformation, but does not seem to convey a particular speaker-hearer relation. Swedish V2 distributes like MCP such as topicalization, and yet does not seem to convey emphasis. Data such as these suggest that in distinguishing MCP/root phenomena, Miyagawa (this volume) has highlighted an area in need of further research.

### 3.3 An alternative typology of MCP

Heycock (2006) also divides MCP (or ‘root phenomena’ in her terminology) into two classes. However, rather than making the division on the basis of distribution, as in Miyagawa’s approach, her typology is based on the nature of the MCP themselves. She distinguishes between structural phenomena, and non-structural phenomena.16 The former class comprises the familiar H&T-type cases covered by Emonds’ (1976) COMP substitution rules, such as topicalization and negative preposing, as well as verb second, and certain Japanese and Korean topic markers, whilst the latter includes particular adverbial adjuncts and interjections discussed by Green (1976). As these are often associated with ‘speaker attitude’ (Heycock 2006: 187), it might be tempting

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14. There is a vast literature on V2 which provides detailed illustration and discussion of the various patterns found in Scandinavian; see for instance Holmberg & Platzack (1995), Vikner (1995), Heycock (2006), Wiklund et al. (2009) and Franco (this volume). Our discussion is inevitably a simplification.

15. Icelandic and Yiddish show generalized embedded V2 (Iatridou & Kroch 1992). Presumably in these languages V2 is neither a Root Transformation nor a case of MCP.

16. De Cat & Lahousse (2011) combine the structural/non-structural distinction with a second dimension of whether or not a given MCP has interpretive import. De Cat (this volume) proposes that the distribution of MCP is dependent both on the properties of the phenomena themselves, and of the clauses hosting them.
to see a link with Miyagawa's strictly root phenomena, which involve a speaker-hearer relation. However, such an attempt at unification runs into immediate difficulties. Firstly, Heycock's non-structural phenomena are not all limited to strictly root contexts. Secondly, Miyagawa's strictly root phenomena do appear to be 'structural' in the relevant sense.

In conclusion, whilst there is as yet no established classificatory system for MCP/root transformations, there is a growing awareness of the fact that phenomena that are sensitive to the root/non-root distinction, both within and across languages, cannot simply be assumed to form a homogeneous class. The papers in this volume discuss a diverse range of MCP from different languages, and thus widen the data set to be taken into consideration in any attempt at drawing up a typology of MCP.

3.4 MCP: The unusual suspects

In the first section of this paper we gave an overview of the patterns commonly discussed in the literature as representative of root transformations/MCP (see Heycock 2006 for a survey). Most of these involve movement to the front of the clause, and this has led to analyses of MCP in terms of the syntax of the left periphery. Though implementations differ widely, syntactic accounts offered for the distribution of MCP imply directly (as in truncation accounts) or indirectly (as in the intervention account) that MCP are instantiated in a structurally rich left periphery, and that the structure needed to generate MCP is unavailable in domains which resist MCP (see Haegeman this volume for discussion and references). Similarly, in postulating that MCP depend on 'assertion', semantic/pragmatic accounts suggest that domains that manifest MCP are 'richer' in that they encode this property (see Vermeulen 2010 on Japanese).

In this section we turn to patterns which can be subsumed under the term 'left edge ellipsis'. Whilst distributionally they qualify as root phenomena, they are not typically discussed in the literature on MCP (but see Emonds 1976 and the discussion in Section 2). These root phenomena do not have an emphatic effect and under certain approaches, their analysis actually involves structural impoverishment, rather than enrichment, of the hosting clause. Space limitations mean that our discussion is not exhaustive, either in terms of the relevant data or in terms of the analyses presented, and we refer the reader to the literature cited for full discussion. We hope nevertheless to give an initial indication of the wealth of phenomena which are sensitive to the root/embedded contrast, and for which an analysis as MCP could potentially be revealing.

As discussed in Section 2 above, certain ellipsis patterns are restricted to the root domain. (13) illustrates a phenomenon usually referred to as 'topic drop': (13a) is from
colloquial Dutch, (13b) is from European Portuguese (Raposo 1986), (13c) illustrates topic drop with wa stranding in Japanese (Nasu this volume, Sato 2007):17

(13) a.

‘En The Master?’ – ‘Heb ik al gelezen.’ [Dutch]

and The Master have I already read
‘And The Master?’ – ‘I’ve already read that one.’

b. *Joana viu na TV ontem* [Portuguese]

Joana see-past-3sg on TV yesterday
‘Joana saw it on TV yesterday.’ (Raposo 1986: 373)

c. A: Keetai-wa dono kisu-ga hayatteru no? [Japanese]

mobile-top which machine-nom popular Q
‘Speaking of mobiles, which machines are popular?’

B: Ø-wa Sony-no kisu-ga hayattemasu.

Ø-top Sony-gen machine-nom popular
‘(Speaking of them), Sony’s machines are popular.’

(Nasu, this volume: his (1))

These patterns are all confined to root environments: Dutch does not allow argument omission in embedded environments (cf. (14)) and as discussed by Nasu (this volume), and Sato (2007), Japanese wa-stranding is a root phenomenon. This makes them a candidate for genuine root phenomena of the sort discussed by Miyagawa (this volume) and in Section 3.1.

(14) Ik zeg je dat ik *(hem) al gezien heb.*

I tell you that I him already see-part have-1sg
‘I tell you that I’ve already seen him.’

Descriptively, all the above examples seem to involve left edge ellipsis. In each case the leftmost constituent of the sentence is deleted, and the deleted constituent is recoverable from the context. Such patterns have been noted in the literature, and there have been several attempts to provide a syntactic account for them.

Raposo (1986) offers a movement analysis for Portuguese topic drop. A topic constituent, whose content is recoverable from the discourse, is moved to the specifier of a left edge position, SpecCP (or SpecTopP in an articulated left periphery (Rizzi 1997)). Assuming a constituent in the specifier of the highest projection in the clause remains covert, the non-realization of topics is explained. What this does not account for is the fact that topic drop is a root phenomenon: why is it that a constituent in the specifier of the relevant projection in an embedded clause cannot similarly remain covert? Why is the specifier of the root privileged for ellipsis?

Two quite different approaches to answering this question have been pursued in recent years. We briefly outline these here.

One possibility is that left-edge ellipsis is licensed by association of the elided element with (abstract) projections dominating CP, where the proposition is anchored to the discourse (cf. Miyagawa this volume; Nasu this volume; Sigurðsson 2004, 2011; Sigurðsson & Maling 2010. See also Zanuttini 2008 on subject ellipsis in imperatives). If this higher structure is limited to root contexts, the restriction of left-edge ellipsis to the same domain follows.18

Rizzi’s (2005, 2006) account for left edge ellipsis differs. He adopts a phase-based approach to account for the privileged status of the specifier of the root in undergoing ellipsis. Following Nissenbaum (2000), Chomsky (2001), spell-out is phase-based: more specifically, when the derivation reaches the root CP level, its TP complement is sent to spell-out, but the C head and the CP edge are not (cf. Rizzi 2005: 529). This explains why the head of the matrix (root) CP does not receive a phonological realization. Rizzi develops a unified account for topic drop and subject drop, which explores the idea that left edge ellipsis arises through structural truncation of the topmost layers of structure. Adopting the articulated CP (Rizzi 1997), he suggests that languages may differ with regard to which projections can constitute a Root Phase. Universally, ForceP can be a Root Phase, but some languages have the additional possibility for the computation to stop lower in the structure. Specifically, in languages with topic drop, the computation can stop at TopP, which then becomes the Root Phase. Hence the complement of Top is sent to spell-out, but the top head itself and material in its specifier are not. As a result, the constituent in SpecTopP is not overtly realized.

Following Raposo (1986), the derivation of (13b), repeated as (15), involves topic movement to SpecTopP. If the derivation terminates at TopP, Top’s complement spells out and the fronted topic itself remains non-overt. Sato (2007) offers a similar analysis for Japanese wa-stranding.

(15) \[ \text{TopP DP [FinP [TP A } Joana [T viu ] [VP viu tDP nante.} \] \[ the Juan saw on TV Ontem.} \] 

Whilst Rizzi’s approach allows for a unified account of various left-edge ellipsis processes, the question remains as to what determines which projections can be a root phase in a given language.19

Relevant for our broader concerns is the fact that Rizzi’s approach to left edge ellipsis appeals to a truncated structure to account for this root phenomenon. This

18. Ultimately, this approach would be compatible with truncation accounts given for the restricted distribution of MCP (see Haegeman this volume).

19. For instance, the V2 property cannot be the decisive factor for the fact that TopP is a phase in Dutch and German. Though a V2 language, West Flemish does not have ‘German style’ topic drop.
contrasts with the view that domains permitting MCP are somehow ‘richer’. Pending further investigation, this would support the view that MCP are not a homogeneous class, and hence that a unitary account in terms of one single property is unlikely to be sufficient to capture their distribution.

The next and final section gives a brief overview of the papers in this volume, and the contribution each makes to the issues raised above.

5. Outline of this volume

The volume consists of two parts, containing thematically grouped papers. Part 1 has seven papers, which deal with issues concerning MCP as a class – their distribution, typology, syntax and semantics – from a range of different perspectives. The papers in Part 2 focus on specific phenomena, and fall into three groups. A first group discusses particles and agreement markers, a second group looks at complementizers and verb second phenomena and the final part discusses adverbial clauses. In what follows, we briefly summarize each paper.

As made clear in this introductory paper, Joe Emonds’ work is the starting-point for discussion of root transformations/MCP, so it is natural for his contribution to open the volume. Emonds’ paper revisits the Tensed S Constraint, starting with the question of why MCP occur only in main clauses and a limited type of embedded clause, called indirect discourse. Emonds postulates a set of a-categorial root projections (“Discourse Shells”). Root movements are structure preserving and target the specifier or head of these a-categorial or “label-less” projections.

Richard Larson and Miyuki Sawada propose a “semantic closure” account in which root transformations trigger existential closure in an adverbial, binding all available variables in a restriction, and all but the main variable in the scope. As a consequence, they induce a vacuous quantification violation in the first case, but not in the second.

Shigeru Miyagawa's paper looks at allocutive agreement in Souletin, a Basque dialect. The distribution of the allocutive agreement is parallel to the politeness marking on the verb in Japanese. Miyagawa proposes that, despite Japanese being characterized as a typical agreement-less language, the politeness marker is, in fact, second-person agreement, limited to the root clause. His discussion leads to a distinction between (strictly) Root Phenomena, and Main Clause Phenomena. To encode such root agreements, he postulates a speaker-related projection dominating CP (cf. Ross 1970; Speas & Tenny 2003).

The fourth paper in this part is by Liliane Haegeman. Focusing on the absence of argument fronting in English adverbial clauses, she proposes that the restricted distribution of MCP follows from locality conditions on movement. She revisits the ‘truncation’ accounts which postulate that a segment of the articulated left periphery is
unavailable, and develops an intervention-based account for MCP, in which the effect of 'truncation' is no longer stated as a primitive but is syntactically derived.

A different approach is taken by Cécile De Cat, who explores root phenomena with an interpretive import, and identifies three kinds of data which go unaccounted for under purely syntactic approaches: the gradience in acceptability of MCP in different clause types, the variable behavior of peripheral adverbial clauses, and the existence of root phenomena in “fragments”. She argues for an interface account, where most of the burden of licensing falls on the interpretive component.

David Lightfoot shows in his paper that there are two ways to explain matrix/embedded domain discrepancies: through principles of UG or principles of language acquisition. According to his paper, the degree-0 approach to language acquisition can account for such discrepancies, and he argues that the two approaches should be combined for the best results.

In the final paper of this part, Mark de Vries starts from the observation that syntactic and semantic characteristics canonically associated with main clauses do not always go together, and from this perspective discusses two puzzling construction types: appositive relative clauses and quasi-relatives.

The papers in Part 2 have a greater emphasis on specific MCP, although each contributes to our conception of the bigger picture. The first group of MCP we introduce are particles and agreement markers, and the first author is Norio Nasu. On the basis of both the syntactic and pragmatic characteristics of topic particle stranding – a previously little-discussed phenomenon in Japanese, whereby a topic particle appears in sentence-initial position without an overt topic phrase – he argues for the existence of a projection above ForceP in the CP domain.

Marco Coniglio and Iulia Zegrean present data on discourse particles in Romance languages as well as Germanic, which support the splitting of Rizzi’s (1997) ForceP into two distinct projections: Illocutionary Force and Clause Type. This captures the cross-linguistic properties of such particles at discourse level, and also their syntactic restrictions. Specifically, each particle can occur in certain clause types, and they are only licensed in clauses with ‘root properties’.

The third and final paper in this group deals with the irrealis particle by in Polish conditionals. Barbara Tomaszewicz observes that when by is in C0, MCP are precluded, and when it is in a lower position, MCP are available. She suggests that the movement of by to C0 accompanies the A’-movement of a world operator in conditional clauses (Bhatt & Pancheva 2006; Haegeman 2010b). As in Haegeman’s (2010b) approach, the moved operator acts as an intervener for MCPs.

The second set of phenomena dealt with are complementizers and the Verb Second pattern, which we group together as they are often claimed to be related. First of all, Rita Manzini argues that the nominal nature of complementizers in many languages points to the conclusion that this extra embedding layer is nominal. Her paper
also addresses the question of whether the structures they create are more similar to headed relatives or to free relatives, arguing in favour of the latter.

Approaching complementizers from a different angle, Virginia Hill’s paper focuses on Romanian main clauses introduced by the complementizer că ‘that’. Her analysis capitalizes on the proposal that a field for encoding conversational pragmatics is projected above ForceP (cf. Ross 1970; Speas & Tenny 2003). Force can be spelt out as că when the derivation proceeds beyond this level in assertive clauses.

Irene Franco’s paper focuses on the syntactic and interpretive properties of subordinate clauses in Scandinavian. She presents a cartographic account for the syntax of embedded V2 which assumes the presence of a semantic/pragmatic (null) OP, triggering intervention effects with Wh-fronting. This OP has specific clause-typing properties and depends on the selectional requirements of the matrix predicate and on the interpretation of the whole sentence. The ungrammaticality of V2 in certain clauses is explained as the result of minimal intervention effects.

The final paper in this section is by Krzysztof Migdalski. He analyses two patterns in which a member of a certain natural class follows the initial syntactic constituent, with seemingly few restrictions on what this initial constituent can be. The first pattern is Verb Second in Dutch, the other second position cliticisation in Serbo-Croatian. This paper indicates that V2 is an umbrella term for a number of operations, and challenges the assumption that V2 is necessarily a way of marking the illocutionary force of a clause.

The final group of phenomena-focused papers looks at adverbial clauses. Yoshio Endo’s paper discusses the typology of adverbial clauses. Based on insights from traditional descriptive Japanese grammarians, he shows how the properties of adverbial clauses can be related directly to their internal functional structure, with different adverbial clauses displaying more or less functional structure. He also shows that the internal structure of the adverbial clause determines the point at which it is merged with the clause it modifies.

Vesselina Laskova’s paper discusses the difference between central and peripheral clauses (Haegeman 2010a) in relation to the properties of the Bulgarian non-past verbal form. She suggests that this form is an instantiation of subjunctive mood and argues that its distribution correlates with the distinction between central and peripheral clauses. Additionally, she shows that peripheral clauses are not a homogenous group and can be subdivided into at least two subgroups – premise and adversative clauses.

In the final paper on adverbial clauses, Werner Frey argues that, apart from peripheral adverbial clauses (which allow certain root-phenomena) and central adverbial clauses (which do not), a third class of adverbial clauses has to be distinguished. In German this class contains continuative w-relatives and free dass-clauses. These allow more root phenomena than the peripherals, and show other indications of greater
independence. Frey argues that while the syntactic licensing of central adverbal clauses differs substantially from that of peripheral adverbal clauses, adverbials of the third class are not syntactically licensed at all: they are ‘orphans’, semantically linked to their associated clause only by a specific discourse relation.

The wealth of phenomena which potentially seem to qualify as MCP or root phenomena thus extend well beyond the standard cases usually cited in the literature. The diversity of the empirical data has brought the authors to novel theoretical proposals, and leads us to question the idea that MCP form a homogenous set of data that can be accounted for under a unitary analysis. Individually and collectively, the papers in this volume thus broaden our empirical and theoretical horizons in the domain of MCP.

References


Main Clause Phenomena and the privilege of the root


Sigurðsson Halldór Ármann & Maling, Joan. 2007. Argument drop and the Empty Left Edge Condition (ELEC). Ms, Lund University-Brandeis University.


PART I

Explaining Main Clause Phenomena: 
The bigger picture
Augmented structure preservation and the Tensed S Constraint

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Many grammatical phenomena occur only in “root clauses,” i.e., main clauses and a limited type of embedded clauses called indirect discourse. Among these are certain transformational movements. Earlier generative studies stipulate that root transformational movements are simply exempt from constraints on landing sites of movements.

Two recent more restrictive theories remedy this. Rizzi (1997) restricts landing sites to SPEC and head positions of specially labeled projections such as TopP and FocP. Emonds (2004) proposes rather that such root projections (“Discourse Shells”) have no labels. This essay argues that root movements are then subject, like all others, to Structure Preservation, and that their landing sites are better conceived as SPECs and heads of “label-less” or a-categorial projections.

**Keywords:** discourse shell; dislocation; focus movement; German Verb-second; head movement; left periphery; rightward movement; root transformation; structure-preservation; tensed-S constraint; topicalization

1. Root phenomena and Discourse Shells

In Minimalist terms (Chomsky 1995), a basic question about root phenomena is why (external) *Merge* of the underlined clauses in (1), which can all occur in isolation, is allowed, while *Merge* of their internally rearranged counterparts in (2) is blocked.

(1)  
- a. Mary used his airline since [she could avoid Boston].
- b. The boss was so mad that [we would work only till five].
- c. The idea that [the city might close the airport] didn’t occur to us.
- d. No experiment showed (that) [a metal reacts with such material].

(2)  
- a. *Mary used his airline since [Boston she could avoid].
- b. *The boss was so mad that [only till five would we work].
- c. *The idea (that) [the airport the city might close] didn’t occur to us.
- d. *No experiment showed (that) [such material a metal reacts with].
It is difficult to see how some restriction on (external) Merge, say in terms of feature-checking, can explain in the same terms the restriction on Move (internal Merge) in (3c,d).

(3)  a.  [To fly to India in First Class!] What a luxury!
    b.  [Buying that old car for his holiday!] How foolish!
    c.  *[To India to fly in First Class!] What a luxury!
    d.  *[That old car buying for his holiday!] How foolish!

It is, however, the same restriction, as can be seen by inserting the clauses of (3) into the contexts in (1)–(2).

(4)  a.  The boss was so mad that I’ll fly to India in First Class.
    b.  *[The boss was so mad that [to India I’ll fly in First Class].
    c.  The idea that he bought that old car for his holiday didn’t occur to us.
    d.  *[The idea (that) [that old car he bought for his holiday] didn’t occur to us.

In the last decade, an influential approach has been to assume that phrasal frontings occur freely in all clauses, but are for some other reason restricted to root clauses like those bracketed in (1) and (3a,b); the explicandum then shifts to why the embeddings are ungrammatical in (2) and the main clauses in (3c,d). The idea behind this work is that usually embeddable subordinators, such as since, that, Ø, to, -ing in (2) and (3c,d), are blocked from Merging (and thereby embedding the clauses in question), because the fronted phrases block their Moving into their surface positions (from some deeper positions, where for some unstated reason, they cannot appear either). In these analyses, the fronted phrases in (2) and (3c,d) thus have “intervention effects” which force a derivation to terminate as a root clause or alternatively to “crash.”

This line of research is exemplified in Haegeman (2009, 2011, this volume), who also cites and situates other work in this perspective. But crucially, these authors tend to select constructions with subordinators and complementizers like when and if, which may plausibly Move from clause-internal to clause-initial positions. Haegeman (2009) thus exploits the fact that subordinating conjunctions such as when and before arguably originate as embedded time adverbials inside verb phrases (Geis 1970) and are then subject to Wh-fronting in relative clauses, plus morphological deletions:

(5)  Helen arrived back (at/before the time) (when) the sun sets.
    → Helen arrived back when/before the sun sets.

However, when examples as in (1) and (3a,b) use more neutral subordinators and complementizers, only circular reasoning can conclude that they “move” into their surface positions from some unstated more embedded source, and hence are subject to intervention effects.
The fact is, the exclusion of (non-Wh) phrases in front of subjects is just as robust in embedded clauses such as (2) and (3c,d) as in the relative and temporal subordinate clauses of (5). To account for this, I argue that only a few general principles – and no special categories – are needed to specify the structural “tops” of clausal projections. These notably include (i) the venerable if almost forgotten Tensed S Constraint of Chomsky (1973), which is fundamentally an intervention constraint, and (ii) a drastically simplified Structure Preserving Constraint (“SPC”, Emonds 1970, 1976). These principles can account for the above and many other salient paradigms in unembedded (“root”) clauses in, e.g., English and German, for which such paradigms have been extensively studied.

Perhaps the most important proposal here is that a construct of unlabeled Discourse Shells is the best way to analyze the “left periphery” of root clauses. I use these Shells in place of certain clausal categories of other authors, i.e., the TopP and FocP phrases of Rizzi (1997) and papers using his framework. Such labels, absent from previous grammatical tradition, strike me as ad hoc and unneeded accretions.

(6) **Discourse Projections.** Certain unselected finite clauses IP called Discourse Projections may be immediately dominated by a series of categorically unspecified XPs.

“Unselected” means a clause that is not an argument or adjunct of an underlying lexical item in X⁰ (Emonds 1985: Chapter 3). I propose to refer to the category-less XPs that can dominate unselected Discourse Projections as “Discourse Shells.” Only SPECs of Discourse Shells serve as categorically unrestricted landing sites for movements, the property that characterizes “root phenomena.” The fronted phrases in (2) & (3c,d) are thus excluded because the bracketed IPs in the clauses in (1)–(3a,b) are not Discourse Projections. Therefore, they can’t give rise to Discourse Shells.

At this point then, the class of Discourse Shells includes at least what Rizzi calls FocP, which I claim is an unnecessary category. In the tree below, VP contains a trace of a moved YP.

(7)\[\begin{align*}
\text{XP} &= \text{“Discourse Shell”} \\
\text{SPEC(XP)} &\quad \text{X’} \\
&\quad \text{landing site of YP} \\
&\quad \text{X₀} \\
&\quad \text{IP} = \text{“Discourse Projection”} \\
&\quad \text{∅} \\
&\quad \text{DP} \\
&\quad \text{lexical I} \\
&\quad \text{VP} \\
&\quad \text{lexical lexical}
\end{align*}\]
Some formal properties of the category-less empty head $X^0$ in (7) are welcome, though they then lead to a puzzle. First, in contrast to Rizzi’s $\text{Foc}^0$, the lack of a label can explain why $X^0$ is empty, by virtue of an assumption in almost all grammatical analyses that is rarely made explicit:

(8) **Category Membership.** Each overt morpheme has a category.

It follows from this that no items can be inserted from the lexicon (Externally Merged) *under the unlabeled $X^0$ in* (7).

Some languages of course do have particles for marking focus constituents; Rizzi (1997:287) cites *wè* from the language Gungbe, based on Aboh (2004). Perhaps the most studied focus particles are those (in complementary distribution) that follow focus XPs in Japanese, such as *dake* ‘only’, *mo* ‘too’ and *sae* ‘even’. English *only* and *even*, which generally precede focus XPs, are further examples. Proponents of Rizzi’s “cartographic” approach might analyze the Japanese particles as follows: $[[\text{SPEC}(<\text{FocP}>) \; \text{XP}] \; [\text{Foc} \; [\text{Foc} \; \text{dake/mo/sae}] \; - \; \text{IP}]]$.

However, this structure assigns the wrong constituency. Several criteria justify locating these particles, as well as English *only* and *even*, inside the focus XP; no analysis of them has ever motivated the view that they are not, i.e., no diagnostic suggests that they group with a following clause. Thus, these typical focus particles provide *no support* for the existence of a category $\text{Foc}^0$, exactly as the framework here predicts.

A second restriction on Discourse Shells seems entirely uncontroversial. The lack of a lexical head accounts for why these shells cannot be selected by higher predicates.

(9) **Lexical Selection.** Lexical heads $X^0$ of Specifier and Complement XP must satisfy *selection restrictions imposed by the lexical head of the lowest phrasal domain containing XP.*

Since Discourse Shell heads are empty, they cannot satisfy selection restrictions, i.e., Discourse Shells are not themselves selected.

Lexical Selection (9) has a third far-reaching consequence, namely it predicts the rather free category combinations *inside* Discourse Shells. In standard phrases with labeled heads, various restrictions govern what appears in Specifier and Complement positions. For example, Specifier phrases of lexical I must be DPs, those of lexical D must be possessives, those of lexical A are measure phrases, etc. But the *lack of head categories* inside Discourse Shells means that no restrictions are imposed on their SPECs, i.e., on “FocP” or (later in this essay) on “TopP”. We see this freedom in the following examples, where neither English nor German Discourse Shells exhibit any categorical restrictions on their SPEC.1

1. By the definition of Discourse Projections (6), the Complement in a Discourse Shell is either another category-less shell or a finite clause.
(10) a. \( [\text{DP} \text{What beautiful skirts}]_i [x \emptyset] \text{that girl wears} \_i \! \)!
b. \( [\text{AP} \text{How long}]_i [x \emptyset] \text{the professor droned on} \_i \! \)!
c. \( [\text{NP} \text{Good books}]_i [x \emptyset] \text{we don’t have} \{\text{many/any}\} \text{of} \_i \! \)!
d. \( \ldots \text{but} [\text{VP} \text{eaten that candy}]_i [x \emptyset] \text{she couldn’t have} \_i \! \)!
e. \( [\text{PP} \text{Down the street}]_i [x \emptyset] \text{the baby carriage rolled} \_i \! \)!
f. \( [\text{PP} \text{Down the street}]_i \text{[V rolled]}_j \text{the baby carriage} \_i \_j \! \)!
g. \( [\text{PP} \text{To which child}]_i [\_i \text{should}]_j \text{John give a book} \_j \! \)!
h. \( [\text{DP} \text{Not one book}]_i [\_i \text{did}]_j \text{John give} \_j \text{to this child}. \)!

(11) a. \( [\text{DP} \text{Den ersten Teil}]_i [v \text{hat}] \text{Hans} \_i \text{verpasst}. \)!
   the first part has John skipped
b. \( [\text{NP} \text{Gute Bücher}]_i [v \text{fand}] \text{er nicht viele} \_i \!
   good books found he not many
c. \( [\text{VP} \text{Solche Bücher gekauft}]_i [v \text{hat}] \text{Hans schon} \_i \!
   such books bought has John already
d. \( [\text{PP} \text{Ins Schwimmbad}]_i [v \text{sprang}] \text{Marie} \_i \!
   into.the pool jumped Mary

Given these advantages, the empty heads in Discourse Shells lead to the question: if Discourse Projections are not selected by higher heads, how are the Shells above them with empty heads licensed in trees?

First, they can always appear at the top of trees, i.e., they are the principal locus of “root phenomena.” Since the root of a tree is unselected, we can say:

(12) **Roots. Unselected finite IP are always Discourse Projections.**

Moreover, many languages including English allow *Discourse Projections in the positions of certain types of embedded clauses.* Such structures often diverge in form from standard selected complements:

(13) a. John was thinking, *when could Mary get a holiday?*
b. Sue’s reaction was that *never had she been so offended.*

Emonds (1970, 1976) observed that for many speakers, dependent clause contexts like *warn someone that_____* and *make a promise that_____* mimic the freedom of root structures (= Discourse Projections) in what traditional grammar calls *indirect discourse.*

(14) a. **Topicalization:**
   Bill warned us that [**Boston we should try to avoid.**]
b. **Negative preposing and Auxiliary inversion:**
   I made a promise that [**only till five would we work.**]

Subsequent studies of such “embedded root phenomena”, beginning with Hooper and Thompson (1973), elaborate in various ways on this first rough characterisation,
employing rather vague discourse properties such as “assertion,” “presupposition,” “emphasis,” “contrast,” etc. In formal terms, however, these efforts do not seem to get much beyond the traditional label “indirect discourse”, which I turn to in the next section.  

2. Root-like structures of indirect discourse

Although many seemingly embedded root structures may be spotted in print, heard on the fly, or pop into the minds of native English speakers, such “root-like indirect discourse embedding” (I use an acronym “RIDE”) is nevertheless incompatible with most dependent clause positions. As shown in Emonds (2004), RIDEs in at least English and German:

1. are always finite;
2. substitute for complements rather than adjuncts of some predicate;
3. tend to be introduced by V or A rather than by lexical N or P.
4. Some argument of the introductory predicate must be animate.

This higher animate argument specifies the mental locus of the indirectly reported discourse; in examples (13), these arguments are John and Sue.

Thus, what accounts for the ungrammaticality in (2)–(4) is that these clauses are not RIDEs, i.e., indirect discourse. Each of the bracketed clauses in them violates one or more of the above four criteria. Whenever embedded clauses do not

2. Certain constructions set off by a comma and introduced by what traditional grammar calls subordinating conjunctions, such as “peripheral” because-clauses and if-clauses (Haegeman 2009), have some behavior of root clauses, but for a different reason. Very likely, these conjunctions are not present in trees prior to Spell Out, so these clauses are not complements of a lexical item before the derivation enters PF; hence they have some root properties with respect to LF. But as part of their late insertion these conjunctions must select IPs, which restricts availability of left-periphery landing sites. Such a scenario accounts for why the usual meanings of their heads e.g. because are unavailable in LF.

3. The root-like complements of “light verb” expressions such as make a promise can alternatively be sisters of V rather than N, a result of the extraposition suggested in Ross (1967); cf. (i). Complements unmistakably within NP as in (ii) are not root-like:

(i) A promise was made by John that \([\text{RIDE any defect the firm will fix}]\).
(ii) *A promise that \([\text{IP any defect the firm will fix}]\) was made by John.
satisfy *all four* of these conditions on RIDE positions, root transformations produce clear unacceptability. Further characteristic examples showing these points are in Emonds (2004).

Additionally, RIDE is unavailable even in many finite complements of V or A with animate arguments. For example, Hooper and Thompson (1973) observe that complements to verbs in their taxonomy’s “C class” and “D class” exclude root frontings, giving examples such as *Sally plans for Gary to marry her and it’s possible that marry her he will,* and *He was surprised that never in my life had I seen a hippopotamus.* From all these considerations, it is clear that RIDE is the exception rather than the rule for dependent clauses.

German freely allows embedded Discourse Projections to report indirect as well as direct quotation, giving rise to the much studied second type of Indirect Discourse, in which the finite verb is in second position and there is no embedding complementizer *dass* ‘that’ (Grebe et al. 1973). Both types of German indirect discourse are therefore expressed in RIDEs.

This essay does not try to exactly specify the sentence-internal positions in which Discourse Projections (RIDEs) appear, though English and German appear similar in this respect. (One difference is that RIDEs can appear after English *that* but not after German *dass*; Emonds 2004 has extensive discussion and analysis.) Generally speaking, I maintain my earliest view that they are not simply “embedded clauses like any others.” Along such lines, a reviewer observes that Meinunger (2004) analyzes (German) RIDEs as “almost paratactic” clauses, while Krifka (2001) treats them as separate speech acts. The crux of this issue is how to specify the distribution of indirect discourse, a puzzle for which an elegant syntactic solution has eluded grammarians for centuries. Resolution of this problem will perhaps more likely be found in terms of formal semantic representations; thus, RIDEs may indeed be Krifka’s embedded speech acts. In any case, one thing is certain: these RIDE projections are not simply a subcase of selected clausal complements, so their characterization as “unselected” in the definition of Discourse Projection (6) seems secure.

3. **Predictions of Chomsky’s Tensed S Constraint**

Section 1 showed that the free choice of category types in root fronting is due to the fact that Discourse Shells have no categories and hence no lexical heads (= they are not subject to External Merge) that could impose restrictions on categories in their SPEC. This freedom is nonetheless balanced by a severe restriction (in English and German) on how many such phrases can precede the subject phrase: Discourse Shells binding
more than one trace, one for each YP in SPEC(XP), cannot iterate; that is, *only one phrase can move to the front of each root or root-like clause.*

Since one can distinguish eight distinct subcases of root fronting in English, fully demonstrating the incompatibility of each with all others would require some 30 different sets of examples. A few examples have to suffice; for more examples making this point, see Emonds (1976: Chapter II).

(15) Exclamative fronting + topicalisation:
   a. *[What a stupid campaign], [that whole weekend], Mary spent \texttt{i} on \texttt{t_j}.
   b. *[That whole weekend], [what a stupid campaign], Mary spent \texttt{t_j} on \texttt{i}.

Topicalization + question fronting:
   c. *[That house], [which cousin], did Mary buy \texttt{t_j} for \texttt{t_i}?
   d. *[Which cousin], [that house], did Mary buy \texttt{t_i} for \texttt{t_j}?

Double topicalisation:
   e. *[Bill], [that house], she took \texttt{t_i} to \texttt{t_j} for the weekend.
   f. *[That house], [Bill], she took \texttt{t_i} to \texttt{t_j} for the weekend.

Topicalization + directional PP preposing:
   g. *That big toy into the pool Mary jumped with!*
   h. *Into the pool that big toy Mary jumped with!*

Negative preposing + question fronting:
   i. *Only in the suburbs which banners did they confiscate?*
   j. *Which banners only in the suburbs did they confiscate?*

VP preposing + topicalization:
   k. *…and [\texttt{VP double in price}], [DP that house], I’m sure \texttt{t_j} will \texttt{t_i}.
   l. *…and [DP that house], [\texttt{VP double in price}], I’m sure \texttt{t_i} will \texttt{t_j}.

The *uniqueness of the landing site* for these English preposings is exactly the same phenomenon as the unique “first position” (Vorfeld) of the phrase that precedes a main clause verb in German and Dutch traditional grammars. The fact that the same overriding pattern occurs in both declarative and interrogative Discourse Projections in German and Dutch (with verb fronting), and with or without subject inversion in English, suggests that universal grammar itself is responsible for restricting root phrasal movements to a single landing site in each clause.

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4. Some discussions of fronting seem confused by the fact that adverbials of space, time etc. prototypically PPs, can freely precede subjects in embedded clauses and modify more deeply embedded verbs: *Statistics show that in the next decade we cannot now hope for pollution to subside.* Such examples simply show that adjunct PPs can precede subjects, and can Merge both externally (“deep insertion”) and internally (by movement).
Although this didn’t seem to be his focus, Chomsky’s Tensed S Constraint in *Conditions on Transformations* (1973) predicts this impossibility of movement over a fronted phrase, i.e., an intervention effect.

(16) **Tensed S Constraint, or “Unique Traces Constraint.”**

A trace inside a finite IP sister of $Z^0$ must be bound within ZP.\(^5\)

In the examples of (15), one of two traces in the finite clause must be bound outside the lowest Discourse Shell (ZP); such violations of (16) then all lead to ungrammatical examples.

Chomsky introduced (16) as a way to force long distance Wh-movement to be successive cyclic, and indeed it has this effect. When $Z = [C, +Wh]$, then the closest binder of any trace within an IP sister of C cannot be outside CP. Note that this account works *only if* CPs, like Discourse Shells, have unique specifier positions; this property is thus equally crucial in both Chomsky’s original use of (16) and my use of it.

Digressing from the main line of argument, the Tensed S Constraint was not used to exclude movements to argument positions (in today’s terms, to higher DP positions) which “skip” intervening subjects, but I believe it could be. With a proviso about where in derivations (16) takes effect, it can subsume Chomsky’s separate Specified Subject Condition.

(17) **Generalized Tensed S Constraint.**

A trace inside an IP sister of $Z^0$ must be bound within a maximally extended projection of $Z^0$.

I assume that the Generalized Constraint (17) applies only in the derivational phase for the ZP domain and cannot “look back” into properly contained domains of previous phases.\(^6\)

If the $Z^0$ is a V, then a trace inside its IP sister must be bound within ZP, i.e., by the subject in SPEC(ZP), which is the Specified Subject Condition of Chomsky (1973). In this phasal domain IP, there is not yet any trace of a phrase that eventually

---

5. French and Italian allow left dislocated phrases that bind clitics to the right of focused phrases; see Haegeman (2006). For such systems, statement (16) of the Tensed S Constraint may be too restrictive; cf. Section 5.2. Brame’s (1981) similar formal restriction of Operator Binding focuses on the uniqueness of bound variables in a clausal domain.

6. A maximally extended projection of an IP includes an immediately dominating CP, i.e., a PP whose head Ps are not lexicalized prior to PF (Emonds 1985: Chapter 7). The formulation (17) thus allows traces inside “bare IPs” to be bound by the SPEC(CP) of the next IP above them: *Who, did John seem [bare IP to despise t]*? where $Z = seem$. The possible implications of this proviso need critical examination. The material in this digression is not used in the rest of this essay.
moves into a containing CP, so (17) cannot at this point block such a later operation. A later Wh-movement during a CP phase from within a bare IP embedded in VP could violate the Generalized Constraint, but at this point, it is too late to take ZP as anything but the highest IP.

4. Simplifying/generalizing the Structure Preserving Constraint

4.1 Phrasal movements under Augmented Structure Preservation

Using Discourse Shells, the original SPC (Emonds 1976: Chapter I) can be generalized so as to make unnecessary any special “root transformations” or any other “typology” of transformational operations.

(18) **Augmented Structure Preserving (ASP) Constraint.**

Movements are always substitutions of α for β, where β is not specified for a feature differently than α.

With respect to phrasal movements, all the diverse root fronting operations of YP in (10)–(11) conform to the ASP Constraint, because targets of these phrasal movements to the unique SPEC(XP) position in (7) are not required to have any particular category features selected by X0.

Let me relate this explanation to structure preservation more generally. The idea behind the original SPC, arrived at in discussions with N. Chomsky, was always that transformations are “substitutions” for types of constituents which can be generated at the landing site independently of this movement. In fact, Minimalist movements to Specifier positions which “check features” of adjacent heads are structure-preserving in just this sense: a certain head X0 licenses adjacent phrases with some feature(s) Fi which can be in SPEC(XP) independent of movement (via External Merge) or concomitant with movement (via Internal Merge).

For reasons I do not understand, Chomsky’s later publications and those of closer collaborators have favored more or less unconstrained adjunction instead of restricted structure-preserving substitutions: the “branching COMPs” of early Government and Binding, topicalization as adjunction to IP/S, covert Quantifier Raising in LF, the

7. The changed use of the term “structure-preservation” in *Barriers* (Chomsky 1986) concerns only levels in the bar notation and says nothing about categories. According to *Barriers*, any type of category can substitute for or adjoin to any other (APs could become subjects, post-verbal Cs could move to V and hence I, etc.) This needlessly distorts, weakens and de facto eliminates the original Structure Preserving Constraint, namely that categories Yk substitute for β only in positions where a Yk can appear independently.
never visible adjunction of any phrase to VP in *Barriers*, etc.\textsuperscript{8} The above discussed parsimonious and explanatory system of Discourse Shells, the ASP Constraint and the Tensed S Constraint show the superiority of a substitution-based view of at least phrasal movement.\textsuperscript{9}

### 4.2 Head movements under Augmented Structure Preservation

Subsuming Head Movements under the (Augmented) SPC is conceptually less simple, primarily because, in light of their use in Baker’s (1988) classic *Incorporation*, there seem to be three quite different types of this process. As will be seen in Section 4.2.3, the adjunction version of head movement is in fact not movement at all, but something else.

#### 4.2.1 Head movements limited to root clauses

Certain head movements in English (10) and German (11) are operations in root clauses, i.e., the “root inversions” called I to C and (residual) V to C in English and the general V to C in German and Dutch (“Verb-second”).

According to Augmented Structure Preservation (18), these movements cannot actually target a landing site of category C, since C is a different category from V and I. The finite elements indeed move to a higher head which is a sister of IP, but *only in IPs that are main clauses and RIDEs*. This target of movement is therefore not C, but rather a category-less X\textsuperscript{0} head of a Discourse Shell.\textsuperscript{10}

Consequently, root I and V inversions/frontings move the highest heads in Discourse Projection IPs to X\textsuperscript{0} heads of Discourse Shells, which are unspecified for features and hence can be the target of ASP movement. As a result of this Internal Merge, these X\textsuperscript{0} acquire category labels, even though Category Membership (8) prevents External Merge under X\textsuperscript{0}, i.e., insertion directly from the lexicon.

There still remains the issue of why in German and Dutch finite head verbs move to second position (the head of a Discourse Shell) in *every* main clause, while in English fronting from the Tense/Modal position is limited to only a few constructions. Emonds (2004: Section 4) provides a detailed analysis linked to the obligatory vs. optional presence of subordinating complementizers in the two languages, but any particular analysis of this difference is independent of the ASP claim about the nature of the landing site of moved finite verbs.

\textsuperscript{8} Lightfoot and Weinberg (1988), in an otherwise entirely favorable review of *Barriers*, strongly critique VP-adjunction as its (unconstrained) “wild card.”

\textsuperscript{9} The ASPC seems to obviate any special mechanism of feature-checking at landing sites. The original SPC applied to SPEC-head configurations is in fact feature-checking in a constrained form; I know of no argument that the SPC is “too strong” a restriction on it.

\textsuperscript{10} The ASPC correctly predicts that root inversions cannot iterate in one clause.
Head movements not limited to roots: Substitutions

Two widely attested substitution movements are V to I (e.g. in French) and N to D (e.g. in Bantu; cf. Ndayiragije 1999). These processes are not in any way restricted to root domains. Some minimal differences must of course distinguish V from I and N from D. Are these movements then still compatible with the ASPC (18)?

Van Riemsdijk (1998, Note 5) argues that I and D are related to V and N respectively in being less specified categorial variants of V and N: “…the resulting node after substitution will contain a feature matrix which is an amalgam of the feature matrices of I and V, or, to put it differently, an I with some of the features of V added to it.” For example, items of category V seem to receive an unmarked interpretation in Logical Form of “activity” (stative verbs are the marked subclass of V which don't). But the category I, while doubtlessly sharing features with V, excludes this interpretation; so when do is inserted in I in questions, before n't, etc. it lacks its otherwise uniform interpretation as activity. (Its irregular morphology shows that it is nonetheless the same lexical item as the verb do.)

Under this view then, V-to-I and N-to-D are movements whose (empty) landing sites have fewer categorial features than the elements moving into them, but no features different from theirs. Hence, such movements of V and N fully conform to the ASP Constraint.

Head adjunctions

The original SPC exempted a formally restricted class of “local transformations” from its scope. Many of Baker’s (1988) incorporations of Y₀ into a next highest governing X₀ fell into this class of rules. But the ASP Constraint makes no provision for them, so such transformational head adjunction is not consistent with ASP.

In my view, closer analyses of such local rules and incorporations have shown that they are not actually transformational in nature. The key to understanding them comes from a non-transformational operation “Merger” motivated in the framework of Distributed Morphology. Merger “generally joins a head with the head of its complement XP” (Halle & Marantz 1993:116). For example, they use Merger as an alternative to Chomsky’s classic affix movement transformation of English, which eliminates both (i) the unwanted transformational “lowering” of morphemes in I to V (Halle & Marantz 1993:134) as well as (ii) the rule’s stipulative restriction to –MODAL values of I.

If Merger is not itself just an ad hoc device to avoid lowering subcases of movement, there must be other instances of it, and some general characterization of all possible Mergers that is independent of Movement. My proposal for this more general syntactic device is (19).

11. Mergers in this sense are thus instances of External Merge (from the lexicon) and not of Internal Merge (movement). Emonds (1985) uses Alternative Realization for such
Generalized Merger/Alternative Realization (“AR”).

A syntactic feature \( F \) canonically positioned in LF on category \( \beta \) can be alternatively realized in a closed class morpheme under \( \gamma \), provided that some projections of \( \beta \) and \( \gamma \) are sisters.

Emonds (2000: Chapter 4) argues that AR covers many familiar syntactic and morphological processes. For example, it is the best mechanism for assigning case to DPs, and more generally covers almost all of what traditional grammar calls “inflection”.

As defined above, AR/Merger is not transformational, but rather a principle that sanctions a certain range of lexical entries of grammatical items. A second good example of AR/Merger relevant to this essay concerns what has often been taken to be “Verb-Raising” of English finite copulas and \( do \). Such a transformation would be limited to just a few items (\( be, \ do, \ have \)), which each act differently under the purported movement and even change their morphological form (\( be \rightarrow is/are/am \)). An elegant alternative is to treat these English finite “auxiliaries” as Alternative Realizations under Tense of (i) \( V \) itself for the item \( do \), and (ii) the feature +STATIVE for the verbs \( be/have \); see Emonds (2000: Section 4.5).

Consequently, when head movement is properly circumscribed and supplemented with lexical AR, it conforms to the ASP Constraint (18). For detailed arguments that justify the restrictions on head movement in (20) and sharply differentiate it from lexical AR, see Emonds (2004).

<table>
<thead>
<tr>
<th><strong>Alternative Realizations</strong></th>
<th><strong>Transformational Head Movements</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>AR is possible only for least marked members of a category.</td>
<td>Head Movement affects all members of a category such as I, V or N.</td>
</tr>
<tr>
<td>AR realizes features lower or higher than their canonical (LF) positions, even in other phrases.</td>
<td>Head Movement always involves raising a node within single properly defined extended projections.</td>
</tr>
<tr>
<td>AR is never sensitive to a root vs. embedded clause dichotomy.</td>
<td>The ASPC (18) determines if a head movement is limited to root clauses.</td>
</tr>
<tr>
<td>Lexical entries specify types of PF positions under ( X^0 ), such as adjoined prefixes and suffixes, and can specify fission or fusion.</td>
<td>Head Movements (V to I; I to C; N to D) are always substitutions. Later adjunction to moved stems can be effected by PF-insertion under AR.</td>
</tr>
<tr>
<td>AR is defined only for closed class items.</td>
<td>Head Movement affects open classes, as in French V to I or Bantu N to D.</td>
</tr>
</tbody>
</table>

configurations, where Marantz’s work uses Merger. The difference between the two is that AR is limited neither to “lowering” nor to bound morphemes (affixation).
Because of these several differences between AR and head movement, the first one being an unambiguous indicator of which of the two non-overlapping mechanisms is at play, I do not hesitate and in fact am forced to let lexical AR and transformational Head Movement co-exist in syntactic theory. As a result, most processes treated in earlier analyses as local transformations or as incorporations are not actually movements, and are orthogonal to the validity of the Augments Structure Preserving Constraint.

There are also some main clause and RIDE phenomena unrelated to the ASPC. Since Structure Preservation constrains only movement, it cannot in principle restrict root phenomena such as speaker-oriented adverbials and parentheticals (Banfield 1982: Chapters 1–3), discourse particles (Coniglio & Zegrean this volume), main clause deletions (Haegeman 1999 and subsequent articles), or honorific marking, e.g. the Japanese suffixal politeness verb -masu as described in Miyagawa (this volume).

A particularly relevant phenomenon of this type, which bears on how to refine this paper's basic approach, concerns the range of root phenomena in Peripheral Adverbial Clauses (Haegeman 2009), mentioned above in Note 2. Frey (this volume), using German data, distinguishes such clauses from both Central and “Non-integrated” Adverbial Clauses. The former are standard dependent clauses, selected by subordinating conjunctions of category P, while the latter are essentially unembedded Roots, as defined in (12). Standing between these two types, the Peripheral Adverbial Clauses are indeed selected, e.g. by da ‘because’ and obwohl ‘although’, but as observed in Note 2, these conjunctions are perhaps inserted only in PF, which may explain why they are “root-like” for example in allowing Discourse/Modal Particles.

Although studies such as these have brought to light and analyzed many properties exhibited in these root constructions, the present essay does not discuss these non-movement phenomena, except perhaps to suggest the concept of Discourse Projections as a locus for where they may occur.

5. Left dislocation constructions

5.1 Left dislocation and Discourse Shells

A full treatment of initial constituents in root contexts, i.e., main clauses and RIDEs, must account for left dislocations set off by commas. These often occur with co-referential resumptive pronouns, as in (21)–(23).

\[(21)\]  
a. \[\[\text{XP} [\text{DP Mary}]_\text{p} [\text{XP why [x must] [IP [she] always be late]]}\]\n
b. John thinks \[\[\text{CP that [XP [IP such a car,] you shouldn’t buy it]]}\]\n
c. \[\[\text{XP [PP Because he phoned his wife], [XP [ the first part of the movie] \text{Ø}] [IP Jim missed]]}\]\n
(22) a. On croit \([CP \text{ que } [XP \text{ ce type-là}]_p, [IP \text{ le patron va mettre à la porte}]]\).\(^{12}\) (French)

We think that that fellow, the boss goes him put to the door ‘We think that that fellow, the boss is going to fire him.’

b. \([XP [AP \text{ Contente d’ avoir réussi}], [IP \text{ Marie est partie}]]\).

Happy to have succeeded Mary is left ‘Happy to have succeeded, Mary has left.’

(23) \([XP [CP \text{ Dass du gekommen bist}], [XP dasi [V ärgert] [IP hier alles]]]\).

That you come, that bothers here everyone ‘That you have come, that is bothering everyone here.’

(German, adapted from Vikner 1995, 239)

As with the fronted phrases binding traces in Sections 1 and 3, is it better to analyze left dislocations using Discourse Shells, or do they realize some specifically topic-based structure such as the TopP of Rizzi (1997)?

1. As with Foc\(^0\), his putative category Top\(^0\) is never lexicalized.
2. A range of different phrasal types of YP can be left dislocated.
3. Left Dislocation is a root phenomenon in English (Ross 1967).

(24) Left Dislocation.

These three properties follow from (6), (8) and (9), if Left Dislocation is analyzed with category-less Discourse Shells.

Conclusion (24) suggests that the iterated Discourse Shell Specifiers provided for in (6) are a natural device for multiple left dislocated constituents as in (25). They have the following characteristics:

1. When such SPEC(XP) are DP arguments in a following clause, they are paired with resumptive pronouns.
2. When they are adverbial PP adjuncts, they are not.

(25) \([ZP \text{ That guy, } [Z \text{ Ø}] [YP after the play, [Y \text{ Ø}] [XP according to Sue, [X \text{ Ø} hei wept]]]}\].

\(^{12}\) De Cat (2002, Chapter 3) refutes a frequent claim that French left dislocated subject DPs with resumptive clitics are in SPEC(IP). She shows they are located outside IP. For hypotheses about whether French dislocations are root phenomena, see Ronat (1973) and Haegeman (2006).
5.2 Predicting the order Topics – Focus

The Tensed S Constraint also has revealing consequences for Left Dislocation. Section 3 showed that any trace of a root fronting in a Discourse Projection IP has its closest binder in the first Discourse Shell XP just above IP, as in the examples (27).

\[(27)\]
\[
a. [ZP My boss], [XP [SPEC(XP), YP a \text{ man like that}], [X Ø] [IP she would never hire].
\]
\[
b. [ZP Suzanne], [XP [SPEC(XP), YP what else], [V does] [she do to relax]]?
\]
\[
c. [ZP Due to Bill], [XP [SPEC(XP), YP Mary], [X Ø] [IP I can’t go to movies with anymore]].
\]

Any trace-binding YP that precedes a dislocated ZP is then “too high,” as shown in (28). The trace violates the Tensed S Constraint, which thus accounts for the contrast. Antecedent-trace pairs are underlined.

\[(28)\]
\[
a. *[A \text{ man like that}],[my boss], [IP I don’t think she would hire].
\]
\[
b. *[\text{What else}], [Suzanne], [does she do to relax]?
\]
\[
c. *[Mary], [XP [SPEC(XP) due to Bill], [X Ø] [IP I can’t go to movies with anymore]].
\]

The Tensed S Constraint (16) thus explains automatically why dislocations, at least in English and German, must be \textit{exterior to landing sites for movements}. For Italian, however, Rizzi (1997) claims that topics sometimes follow trace-binding focus YPs. At issue is the status of (28) and (30), which are less acceptable in English than (27) and (29):

\[(29)\]
\[
a. \text{Topic–Focus–IP:}

I said that John, this we should tell him tomorrow.
b. Topic–Topic–Focus–IP:
   ? I said that John, tomorrow, this we should tell him.

(30) a. Focus–Topic–IP:
   ?? I said that this, John, we should tell him tomorrow.

b. Focus–Topic–Topic–IP:
   *I said that this, John, tomorrow, we should tell him.

These are translations of Rizzi’s examples, except I replace credo ‘I believe’ with I said. He gives all four Italian examples as acceptable. However, my English judgments suggest that the movements over dislocated topics in (30) incur a cost by derivational steps whose motivation is not syntactic, but rather pragmatic (indirect discourse). That is, the movements in (30) may derive from those in (29) by movement of the focused constituent [DP this] from the SPEC of the lowest Discourse Shell to the SPEC of a higher shell. That is, the Tensed S Constraint may be parameterized in different languages, with the consequence that movement over certain left dislocated phrases needn’t invariably violate it.13

In English and German then, Discourse Shells whose Specifiers bind traces always seem interior (at least when fully acceptable) to clauses exemplifying Left Dislocations. But even if Italian dislocations are less strictly ordered, Rizzi still concludes, using Italian, that his FocP, whose phrasal Specifiers bind traces, immediately dominates IP and is hence lower than his TopP.14 With no stipulation as to this order, the joint effect of the Tensed S Constraint and Discourse Shells predicts Rizzi’s syntactic structure of the left periphery.

Thus, the categories TopP and FocP and the order between them turn out to be simply labels for two syntactic configurations that differ in any case. “FocP” redundantly labels the configuration with a trace (7), while TopP similarly redundantly labels any other a-categorial Discourse Shell.

This leaves purely semantic properties as the only possible justifications for according these labels some formal status. Yet Neeleman and van de Koot (2008: esp. 2.1) carefully show that such functional projections at clausal left peripheries cannot accurately express or fully account for the concepts of Topic and Focus as they need

13. If Italian counterparts to (30) are fully acceptable, perhaps “Finite IP” in (16) in Italian is taken to include certain Discourse Shells above IP, unlike in English. French paradigms suggest that topic phrases in such shells can bind resumptive clitics; on these constructions, see Haegeman (2006).

14. The generalization of Rizzi (1997:291) is: “Focus is quantificational, Topic is not”. By stipulating that FocP, whose Specifiers bind traces (= are “quantificational”) is lower than TopP, whose Specifiers do not, he ensures that trace-binders are interior to non-binding dislocations.
to be defined for the “discourse templates” of information structure. At best, Rizzi’s TopP and FocP can be the basis for some one-way implications involving semantically defined Topics and Foci, but such one-way implications can as well take as their input the more parsimonious a-categorial representations of Discourse Shells, either binding a trace (his FocP) or not (his TopP).

5.3 The comma intonation in Left Dislocation

Category Membership (8) forbids External Merge under X^0. Yet, any non-lexical X^0 must be licensed by some theoretical mechanism:

\[(31) \text{ Licensed Empty Categories. All categories must be phonologically realized unless (i) licensed by UG theories of binding and alternative realization, or (ii) lexically specified as grammatical null allomorphs.}\]

For example, one type of empty head X^0 licensed by movement theory appears to be certain intermediate traces, including Cs and the X^0 in Discourse Shells, between fronted (focused) YPs and their lowest bound traces. That is, all the intermediate X^0 “links” through or to whose Specifiers the YP move can apparently be empty by virtue of some part of binding theory. For a theory of these links and some relevant differences in English and German, see Emonds (2004: Section 4).\(^\text{15}\)

Now in contrast to the Moved YP in (10) and (11), suppose some phrase of a Discourse Shell is externally Merged in SPEC(XP), or in older terms “base-generated” outside a Discourse Projection. The null head X^0 cannot be due to (31i) since no movement or AR is involved, but it can’t be a null lexical morpheme either (31ii), because of Category Membership (8). These considerations at first seem to exclude “base-generated” Left Dislocations entirely.

Nonetheless, a different “last resort” (less economic) way to phonologically realize X^0 can satisfy (31). It appears that an item can be phonologically realized without speaking:

\[(32) \text{ Pause Prosody. An otherwise unlicensed, category-less head X^0 can be phonologically realised as a (potential) pause, i.e., an orthographically represented “comma intonation.”}\]

It is therefore a general condition on empty categories (31) that explains why base-generated, “dislocated” constituents are set off by phonologically pauses, while moved constituents, which bind a trace, are not. The commas are there not because

\(^{15}\) This essay doesn’t treat any phonologically null lexical items as in (31ii). Emonds (2005) discusses how such items are related to other empty nodes permitted by Alternative Realisation.
speakers need to breathe, but so as to circumvent violations of Licensed Empty Categories (31).

6. Rightward movements of phrases

6.1 Structure-preserving instances of Move

This study has subsumed the root constructions of English, German, French and Dutch under an “Augmented” version (18) of the Structure Preserving Constraint, though French and/or Italian dislocations may call for additional refinement along the lines of Haegeman (2006). As in most syntactic research, the main concern here has been leftward movements. However, as argued in Emonds (1970, 1976), movements of constituents rightward also preserve structure, in the sense that the landing sites of X moved rightward are exactly where a language’s canonical structures independently specify categories that are of the type X and no other. Among rightward structure-preserving movements are clausal extraposition (Rosenbaum 1967), extraposition of PP from within DPs (Ross 1967), and Dutch and German “PP over V” (Koster 1974).

Less straightforwardly, a “structure-preserving effect” often accompanies rightward movements of subjects such as French Stylistic Inversion. Based on patterns first explicitly brought out in Kayne (1972), Emonds (1976) observes that postposed subjects appear to “compete” with direct objects for the same surface position:

\[(33)\]

\(a.\) C’est après le diner que parlera [DP le patron].

\(\text{it’s after the dinner that speak-will the chief}\)

\(\text{‘It’s after the dinner that the chief will speak.’}\)

\(b.\) *C’est après le diner que parlera [DP le patron]

\(\text{it’s after the dinner that speak-will the chief}\)

\(\text{[DP sa propre langue].}\)

\(\text{his own language}\)

\(c.\) *C’est après le diner que parlera [DP sa propre}

\(\text{it’s after the dinner that speak-will his own}\)

\(\text{langue} \ [DP \ le \ patron].\)

\(\text{language the chief}\)

The structure of the French VP allows for only one (preposition-less) DP. Example (33) thus shows that a subject DP can “stylistically invert” only when V has no other overt DP sister; this movement cannot violate the canonical restriction to one DP.

As we now see, several English constructions exhibit the same effect. This cross-linguistic incompatibility of direct objects and post-posed subjects strongly suggests
that its source lies in Universal Grammar. In (34a–b), post-verbal subjects accompany root frontings of certain APs and PPs to the SPEC(XP) of Discourse Shells. These frontings clearly illustrate ASP, and in fact so also does the restriction on the clause-final positioning of the subjects. In a similar construction without fronting in (34h–i), post-verbal subjects also occur with the expletive there in SPEC(IP).

(34) Preposing of AP over be:
   a. More relevant would be (considered) a talk on DNA.
   b. *More relevant would consider our group a talk on DNA.
   c. *More relevant would consider a talk on DNA our group.

Directional PP fronting and preposing over locative PPs:
   d. Into the harbour sailed a new warship (*the old admiral).
   e. *Into the harbour sailed the old admiral a new warship.

*There*-insertion with clause-final subjects:
   h. There sailed into the harbour a new warship (*the old admiral).
   i. *There sailed into the harbour the old admiral a new warship.

These paradigms are prima facie evidence for structure-preserving movement from subject to object position. After a long period in which such transformational lowering has been more or less “unthinkable”, I now see no objection to optional lowering in the PF component, subsequent to Spell Out. Such an operation does not then contribute to LF. That is, LF is oblivious to a PF lowering rule leaving an unbound trace, and in addition substituting for and thereby deleting a trace of a previously moved object at a landing site.16

All the (acceptable) sentence patterns in (34) have a distinct feel of high style, suggesting that Kayne named the French variant well. Elegant phrasing might be attributed to a kind of “Stylistic Obligatory Contour Condition” which could reproduce base constituent orders without regard for logic (i.e., independently of LF). The paradigms in (34) then show that such stylistic lowering, like other movement, obeys Structure Preservation. More generally, “stylistic rules” were placed on the PF branch of Chomsky and Lasnik’s (1977) T-model, so in fact my proposal that they operate in PF with no regard for the traces of LF is not actually novel. An a priori objection to this analysis simply amounts to not taking Chomsky and Lasnik’s (1977) T-model of grammar seriously.

There is of course a limit as to how far a constituent may lower. None of the processes in (34) could ever move constituents into a lower finite IP or into a DP from the outside. This can be attributed to derivations proceeding in cycles or phases. At

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16. Relativizing or Cliticizing a direct object in French “frees” the post-verbal position for rightward movement of a subject DP; here also the lost traces play no role: C’est le danois que parle le patron. (‘It is Danish that speaks the chief.’)
a point when an XP can move, all previous phases are plausibly closed off to further modification by movement; this is the “strict cycle” effect. Hence, any stylistic lowering “on the PF branch” from say subject to object position must be limited to positions in the same phase (= cyclic domain IP or DP).

6.2 Free word order phenomena disguised as movement

Rightward movements classically also include Heavy NP Shift (Ross 1967), which has always been a problematic paradigm for the original SPC. This Shift neither preserves structure, nor is local, nor is restricted to main clauses and RIDEs. In English, “heavy” complement phrases (DPs or APs) as in (35a,b) apparently move in (35c,d) into a region where the language’s canonical structures accept only PPs and CPs.

(35) a. Sue brought [DP a tray of drinks] to us so we could relax.
   b. The ads sounded [AP as stupid as the previews] to us.
   c. Sue brought [AP a tray of drinks] to us so we could relax.
   d. The ads sounded [AP as stupid as the previews] to us.

Such Heavy NP Shift may well be a subcase of a more general phenomenon, usually termed Scrambling in languages with freer word order. As committed as I am to defending some kind of structure-preserving constraint on movement, the alternation (35) and more generally the scrambling phenomenon has always resisted treatment in such a framework.

6.3 Exempting genuine subcases of Merge from Move

It is therefore of interest that Saito and Fukui (1998) find independent justification for separating these two black sheep of structure preservation from the herd of transformational processes conforming to it. They argue that a significant cluster of properties (36) distinguishes certain “genuine subcases of Merge,” namely Heavy NP Shift and Scrambling, from what we can contrastively call “genuine subcases of Move,” of which WH-movement and passives NP-movement are typical.

(36) **Genuine Subcases of Merge.** Unlike instances of Move, Heavy NP Shift and Scrambling:
   a. Participate in *no agreement* at their landing site.
   b. Are always *optional*.

17. Their transformational theory formulates properties of WH-movement and NP-movement in terms of feature-checking. With these assumptions, their investigation concludes “…that English heavy NP shift is not movement to a feature-checking position and that it is to be treated on a par with scrambling.” (Saito & Fukui 1998:445).
c. Displace constituents in a direction away from a language’s head position, i.e., Japanese Scrambling is leftward and English Heavy NP Shift is rightward.

d. Can apply to multiple constituents in the same domain.\(^{18}\)

e. Place constituents outside of domains where they appear at LF, requiring so-called “radical reconstruction.”

While I do not use a number of Saito and Fukui’s formulations, they have undeniably identified a central difference among operations traditionally grouped together simply as “Move a.” They conclude in particular that Heavy NP Shift and Scrambling as “genuine subcases of Merge” are more akin to optional alternative ways of satisfying head–complement relations than to movements of constituents into higher domains. From this conception, however it is made precise, at least the properties (36a–d) appear to follow.\(^{19}\) A further implication, which coincides with the thrust of this essay, is that all other familiar cases of movement are not Merges, but genuine Moves, subject to the ASPC (18).

I conclude that Augmented Structure Preservation is a fully general condition on all “genuine case of Move,” i.e., on every movement except the “apparent movements” but actually Merges of (36).

References


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18. Saito and Fukui (1998:445) imply that lack of agreement (36a) and optionality (36b) both follow from lack of feature checking at a landing site (443), citing Webelhuth (1989) for material on multiple applications of Heavy NP Shift. In the scrambling language Japanese, they relate (36d) to the possibility of double subjects. Note also, (36) does not claim that Scrambling towards a head, if it exists, is Merge rather than Move.

19. Saito and Fukui (1998) also develop the idea that a certain formal operation that they term “substitution” should be used for “genuine subcases of Merge,” and that a different formal operation with segmented categories called adjunction should be used for movement. Section 4.1 above critiqued this bias toward adjunction as an operation. I also disagree with their redefinition of “substitution,” and so for the dichotomy they have uncovered I retain the more widespread understanding of Merge vs. Move.
Hooper and Thompson (1973) observe that root transformations (RTs) occur in asserted adverbial adjuncts (because-clauses) but not in presupposed ones (when/before/after-clauses). Developing the idea that adverbial clauses can be analyzed semantically as parts of quantificational structures, we argue that RTs are available in adverbs that correspond to the scope of quantification, but not in those corresponding to the restriction. We spell out this view using the semantic theory of when/before/after-clauses developed in Johnston (1994) and the analysis of because-clauses in Larson (2004). After briefly reviewing alternative syntactic approaches, and noting difficulties for them, we suggest a “semantic closure” account in which RTs trigger existential closure in an adverbial, binding all available variables in a restriction, and all but the main variable in the scope. As a consequence, RTs induce a vacuous quantification violation in the first case, but not in the second.

In pioneering work, Emonds (1970, 1976) identified an interesting class of transformations whose domain of application appears largely confined to main clauses. Hooper and Thompson (1973) suggest that the availability of these “Root Transformations” (RTs) in syntax correlates with semantic assertion. Specifically, they propose that RTs may occur in clauses expressing asserted content, such as sentence-final because-clauses (1a), but not in clauses expressing presupposed content, such as sentence-final temporal clauses (2a,b), or preposed because-clauses (3a,b):

\[
\begin{align*}
(1) & \\
   & a. \text{Mildred drives a Mercedes} \\
   & \quad [\text{because her son, he owns stock in Xerox}]. \\
   & b. \text{Mildred drives a Mercedes} \\
   & \quad [\text{because her son owns stock in Xerox}]. \\
   & \text{Asserts: Mildred's son purchased stock in Xerox.}
\end{align*}
\]

* We are grateful to participants at GIST2 and to two anonymous reviewers for helpful comments on this work.
(2) a. *Mildred bought a Mercedes [when/before/after her son, he purchased stock in Xerox].
   b. Mildred bought a Mercedes [when/before/after her son purchased stock in Xerox].
   Presupposes: Mildred’s son purchased stock in Xerox.

(3) a. *[Because her son, he owns stock in Xerox], Mildred drives a Mercedes.
   b. [Because her son owns stock in Xerox], Mildred drives a Mercedes.
   Asserts: Mildred drives a Mercedes.

Semantic quantification theory also invokes the notions of presupposition and assertion (Partee 1991). In typical tripartite quantificational structures, including adverbial quantifications, restrictions correspond to presupposed material whereas scopes correspond to asserted material (4):

(4) a. Always when I eat spicy food I regret it afterwards.
   b. Quant. Restriction Scope
   Presupposed Asserted

This suggests a potential explanatory connection between RT availability in syntax and semantic function. Suppose the following theses are all true:

- Adverbial clauses forbidding RTs occur in quantificational restrictions.
- Adverbial clauses allowing RTs occur in quantificational scopes.
- Some property of RTs blocks their availability in quantificational restrictions, but permits them in scopes

Then the basic Hooper and Thompson syntax-semantics correlation will have been explained.

In this paper, developing earlier ideas in Sawada and Larson (2004), we investigate whether the explanatory picture just sketched can be sustained for temporal and causal clauses, noting some potentially damaging counter-examples from Johnston (1994). We tentatively conclude that the account is defensible and we suggest “semantic intervention” as the property excluding RTs from quantificational restrictions.

1. Adverbial quantification

Modern formal semantic approaches to quantification are all based on the relational view of (monadic) quantifiers, according to which quantifiers express cardinality
relations $Q$ between sets. The first argument of the quantifier corresponds to the restriction on quantification and the second argument corresponds to the scope (5). (6) gives typical analyses, where ALL expresses the subset relation (6a), and where MOST compares the cardinalities of intersection and difference (6b):

(5) **Relational View of (Monadic) Quantifiers**

\[ Q ((x: A(x)), (y: B(y))) \]

- {x: A(x)} – Restriction argument
- {x: B(x)} – Scope argument

(6)

a. i. All fish swim.
   ii. \( \text{ALL}((x: \text{fish}(x)), (y: \text{swim}(y))) \)
   iii. \(|\{x: \text{fish}(x)\} - \{y: \text{swim}(y)\}| = 0\)

b. i. Most birds fly.
   ii. \( \text{MOST}((x: \text{birds}(x)), (y: \text{fly}(y))) \)
   iii. \(|\{x: \text{birds}(x)\} \cap \{y: \text{fly}(y)\}| > |\{x: \text{birds}(x)\} - \{y: \text{fly}(y)\}|\)

Nominal and adverbial quantification differ with respect to the domain of objects quantified over. Nominal quantification appears to range over all entities in the universe of discourse whereas adverbial quantification is more restricted, ranging over sets of times (7a) or eventualities (7b), depending on the analysis:

(7)

a. \( Q (\lambda t[A(t)], \lambda t[B(t)]) \) \hspace{1cm} \text{(Stump 1981, 1985)}

b. \( Q (\lambda e[A(e)], \lambda e[B(e)]) \) \hspace{1cm} \text{(Chierchia 1995; de Swart 1993)}

Adverbial quantification also commonly involves an unexpressed restriction, whose content is drawn either from context (8a)/(8bi), or derived from the sentence itself (8bii–iv):

(8)

a. John usually talks too much.
   “In most **contextually relevant situations**, John talks too much.”

b. John usually steams Chinese dumplings.
   i. “In most **contextually relevant situations**, John steams Chinese dumplings.”
   ii. “In most **contextually relevant situations where John steams something**, John steams Chinese dumplings.”
   iii. “In most **contextually relevant situations where John steams dumplings**, John steams Chinese dumplings.”
   iv. “In most **contextually relevant situations where John deals with Chinese dumplings**, John steams Chinese dumplings.”

Following proposals by Rooth (1985), restrictions derived sentence-internally like (8bii–iv) have been widely taken to arise by **association with focus**. Specifically, adverbial quantifiers have been analyzed as focus-sensitive elements that associate with material in their scope. On this view the restrictions in (8bii–iv), for example,
correspond to the focal assignments in (9a–c) (resp.), where the boldfaced materials in (8) and (9) match-up:

(9)  
   a. Usually John steams [FOCUS Chinese dumplings].

Adverbial Qs are widely assumed to exhibit their full argument structure in conjunction with adverbial if/when/before/after-clauses (10a–d). The adverbial clause supplies the restriction on quantification whereas the main clause supplies the scope (11a–c) (Kratzer 1986):

(10)  
   a. Sometimes [CP if John is sleepy] he drinks green tea.
   c. John always shaves [CP when he is in the shower].
   d. John never washed vegetables [CP before eating them].

(11)  
   a. SOMETIMES (λ.e[John is sleepy(e)]) (λ.e[John drink green tea(e)])
   b. USUALLY (λ.e[John cooked(e)]) (λ.e[John steamed C. dumplings(e)])
   c. ALWAYS (λ.e[John in the shower]) (λ.e[John shaves(e)])

In the circumstance where if/when/before/after-clauses occur without an overt adverbial quantifier (12a), a covert one has been assumed (Heim 1982) (12b):

(12)  
   a. When John visited Paris, he ate in a café.
   b. SOMETIME (λ.e[John visited Paris(e)]) (λ.e[John ate in a café(e)])

The possibility of a covert adverb, even in sentences with an overt one, correctly predicts ambiguity to arise in examples like (13). On reading (13a), the when-clause restricts always (14a), so that the sentence speaks of all of John's occasions of visiting Paris. On reading (13b), the when-clause restricts a covert adverb SOMETIME; always quantifies over contextually relevant parts of the larger visitation-event. In other words, at all relevant times within John's (possibly single) visit to Paris he ate in a café (14b).

(13) When John visited Paris, he always ate in a café.
   a. “In all situations in which John visited Paris, he ate in a café.”
   b. “At the time John visited Paris, in all relevant situations, John ate in a café.”

(14)  
   a. ALWAYS (λ.e[John visited Paris(e)]) (λ.e[John ate in a café(e)])
   b. SOMETIME (λ.e[John visited Paris(e)]) (λ.e[ALWAYS (λ.e'[C(e) & Π(e',e)]) (λ.e'[John ate in a café(e')])

In all these cases, the if/when/before/after-clause restricts an adverb of quantification.
2. *When/Before/After*-clauses, presupposition & RTs

Hooper and Thompson (1973) suggest that “Some adverbial subordinate clauses, such as those beginning with *when*, *before* and *after*, are … always presupposed, and that RTs do not apply within them” (pp. 494–495). They offer (15a–e) (= (251–255) in Hooper & Thompson (1973)) as evidence in support of their basic claim:

(15) a. *Helen and Jack had dinner*[before into the kitchen trooped the children].
    b. *The villagers all burst into song*[when in came the bride and groom].
    c. *We were all much happier*[when upstairs lived the Browns].
    d. *The guests laughed out loud*[after Mary stopped singing, strangely].
    e. *The customer stomped out*[after the clerk, I guess, insulted her].

Hooper and Thompson’s correlation appears to fit smoothly with the semantics sketched above. Thus *when/before/after*-clauses uniformly restrict (overt/covert) quantificational adverbs, and in tripartite quantificational structures, restrictions always represent presupposed information. There is presupposed to be a domain of individuals satisfying the restriction of which the scope is asserted to hold (16):

(16) a. Always when I eat spicy food I regret it afterwards.

If RTs are blocked in presupposed environments (for whatever reason), then RTs will be expected to be blocked in *when/before/after* clauses, given that the latter are exactly presupposed environments.

2.1 Asserted *When/Before/After*-clauses?

The preceding result is attractive but immediately encounters problems with the phenomenon of asserted adverbial clauses. Consider the pairs in (17) and (18). With normal intonation, (17a) (based on de Swart 1993) naturally answers (18a), but not (18b). Conversely, (17b) naturally answers (18b), but not (18a):

(17) a. [After the war ended] John lived in London.
    b. John lived in London [after the war ended].
(18)  a.  Where did John live after the war ended?
b.  When did John live in London?

Answers typically constitute focused/asserted material. As an answer to (18b) therefore, the after-clause in (17b) seems to be asserted. Despite this fact, RTs continue to be blocked, as shown in (19):

(19)  Q:  When did John live in London?
     A:  *John lived in London [after the war, it had ended].

Consider also (20a). (20a) has the reading in (20b), where the when-CP restricts the quantificational adverb always and is accordingly presupposed. But (20a) also has reading (20c) where the arguments of the quantificational adverb seem reversed. On the reading in (20c), the adverbial clause seems to be asserted material. The two readings are brought out by different emphasis (Rooth 1985).

(20)  a.  Marty always shaves when he is in the shower.
b.  Always (λe[Marty is in the shower(e)]) (λe[Marty shaves(e)])
   (cf. Marty always SHAVES when he is in the shower.)
c.  Always (λe[Marty shaves(e)]) (λe[Marty is in the shower(e)])
   (cf. Marty always shaves when he is in the SHOWer.)

Readings where the main clause gives the restriction on quantification and where the adverbial clause gives the apparent scope are natural for (21a–d) (from Johnston 1994):

(21)  a.  Frances always breaks up with lovers when it is raining.
   (“All the (relevant) times that Frances breaks up with lovers are times at which it is raining.”)
b.  Sharks usually attack people when they are hungry.
   (“Most shark attacks occur when the shark is hungry.”)  
c.  Edward always submits an abstract when the deadline is very near.
   (“Edward's abstract submissions invariably occur at the point where the deadline is very near.”)
d.  Marcia always goes to the store before it gets dark.
   (“All Maria's goings to the store occur before it gets dark.”)

Since scopal material is asserted, the when-clauses in (20a) and (21a–d) appear to be asserted on the relevant readings. Nonetheless, RTs continue to be blocked in all of these examples; cf. (22a,b):

(22)  a.  Q:  When does Marty always shave?
     A:  *Marty always shaves [when in the shower, he is].
b.  *Edward always submits an abstract
     [when the deadline, it is very near].
These results thus appear to challenge the basic Hooper and Thompson correlation between when/before/after-clauses, presupposition/assertion and RT availability. Here we seem to have asserted adverbials in which RTs are nonetheless unavailable.

2.2 A more refined semantics (Johnston 1994)

We believe that the problem of asserted when/before/after-clauses is merely an apparent one and arises from an inadequate semantics. The semantic account of adverbial quantification offered in Johnston (1994) appears to resolve the puzzle and show what’s going on. For convenience we will follow Johnston (1994) in talking about an adjunct restriction reading of a temporal clause and a head restriction reading, defined as below:

**Adjunct restriction reading**: when/before/after-clause provides the quantifier restriction.

**Head restriction reading**: main clause provides the quantifier restriction.

2.2.1 The adjunct restriction reading

Johnston (1994) derives the adjunct restriction reading of an example like (23a) via an IP adjunction structures as in (23b), and the general mapping procedure stated in (24):

(23) a. Marty always shaves when he is in the shower.

   b. 

   \[
   \begin{array}{c}
   \text{IP} \\
   \text{IP} \\
   \text{PP} \\
   \text{when...} \\
   \text{DP} \\
   \text{I'} \\
   \text{Marty} \\
   \text{I} \\
   \text{VP} \\
   \text{Adv} \\
   \text{always} \\
   \text{VP} \\
   \text{DP} \\
   \text{V} \\
   \langle\text{Marty}\rangle \\
   \text{shaves}
   \end{array}
   \]

(24) Determining the Restriction & Nuclear Scope of an Adverb of Quantification:

i. Make the Q adverb the first element in the tripartite structure.

ii. Factor VP material c-commanded by the Q adverb into the nuclear scope.

iii. Factor material adjoined to IP or in IP Spec into the restriction.
The interaction between structure, mapping principles and interpretation is exhibited explicitly in (25):

(25)

The adverb *always* maps to the quantifier (24i); the IP-adjoined adverbial clause is assigned to the quantifier restriction (24iii); and the VP is assigned to the scope (24ii).

In (25), the expression *when* \( e_2 \) \( \in' (\text{Marty, the shower, } e_2) \) denotes a set of time intervals that is derived as in (26). The basic sentence itself (Marty is in the shower) is interpreted as denoting a set of events, here the set of all events in which Marty is in the shower (26a). The adverbial *when* denotes an operator that combines with a set of events to yield the “run-time” (\( \text{RunT} \)) of the maximal event in the set (26b). The run-time of an event is simply its temporal extension: how long it took. In the case of *when Marty is in the shower*, we thus get the interval that is the run-time the maximal event of Marty being in shower (26c).

(26)

a.  \( \text{Marty is in the shower} \Rightarrow \in' (\text{Marty, the shower, } e) \)

b.  \( \text{when} \Rightarrow \lambda \varphi \lambda i [\exists e [\text{MAX}(\varphi)(e) \& i = \text{RunT}(e)]] \)

c.  \( \text{when Marty is in the shower} \Rightarrow \lambda i [\exists e [\text{MAX}(\in' (\text{Marty, the shower, } e)) \& i = \text{RunT}(e)]] \)

Putting this result together with (25), we can read the latter as saying that *Marty always shaves when he is in the shower* is true on the adjunct restriction reading if and only if for each time interval that is the run-time of a maximal event of Marty being in the shower (Mis) there is an interval contained within it corresponding to the run-time of an event of Marty shaving (Ms) (27):
Thus for Johnston, adjunct restriction readings involve quantification over time intervals.

### 2.2.2 The head restriction reading

Johnston (1994) derives the head restriction reading of (28a) from a different syntactic source – specifically, from the VP adjunction structure in (28b). (29) exhibits the details.

(28) a. Marty always shaves when he is in the shower.

```
IP
  DP
    I'
      Marty
      I
      VP
        Adv
        VP
          always
          VP
            PP
              when...
                DP
                  V
                    shaves
                      ⟨Marty⟩
```

(29)```
IP
  DP
    I'
      Marty
      I
      VP
        Adv
        VP
          always
          VP
            PP
              when...
                DP
                  V
                    shaves
                      ⟨Marty⟩
```

always' ⋄ (\exists when' e₂ (in'(Marty, the shower, e₂)) ) (shaves'(Marty, e₁))

Q Restriction Scope
Observe that the mapping principles in (24) assign no restriction to \textit{always’}. All sentence material is interpreted in the scope. Johnston takes the resulting representation to violate the constraint on vacuous quantification in (30), proposed by Kratzer (1995). In (29) the quantifier \textit{always’} fails to bind a variable in the restrictive clause.

(30) \textbf{Prohibition against Vacuous Quantification}: For every quantifier $Q$, there must be a variable $x$ such that $Q$ binds an occurrence of $x$ in both its restrictive clause and its nuclear scope.

As a semantic repair option, Johnston assumes a process of \textit{eventuality variable binding}, whose effect, in essence, is to copy the scope term into the restriction. Eventuality variable binding yields (31), which satisfies the prohibition against vacuous quantification, and delivers the correct truth-conditions:

(31) \textit{always’}[$\text{shaves’}(\text{Marty}, e_1)$] \[(\exists [\text{when’} e_2 \text{in’}(\text{Marty, the shower, } e_2)]([\text{shaves’}(\text{Marty, } e_1)])] \]

According to (31), for each eventuality of Marty shaving ($Ms$) there is an eventuality of Marty being in the shower and shaving ($Mis&Ms$) whose run-time contains the interval of the shaving.

(32) \begin{tabular}{cccc}
$Ms$ & $Ms$ & $Ms$ & $Ms$ \\
$\Uparrow$ & $\Uparrow$ & $\Uparrow$ & $\Uparrow$ \\
$Mis&Ms$ & $Mis&Ms$ & $Mis&Ms$ & $Mis&Ms$ \\
\end{tabular}

where $\text{RunT}(Ms) \subseteq \text{RunT}(Mis&Ms)$

In contrast to adjunct restriction readings, which involve quantification over time intervals, head restriction readings involve quantifications over event(ualitie)s directly.

2.2.3 \textit{Implications}

Johnston’s representations in (25) and (31) differ sharply from our earlier representations in (20b,c). Firstly, \textit{when} is semantically contentful according to Johnston, and not a simple “restriction marker” contra Lewis (1975), Heim (1982), and Kratzer (1986). As we’ve seen, \textit{when} contributes the operator in (26b).

Furthermore, Johnston’s adjunct and head restriction readings are not simple inverses like (20b,c). Adjunct restriction readings quantify over time intervals whereas head restriction readings quantify over event(ualitie)s.$^1$

---

1. This distinction has a very interesting consequence that Johnston discusses. Johnston observes that examples like (i) and (ii) are not equivalent in their readings. Whereas (i) is ambiguous, having both adjunct and head restriction readings, which can be brought out by stress, (ii) has only an adjunct restriction reading, no matter what stress we apply:
Most importantly for us, however, in Johnston’s head restriction readings, the *when*-clause does not become the whole scope, but only part of it. Consider again (31), repeated below, where the *when*-clause is only part of the larger underlined term:

\[
\text{always' } \{ \text{shaves}'(\text{Marty, } e_1) \} \\
\quad (\exists \{ \text{when}' e_2 (\text{in}'(\text{Marty, the shower, } e_2))) (\text{[shaves}'(\text{Marty, } e_1)])) \\
\]

**Scope**

Moreover, within the scope term the *when*-clause actually functions as a quantifier-restriction on an inner existential quantifier \(\exists\). Thus under Johnston (1994), what we called “asserted adverbial clauses” are in fact not simply asserted. Rather they are part of a larger quantificational structure that is asserted. And within this asserted quantificational structure, the *when*-clause continues to function as a quantifier restriction. If, within this larger quantificational assertion, we are permitted to speak of a presupposed part, then in fact we can preserve Hooper and Thompson’s core contention that “adverbial subordinate clauses, such as those beginning with *when, before* and *after*, are … always presupposed, and RTs do not apply within them.”

(i)  
- a. Marty always shaves when he is in the shower.  
- b. Marty always SHAVES when he is in the shower.  
- c. Marty always shaves when he is in the SHOWer.  

(ii)  
- a. Marty is always in the shower when he shaves.  
- b. Marty is always in the SHOWer when he shaves.  
- c. Marty is always in the shower when he SHAVES.  

Johnston traces this difference to aspect and its interaction with quantification. Briefly, quantifiers require as their restrictions predicates that allow one to count the entities involved – i.e. they require **sortal predicates**. *When*-clauses yield predicates of time intervals, which are always sortal, hence adjunct restriction readings are always available with temporal adverbial clauses because they always provide a temporal quantifier with a countable domain. With head restriction readings, however, the situation is different. Here what is functioning as the restriction is not a predicate of time intervals but rather a predicate of event(ualities)s. Unlike time intervals, event(ualities)s are not always countable. For example, whereas telic events appear to be countable, states are not. This means that the availability of a head restriction reading, where the main clause furnishes the restriction, will be sensitive to whether the main clause expresses a countable predicate of events. In (ia) where the main clause *shaves* expresses a telic, countable, sortal predicate of events, a head restriction reading will be available. In (iia) where the main clause *in the shower* expresses a nontelic, noncountable, nonsortal predicate of states, head restriction reading will not be available. See Johnston (1994) for further discussion.

2. This proposal requires a structured notion of presupposition and assertion in which assertions can themselves contain presupposed material, and in which presupposed material can contain asserted material. For further discussion see Herburger (2000).
2.3 The syntax-semantics mapping revisited

Johnston (1994) does not derive head restriction readings via focus (contra Rooth 1985), but rather calculates them directly from syntactic structure via his mapping principles in (24). In support of this view Johnston points to the fact that (21a–d) (repeated below) get natural head restriction readings without special focal emphasis:

(21)   a. Frances always breaks up with lovers when it is raining.
       b. Sharks usually attack people when they are hungry.
       c. Edward always submits an abstract when the deadline is very near.
       d. Marcia always goes to the store before it gets dark.

Nonetheless, Johnston’s structures and mapping principle (24) seem to us doubtful in some respects.

First of all, Johnston associates adjunct restriction readings with high, IP adjuncts of the when/before/after-clause. On this view, pre- and postposed adverbials are symmetric counterparts (33a,b):

(33)   a.  
     \[ \begin{array}{c}
             \text{IP} \\
             \text{PP} \\
             \text{when...} \\
             \text{DP} \\
             \text{Marty} \\
             \text{I'} \\
             \text{VP} \\
             \text{Adv} \\
             \text{always} \\
             \text{DP} \\
             \langle \text{Marty} \rangle \\
             \text{V} \\
             \text{shaves}
\end{array} \]

   b.  
     \[ \begin{array}{c}
             \text{IP} \\
             \text{DP} \\
             \text{Marty} \\
             \text{I'} \\
             \text{VP} \\
             \text{Adv} \\
             \text{always} \\
             \text{DP} \\
             \langle \text{Marty} \rangle \\
             \text{V} \\
             \text{shaves}
\end{array} \]
This does not seem correct, however. Reinhart (1983) notes that preposed adverbial clauses do not trigger Principle C violations (Chomsky 1981), but postposed adverbial clauses do (34a,b):

(34)  a. When sharks are hungry they usually attack people.
     b. *They usually attack people when sharks are hungry.

Furthermore, examples having only adjunct restriction readings allow when/before/after-clauses to be captured by VP ellipsis (35), implying that the adverbial clauses must be able to attach within VP in order to be deleted with it:

(35)  Marty always is in the shower when he shaves, and Peter always is Ø too.

We won’t attempt to revise Johnston’s syntax for when/before/after-clauses, but we do wish to make a general point about the syntax – semantics mapping in adverbial quantification, which appears to us to offer a more promising approach to the question, particularly for sentence-final adverbial clauses.

2.3.1  Adverbial Qs as indefinite pronouns/pronominal Qs

Adverbial quantifiers are often compared directly to determiner quantifiers, with the adverbial clause congruent to the NP complement of D (36a)/(36b). Semantically, the adverbial clause is taken to provide the restriction argument, just like NP does (37a)/(37b):

(36)  a. Always, when one travels, one enjoys the change of scenery.
     b. All travelers enjoy a change of scenery.

(37)  a. Always (λe[someone-travels(e)]) (λe[he/she-enjoys-change-of-scenery(e)])
     b. All (λx[traveler(x)]) (λx[enjoy-change-of-scenery(x)])

Q  Restriction  Scope

But this view faces the question of why adverbial quantifiers more readily omit their restriction arguments than determiners (38), and why when/before/after-clauses readily occur separated from their quantifier whereas NP complements to determiners never do (39):

(38)  a. Never (when one travels) does one enjoy delay.
     b. No *(traveler) enjoys delay.

(39)  a. One always enjoys the change of scenery when one travels.
     b. *All enjoy a change of scenery travelers.

In our view, a better comparison is suggested by the pairings in (40) and (42), with their respective (approximate) semantics in (41) and (43). (40) compares always, not
to the universal determiner *all*, but to the universal indefinite pronoun *anyone*. (42) compares *mostly*, not to the simple determiner *most*, but to the pronominal determiner *most*. In both cases, the adverbial clause then ends up congruent, not to the restriction NP, but to a restrictive modifier like a relative clause. The semantic representations in (41) and (43) reflect this change:

(40) a. *Always, when one travels*, one enjoys the change of scenery.
    b. anyone *who travels* enjoys a change of scenery.

(41) a. Any \( (\lambda x[\text{one}(x)]) \ (\lambda x[\text{travels}(x)]) \ (\lambda x[\ldots-\text{change-of-scenery}(x)]) \)
    b. All \( (\lambda e[\text{way}(e)]) \ (\lambda e[\text{someone-travels}(e)]) \ (\lambda e[\ldots-\text{change-of-scenery}(e)]) \)

<table>
<thead>
<tr>
<th>Q</th>
<th>Restr</th>
<th>Modifier</th>
<th>Scope</th>
</tr>
</thead>
<tbody>
<tr>
<td>(42) b. Mostly, <em>when one travels</em>, one enjoys the change of scenery.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Most <em>who travel</em> enjoy a change of scenery.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(43) a. Most \( (\lambda x[\text{C}(x)]) \ (\lambda x[\text{travels}(x)]) \ (\lambda x[\ldots-\text{change-of-scenery}(x)]) \)
    b. Mostly \( (\lambda e[\text{C}(e)]) \ (\lambda e[\text{someone-travels}(e)]) \ (\lambda e[\ldots-\text{change-of-scenery}(e)]) \)

<table>
<thead>
<tr>
<th>Q</th>
<th>Restr</th>
<th>Modifier</th>
<th>Scope</th>
</tr>
</thead>
</table>

Indefinite pronouns like *anyone, everywhere, everything*, etc. seem to *incorporate* their nominal restriction argument (*-way, -where*). Similar incorporated nominal morphology occurs with adverbs like *always* and *sometimes*. Thus we suggest that adverbial quantifiers like *always, sometimes, anytime*, etc. be thought of as *adverbial indefinite pronouns*.

Pronominal quantifiers (*many, few, most*, etc.) can take an *unexpressed pro-nominal restriction*. The same seems true of counterpart adverbs (*mostly, often, rarely*). Thus we suggest that adverbial quantifiers like *mostly, often, rarely*, etc. be thought of as *pronominal adverbial quantifiers*.

If adverbial clauses in adverbial quantifications do not correspond to NPs in nominal quantification, but rather to modifiers like relative clauses, this would explain both their invariable optionality (38a) and their ability to appear discontinuously from their quantifiers (39a). Optionality is simply the reflex of their being modifiers, and not complements like NP. As for discontinuity, the phenomenon would be parallel to extraposed relatives (44a,b).³

³ This proposal may also illuminate an important implicit assumption in Johnston (1994): that adverbial quantifiers are uniformly *count* quantifiers. This assumption is crucial to explaining the asymmetry in (i) and (ii) discussed in Footnote 1. If adverbial quantifiers could
a. Often when it involves computers a job pays well \([\text{AdvC} \text{when it involves computers}]\).

b. As for jobs, many that involve computers pay well \([\text{RC} \text{that involve computers}]\).

Specifically, we would expect sentence final adverbial clauses (on their adjunct restriction readings) to be located wherever extraposed relative clauses are positioned.\(^4\)

3. *Because*-clauses, presupposition & RTs

Hooper and Thompson (1973) note a complex distribution for the RTs identified by Emonds (1970) in sentences with *because*-clauses. They distinguish non-restrictive *because*-clauses, which supply the reason for the speaker’s assertion or question (45a), from restrictive *because*-clauses, which supply the reason for the main clauses events (45b):

(45) a. Sam is going out for dinner, because I just talked to his wife.

b. Sam is going out for dinner because his wife is cooking Japanese food. (= (224–225) in H&T 1973)

In sentences with final restrictive *because*-clauses, the adverbial permits RTs (46a–g), whereas the main clause does not (47a–c):\(^5\)

(46) a. Helen and Jack stopped eating  
[**because into the kitchen trooped the children**].

b. The villagers burst into song  
[**because in came the bride and groom**].

c. We were all much happier  
[**because upstairs lived the Browns**].

d. The guests laughed out loud  
[**because Mary stopped singing, strangely**].

be mass quantifiers, then head restriction readings would be predicted to possible in the case where the main clause expresses an atelic eventuality, contrary to fact. Interestingly, indefinite pronouns are uniformly count quantifiers.

4. The idea that temporal clauses have the semantic status of (extraposed) relative clauses is proposed in Larson (1982).

5. (46a,b) are identified by Emonds (1970) as exhibiting Directional Adverb Preposing. (46c–g) display (respectively) PP Substitution, Adverb Dislocation, Complement Preposing, Direct Quote Preposing and Tag Question Formation. We should note that not all individuals seem to accept RTs freely in *because*-clauses. Our own judgments track those of Hooper and Thompson and below we will assume their basic correctness.
e. The customer stomped out [because the clerk, I guess, insulted her].

f. Max left the room [because “I won,” Alice exclaimed].

g. Max was quiet [because Alice was sleeping, wasn’t she?].

(47)

a. *In came Jerry because it was raining.

b. *That house there are ghosts in it because they like it there.

c. *Sitting in the corner was Tom because he’d hidden grandma’s teeth.

(= (234–236) in H&T 1973)

In sentences with initial restrictive because-clauses, the pattern seems to reverse. RTs become possible in the main clause (48), but largely unavailable in the adverbial clause (49):

(48)

a. Because Helen and Jack had stopped eating [into the kitchen trooped the children].

b. Because the villagers had burst into song [in came the bride and groom].

c. Because we had invited them warmly [upstairs lived the Browns].

d. Because the guests laughed out loud [Mary stopped singing, predictably].

e. Because the customer stomped out [the clerk, I guess, blushed].

f. ?Because Max left the room [“I won,” Alice exclaimed].

g. Because Max was quiet [Alice fell asleep, didn’t she?]

(49)

a. *[Because into the kitchen trooped the children] Helen and Jack stopped eating.

b. *[Because in came the bride and groom] the villagers burst into song.

c. *[Because upstairs lived the Browns] we were all much happier.

d. *[Because Mary stopped singing, strangely] the guests laughed out loud.

f. *[Because “I won,” Alice exclaimed] Max left the room.

g. *[Because Alice was sleeping, wasn’t she?] Max was quiet.

Hooper and Thompson analyze the situation in (46) and (47) as follows: in a sentence with a (final) restrictive because-clause, the main clause represents presupposed information and the adverbial clause represents asserted information. RTs are permitted
in asserted, but not presupposed, environments, hence, RTs are permitted in a (final) restrictive because-clause, but not in the main clause (50):

(50)  

<table>
<thead>
<tr>
<th></th>
<th>[Sam went out for dinner]</th>
<th>[because his wife cooked Japanese food].</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Clause</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presupposed</td>
<td></td>
<td></td>
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<tr>
<td>*RTs</td>
<td></td>
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</tbody>
</table>

Because-clause Asserted
RTs ✓

On this analysis, initial restrictive because-clauses would have the expected associations in (51):

(51)  

<table>
<thead>
<tr>
<th></th>
<th>[Because his wife cooked Japanese food]</th>
<th>[Sam went out for dinner]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Because-clause</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presupposed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>*RTs</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Main Clause Asserted
RTs ✓

This result seems correct, as shown by the evidence in (52) and (53). (52a) is naturally answered by (52b), but not by (52c). Similarly, “Right?” in (53a) seeks confirmation of Sam’s reason for going out to dinner; “Right?” in (53b) seeks confirmation only of Sam’s going out to dinner:

(52)  

a. Why did Sam go out to dinner?

b. Sam went out for dinner
   [because his wife cooked Japanese food].

c. ??[Because his wife cooked Japanese food]
   Sam went out for dinner.

(53)  

a. Sam went out for dinner because his wife cooked Japanese food. Right?

b. Because his wife cooked Japanese food, Sam went out for dinner. Right?

Answers are asserted and confirmation questions refer back to asserted material. In both cases, the presupposed because-clause is not behaving as if it is asserted.

3.1 The semantics of because-clauses

In analyzing when/before/after-clauses, we derived their resistance to RTs from their status as presupposed elements. And we derived their status as presupposed elements from their semantic function as quantifier restrictions. It’s natural to wonder whether similar connections can be made with because-clauses. More precisely, since the availability of RTs with because-clauses does seem to track their status as asserted vs. presupposed, is it possible to derive the latter from quantificational structure? In fact, the possibility of doing so requires us to develop our semantics in an interesting way.
3.1.1 *Because as propositional relation*

*Cause* is often analyzed semantically as expressing a relation between propositions. For example, Dowty (1972, 1979) offers the semantic account in (54), based on Lewis’ (1973) account of counterfactuals. Here *CAUSE* is a binary relation between propositions \( \varphi, \psi \):

\[
\begin{align*}
(54) & \quad \text{a. } [\varphi \text{ CAUSE } \psi] \text{ is true iff (i) } \varphi \text{ is a causal factor for } \psi, \text{ and (ii) for all other } \varphi' \text{ such that } \varphi' \text{ is a causal factor for } \psi, \text{ some } \neg \varphi \text{ world is more similar to the actual world than any } \neg \varphi' \text{ world is.} \\
& \quad \text{b. } \varphi \text{ is a causal factor for } \psi \text{ iff there is a series of sentences } \varphi, \varphi_1, \ldots, \varphi_n, \psi \text{ (for } n \geq 0 \text{) such that each member of the series depends causally on the previous member.} \\
& \quad \text{c. } \varphi \text{ depends causally on } \psi \text{ iff } \varphi, \psi \text{ and } \neg \varphi \Rightarrow \neg \psi \text{ are all true.}
\end{align*}
\]

Given this basic view of *cause*, it’s natural to analyze *because* as expressing a propositional connective as well, viz., as *BECAUSE*. Indeed, *cause* and *because* are plausibly just inverses of each other, so that \( \varphi \text{ BECAUSE } \psi \text{ iff } \psi \text{ CAUSE } \varphi \). Analyses of *because* as a sentential connective expressing a relation between propositions are in fact commonplace. For example, Johnston (1994) offers the propositional analysis in (55):

\[
(55) \quad \text{because’}(X,Y) \text{ is true iff } X \text{ and } Y \text{ are propositions and } X, \text{ the result, is true as a result of } Y.
\]

These sentential connective analyses fit a traditional syntax involving high attachment of *because*-clauses to a proposition-denoting phrase (TP, VP) (56):

\[
\begin{align*}
(56) & \quad \text{a.} \\
& \quad \text{b.}
\end{align*}
\]
Nonetheless they do not appear to be compatible with the leading idea we are pursuing here. In the semantics for *because* given above, the main and adverbial clauses are not related as parts of a quantificational structure. Consequently these analyses provide no clear way of deducing the informational structure of *because*-constructions from quantificational semantics. There is no way of deducing presupposed versus asserted information under the binary sentence connective view, and hence no way to deduce RT availability. This suggests we should seek a different semantics for *because*, one with quantificational structure.

3.1.2 *Because as event relation*

Davidson (1967) departs from the traditional propositional view, analyzing CAUSE as a binary relation between event(ualitie)s: one eventuality e causes another e′ (57).

Taking sentences quite generally to express quantifications over events (58a,b) (where we ignore tense), CAUSE will then connect event quantifications (58c):

(57) \(\text{CAUSE}(e, e')\)

(58) a. John sneeze → \(\exists e\{\text{sneezing}(e, j)\}\)
   b. Mary leave → \(\exists e'\{\text{leaving}(e', m)\}\)
   c. John's sneezing made Mary leave → \(\exists e \exists e'\{\text{sneezing}(e, j) \& \text{CAUSE}(e, e') \& \text{leaving}(e', m)\}\)

Larson (2004) proposes a development of this view wherein sentence final *because*-clauses involve *structured* event quantification as in (59). Here the main clause material gives the restriction on quantification and the subordinate *because*-clause supplies the scope: 6

(59) a. Mary left [**because** John sneezed]
   b. \(\exists e'\{\text{leaving}(m, e')\} [\exists e\{\text{sneezing}(j, e) \& \text{CAUSE}(e, e')\}]\)

Q Restr Scope

“For some leaving by Mary, it was because John sneezed”

Larson (2004) argues that this semantics for sentence final *because*-clauses fits neatly with a right-descending syntax under a minor variant of Diesing’s quantificational

---

6. We assume here and below that existential event quantifiers, and existential quantifiers generally, can have full proportional quantifier structure, including a restriction and a scope. See Herburger (2000) for development of this idea.
Mapping Hypothesis (Diesing 1992). According to the latter, the lowest predicate in VP maps to the scope and higher material maps to the restriction (60):

\[(60)\]

\[
\begin{array}{c}
\text{vP} \\
\downarrow \\
\text{DP} \\
\downarrow \\
\text{Mary} \\
\text{v} \\
\downarrow \\
\text{V} \\
\downarrow \\
\text{VP} \\
\end{array}
\]

\[
\lambda e'[\text{leaving}(m,e')] \quad \lambda e'\text{[sneezing (j,e) & CAUSE(e, e')]}
\]

Whereas in right-ascending analyses like (56a) or (59b), because-clauses are outermost adjuncts, tracking their semantic analysis as propositional operators, in the right-descending analysis, because-clauses are innermost complements, tracking their semantic analysis as Q-scopes under the Mapping Hypothesis.7

This picture can be extended to sentence initial because-clauses under the proposal of Reinhart (1983) that these occupy a higher projection (XP) (61):

\[(61)\]

\[
\begin{array}{c}
\text{XP} \\
\downarrow \\
\text{PP} \\
\downarrow \\
\text{because John sneezed} \\
\downarrow \\
\text{X} \\
\downarrow \\
\text{TP} \\
\end{array}
\]

\[
\lambda e'[\text{leaving}(m,e')] \quad \lambda e'\text{[CAUSE(e, e')] & sneezing(j,e)]} \quad \lambda e[\text{leaving}(m,e)]
\]

Again the lowest event predicate maps to the scope, and the higher residue yields the restriction.

---

7. Larson (2004) suggests that the low attachment of because-clauses reflects their status with respect to event individuation. For Davidson (1967), causal relations individuate events: events with the same causes and effects are the same event. Suppose then that the θ-hierarchy responsible for complement projection reflects individuation. Lowest, innermost status for because-clauses would then make sense: in determining event identity, causal relations outrank space-time location, manner, participants, etc. and hence come closest to V.
3.2  *Because*-clauses and Q adverbs

The event quantificational analysis can capture all the core data of the sentential/propositional account. For example, Johnston (1994) notes the ambiguity of (62a), which he describes as expressing a quantifier head reading versus a quantifier adjunct reading. On the quantifier head reading, the *because*-clause tells us why a certain general quantificational state holds (62b). On the quantifier adjunct reading, the *because*-clause tells us why individual states determined by the quantifier obtain (62c):

(62)  

a. Leopold always sold shares because he needed money.

b. **Quantifier head reading**: “On all relevant occasions, Leopold sold shares, and the reason for this pattern was that he needed money”

c. **Quantifier adjunct reading**: “On all occasions that Leopold sold shares, the reason for doing so was that he needed money”

As Johnston notes, some sentences naturally favor one reading over the other. Thus (63a) naturally favors the quantifier head reading: the *because*-clause tells us why Frankie always misses the bus. (63b) naturally favors the quantifier adjunct reading: the *because*-clause tells us the reason for each of Leopold’s bank robberies.

(63)  

a. Frankie always misses the bus because he is a slow runner.

b. Leopold always robs a bank because he needs money fast.

Johnston himself analyzes this ambiguity as a matter of the relative scope of the quantificational adverb and the *because*-clause. On the quantifier head reading, the *because*-clause has high attachment (to IP) and takes scope above the Q-adverb (64):

(64)  **Quantifier Head Reading**

a.  

b.  

because’( always { C } [sell’(Leo, shares, e1)], need’(Leo, money, e2) )
On the quantifier adjunct reading, the *because*-clause has low attachment (to VP) and takes scope beneath the Q-adverb (65a):

(65) Quantifier Adjunct Reading

\[
\begin{align*}
\text{IP} & \quad \text{DP} \\
& \quad \text{I'} \\
& \quad \text{Leopold} \\
& \quad \text{I} \\
& \quad \text{VP} \\
& \quad \text{Adv} \\
& \quad \text{always} \\
& \quad \text{VP} \\
& \quad \text{PP} \\
& \quad \langle \text{Leopold} \rangle \text{sold shares because ... money}
\end{align*}
\]

b. **always'** \{ \} [because'(Leo, shares, e₁) need'(Leo, money, e₂)]

\mathbf{Q} \mathbf{R} \mathbf{estr} \mathbf{Scope}

c. **always'** \{ sell'(Leo, shares, e₁) \}

[because(sell'(Leo, shares, e₁)) need'(Leo, money, e₂)]

The low attachment yields an initial semantic representation like (65b), with an empty restriction ("\{ \}"). Eventuality variable binding repairs this representation yielding (65c), which avoids a vacuous quantification violation: **always'** binds e₁ in both the restriction and the scope.

3.3 Quantifications as states

Johnston’s ambiguity can be captured in the event relation analysis of *because* by reanalyzing quantifications as states that can themselves enter causal relations. Thus under our previous view, quantificational relations like ALL were binary, involving two set arguments (66a). On the revision recommended here, we augment this relation to include an additional state argument e* (66b), which can then enter into causal relations.⁸

(66) a. ALL (\{x: A(x)\}, \{y: B(y)\}) \quad \text{Old View}

\begin{align*}
\{x: A(x)\} & \quad \text{Restriction argument} \\
\{x: B(x)\} & \quad \text{Scope argument}
\end{align*}

⁸. See Barwise and Perry (1985) for the closely related idea of quantificational situations within the framework of Situation Semantics.
To see how this helps us with Johnston’s ambiguity, consider first the quantifier head reading of (62a) *Leopold always sold shares because he needed money*, according to which a certain quantificational pattern (*Leopold always sold shares*) is caused by a certain state (*Leopold needed money*). We can capture this reading as in (67), where the quantificational state $e^*$ is caused by $e$, the state of Leo needing money.

\[(67) \text{Quantifier Head Reading} \]
\[\exists e^* [\text{Always}(C, \lambda e' [\text{Leo sell shares}(e')], e^*) & \exists e [\text{Leo need money}(e) \& \text{CAUSE}(e, e^*)]] \]

For the quantifier adjunct reading, on which the *because*-clause tells us why individual states determined by the quantifier obtain, we suggest the representation in (68). Here it is individual states of selling shares $e'$ that are caused by states of Leo needing shares $e$.

\[(68) \text{Quantifier Adjunct Reading} \]
\[\text{a. } \text{Always}(C, \lambda e' [\text{Leo sell shares}(e'), \lambda e' [\text{Leo sell shares}(e') \& \exists e' [\text{Leo need money}(e) \& \text{CAUSE}(e, e')]], e^*) \rightarrow \text{eventuality variable binding} \rightarrow \]
\[\text{b. } \text{Always}(\lambda e' [\exists e' [\text{Leo need money}(e) \& \text{CAUSE}(e, e')]], e^*) \]

(65) is analogous to the head restriction reading of a temporal adverbial clauses, where the main clause ultimately supplies restriction on *always’* through eventuality variable binding. As Johnston notes (62a) has no reading equivalent to adjunct restriction reading, where the *because*-clause actually supplies the restriction (69):

\[(69) \text{Adjunct Restriction Reading} \]
\[\text{Always}(\lambda e [\exists e' [\text{Leo need money}(e) \& \text{CAUSE}(e', e')]], \lambda e [\text{Leo sell shares}(e)], e^*) \]
\[“\text{Every eventuality caused by the state of Leopold needing money is an eventuality of Leopold selling shares.”}\]

We conjecture that this reading is unavailable for the same reason, discussed by Johnston (1994) (see Footnote 1, this paper) that head restriction readings are unavailable with non-telic main clauses: the CAUSE relation obtains between eventualities of all types, hence the event predicate $\lambda e' [\exists e [\text{Leo need money}(e) \& \text{CAUSE}(e, e')]]$ (the set of eventualities caused by an eventuality of Leo’s needing money) is simply...
indeterminate with respect to countability – it’s not a sortal predicate. Since it is non-sortal, a quantifier cannot count over it. But this is exactly what is required of a restriction predicate. Hence (69) is not licit, and the reading is not available.

4. Root transformations and semantic structure

Under our quantificational analysis of because-clauses, informational status of when/before/after-clauses and because-clauses tracks their semantic function; and this informational status also tracks RT availability:

- Adverbial clause denotes presupposed material
  Adverbial clause functions as quantificational restriction
  RTs disallowed.
- Adverbial clause denotes asserted material
  Adverbial clause functions as quantificational scope
  RTs permitted.

The correlation between informational status and semantic function suggests an approach to RT availability different than the one adopted by Hooper and Thompson (1973). Rather than taking RT availability to follow from informational status, with semantic function a correlate, we might try to deduce RT availability from semantic function, with informational status a simple consequence of the latter. To assess the prospects of such an approach, we first look briefly at current accounts of RT availability.

4.1 Syntactic accounts

Current analyses typically try to derive RT distribution from syntactic considerations, involving either “clause size” or intervention effects.9

4.1.1 Clause “Size”

Haegeman (2003) suggests that RTs are possible only in constructions with a fully expanded left periphery as proposed by (Rizzi 1997). A clause with a fully expanded left periphery contains the set of syntactic positions exhibited in (70a), including Sub, Top*, Focus, etc. These clauses allow RTs because the positions in question are

9. Emonds own approach to RT syntax (1970, 1976) appeals to the so-called “Structure-preserving Constraint”. This analysis is further developed in Emonds (1985, 2004). Due to space limitations, we will not attempt to discuss this line of thinking here.
precisely the ones targeted by root transformational operations like preposing. Clauses may be “truncated” in their left peripheries, however, possessing a reduced set of positions (70b). Such truncated clauses do not allow RTs because the relevant positions are simply unavailable:

\[(70)\]
\[
\begin{align*}
\text{(Sub) Top* Focus Force Fin IP} & \quad \text{(Full Left Periphery Allows RTs)} \\
\text{Sub} & \quad \text{Fin IP} & \quad \text{(Truncated Left Periphery Forbids RTs)}
\end{align*}
\]

On Haegeman’s view, adverbial clauses allowing RTs have fully projected left peripheries, whereas adverbial clauses blocking RTs have truncated left peripheries.

Sawada and Larson (2004) also suggest a “clause size” analysis, although one less worked out than Haegeman (2003).\(^{10}\) In brief, they suggest that an additional existential quantifier in the semantics of because vs. when/before/after corresponds to a head (X) whose specifier position is available to host RTs (71a–c):

\[(71)\]
\[
\begin{align*}
\text{a. when/before/after} & \quad \text{[YP ...]} \\
\text{b. because} & \quad \text{[XP \_ X' \_ e \_ [YP ...]]} \\
\text{c. because} & \quad \text{[XP her son \_ X' \_ e \_ [YP he owns stock in Xerox]]}
\end{align*}
\]

Clause size analyses now appear problematic to us, for the simple reason that adverbial clauses don’t behave invariantly with respect RT availability. As we’ve seen, because-clauses allow RTs in final position (46), whereas in preposed position they do not (49).\(^{11}\) On a clause size account, this would seem to require because to project its complement clause differently (full/truncated) according to its position. It’s unclear how this dependency of internal structure on external position could be encoded syntactically.

4.1.2 Syntactic intervention

An alternative approach to RT availability appeals to syntactic intervention. Haegeman (2010, this volume) hypothesizes that temporal and conditional clauses involve fronted

---

10. Sawada (2000) shows that the notion of clause size, including size of adverbial clauses, plays a very important role in traditional Japanese grammar, where it is used to explain the distributions of various grammatical phenomena, much as it does in modern “cartographic” approaches.

11. Hooper and Thompson (1973, p.495, Footnote 16) observe a similar effect with certain when-clauses. They note that examples like (i) seem well-formed:

\[(i)\]
\[
\text{We were just about to unveil the statue} \\
\text{[when in swept Mrs. Von der Vogelweide].}
\]

The latter seems to us a reasonable candidate for an asserted when-clause.
wh-operators, which she analyzes as bearing a Q feature. She further proposes that preposed RT items like topics also bear the Q feature (in the complex δ+Q). RTs inside a temporal or conditional clause will then blocks the featural relation between OP bearing Q (when) and its trace (72):

(72) *when this problem you are able to solve when

\[
\begin{array}{cc}
\text{Q} & \delta+Q \text{ (topic)} \\
\hline
\end{array}
\]

Haegeman’s appeal to an operator in temporal clauses is based on the groundbreaking work of Geis (1970a,b), who observed that when/before/after-adverbials show long distance readings indicative of movement. Thus examples like (73) are ambiguous, as Geis notes, according to whether adverbial when is associated with its immediate complement clause (she said) or with the more deeply embedded CP (she was there):

(73) I saw Mary in NYC [when she said [she was in Paris]]

“I saw Mary in NYC at a time t such that she said at t that she was in Paris”

“I saw Mary in NYC at a time t such that she said that she was at t in Paris”

Geis analyzes this ambiguity as reflecting different clauses of origin for the moved item when (74):

(74) a. I saw Mary in NYC [when she said [she was in Paris when]]

b. I saw Mary in NYC [when she said [she was in Paris when]]

Geis also observes that not all temporal clauses show long distance readings; for example, while-clauses do not (see also Larson 1990). Thus (75) has only the pragmatically odd reading according to which I saw Mary during the time that she was speaking certain words. It does not have the more natural reading where I saw her during the time she was at home. (75) contrasts in this respect with a true relative clause structure like (76), which in fact does exhibit both of the readings in question:

(75) I saw Mary in NYC while she said [she was at home sleeping].

“I saw Mary in NYC during the time t such that she said at t that she was at home sleeping.”

“#*I saw Mary in NYC during the time t such that she said that she was at home sleeping at t.”

(76) I saw Mary in NYC during the time she said she was at home sleeping.

This contrast between temporal connectives is unsurprising. Adverbial when-is transparently related to interrogative and relative clause when and in fact derives from the
former historically. Before- and after-clauses descend from Indo-European comparatives (equivalent to earlier than/later than), which also involve operator movement. By contrast, while (like since) has no such operator-linked history.

Nonetheless, while clauses block RTs in English, just like when/before/after clauses do.

(77) a. *Helen and Jack had dinner
[while into the kitchen trooped the children].
(cf. *Helen and Jack had dinner [before into the kitchen trooped the children])

b. *The villagers all burst into song
[while in came the bride and groom].
(cf. *The villagers all burst into song [after in came the bride and groom].)

c. *We were all much happier
[while upstairs lived the Browns].
(cf. We were all much happier [when upstairs lived the Browns].)

d. *The guests laughed out loud
[while Mary was singing, strangely].
(cf. *The guests laughed out loud [after Mary stopped, strangely].)

e. *The customer stomped out
[while the clerk, I guess, insulted her].
(cf. *The customer stomped out [after the clerk, I guess, insulted her].)

This fact raises a clear puzzle for Haegeman’s syntactic intervention account. If the presence of operator movement in temporal clauses is diagnosed by the presence of temporal ambiguities, then, cetris paribus, we would expect the absence of temporal ambiguities to indicate an absence of operator movement, and hence to predict the possibility of RTs. Nonetheless, RTs continue to be blocked even where temporal ambiguities are not found.

As a final problem for the syntactic intervention account of RT availability, we may note again the nonuniform behavior of because-clauses. An intervention account would seem to require operator structure in initial because-clauses, blocking RTs, but exclude operator structure in final because-clauses, allowing RTs. Again it is simply unclear how this coordination of internal structure and external position could be secured.

4.2 Semantic closure

In place of the syntactic intervention account, we want to tentatively suggest an alternative based on a notion of what we will call semantic closure. Analyses of
quantification within Discourse Representation Theory (Kamp 1981; Heim 1982) routinely posit an important asymmetry between the restriction and the scope. Both contain a variable bound by the quantifier, but the scope in addition undergoes existential closure, which captures all remaining variables within it. Thus in (78), the restriction remains as is, but the scope undergoes existential closure, which binds all variables within it apart from the main quantificational variable x:

\[
(78) \quad \begin{align*}
\text{a. Every man owns a donkey.} \\
\quad \text{Substitution} \\
\quad \text{b. } & \forall x \{\text{man}(x)\} \quad \exists y \{\text{donkey}(y) \& \text{own}(x,y)\} \\
\quad \text{c. } & \forall x \{\text{man}(x)\} \quad \exists y \{\text{donkey}(y) \& \text{own}(x,y)\} \\
\quad & \text{"Existential closure"}
\end{align*}
\]

This view is faithful to our intuitive picture of quantification in which we are given a domain of entities by the restriction, and evaluate the sentence as true if Q-many of these entities can be truthfully asserted of the scope. Assertions must be truth-evaluable, hence all variables in it must be bound; asserted formulae must be closed (cf. Krifka 1992). Restrictions are a different matter; they must provide us with a predicate to identify the members of the domain quantified over.

Given these points we might reason as follows. Hooper and Thompson's basic (1973) observation is that RTs track asserted environments. The key feature of assertions is that they are semantically closed. Suppose then that the presence of “high, left elements,” whether produced by movement (Topicalization) or by base generation (Left Dislocation), is interpreted as assertion, i.e. suppose that a projection containing an RTs triggers closure in the head that it combines with.

Then RTs will be possible only where closure is possible. RTs will be possible in scopes but not restrictions.

To see how this proposal works technically, consider first the case of while-clauses. Adapting Johnston’s (1994) treatment of when, we might take the normal contribution of while and its normal process of combination to go as in (79), where f is some function like Johnston’s “run-time” which derives an interval of time points from n event (in this case, a state):

\[
(79) \quad \begin{align*}
\text{a. } & \text{Marty is in the shower } \Rightarrow \text{in’(Marty, the shower, e)} \\
\text{b. } & \text{while } \Rightarrow \lambda \varphi \lambda i \{\exists e \{\text{MAX}(\varphi)(e) \& i = f(e)\}\} \\
\text{c. } & \text{while Marty is in the shower } \Rightarrow \\
\quad & \lambda i \{\exists e \{\text{MAX}(\text{in’(Marty, shower, e)}) \& i = f(e)\}\}
\end{align*}
\]

Suppose now that while combines with a structure XP containing a root transformation, for example, a left dislocation. We assume X the head of XP, to bear a feature [γ] triggering existential closure when XP combines with while (80):
While-Clause (in the Restriction)

\[(80)\]

\[
\begin{array}{c}
\text{PP} \\
\text{P} \\
\text{while} \\
\text{DP} \\
\text{X'} \\
\text{Marty} \\
\text{X} \\
[\gamma] \\
\text{TP} \\
\end{array}
\]

\[\gamma = \text{“close projection”}\]

The semantic result will be a closed expression, as shown in (81). The presence of a root transformation triggers closure on all variables in PP, including the main event variable \(e\) (81c). This means that \(\text{Marty, he is in the shower}\) does not denote an open event sentence of the kind required for a restriction.

\[(81)\]

\[
\begin{array}{l}
a. \quad \text{Marty, he is in the shower} \Rightarrow \lambda e [\text{in}'(\text{Marty, the shower, } e)] \\
b. \quad \text{while} \Rightarrow \lambda \varphi \lambda i [\exists e [\text{MAX}(\varphi)(e) \& i = f(e)]] \\
c. \quad \text{while} \text{Marty, he is in the shower} \Rightarrow \text{closure} \Rightarrow \exists i [\exists e [\text{MAX}(\text{in}'(\text{Marty, shower, } e)) \& i = f(e)]]
\end{array}
\]

A similar story can be told for \textit{because}. The normal contribution of \textit{because} and its normal process of combination might be taken to go as in (82). \textit{Because} takes an event predicate and yields an event predicate in return; the latter is satisfied by all events caused by the event denoted by the complement of \textit{because}, in this case, all events caused by an event of Marty being in the shower (82b):

\[(82)\]

\[
\begin{array}{l}
a. \quad \text{because} \Rightarrow \lambda \varphi \lambda e [\exists e' [\text{CAUSE}(e', e) \& (\varphi)(e)]] \\
b. \quad \text{because} \text{Marty is in the shower} \Rightarrow \lambda e [\exists e' [\text{CAUSE}(e', e) \& (\text{in}'(\text{Marty, shower, } e'))]]
\end{array}
\]

Suppose now that \textit{because} attempts to combine with a left dislocation structure (83). \(X\) the head of XP, once again triggers existential closure in PP (84):

\[(83)\]  

\[
\begin{array}{c}
\text{PP} \\
\text{P} \\
\text{because} \\
\text{DP} \\
\text{X'} \\
\text{Max} \\
\text{X} \\
[\gamma] \\
\text{TP} \\
\end{array}
\]

\[\text{he is in the shower}\]
(84) a. because ⇒ λϕλ.e[∃e′[CAUSE(e′, e) & (ϕ)(e′)]]
b. Marty, he is in the shower ⇒ λe[in′(Marty, the shower, e)]
c. because Marty, he is in the shower ⇒ closure ⇒
∃e [∃e′[CAUSE(e′, e) & (in′(Marty, shower, e′))]]

Again closure captures all variables, making the because-PP a closed sentence and hence unsuitable as a quantificational restriction.

Now let us consider what happens in the scope. Recall that in the scope of quantification existential closure applies to every variable except the main variable given by the restriction. In the scope, existential closure always ignores the main quantificational variable (cf. 78c). Now when a because-clause appears in the scope under the analysis of because in Larson (2004) and discussed above, the variable given by the restriction is the event variable e. This means that when we do existential closure in the scope we capture every variable apart except e. The result is shown in (85):

(85) Because-Clause (in the Scope)
because Marty, he is in the shower ⇒ closure ⇒
∃ [∃e′[CAUSE(e′, e) & (in′(Marty, shower, e′))]^

unbound main variable!

The result is (essentially) vacuous closure. The main event variable e remains unbound and uncaptured. Hence because Marty, he is in the shower still denotes an event predicate and can still serve as the scope of quantification.

This account may appear to be a kind of trick insofar as when the adverbial clause appears in the restriction we close all of its variables whereas when the adverbial clause appears in the scope we close off all but the main quantificational variable. But in our view this simply reflects the fundamental “procedural” asymmetry between restrictions and scopes, namely that in quantifications, we first determine a domain of quantification and then evaluate elements of that domain against a scope. This implies that, at the point where we are testing elements against the scope, we know what variable we are dealing with. When we are dealing with the restriction we are not in the same position: we haven’t, as it were, already selected a variable that we know is exempt from closure. These remarks do not settle the technical question of how e is formally identified as the main variable in (85) and made exempt from closure. But, as we have indicated, this seems to be part of a wider question about quantification generally and hence we leave it for further investigation.

5. Conclusion

In this paper, following earlier work in Sawada and Larson (2004), we have pursued the observation by Hooper and Thompson (1973) that root transformations appear to
occur in asserted but not presupposed environments. We have argued for the view that when/before/after-clauses and because-clauses can be analyzed semantically as parts of quantificational structures, and that RT availability tracks occurrence in the scope term. This result suggests the possibility of a semantic account of RT availability. We briefly reviewed alternative syntactic approaches, noting difficulties for them. In their place, we tentatively suggested a “semantic closure” account in which RTs trigger existential closure in an adverbial, binding all available variables in a restriction, and all but the main variable in the scope.

References


Agreements that occur mainly in the main clause*

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Most agreement systems target a grammatical entity within the sentence, typically the subject but in some cases the object or the dative. There is another kind of agreement found in languages such as Souletin, a Basque dialect, that targets the hearer. I will look at this type of so-called allocutive agreement and pursue two main issues. First, although it targets the hearer, the form of the agreement is the same as the regular phi-feature agreement used for subject/object. This means that the allocutive agreement must be part of a probe-goal relation, leading to the question, where is the goal? I argue that something like Ross’s Performative Analysis furnishes the second-person goal. Second, the distribution of the allocutive agreement is essentially the same as the politeness marking on the verb in Japanese, which leads to the hypothesis that, despite Japanese being characterized as a typical agreementless language, the politeness marker is, in fact, an implementation of second-person agreement. Moreover, this allocutive agreement in Japanese has a distribution that limits it to the root clause as originally conceived by Emonds (1969).

1. Root vs. non-root

Emonds (1969, 1976) noted that while structure-preserving transformations may apply virtually in any type of clause, those that he identified as non-structure preserving transformations are limited to the root clause, which he defined as follows.

(1) Root
    A root will mean either the highest S in a tree, an S immediately dominated by the highest S or the reported S in direct discourse.

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In these contexts, a non-structure preserving transformation such as Negative Constituent Preposing (NCP) may apply, but not in a non-root clause, which requires all transformations to be structure-preserving (see also Emonds 2004, this volume).

(2)  
a. Never had I had to borrow money.  
b. John said that never had he had to borrow money.  
c. *The fact that never had he had to borrow money is well-known.

Hooper and Thompson (1973) criticize Emonds’ proposal by pointing out that root transformations apply in a variety of clauses outside of what Emonds called root clauses. One such example is the following:

(3)  
I found out that never before had he had to borrow money.  (H&T (119))

Why is it that root transformations (RTs) are possible in some subordinate environments but not in others? What Hooper and Thompson point out is that the RTs that Emonds identified all involve some sort of emphasis; the following is a partial list of RTs.

(4)  
Root transformations:  (Emonds 1969; see also Emonds 2004)  
NCP, VP preposing, topicalization, prepositional phrase substitution, subject replacement, direct quote preposing, etc.

For example, NCP is a transformation that places special emphasis on the negative portion of an asserted clause (*Never have I had to …*), and direct quote preposing moves the quoted material to the left edge in order to highlight it. According to Hooper and Thompson, the correct way to view the root/non-root distinction is to recognize that the so-called RTs that Emonds identified all embody this meaning of emphasis, and because emphasis occurs naturally in asserted environments, “[r]oot transformations are restricted to application in asserted clauses” (H&T: 472). On this view, root transformations are incompatible with presupposed clauses such as the complement in the complex NP headed by *fact* in (2c), which by nature does not involve assertion (see Heycock 2006 for criticism of Hooper & Thompson). But in (3), the predicate *find out* allows its complement to contain the meaning of assertion, something I return to later.¹

¹. See Emonds (2004) for a revision of Emonds (1969, 1976) that accounts for many of Hooper & Thompson’s (1973) counterexamples. I maintain the original conception of Root (Emonds 1969) because, as I will show, it captures precisely the distribution of allocutive agreement in Japanese.
In a series of works, Haegeman (e.g. 2006, 2010) and Haegeman and Ürögdi (2010) argue that the asserted/non-asserted distinction follows from proposals that postulate movement in those structures that block root transformations. For example, temporal adjunct clauses have been argued to involve the movement of an operator such as a wh-phrase or a null operator (e.g. Geis 1970; Larson 1987, 1990). Haegeman argues that this movement gives rise to an intervention effect for RTs such as NCP and topicalization, in turn, suggesting, as Hooper and Thompson, that there is no inherent and independent distinction to be made between root and non-root clauses. I support this general approach of using syntactic intervention to account for the absence of RTs in certain environments. At the same time, I show that Emonds was essentially correct to isolate certain clauses as having a special status: unlike the RTs he identified, which can be explained in principle by syntactic intervention, the phenomenon I discuss – agreements that occur mainly in the main clause – requires a super-structure above the utterance that recalls Ross’s Performative Analysis (1970). As we will see, this special type of agreement is identical in form to the standard subject (or object) – verb agreement, except that the goal represents the hearer and not the subject. To implement this within the probe-goal system, we need to postulate a super-structure above the utterance that contains a representation of the hearer in a position that constitutes the local search domain for the relevant probe. This super-structure happens to correspond perfectly to Emonds’ original conception of root clause as defined above in (1).

I first discuss allocutive agreement in Basque, and then turn to a similar phenomenon in Japanese, that of politeness marking. I show that the distribution of allocutive agreement matches Emonds’ original root clause. Finally, I turn to topicalization in Japanese, where we will see that its distribution diverges widely from “allocutive agreement,” indicating that, as argued widely since Emonds’ original work, RTs such as topicalization are not RTs as Emonds originally conceived, but rather, they are conditioned by syntactic/semantic factors such as intervention.

## 2. Allocutive agreement in Basque

There is a type of agreement called allocutive agreement, which is found in Souletin, an eastern dialect of Basque (Oyharçabal 1993).² For the proposition “Peter worked,” one typically finds two agreements, the subject-verb agreement, which holds constant, and allocutive agreement, which varies in four ways depending on whom the speaker is speaking to.

² I am grateful to Karlos Arregi for bringing Oyharçabal (1993) to my attention.
(5) a. To a male friend allocutive agr. subject agr.  
\[ \text{Pettek lan egin dik.} \]
\[ \text{Peter.erg work.abs do.prf aux-3.s.abs-2.s.c.msc.alloc-3.s.erg} \]
‘Peter worked.’

b. To a female friend  
\[ \text{Pettek lan egin din.} \]
\[ \text{Peter.erg work.abs do.prf aux-3.s.abs-2.s.c.fm.alloc-3.s.erg} \]

c. To someone higher in status (formal)  
\[ \text{Pettek lan egin dizü.} \]
\[ \text{Peter.erg work.abs do.prf aux-3.s.abs-2.s.f.alloc-3.s.erg} \]

d. Plural addressee  
\[ \text{Pettek lan egin du.} \]
\[ \text{Peter.erg work.abs do.prf aux-3.s.abs-3.s.erg} \]

All of these sentences mean “Peter worked,” but in (a), the sentence is uttered to a male friend, and (b) to a female friend. The version in (c) is appropriate for a hearer who is older or higher in status. The example in (d) shows that there is no plural allocutive agreement so it does not occur if the addressee is plural.

An important point to note about allocutive agreement is that it is authentic agreement on a par with subject and object agreement. In Basque, there can only be one 2nd person agreement within a clause (also only one 1st person agreement) (thanks to Karlos Arregi for this information). We see that the allocutive agreement, which is always 2nd person, competes with the subject/object 2nd person agreement morpheme. If a sentence contains a 2nd person subject or object, the allocutive agreement cannot occur (Basque is a subject/object agreement language). Consequently, in the following, the allocutive agreement cannot arise.

(6) a. \[ \text{(Nik hi) ikusi haut.} \]
\[ \text{(1.s.erg 2.s.abs) see.prf aux-2.s.abs-1.s.erg} \]
‘I saw you.’

b. \[ \text{(Zuek ni) ikusi naizue.} \]
\[ \text{(2.p.erg 1.s.abs) see.prf aux-1.s.abs-2.p.erg} \]
‘You saw me.’

Allocutive agreement is a Main Clause Phenomenon in a way that is more strict than the typical RTs in English: it only occurs in the main clause, as far as it is reported in Oyharçabal (1993). So, for example, it does not occur in relative clauses:

(7) a. \[ \text{[Lo egiten duen] gizona Manex dun} \]
\[ \text{sleeping aux.3.e.comp man.the John cop.3a.allo.fem} \]
‘The man [who is sleeping] is John.’
b. *[Lo egiten dinan] gizona
   sleeping AUX.3E.ALLOFEM.COMP man.the
Manex dun
John 3A.COP.ALLOFEM

It also does not occur in complements:

(8)  a. Ez dinat nahi [gerta dakion]
    NEG AUX.1E.ALLOFEM want happen 3A.AUX.3D.COMP
    ‘I don’t want it to happen to him.’

     b. *Ez dinat nahi [gerta diakionan]
    NEG AUX.1E.ALLOFEM want happen 3A.AUX.3D.ALLOFEM.COMP

Not only is allocutive agreement excluded from subordinate environments, but it is
prohibited even in the main clause if the sentence is a question.

(9)  a. Lan egiten duia hire lagunak?
    work AUX.3E.Q your friend.erg
    ‘Does your friend work?’

    b. *Lan egiten dina hire lagunak?
    work AUX.3E.ALLOFEM.Q your friend.erg

This last point is particularly important because it hints at the source of the allocutive
agreement. As Oyharçabal (1993) notes, the distribution of such agreement points
to the fact that it can occur only if there is no lexical complementizer. Questions
have such a Q complementizer, and embedded structures have other types of lexical
complementizer. Based on this, Oyharçabal argues that the allocutive agreement is
related to C, despite it being pronounced at T where the subject/object agreement is
pronounced.

(10) Allocutive agreement is borne by C. (see Oyharçabal 1993)

The fact that the allocutive agreement is limited to those clauses that do not have a
lexical complementizer recalls the proposal by den Besten (1977/1983) that the root/
non-root distinction is a function of whether there is a lexical complementizer (non-
root) or not (root). On this analysis, RTs such as the NCP are to C, and they can only
apply if some lexical material does not already fill C. This derives the root/non-root
distinction strictly from what is on the head (C).³

³ In cartographic approaches (cf. Rizzi 1997) this would not hold. See also Haegeman
(2000) who discusses embedded NCP.
However, there must be more to it than just the issue of whether the C already has lexical material. We saw that the allocutive agreement is authentic agreement by virtue of the fact that it competes with the normal subject/object 2nd person agreement. This means that it starts out as an uninterpretable feature (probe), and must find a goal (“you”) with the proper interpretable features in order to undergo valuation. There are at least two questions to answer. First, where is the probe? Second, where is the goal?

For the first question, we already saw from Oyharçabal (1993) that the allocutive agreement is related to C. This is consistent with the recent idea that the probe for agreement begins at C (or, more precisely, on a phase head) (Chomsky 2005, 2008, etc.) and is typically inherited by T, where it is pronounced. The fact that the allocutive agreement competes with a lexical element associated with C provides clear evidence that it starts out at C. Turning to the second question, in order for the allocutive probe at C to be properly valued, it must find a goal within its local search domain. We saw from the example earlier (“Peter works”) that there is no overt 2nd person noun phrase in the sentence to give value to the allocutive probe. This means that some 2nd person element must be present that is not pronounced. I adopt Speas and Tenny’s (2003) proposal that in the main clause and in some subordinate clauses, there is a superstructure, which they call “Speech Act” headed by “sa” (Speech Act) that furnishes information about the speaker and the hearer and their relationship. Their proposal is the modern version of Ross’s Performative Analysis.

(11) saP
   (SPEAKER) sa
   sa sa
   (UTTERANCE CONTENT) sa
   sa (HEARER)

This is a declarative sentence, and the asymmetrical relations holding among the various elements such as the speaker and the hearer are a function of the particular syntactic relation that each holds within the structure. The head of the structure is “sa” (Speech Act), which begins in the lower position, and moves to the head position of the shell (saP). They suggest that the hearer is raised in the case of questions, something that I will not be concerned with in this article. See their article for the details.

How is the allocutive probe given valuation in this structure? Let us look at the structure with the allocutive probe, which is a normal uninterpretable agreement feature at C of the utterance, CP. For reasons that will become clear in a moment,
I adopt Haegeman and Hill’s (2011) revision of Speas and Tenny’s structure, given below. Following them, I mark the highest projection, the “shell,” as SAP, and the lower one of “sa” “saP.”

Two points to be noted for this structure are, first, the allocutive probe does not c-command its goal (HEARER) at this point, and second, the allocutive agreement, as a marking of politeness/informality, should have scope over the entire sentence. With these points in mind, let us suppose that the allocutive probe raises to the head “sa,” possibly as a result of head-raising of C, and, as with Speas and Tenny’s proposal, this “sa” head moves to the head position of the shell (thanks to an anonymous reviewer for suggesting to use Haegeman and Hill’s revision of Speas and Tenny’s structure).

Now the allocutive probe properly c-commands its goal, HEARER. Moreover, once it is raised to this higher position inside the SAP shell, it has the entire sentence in its scope, which gives it the right interpretation of marking the overall utterance for levels of politeness. The HEARER in Souletin comes with not only the 2nd person feature, but also gender and level of politeness (colloquial, formal). The reason for adopting this structure by Haegeman and Hill over Speas and Tenny’s is that in this structure, the allocutive probe (and possibly the C that it occurs on) is able to c-command it’s
original position after being raised to the higher SA. In Speas and Tenny’s structure, the “sa” head fails to c-command the C that initially hosts the allocutive probe.

3. Politeness marking in Japanese as a form of allocutive agreement

Politeness marking in Japanese parallels allocutive agreement in Basque both in function and in being associated with C (Miyagawa 1987; Oyharçabal 1993). The politeness marker -mas- (its nominal counterpart is -des-) occurs on the verbal inflection and indicates that the speaker is intending to be polite to the hearer. In its absence, the speaker is intending to show the informal nature of the speaker-hearer relationship.

(14) a. Peter-wa hataraki-mas-i-ta. (FORMAL)
P eter-top work-MAS-PAST

b. Peter-wa hatarai-ta. (COLLOQUIAL)
P eter-top work-PAST

‘Peter worked.’

Harada (1976:553) aptly calls this polite form “performative honorifics” because its usage is conditioned by “such categories as the speaker, the addressee, the situation in which the sentence is uttered, and so on...”. To use the politeness marker, or to decide not to use it, the speaker must minimally be aware of his/her relationship to the hearer; one would use the politeness marker for a hearer who is socially superior or equal (Harada 1976). The fact that it is normally directed to the hearer (see Uchibori 2007, for example) makes it appear as a form of agreement, an idea that I support. I go further and argue that the politeness marker is a form of 2nd person agreement parallel to the Souletin allocutive agreement, which we saw is a standard 2nd person agreement that occurs at C and interpreted in the Speech Act structure to give it the force of politeness-level marking.

Unlike the allocutive agreement in Souletin, the politeness marker in Japanese can occur in certain complement clauses as well as in the main clause. Complement clauses in Japanese typically have one of two types of complementizers, to for non-factive or quoted clauses and koto/no for factive clauses, and “[t]he few complement constructions that do permit [the politeness marker] to occur are interpretable, without exception, as ‘direct discourses’”, and as such, they are all instances of to complement constructions (Harada 1976:544). As we will see, there are a handful of exceptions that Harada himself noted, which we return to later. What the politeness marker in Japanese has in common with the Souletin allocutive agreement is that it is borne by C. I begin with the argument for this point.

In Miyagawa (1987), I argued that the politeness marker is borne by C despite the fact that it is pronounced at T. In that work, I assumed that the politeness marker begins at T, and at LF, it raises by excorporation to the C region. However, given the
recent assumptions about agreement as starting out at C, and the fact that this view is consistent with the Basque allocutive agreement, I assume that the politeness marker is a form of allocutive agreement that begins at C. Below, I briefly summarize the relevant portion of the analysis in Miyagawa (1987).

One way to ask a wh-question in Japanese, a wh-in-situ language, is to use the question particle *ka*, which comes at the end of the sentence.

(15) \( \text{Dare-ga ki-mas-u } \text{ka?} \)
\( \text{who-NOM come-MAS-PRES Q} \)
'Who will come?'

Note that this question has the politeness marker *-mas-* on the verb; without the politeness marker, the *ka* question is illicit (Miyagawa 1987).

(16) *\( \text{Dare-ga kuru ka?} \)
\( \text{who-NOM come Q} \)
'Who will come?'

To ask (16) appropriately, one must use another particle, *no*, or simply rising intonation. I will focus on *ka*. What is the difference between the grammatical wh-question in (15), which has the politeness marker, and the ungrammatical one in (16) that lacks the politeness marker? The relevant condition, although not so apparent from these examples, is that the question particle *ka* must be selected by a head.

(17) *Ka must be selected by a head.*

We can see this below, in which *ka* is fine with a bridge verb but is degraded with a non-bridge verb (see Miyagawa 1987 for other arguments to support (17)) (some speakers find a sharper contrast if these sentences are turned into yes-no questions).

(18) \( \text{Bill-wa [CP dare-ga kuru ka] kiita.} \)
\( \text{Bill-TOP who-NOM come Q asked} \)
'Bill asked who will come.'

(19) *\( \text{Bill-wa [CP dare-ga kuru ka] donatta.} \)
\( \text{Bill-TOP John-NOM come Q shouted} \)
'Bill shouted who will come.'

A bridge verb selects its complement, so *ka* is fine, but a non-bridge verb such as "shout" does not, and *ka* is not allowed in its complement clause. Note that in (18), which contains a bridge verb, the verb in the subordinate clause is in the colloquial form, not in the polite form. This means that the selecting head – the matrix verb

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4. As noted in Miyagawa (1987), adding a sentential particle such as *-na* ‘I wonder...’ after *ka* makes (16) acceptable. I give the analysis for why such a head as a sentential particle can license *ka* in the absence of the politeness marker.
“ask” – is playing the same function as the politeness marker in the matrix clause question in (15) above.

A reasonable way to think about what we just observed is that the politeness marker is associated with a head that is capable of selecting the matrix clause and the ka contained in it. If it is to parallel indirect questions such as in (18), which are selected by a verbal head, the head associated with politeness marking should be some kind of a predicate head. A good candidate for this is the Speech Act structure proposed by Speas and Tenny (2003) (with revision by Haegeman & Hill 2011), who suggest that there is a structure above the pronounced portion of a sentence that contains discourse information about the participants – speaker, hearer, and the relationship between the two. There are two points essential to our discussion. First, as we saw earlier, the Speech Act structure furnishes the representation of the hearer, which is a second person entity. This is needed to give valuation to the allocutive agreement. Second, the head of the Speech Act structure, “speech act,” according to Speas and Tenny, parallels small v in being a predicate of some sort. They suggest, in fact, that the Speech Act structure, headed by the Speech Act head (“sa”), is equivalent to the predicate structure found in the vP domain as proposed by Hale and Keyser (1998, 1999). That “sa” is a predicate head finds support in the analysis of verb-based sentential particles in Romanian and West Flemish by Haegeman and Hill (2011), in which these verb-based particles occur as “sa” heads. As we will see, the analysis of politeness marking provides further support for the predicate nature of “sa.”

Following is the structure for allocutive agreement with the CP being the question that is uttered. I have given a head-final structure now that we are discussing Japanese. One point on which Japanese differs from Souletin is that the politeness marker – what I assume to be allocutive agreement – may occur in questions, as we saw. This is not surprising since Japanese allows C recursion, as in to-ka ‘C-Q’. In (20), C recursion allows CQ that takes ka to occur with C that initially hosts the ϕ allocutive probe.

(20)
In Japanese, $C_Q$ is the head that hosts the question particle *ka*, and, as shown in (20), this $C_Q$ is appropriately selected by “*sa*,” a predicate element according to Speas and Tenny. “*sa*” occurs because there is politeness marker *-mas*- in the structure. The fact that “*sa*” can license *ka* in the same way that a verb can in indirect questions is further evidence for the verbal nature of “*sa*”. The other $C$ head hosts the allocutive probe; like in Souletin, I assume that this probe raises to the “*sa*” head, and this “*sa*” head raises to the position of SA, where it c-commands its goal (HEARER) and it has the entire utterance in its scope as the politeness marker.

The analysis of politeness marking in Japanese as allocutive agreement makes the prediction that the politeness marker should not occur in indirect questions, a prediction that is borne out in the following example.

(21) \[
\text{Hanako-wa [dare-ga kuru/*ki-mas-u ka] sitio i-mas-u.}
\]

Hanako-top who-nom come/come-mas-pres $Q$ know mas-pres

‘Hanako knows who is coming.’

In its use as a verb of indirect question, the matrix verb “*know*” must select an indirect question with *ka*. This is fine with the informal form of the verb. However, if the politeness marker appears, what the matrix verb is selecting for is not an indirect question because the CP with *ka* is embedded in the larger Speech Act structure, and “*know*” has inappropriately selected this Speech Act structure. As a result, inclusion of the politeness marker leads to a violation of the selectional requirement for the matrix verb “*know*.” This further shows that in the absence of the politeness marker, the Speech Act structure is not projected, which differentiates it from Souletin, where colloquial as well as formal forms apparently project the Speech Act structure.

3.1 Strong uniformity

At this point, we might ask, why does agreement occur in Japanese, when Japanese is typically an agreementless language? If a proposal I made in Miyagawa (2010) is on track, we in fact predict that Japanese should have $\phi$-feature agreement of some sort.

(22) **Strong Uniformity**

Every language shares the same set of grammatical features, and every language overtly manifests these features in some fashion.

This is an instantiation of the **Uniformity Principle** (Chomsky 2001):

(23) **Uniformity Principle**

In the absence of compelling evidence to the contrary, assume languages to be uniform, with variety restricted to easily detectable properties of utterances.
The Uniformity Principle, or something like it, is needed because we can no longer depend on the kind of parametric variation statements of the GB era, where variations were defined over the application of universal principles. Unfortunately, these principles turned out to be descriptions of the problems they were intended to solve. In MP, effort is made to rid elements from the theory that are not independently motivated, and the many – maybe all – principles, such as subjacency and the ECP, are examples that do not find independent motivation. We must therefore find a new way to state the uniform nature of human language, and where they can vary. Strong Uniformity states that languages all share exactly the same set of formal features, which are used for structure building and other operations, and that we do not expect to find variation of the sort whereby some languages have some of these features while other languages have some other subset of the universal set of features. All languages share all formal features, and all languages manifest these features in some fashion. The politeness marker in Japanese is person agreement that utilizes the same ϕ-feature agreement as the typical agreement-based languages. As an allocutive agreement, it finds its goal not in the domain of vP (subject, for example), but in the Speech Act structure, where it is valued by the second-person element corresponding to the hearer, “you.”

Strong uniformity is, in appearance and probably in content, in opposition to the cartographic approach (e.g. Rizzi 1997), which postulates “topic,” “focus,” and other functions as fixed positions in a structure. In contrast, Strong Uniformity states that notions like topic and focus are featural in nature, and they may occur on various heads, most notably, C and T. On the other hand, the two approaches share the assumption that such notions are universally represented in syntactic structure.

4. Politeness marking and the main clause phenomenon

Speas and Tenny (2003) propose the Speech Act structure with the idea that certain discourse-related phenomena are best viewed as being part of the syntactic structure of a sentence. What we have seen is that the SA structure occurs in a root domain where allocutive agreement may occur (and also discourse particles in Romanian and West Flemish – see Haegeman & Hill 2011). A question naturally arises, is the SA structure the domain for all root transformations? The SA structure is the only type of clause that allows the allocutive agreement, which is only natural because this structure furnishes the second person element needed as the goal for the allocutive agreement. But the type of root transformations originally identified by Emonds are allowed in asserted clauses, which occur independent of the SA structure. No root operation is allowed in presupposed clauses, as noted by Hooper and Thompson (1973). There
are, then, two types of main clause phenomenal, agreements that occur mainly in the main clause, which are the allocutive agreements we saw that are licensed within the SA structure, and the RTs such as the NCP that Emonds originally identified and was shown by Hooper and Thompson to apply in asserted clauses. Below, I show that these two types of main clause phenomena are indeed distinct, and that the latter – the RTs identified by Emonds and others – are ruled out on independent, syntactic grounds on a par with Haegeman and others, leaving only the allocutive agreement and other, related phenomena such as sentential particles in Romanian and West Flemish that depend on the occurrence of the SA structure to remain as a genuine MCP in the original spirit of Emonds.

4.1 Politeness marking in subordinate clauses

As Harada (1976) pointed out, the politeness marker may occur in limited types of subordinate clauses. Presumably, these are clauses that, despite being embedded, allow the SA structure, which led Harada to say that these are interpretable as “direct discourses,” all accompanied by the non-factive “quotative” complementizer to. In order to investigate the types of complements that allow the politeness marker, and those that do not, I turn to the classification of complement types Hooper and Thompson (1973) used for MCP possibilities in English subordinate clauses.

Hooper and Thompson (H&T) test for root transformations in five environments, A–E below.

(24)  

<table>
<thead>
<tr>
<th>Nonfactive:</th>
<th>Factive:</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>B</td>
</tr>
<tr>
<td>say</td>
<td>suppose</td>
</tr>
<tr>
<td>report</td>
<td>believe</td>
</tr>
<tr>
<td>exclaim</td>
<td>think</td>
</tr>
<tr>
<td>etc.</td>
<td>etc.</td>
</tr>
</tbody>
</table>

According to H&T, for Class A, it is possible for the complement to comprise the main assertion. For Class B, the main verb does not always have the meaning of assertion, allowing the complement to express the main assertion of the sentence. Class C verbs have the meaning of assertion, and they take a complement that is neither asserted nor presupposed. Class D verbs likewise express assertion, and their complement is presupposed. Finally, Class E verbs are called “semifactive” and their complement is not always presupposed. H&T show that RTs are possible in the complement clause in those classes where the complement can express assertion, namely, A, B, and E.

(25)  I exclaimed that never in my life had I seen such a crowd. (A)  (H&T: (43))
(26) I think that this book, he read thoroughly. (B)
(27) I found out that never before had he had to borrow money. (E)  
     (H&T: (119))

C and D do not allow RTs in the complement clause.

(28) *It’s likely that seldom did he drive that car. (C)  
     (H&T: (96))
(29) *He was surprised that never in my life had I seen a hippopotamus. (D)  
     (H&T: (103))

4.2 Comparison to Japanese: Allocutive agreement and complementizer type

In Japanese, asserted and presupposed clauses are often, though by no means always, distinguished by the type of complementizer heading the clause.

(30) Complementizers in Japanese  
     (see Kuno 1973; McCawley 1978, etc.)
     to: non-factive (=not presupposed)
     koto/no: factive (=presupposed)

When we look at complementizer selection in Japanese, we find that the five verb classes in H&T cluster precisely into two groups, those in English that allow RTs and those that do not. As shown below, while A, B, and E may take to or koto, C and D are limited to koto.

(31) A: to, koto
     B: to, koto
     C: koto
     D: koto
     E: to, koto

We see that those verb classes whose complements allow RTs as identified by H&T (A, B, E) may take the non-factive to, while those that do not can only take koto (C, D). The fact that A, B, and E can also take koto simply shows that any verb has the option of taking a presupposed complement with the right construction, as we can see in English with Class A verbs (I reported the fact that Mary will miss the meeting). In English, factive/non-factive difference is not lexically encoded on the complementizer.

Let us now look at the distribution of the politeness marker in these classes, paying attention to the complementizer type. As we can see below in an example taken from Harada (1976), Class A verbs allow the politeness marker in their complement clause:
Agreements that occur mainly in the main clause

(32)  Taroo-wa [Hanako-ga ki-mas-i-ta to] it-ta.\(^5\)
Taro-TOP [Hanako-NOM come/MAS-PAST] \(c_{\text{nonfactive}}\) say/PAST
'Taro said that Hanako came.' (Harada’s (102b))

If a Class A verb takes the *koto* complement instead of *to*, the politeness marker is not possible (I have changed the verb to ‘report’, which more readily allows the *koto* complement).

(33)  Taroo-wa [Hanako-ga kita/**ki-mas-i-ta** koto]-o
Taro-TOP [Hanako-NOM came/come-MAS-PAST] \(c_{\text{factive}}\) ACC
hookokusui-ta.
report/PAST
'Taro reported the fact that Hanako came.'

Before looking at Class B, let us look at C and D. We predict that Classes C and D, which only allow *koto*, do not allow the politeness marker.

CLASS C:

(34)  Taroo-wa [Hanako-ga kita/**ki-mas-u** koto]-o
Taro-TOP [Hanako-NOM came/come-MAS-PRS] \(c_{\text{factive}}\) ACC
hitei-sita.
deny/PAST
'Taro denied that Hanako will come.'

CLASS D:

(35)  Taroo-wa [Hanako-ga kita/**ki-mas-i-ta** koto]-ni
Taro-TOP [Hanako-NOM came/come-MAS-PAST] \(c_{\text{factive}}\) DAT
odoroi-ta.
surprise/PAST
'Taro was surprised that Hanako came.'

We can conclude from the examples above that:

(36)  *to* nonfactive complementizer may occur with the *sa* projection;
    *koto* (and *no*) factive complementizer does not occur with the *sa* projection.

---

\(^5\) Following Harada’s original example in (32) (his (102b), the matrix verb is given in the informal form. As his example shows, the verb in the complement clause of Class A may take the politeness marker without causing a stylistic conflict with the informal matrix verb. Later, I discuss other examples by Harada where the matrix verb must also be in the polite form and suggest, following Uchibori (2008), that this is a distinct phenomenon from allocutive agreement. Also, it has been pointed out to me that the politeness marker becomes possible even with *koto* if the complement verb with *-mas-* is in the honorific style, something I also discuss later in conjunction with the examples.
Let us now turn to Classes B (believe-type) and E (know-type), which allow RTs in English and, in Japanese, they can take either the to or the koto complement just as with Class A verbs. With koto, predictably the politeness marker is ungrammatical, just as we saw for Class A.

**CLASS B:**

(37)  
[Taroo-wa Hanako-ga kuru/*ki-mas-u koto]-o sinzitei-ru.  
Taro-TOP Hanako-NOM come/come-MAS-PRES c\textsubscript{FACT}-ACC believe-PRES  
'Taro believes that Hanako will come.'

**CLASS E:**

(38)  
[Taroo-wa sono hikooki-ga tuirakusita/*tuirakusi-mas-i-ta koto]-o sira-nakat-ta.  
c\textsubscript{FACT}-ACC know-NEG-PAST  
'Taro didn’t know that the airplane fell down.' (adapted from Harada’s (104b))

It is surprising that even with the non-factive to, the politeness marker is not possible with these two classes of verbs.\(^6\)

(39)  
[Taroo-wa Hanako-ga kuru/*ki-mas-u to] sinzitei-ru.  
Taro-TOP Hanako-NOM come/come-MAS-PRES c\textsubscript{NONFACT} believe-PRES  
'Taro believes that Hanako will come.'

---

6. Harada gives the following (his (103b)) using the Type B example “believe”. The example uses the nominal politeness marker -des-, which is why I did not use the example in the main text, although it makes the same point.

(i)  
*Taroo-wa [zibun-no tuma-ga CIA-no supai des-u to] sinzite i-mas-u.  
Taro-TOP self-GEN wife-GEN CIA-GEN spy DES-PRES believe-MAS-PRES  
'Taro believes that his wife is a CIA spy.'

In (40) below, I have also changed the Class E verb to “realize,” which more readily takes the to complement (thanks to Hiroki Maezawa for noting that Class E verbs can take to).

Uchibori (2008) notes the following Class B example as ungrammatical (her (14b)).

(ii)  
*Isya-wa [oosama-ga sono kusuri-o nomi-mas-i-ta to] omotta.  
c\textsubscript{NONFACT} thought  
'The doctor thought that the king took that medicine.'
(40) *Taro-wa [sono hikooki-ga tuirakusita/*tuirakusi-mas-i-ta to] satot-ta.*
+Taro-top that plane-nom fell/fall-mas-past to realized-PAST

‘Taro didn’t know that the airplane fell down.’

In English, complements of Class B and E verbs allow RTs, hence, the complements may be assertions under H&T’s analysis. So, why isn’t the politeness marker possible in Japanese in the same context? Is the complement of these verbs in Japanese simply different, and presupposed, in contrast to English? Minimally, what we can say about complements of Class B and E verbs is that they lack the SA structure because they do not allow the politeness marker in their complement, regardless of whether the complementizer is *koto* or *to*. Thus, so far, only root clauses and complement of Class A verbs, which is “reported S in direct discourse” (Emonds 1969), allow the allocutive politeness marker. Below, I will return to these classes of verbs and show that, just as in English, Japanese does allow a “root” operation distinct from allocutive agreement.

4.3 Reason clause

So far, we have identified the distribution of the politeness marker as being in two of the three environments identified by Emonds (1969).

(41) Root

A root will mean either the highest S in a tree, an S immediately dominated by the highest S or the reported S in direct discourse. (Emonds 1969:6)

The politeness marker occurs in the “highest S in a tree” and “the reported S in direct discourse,” the latter being the complement of Class A verbs in H&T’s classification. What about the third environment, that of “an S immediately dominated by the highest S”? If we can show that the politeness marker occurs in such an environment as well, Emonds’ original conception of Root turns out to have identified those structures that allow the Speech Act projection, and showing that his notion of Root therefore has nothing to do with RTs, which must be derived by some other means.

One type of sentence that H&T noted as a counterexample to Emonds (1969) is the reason adverbial clause, which allows RTs.

(42) Robert was quite nervous, because never before had he had to borrow money.

However, one way to look at this is that the reason clause itself occurs high in the structure, possibly directly hanging from the matrix TP (highest S in Emonds’ words),
which would make it the third environment that Emonds identified as root.\(^7\) That this is the case is shown by the fact that the politeness marker occurs in reason clauses, a fact already noted by Harada (1976) (\(-\text{des-}\) is the politeness marker that attaches to a nominal; see the subsequent example for a sentence with \(-\text{mas-}\)):

\[
\begin{align*}
(43) & \quad \text{Hima } \text{des-i-ta} \quad \text{kara} \quad \text{Ginza-ni} \quad \text{iki-mas-i-ta}. \\
\text{free} & \quad \text{DES-PAST} \quad \text{because} \quad \text{Ginza-to} \quad \text{go-MAS-PAST} \\
\text{‘I went over to the Ginza Street because I had nothing to do.’}
\end{align*}
\]

(Harada’s (137d))

The same is observed with the verbal politeness marker \(-\text{mas-}\), cf. (44).

\[
\begin{align*}
(44) & \quad \text{Hanako-ga} \quad \text{ki-mas-u} \quad \text{kara}, \quad \text{uti-ni} \quad \text{ite-kudasai}. \\
\text{Hanako-NOM} & \quad \text{come-MAS-PRES} \quad \text{because} \quad \text{home-at} \quad \text{be-please} \\
\text{‘Because Hanako will come, please be at home.’}
\end{align*}
\]

Based on the distribution of the politeness marker in Japanese, which I consider to be a form of allocutive agreement, we can state unequivocally that the original proposal for the Root by Emonds (1969) is a proposal about clauses that allow the Speech Act projection. His proposal is not about distinguishing environments that allow RTs of the type he noted (see also Emonds 2004, this volume). For the RTs and their environments, we need a very different approach to identify when they may apply, something I turn to in the remainder of the article.

5. **Topic \(\text{wa}\)**

A root phenomenon commonly mentioned in the literature is topic \(\text{wa}\), which may occur in a limited type of subordinate clauses (e.g. Heycock 2008; Kuno 1973; Kuroda 2005; Maki et al 1999; Sato-Zhu & Larson 1992; Tomioka 2007, 2010; Ueyama 1994; Whitman 1989, etc.). Kuroda (2005: 19–20) specifically points out that the topic \(\text{wa}\) can only occur in “statement-making contexts,” which we can interpret to mean something like ‘root’ contexts (see Heycock 2008 for further comment on this point as well as an extensive discussion of the literature). Thus, it is possible for this topic to occur in the complement of Class A verbs.

\[
\begin{align*}
(45) & \quad \text{Hanako-\(\text{wa}\)} \quad [\text{piza-\(\text{wa}\)} \quad \text{Taro-\(\text{ga}\)} \quad \text{tabeta} \quad \text{to}] \quad \text{itta}. \\
\text{Hanako-\(\text{TOP}\)} & \quad \text{pizza-\(\text{TOP}\)} \quad \text{Taro-\(\text{NOM}\)} \quad \text{ate} \quad \text{c\(\text{nonfact}\)} \quad \text{said} \\
\text{‘Hanako said that pizza, Taro ate.’}
\end{align*}
\]

\(^7\) I am grateful to an anonymous reviewer for pointing out this possibility for reason clauses.
Class A verbs such as ‘say’ above may take the non-factive to complement. We saw earlier that this class of verbs may also take the factive koto complement; with this complement, topicalization turns out to be ungrammatical (I have changed the main verb to “report,” which readily takes the koto complement).

(46) \*Hanako-wa [piza-wa Taroo-ga tabeta koto]-o hookokusita.
    Hanako-TOP pizza-TOP Taro-NOM ate c\textsubscript{FACT-ACC} reported
    ‘Hanako said that pizza, Taro ate.’

As topic, the phrase with wa is destressed (Kuno 1973; Nakanishi 2004); if it is stressed, it is not topic wa but contrastive wa, which has a wider distribution and is not a root phenomenon (e.g. Kuno 1973).\footnote{I am assuming the topic/contrastive wa bifurcation of Kuno (1973). For a different approach to wa and also the nominative ga, see Kuroda 2005 and references therein.}

We saw earlier that while Class A verbs with the to complement allow the politeness marker, Class B and E, which in English allow RTs, do not allow the politeness marker. I concluded that B and E do not allow their complement to project the SA structure, only leaving the complement of Class A verbs to do so. However, when we look at topicalization, we see a different pattern: topicalization is possible, as shown for Class B below.

(47) Taroo-ga [Hanako-wa kuru to] sinzitei-ru.
    Taro-NOM [Hanako-TOP come-PRES c\textsubscript{NONFACT} believe-PRES
    ‘Taro believes that Hanako will come.’ (Class B)

Just as we saw for Class A verbs, topicalization with Class B and E verbs is possible only with the to complement; with the koto complement, topicalization is ungrammatical.

(48) \*Taroo-ga [Hanako-wa ku-ru koto]-o sinzitei-ru.
    Taro-NOM [Hanako-TOP come-PRES c\textsubscript{FACT-ACC} believe-PRES
    ‘Taro believes that Hanako will come.’ (Class B)

The fact that Class A, B, and E verbs allow the root transformation of topicalization to apply in the complement clause, but only Class A allows the politeness marker, shows that RTs such as topicalization do not depend on the notion of Root as proposed by Emonds. From our perspective, Emonds’ RTs do not depend on the occurrence of the SA structure.
Class C and D verbs only allow the *koto* complement, so that topicalization is not possible, a point demonstrated in the following example from Maki et al. (1999).

(49) \[\text{John-wa} \ [\text{kono hon-}^\text{wa/o} \ \text{zibun-}^\text{no-kodomo-ga} \ \text{yonda}]\]
\[\text{John-top this book-top/acc self’s-child-nom read}\]
\[\text{koto]-o} \ \text{ kokkaisita.} \]
\[\text{cfact-acc regret}\]

’John regrets that this book, his child read.’ (Class D) (Maki et al.’s (12b))

One interesting point that this example by Maki et al demonstrates is that while topicalization to the left edge of the Class D verb complement is ungrammatical, scrambling, indicated by the accusative case marking, is fine. I return to this distinction below.

What precisely is the difference between *to* (non-factive) and *koto* (factive complementizer) that gives rise to the pattern of grammaticality we have observed? In a series of works, Haegeman (e.g. 2006, 2009, 2010) (see also Haegeman & Ürögdi 2010) argues that the prohibition against RTs is a syntactic phenomenon in which an occurrence of movement, such as operator movement, intervenes to block RTs.

Munsat (1986) argues that factive clauses contain an operator that moves to C (see also Melvold 1991; Hiraiwa 2010; Watanabe 1993, 1996, among many others). Using a proposal in Haegeman (2007), Haegeman and Ürögdi (2010) argue that this operator movement is what causes an intervention effect in factive clauses (they call them “referential clauses”), leading to blocking of root operations such as topicalization.

(50) Adapted from Haegeman (2007):
\[\{\text{CP OP}_1 \text{C} \ldots \text{FP}_1 \text{[TP} \ldots \text{]}\}\]

This operator movement to Spec,CP blocks anything else from moving to this position. Recall from Maki et al (1999) that while topicalization to the left edge of the complement clause of a Class D verb leads to ungrammaticality, scrambling is perfectly acceptable. This distinction between topicalization and scrambling would find the same explanation based on intervention if we assume that, while scrambling may be to TP (e.g. Saito 1985), topicalization is to Spec,CP. The latter assumption is not standard, with Kuno (1973) arguing that topicalization, as opposed to constrastive wa, need not involve movement (see also Hoji 1985, Saito 1985). If we accept certain assumptions in Maki et al (1999) and hypothesize that topicalization in Japanese relates to C, and it involves movement, the intervention analysis would account for...
the pattern of grammaticality we have observed between to and koto complementizer clauses. It is possible that when -wa is interpreted as contrastive, which means that the -wa phrase receives emphatic focus stress, it moves to TP, as Saito (1985) argued (see also Hoji 1985). This would make the movement fine because it does not compete with the operator movement. But as topic movement, which is characterized by a lack of emphatic stress, the movement is to Spec,CP and competes with the operator movement. The fact that there is a range of judgments reported (for example, Hiraiwa 2010, p. 193, Footnote 4) suggests that the two types of movement of the -wa phrase are not always being distinguished.

The operator that arises with the koto complementizer does not occur with the non-factive to complementizer, so that for Classes A, B and E, which allow both to and koto, the complement with to allows topicalization, as we saw above. The fact that Class B and E verbs allow topicalization with the to complement but not the politeness marker, as we saw earlier, indicates that the complement of these two classes of verbs cannot occur with the SA structure. Independent of the SA structure, a root operation such as topicalization is predicted to be impossible if there is a competing A’-movement in the structure already, but such an operation is fine if there is no competing A’-movement to begin with. This shows that root/non-root distinction finds justification only relative to whether the structure allows the SA projection, and does not find justification by whether the structure allows RTs. All the RTs identified in English are such that they can, in principle, be dealt with by the syntactic intervention approach. This leads to the question, is there a genuine root phenomenon in English? Later, I will introduce the study by Amano (1999), who draws the same distinction between MCP that are only allowed in what I am calling SA structures and other MCP that are allowed in non-SA constructions.

6. Adverbial clauses and indirect questions

We saw earlier that the politeness marker is possible in the reason-clause.

(51) Hanako-ga ki-mas-u kara, uti-ni ite-kudasai.
    Hanako-NOM come-MAS-PRES because home-at be-please
    ‘Because Hanako will come, please be at home.’

We can see below that the reason-clause also allows topicalization.

---
10. The analysis in Miyagawa (2010) should in principle make it possible for topicalization to take place within the TP projection instead of the CP projection, although movement to the CP region is not excluded. I leave this issue open.

11. Amano (1999) was brought to my attention in the last stages of writing this article by Hiroki Maezawa.
There is one issue about the reason-clause that makes a distinction between politeness marking and topicalization.

The reason-clause is often ambiguous between presupposed reason and asserted reason, and it is only in the asserted meaning that RTs such as topicalization are allowed (Hooper & Thompson 1973; Sawada & Larson 2004, this volume; Haegeman 2006). As Koizumi (1993), Sawada (2011), and others note, we see a parallel in Japanese. In fact, we can use this structure to ask a question we have not been able to address before: is the SA structure compatible with presupposed clauses (or, on the intervention story, with clauses that contain movement), or is it limited to occurring with asserted clauses (or clauses without movement)? There is, in principle, no reason why the SA structure cannot occur with presupposed clauses, and this is what we will see in the reason-clause.

In the example below, the reason-clause is ambiguous between being presupposed and being asserted.

(53) **Hanako-ga kuru kara, uti-ni ite-kudasai.**
Hanako-nom come because home-at be-please
‘Because Hanako will come, please be at home (assertion)/Please be at home because Hanako will come (presupposed).’

We see in the following example that topicalization disambiguates the reason-clause, forcing it to solely take on the assertion interpretation.

(54) **Hanako-wa kuru kara, uti-ni ite-kudasai.**
Hanako-top come because home-at be-please
‘Because Hanako will come, please be at home.’

This shows that, just as in English, presupposed clauses are incompatible with RTs. An interesting point about this example is that, if the intervention story is on the right track, the reason-clause apparently has an operator if it is presupposed despite the fact that the clause does not have a complementizer that marks the clause as factive (like *koto* in sentential complementation), and this operator blocks topicalization from occurring, which leaves only the asserted reason-clause as the environment where this RT can take place.

Let us now look at the reason-clause with the politeness marker.

(55) **Hanako-ga ki-mas-u kara, uti-ni ite-kudasai.**
Hanako-nom come-MAS-PRES because home-at be-please
‘Because Hanako will come, please be at home/Please be at home because Hanako will come.’
As indicated by the English translation, this reason-clause is ambiguous between presupposed and asserted interpretations. This indicates that the SA structure is independent of whether the CP within it contains presupposed or asserted clause (or movement or no movement). This further separates Root (SA structure) from the notion of asserted/non-asserted clauses, leaving the latter to be analyzed by such approaches as syntactic intervention.

6.1 Temporal clause

Let us turn to temporal adverbial clauses. This construction does not allow the politeness marker, showing that a temporal clause does not contain the SA structure.

(56) *Taro-ga [Hanako-ga ki-mas-ita toki],
    Taro-nom Hanako-nom come-mas-past when
    uti-ni i-mas-en-desita.
    home-at be-mas-neg-past
    'When Hanako came, Taro wasn’t home.’

Let us now see if temporal clauses in Japanese allow topicalization. First of all, it is well known that English temporal clauses do not allow RTs such as topicalization (e.g. Hooper & Thompson 1973; Haegeman 2010).

(57) *When her regular column she began to write again, I thought she would be OK.

Haegeman (2010) argues that the impossibility of this sort of operation within temporal clauses is not due to the fact that this clause is non-assertive. Rather, she points out that there is a separate operation of movement of the temporal wh-phrase, and this movement intervenes to block such operations as topicalization. The evidence for movement of the wh-phrase is found in Larson (1987, 1990), who proposes the following representations for high (58a) and low (58b) construal (see also Geis 1970 and Johnson 1988, among others, for relevant discussion).

(58) a. John left [CP when] [IP Sheila said [CP [IP he should leave] t₁]]
    b. John left [CP when] [IP Sheila said [CP [IP he should leave t₁]]]
    (Larson 1987)

Likewise in Japanese, the RT, topic wa, is not possible.

(58) *Taro-ga [Hanako-wa kita toki], uti-ni i-nakat-ta.
    Taro-nom Hanako-top came when home-at be-neg-past
    'When Hanako came, Taro wasn’t home.’

At first blush, it is puzzling why we find intervention in Japanese, because the sort of ambiguity for temporal adjuncts that we observed for English above does not appear to hold in Japanese, suggesting that there is no operator movement.
This sentence only has the high reading of when Sheila's utterance took place, and not when he should leave. This suggests that there is no operator movement. However, as it turns out, with a slight change in the example, we are able to obtain the same ambiguity as in English (thanks to Hiroki Maezawa for this example).

In this example, the postposition -ni appears with the toki 'when' phrase, and although the high reading is more natural, it is also possible to obtain the lower reading. This suggests that Japanese also has operator movement within temporal clauses, and, for some reason, the movement of this operator is blocked from the lower clause in the absence of the postposition -ni (see Endo in this volume for some preliminary remarks). I leave this problem open.

6.2 Indirect question

We saw earlier that an indirect question does not allow the politeness marker. The example is repeated below.

(61)  
\[
\text{Hanako-wa} \ [\text{dare-ga} \ ku-ru/*ki-mas-u \ ka] \ sitte-i-ru.
\]
Hanako-TOP who-NOM come-PRES/come-MAS-PRES Q know-PRES

'Hanako knows who is coming.'

However, the following shows that topicalization is possible (Maki et al. 1999).

(62)  
\[
\text{Hanako-ga} \ [\text{CP Taro-wa nani-o katta} \ ka] \ sitte-i-ru.
\]
Hanako-NOM Taro-TOP what-ACC bought Q know-PRES

'Hanako knows what Taro bought.'

This is different from English, where RTs are not possible in indirect questions presumably due to intervention. What is the difference? There are analyses of wh-construction in Japanese that would be compatible with the absence of intervention. For example, Hagstrom (1998) argues that in Japanese, the Q-particle (ka in above) is merged with the wh-phrase, and moves by head movement to C. In Miyagawa (2001), I gave this as
the reason why the wh-phrase does not have to move in Japanese, drawing a parallel with head-movement of pronominal agreement to T that makes it unnecessary for a DP to move to Spec, TP in Romance (Alexiadou & Anagnostopoulou 1998). On this account, the movement that occurs is head movement, and it is not surprising that such a movement does not to intervene in topicalization, which is XP movement.

7. SA structure and the MCP in Japanese and English

The following summarizes the data we have looked at in this paper.

(63) MCP in English and Japanese

<table>
<thead>
<tr>
<th>Type</th>
<th>Type A (say)</th>
<th>Type B (believe)</th>
<th>Type C (deny)</th>
<th>Type D (be surprised)</th>
<th>Type E (know)</th>
<th>because</th>
<th>when</th>
<th>Indirect question</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>√</td>
<td>√</td>
<td>*</td>
<td>*</td>
<td>√</td>
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<td>Japanese</td>
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<td>*</td>
<td>*</td>
<td>√</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

In the cases where there is a difference between the politeness marker and -wa (Classes B and E, and indirect question), this difference arises because these are clauses that do not allow the SA structure but at the same time, these clauses do not have an independent operator movement to intervene in topicalization. For Classes B and E, topicalization is allowed only in clauses that are associated with the non-assertive to because, by assumption, these clauses do not contain a factive operator. Type A and reason-clause allow the politeness marking, indicating that these are environments where the SA structure may emerge along with the matrix clause.

There is a question as to whether in English, the SA structure also occurs, something that cannot be checked with allocutive agreement because English does not have such agreement nor does it have sentential particles found in Romanian and West Flemish, which are also MCP in the SA structure. As it turns out, there is one phenomenon in English observed by Amano (1999) that precisely matches the allocutive agreement and sentential particles in apparently only being able to occur in Emonds’ original root environments (and the reason-clause). Following Greenbaum (1969) and Quirk et al (1972, 1985), Amano distinguishes between “attitudinal” and “style” adverbs.

(64)  

a. **attitudinal**  
apparently, certainly, definitely, evidently, annoyingly, astonishingly,…  

b. **style**  
frankly, truthfully, honestly, …
According to Greenbaum (1969), attitudinal adverbs indicate the speaker's attitude toward the proposition, in some cases this attitude is about the truth value of the proposition (e.g. apparently), while in other cases some other attitude is expressed (e.g. annoyingly). Amano's proposal is that attitudinal adverbs indicate assertions, and, quite strikingly, Amano observes that the attitudinal adverbs occur in all the environments that H&T identified as allowing RTs (Amano 1999: 206).

(65)  
a. Carl told me that this book certainly has the recipes in it. (Class A)  
b. Bill believes that certainly, John will lose the election. (Class B)  
c. *I doubt Kissinger certainly is negotiating for peace. (Class C)  
d. *I regret that I unfortunately attended the concert. (Class D)  
e. I know that Santa certainly has lost a lot of weight. (Class E)  
f. Sam is going out for dinner, because his wife certainly is cooking Japanese food. (reason-clause)

According to Greenbaum (1969), style adverbs indicate the speaker's manner of expression (e.g. frankly), and Amano proposes that this type of adverb need not modify an assertion, and importantly, its occurrence is limited to Emonds' original characterization, plus the reason-clause. First, style adverbs are compatible with all types of main clauses (Amano 1999: 210).

(66)  
a. Frankly, did you like the article? (question)  
b. Truthfully, who broke the window? (question)  
c. Honestly, don't tell him about it. (order)

However, style adverbs in embedded contexts are only compatible with Class A verbs.

(67)  
She said, "Honestly, I do not know anything about their plans." (Class A)

Amano points out that the style adverb is only compatible with Emonds' original characterization of root clauses. He notes this for indirect questions and indirect requests, given in (a) and (b) below; the rest I have created using his examples from earlier, replacing the attitudinal adverb with a style adverb.

(68)  
a. *She asked me whether honestly I would stay. (ind. question)  
b. *He requested that, frankly, the papers be turned in next Monday. (ind. request)  
c. *Bill believes that honestly, John will lose the election. (Class B)  
d. *I doubt Kissinger frankly is negotiating for peace. (Class C)  
e. *I regret that I frankly attended the concert. (Class D)  
f. *I know that Santa honestly has lost a lot of weight. (Class E)

Finally, Amano notes that style adverbs are compatible with reason-clauses ("?" is based on native speakers he consulted).

(69)  
?John fired his secretary, because, frankly, she was incompetent. (reason)
Very clearly, Amano discovered a way for English to distinguish SA-structures from non-SA structures that allow RTs. Why should style adverbs require the SA-structure? In a semantic analysis of adverbs, Bellert (1977: 349), who calls the style adverbs “pragmatic adverbs,” notes that these adverbs “are the only ones that are strictly speaking speaker-oriented adverbs, for one of the arguments is the speaker.” If this is correct, then the semantic representation of the speaker would be expressed explicitly in the SA structure. Finally, the fact that attitudinal adverbs only occur with assertion is a challenge to the intervention approach to RTs. While the typical RT involves movement, hence amenable to an intervention approach if blocked, adverbs presumably do not involve movement, so that with these adverbs, we will need to revert to H&T’s notion of assertion vs. non-assertion (see also Sawada & Larson 2004, this volume, for relevant discussion of the semantics of assertion and clause size). See Haegeman (2011) for a possible account of how the distribution of these adverbs can be derived on an intervention account.

8. Some problems

Before concluding the paper, I will note some remaining problems, all drawn from Harada (1976). Harada (1976: 559) lists the following subordinate environments as allowing the politeness marker:

i. direct discourse complement
ii. factive complement
iii. nonrestrictive relative clause
iv. conjunct clause
v. adverbial subordinate clause

We have already seen (i) and (v) as those that allow the SA structure; (iv) is also not a problem given that what is conjoined are two or more SA-structure clauses. Following is an example given by Harada (his (137b)).

(71) Kesa Ueno Doobusuen-ni iki-mas-i-te, sukosi
    this.morning Ueno zoo-to go-MAS-CONJ bit
    sanpo-o si-te mairi-mas-i-ta.
    walk take went-MAS-PAST
‘This morning I went to the Ueno Zoo and took a short walk.’

This is presumably a conjunction of two main clauses, so the occurrence of the politeness marker is not at all surprising. While these can be readily handled, the remaining two are not so easily accounted for, and I will simply give the data and some thoughts on them.
One example that Harada gives for (ii), factive complement, is the following (his 131b).

(72)  \[Yamada-kun-ga \ kono \ tabi \ \text{N}oobe\text{r}-syoo-o \ \text{zyu}yo-sare-
\text{Y}amada-nom \ \text{lately \ Nobel \ Prize-acc \ was.given-}
mas-i-ta \ \text{koto-wa \ \text{mina-sama \ go-zonzi \ to \ omoi-mas-u.}
\text{MAS-PAST \ \text{fact-top \ you \ all \ know \ c \ \text{think-MAS-PRES}}
\text{\textquotesingle \textbf{I think you all know that Mr. Yamada was given the Nobel Prize lately.}}\]

One point that Harada notes is that the occurrence of the honorific \textit{sare} on the predicate 'was given' appears to make the politeness marker sound more felicitous (the other example Harada gives in this category also has such an honorific form). This may suggest that the honorific form has the ability to project the SA structure independent of the type of complement that it occurs in. Uchbori (2008) also notes that for the politeness marker to be grammatical in certain embedded contexts, it must be accompanied by the honorific form.

Finally, the example for non-restrictive RC is the following.

(73)  \[Watasi-wa \ \text{mizu-tama-moyoo-no} \ \text{ari-mas-u \ kami-}
\text{I-top \ \text{polka.dots \ exist-MAS-PRES \ paper-}
\text{ga} \ \text{hosi-i \ to \ omoi-mas-u.}
\text{nom \ \text{want \ c \ \text{think-MAS-PRES}}
\text{\textquotesingle \textbf{I want the paper with polka dots.}}\]

Harada points out that the referent of the head noun 'kami' is unambiguous in referring to a specific entity and this fact led him to the conclusion that when the politeness marker occurs, the RC is non-restrictive. As he notes, if we take off the politeness marker, as in the example below, the head noun becomes ambiguous between being specific and nonspecific.

(74)  \[Watasi-wa \ \text{mizu-tama-moyoo-no} \ \text{aru \ kami-ga \ hos-i}
\text{I-top \ \text{polka.dots \ exist \ paper-nom \ want}
\text{to \ omoi-mas-u.}
c \ \text{\text{think-MAS-PRES}}
\text{\textquotesingle \textbf{I want (the) paper with polka dots.}}\]

There is one point about the non-restrictive RC in (73) that is worth mentioning. Note that the politeness marker occurs both within the RC and on the matrix verb 'think'. Without the politeness marker on the matrix verb, the entire sentence sounds decidedly odd. This is not always the case, as we saw in Harada’s example of Class A verb earlier, repeated below.

(75)  \[Taro-wa \ \text{[Hanako-ga} \ ki-mas-i-ta \ \text{to}] \ \text{it-ta.}
\text{Taro-top \ Hanako-nom \ come-MAS-PAST \ c_{\text{nonfact}} \ say-MAS-PAST}
\text{\textquotesingle \textbf{Taro said that Hanako came.}}\]

(Harada’s (102b))
In this example, while the complement verb has the politeness marker, the matrix verb ‘said’ does not, and the sentence sounds perfectly natural. What is the difference between this and the non-restrictive RC example? Uchibori (2008) observes precisely the phenomenon we just looked at. She notes that not all instances of the embedded politeness marker require the matrix verb to be in the polite form as well. Where there is such a requirement, and apparently the non-restrictive RC is one, Uchibori suggests that it is a form of long-distance licensing by a modal head that reaches into the embedded environment in certain contexts to allow the politeness marker to occur. On this view, it is not an instance of the allocutive agreement because the politeness marker is licensed by some head outside of its clause instead of by the SA structure. It is also interesting to note that Harada (1976) calls the honorific form in the non-restrictive RC “hyper-polite”, which he somehow distinguishes from the normal use of the politeness marker. This special form of politeness marker may reflect Uchibori’s long-distance licensed politeness marker instead of one made possible by the SA structure.12

12. Uchibori (2007: 309) observes that the politeness marker may also occur in what she calls "subjunctive" clauses.

(i) Ame-ga hurii-mas-u yooni. (Uchibori: (28))

\[ \text{rain-NOM fall-MAS-PRES } C_{\text{SUBJUNC}} \]

This is an expression of hope or, in other contexts, ordering, and may be embedded under a verb like “pray” or “order.” An interesting point about this subjunctive clause is that when embedded under a verb such as “pray,” there are two options for the politeness marking to appear, as noted by Uchibori (2007; see also 2008). If the complementizer yooni occurs, the main verb must also have the politeness marker.


\[ \text{people-TOP rain-NOM fall-MAS-PRES C pray-MAS-PAST/ prayed} \]

‘People prayed that it will rain.’

On the other hand, if the complementizer is accompanied by the quotative particle to, the main verb need not be in the polite form.

(iii) Hitobito-wa [ame-ga hurii-mas-u yooni to] negai-mas-i-ta/negatta.

\[ \text{people-TOP rain-NOM fall-MAS-PRES C pray-MAS-PAST/PRAYED} \]

‘People prayed that it will rain.’

This pattern of grammaticality suggests that when to occurs, it is a quote, allowing the politeness marker to occur independent of the form that the matrix verb takes, but without it, it is embedding that behaves similarly to other verbs that do not allow the politeness marker in the complement.
9. Conclusion

Emonds’ (1969) seminal work opened the door to a large body of literature on the MCP. We have learned from these efforts that much of what Emonds observed as having a special status as root transformations finds explanation on independent grounds, either a semantic one in terms of assertion/non-assertion or a syntactic one in terms of intervention, which does not require us to postulate a special “root” structure. However, his original conception of the root clause as being the matrix clause, clause directly dominated by the highest S, and the complement of verbs of direct discourse finds support in the phenomenon of allocutive agreement, which is genuine agreement that occurs mainly in the main clause and agrees with the hearer in the discourse. The allocutive agreement requires a super-structure above the uttered expression that introduces a representation of the hearer, much like Ross’s original Performative Analysis. I used the modern version of the Performative Analysis by Speas and Tenny, which they call Speech Act projection, with revision by Haegeman and Hill, to argue that, indeed, Emonds’ original conception of Root refers to clauses that project the SA structure that supports allocutive agreement. Finally, given that the research on the MCP began with discussion of English, a natural question to ask is, are there indications of the SA structure in English? While the work of Ross on the Performative Analysis naturally comes to mind, some of the most interesting evidence he marshals for it is based on the occurrence of reflexives that do not have an antecedent in the utterance, but instead refer to the speaker, for example. It is possible that such use of the reflexive points to the existence of the super-structure, but we must tread carefully, given that since his study we have come to understand that certain uses of the anaphor are logophoric, and although logophoricity itself may be evidence for the super-structure, we will need to see if his work provides genuine evidence for the discourse-related layer of syntactic structure that he argued for. We saw that a different test suggested by Amano (1999) using attitudinal and style adverbs may hold promise of identifying SA and non-SA structures even in English.

References


Haegeman, Liliane & Hill, Virginia. 2011. The syntacticization of discourse. Ms, Ghent University and University of New Brunswick-SJ.


Agreements that occur mainly in the main clause


The syntax of MCP
Deriving the truncation account*

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This paper proposes that the restricted distribution of MCP follows from locality conditions on movement. The focus is the well-known absence of argument fronting in English adverbial clauses, but the account extends naturally to other clause types and to other MCP. Underlying most syntactic accounts of the distributional restrictions on MCP is the intuition that certain clause types cannot fully exploit their left-peripheral space. This intuition is directly expressed in configurational terms in what I will be calling ‘truncation’ accounts which postulate that a segment of the articulated left periphery is unavailable. In this paper I develop an intervention-based account for MCP. In this account the effect of ‘truncation’ is no longer stated as a primitive but is syntactically derived.

1. Introduction

Starting from seminal work by Joe Emonds (1970, 1976), there is a long-standing tradition that sets apart a set of syntactic phenomena as ‘Root Transformations’ or ‘Main Clause Phenomena’ (Hooper & Thompson 1973), i.e., patterns whose distribution is restricted to main clauses and a restricted subset of subordinate clauses. This paper focuses on one subset of the so-called root phenomena, namely (non-resumptive) argument fronting in English. Picking up the tradition initiated by Emonds’s own work (1970, 1976), I will explore a syntactic account for the restricted distribution of this phenomenon. Though the focus of my discussion is the absence of argument fronting in English adverbial clauses, the account which will be explored extends naturally to other clause types that disallow MCP. The intervention account also leads to the prediction (Emonds 1976:40–41, see introduction to this volume) that multiple MCP will be disallowed, since two instantiations of fronting will also lead to intervention effects.

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I start from the assumption that English argument fronting involves the left periphery (in the sense of Rizzi 1997). Underlying most syntactic accounts of the distributional restriction of MCP is the intuition that somehow adverbial clauses cannot fully exploit their left-peripheral space. This intuition is expressed configurationally in so-called ‘truncation’ proposals, i.e., accounts postulating that a specific chunk of the articulated left periphery is unavailable in some embedded domains. However, such accounts raise a number of questions, in particular the precise implementation of structural truncation is complex and empirical issues remain. I will show that these problems dissolve if one conceives of ‘truncation’ not as the primitive of the analysis but rather as a by-product of the syntactic derivation of the clause types in question.

The paper is organized as follows. Section 2 presents the empirical focus of the paper, namely the fact that so-called Main Clause Phenomena (MCP) are banned from adverbial clauses, focusing on the absence of argument fronting in English. It offers a configurational account in terms of structural deficiency according to which clausal domains that are incompatible with MCP are ‘truncated’ in that their left periphery lacks the Focus and Topic layers that host fronted arguments in English. Section 3 discusses the conceptual and empirical problems that arise for the truncation account and shows that linking the distribution of MCP to Assertion also is not without its problems. Section 4 presents an alternative account, building on the observation that fronting in the left periphery presents a double asymmetry: on the one hand, English adjuncts can and arguments cannot front to the left periphery of adverbial clauses, on the other hand, unlike English argument fronting, CLLD in Romance is admitted in the left periphery of adverbial clauses. The section shows that this double asymmetry is familiar from contexts such as wh-questions and relativization structures, contexts in which a natural account in terms of intervention effects on movement suggests itself. It is then shown that adopting a movement analysis of adverbial clauses, the distribution of MCP will follow without any need for appealing to truncation. Section 5 briefly shows how the apparent structural deficiency of domains that are incompatible with MCP follows from the intervention account and hence that what seems like structural truncation is a by-product of locality conditions of movement. Section 6 addresses the analysis of peripheral adverbial clauses. Section 7 is a brief conclusion.

2. Main clause phenomena and truncation

2.1 The core data

For most speakers of English, temporal and conditional adverbial clauses are incompatible with argument fronting, a pattern available in root declaratives.
(1)  a. *When her regular column, she began to write again, I thought she would be OK.
    b. *If these exams he doesn't pass, he won't get the degree.

These data might lead to the hypothesis that for some reason the left-peripheral space is unavailable in the adverbial domains. This proposal would reflect Hooper and Thompson's (1973:485) idea that clauses that resist MCP are 'reduced'. It is, however, not the case that adverbial clauses do not allow any material to appear to the left of the canonical subject position, as shown by the fact that (i) English adverbial adjuncts (cf. (2)) and (ii) Romance CLLD constituents (cf. (3)) may also appear to the left of the subject (see Haegeman 2006 for more examples).

(2)  a. When last month she began to write a regular column for the Times (at a reported £ 250,000 a year), I thought, that's it...
    (Guardian, G2, 21.01.2002, page 8 col 5)
    b. If on Monday the share price is still at the current level then clearly their defence doesn't hold much water.
    (Observer, 11.07.2004, business, page 22 col 5)

(3) [Se la stessa proposta la fa anche l’ altro candidato],
    if the same proposal it makes also the other candidate
    non otterrai quel posto.
    not get-FUT-2SG that position
    (Cardinaletti 2009, her (22a))

To account for the availability of left-peripheral adjuncts, and for the unavailability of argument fronting in English, one might propose that adjuncts, unlike fronted arguments, are TP-joined and do not involve a left-peripheral functional projection. A TP adjunction analysis for adjuncts, which would remain compatible with the hypothesis that the left-peripheral space is unavailable in the relevant adverbial clauses, raises both theoretical and empirical problems. (i) In many current approaches adjunction as such is no longer available, and (ii) Rizzi (1997) provides empirical arguments that an adjunction approach to initial adjuncts is unable to account for the fact that such adjuncts are incompatible with subject auxiliary inversion. I refer to his paper for discussion.¹

In their discussion of the distribution of Main Clause Phenomena in adverbial clauses Bianchi and Frascarelli (2010:22, (44a)) signal examples such as (4), in which the DP the staff is fronted in a clause embedded within the adverbial clause.

(4)  He held back when I told him that the staff, I myself would choose _ (and the office, he would choose).

¹. The objection extends to Maki et al.’s (1999) adjunction account of argument fronting.
Obviously since the relevant fronting is not in the adverbial clause as such but in an embedded domain it is indeed not expected to be unacceptable.

### 2.2 The truncation analysis

To account for the unavailability of argument fronting in English adverbial clauses while allowing initial adjuncts and CLLD in Romance, Haegeman (2006) proposes that the size of the left periphery of adverbial clauses differs from that of main clause and of those embedded clauses that are compatible with argument fronting: while root clauses and embedded clauses compatible with MCP have the full-fledged left periphery in (5a), adverbial clauses have a reduced or truncated periphery in (5b).

The representations in (5) depart from the original articulated CP structure in Rizzi (1997) in two ways. (i) SubP is distinguished from ForceP: the former hosts the subordinating conjunction, the latter encodes Illocutionary Force (cf. Bhatt & Yoon 1992); (ii) Mod(ifier)P hosts the initial adverbial adjuncts. I return to these points below.

\[
\begin{align*}
(5) & \quad \text{a.} \quad \text{SubP} \quad \text{ForceP} \quad \text{TopP} \quad \text{TopP} \quad \text{FocP} \quad \text{TopP} \quad \text{ModP} \quad \text{FinP} \\
& \quad \text{b.} \quad \text{SubP} \quad \text{TopP} \quad \text{TopP} \quad \text{ModP} \quad \text{FinP}
\end{align*}
\]

Haegeman proposes that different TopPs must be distinguished, each with a specialized contribution to information structure (see Frascarelli & Hinterholzl 2007; Bianchi & Frascarelli 2010, etc.) and, in particular, that the ‘lower’ TopP which is dominated by FocP and survives truncation (5b) is only available in Romance (in the form of CLLD).

To derive the structural truncation Haegeman (2006) proposes that the higher TopP and FocP are licensed by Force. The intuition behind this is the idea that in English ‘focalization’ and ‘topicalization’ are directly anchored to the (possibly reported) speaker, and that this is encoded through Force. A similar idea was suggested in Bayer (2001: 14–15), who explicitly relates the availability of topicalization and of high modal markers to the presence of Illocutionary Force. One might formalize the relevant dependency in terms of feature checking through agree by, for instance, proposing that Foc and the higher Top are associated with an uninterpretable feature [u\text{force}] which probes upwards for the Force head, which has the matching interpretable feature.\(^2\)

Among others, the following have explored the idea that the left periphery is not uniformly projected to the same level: Kuroda (1992: 350), Benincà and Poletto (2004), Grewendorf (2002: 53), Emonds (2004), McCloskey (2006), Meinunger (2004), though with widely divergent implementations. Haegeman’s (2003a, 2006) implementation

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of the truncation account was further explored by Carrilho (2005:244–5, 2008), Munaro (2005), Hernanz (2007a,b), Bentzen et al. (2007), Abels and Muriungi (2008:693–4), Cardinaletti (2009), Wiklund et al. (2009).

3. Discussion

For Haegeman adverbial adjuncts are – or can be – hosted by a designated ModP (Haegeman 2003b, Rizzi 2004), which remains available in the left periphery of adverbial clauses (5b). Note however, that the fronted adjuncts that are most easily available in the left periphery of adverbial clauses seem to belong to frame-setting adjuncts.3 Benincà and Poletto (2004:66) label the same class of adjuncts ‘scene-setting’ adjuncts and propose that they occupy a high position in the left periphery (cf. also Hernanz 2010:53 for supporting evidence). Assuming the truncated structure in (5b) as well as the hypothesis that the high scene-setting projection remains available introduces a complication to the truncation analysis, since one would then have to assume that certain projections above FocP are selectively instantiated and that these can license the relevant adjuncts. This might arguably be because these projections are not licensed by Force, so one would have to assess for each projection, regardless of its

3. As pointed out by Shigeru Miyagawa (p.c.) the left peripheral adjuncts are not restricted to so called scene-setting adjuncts. He gives the following example:

(i) If in the next test Sally writes the correct answer, I will pass her.

The precise restrictions on which adjuncts do not give rise to intervention awaits further research. This may also vary in terms of the type of adverbial clause. For instance, McCloskey (2006: his (49a), (50a), (51a)) shows that temporal clauses introduced by before, after and since do not allow left-peripheral adjuncts.

(ii) a. *After while washing the dishes he cut his thumb …
    b. *Before last year she retired …
    c. *Since a year ago she went away …

However, the following attested examples show that this restriction is too absolute: at least before and after are compatible with some left-peripheral adjuncts, typically realized as -ly adverbs.

(ii) a. Next it was Kent Wood’s turn, and we had yet more waffle about “ambiguous” evidence before finally he too put the point that there was no evidence for an effect beyond the placebo effect. (http://www.layscience.net/node/828)
b. After finally he reaches Alaska, he enjoys the wilderness for a while. (http://room701.wordpress.com/2008/11/23/psychological-approach-to-the-movie-into-the-wild/)
For Haegeman (2006), the availability of the higher TopP and of FocP crucially depends on the presence of ForceP, which is taken to encode Illocutionary Force. However, the presence of Illocutionary Force is not a sufficient condition for licensing fronting operations in English: though imperative and interrogative sentences are presumably associated with Force, argument fronting in English is also felt to be degraded by most speakers. On the other hand, as was the case for adverbial clauses, adjunct fronting and Romance CLLD remain compatible with both imperatives and interrogatives.

    b. When you leave/tonight, don’t forget to lock up.
    c. De cette histoire, ne m’ en parle plus jamais!  (French)
       of this affair, ne me of-it talk more never
       ‘Don’t you ever talk to me about this affair again.’
    d. Il libro, portamel0!  (Italian)
       the book bring-to.me-it
       ‘Bring me that book.’  (Cardinaletti 2009, (17))

    b. *Those petunias, when did John plant?  
       (Bianchi & Frascarelli 2010:12, (44f))
    c. When you were in France, which language did you speak?
    d. Ton texte, quand l’ auras tu terminé?  (French)
       your text, when it have-FUT-2SG you finish-PARTICIPLE
       ‘Your texte, when will it be ready?’
    e. E la famiglia, dove la lasci?  (Italian)
       and the family where it leave-2SG
       ‘And where do you leave your family?’  (Frascarelli 2000:152, (184a))

Observe that the patterns in (6) and (7) replicate those found in adverbial clauses. For the imperatives in (6) one might conceivably entertain a truncation analysis (as in Cardinaletti 2009) and assume there is no ForceP and hence no TopP or FocP, but absence of Force is harder to motivate with respect to root questions, which are clearly speech acts. Indeed, the pattern displayed by root wh-questions in (7) give rise to additional problems of execution for the truncation account. It is commonly assumed that the fronted wh-phrase moves to the specifier of the root FocP (Rizzi 1997). This as such is in keeping with the truncation account: if root wh-questions have Illocutionary Force, then FocP will be licensed. But in that case, one also expects a higher TopP to be licensed, and the unacceptability of (7a) and (7b) is unexpected. Furthermore, on
these assumptions, the topicalized constituents, *de cette histoire* ‘of this affair’ in (7d) and *la famiglia* ‘the family’ in (7e), which precede the *wh*-phrase, can clearly not be said to occupy the lower TopP, the projection which, according to Haegeman (2006), is unavailable in English and available in Romance, but they must be in the higher TopP. So the higher TopP is projected but still cannot host a fronted constituent in English. Finally, (7c) confirms that the scene-setting adjunct definitely can occupy a higher position than FocP. In spite of the fact that truncation cannot plausibly be invoked, *wh*-questions display the distributional pattern found in adverbial clauses with argument fronting leading to ungrammaticality and both CLLD and fronted adjuncts remaining available.

One way of capturing the restrictions discussed is to tie all argument fronting operations in English directly to assertion, while allowing for fronted adjuncts and CLLD to be available in non-assertive contexts. Roughly, Force could carry the interpretable feature [ias] and (English) topicalization could be associated with [uas]. A fronted constituent with [uas] in a clause lacking Force [ias] will lead to ungrammaticality. If Illocutionary Force and clause type are identified by means of a specific feature on Force, we can dispense with the distinction between Sub and Force proposed in Haegeman (2006): Force may host the subordinating conjunction, and depending on its feature specification (assertion, question, etc.) fronting will be licensed. In terms of such an analysis, truncation is no longer a primitive concept, the apparent structural truncation is simply a by-product of the features instantiated on Force: whenever Force lacks [ias] argument topicalization will be unavailable and hence TopP cannot be activated.

Though the account is preferable in that ‘truncation’ is here not a primitive but follows from the analysis, there remain problems. First, FocP must remain available in non-assertive contexts, since its specifier is taken to attract the *wh*-constituent in root questions. If FocP is then not dependent on assertive force, the question arises why argument fronting qua focalization is excluded in English adverbial clauses (1). Second, tying English argument topicalization to assertive force is not fully satisfactory either. As observed by Culicover and Levine (2001:297), gerunds are (for some speakers) compatible with topicalization. It is certainly not a standard assumption that such gerundive clauses are associated with assertion. Indeed, gerunds are standardly taken to be presuppositional (Kiparsky & Kiparsky 1970; Hooper & Thompson 1973).

(8) That solution Robin having already explored *t* and rejected *t*, she decided to see if she could mate in six moves with just the rook and the two pawns.

(Culicover & Levine 2001:297, n.14, (i))

At this point, there exists no workable definition of the required Force (assertion/declarative') and often there is danger of circularity: where MCP occur in a particular clause type, the clause will be labelled ‘assertive’ on a post-hoc basis. Heycock (2006: 190) remarks: “It is a general problem for work in this area that definitions given are vague and independent evidence for the validity of the concepts used often weak” (Heycock 2006: 190). Similar remarks are found in Bentzen et al. (2007a: 9) and Wiklund et al. (2009).5

So far the accounts outlined above explicitly relate the licensing of MCP to some specific property of the clause: if that is absent, then MCP are illicit. In the next section I explore a different generalization that emerges from the data, namely that English argument fronting (or MCP in general) is essentially available in the unmarked clause type, that is a clause in which Illocutionary Force is not overtly marked (cf. Roberts & Roussou 2002: 141 on declaratives as the unmarked force). At the descriptive level, this generalization also captures the unavailability of argument fronting in wh-questions and in imperatives: both of these display syntactically marked Force.

Further complications to the assertion-related account are revealed by Southern Italian dialect data recently discussed by Ledgeway (2010). This author introduces data such as those in (9) from the Campania dialect, in which the subject ‘a fibbia (‘the buckle’) is doubled by chella (‘that-one’), a demonstrative element in the left periphery.

(9) a. Chella$_i$ [DP ‘a fibbia]$_i$ sè rott.$t$.
   that one.f the buckle.f self= is broken
   ‘The buckle has broken.’

b. Chella$_i$ sè rott.$t$ [DP ‘a fibbia]$_i$.
   That one.f self= is broken the buckle.f

5. The term ‘assertion’ is used with different meanings by various authors. I briefly illustrate this terminological point here. Along the lines of Hooper and Thompson (1973) the unavailability of MCP is often related to the absence of assertion. According to others, however, (e.g. Zubizaretta (2001:201); Starke (2004:260)) complement clauses of factive verbs contain an assertion operator, though in fact such clauses are generally assumed to be incompatible with MCP and in terms of Hooper and Thompson’s proposal would have to be non-assertive.

In work on the interaction between focus and negation, Neeleman and Vermeulen (2011) show that focal operators such as only, even etc. bear on the relation between presupposition and assertion associated with the utterance. For instance, for them in (ia), ‘John invited Pia’ is ‘asserted’. (Neeleman & Vermeulen 2011:5, (29)). However, note that this use of even occurs in embedded clauses that resist MCP:

(i) a. John invited even P$_1$A.
   b. When John invited even P$_1$A, we knew there was something wrong.
The pattern has a particular impact on information structure:

The double-subject construction typically proves felicitous in contexts where it serves to announce a new topic or mark a shift from one topic to another, a pragmaticosemantic interpretation transparently betrayed in the structural combination of a pronominal with a coreferential lexical DP. In particular, pronominals represent the prototypical topical expression, whereas full DP coding is generally reserved for the expression of discursively new (unidentifiable or inactive) referents. (Ledgeway 2010: 264)

From the description above, and from the illustrations provided in Ledgeway (2010: 264–5) I tentatively conclude that the presence of the demonstrative is not associated with a familiar or given topic. Adopting the articulated left periphery as developed by Benincà and Poletto (2004), Ledgeway (2010) examines the position of the doubling demonstrative in some detail and concludes that it occupies a high Subject position in the left periphery, and in particular that its position is higher than that of the focus field. The lexical DP subject may occupy a number of different positions in the Left periphery or within IP:

\[
\begin{align*}
(10) \quad \text{[FrameP HTop [ForceP che/ca [TopP/IntP (LD-Top, si) [SubjP Subj1]
(LD-Top, si Subj2) [FocP ConFoc [FinP [IP [SubjP Subj2/proi])]]]]]}
\end{align*}
\]
(Ledgeway 2010: 285, (30))

If it was the case that a conditional clause had a truncated left periphery in which the Focus domain and the high topic projections were unavailable, then we would predict that Ledgeway’s high SubjP would also not be available in conditional clauses. This prediction is not borne out: in (11) the demonstrative is available in a conditional clause:

\[
\begin{align*}
(11) \quad \text{Se chella saglie a signora, ammu passate nu guaie.}
\text{if that-one.F ascends the.F.SG lady.F we-have passed a problem}
\text{‘If the landlady comes up, we are in trouble.’ (Ledgeway 2010: 284, 28b)}
\end{align*}
\]

The only way to rescue patterns such as (11) in terms of the truncation account would be by adopting some selective truncation which allows for the high SubjP to survive the structural deficiency. Such an account seems to me stipulative. In terms of the assertion-based account and assuming that conditional clauses are not assertions, one would then have to specify that the specific information structural function of the doubling pattern illustrated in (9) is independent of assertion.

4. The syntax of initial constituents

In the truncation account, the observed asymmetries between adjunct fronting and argument fronting on the one hand, and between argument fronting and CLLD on the other, are stipulated by relating the fronted argument to the available projections,
but there seems to be no intrinsic reason why the data are what they are. Yet, these asymmetries are not accidental.

Shlonsky (2010) shows that Hebrew patterns like English. The sentence in (12a) illustrates argument fronting in an embedded clause. As seen in (12b) and (12c) this type of argument fronting is incompatible with temporal clauses, while (12d) and (12e) show that adjuncts can be fronted in such contexts.

(12) a. Dani ‘amar se et ha sulxnan Rina niqta.
   Dani said that ACC the table Rina cleaned
   ‘Dani said that the table, Rina cleaned.’

   b. *Dani niqa et ha sulxan axarey se et ha calaxot
      Dani cleaned ACC the table after that ACC the dishes
      Rina hesira.
      Rina cleared
      ‘Dani cleaned the table after Rina cleared the dishes.’

   c. *Dani yelex ha batta kse et ha ‘avoda ha
      Dani will go the home when ACC the job the
      pakid yigmur.
      clerk will finish
      ‘Dani will go home when the clerk finishes the job.’

   d. Dani niqa et ha sulxan hayon axaery se etmol
      Dani cleaned ACC the table today after that yesterday
      Rina hesira et ha calaxot.
      Rina cleared ACC the dishes
      ‘Dani cleaned the table today after Rina cleared the dishes yesterday.’

   e. Dani halax li-son kse ha bayt ha kol haya saqet.
      Dani went to sleep when at home the all was quiet
      ‘Dani went to sleep when at home everything was quiet.’

   (Shlonsky 2010: 3, (28)–(31))

Crucially, like in English, argument fronting in Hebrew (12a–c) does not entail the use of a resumptive pronoun. In Italian, the clitic in CLLD patterns turns out to play a key role in licensing the left-peripheral DP. While CLLD – which displays the clitic – is not a MCP, Resumptive Preposing, i.e., the fronting of an argument without resumptive clitic, is. Cardinaletti (2009: 9: (22a) and 8: (19a)) shows that while CLLD is licit in conditional clauses in Italian, Resumptive preposing, a type of topic fronting without an overt clitic, is not:

(13) a. [Se la stessa proposta la fa anche l’altro candidato],
   if the same proposal it-make-3sg also the other candidate
   non otterrai quel posto.
   not get-FUT-2sg that position
b. *[Se la stessa proposta fa anche l’altro candidato], if the same proposal make-3sg also the other candidate
non otterrai quel posto.
not get-FUT-2SG that position

The role of the resumptive clitic in avoiding MCP effects is also shown by Garzonio (2008): while in root clauses (cf. (14a)) a PP in the left periphery is optionally doubled by a resumptive clitic, in conditional clauses (cf. (14b)) containing such a PP, the resumptive clitic is obligatory. He concludes that the clitic-less construction with PP fronting in (14b) is syntactically analogous to English argument fronting. For discussion of fronted PPs and CLLD, see also Cruschina (2010).

(14) a. Col capo non (ci) parla.
with-the boss not clitic-speak
‘He doesn’t speak with the boss.’ (Garzonio 2008:7)

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

5. The double asymmetry

5.1 The core pattern

The empirical generalization that emerges is the double asymmetry in (15), schematically summarized in (16): (i) In adverbial clauses, argument fronting is excluded in English (and in Hebrew) while initial adjuncts are available, and (ii) in adverbial clauses argument fronting is excluded in English while in Romance CLLD is available:

(15) a. *When this column she started to write last year, I thought she would be fine.

b. Quand cette chanson je l’ai entendue,
when this song I it-have-1sg heard-PART-FSG,
j’ai pensé à toi.
I have-1sg think-PART on you
‘When I heard this song, I thought of you.’

c. When last year she started to write this column, I thought she would be fine.
(16) a. Eng *when- argument 

b. Rom √when- - CLLD

c. Eng √when- - adjunct

5.2 Intervention and the double asymmetry

The double asymmetry in (16) is also instantiated in relative clauses (cf. (17)) and in wh-interrogatives, as in (18):

(17) a. *These are the students to whom, your book, I would recommend in the next semester.

b. These are the students to whom, in the next semester, I will recommend your book.

c. ?Ecco lo studente a cui, il tuo libro, lo darò domani. (Italian)
   this is the student to whom the your book it give-FUT-1SG tomorrow

(18) a. *Robin knows where, the birdseed, you are going to put.
   (Culicover 1992: 5, (6c))

b. Lee forgot which dishes, under normal circumstances, you would put on the table.
   (Culicover 1992: 9, (17d))

c. Non so proprio chi, questo libro, potrebbe non know-1SG honestly who, this book, can-COND-3SG recensirlo per domani. (Italian)
   review-it for tomorrow
   ‘I honestly don’t know who could review this book for tomorrow.’
   (Cinque 1990: 58, (1b))

For speakers who reject argument fronting in the adverbial clause in English (15a), extraction from a clause with a fronted argument is also degraded; extraction remains applicable in the context of initial adjuncts or with CLLD. The schema in (20) summarizes the relevant patterns:

(19) a. *Who did you say that to Sue Bill introduced? (Boeckx & Jeong 2004: (3))

b. Who did they say that two weeks ago had travelled to France?8

6. If in these embedded wh-clauses, the wh-constituent targets the clause typing projection (Rizzi’s SpecForce 1997), we have to conclude that both the lower topic AND the higher topic must be unavailable here.

7. See Browning (1996) and Delfitto (2002: 57–8).

8. Thanks to Andrew Radford for this example and also for discussing speaker variation with me.
The asymmetries in (20) are standardly captured in terms of locality conditions on extraction: English fronted arguments give rise to intervention effects on movement, whereas English fronted adjuncts as well as CLLD constituents do not (see Cinque 1990; Rizzi 1997, for discussion and for references). While there remain important questions about the syntax of intervention (see Starke 2001; Rizzi 2004; Haegeman & Lohndal 2010 for some discussion), one way to capture the double asymmetry is to propose that only English argument fronting is derived by movement. Hence, English fronted arguments may act as interveners, while both a CLLD phrase and the adjunct to the left of the subject are merged in the left periphery and are not interveners for movement (see Cinque 1990; Ledgeway 2010: 290–293 for recent discussion and arguments). If intervention can account for the double asymmetry in (20), then the most economical account for the double asymmetry in adverbial clauses will be one according to which that double asymmetry also follows from locality conditions on movement. This should lead to the hypothesis that adverbial clauses are derived by movement. As will be shown in the next section, this hypothesis actually ties in with a long tradition.

5.3 The movement derivation of adverbial clauses

According to a fairly long-standing tradition started by Geis (1970, 1975) and continued in work by Larson (1985, 1987, 1990), Declerck (1997), Demirdache and Uribe Etxebarria (2004), Stephens (2006), Bhatt and Pancheva (2006), Tomaszewicz (2009, 9. Shigeru Miyagawa (pc) points out that this account presupposes that the movement of the relative operator involved in relativization is the same as or at least sufficiently similar to that involved in topicalization. This is indeed the case. I discuss this in some detail in Haegeman (to appear, Chapter 3). For additional proposals to the effect that topicalisation and relativization are, at least in some languages, similar see Bianchi (1999: 200) and Miyagawa (2010: 155, note 2) and the references cited there.
this volume), Zentz (2011) and many others, temporal and conditional adverbial clauses are derived by movement of an operator from a TP-internal position to the left periphery. Various types of empirical evidence are provided in support, for reasons of space I cannot go into this here. If such a hypothesis is adopted, the double asymmetry summarized in (16) should be reanalysed as in (21):

\[
\begin{align*}
(21) & \quad \text{a. Eng } \ast \text{ when- - argument } \ldots \ldots t_{\text{when}} & \\
& \quad \text{b. Rom } \checkmark \text{ when- - CLLD } \ldots \ldots t_{\text{when}} & 1 \\
& \quad \text{c. Eng } \checkmark \text{ when- - adjunct } \ldots \ldots t_{\text{when}} & 2
\end{align*}
\]

The ungrammaticality of argument fronting in adverbial clauses now follows from the same constraints that rule out argument fronting in English relative and interrogative wh-clauses. That (4), repeated here as (22), is grammatical is expected because in this example the movement path of the temporal when-operator will not cross the position of the embedded topic:

\[(22) \quad \text{He held back when I told him that the staff, I myself would choose } _{\text{(and the office, he would choose)}}\]

For completeness’ sake I note that the availability of the doubling subject pattern in conditional clauses in the Southern Italian dialect described by Ledgeway (2010) (cf. (9)) also follows if, as he argues, the doubling pronoun is merged directly in the left periphery. Thus, like CLLD, the doubling pattern is not expected to interfere with movement.

5.4 A precursor

In the above I have proposed that the restricted distribution of MCP can be accounted for in terms of a syntactic account that puts a restriction on the interaction between moved constituents. This proposal is in line with the intuitions behind Emonds’ original work on root phenomena. Concerning the movements which are referred to as root transformations he writes: “There is evidence that all the root transformations that front phrasal constituents without inducing comma intonation are substitutions for the sentence-initial COMP node. The evidence is the fact that only one of these transformations can occur in a given clause.” (1976:40) The unavailability of multiple MCP follows from his assumption that COMP is a unique slot. If adverbial clauses are derived by operator movement to what used to be called COMP, then, on Emonds’ account, they are predicted to be incompatible with MCP that also involve

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10. See also Haegeman (2011).
movement to COMP since the fronted operator in COMP will preclude any additional movement. However, in terms of the articulated CP along the lines of Rizzi (1997), the incompatibility of various fronting operations to the left periphery can no longer be derived by the fact that there is a unique left-peripheral landing site. Rather, it must be related to intervention effects that arise through multiple movements.\\footnote{11}

6. **Truncation follows from locality**

At this point I would like to return to the truncation account and eliminate a misunderstanding that seems to have arisen in the literature. The intervention account sketched here (see also Haegeman 2010, 2011, to appear) is not to be viewed as an alternative to the truncation account. In general, locality conditions on movement constraint the compatibility of different types of movement to the left periphery (see Starke 2001). If adverbial clauses are derived by leftward movement of an operator, intervention restrictions on movement will effectively determine which additional movements to their left periphery remain available.\\footnote{12} In terms of the movement approach, the apparent ‘truncation’ of adverbial clauses can be seen as a by-product of movement: there is no need to appeal to structural ‘truncation’ for adverbial clauses. Rather, in these domains certain left-peripheral projections cannot be activated because their activation would create an environment which renders the adverbial clause underviable. The claim of the paper is that a full understanding of the constraints on preposing in adverbial clauses ultimately rests on a full understanding of locality conditions on leftward movement. Though it is true that there remain questions concerning locality conditions on movement, these need to be solved independently.

7. **Completing the picture: Peripheral adverbial clauses**

In the discussion so far I have left aside the fact that while argument fronting is excluded in central adverbial clauses – that is, those illustrated above – another set of adverbial clauses, which I have labeled peripheral (Haegeman 2003, 2006) do allow for

\\footnote{11} Cardinaletti (2009) comes close to being an updated implementation of Emonds’ original idea.

\\footnote{12} Larson and Sawada (this volume) identify “semantic intervention” as the property excluding RTs from quantificational restrictions. They do not make explicit what determines the intervention. Still, while they do not adopt a syntactic account, Larson and Sawada appear to agree with the hypothesis elaborated here that MCP are to be ruled out by intervention.
argument fronting (and MCP in general). I discuss one example here, for more details see the papers cited. The English conjunction while has two uses: (i) it introduces a temporal clause (cf. (23a)) or a contrastive clause (cf. (23b)). In the latter its interpretation resembles that of whereas. I have shown in independent work that central adverbial clauses are more closely integrated with the clause they modify than peripheral ones.

(23)  
  a. While I was revising this handout last week, I thought of another point.  
  b. She put Len on her right while she will put Gillian on the corner of the table.

Observe now that whereas the temporal while clause in (23a) does not allow argument fronting (cf. (24a)), a peripheral one does, as the attested example in (24b) illustrates.

(24)  
  a. *While this handout I was revising last week, I thought of another point.  
  b. Sophie would put Len between two women who would have to bear his halitosis, while Gillian she buried mid-table among the also-rans.  
  (Sebastian Faulks, A Week in December, London: Vintage 2010, page 40)

The question arises how peripheral adverbial clauses should be dealt with. In Haegeman (2003, 2006) I proposed that peripheral adverbial clauses have the full-fledged periphery as in (5a), thus allowing for fronting of arguments. In terms of the current proposal two options are available to derive the compatibility of peripheral adverbial clauses with fronting: (i) either no operator movement takes place to derive such clauses, which means that there will be no intervention effects and MCP are available, or (ii) there is operator movement but from a higher position in the periphery, with while reinstated as a temporal conjunction that introduces a temporal modifier to a tacit speech act head.

In the recent literature, a number of authors (Kayne 2010, in press; Manzini this volume; Arsenijević 2009a, 2009b) have proposed that all declarative complement clauses are to be analyzed as hidden relatives. For instance, for Arsenijević (2009a, 2009b) the verb claim is actually derived in the syntax from the combination of a light verb which incorporates a nominal element claim. So claim roughly equates make the claim. This means that the clause embedded under claim would have to be assimilated to complement clauses of N, themselves derived as relatives (see Arsenijević 2009a, 2009b)

(25)  
  a. claimed that John kissed Mary  
  b. claimed = made the claim that....

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

The choice between the two options could be made on purely conceptual grounds but preferably one would like to find empirical support for one hypothesis or the other. One type of evidence that hypothesis (i), which assumes that there is no movement in peripheral adverbial clauses, is preferable is adduced in recent work by Zentz (2011). This author discusses morphological evidence for the operator movement account of adverbial clauses from Akoɔse, a Bantu Language. In this language wh-extraction gives rise to distinct verbal morphology. For details I refer to Zentz’s own work, but suffice it to say here that whereas the distinctive morphological marking (wh-agreement) surfaces in central adverbial clauses, it is absent from peripheral adverbial clauses, leading Zentz to the conclusion that these clauses display no movement.

One type of adverbial clause that I have not touched upon here is because clauses. These are discussed extensively in Larson and Sawada (this volume) and raise particular issues, also in their relation to the matrix clause. Because clauses are of interest, because, just like if clauses, they come in two varieties: As discussed in Hooper and Thompson (1973) because clauses can be restrictive (cf. (26a)) or non-restrictive (cf. (26b)). The former are incompatible with MCP, the latter are compatible with MCP. The syntax of because clauses merits further study, but I cannot do justice to it here. I refer to Schoenenberger (2007) and Antomo (2009) for recent discussion of German weil (‘because’) clauses.

(26) a. I don’t drink coffee because I want to lose weight.
   b. I don’t drink coffee, because I want to lose weight.

Obviously further research is needed, not merely in relation to the internal syntax of adverbial clauses, but in relation to the general question to what extent all complement clauses can be derived by some process of relativization. I leave this issue for future research.

8. Summary

The focus of the paper is the absence of argument fronting in English adverbial clauses. Underlying most syntactic accounts of the distributional restrictions on MCP is the intuition, which can be traced back to Hooper and Thompson (1973), that certain

13. As pointed out by one of the reviewers.
clause types cannot fully exploit their left-peripheral space. This intuition is often configurationally expressed in ‘truncation’ accounts which postulate that a segment of the articulated left periphery is unavailable. It is shown that truncation accounts raise a number of problems of implementation. These dissolve if ‘truncation’ is not seen as the primitive, but conceived of as a by-product of the operator movement that derives the relevant clause types.

References


Cruschina, Silvio. 2010. Syntactic extraposition and clitic resumption in Italian. Lingua 120:50–73.
Emonds, Joseph. 2004. Unspecified categories as the key to root constructions. In Peripheries, David Adger, Cécile De Cat & George Tsoulas (eds), 75–121. Dordrecht: Kluwer
Liliane Haegeman


Meinunger, André. 2004. Verb second in German(ic) and mood selection in Romance. Paper presented at the Workshop on clause typing and the left periphery. Georgetown University Round Table.


Schoenenberger, Manuela. 2007. Verstellung in weil-Sätzen und ihre Interpretation. GGS Tagung, University of Constance, Germany.


Towards an interface definition
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Root phenomena are those that typically occur in matrix clauses but are also allowed in a restricted set of embedded (“root-like”) clauses. This paper explores root phenomena with an interpretive import, and identifies three kinds of data that a purely syntactic approach cannot account for: the gradience in acceptability within clause types, the variable behaviour of peripheral adverbial clauses, and the existence of root phenomena in “fragments”. I argue that far from being noise in otherwise harmonious behaviour, these data are essential to consider for a full understanding of root phenomena, and that a strictly syntactic approach cannot capture them. An interface account is called for, where (most of) the burden of licensing befalls on the interpretive component.

1. Root phenomena

1.1 A first definition

Root phenomena are those that normally occur in matrix clauses but are also allowed in a restricted set of embedded (“root-like”) clauses (Heycock 2005). Typical examples in English include auxiliary inversion, argument fronting, locative inversion, and tag questions as illustrated in turn below. As shown in the (b) examples, these phenomena tend not to be possible in embedded clauses.

\[
\begin{align*}
(1) \quad a. \quad \text{Man, are we in for it!!} & \quad \text{(Green 1976: 8a)} \\
\quad b. \quad \ast \text{He discovered that boy, was I in over my head.} & \quad \text{(Green 1976: 8b)}
\end{align*}
\]

* I would like to thank Shigeru Miyagawa, Reiko Vermeulen and Mika Kizu for comments and enlightening remarks about the Japanese data (which doesn’t imply they agree with my analysis), and Mika Takewa for her generous help in gathering these data. Special thanks to Kristine Bentzen for comments and discussion. Many thanks also to two anonymous reviewers, and to the audiences at the Department of Linguistics at KU Leuven (2010), the GIST2 workshop (Ghent 2010), the conference “On Linguistic Interfaces” (Belfast 2010), and the SLE 2011 workshop on “New forays into root phenomena”.

* Cécile De Cat
Her regular column, she began to write again. The other ones, she never resumed.

*When her regular column she began to write again, I thought she would be OK. (Haegeman 2010b: 1b)

In the deepest part of the forest lived a scary Gruffalo.

He told me that in the deepest part of the forest lived a scary Gruffalo.

Acupuncture really works, doesn’t it?

I suppose acupuncture really works, doesn’t it?

Since Emonds (1970), many have attempted to capture root phenomena as a syntactic property of clauses. That approach associates the ability for a clause-type to stand alone with its ability to host root phenomena. Root-like clauses are generally assumed to be essentially finite embedded clauses selected by verbs of assertion (such as told in (4b) – see e.g. Hooper & Thompson 1973; Emonds 2004), although some adjunct clauses have also been found to allow root phenomena (see Heycock 2005 for an overview). Under a strict version of the syntactic approach, clauses are endowed with some kind of boolean feature \[±\text{root}\], and only those belonging to the type \[+\text{root}\] can host phenomena such as those illustrated in (1)–(4).

It has recently been proposed that root properties could be captured syntactically by positing a reduced structure in non-root clauses (as in Haegeman 2006), and/or by appealing to restrictions on syntactic movement across elements endowed with properties inherent to rootness (Haegeman 2010b, a). In the former approach, root properties are entirely dependent on the presence of a dedicated functional projection in the CP field. That projection is responsible for anchoring to the speaker (Haegeman 2006: 1660). It was originally identified as ForceP (Haegeman 2002) and later as SpeakerDeixisP (Haegeman 2006) – situated between FocusP and FinP. By contrast, in the latter approach, root phenomena are blocked in clauses derived by movement to the CP field of an epistemic operator, over which further movement is blocked because of intervention effects.

The movement approach is argued to best capture the difference between central adverbial clauses (which lack root properties) and peripheral adverbial clauses (endowed with root properties) (Haegeman 2010b). Central adverbial clauses express conditions for the realisation of the state of affairs in the main clause. They are syntactically and prosodically integrated to the main clause, from which they inherit their temporal anchoring and point of view. Peripheral adverbial clauses structure the discourse background of the associated clause. They are relatively independent from the main clause: they can be anchored directly to speech time and to the speaker, and are prosodically independent. Only peripheral adverbial clauses are claimed to have root properties. This enables them to host high modal markers (e.g. probably in (5)) and argument fronting (6). Both phenomena are banned from central adverbial clauses (7)–(8).
Towards an interface definition of root phenomena

(5) He will send the text by email today, so that it probably will reach me on time.  
(Haegeman 2006: (3c))

(6) I think we have more or less solved the problem for donkeys here, because those we haven't got, we know about.  
(Haegeman 2010b: (42b))

(7) *?? John works best while his children are probably asleep.  
(Haegeman 2010b: (2a))

(8) *When her regular column she began to write again, I thought she would be OK.  
(Haegeman 2010b: (1b))

In what follows, I will point out three problems for a strictly syntactic approach to root phenomena: (i) gradience, (ii) the variable behaviour of adverbial clauses, and (iii) the existence of fragments with root-like properties). Then, in Sections 3–5 I show how the interpretive component plays a crucial role in explaining these three problematic aspects and argue that an interface approach is needed to account for embedded root phenomena.

2. Three problems for a strictly syntactic approach

2.1 Gradience

One of the key puzzles posed by root phenomena is their gradient nature: their acceptability can be much degraded depending on a host of interpretive properties, some of which are listed below.

Negation in the matrix clause usually blocks root phenomena (something Hooper & Thompson 1973 attribute to the fact that it turns the predicate into a non-assertive one), but not automatically so:

(9) I didn't realise that standing in the corner was his black umbrella.  
(Green 1976: (71b))

Neg preposing presupposes agreement of the speaker rather than a third party:

(10) a. I regret that never before has such a proposal been made. 
b. *He regrets that never before has such a proposal been made.  
(Green 1976: (40))

The subject in locative inversion needs to be new information:

(11) a. It seems that into the garden ran a golden-haired girl.  
(Green 1976: (20))
b. *It seems that into the garden ran the cat with the red collar.  
(Green 1976: (31a))
PP fronting and Clitic Left Dislocation (CLLD) are sometimes possible in central adverbial clauses:

(12) He was washing the dishes when in came the dog. (Green 1976: (62b))

(13) Haegeman (2007: examples (11))
   a. Si ce livre-là tu le trouves à la Fnac, achète-le.  
      if that book-there you it find at the Fnac buy-it
      ‘If you find that book at the Fnac, buy it.’
   b. Dès que ton texte je l’aurai lu, je t’appellerai.  
      as-soon as your text I it-will-have read I you-will-call
      ‘As soon as I’ve read your text, I’ll call you.’
   c. Quand cette chanson je l’ai entendue, j’ai pensé à toi.  
      when this song I it-have heard I have thought of you
      ‘When I heard this song, I thought of you.’

Generally, however, CLLD is not acceptable in central adverbial clauses:¹

(14) a. #On était bien plus heureux quand, les lettres, on les 
      One was much more happy when the letters one them
      recevait le matin.  
      received the morning
      ‘We were much happier when we received the letters in the morning.’
   b. #Elle a commencé à aller mieux quand l’éditorial, elle a 
      She has started to go better when the-editorial she has
      recommencé à l’écire.  
      restarted to it-write
      ‘She started getting better when she started writing the editorial again.’
   c. #Depuis que cette boulangerie je l’ai découvert, j’adore 
      since that this bakery I it-have discovered I adore
      mon quartier.  
      my neighbourhood
      ‘Since discovering this bakery, I adore my neighbourhood.’

Root phenomena are more strictly banned from restrictive relative clauses, but even there they are sometimes allowed:

(15) … places where, upon mentioning the name of an habité friend, might be obtained strange whiskey and fresh gin in many of their ramifications.  
     (Dorothy Parker, in Green 1996)

¹. Bianchi and Frascarelli (2010) claim that only aboutness-shift topics are root phenomena (not common-ground topics and not contrastive topics). It is unclear whether this can be maintained for spoken French (see De Cat in preparation-a).
Understanding the causes of this gradience is key to understanding the nature of root phenomena.

2.2 Variable behaviour of adverbial clauses

A second problem for strictly syntactic approaches to root phenomena is the variable behaviour of adverbial clauses, depending on their attachment level in the clause. This was originally pointed out by Hooper and Thompson (1973), and has recently been revisited by Larson and Sawada (this volume). As illustrated by the contrast below, peripheral adverbial clauses cease to be able to host root phenomena when sentence-initial.

(16) Mildred drives a Mercedes [because her son, he owns stocks in Xerox].
(17) *[Because her son, he owns stocks in Xerox], Mildred drives a Mercedes.

A strictly syntactic approach to root phenomena would need to explain why the locus of attachment of peripheral adverbial clauses has such an effect – an effect that, under such an approach, would have to be captured in terms of amount of structure projected (under a cartographic approach) or alleviation of intervention effects (under a movement approach). How can such variations in the internal syntax of peripheral adverbial clauses be captured in a principled way?

2.3 Root-like fragments

The third problem for strictly syntactic approaches to root phenomena arises from the existence of structures that are syntactically non-clausal but that nonetheless exhibit root-like properties. The evidence presented below comes from Japanese fragments.

Fragments (also known as nonsententials Progovac et al. 2006) or Bare Argument Ellipsis (Culicover & Jackendoff 2005)) are verbless utterances interpreted as full propositions with assertoric force. In (18), the utterance signals the presence or the existence of a frog. It could be interpreted as (19a) if uttered out of the blue or as (19b) in a context where the speaker had been trying to guess what somebody had been talking about.

(18) Oh a frog!
(19) a. There’s a frog here!/I see a frog!
    b. Oh you meant a frog!

The second utterance in (20), uttered in answer to A’s question, is interpreted as (21a) or arguably (21b).

(20) A: What’s for supper, dad?
    B: Gruts.
A question that has been hotly debated since the 70s is that of whether such non-sentential utterances should be analysed syntactically as full clauses or not. Recent proponents of the YES option include Merchant (2001, 2004, 2008); recent proponents of the NO option include Culicover and Jackendoff (2005) and Stainton (2006).

Merchant (2004) proposes that fragments are fully propositional in syntax, but that most of their structure remains unpronounced. He analyses fragments as ellipsis, and more specifically as a form of sluicing. Merchant argues that the fragment occupies the specifier of a left-peripheral phrase (which he suggests may be FocusP) whose head is endowed with an E feature. This feature has two functions: (i) it instructs PF not to parse its complement (and hence not to pronounce it) and (ii) it consists of a partial identity function over propositions, which is supposed to ensure that the complement of an E-endowed head has an appropriate antecedent in the discourse (which essentially ensures that the content of the unpronounced structure is identifiable/recoverable).

Crucial for the argument developed below is the fact that, under the ellipsis analysis, the full structure must be inherited verbatim from the immediately preceding discourse. Merchant (2006) uses island sensitivity as key evidence for his sluicing analysis: he attributes the unacceptability of the answer in (22) to the illicit movement the pronounced constituent would have had to undergo to reach the [spec,FP] position.

(22) Q: Does Abby speak the same Balkan language that Ben speaks?  
   A: *No, Charlie.  
       No, she speaks the same Balkan language that Charlie speaks.

Culicover and Jackendoff (2005) and Stainton (2006) argue that the syntactic ellipsis approach cannot account for all fragments. In particular, it cannot hold in cases where the fully pronounced structure would be ungrammatical, for instance as a result of island violation. Examples of such fragments are provided below (all are adapted from Culicover & Jackendoff 2005). In each example, the context is provided in (a), the fragment in (b), and the full syntactic structure one would have to postulate for it following Merchant’s analysis is given in (c).

(23) a. Haruko has been drinking sake all weekend.  
    b. Yes. And shochu.  
    c. *And shochu, Haruko has been drinking sake all weekend.

(24) a. Whose sake has she been drinking?  
    b. Her mother’s.  
    c. *Her mother’s, she has been drinking sake.

(25) a. Haruko drinks sake that comes from a very special part of Japan.  
    b. Where?  
    c. *Where does Haruko drinks sake that comes from a very special part of (Japan)?
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(26)  
   a. Yasu met a child who speaks Urdu.
   b. With a Japanese accent?

In addition to these, some examples of fragments have no full-clause equivalent at all:

(27)  
   a. Would you like a drink?
   b. How about tea?

Stainton (2006) beautifully argues that such fragments have pragmatic Force in spite of not having syntactic Force, which implies that there is no one-to-one correspondence between “what [is] done (a “full-fledged speech act” i.e., propositional, force-bearing and literal) and what [is] used (lexical projections, not of semantic type $\langle t \rangle$, not having [an expression encoding] force, and not embedded in any higher tree)” (Stainton 2006: 29).

I present below new evidence from Japanese showing that verbless utterances can have Force without it being realised syntactically. It is based on the distribution of a politeness marker. As a preliminary step, it is therefore necessary to consider the distribution of the corresponding politeness marker used in full clauses.

Miyagawa (this volume) shows that the politeness marker -mas- (illustrated in (28)) occurs exclusively in root-like clauses.

(28)  
   Watasi-wa pizza-o tabe-mas-u.
   'I will eat pizza.' (Formal register)

-MAS- occurs in a subset of the subordinate environments allowing the topic marker -wa, which leads Miyagawa (this volume) to postulate a three-way distinction in the root-like status of clauses: P(erformative)-roots, semi-roots, and non-roots (to which I will come back in Section 3.2). As shown in Table 1, -mas- is only allowed in P-roots, while -wa is allowed both in P-roots and in semi-roots.

Table 1. The distribution of -wa and -mas- in Japanese (Miyagawa this volume)

<table>
<thead>
<tr>
<th></th>
<th>WA</th>
<th>MAS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>say clauses</td>
<td>✓</td>
<td>✓</td>
<td>P-root</td>
</tr>
<tr>
<td>because clauses</td>
<td>✓</td>
<td>✓</td>
<td>”</td>
</tr>
<tr>
<td>believe/know clauses</td>
<td>✓</td>
<td>✗</td>
<td>Semi-root</td>
</tr>
<tr>
<td>indirect questions</td>
<td>✓</td>
<td>✗</td>
<td>”</td>
</tr>
<tr>
<td>when clauses</td>
<td>✗</td>
<td>✗</td>
<td>Non-root</td>
</tr>
<tr>
<td>deny/be surprised</td>
<td>✗</td>
<td>✗</td>
<td>”</td>
</tr>
</tbody>
</table>
In verbless clauses, another politeness marker is used (-des-), which is functionally equivalent to -mas- (Miyagawa, p.c.). The simple, verbless clause in (29) hosts (-des-); its embedded equivalent in (30) doesn’t (it cannot), and as a result politeness is marked in the matrix clause only.

(29)  
\[ \text{Tomoko-san-wa atama-ga ii desu.} \]  
\[ \text{Tomoko-honor-top head-nom good des} \]  
‘Tomoko is clever.’ (Lit: ‘Tomoko’s head is good.’)

\[ \text{[Tomoko-san-wa atama-ga ii to] omi-masu.} \]  
\[ \text{Tomoko-honor-top head-nom good quote believe-mas} \]  
‘I believe Tomoko is clever’

Crucially, -des- is required to mark politeness in because (verbless) clauses (which, as peripheral adverbial clauses, are predicted to be able to host root phenomena), as shown in the (a) sentences below, but it cannot be used in when (verbless) clauses, as shown in the (b) sentences.

(30)  
\[ \text{[Tenki-ga ii desu kara] Yoko-san-wa} \]  
\[ \text{weather-nom good des because Yoko-honor-top} \]  
\[ \text{Tomoko-san-o syootai site kuremasu.} \]  
\[ \text{Tomoko-honor-acc invite connective give-mas-non-past} \]  
‘Yoko will invite Tomoko because the weather is good.’

\[ \text{[Tenki-ga ii toki] Yoko-san-wa Tomoko-san-o} \]  
\[ \text{weather-nom good when Yoko-honor-top Tomoko-honor-acc} \]  
\[ \text{syootai site kuremasu.} \]  
\[ \text{invite connective give-mas-non-past} \]  
‘Yoko will invite Tomoko when the weather is good.’

(31)  
\[ \text{[Yoko-san-wa siawase desu kara] Taro-ga} \]  
\[ \text{Yoko-honor-top happy des because Taro-subj} \]  
\[ \text{Tomoko-san-o syootai site Kuremasu.} \]  
\[ \text{Tomoko-honor-acc invite connective give-mas-non-past} \]  
‘Taro will invite Tomoko because Yoko is happy.’

\[ \text{Taro-ga [Yoko-san-ga siawase nara]} \]  
\[ \text{Taro-subj Yoko-honor-subj happy cond} \]  
\[ \text{Tomoko-san-o syootai site Kuremasu.} \]  
\[ \text{Tomoko-honor-acc invite connective give-mas-non-past} \]  
‘Taro will invite Tomoko when Yoko is happy.’

(32)  
\[ \text{Watasi-wa [musume-ga byooki desu kara] uti} \]  
\[ \text{I-top daughter-subj illness des-non-past because home} \]  
\[ \text{ni imashita.} \]  
\[ \text{at stayed} \]  
‘I stayed at home because my daughter is ill.’
Towards an interface definition of root phenomena

b. Watasi-wa [musume-ga byooki no toki] uti I-TOP daughter-SUBJ illness CONNECTIVE when Home ni imasu. at stay-MAS-NON-PAST ‘I stay at home when my daughter is ill.’

This suggests that -des-, like -mas-, is a (P-)root phenomenon. Let’s now return to the problem at hand.

The third problem for a strictly syntactic approach to root phenomena can be illustrated by the fact that -des- (a politeness marker restricted to root-like clauses) can appear in fragments that cannot be accounted for by the syntactic ellipsis approach, i.e., fragments that do not have a full clausal structure. (33b), (34b) and (35b) show that -des- can be used in fragments that, under Merchant’s (2004) analysis, would have to be extracted out of island (complex NPs or coordinated structure).  

(33) a. Kanozyo-wa dare-no sake-o nondei-ta no? she-TOP who-GEN sake-ACC drinking-PAST Q ‘Whose sake has she been drinking?’

b. Kanozyo-no hahaoya-no(-o) desu/*masu. 3p.sg.-gen mother-NOMINALISER-(ACC) DES/MAS ‘Her mother’s.’

(34) a. Haruko-wa [nihon-no tokubetu-na tokoro-de] Haruko-TOP Japan-GEN special-CONNECTIVE place-at tukurareteiru] sake-o nomi masu. produce-PAST-ASP sake-ACC drink masu ‘Haruko drinks sake that comes from a very special part of Japan.’

b. Doko desu/*masu ka? where DES/MAS Q ‘Where?’


b. Biiru-desu. beer-DES ‘Beer.’

2. Incidentally, note that the impossibility of using -mas- in the fragments above provides additional evidence against a sluicing analysis: if these were syntactically full clauses copied from an antecedent in the discourse, they would involve verbs and the use of -des- rather than -mas- would be obligatory. Merchant’s variable island repair strategy, which is invoked to account for the extractability of question words out of elided islands, can therefore not be invoked here, on account of the presence of DES rather than the expected MAS.
The examples in (36b) and (37b) show that -des- can be used in fragments for which it is impossible to identify a full sentence-equivalent syntactically based on a copy of the (a) sentence.

(36)  a. *Nanika* nomi masu ka?
    Something drink *mas Q
    ‘Would you like a drink?’

    b. Otya-wa doo desu/*masu ka?
    tea-top how *des/mas Q
    ‘How about tea?’

(37)  a. Pizza-o tor-oo.
    pizza-acc order-volitional
    ‘Let’s get a pizza.’

    b. *Margharita desu/*masu ka?
    Margharita des/mas Q
    ‘Margharita?’

The politeness marker -des- is restricted to root environments, but as shown above it can appear in fragments that cannot be analysed as full clauses under Merchant’s sluicing analysis.3 Fragments that do not have a clausal structure are predicted not to be able to host root phenomena, under a strictly syntactic approach.

2.4 Summary

A strictly syntactic approach to root phenomena has been shown to face (at least) three major challenges: (i) the variable levels of acceptability in particular syntactic structures, (ii) the radically different behaviour of peripheral adverbial clauses depending on where they are attached in their host clause, and (iii) the existence of root phenomena in (fragment) utterances that do not have a full clausal structure.

3. Solution 1: Gradience as mismatch

Strictly syntactic approaches to root phenomena focus on the properties of clauses. Traditionally, such approaches have paid little attention to the interpretive import of the root phenomena themselves. What mattered was that these occurred typically in

3. It might be that some of the Japanese fragments above could be analysed as reduced clefts (along the lines of Saito 2004). This is not without problems for Merchant’s analysis and does not provide compelling evidence for the presence of syntactic Force in fragments – see De Cat (in preparation-b) for discussion.
root clauses, and in a limited set of embedded clauses. The focus was on capturing syntactically the properties of such embedded clauses, which enable them to behave like root clauses. As a consequence, most of the gradience observed in Section 2.1 had to be treated as exceptions, that remain unaccounted for and unpredictable – just noise in the data.

I take the opposite view and pursue Green's (1976; 1996) insight that the gradient nature of root phenomena can only be captured if both the interpretive properties of root phenomena and those of the clause hosting them are considered. Gradience cannot be captured by a mere typology of clauses.

3.1 The interpretive import of root phenomena

I contend that two types of root phenomena need to be distinguished from an interpretive point of view: (i) those that indicate speaker involvement (e.g. emphatic agreement from the speaker or speaker acknowledgement of the addressee) and (ii) those that have an information-structural import.

In the speaker-involvement type, the clause typically requires a prosodic contour characteristic of direct speech (e.g. an exclamatory contour) and has performative properties. In English, this includes cases such as VP fronting (38), fronting of PP (39) (repeated from (12)) or a negated constituent (40) (both accompanied by aux-subject inversion), exclamatory inversion (41) (repeated from (1)). In Japanese, it includes politeness marking with -mas- or -des- (see Section 2.3), whose performative property is to acknowledge the status of the addressee. (This is of course not an exhaustive list.)

(38) John said that he’d win it, and win it he did!
(39) He was washing the dishes when in came the dog. (Requires exclamative contour on in.)
(40) Never before has such a proposal been made.
(41) Man, are we in for it!!

The information-structural type does not require direct speech contour but involves special prosody when fronted elements are involved. It includes argument fronting (related to either topic or focus, depending on the context and the presence of

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4. I leave open the question as to whether there may be root phenomena (such as some instances of V2) without an interpretive import. If so, they would be predicted not to be sensitive to the constraints explored in this paper. See e.g. Frey (2006); Wiklund et al. (2009); Bentzen (2011). My analysis predicts that those V2 phenomena that have been shown to be sensitive to the root-like status of their host clause (Wiklund et al. 2009; Bentzen 2011) do have an interpretive import, but I am not in a position to speculate as to its exact nature.
resumptives) as in (42) (repeated from (2)), clitic left dislocation, in which the dislocated element expresses the topic (De Cat 2007), as in (43), and locative inversion (as in (44), repeated from (3)), which introduces a thetic (i.e., all focus) structure.

(42) Her regular column, she began to write again. The other ones, she never resumed.

(43) *Les petits, ils auront de la soupe.*

the little-ones they will-have part. the soup

‘The little ones will have soup.’

(44) In the deepest part of the forest lived a scary Gruffalo.

3.2 The interpretive properties of root-like clauses

In parallel to the above, root-like clauses can be endowed with two types of relevant interpretive properties: epistemic properties and performative properties.

3.2.1 Epistemic properties

The information-structural properties of root-like clauses can be revealed by the observation of a phenomenon that is not restricted to root contexts but that is sensitive to the contrast between central and peripheral adverbial clauses (as are root phenomena): the licensing of postverbal nominal subjects in French.

In French, the only type of VS order allowed in embedded contexts is stylistic inversion, a phenomenon confined to literary (or very formal) French. Stylistic inversion is not allowed in yes-no questions (whether matrix or subordinate), but it is otherwise found in matrix and subordinate contexts alike.

(45) *Quand arriva la tante, cela se fit tout naturellement.*

when arrived the aunt that refl did very naturally

‘When the aunt arrived, that happened very naturally.’ (Lahousse 2010)

Lahousse (2010, 2011) demonstrates that French VS is only licensed in thetic contexts, i.e., in clauses with an all-focus interpretation. In such contexts, aboutness topics are impossible.

Most relevant here is the fact that French VS requires extra licensing in peripheral adverbial clauses (46), but not in central adverbial clauses (45). In the former, VS only

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5. I will leave aside here the question as to whether right dislocation is also a root phenomenon.

6. *Inversion* is a misnomer in this case. As argued by Lahousse (2011), in genuine stylistic inversion the subject stays in its VP-internal [Spec, ThetaP] position.
appears in the presence of an overt indicator of thetic structure, such as the stage topic là ‘there’ in (46).

(46) Un nom prédestiné, parce que là renaitrait
    a name predestined because there would-be-born-again
    le phénix.
    the phoenix

Combining insights from Haegeman (2010b) and Lahousse (2010), the properties of adverbial clauses are as follows: only peripheral adverbial clauses but not central adverbial clauses (i) allow root phenomena such as argument fronting, (ii) allow epistemic qualification (manifested for instance by the presence of high epistemic adverbials and epistemic modals) and (iii) need overt indicators of thetic structure in order to allow stylistic inversion. This is summarised in Table 2.

Table 2. Properties of adverbial clauses

<table>
<thead>
<tr>
<th></th>
<th>Peripheral clauses</th>
<th>Central clauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Root phenomena allowed?</td>
<td>Yes</td>
<td>no</td>
</tr>
<tr>
<td>Epistemic qualification allowed?</td>
<td>Yes</td>
<td>no</td>
</tr>
<tr>
<td>VS needs overt licensing?</td>
<td>Yes</td>
<td>no</td>
</tr>
</tbody>
</table>

Epistemic qualification is inherently linked with the evaluation of truth: it signals the level of speaker commitment to the truth of the proposition. Following the tradition stemming from Reinhart (1981), the truth of propositions is evaluated with respect to their topic. A link between the possibility of hosting epistemic qualifying expressions and overt topics is therefore expected. Clauses that are not a locus of truth evaluation are expected not to have a topic-comment articulation, and not to host epistemic qualifying expressions. This is what happens in central clauses, as shown in (5) vs. (7).

The relevant difference between central and peripheral clauses may therefore be captured in terms of information structure: only the latter can have their own information structure (and truth value) independently from that of the matrix clause. Central adverbial clauses do not have that level of autonomy. One might be tempted to interpret this, as standard in the literature on Root Phenomena, in terms of presupposition: as hypothesised by Hooper and Thompson (1973), the defining property of root-like clauses might be that they are not presupposed. There is however one notable exception to this, as discussed by Wiklund et al. (2009) and Bentzen (2011) (based on observations already present in Hooper & Thompson 1973): the object clause of semifactive predicates does allow root phenomena in spite of being presupposed. If being
presupposed prevented a clause from having its own information structure, this would predict that the complement of semi-factive predicates cannot host dislocated topics. The examples below demonstrate that they can, and that this does not affect the presupposed status of the embedded proposition (evidence to that effect comes from the fact that the proposition would remain true under negation of the matrix verb, and that the presupposition can be cancelled as shown in (48) – see Bentzen 2011 for details).

(47) a. *J’ai réalisé que les photos, on les avait toutes oubliées.*
   I-realised that the picture we them had all forgotten
   ‘I realised that we had left all the pictures behind.’

   b. *Tu sais que les manuscrits de Clara Schumann,*
   do you know that the manuscripts from Clara Schumann
   *tu pourrais les consulter au musée?*
   you could them peruse at-the museum
   Do you know that you could peruse Clara Schumann’s manuscripts at the museum?

(48) *Pas si vite ! Les photos, on ne les avait pas toutes oubliées.*
   not so fast the photos one NEG them had not all forgotten
   ‘Hey, wait a minute! We had NOT left all the pictures behind.’

In the case of semi-factives, presupposition of their complement arises from the (pragmatic) assumption of truth. This does not preclude the (semantic) truth of the proposition in question obtaining with respect to a topic. In other words, the presupposition in this case stems from conversational rules (see e.g. Stalnaker 1974 & Simons 2007). The use of an epistemic expression or an overt topic enables the speaker to clarify the level of their commitment to the presupposed truth of the proposition (that would otherwise be attributed to them by conversational rules). This could be done to anticipate or pre-empt a challenge of the presupposition (in a *Hey, wait a minute* move) from their addressee.

The condition for an independent information structure may therefore be that the clause be non-presupposed or that the presupposition it carries be pragmatic in nature (so that the speaker be able to express the degree to which they are committed to its truth).

3.2.2 Performative properties
The other relevant interpretive property of root clauses is that they have pragmatic force (see e.g. Stainton 2006). Root clauses are speech acts (including, but not limited

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7. The dislocated topics in these examples are licit under topic-shift interpretation, which Bianchi and Frascarelli (2010) have demonstrated is a root phenomenon in Italian. See also De Cat (in preparation-a).
to assertions), and as such they automatically imply the involvement of a speaker (by default the person uttering the sentence). This enables the speaker in question to express their emotive reaction to what is being said (implying e.g. surprise, disapproval,...), as in (49) (repeated from (12)). In (49), the preposition fronting emphasises the coming in of the dog, implying that the speaker considers it unexpected or undesired.8

(49) He was washing the dishes when in came the dog.

Wiklund et al. (2009) propose that the key characteristic of root(-like) clauses is that they convey the Main Point of the Utterance (MPU), i.e., the proposition which renders a particular utterance relevant. “The main point of an utterance U given in answer to a question is that part of the content of U which constitutes the proffered answer to the question” (Simons 2007: Footnote 2). In (50), the MPU of the answer is conveyed by the embedded clause; the rest of the sentence only conveys evidential information.

(50) Q: Why didn’t Louise come to the meeting yesterday?  
A: I heard that she’s out of town.

Clauses with MPU potential correspond to those identified by Hooper and Thompson (1973) as hosts for root phenomena (i.e., the complement of assertive and semi-factive predicates, and peripheral adverbial clauses) – see Bentzen (2011) for evidence.

I will assume that clauses that carry the MPU are necessarily endowed with pragmatic force,9 and remain agnostic for the time being as to whether clauses with pragmatic force necessarily convey the MPU.

Now that the properties of root-like clauses and those of (some) root phenomena have been established, we are in a position to try to capture the gradient nature of the distribution of root phenomena.

3.3 Accounting for gradience

Gradience results from the degree of mismatch between the interpretive requirements of the root phenomenon in question and the interpretive properties of the host clause. From this, a number of predictions derive straightforwardly.

3.3.1 Prediction 1

Phenomena expressing emphatic agreement from the speaker (such as VP fronting, Neg preposing and emphatic inversion in English) require not only a host clause with

8. The question as to which clauses can display such performative properties will be explored in Section 4.
9. This will need to be confirmed by further research.
performative attributes, but also that the point of view expressed be that of the speaker. This explains the contrast in (51) (repeated from (10)).

(51)  
a. I regret that never before has such a proposal been made.  
b. *He regrets that never before has such a proposal been made.

3.3.2 Prediction 2
Negation in the matrix clause will only block phenomena expressing emphatic agreement from the speaker if it prevents the embedded clause from expressing the perspective of the speaker. This is shown by the contrast in (52).

(52)  
a. John says that he'll win it, and I think that win it he will.  
b. *John says that he’ll win it, but I don't think that win it he will.

By contrast, in (53), the negation in the matrix clause doesn’t prevent the speaker’s emphatic expression of the fact that the umbrella was there all along in spite of them not noticing it at the time. The meaning contributed by the VP inversion expresses the speaker’s astonishment (or any strong emotion justified by the context).

(53)  
a. I didn’t realise that standing in the corner was his black umbrella.  
b. He didn't say that standing in the corner was his black umbrella.

The perspective of the speaker can only manifest itself in clauses expressing the Main Point of the Utterance (a property instantiated by the complement clause of assertive (52a) and semi-factive (53) predicates, but not non-assertive predicates (52b)). An apparent exception to this is (53), where the negation of the assertive matrix predicate should turn it into a non-assertive predicate – hence blocking embedded root phenomena. Not saying does not entail not knowing, and in this case does not prevent the embedded clause from expressing a fact highlighted as surprising by the speaker.

3.3.3 Prediction 3
Phenomena seeking approval or confirmation from the addressee automatically imply the other active participant in the discourse, i.e., the speaker. They will therefore only be possible if it is the speaker’s point of view that is expressed by the root-like clause. This is what happens in tag questions, whose function is to ask confirmation about the truth of [the] assertion, or to express doubt or uncertainty about [it] (Hooper & Thompson 1973:471).

(54)  
a. I suppose acupuncture really works, doesn't it?  
b. *Gloria supposes acupuncture really works, doesn't it?

10. Thanks to Kristine Bentzen for drawing my attention to this. See Miyagawa (this volume) for a summary of Hooper and Thompson’s (1973) classification of embedding predicates.
This restriction doesn’t apply to root phenomena that do not necessarily express the speaker’s point of view:

(55) a. I thought that on the top shelf stood a large archery trophy.  
    b. Sam thought that on the top shelf stood a large archery trophy.

3.3.4 Prediction 4

Information structure phenomena are predicted to be possible only in clauses with their own truth value (independent from that of the main clause). Some clauses strictly cannot allow this, such as embedded non-finite clauses, which follows from the fact that they are never assertions (Hooper & Thompson 1973:485).

This predicts that root phenomena should be possible in non-finite clauses only to the extent that they can express the Main Point of the Utterance. The only condition in which this obtains is when they are used as fragments. As shown below for French, dislocated topics can occur in non-finite clauses used as fragments (56), but not in their embedded counterparts (57).11

(56)  
    a. *Elle, promener ton chien? Ca m’étonnerait.  
        her walk-INF your dog it me-would-surprise  
        ‘For her to walk your dog? I’d be surprised.’
    b. Les chicons, les manger crus? Pourquoi pas,  
        the chicory them to-eat:INF raw why not  
        après tout.  
        after all
        (lit: To eat chicory raw? Ater all, why not.)

(57)  
    a. *Je lui ai demandé de elle, promener ton chien.  
        I to-her have asked to her walk your dog
    b. *J’ai envie de les chicons, les manger crus.  
    c. *?Je lui ai demandé, elle, de promener ton chien.
    d. *?J’ai envoyé, les chicons, de les manger crus.  
        I-have desire the chicory to them eat raw

4. Solution 2: Capturing variations in ‘rootness’

What remains to be explained is the variable behaviour of some adverbial clauses in terms of root phenomena licensing.

11. The embedded topic is slightly less marked if it precedes the complementiser, but this could be due to a parenthetical reading.
4.1 The effect of event quantification

According to a strictly syntactic analysis of root phenomena, clauses inherently associated with the syntactic properties conferring rootness are expected to always allow root phenomena. The ability of peripheral adverbial clauses to host root phenomena is traditionally attributed to properties inherent to such clauses, and the inability of central adverbial clauses to do so is attributed to their lack of such properties (Hooper & Thompson 1973; Haegeman 2010b).

However, as pointed out in Section 2.2, peripheral adverbial clauses do not always behave as expected, given the above. When sentence-initial (58), they are presupposed, and hence unable to host root phenomena. When sentence-final (59), they are asserted, and hence able to host such phenomena.

(58) *Because her son, he owns stocks in Xerox, Mildred drives a Mercedes.

(59) Mildred drives a Mercedes because her son, he owns stocks in Xerox.

Larson and Sawada (this volume) capture the contrast in (58)–(59) as a consequence of event quantification. Sentences containing an adverbial clause are analysed as tripartite structures involving a (covert) quantifier and hence a restriction and a scope. The restriction includes presupposed content, and the scope asserted content. Larson and Sawada argue that the lowest event predicate maps to the scope. Final adverbial clauses are attached at VP-level, so they are part of the scope and hence asserted. Initial adverbial clauses are attached at CP-level, so they are part of the restriction, hence presupposed. Root phenomena are therefore possible in sentence-final adverbial clauses, but not in sentence-initial ones, as predicted (but hitherto unexplained) by Hooper and Thompson (1973).

4.2 Levels of rootness

Larson and Sawada’s analysis has direct information-structural consequences for the account developed here: only those clauses that are not in the restriction of an adverbial of quantification are truth-evaluable, so only those can have a topic-focus articulation independent of that of the main clause, and host root phenomena with an information-structural import.12 I propose that the other type of root phenomena (i.e., those that indicate speaker involvement) has a double requirement: (i) a truth-evaluable host-clause, and (ii) speaker anchoring/performativity. The

12. Note also that, by definition, clauses that are part of the restriction cannot express the Main Point of the Utterance, as they merely express restrictions on what is in the scope of the event quantifier.
second requirement implies a higher level of involvement from the speaker than mere commitment to the truth of the predication.

This predicts that some clauses will be able to host information-structural root phenomena but not performative ones. Miyagawa (this volume) shows that this is indeed the case. In Japanese, both the politeness marker -mas- and the topic marker -wa are restricted to root-like clauses (including embedded clauses that allow discourse-related sentential particles). But in clauses selected by verbs such as believe and in indirect questions, only -wa is possible, and not the politeness marker -mas-. This is shown in the contrast between (60) and (61), from Miyagawa (this volume):

(60) Taroo-ga [Hanako-wa ku-ru to] sinziteiru (rasii).
    Taro-TOP Hanako-TOP come C_{non fact} believe apparently
    ‘Taro (apparently) believes that Hanako will come.’

(61) *Taroo-wa [Hanako-ga ki-mas- to]
    Taro-TOP Hanako-TOP come-MAS-PRES C_{non fact}
    sinzitei-mas-u.
    believe-MAS-PRES
    ‘Taro believes that Hanako will come.’

As shown in Table 3, Miyagawa’s typology can be captured by a combination of the two interpretive features of root clauses identified in Section 2.3: the information structural properties of clauses, and their performative properties.

Table 3. Typology of clauses

<table>
<thead>
<tr>
<th>Performative</th>
<th>Independent I.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-roots</td>
<td>✓</td>
</tr>
<tr>
<td>‘semi-roots’</td>
<td>✓</td>
</tr>
<tr>
<td>non-roots</td>
<td>✗</td>
</tr>
</tbody>
</table>

The present analysis predicts that information structure independence from the main clause is a necessary condition for all root-like clauses. Therefore, any clause able to host root phenomena with a performative import should also be able to host information-structural phenomena normally restricted to root clauses. The reverse does not hold, however, as indicated by the existence of “semi-roots”. Non-presupposition does not automatically entail full performative status. This is further developed in the next section.
5. Solution 3: Disentangling pragmatic force from syntactic force

5.1 Accounting for (Japanese) fragments

The Japanese fragments discussed in Section 2.3 have been shown not to be amenable to a full-clause analysis (with the core left unpronounced): they are true ‘orphans’, in the sense of Culicover and Jackendoff (2005).

Yet, in spite of not being full clauses, these fragments clearly have pragmatic Force, as they host politeness markers only found in root-like clauses.

This is a clear case where Force is not instantiated in a dedicated clause-peripheral position. Yet, the lack of syntactic Force does not block the availability of pragmatic Force. If this is true for some structures, the availability of pragmatic force in the absence of syntactic encoding should be considered the null hypothesis in all cases, as required by the principle of Occam’s Rasor. Force might be best captured by an interface analysis acknowledging the essential contribution of the interpretive component.

5.2 The need for an interface account

Summing up what has been discussed so far, the root phenomena landscape looks as follows.

Two types of root phenomena need to be distinguished: those with epistemic properties only, and those with performative properties (and epistemic properties). Both types of properties apply to the root phenomena themselves as well as their host clause. Mismatch results in marked (or ungrammatical) structures.

Root phenomena with an information structural import require a host clause that is epistemically independent: if embedded, that clause must have its own truth value, independent of that of the main clause. This translates into its ability to have its own topic-focus articulation. Epistemic independence is only possible if the clause expresses the Main Point of the Utterance (which, in most cases, translates into its not being presupposed). If the clause is (part of) the restrictor of an event quantifier, it loses its ability to express the MPU, and cannot be epistemically independent. Reduced structures such as untensed clauses can only express the MPU when they function as fragments (as was shown above in the case of some non-finite clauses in French, and in the case of Japanese fragments).

Information-structural phenomena only require commitment of the speaker to the truth value of the preposition. Root phenomena with a performative import have the added requirement that they should express a stronger involvement of the speaker: either to mark the speaker’s point of view, or to express their acknowledgement of the addressee (as with Japanese politeness markers). This predicts a high level of sensitivity of root phenomena to fine-grained semantic properties of their host clause that impact on their ability to express the speaker’s point of view.
Towards an interface definition of root phenomena

The extent to which the above can be captured by a strictly syntactic approach remains to be determined. What is clear at this point is that the interpretive component(s) have a substantial role to play in the licensing of root phenomena, and that their distribution cannot be reduced to the syntactic properties of clauses alone.

6. Concluding remarks

In this paper, I have argued that embedded root phenomena can only be captured by an interface approach, to account for (i) their gradience in acceptability, (ii) the variable behaviour of peripheral adverbial clauses, and (iii) the existence of root phenomena in utterances that are not propositional syntactically (and hence without syntactic Force) but nonetheless endowed with pragmatic Force.

Gradience has been shown to result from the interaction of the interpretive properties of root phenomena with the properties of their host clause. Two types of interpretive properties (affecting the root phenomena themselves as well as their host clause) are involved: (i) those that indicate speaker involvement and (ii) epistemic/information structural properties. All root phenomena have been argued to involve epistemic/information structural properties; speaker involvement is only required in a subset of cases.

The fact that peripheral adverbial clauses can only host root phenomena if they (the clauses) are sentence-final (not sentence-initial) eludes current syntactic analyses (or any analysis that attempts to capture root phenomena as a purely syntactic property of clauses), but can be captured by the interaction of syntax and the interpretive component (Larson & Sawada 2010).

The existence of root phenomena in non-sentential assertions was demonstrated with original data from Japanese. These consisted in “fragment” utterances that cannot be analysed as full syntactic structures (according to Merchant’s 2004, 2008 sluicing account) and hence lack syntactic Force. Under a strictly syntactic analysis, root phenomena are predicted not to be possible in such fragments, contrary to fact.

Whether these three types of phenomena can be captured by a syntactic approach remains to be debated. Crucially, as pointed out by Hooper and Thompson (1973: 495):

“Some transformations are sensitive to more than just syntactic configurations. [...] Even if it were possible to define in syntactic terms the conditions under which Root Transformations can apply, this correlation would still require an explanation.”
References

Bentzen, Kristine. 2011. The status of the embedded v-neg word order. Ms, University of Tromsø.
De Cat, Cécile. 2007. French Dislocation: Interpretation, Syntax, Acquisition [Oxford Studies in
Theoretical Linguistics 17]. Oxford: OUP.
De Cat, Cécile. In preparation-a. Dislocated topics in hostile environments. Ms, University of
Leeds.
conference On Linguistic Interfaces (Belfast, 2010). Oxford: OUP.
Syntactic Edges and their Effects, David Adger, Cécile De Cat & George Tsoulas, 75–120.
Dordrecht: Kluwer.
Frey, Werner. 2006. Contrast and movement to the German prefield. In The Architecture of
Green, Georgia. 1996. Distinguishing main and subordinate clause; the root of the problem. Ms,
University of Illinois.
Haegeman, Liliane. 2002. Anchoring to speaker, adverbial clauses and the structure of CP.
Haegeman, Liliane. 2007. Operator movement and topicalisation in adverbial clauses. Folia Lin-
Haegeman, Liliane. 2010a. The movement derivation of conditional clauses. Linguistic Inquiry
41: 595–621.
Lahousse, Karen. 2010. Information structure and epistemic modality in adverbial clauses. Studies
in Language 34: 298–326.
OUP.
Merchant, Jason. 2006. “Small structures”: A sententialist perspective. In The Syntax of
Nonsententials [Linguistik Aktuell/Linguistics Today 93], Ljiljana Progovac, Kate Paesani,
Merchant, Jason. 2008. Variable island repair under ellipsis. In Topics in Ellipsis, Kyle Johnson
Progovac, Ljiljana, Paesani, Kate, Casielles, Eugenia & Barton Ellen (eds). 2006. The Syntax of
Nonsententials: Multidisciplinary Perspectives [Linguistik Aktuell/Linguistics Today 93].
Amsterdam: John Benjamins.


Explaining matrix/subordinate domain discrepancies*

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There are discrepancies between matrix and subordinate clauses that call for explanation, particularly the apparent fact that computational operations may affect matrix but not subordinate clauses, and not vice versa. Explanations were offered in the 1970’s through principles of Universal Grammar but those principles became unstatable as theories of UG developed and the explanations were lost. This volume and other venues present descriptive work on such discrepancies, often exploiting the multiplicity of functional categories made available by cartographic approaches to syntax. But little is said about how to explain the discrepancies. This paper develops an explanatory approach through theories of language acquisition under which children seek cues only in simple domains, defined in terms of Binding Domains and not clauses. The fact that some cues are not expressed in embedded Binding Domains must then follow from independent properties of embedded Domains.

1. Introduction

With the rise of the so-called cartographic approach to syntax over the last decade and the development of a rich structure for the left periphery, functional categories have been introduced to capture phenomena related to illocutionary force in ways reminiscent of the complex abstract structures of the late 1960’s. In those days, investigators argued that a simple sentence like *Floyd broke the glass* consisted of no less than eight sentences, topped by a performative verb (Bach & Harms 1968). This style of analysis is illustrated by many papers in this volume and by most of the presentations at the meeting from which the volume emerged.

Since illocutionary force is generally a property of matrix clauses and has syntactic effects, we find computational operations affecting matrix domains differently from

*This paper, in part, recapitulates arguments that I made for degree-0 learnability in the 1990’s but here I address the question of how to explain matrix/subordinate domain discrepancies, which are the focus of this volume.*
subordinate domains. That, in turn, raises a set of issues also reminiscent of the work of several decades ago, dealing with syntactic discrepancies between matrix and subordinate domains.

Here I want to raise questions about how such discrepancies might be explained, teasing apart the possible roles of Universal Grammar (UG) as opposed to the role of the way in which language acquisition takes place. UG, I argue, is not likely to carry all of the explanatory burden but, more fundamentally, we need deep explanations for discrepancies between clause types.

The natural inclination of modern generative syntacticians is to explain phenomena like this through properties of UG and certainly UG has an important role to play in this context. However, UG-based explanations, involving different types of transformations, were short-lived in the 1970’s and it is worth considering alternatives. We want deep explanations. Postulating functional categories associated with elements of illocutionary force explains why certain phenomena cluster but one wants to go deeper and to know whether the categories are given by UG or arise as a function of the nature of acquisition or are learned in some fashion and, if so, how. We need to be open to all these possibilities. I will argue that the nature of acquisition, particularly the idea of degree-0 learnability, has a role to play alongside that of UG. Children learn only from simple structures and therefore they cannot learn operations manifested only in complex structures; that is why we find no operations manifested only in embedded clauses, which is part of what needs to be explained.

2. 1970’s explanations through UG

Joe Emonds (1970, 1976) made the seminal discovery that under a transformational approach to syntax, transformations affecting subordinate clauses were a subset of those affecting matrix clauses and that no transformation affected only subordinate clauses. He sought to explain this discrepancy between what happens in matrix and subordinate domains through a theory of grammar, making the difference a function of a principle of UG. In the early days of transformational-generative grammar, he distinguished three types of transformation: local, structure-preserving and root transformations, which had different formal properties. Local transformations affected a head and an adjacent constituent, while the Structure-Preserving Constraint specified that major transformations were either structure-preserving, i.e. generating structures that could in principle have been generated directly by the phrase structure rules, or structure-deforming root transformations. So Subject NP Postposing (1) generated a preposition phrase (PP) at the end of a VP, where PPs naturally occur without the intervention of a movement operation, as in John lives in Brussels, and was structure preserving. Root transformations, on the other hand, are more radical, yield structures
that cannot be generated directly by phrase structure rules and affect elements that are immediately dominated by the topmost, “root” node; therefore, they operate only in a root position, hence in a matrix clause. An example is Subject–Auxiliary Inversion (2).

(1) Subject NP Postposing: Two cities were visited by everyone.

(2) Subject–Auxiliary Inversion: Will they support us?

Similarly, Ross (1973) proposed an informal Penthouse Principle, stipulating that what goes on downstairs also goes on upstairs but not vice versa.

Emonds' Structure-Preserving Constraint had the effect of predicting (3) that structure-deforming operations apply only in root, matrix clauses and both Emonds' constraint and Ross' Penthouse Principle predicted (4) that no syntactic operation applies only in subordinate clauses.

(3) Radical, structure-deforming operations apply only in root domains.

(4) No syntactic process can apply only in subordinate domains.

Emonds' approach depended on a distinction between the form of different transformational operations. However, work of the 1970's was directed toward reducing the expressive power of transformations, eventually reducing everything to Move something or Affect something. If there was only one transformation, there could be no formal distinction between transformations appearing in all clause-types and those applying only in root domains and one would have to look elsewhere to explain the matrix/subordinate clause discrepancy. The early attempts to explain matrix/subordinate domain discrepancies through UG and different types of transformations collapsed when the expressive power of transformations was reduced dramatically.

3. Explanations through acquisition

An alternative approach to explaining matrix/subordinate domain discrepancies was to appeal to a theory of language acquisition. Good syntactic work specifies the parameters that children need to set but sometimes we need work on acquisition or learnability to tell us how those parameters are set. An example involves the learning associated with the familiar Binding Theory. The Binding Theory introduced by Chomsky (1981) divides nouns into anaphors (bound within their Domain), pronouns (free in their Domain), and names (free everywhere). This represented a vast simplification over the indexing procedures that preceded it (see the appendix to Chomsky 1980) and vastly reduces the hypothesis space and therefore reduces what has to be learned by children. However, the question still arises of how children learn that himself is an anaphor, etc. There is more to acquisition than reducing the hypothesis
space and this turns out not be as simple as it seemed and a problem, discussed in Lightfoot (2006a:61), concerns how a child learns that Kim is a name and not a pronoun. Analysts know that Kim is not a pronoun because one does not find Kim said that Kim left, with the two Kim’s referring to the same person, but that is a negative fact concerning something that doesn’t occur, hence unavailable to young children and therefore not a basis for language acquisition. A solution is to say that children assume first that every noun is a name, unless there is positive refuting evidence. Under that view, a sentence like They washed themselves, with themselves understood to co-refer with they, shows that themselves is an anaphor and not a pronoun or a name. Kim heard Bill’s speeches about her, with her co-referring with Kim, shows that her is not a name, because it is not free everywhere, and not an anaphor, because it is not locally coindexed. Once we make some claims about how acquisition works, supplementing the information of the Binding Theory, we can indeed show how children learn which words are anaphors and pronouns; names involve no learning. In general, the role of the nature of acquisition in delimiting what gets learned has been underestimated and we need to think beyond how UG reduces the hypothesis space when we seek to account for what gets learned by children.

Roeper & Weissenborn (1990), building on Roeper’s 1972 dissertation, were the first to look to acquisition theory to explain matrix/subordinate discrepancies. They advocated a subordinate clause strategy, whereby children looked to subordinate clauses to determine parameter settings. Their idea was that embedded clauses uniformly manifest the correct generalizations and the partial, exceptional generalizations manifested in main clauses are not a function of true parameter setting, rather of “subparameters.”

Parametric decisions have no local exceptions in subordinate clauses. Therefore subordinate clauses provide the locus for unique triggers that can set the primary parameter. (Roeper & Weissenbaum 1990:155)

Children could determine parameter settings by attending to embedded clauses, ignoring the distorting evidence from main clauses. English embedded clauses do not trigger null subjects (6) and Roeper and Weissenborn’s parameter setting is not affected by the distorting influence of what they call apparent null subjects in matrix clauses (5). Similarly they argue that French children do not hear embedded wh-in-situ (10) and therefore do not acquire matrix wh-in-situ (7) through the usual parameter-setting mode, unlike wh-movement manifested in embedded clauses (9) and generalizing smoothly to matrix domains.

(5) (It is) raining out today.
(6) *I think that raining out today.
(7) Il est où, papa?
Roeper and Weissenborn held that the subordinate clause is “the point at which the deep structure of the language is open to view” (p160). That has some plausibility but it does not automatically entail that children attend to subordinate clauses in some privileged way in order to set parameters, ignoring simple structures; in fact, that would be quite counterintuitive. In fact, as we shall see, there are good reasons to believe that the opposite is true, that children set parameters on the basis of simple data drawn only from matrix domains and that the revealing quality of subordinate clauses is a result of that restriction on language acquisition.

When Roeper and Weissenborn wrote, others had been investigating the complexity of the Primary Linguistic Data (PLD) from other perspectives, developing ideas of degree-x learnability. If the development from an initial UG to a mature grammar is triggered by exposure to PLD, one can ask how complex the PLD may be. Children might have access to structures like (11), with two levels of embedding, degree-2 complexity, or structures like (12), with one level of embedding, degree-1 complexity, or just simple structures like (13), with no embedding, degree-0 complexity.

(11) Jay said [that Kay asked [if Ray was home]].

(12) Kay asked [if Ray was home].

(13) Ray was home.

Wexler & Culicover (1980) provided a proof that Aspects-style grammars (Chomsky 1965) were degree-2 learnable. They showed that if children encounter \((b, s)\) pairs, where \(b\) is a base structure (in which transformational and phonological rules have not applied) and \(s\) is a surface string, and if children follow an error detection procedure, they can discover all errors in finite time in nothing more complex than two levels of embedding. Baker’s (1982) review showed the oddity of some of the assumptions but providing a proof was regarded as a substantial achievement.

In fact, all relevant data that Wexler and Culicover needed were to be found in degree-1 embeddings but their error detection procedure required an extra level to reveal possible errors redundantly. Morgan (1986) argued for degree-1 learnability in part by dispensing with that extra insurance level: if children encounter \((b, s)\) pairs AND a surface string with constituent structure assigned, they can discover all errors with nothing more complex than one level of embedding. Culicover & Wilkins (1984) argued for the same conclusion on a somewhat different basis, given the existence of a Subjacency Condition limiting the locality of transformational operations, as if
the locality condition itself guaranteed degree-1 learnability. Joshi (1989) offered yet another kind of argument in favor of degree-1 learnability.

Taking things a step further, Lightfoot (1989, 1991, 1994) argued for degree-0 learnability, if children encounter data from unembedded binding Domains, as distinct from unembedded clauses. Under that view, children have access not only to data from unembedded clauses but also to the topmost elements of an embedded clause: the subject of an embedded infinitival (14), an embedded C (15), and an embedded Specifier of CP and Inflection element, because an element's binding Domain is the first CP that contains it and an accessible SUBJECT and here the accessible SUBJECT for these items is in the higher clause (see Chomsky 1981; Aoun, Hornstein, Lightfoot & Weinberg 1987, etc. for definitions of accessible SUBJECTs).

(14) Kim expected [her to win].

(15) Kim expected [(that) she would win].

(16) …CP[Spec C [(DP) I …].

This allows degree-0 children to learn that English has “Exceptional Case Marking” constructions (14), deleted complementizers (15) and sequence of tense phenomena. The accessible SUBJECT for her in (14) is the Inflection of the matrix clause, similarly for that in (15) and Spec of CP and I in (16). Another way of looking at this is that the relevant items in (14–16) are the connection points with embedded clauses, that is, elements featuring in subcategorization frames, selectional restrictions, or linking time reference with that of the higher clause (for details see Lightfoot 1994, 1999). One way of thinking of this is that cues are expressed in degree-0 binding Domains.

This, of course, does not mean that young children do not process or understand material from embedded domains; it means that complex structures do not contribute to the learning of operations. This provides a different approach to explaining matrix/subordinate domain discrepancies. If children can learn only from simple structures in this way, then it follows that they cannot learn operations manifested only in more complex structures. We do not find operations manifested only in embedded clauses, because they would be unlearnable by a degree-0 learner.

4. Apparent counterexamples

There are apparent counterexamples to degree-0 learnability but they are only apparent and can be analyzed away productively. First, the verb serve appears to be subject to a selectional restriction that its complement must have a transitive verb (17, 18); if so, this would seem to be impossible to learn without access to embedded PLD. But that is not the right generalization. Rather, Roger Higgins (1973) showed that the verb serve
must have an instrumental subject, i.e. non-human, explaining the non-occurrence of (19). Therefore the empty subject of an embedded infinitival must also be instrumental and verbs with instrumental subjects are all transitive. (17) does not occur because the ice is not an instrumental.

(17) *The ice served to melt.

(18) The ice served to chill the beer.

(19) *Edison served [DP the lightbulb to invent the lightbulb]

Second, another apparent counterexample lies in the subjunctive mood found in embedded conditional clauses (20). These forms might not manifest people’s active grammars, instead representing highly educated speech forms that are not acquired in the usual way. However, even if they do reflect normal language acquisition, properties of an embedded Inflection element are available to a degree-0 learner, because its binding Domain is the higher clause, where the higher Inflection element acts as an accessible SUBJECT (see 16).

(20) If I were the boss, I would …

Third, the very first parameter, proposed by Rizzi (1982), lay in the bounding nodes for the Subjacency Condition. The Subjacency Condition required that movement take place across at most one bounding node and Rizzi showed that languages differed in what counted as a bounding node. In languages allowing no movement out of embedded clauses, DP, IP and CP were bounding nodes (I adapt his terminology); languages like English allow movement out of an embedded clause in *Who do you think that Kim saw? and have DP and IP as bounding nodes, while Italian allows extraction from more complex structures (21) and have DP and CP as bounding nodes. Sportiche (1981) showed the same thing for French (22). Under this analysis, children have to learn what are the bounding nodes for their language and appear to need access to complex structures to do so. The relevant structures were complex (Rizzi recognized that they were degree-2 complex and therefore that his analysis was degree-2 learnable) but the same result could be triggered by simple, degree-0 complex structures like (23). In (23) *combien moves across DP and IP and therefore both cannot be bounding nodes. As a result, the bounding nodes for Italian and French are, in fact, degree-0 learnable, expressed in simple PLD.

(21) Tuo fratello, [a cui IP[mì domando CP[che storie IP[abbiano your brother to whom me I-ask that stories they-have raccontato che storie a cui]][]], era molto preoccupato.

‘Your brother, to whom I wonder which stories they told, was very troubled.’
Fourth, languages differ in the deletability of embedded subjects, the so-called that-trace effect. So English does not allow who to delete in a structure like (24), hence boldface.

This might be due to the way that indexing works for two elements contained in a CP (Aoun, Hornstein, Lightfoot & Weinberg 1987) or a general condition that elements may be deleted only where they are cliticized (Lightfoot 2006b) but the details do not matter here. On the other hand, Dutch allows comparable structures (25). Koopman (1983) showed that the distinction can be learned from simple, degree-0 data: structures like (26) show Dutch children that a wh-item may be deleted in subject position, even if there are two elements in CP. English allows (27) but not (28), where there are two elements in the highest CP. The structure of Who has read the book? must be as in (27), where has stays internal to the IP, because the non-occurrence of (28) shows that English does not allow two elements in CP if the subject DP is deleted and nothing requires that analysis, unlike in a verb-second language like Dutch.

\[(24) \quad *\text{Who did Jay say } \text{CP[}\text{who that who saw Kay]}\]

\[(25) \quad \text{Wie denk je } \text{CP[}\text{wie dat } \text{IP[}\text{wie het boek gelezen had}]？}\]

\[\text{who think you who that who the book read had ‘Who do you think had read the book?’}\]

\[(26) \quad \text{Wie heeft } \text{IP[}\text{wie het boek gelezen heeft]}.\]

\[\text{who has who the book read has ‘Who has read the book?’}\]

\[(27) \quad \text{Who } \text{IP[}\text{who has read the book}]?\]

\[(28) \quad *\text{Who did } \text{IP[}\text{who did read the book}]?\]

A fifth potential counterexample to degree-0 learnability is the phenomenon of ha deletion in Swedish, which Anderson & Dahl (1974) offered as a counterexample to Ross’ Penthouse Principle. They observed that ha might be deleted in embedded clauses (31) but not in matrix clauses (29, 30).

\[(29) \quad \text{Han hade sett henne.}\]

\[\text{he had seen her ‘He had seen her.’}\]
Explaining matrix/subordinate domain discrepancies

(30) *Han hade sett henne.

(31) … at han (hade) sett henne.
that he had seen her
‘… that he had seen her.’

However, it turns out that *ha may be deleted in a matrix Domain, if it has not been raised to the usual verb-second position, the head of CP (32). We can understand this in terms of deleted elements requiring an overt antecedent for their interpretation. That explains why an English auxiliary verb may delete in its non-raised position in (33) but not when raised in (34, 35); in that event there is no antecedent for the deleted element in its original base position. Under that view, there is nothing special about Swedish and nothing new to be learned from embedded clauses: children learn from degree-0 complex PLD like (32) that *ha may be deleted. Therefore, *ha may be deleted in embedded Domains (31) and not when it has been raised to the head of CP (30).

(32) Allan kanske redan (har) skrivit sin bok.
Allan perhaps already has written his book
‘Allan perhaps already has written his book.’

(33) Jay can greet Fay and Ray can treat Kay.

(34) *Who did Jay greet and who did Ray treat?

(35) *Who can Jay visit and who can Ray eat with?

5. Problems

Degree-0 learnability has considerable explanatory force but is not without problems. For example, some languages show long-distance anaphors, as in Chinese (36), where zijì may refer back to John, and it seems that children need access to complex structures in order to learn that something is a long-distance anaphor. This is unlikely to be due to a parameterization of binding Domains (Manzini & Wexler 1987), where Chinese has bigger binding Domains than languages that do not allow long-distance anaphors. Such an analysis seems not to capture naturally blocking effects, whereby long-distance anaphors are sensitive to the properties of intervening subjects, which may not vary in person (37).

(36) John_xiangxin [Bill, dui Sam, shuo [zijì taoyan Mary]]
John believes Bill to Sam said self hated Mary
‘John believes that Bill said to Sam that he hated Mary.’

(37) *John_xiangxin [wo shuo [zijì taoyan Mary]]
John believes I said self hated Mary
‘John believes that I said that he hated Mary.’
Battistella (1989) analyzed these long-distance anaphors through movement to the Inflection position, an analysis that captures the blocking effects neatly and comports with the modern movement analysis of control in Boeckx, Hornstein & Nunes (2010). If the movement takes place on the PF side of grammars, that also explains why long-distance anaphors do not occur in reconstruction contexts like (38).

(38) Zhangsan shuo [ziji de shu [Lisi zui xihuan]].
Zhangsan said self of books Lisi likes most
‘Zhangsan said that his books, Lisi likes most.’

The movement analysis may be a step in the right direction and provides a framework for a degree-0 analysis.

Second, Baker (1989) pointed out that languages differ in whether they allow resumptive pronouns in embedded infinitives (39) and relative clauses (40), another piece of parametric variation where acquisition would seem to require access to complex structures.

(39) John is too tired to invite [him] for dinner.
(40) The woman who we met [her] lives in DC.

It may be that infinitivals with empty positions have different structures from those with resumptive pronouns. For example, Cinque (1990) argued that ordinary complements participate in a predication relation and may have empty objects; on the other hand, clauses introduced by a preposition may not participate in the predication relation. If that is so, then one would ask whether those structures can be learned from simple PLD rather than asking the degree-0 challenging question of how children learn to allow resumptive pronouns in embedded domains.

6. Arguments for degree-0 acquisition

Some apparently recalcitrant phenomena turn out to be strong arguments in favor of limiting the complexity of trigger experiences. Consider Dutch and German word order, predominantly subject-verb-object in simple, matrix clauses (41) but consistently object-verb in embedded clauses (42). Since there are strong reasons to believe that the initial word order is object-verb, this discrepancy would appear to suggest plausibility for Roeper and Weissenborn’s subordinate clause strategy.

(41) Jan bezoekt Amsterdam.
‘John visits Amsterdam.’
(42) Margo denkt [dat Jan Amsterdam bezoekt].
Margo thinks that Jan Amsterdam visits
‘Margo thinks that Jan visits Amsterdam.’
However, there are robust degree-0 PLD that trigger initial object-verb order. Verbs with separable particles may move independently to the verb-second position in the head of CP or some other high functional category and the particle remains in its base-generated position, marking consistently the position from which the verb moved (43). Similarly “clause-union” constructions like (44) show the infinitival verb in VP-final position to the right of the object DP. Furthermore, small adverbials like 'not,' 'sometimes,' 'tomorrow,' and 'often' occur to the right of the object DP, also indicating the VP-final position from which the verb moved (45).

(43)  *Jan belt de hoogleraar op.*
      John calls the professor up
      'John calls the professor.'

(44)  *Jan moet de hoogleraar opbellen.*
      John must the professor up-call
      'John has to call the professor.'

(45)  *Jan bezoekt de hoogleraar niet/soms/morgen/vaak.*
      John visits the professor not/sometimes/tomorrow/often.
      'John doesn't visit/sometimes visits/often visits the professor/tomorrow.'

In addition, there are frequent simple colloquial expressions where the verb is in infinitival form and in VP-final position, manifesting the initial object-verb order (46–49).

(46)  *En ik maar fietsen repareren.*
      and I but bikes repair
      'I ended up repairing bicycles.'

(47)  *Hand uitsteken.*
      hand outstretch
      'signal'

(48)  *Jantje koekje hebben?*
      Johnnie a cookie have
      'Does Johnnie want a cookie?'

(49)  *Ik de vuilnisbak buiten zetten? Nooit!* 
      I the garbage-bin outside put never
      'Me put the garbage out? Never!'

All of this indicates that there are simple triggers for object-verb order and that children do not need to rely on complex triggers with subordinate clauses to learn underlying order. Not only is it possible that children learn object-verb order from simple PLD but there are good reasons to believe that it must be this way and that Dutch and German children actually determine the underlying verb-final nature of their grammars on the basis of simple, degree-0 structures and not through learning from embedded structures.
In an influential early study Clahsen & Smolka (1986) showed that German children acquire word order in four distinct stages. Their results have been refined somewhat but their core findings have remained secure. At the earliest relevant stage verbs occur in an initial position and in a VP-final position, with a statistical preference for final position. That includes many expressions that do not occur in adult German. Children identify sentence-final position as a possible position for verbs, including finite verbs, although they are almost never heard in this position in matrix clauses uttered by adults.

At the next stage verbal elements with separable particles occur consistently in final position, again not reflecting adult German.

At the third stage there is an explosive increase in the frequency of verb-second structures, 20–40% in stages 1 and 2 and 90% at stage 3, and all children make the change within one month. Children have learned that this is a verb-second language and finite verbs, and only finite verbs, occur in first or second position, now reflecting what is heard from adult German sources.

Crucially, at the fourth stage subordinate clauses are produced and they consistently show verbs, including finite verbs, in final position, apparently with no learning specific to embedded clauses, contrary to what Roeper and Weissenborn would expect; the relevant learning seems to be complete before children begin using embedded clauses.

Stage 1 (25–29 months): All verbal elements (including verbal complexes) occur in first/second and final position, with a preference for final position.

Stage 2 (31–33 months): Verbal elements with particles occur regularly in final position; other finite verbs occur in both first/second and final positions.

Stage 3 (36–39 months): All and only finite verbs occur in first/second position; verbal complexes with finite and non-finite parts appear in discontinuous positions.

Stage 4 (41–42 months): As soon as embedded sentences are produced, their finite verbs are in final position.

Furthermore, saying that underlying verb order in object-verb, verb-second languages is learned from structurally simple, degree-0 PLD explains two other phenomena that have puzzled investigators.

First, early English was a German-like object-verb, verb-second language and changed to become subject-verb-object. The object-verb to verb-object change affected matrix domains before embedded and it affected embedded domains catastrophically in the 13th century (Canale 1978; Bean 1983). This would be very difficult to understand.
stand if children were learning from subordinate clauses and exactly what one would expect if all learning is based on simple, degree-0 PLD. There were a number of gradual changes in simple structures affecting separable particles and main clause instances of object-verb order, leading to a slow decrease in the frequency of matrix clause object-verb order. In a verb-second language, subject-verb-object is typically the most common order in matrix clauses, as in modern Dutch and German. If children are degree-0 learners, one would expect that changes in matrix clauses might lead to a new parameter setting, which would be manifested by object-verb order in embedded clauses.

Second, Kouwenberg (1992) showed that the Guyanese creole Berbice Dutch emerged from two languages that are object-verb and verb-second, Dutch and the Kwa language Eastern Ijo. In both source languages subordinate clauses are uniformly object-verb and matrix clauses are verb-second. Nonetheless the new creole is neither verb-second nor object-verb but straightforwardly subject-verb-object. This can be understood if children’s grammars are triggered by simple, degree-0 PLD and particularly if the properties of verb syntax are acquired, as we indicated in discussion of Dutch and German word order, by attending to PLD from matrix Domains and using indirect indicators like particles and negation markers to determine the underlying position of the verb. If the first speakers of Berbice Dutch did not have robust evidence about the distribution of separable particles or if negative markers were not retained in their original position, marking the original position of the verb, then there would not be adequate PLD to trigger the object-verb order. Negation, for example, works differently in Dutch and Ijo. In Dutch the negative occurs to the right of an object DP, marking the position from which the verb moves (45), but in Ijo the negative is adjoined to the verb and moves with it, as in (50).

(50)  á nimi-γá,  
I know-not

Ijo provided the negative marker for the creole, *kane*, although it is a free-standing morpheme in Berbice Dutch and not a clitic. Because Ijo provided the basis for negation patterns, one of the Dutch indicators of underlying object-verb order was obscured. Minor shifts in some patterns could trigger very different I-languages. What constitutes one piece of indirect evidence for one of the languages might be obscured if the other language is dominant with respect to that construction type, as we saw with negation. Consequently, one can understand how a creole language might emerge with properties quite different from the two source languages, if one takes the relevant data

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2. For further details of this analysis, see Lightfoot (1999). For an attempt to model the effects of a degree-0 approach to language acquisition on language change, see Pearl & Weinberg (2007).
for language acquisition as structurally limited, recognizing that some of the simple, degree-0 data might be analyzed differently by children as a result of the contact situation and that subject-verb-order is by far the most common order in matrix clauses of verb-second, object-verb languages.

7. Discrepancies

Under the degree-0 learnability perspective, the problem of matrix/subordinate domain discrepancies is now re-formulated: if all operations are learned only from unembedded binding Domains, then the explanatory challenge is to show why certain operations do not occur in embedded domains.

The Penthouse Principle is reformulated: everything happens upstairs but some things do not happen downstairs, and the reason is that the syntactic enabling conditions are not met and those enabling conditions may be language-specific.

One can see the matter clearly through the verb-second phenomenon discussed earlier. Verb-second structures arise in Dutch when a verb moves first to I and then the I element moves to C, taking the verb along with it, and when a phrasal element moves to the Specifier of the CP (51). This is a main-clause phenomenon and one does not find comparable structures in embedded clauses, because the head of CP is already filled by *dat* in (52) (den Besten 1983). Similarly in English (53, 54), where *will* may not move to C if it is already filled by *whether*, etc. There is no empty C to accommodate a moved verb and so the syntactic conditions for verb movement are not met.

(51) $\text{CP[Spec}_I \text{Jan c}\_\text{bezoekt IP[Jan Amsterdam bezoekt]]}$

John visits John Amsterdam visits

'John visits Amsterdam.'

(52) $\text{Ik denk CP[dat IP[Jan Amsterdam bezoekt]]}$

I think that John Amsterdam visits

'I think that John visits Amsterdam.'

(53) Will John do it?

(54) I wonder CP[whether IP[John will do it]]

Modern Greek, however, has subject-verb-object order with V-to-C movement, which is generally optional (55, 56) but obligatory if there is a wh-word (57).

(55) $\text{Enas neos andras eklise tin porta.}$

'A young man closed the door.'

(56) $\text{Eklise enas neos andras eklise tin porta}$

closed a young man the door

'A young man closed the door.'
Furthermore, unlike in Dutch, this movement takes place in embedded clauses, where the head of CP is otherwise empty (58); if C may be empty, then a verb is free to move to it. In addition and also unlike Dutch, of course, the copy of a wh-item in Spec of CP also triggers V-to-C movement, as in (59), even if the head of CP is occupied by oti. In addition, verb movement also takes place in a relative clause that is introduced by the invariant element pou (60).

8. Conclusion

I have sought to show that there are two ways, in principle, to explain matrix/embedded domain discrepancies: through principles of UG or principles of language acquisition. The UG approaches of Emonds and Ross, keying discrepancies to the form of transformations, were not successful and the degree-0 approach to language acquisition seems to have explanatory force and can account for matrix/subordinate domain discrepancies in an appropriate way. That, of course, is not to say that no UG approach will succeed in explaining the discrepancies; clearly UG plays a critical role but it seems that we need something more.

Under the cartographic approach of several papers in this volume, a third approach may be possible, making different explanations available. It may be that
some functional categories occur only in matrix Domains, perhaps in the Force phrase of the left periphery (Haegeman 2006), because they are linked to some kind of performativ verb analysis. In this case, the matrix/subordinate domain discrepancy may be explained through such functional factors.3

However, postulating that some functional categories occur only in matrix Domains explains why some phenomena cluster in the way they do but one wants a deeper explanation and the explanation may be based in the universal properties of the language system or perhaps in an analysis of how grammars are attained or in what gets learned, or, in principle, in a functional account that remains to be elucidated, or, of course, some combination of such factors.

References


3. For critical discussion see Bentzen (2010).


Parenthetical main clauses – or not?

On appositives and quasi-relatives

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Syntactic and semantic characteristics canonically associated with main clauses do not always go together. This paper discusses two puzzling construction types from this perspective: appositive relative clauses (ARCs) and quasi-relatives. I argue that ARCs and appositions are related, and that relativization as such and parenthesis are independent effects. Specifically, an analysis of attributive construal as restrictive relativization of an abstract specific indefinite head explains the syntactically subordinated status of ARCs; on the other hand, the semantic main clause effects attested in ARCs are due to their construal as parenthetical specifications of the anchor, comparable to identificational appositions. Like ARCs, quasi-relatives seem to involve an E-type link with the anchor, but they lack a relative operator, and qualify as main clauses that are either coordinated to the host at the sentence level or inserted as regular parentheticals.

1. Introduction

What have been referred to as main clause or root phenomena (dating back to seminal work by Emonds 1970; Hooper & Thompson 1973; Green 1976, and others) are not a coherent set of characteristics. Consequently, it does not come as a surprise that they can be found in various contexts. This chapter discusses some of these characteristics and contexts, and in particular the effect of parenthesis. The incentive for this study is a well-known puzzle, illustrated in Dutch in (1):

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1. Thanks to the audience of the GIST 2 conference on main clause phenomena (Gent, October 1, 2010), and especially to Lobke Aelbrecht, Liliane Haegeman, Rachel Nye, the anonymous reviewers, and Dennis Ott. This work was conducted as part of the research project Incomplete Parenthesis, financially supported by the European Research Council.
The appositive (i.e., non-restrictive) relative clause acts like a main clause in that it contains a speaker-oriented, discourse-regulating adverb *overigens* 'by the way', among other things. At the same time, it is formally a subordinate clause because it is verb final, whereas regular main clauses have verb second (V2) in Dutch. This immediately shows that semantic and syntactic criteria for main clause status may contradict each other (see also the overview in Heycock 2006). Therefore, these are independent of each other at least to some extent, even though one might expect *a priori* that they would go along.

After some initial remarks in Section 2, Section 3 discusses the puzzle concerning appositive relative clauses from the perspective of a more general theory on parenthesis. Parentheses can be seen as more or less autonomous parts of a larger sentence or utterance; they are semantically independent. What is surprising then, given their full clausal status, is syntactic V-final in appositives. Based on earlier work (De Vries 2006), I propose that this is because they are structurally embedded in an abstract DP, thereby generalizing over appositions and appositive relative clauses (see also Cardoso & De Vries 2010). Section 4, then, shows that there are nevertheless quasi-relative constructions, both restrictive and appositive, that do display V2 (building on Gärtner 2001 & Zwart 2005). Section 5 is the conclusion.

2. Some preliminary remarks

What is a main clause? In most cases, we have a clear intuition about it. Normally, it is the highest clause, which involves the structural root. However, the question is not always trivial. For instance, if we coordinate two clauses, we get \([\text{CoP} \ CP_1 [\text{CoCP}_2]]\), presupposing a common analysis for coordination. Here, the second clause is structurally embedded in a way, but it is not a subordinate clause. In a comparable hierarchical configuration with a noun as the head, the clause does count as subordinate, e.g. *the claim* \([\text{CP that...}]\). Also, a clause within a clause is a subordinate clause: *He said* \([\text{CP that ...}]\). But what about parentheticals, many of which are clearly main clauses? An example is *John said – [CP Who am I to contradict him?] – that the earth is flat.* Perhaps non-selectedness is a criterion. But then again, we have adverbial clauses, which are subordinate but not selected for. Linear order is also irrelevant; for
one, sentences can start with a subordinate clause, e.g. a subject clause or a preposed adverbial clause. Finally, the pragmatic notion of ‘assertion’ is not really helpful in clarifying the issue. For instance, in response to the question *What did you say?* the answer *I said that John bought a new car* contains an assertion that is expressed in a subordinate clause.

Thus, rather than trying to find the ideal definition of main clauses, let us consider some of the characteristics that are considered prototypical. Roughly, there seem to be three groups, the structural ones, the ones that have a primary semantic or pragmatic aspect to it, and the prosodic ones:

(2) **Typical (potential) characteristics of main clauses**

I  structural and morphological criteria (language-dependent)
   – verb second
   – fronting
   – inversion
   – left dislocation

II  semantic/pragmatic criteria
   – speaker orientation
   – ‘high’ adverbs or adverbial phrases
   – illocutionary force, speech act
   – scopal independence

III prosodic criteria
   – separate intonational phrase/phonological disintegration
   – independent pitch accent

Some of these are virtually obligatory or predetermined (e.g. speaker orientation, or V2 in Dutch), others merely reflect a potential: for instance, the presence of a high adverb is an indication for main clause status, but the absence does not necessarily imply anything.

Needless to say, a semantic criterion may very well be related to certain structural properties. Scope is probably related to c-command, there may be structural positions for certain adverbs, etc. All of this involves theoretical assumptions. What can be directly detected, however, is the semantic characteristic at issue; therefore this is the primary criterion in these cases. Reversely, syntactic operations can obviously have a semantic or pragmatic effect. Nevertheless, fronting, etc. are directly reflected in the word order or another formal aspect of the clause, and as such easily detectable; hence their categorization in group I.

An interesting topic of discussion are so-called embedded root phenomena, attested in various ways in various languages, for instance embedded V2 (see below), or peripheral adverbial clauses (see for instance the papers by Endo, Frey, Haegeman, Laskova, and Tomaszewicz in this volume). From a syntactic perspective, there are
a number of possible approaches. The first is that the clause under consideration is not regularly embedded but attached to the matrix at some higher level. The extreme case would then involve adjunction or coordination at the sentence level. The second possibility, which can also be combined with the first, is that the clause involves additional levels of projection that facilitate root phenomena. The third possibility is that the relevant clause only apparently involves hypotaxis, but rather constitutes a parenthetical.

I consider it likely that all or at least several of these possibilities are real. This implies that there is no unified approach to root phenomena. As is now well-known, different construction types across languages and registers display different behavior, which can then be attributed to diverse analyses. Moreover, it is hard to see from a theoretical perspective how the various structural options can be categorically blocked from the generative language system without resorting to otherwise undesirable rules or constraints.

As a concrete example, consider embedded V2 in German and Frisian complement clauses (for discussion and references, see also Reis 1997; De Haan 2001; Heycock 2006 & Franco this volume). Both languages are like Dutch in that they normally have V2 in main clauses and V-final in embedded clauses. In addition, embedded V2 is possible in restricted contexts, mainly involving bridge verbs. In these cases the complementizer cannot surface for most German speakers (thus, V2 and C are in complementary distribution), but Frisian allows for V2 below a complementizer as well in some cases. It can and has been argued that these construction types are qualitatively different from ‘integrated’ embedded V2 constructions. Consider, for instance, the possibility of binding a variable in the complement clause by a quantifier in the matrix, which is fine in German; see (3). This suggests low-level embedding. By contrast, the impossibility of precisely this in the Frisian example in (4a) implies that the alleged complement clause takes high scope, and is probably attached at a higher level. (Moreover, the retention of the complementizer in combination with V2 points to an additional clausal projection level below CP.) Thanks to Dennis Ott and Ger de Haan for their judgments.

(3)  
\[ \text{Jeder}_i \text{ hat gesagt, er}_i \text{ wüsste es nicht.} \]  
Everyone\(i\) has said\(i\) he\(i\) knew it not  
‘Everyone\(i\) said that he\(i\) didn’t know it.’

(4)  
a.  
\[ \text{*Eltsenien}_i \text{ hie sein dat hy}_i \text{ wist it net.} \]  
everyone\(i\) had said\(i\) that he\(i\) knew it not  
‘Everyone\(i\) said that he\(i\) didn’t know it.’

b.  
\[ \text{Eltsenien}_i \text{ hie sein dat hy}_k \text{ wist it net.} \]

c.  
\[ \text{Eltsenien}_i \text{ hie sein dat hy}_j \text{ it net \textbf{wist}.} \]

d.  
\[ \text{Eltsenien}_i \text{ hie sein hy}_i \text{ wist it net.} \]
Just for comparison, the examples in (4b–d) show that an unbound reading is fine, that binding is acceptable in a regular subordinate clause with V-final, and that the bound reading is acceptable with complementizer-less embedded V2, as in German, provided that there is an integrated intonational pattern, which does not seem to be available in (4a).

In the next section, I return to appositive relative clauses, and show to which extent they meet the criteria in (2).

3. Appositive constructions

3.1 The Janus-faced behavior of appositive relative clauses

The Dutch data below show that appositive relative clauses (ARCs) behave like restrictive relative clauses – which are undoubtedly subordinate – with respect to the structural criteria in (2.I); on the other hand, they behave like main clauses according to the semantic/pragmatic criteria in (2.II).

The examples in (5) illustrate the fact that both restrictive (5c) and appositive (5d) relative clauses, like complement clauses (5b), are obligatorily V-final, contrary to the situation in main clauses (5a), where the finite verb is moved to the second position.

(5) a. Joop (heeft) vandaag een huis (*heeft) gekocht.
    Joop has today a house has bought
    ‘Joop bought a house today.’

b. Ik hoorde dat Joop (*heeft) vandaag een huis
    I heard that Joop has today a house
    (heeft) gekocht.
    has bought
    ‘I heard that Joop bought a house today.’

c. Ik groette de man die (*heeft) vandaag een huis
    I greeted the man who has today a house
    (heeft) gekocht.
    has bought
    ‘I greeted the man that bought a house today.’

d. Ik groette Joop, die (*heeft) vandaag een huis
    I greeted Joop who has today a house
    (heeft) gekocht.
    has bought
    ‘I greeted Joop, who bought a house today.’
Fronting of an object or in fact any other constituent to the left periphery preceding the subject, which is possible in main clauses, where it triggers inversion (compare (6a) to (6a’)), is excluded in complement clauses (6b), and restrictive (6c) and appositive (6d) relative clauses:

(6)  a. Een boek heb jij de man gegeven.
     a book have you the man given
     ‘It is a book that you gave the man.’

     a’ Jij hebt de man een boek gegeven.
     you have the man a book given
     ‘You gave the man a book.’

b. Ik hoorde (*een boek) dat (*een boek) jij de man
     I heard a book that a book you the man
     (een boek) had gegeven.
     a book had given
     ‘I heard that you gave the man a book.’

c. Ik sprak de man (*een boek) die (*een boek)
     I spoke.to the man a book who a book
     jij (een boek) had gegeven.
     you a book had given
     ‘I spoke to the man who you had given a book.’

d. Ik sprak Joop, (*een boek) die (*een boek) jij
     I spoke.to Joop, a book who a book you
     (een boek) had gegeven.
     a book had given
     ‘I spoke to Joop, who you had given a book.’

Left dislocation, whether contrastive or hanging topic, is generally not allowed in verb final clauses;2 (7) illustrates this for ARCs only:

2. Nevertheless, an anonymous reviewer reports that left dislocation in a subordinate V-final clause under a bridge verb in German is more or less acceptable (that is, for some speakers, since my own informants rejected the sentence):

(i)  (?) Ich denke, unseren Chef, dass den viele bewundern.
     I think out:ACC boss that dem:ACC many admire
     ‘I think that many people admire our boss.’

Remarkably, the dislocated phrase in (i) precedes the complementizer, and the resumptive demonstrative pronoun is in the middle field following it.
Parenthetical main clauses – or not?

Thus, it is evident that ARCs are internally structured like subordinate clauses in all respects.

We already saw that ARCs may contain high adverbs. They are speaker-oriented. This becomes particularly clear in examples such as (8), where the speaker’s belief contradicts the subject’s belief:

(8) Joop thinks that Jaap, who is actually a millionaire, is very poor.

In a restrictive construction, this would be incoherent or at least involve creative thinking:

(9) (#) Joop thinks that someone who is a millionaire is very poor.

Furthermore, ARCs are usually simple declarative assertions. Interestingly, it is also possible to construe examples in which they express an independent illocutionary force. I illustrate this in Dutch:

(10) Joop, die toch zeer rijk is, nietwaar?, gaat een Ferrari kopen.

‘Joop, who is very rich, isn’t he?, is going to buy a Ferrari.’

(11) Joop, die nu zijn kamer gaat opruimen!, komt straks buiten spelen.

‘Joop, who is now going to clean his room!, will come play outside later.’

Sentence (11), for instance, might be uttered by little Joop’s mother, talking to his friend at the door. Indirectly, she is giving an order to Joop. Note that such examples underline the need to distinguish between formal syntactic clause type and illocutionary force, which is essentially pragmatic.
The following sentence shows that even an explicit speech act is possible, for instance in a contract:

(12) De eigenaar zal de sleutel overhandigen aan ondergetekende, the owner will the key hand over to undersigned, 
die hierbij de huur van het huis aanvaardt. who hereby the rent of the house accepts
‘The owner will hand over the key to the undersigned, who hereby accepts the rent of the house.’

With restrictive (relative) clauses, meaning aspects such as in the above examples can never be obtained.

Last but not least, (13) illustrates that an appositive relative clause is not in the scope of elements higher up in the matrix. Therefore, a variable cannot get a bound reading (13b), contrary to the situation in restrictives (13a):

(13) a. [Geen enkele klimmer] sprak over de berg no single climber spoke about the mountain
die hij vorige maand bedwongen had. which he last month conquered had
‘[No single climber] spoke about the mountain he conquered last month.’

b. [Geen enkele klimmer], sprak over de K2, die hij vorige maand bedwongen had.
‘[No single climber] spoke about the K2, which he conquered last month.’

In short, this overview confirmed the conception that ARCs are internally structured as subordinate clauses (in particular, restrictive relative clauses), but are semantically/pragmatically comparable to main clauses. The next two subsections are an attempt to explain this.

3.2 On parenthesis

ARCs are a particular kind of parenthesis – more specifically, they are closely related to (non-restrictive) appositions, as we will see in some more detail below. Parentheses are generally considered more or less independent additions to the sentence. They interact with the host clause pragmatically, but not obviously in any syntactic or semantic way. Furthermore, they add information on a level of communication that is secondary with respect to the ‘at issue’ context, if I may borrow a term from Potts (2005). There are many different types of parentheses (see Dehé & Kavalova 2007 for an overview), but at least this characteristic is what they all have in common, it seems to me.
Parentheses of various kinds have been described as structural ‘orphans’ (Haegeman 1988; Peterson 1999; Burton-Roberts 2006), ‘independent lambda terms’ (Potts 2005), as directly attached to the root (Emonds 1973; McCawley 1982), or otherwise non-embedded (Espinal 1991), to state a few proposals. One would expect full parentheticals to behave as main clauses, then. That this is indeed the case is shown in (14) in Dutch.

(14) Joop is gisteren – het verbaast me trouwens niets – gezakt
    Joop is yesterday it surprises me by the way nothing failed
    voor het tentamen.
    for the exam

    ‘Joop has – it doesn’t surprise me at all – failed the examination yesterday.’

The intervening clause is structurally V2, it contains the high adverb trouwens ‘by the way’, and is clearly speaker-oriented. Furthermore, parentheticals are strong islands for both movement and scope (see also De Vries 2007). The example in (15b) shows that a pronoun cannot get a variable reading bound from outside the parenthetical, contrary to the situation in a regular embedded clause (15a).

(15) a. [Niemand van ons]_i zei dat hij miljonair was.
    nobody of us said that he millionaire was
    ‘[Nobody of us] i said that he was a millionaire.’

   b. [Niemand van ons]_i, zei hij_k/\ri , was miljonair.
    nobody of us said he was millionaire
    ‘[Nobody of us] i was a millionaire, he_k/\ri said.’

Similarly, a parenthetical boundary can shield off a potential Principle C effect; compare (16b) to the (16a), where Joop is regularly c-commanded by the first subject pronoun:

(16) a. Hij_k/\ri zei dat Joop_i zijn hoed zou opeten als hij
    he said that Joop his hat would up.eat if he
    ongelijk had.
    wrong had
    ‘He_k/\ri said that Joop_i would eat his hat if he would be wrong.’

3. I am abstracting away from the fact that under certain discourse conditions (‘modal subordination’, cf. Roberts 2006) there can be scopal effects even between subsequent main sentences, i.e., across discourse, which might therefore also affect parentheses – though probably not in any particular way; see Heringa (2011) for some discussion concerning appositions.
In short, parentheticals are structurally and semantically comparable to main clauses. Nevertheless, they are linearly integrated with the host clause (also note that appositive constructions form a constituent with the anchor/antecedent), and they have a different information-structural status, presenting side-information. This, too, is paradoxical.

It seems a priori clear that a pure orphanage approach to parenthesis explains the independency effects illustrated in (14) through (16), but does not provide a solution to the paradox just mentioned. Interestingly, it is possible to insert parentheses within each other in a recursive fashion. An example involving multiple layers is (17):

(17) Yesterday, Joop asked Anna – and I might add that she, who in fact loves Jaap (also a nice guy, as you will agree), didn’t see this coming – to marry him, the poor fellow.

What is necessary, therefore, is a special device to relate clauses (or phrases) to a host projection in a way that turns the additional material into a parenthesis relatively to its context, without creating subordination effects. Crucially, it is the connection between the matrix and the parenthetical that is special; parenthesis is no inherent property of the relevant clauses or phrases themselves. Heringa (2011) and previously Potts (2005) and Huddleston and Pullum (2002: 1351ff) refer to such a special relationship as ‘supplementation’; see also Ackema & Neeleman (2004), among others, for discussion. It is fair to state that the notion of parenthetical insertion, in whatever way it is worked out, inevitably involves a major stipulation at some point in the grammatical system. Nevertheless, it seems intuitively plausible that parenthetical construal in some way involves a primitive of the grammar.

In previous work, I implemented these general ideas along the following lines. Every parenthesis is the syntactic complement of a functional parenthetical head Par. Being a dependent of Par, and hence embedded inside a ParP, the parenthesis can be recognized as such by other modules of the grammar. As is argued nicely by Kluck (2011), Par – being a functional lexical item – can then have a selection effect on its complement, in particular [+SD] (speaker deixis) for clausal parentheticals, which accounts for several main clause effects. Furthermore, the projection directly containing Par and the parenthetical XP needs to act like a syntactic and semantic barrier: movement, c-command and standard semantic composition across it are
excluded. Technically, this might be achieved by defining an operation ‘parenthetical Merge’ – whose application is triggered by Par – that creates constituency without the regular dominance relation between the more inclusive object and the original objects. The alternative relationship may be called par-inclusion (or supplementation). If c-command remains to be defined over dominance (note that it can be viewed as a direct function of regular merge: an object c-commands its ‘merge-mate’ and everything transitively dominated by it), the desired scope effects follow, since par-Merge (by definition) breaks the line of dominance. For reasons of space, I cannot go into details here, but see especially De Vries (to appear) for a more formal characterization.

In the case of a parenthetical, the ParP can be adjoined to some projection of the host clause. Syntactic adjunction warrants the positional freedom of parentheticals. In practice, this freedom may be constrained by pragmatic and prosodic considerations, but not by purely grammatical factors, it seems (see Schelfhout, Coppen & Oostdijk 2003, and Stoltenburg 2003 for frequency effects concerning potential parenthetical ‘niches’ in spoken Dutch and German, respectively). The situation is somewhat different if a parenthesis is anchored to a particular constituent of the host, as in appositional constructions, for instance. In such cases, Par can be considered bivalent. The anchor is then in the specifier position of the ParP: \([ParP \text{XP}_{\text{anchor}} [Par \text{YP}_{\text{parenthesis}}]]\). A concrete example is my best friend, Joop. This configuration is similar to coordination: \([\text{CoP} \text{XP} [\text{CoYP}]]\), where XP functions as the anchor for a second conjunct YP, and where the relationship between the two conjuncts is mediated – or rather, determined – by a functional head; see also Koster (2000) and Heringa (2011, to appear). Observe that both in coordinate and appositive constructions the functional projection takes over the categorial distribution of the anchor, so Par and Co are underspecified in this respect. On a final note, let me point out another similarity. In some cases, it appears that Par can be spelled out as a regular coordinator. Certain parentheticals can be introduced by and or or (see (17), for example), and certain appositional constructions contain a coordinator, as in The Netherlands, or Holland.

4. The bivalent use of ParP is inspired by Koster’s work on ‘parallel construal’ (specifying coordination). A recent continuation and discussion of his work on extraposition in these terms is De Vries (2011); see also Kluck & De Vries (to appear). Note, however, that Koster himself did not clearly distinguish between appositive and non-appositive (or restrictive) construction types. In my view, we need both specifying coordination, and an appositive variant thereof, which involves not only a coordination-like configuration, but also something to the effect of parenthetical Merge, as mentioned in the main text. In this section on ARCs, only the parenthetical version of parallel construal is of interest.
3.3 Appositives as embedded parentheticals

Let us now return to appositive relative clauses. In Section 3.1 we saw that they behave semantically as main clauses. This would follow if they are analyzed as parentheticals. By definition, the complement of the linking head Par starts a new grammatical domain, which is interpreted as an independent lambda term, as outside the scope of the host clause, etc. By default, parentheticals are syntactic main clauses as well, unless there is an internal reason for an embedded pattern. Is there such a reason in appositive relative clauses? A comparison with appositions suggests that indeed there is, depending on certain theoretical assumptions.

At first sight, ARCs are very similar to appositions. In fact, there is no obvious difference in meaning between Joop, a nice guy on the one hand, and Joop, who is a nice guy on the other hand. It is tempting to think that either an ARC is an elaborate apposition (De Vries 2006), or an apposition is a reduced ARC (a familiar intuition, which goes back to at least Smith 1964). I will argue that in a way both are true at the same time. This paradoxical view requires some elaboration; it is based on the distinction between attributive and identificational contrual. First, consider the approximate overall structure for non-restrictive nominal appositions in (18a), where the anchor determines the position of ParP as a whole within the host clause. If we were to generalize this to ARCs, the actual relative clause would have to be embedded in an abstract DP; see (18b):

\[\text{(18a)}\]
\[\text{[host\_clause ... [ParP [DP anchor] [ Par [DP apposition]]] ...]}\]
\[\text{(18b)}\]
\[\text{[host\_clause ... [ParP [DP antecedent] [ Par [DP D [CP relative clause]]]]] ...}\]

The anchor/antecedent is grammatically and semantically a true part of the host clause, and the apposition/ARC, being the complement of Par, is interpreted as a parenthetical specification of this phrase. On this view, the relative construction Joop, who is a nice guy is interpreted roughly as Joop: someone (a certain person) who is a nice guy. Note that the abstract D in (18b) must be associated with a specific indefinite semantics. Thus, Joop in this case is enriched with a parenthetical alternative description, namely a certain person of whom a particular property is highlighted.

There are important conceptual advantages to this hypothesis, I believe, even apart from the generalization over various appositive construction types (see Cardoso & De Vries 2010 for a detailed discussion). First of all, the analysis tears apart the two meaning components involved, namely the relativization part and the appositive part. The former is identical to restrictive relativization, the latter is equated with the much

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5. There is no uniqueness involved, so a paraphrase like ‘i.e., (s)he who’ in de Vries (2006:248) is a bit unfortunate. Furthermore, a non-specific reading is excluded because then no E-type link with the antecedent could be established, as non-specific elements are non-referential.
more general parenthetical construal at the constituent level. As such, then, there is no theoretically separate ‘appositive relative construction’ – though of course acceptable as a descriptive label –, and (18b) is in fact a restrictive relative construction in apposition to an antecedent; in particular, what is involved here is a semi-free relative, i.e., a restrictive relative clause with a pronominal or ‘light’ head. As such, then, there is no theoretically separate ‘appositive relative construction’ – though of course acceptable as a descriptive label –, and (18b) is in fact a restrictive relative construction in apposition to an antecedent; in particular, what is involved here is a semi-free relative, i.e., a restrictive relative clause with a pronominal or ‘light’ head.6 A related theoretical benefit is that relative pronouns are now always interpreted in the same way, namely as bound operators.

Not all appositions are alike, however. There is a crucial distinction between the attributive (predicative) and the identifying (specificational) type.8 The example *Joop, a nice guy* is clearly attributive, whereas the reverse – *a nice guy, Joop* – is identifying. Another example of the last type is *Joop’s age, sixteen*, where *sixteen* is not predicated of *Joop’s age*, but provides the value that identifies it. Now consider (18a), where appositions are analyzed as parenthetical specifications of the anchor. For identifying appositions this makes sense. In terms of semantic types, we are comparing \( \langle e \rangle \) with \( \langle e, t \rangle \). Attributive appositions, however, are interpreted as predicates, and hence of type \( \langle e, t \rangle \). It seems simply wrong to conjoin the \( \langle e \rangle \)-typed anchor with an \( \langle e, t \rangle \) attribute. Interestingly, the solution almost presents itself. For this, we have to look again at the ARC construction in (18b). Notably, the attribution is entirely within the parenthetical part, *in casu* the relative clause is predicated of the relative head abstracted over. At a higher level, the entire relativized DP is parenthetically related to the overt anchor/antecedent. Since the complex parenthetical DP is specific (and hence referential), as was discussed above, this relationship is identificational. One could say that the relative clause is type-shifted by syntactic means. If we would apply the same method to attributive appositions, the problem disappears. Thus, such appositions are indeed ‘reduced relatives’, in the sense that they imply a plain predicative relative construction, with an abstract relative operator and an empty copula or small clause configuration.

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6. Though nothing crucial depends on it for the main points here, I assume that the external determiner becomes pronominal only in combination with a raised head noun (compare English *some-one*).

7. Interestingly, there are certain cases in which D is necessarily overt. For instance, in French ARCs with a non-nominal antecedent; see (i), taken from Canac-Marquis and Tremblay (1998:133), glosses mine.

   (i) Marcelle est arrivée en retard, ce qu’elle ne fait jamais.
   Marcelle is arrived late, dem that-she neg does never 'Marcelle arrived late, (something) which she never does.'

8. Notice that definite descriptions can be ambiguous between a referential reading and a type reading (an ‘individual concept’), depending on the context. Similarly, proper names, though canonically referential, are often used predicatively (as a label), e.g. in *May I introduce you to my boss, John*. 
If the proposed analysis is correct, we would predict that attributive appositions can be paraphrased with a relative clause, but identifying ones cannot. This is indeed correct; see (19):

(19)  
  a. Joop, (who is) a nice guy/my neighbor/sixteen years old \[attributive\]  
  b. a nice guy, (*who is) Joop \[identifying\]  
  b’. Joop’s age, (*which is) sixteen

Of course, full ARCs contain a lexical verb and hence can internally express any relationship between the arguments; therefore, only copular ARCs can be reduced to an attributive apposition.

Furthermore, as has been argued independently, attributive appositions have an independent propositional value (Potts 2005, among others), and even involve full syntactic clauses (O’Connor 2008; Heringa 2011). An important reason is that they can contain adverbs and complementizers of various types. Some examples are in (20):

(20)  
  a. Joop, then/once a student, is now a full professor of linguistics.  
  b. Joop, whether a nice guy or not, will be asked to leave to building.  
  c. Joop, frankly/unfortunately no Einstein, failed his exams.

As expected, this is normally not the case in identifying appositions:

(21)  
  a. *Joop’s age, then/once/unfortunately sixteen  
  b. *a nice guy, whether Joop or not

To sum up, it seems not unreasonable to assume that all attributive appositions involve a predicative (copular) relative construction. In turn, these and other appositive relative clauses can be analyzed as semi-free relatives (i.e., nominalized clauses) in apposition to the visible external antecedent/anchor. And all appositive constructions represent a parenthetical specificational/identificational relationship between two constituents by means of a bivalent ParP.9

Finally, let us come back to the puzzle that we started out with: why are ARCs syntactically subordinate clauses but semantically comparable to main clauses? The answer falls out naturally from the proposed analysis of appositive constructions. Within the parenthetical dimension there is no higher proposition, and hence semantically ARCs have a main status – recall (8) through (13). By contrast, the actual relative clause of an appositive relative construction is embedded within a DP inside the complement of Par, and hence syntactically subordinate (like the situation in any

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9. As is discussed in detail in Cardoso and De Vries (2010), ARCs and regular appositions do not exhaust the possibilities. There are also appositive constructions with an additional internal or external head NP, and overt semi-free appositive constructions. All of these fit the proposed structural analysis quite neatly.
complex noun phrase). Thus, ARCs resist V2, fronting, etc. (shown in (5) through (7)) for the same reasons that restrictive relatives do.\(^ {10} \)

4. Quasi-relatives

In this section, I would like to highlight some aspects of what I shall call quasi-relatives. There is a very limited amount of literature on certain constructions referred to as ‘V2-relatives’ in Dutch and German (essentially, Gärtner 2001; Endriss & Gärtner 2005; Zwart 2005), the most important conclusion of which is that these are syntactically not relative clauses at all. The name is therefore unfortunate. The mentioned authors show that they are coordinated main clauses with a preposed demonstrative that is coreferent with a noun phrase newly introduced in the preceding clause. A possible example in Dutch is (22):

(22) Joop zag een huis [dat was erg mooi].

Joop saw a house dem was very nice

‘Joop saw a (particular) house which was very nice.’

Apparently, the clause between brackets is a relative clause modifying een huis ‘a house’. However, there are a several caveats. First, notice that the relevant clause is V2, whereas normal relative clauses are V-final, as was shown in (5) above. Second, the ‘antecedent’ is obligatorily indefinite – het huis ‘the house’ would be impossible in (22) – provided that there is an integrated intonational pattern making sure that we are not dealing with subsequent main sentences (which would be fine, of course). This pattern, familiar from extraposed modifiers, among other things, is such that the main accents are perceived on huis and mooi (also the semantic foci), the pitch raises on huis, and the final fall of pitch is postponed until the end of the second clause. Thus, we have the following contrasts in (23), with rough indications of accents in capitals and pitch movement/, −, \ (and where RRC stand for restrictive relative clause):

(23) a. Joop zag een /HUIS− dat was erg MOOI\.

[quasi-RRC (V2)]

a.’ *Joop zag het /HUIS− dat was erg MOOI\.

b. Joop zag een /HUIS\. Dat was erg /MOOI\.

[subsequent main sentences (V2)]

b.’ Joop zag het /HUIS\. Dat was erg /MOOI\.

c. Joop zag een, huis dat erg /MOOI\ was.

[regular RRC (V-final)]

c.’ Joop zag het ,huis dat erg /MOOI\ was.

\(^ {10} \) I have left aside a detailed discussion of the left periphery of relative clauses. What may be relevant from the present perspective is that many languages use an overt complementizer in such constructions, even in appositive relative clauses.
Third, in Dutch – but apparently not in German, for reasons that are unclear to me – the quasi-relative can optionally be preceded by *en* ‘and’ in most cases, without any meaning difference. Of course, a subsequent main sentence can also be introduced by *and*, but a regular restrictive relative clause cannot. Compare (24a/b/c) to (23a/b/c), respectively:

(24) a. Joop zag een /HUIS/ en dat was erg MOOI. [quasi-RRC (V2)]
    b. Joop zag een /HUIS/. En dat was erg /MOOI/. [subsequent main sentences (V2)]
    c. *Joop zag een /huis en dat erg /MOOI/ was. [regular RRC (V-final)]

Fourth, the linker in a quasi-relative – *dat* in (22/23a/24a) – is arguably a demonstrative, and not a relative pronoun as in (23c/24c), for instance. In these particular examples, they happen to be homophonous, and it is therefore hard to tell the difference, but that is not always the case. In Dutch, certain *wh*-forms can be used as a relativizer (depending on the antecedent), namely *waar* ‘where’, *wat* ‘what’, and *wie* ‘who’, but these are impossible in quasi-relatives, where the corresponding demonstratives *daar* ‘there’, *dat* ‘that’ [DEM:NTR], and *die* [DEM:NONNTR] must be used, respectively. An illustration is (25):

(25) a. Ik weet een café *waar/daar* je lekkere koffie kunt krijgen.
    I know a café where/there you tasty coffee can get
    ‘I know a café where one can get good coffee.’
    b. Ik weet een café *daar/waar* kun je lekkere koffie krijgen.
    I know a café there/where can you tasty coffee get
    ‘I know a (particular) café where one can get good coffee.’

Fifth, a quasi-relative is always sentence-final. Unlike regular relative clauses, they can never surface in the middle or initial field of the host clause; see (26), for instance. Related to this, it can be shown that a quasi-relative does not form a constituent with the noun phrase it relates to.

(26) a. Joop heeft een vrouw die veel geld *bezit* ontmoet. [RRC]
    Joop has a woman who much money owns met
    ‘Joop met a woman who possesses a lot of money.’
    b. *Joop heeft een vrouw die *bezit* veel geld ontmoet. [quasi-RRC]
    b.’ Joop heeft een vrouw ontmoet *die bezit* veel geld.
    ‘Joop met a (particular) woman who possesses a lot of money.’
For all these reasons, it is likely that a quasi-relative is syntactically a main clause that is coordinated to the host sentence as a whole:

\[(27) \quad [\text{CoP} \left[ \text{host\_clause} \ldots \text{DP}_i \ldots \right] \left[ \text{Co} \left[ \text{quasi\_RC} \text{DEM}_i \ldots \right] \right]]\]

The particular type of coordinate structure at stake represents an asymmetric relationship of specification. Although there is no parenthesis involved, this is reminiscent of the situation in appositive constructions discussed in the previous section.

The analysis in (27) straightforwardly explains the structural and morphological properties of the quasi-relative – but this is only half of the story. What does the semantics of a quasi-relative amount to? At first sight, the pertinent clause acts as a restrictive modifier of the nominal anchor (at a distance). However, unlike the situation for regular restrictive relative clauses, there are restrictions on the type of anchor (23a’) and its environment (see below). The key to the special semantics, I think, is that the ‘antecedent’ DP is to be interpreted as a specific indefinite. Notice that noun phrases introduced in presentative clauses (canonically, \(\text{there} + \text{be} + \text{NP}\)) are normally specific indefinite (unless they are in a modal context, of course): specific because they introduce an element that is to be referentially accessible, and indefinite because they are new in the discourse.

The difference in interpretation between specific and non-specific indefinites is determined by the context. In a negative context, for instance, the existence of the relevant element is denied, hence it cannot be referential, as is shown in (28a). For the exact same reason, a quasi-relative is impossible here; compare (28b) to (22). The problem is that the demonstrative cannot find a possible referent. By contrast, a restrictive relative clause is fine (28c) because a relative operator attributes a property to the relative head \text{below} the referential level of the DP. The picture is completed in (28d), where it is shown that an appositive relative clause does suffer from the problem of non-referentiality; this is consistent with the analysis in the previous sections.

\[(28)\]

a. \textit{Niemand zag een huis. *Het was erg mooi.}  
   ‘Nobody saw a house. *It was very nice.’  
   [subsequent sentences]

b. \textit{*Niemand zag een huis dat was erg mooi.}  
   \textit{[quasi-RRC]}  
   ‘Nobody saw a (particular) house which was very nice.’

c. \textit{Niemand zag een huis dat erg mooi was.}  
   \textit{[restrictive RC]}  
   ‘Nobody saw a house that was very nice.’

d. \textit{*Niemand zag een huis, dat erg mooi was.}  
   \textit{[appositive RC]}  
   ‘Nobody saw a house, which was very nice.’
Similarly, a modal context that excludes a referential reading does not license a quasi-relative (where a regular restrictive would be fine):

(29) *Ik zou wel eens een huis willen zien dat is erg mooi.  
    I would want to see a house which is very nice  
    ‘I would like to see a house sometime that is very nice.’

Furthermore, we would expect the existential quantifier associated with the specific indefinite in quasi-relatives to take high scope, simply because it needs to be referential. This corresponds to an obligatory de re reading, which is indeed what we find.\(^\text{11}\) So in (30a), there is only one and the same house that everyone likes. By contrast, the de dicto reading (normally correlated with low scope for the existential) is available in regular relative clauses (30b). Again, the quasi-RC patterns with ARCs, since these also allow for the de re reading only; see (30c).

(30) a. Iedereen zag een huis dat was erg mooi.  [quasi-RRC]  
    everyone saw a house which was very nice  
    ‘There was a particular house that everyone saw and which was very nice.’

b. Iedereen zag een huis dat erg mooi was.  [RRC]  
    everyone saw a house which very nice was  
    1. ‘For everyone it was the case that (s)he saw a house that was very nice.’  
    2. ‘There was a particular house that was very nice that everyone saw.’

c. Iedereen zag een huis, dat erg mooi was.  [ARC]  
    ‘There was a particular house that everyone saw and which was very nice.’

Similarly, the existential quantifier necessarily outscopes the deontic modal in (31). The quasi-relative therefore disambiguates the first clause, like an appositive relative clause would; by contrast, a regular restrictive relative would allow for two readings.

(31) Joop moet een huis kopen dat is erg duur.  
    Joop has to buy a house which is very expensive  
    ‘Joop has to buy a (particular) house which is very expensive.’

There are related scope effects worth mentioning. Consider (32), where suddenly the quasi-relative patterns with the RRC instead of the ARC. The interpretation in (32a/b) differs from (32c/d). In the last two examples, all the many young people in Groningen

\[11.\] I am glossing over some semantic intricacies concerning specific indefinites that are irrelevant for the present discussion. See Farkas (2006) for a concise discussion and further references.
are students. In the first two examples, it is only stated that many of the young people in Groningen are students. This is a relative statement. In (32a) this is due to the fact that the quantifier \( \text{many } x_{\text{young people}(x)} \) takes scope over the entire complex sentence (in accordance with the de re effect just discussed);\(^{12}\) in (32b) the quantifier \( \text{many} \) takes scope minimally over the combined nominal head plus relative clause.

\[
\text{(32) } \begin{align*}
a. & \quad \text{In Groningen wonen veel jonge mensen die}\quad \text{zijn}\quad \text{student.} \\
& \quad \text{in Groningen live many young people DEM} \\
& \quad \text{are student} \\
& \quad ' \text{Many young people who are students live in Groningen.'} \\
b. & \quad \text{In Groningen wonen veel jonge mensen die student zijn.} \\
& \quad ' \text{Many young people who are students live in Groningen.'} \\
c. & \quad \text{In Groningen wonen veel jonge mensen. Die zijn student.} \\
& \quad ' \text{Many young people live in Groningen. They are students.'} \\
d. & \quad \text{In Groningen wonen veel jonge mensen, die student zijn.} \\
& \quad ' \text{Many young people, who are students, live in Groningen.'}
\end{align*}
\]

Why is this different in ARCs and subsequent sentences? The reason is that scope does not normally extend beyond full sentences and parenthetical boundaries, as discussed in Section 3. Thus, the reference of the quantified phrase is established exclusively within the host clause proper.\(^{13}\)

\(^{12}\) Informally described: there is a particular, relatively large set of young people, of who it is predicated that they live in Groningen, and they are students.

\(^{13}\) It is now evident how to explain the difference in interpretation between the famous pair of examples in (i) and (ii), due to Gärtner (2001).

\[
\text{(i) } \quad \text{Das Blatt hat eine Seite, die ist ganz schwarz.} \\
\quad \text{the sheet has a page DEM is completely black} \\
\quad ' \text{The sheet has a page that is completely black.'} \\
\text{(ii) } \quad \text{( #) Das Blatt hat eine Seite. (und) Die ist ganz schwarz.} \\
\quad \text{'The sheet has a page and that is completely black.'}
\]

In (i), \text{eine Seite 'a/one page'} is specific, and the existential quantifier takes high scope, which includes the second clause (which is structurally part of the complete sentence). In (ii), there are two separate sentences (according to the intonational pattern, not necessary the orthography). Thus, scope extension to the second clause is impossible here, and the first becomes pragmatically odd, since a sheet has two sides per definition. A non-specific reading of the indefinite would solve that, but this reading is unavailable because the demonstrative pronoun in the second sentence requires a referent.
It can hardly be a coincidence that the scope effect just established correlates with the prosodic domains indicated in (23). If there is one extended intonational contour, as in quasi-relatives, the scope of the (generalized) existential quantifier is widened (I will leave aside the noteworthy question what causes what). If there are two contours, as in separate sentences or appositive constructions, this is not the case. Interestingly, it is more generally the case that a specific indefinite semantics has a cataphoric ring to it. The speaker posits a referential variable in the form of an indefinite noun phrase or pronoun, to whose specific interpretation the hearer has to accommodate; this is often facilitated by (complex) postmodifiers, which linearly follow the (pro)nominal head, e.g. I saw someone yesterday with a T-shirt that had “Spylocogist” on the front.

In effect, then, quasi-relatives show behavior that has resemblances with both RRCs and ARCs. Clearly, they are syntactic main clauses, but what about the semantic/pragmatic criteria? These are surprisingly hard to test, but there are some indications that quasi-relatives are indeed speaker-oriented. Consider (33).\footnote{It is also possible to show speaker orientation by means of certain modal particles (see also Coniglio & Zegrean, this volume). A relevant example from German is Hans hat einen Hund, der is aber wohl schon sehr alt [literally, Hans has a dog, dem is but affirmative already very old], meaning roughly ‘Hans has a dog, but I [=the speaker] strongly suspect it’s a very old dog.’}

First note that the sentence concerns a specific book (title). In (33a), the subject Joop may not know that the book is sold out, so this is an addition by the speaker. By contrast, the regular relative in (33b) is interpreted in the scope of the intensional context evoked by the matrix verb zoeken ‘look for’, so the subject is aware of the problem.

\begin{verbatim}
(33) a. Joop zoekt een boek dat is al uitverkocht. [quasi-RRC]
    Joop looks.for a book that is already out.sold
    ‘Joop is looking for a (particular) book which is already sold out.’

b. Joop zoekt een boek dat al uitverkocht is. [RRC]
    ‘Joop is looking for a book that is already sold out.’
\end{verbatim}

Felicitous follow-up sentences could be “So he will never find it” in (33a) and “So he is checking out the antiquarian book trade” in (33b).

Next, I would like to point out that there is another, related construction type that we may call quasi-relative parenthetical or quasi-ARC. An example is (34a), which can be compared to the regular ARC repeated in (34b):
Parenthetical main clauses – or not?

(34) a. Joop – die woont nu overigens in Amsterdam – komt
Joop dem lives now by.the.way in Amsterdam comes
morgen thuis.
tomorrow home
‘Joop, who now lives in Amsterdam, by the way, is coming home tomorrow.’

b. Joop, die nu overigens in Amsterdam woont, komt
Joop who now by.the.way in Amsterdam lives comes
morgen thuis.
tomorrow home
‘Joop, who now lives in Amsterdam, by the way, is coming home tomorrow.’

Quasi-ARCs are parenthetical quasi-relatives. They relate to a constituent of the host, and contain a preposed demonstrative that is coreferential with this expression. They are undoubtedly main clauses: they are V2, have a separate intonational contour, are speaker-oriented, etc. Due to the fact that they are parenthetical, and hence provide information on another level of communication, they behave differently from quasi-RRCs in a number of respects. Most importantly, the anchor does not have to be indefinite, as is evident from (34a), and related to this, if it is indefinite, the existential quantifier does not take scope over the quasi-ARC; thus, (35) would have to mean that all the many young people are students.

(35) Veel jonge mensen – die zijn student – wonen in Groningen.
many young people dem are student live in Groningen
‘Many young people – these are students – live in Groningen.’

If the parenthetical happens to be sentence-final, there would be virtually no difference with a situation involving subsequent sentences, as in (32c), for instance.

In conclusion, there are two construction types, quasi-relatives and quasi-relative parentheticals, that are reminiscent of restrictive and appositive relative clauses, respectively. Despite some similarities, they are actually V2 main clauses with a preposed demonstrative (not a relative pronoun).

5. Conclusion and outlook

Main clause behavior is not a uniform phenomenon, in the sense that syntactic, semantic, and prosodic characteristics canonically associated with main clauses do not always go together. Appositive construction types are particularly interesting in this respect. A familiar puzzle is the fact that appositive relative clauses are structurally subordinate
clauses, but semantically behave like main clauses, as was illustrated in some detail, here. This can be explained if they are analyzed as parentheticals with a somewhat complex internal structure. I argued that ARCs have the overall architecture of identificational appositions. This implies that what seems to be a clause is in fact a semi-free relative construction, and hence, is nominalized. Consequently, relativization implies restrictive construal in all cases, and all relative operators can be analyzed the same. The E-type connection between the appositive and the anchor/antecedent lies in the abstract pronominal head of the relative construction, not in the operator. All appositive constructions alike are parenthetical specifications of an anchor. It is therefore the way a relative construction is inserted in the syntactic context that determines whether it becomes appositive or not; thus, appositive relative clauses are not a separate construction type. Furthermore, I proposed to generalize over attributive appositions and ARCs such that the former are relative clauses with an overt predicate and an abstract clausal structure. This explains the fact that attributive appositions have various properties normally associated with clauses, e.g. the possibility of inserting a high adverb or a complementizer.

Appositives are phrases that are parenthetically related to an anchor at the constituent level. The type of relationship itself is brought about by a specialized functional head (transparently called Par), whose complement is interpreted as a separate syntactic and semantic domain; this is the case for all types of parenthesis. Semantic main clause phenomena can straightforwardly be derived from this property – albeit that the theoretical background concerning the Par projection, discussed elsewhere in more detail, is less trivial. What is directly relevant here is that the analysis of ARCs now makes the right distinction between semantic/pragmatic and syntactic main clause phenomena: semantically, ARCs are the highest proposition in the parenthetical dimension; syntactically, the appositive clause is nominalized, that is, projects a DP, within which the relative clause proper is embedded.

A hallmark of main clauses in Dutch and German is that they are verb second, contrary to subordinate clauses. As expected, both regular restrictive and appositive relative clauses, being embedded, are verb final. Interestingly, there turn out to be quasi-relative constructions that are nevertheless V2. I reviewed the properties of these constructions, and concluded that they are not relative clauses, but coordinated main clauses with a preposed demonstrative, in line with previous literature. I also tried to informally explain their special semantics on the basis of the fact that the anchor receives a specific indefinite interpretation. Furthermore, I showed that there is a second type of quasi-relative, namely the parenthetical variant of it, which has somewhat different properties due to its status as a parenthesis.

So far, I have discussed semantic and syntactic effects, but only alluded to prosodic properties of main clauses. A general question that needs to be addressed is whether prosody correlates with main clause status, and also whether parentheticals
Parenthetical main clauses – or not?

can be detected as such. Current research suggests that there is no straightforward answer. Depending on the position within the host and the length of the parenthesis at hand, there can be prosodic integration effects (Güneş 2012; Dehé 2009). Further puzzles arise concerning instances of so-called sentence amalgamation (Lakoff 1974; Kluck 2011), and, somewhat oppositely, the status of fragments (see also De Cat, this volume). I will leave this for future work. If anything, however, the picture that arises seems to confirm the general conclusion I started out with.

References

Cardoso, Adriana & de Vries, Mark. 2010. Internal and external heads in appositive constructions. Ms, University of Lisbon & University of Groningen.


PART II

The Phenomena
A. PARTICLES AND AGREEMENT MARKERS

Topic particle stranding and the structure of CP*

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This paper aims at arguing for the existence of a projection above ForceP in the CP domain. It examines both syntactic and pragmatic characteristics of topic particle stranding, a previously little-noted phenomenon in Japanese, whereby a topic particle appears in sentence-initial position on its own (i.e., without an overt topic phrase). The main observations include: (i) while topicalization takes place in TopP, topic particle stranding occurs in a projection above ForceP; (ii) this higher projection constitutes the outermost periphery of a sentence and appears only in root clauses; (iii) it hosts elements that grammaticize interpersonal communicative functions of utterances; (iv) pragmatic factors that seem to determine the availability of particle stranding are reducible to structural conditions that commonly apply in other domains of phrase structure.

1. Introduction

Since Rizzi’s (1997) seminal work on split CP structure, it has been assumed that the highest projection of the CP zone is ForceP, which is headed by an element that determines clause type and specifies illocutionary force. However, close examination of elements occupying the left and right periphery of sentences in Japanese reveals that

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there is another functional layer above ForceP. This layer constitutes the outermost periphery of clause structure and encodes the interpersonal communicative function of an utterance.

The purpose of this paper is to verify the presence of this layer by examining a previously little-noted phenomenon in Japanese, which I call topic particle stranding. Section 2 provides an overall description of this phenomenon with particular attention to its similarities with topicalization. Section 3 demonstrates that topic particle stranding has greater affinity with sentence-final particles than topicalization. Section 4 reinforces this observation and shows that the stranded topic particle and sentence-final particles both appear in the same domain above ForceP. Section 5 deals with a syntactic constraint on the distribution of topic particle stranding.

2. Topic particle stranding

In Japanese, the topic of a sentence may be either overtly specified or left unpronounced. In (1Ba) below, the topic NP keetai ‘mobile’ is overtly realized with the topic particle wa. (1Bb) has the same interpretation as (1Ba), suggesting that although the topic is not pronounced, it is implied.1

(1) A: Keetai-wa dono kisyu-ga hayatteru no?
   mobile-top which machine-nom popular Q
   ‘Speaking of mobiles, which machines are popular?’

   Ba: Keetai-wa Sony-no kisyu-ga hayattemasu.
      mobile-top Sony-gen machine-nom popular
      ‘Speaking of mobiles, Sony’s machines are popular.’

   Bb: Ø Sony-no kisyu-ga hayattemasu.
      Sony-gen machine-nom popular

In addition to these options, it is reported that another type of construction (1Bc) has recently come into use in colloquial speech (Yoshida 2004; Arita 2005, 2009).2

1. The following abbreviations are employed throughout the paper: ACC = accusative; COMP = complementizer; COP = copula; DAT = dative; DECL = declarative; EXH = exhortative; GEN = genitive; IMP = imperative; NOM = nominative; PAST = past tense; POLITE = politeness; PRT = particle; Q = question; TOP = topic.

2. Strictly speaking, this is not a newly discovered usage. It was documented by Hattori (1949) in as early as the late 1940’s. However, it was described as extremely rare then (see Hattori 1949:20). As reported by Yoshida (2004) and Arita (2005, 2009), only recently has it begun to be used frequently.
Topic particle stranding and the structure of CP

Bc: Ø-wa  Sony-no  kisyu-ga  hayattemasu.
 Ø-top  Sony-gen  machine-nom  popular

This pattern (call it topic particle stranding; TPS) looks like a hybrid of overt and covert topic sentences in that while the understood topic is unpronounced, the associated particle wa is overtly realized. This stranded particle is pronounced with a slightly prolonged vowel. Prolongation does not take place when it is attached to an overt phrase. In order to reflect this phonetic property, the stranded topic particle will be represented orthographically as wa: hereafter. 3

As a first approximation, TPS may be seen as a type of topicalization. (1Ba), (1Bb), and (1Bc) express the same conventional meaning and hence are interpretatively equivalent. Though the topic NP is not overtly realized in (1Bb, 1Bc), the relevant gaps are both interpreted as being discourse-bound by the contextually salient element keetai ‘mobile’ appearing in (1A).

TPS behaves like standard topicalization even when the topic phrase is a clausal constituent. (2Ba) topicalizes the same CP that appears in (2A). Parallel to the data in (1), (2Bb) is semantically equivalent to (2Ba).

(2)
A: [ CP John-ga mituketa no]-wa  donna musi desu ka?
   J.-nom  found  comp-top  what  insect  cop  q
   ‘What insect did John find?’

B a: [ CP John-ga mituketa no]-wa  tyoo  desu.
   J.-nom  found  comp-top  butterfly  cop
   ‘It is a butterfly that John found.’

Bb: { Ø/Ø-wa: }  tyoo  desu.
    { Ø/Ø-top }  butterfly  cop

Notice that the topic does not have to be syntactically identified with an element in the preceding utterance. (3B) below involves the topicalization of an NP identical with one appearing in the preceding utterance. However, unlike (1Ba), it is not well-formed. A more felicitous reply to (3A) is shown in (4), with a pronominal topic.

3. Particles other than -wa can also be stranded (Hayashi 2001; Sato & Ginsburg 2007).

(i)
A: (Osaka zyanakute)  KOBE-ni  sunderu  no?
   (Osaka rather than)  Kobe-in  live  q
   ‘Do you live in KOBE (rather than in Osaka)?’

B: Ø-NI  sunderu  n  desu.
   Ø-in  live  comp  cop
   ‘It’s in KOBE that I live.’

However, this type of stranding differs from TPS and exhibits behavior characteristic of focused constituents. See Nasu (2011) for fuller discussion of focus-type particle stranding.
The pronoun cannot be interpreted as referring to a specific constituent in (3A). Rather, its referent is indirectly determined by inference from the preceding context. It takes the preceding question as a whole and presents it as the topic of the current utterance. Therefore, the meaning of this sentence is something like the following: “Speaking of the question of who said so, the answer is that John did.” Notice that a sentence with TPS in the same context expresses the same meaning as (4).

Given the parallelism between TPS and topicalization, it is expected that they will behave alike in other respects. As is often pointed out, some nominal expressions resist topicalization. In contrast to ordinary NPs, for example, a quantificational element like daremo ‘everyone’, a disjunctive expression like John ka Mary ‘John or Mary’, and an indefinite NP like misiranu hito ‘a stranger’ cannot be suffixed by the topic particle -wa (Kuno 1973, Teramura 1991, Endo 2007, Tomioka 2007, among others). As predicted, TPS patterns with topicalization in this respect.

A: John-ga utini kaeru tte itteta no? 
J.-NOM home go.back COMP said Q
‘Did John say that he would go back home?’

\{J.-NOM/J.-TOP/Ø-TOP\} so said
‘John said so.’

A: Daremo-ga utini kaeru tte itteta no? 
everyone-NOM home go.back COMP said Q
‘Did everyone say that he would go back home?’

B: \{Daremo-ga/*Daremo-wa/*Ø-wa:\} soo ittemasita. 
\{everyone-NOM/*everyone-TOP/*Ø-TOP\} so said
‘Everyone said so.’
To sum up, this section has shown that TPS behaves similarly to topicalization in terms of interpretation. Given their similarities, it is tempting to assume that they represent two manifestations of the same construction. As the next section shows, however, their distribution indicates that they cannot be perfectly assimilated into one construction.

3. TPS as a root phenomenon

Topicalization is often considered as a principal root phenomenon. However, it has been noted since the early days of generative studies (Emonds 1970, 1976; Hooper & Thompson 1973; etc.) that it does take place in some, if not all, types of embedded clauses. As will be made clear in this section, TPS on the other hand is strictly limited to root contexts.

3.1 Adverbial clauses

Topicalization is possible in only a subset of adjunct clauses (Minami 1974; Masuoka 1991; Noda 1995; Maki, Kaiser & Ochi 1999). For instance, while it takes place in a concessive adverbial clause (10), it does not in a temporal adverbial clause (11).

(10) \[\text{John[-ga/-wa] tabun hantaisuru daroo]-kedo, kinisuru-na.}\]
    J.[-nom/-top] probably disagree may-though mind-not
    ‘Though John may probably disagree, don’t pay attention to it.’
In the split CP structure, a topic occurs in the specifier of TopP, which is located between ForceP and FocP. The contrast above indicates that while a concessive clause may contain TopP, a temporal clause may not. Nevertheless, the former is not a full clause in that it lacks ForceP. As illustrated below, a concessive clause cannot contain an illocutionary force marker.

This means that TopP is the topmost layer of a concessive clause.

Turning to TPS now, (13Ba) below illustrates that TPS, in contrast to topicalization, cannot be tolerated even in a concessive clause. However, (13Bb) indicates that stranding is possible if the particle is located to the left of the adverb tabun 'probably'. It is therefore not immediately clear whether TPS takes place in a concessive clause.

Still, there is evidence suggesting that TPS is impossible in a concessive clause. Each of the following sentences is intended as a reply to (13A) and involves right dislocation of the concessive clause.
(15) *Settokusuru tumori desu, [Ø-wa: tabun hantaisuru daroo-kedo].
    persuade intention cop Ø-top probably disagree may-though

The contrast indicates that the stranded particle does not form a constituent with a
(dislocated) concessive clause. This means that (13Bb) must have a structure like (16),
where the stranded particle belongs to the main clause.

(16) Ø-wa: [tabun hantaisuru daroo-kedo], settokusuru tumori desu.
    Ø-top probably disagree may-though persuade intention cop

We conclude that TPS, unlike topicalization, does not occur in concessive clauses. This
conclusion is reinforced by the fact that (15) becomes grammatical if the stranded
particle is replaced with an overt topic.

(17) Settokusuru tumori desu, [John-wa tabun
    persuade intention cop J-top probably
    hantaisuru daroo-kedo].
    disagree may-though

The distributional difference between topicalization and TPS leads us to conclude that
they are distinct phenomena and that TPS does not take place in TopP, but in a higher
projection.

3.2 Complement clauses

A complement clause headed by the complementizer to ‘that’ also allows topicalization.

    J-nom the book-top M-nom read comp said
    ‘John said that speaking of the book, Mary read it.’

To-clauses in Japanese may be classified into two types: a quoted clause in direct speech
and a reported clause in indirect speech (see Coulmas 1985). The quoted clause in (19)
behaves similarly to a root sentence like (20): both are able to contain an interjection
and a sentence-final particle. At the same time, however, they are incompatible with
an anaphoric pro-form.

(19) John-ga [ (al) sore-wa {*kareno/bokuno} saihu da (yo)
    J-nom (oh!) that-top {*his/my} wallet cop (prt)
    to] itta.
    comp said
    ‘John said, “Oh, that is {*his/my} wallet.”’

(20) John; (A!) sore-wa {*kareno/bokuno} saihu da (yo).
    (oh!) that-top {*his/my} wallet cop (prt)
    ‘Oh, that is {*his/my} wallet.’
A reported clause like (21) exhibits contrastive behavior. It tolerates neither an interjection nor a sentence-final particle, but it is compatible with an anaphoric pro-form. Furthermore, it cannot act as an independent sentence (see (22)).

(21) John-wa zyoosi-ni {(*a!) sono syorui-wa {kareno/*bokuno}} J.-TOP boss-DAT (*oh!) the document-TOP {his/*my}
    buka-ga nakusita (*yo) to] meeru-de hoookokusuru staff-NOM lost (*PRT) COMP e-mail-by to.report
tumori rasiii.
intention seem
'It seems that John intends to report to his boss by e-mail that speaking of the document, {his/*my} staff lost it.'

(22) John; *Sono syorui-wa kareno, buka-ga nakusita.
the document-TOP his staff-NOM lost
Notice that although topicalization is possible both in a quoted clause (19) and a reported clause (21), TPS occurs only in the former.

(23) Dare-ga so no syorui-o nakusita ka kikareta toki,... who-NOM the document-ACC lost q was.asked when
'When he was asked who had lost the document, …'
   a. John,-wa [Ø-wa: (a!)] {kareno/*bokuno} buka-ga nakusita J.-TOP Ø-TOP (oh!) {his/my} staff-NOM lost
      n desu (yo) to] itta.
      COMP COP (PRT) COMP said
      'John said, “Speaking of the document, oh, my staff lost it.”'
   b. John,-wa iriirona iiwake-o sita ga, yoosuruni {(*Ø-wa:}
      J.-TOP various excuse-ACC made but in.summary (*Ø-TOP)
      (*a!) {kareno/*bokuno} buka-ga nakusita (*yo) to]
      (*oh!) {his/*my} staff-NOM lost (*PRT) COMP
      ii-takatta rasiii.
to.say-wanted seem
      'John made various excuses, but it seems that he wanted to say in summary that his staff had lost it.’

Given that a quoted clause behaves effectively as a root clause, (23a) indicates that TPS is strictly limited to a root context.

3.3 More on similarities between TPS and sentence-final particles

As discussed above, TPS and sentence-final particles occur only in root contexts. This suggests that they are members of the same class of phenomena. The discussion below
shows that this is indeed the case: They do belong to the same projection located above ForceP.

Postulation of a distinct layer above ForceP is in part motivated by the distribution of two classes of sentence-final forms in Japanese. One is comprised of illocutionary force markers such as -u, -nasai, -oo, and -ka, which by definition head ForceP. The other class of forms is comprised of sentence-final particles like ne. In contrast to illocutionary force markers, these are optional elements and can appear in various types of clauses.

(24)  
<table>
<thead>
<tr>
<th></th>
<th>Suguni ik (ne) -u (ne).</th>
<th>'I’m going soon.'</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>soon go (*PRT) -DECL (PRT)</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>Suguni iki (ne) -nasai (ne).</td>
<td>'Go soon!'</td>
</tr>
<tr>
<td></td>
<td>soon go (*PRT) -IMP (PRT)</td>
<td></td>
</tr>
<tr>
<td>c.</td>
<td>Suguni ik (ne) -oo (ne).</td>
<td>'Let’s go soon.'</td>
</tr>
<tr>
<td></td>
<td>soon go (*PRT) -EXH (PRT)</td>
<td></td>
</tr>
<tr>
<td>d.</td>
<td>Suguni iku (ne) -ka (ne).</td>
<td>'Are you going soon?'</td>
</tr>
<tr>
<td></td>
<td>soon go (*PRT) -Q (PRT)</td>
<td></td>
</tr>
</tbody>
</table>

Sentence-final particles do not participate in determining clause type or illocutionary force. One important restriction is that they must appear on the rightmost edge of a sentence, following an illocutionary force marker. Given that Japanese is a head-final language, and that an illocutionary force marker occupies the ForceP head position, sentence-final particles must necessarily head a projection above ForceP. This projection constitutes the outermost layer in the CP zone.

Closer examination of the left periphery of a sentence also supports the presence of such a layer. As shown below, the adverb zituwa ‘to be honest’ occurs only in a declarative sentence.

(25)  
<table>
<thead>
<tr>
<th></th>
<th>Zituwa kono hon-o yonda no desu.</th>
<th>'To be honest, I read this book.'</th>
</tr>
</thead>
<tbody>
<tr>
<td>a.</td>
<td>to.be.honest this book-ACC read COMP COP.DECL</td>
<td></td>
</tr>
<tr>
<td>b.</td>
<td>*Zituwa kono hon-o yom {-e!/oo/-uno?}</td>
<td>'To be honest, {read this book!/let’s read this book/ do you read this book?}'</td>
</tr>
<tr>
<td></td>
<td>to.be.honest this book-ACC read {-IMP/-EXH/-Q}</td>
<td></td>
</tr>
</tbody>
</table>

The selective occurrence of zituwa can be explained by assuming that it occurs on the left edge of ForceP. There it is licensed by the Force head under Spec-Head agreement with respect to features characteristic of declarative sentences.

Bearing this in mind, consider the following example.

(26)  
<table>
<thead>
<tr>
<th></th>
<th>Syukudai-wa owatta no?</th>
<th>'Have you finished your homework?'</th>
</tr>
</thead>
<tbody>
<tr>
<td>A:</td>
<td>homework-TOP finished Q</td>
<td></td>
</tr>
</tbody>
</table>
As shown here, the stranded particle can only precede the adverb *zituwa* and must be located in sentence-initial position. This means that it occupies the left edge of the outermost projection in the CP zone, and that this projection is located higher than ForceP.

The discussion in this section can be summarized as follows: (i) while topicalization takes place in a subset of subordinate clauses, TPS and sentence-final particles are strictly limited to root contexts; (ii) they both occur in a projection that is located higher than TopP, and which constitutes the outermost periphery of the CP zone. The projection in question is present only in root clauses. The next section attempts to show that this layer is responsible for encoding speaker-addressee interactions.

4. Pragmatic functions of TPS and sentence-final particles

4.1 Interpersonal communicative functions

One important property common to a stranded topic particle and a sentence-final particle is that they are canonically found in the context of dialogues, where the speaker has (a) particular addressee(s) in mind to whom an utterance is directed. The particles are excluded from non-dialogic contexts such as narratives.

(27) *Naoko-wa nakanaka kaette-ko-naka-tta (*yo).*
    N.-TOP for.long back-come-not-PAST PRT

(*Ø-wa:) *Teruo-ga kitakusite-kara-mo mada*
(*Ø-TOP) T.-NOM came.home-when-even still

*modora-naka-tta (*yo).*
    return-not-PAST PRT

'Naoko was out for a long time. Even when Teruo came home, she still hadn’t returned.'  (Yasutaka Tsutsui, “Shibahu wa Midori”)

Likewise, a sentence-final particle is not compatible with a sentence uttered in the absence of an addressee.

4. Miyagawa (this volume) makes a similar observation on independent grounds. He argues that while the Japanese politeness marker *-mas* is a genuine main clause phenomenon whose occurrence is limited to root contexts, constructions such as topicalization originally identified as root transformations in the literature (Emonds 1970, 1976; Hooper & Thompson 1973; among others) should be dealt with independently of the root vs. non-root distinction.
A particle cannot be added to this sentence unless the speaker is acting as if he/she were talking to someone else.

In this respect, a sentence-final particle is similar to a performative verb, one that refers to a speech act performed by the speaker. The use of a performative verb inevitably presupposes that the speaker is talking to (or at least has in mind) a particular addressee. Thus, the following sentence is odd when uttered in the absence of an addressee.

The performative nature of sentence-final particles has been pointed out in the literature before. Kuroda (1973) observes that the sentence-final particle yo, for example, serves “to give the connotation ‘I am telling you’” (p. 384). It signals that the utterance is directed at a particular addressee, rather than simply describing an event (see Masuoka 1991, 2007, Inoue 1997, and Endo 2007 for similar remarks). This can be best illustrated by the following example.

Here, the particle yo is obligatory. Without it, the utterance would be a mere description of an event and rendered unsuitable for this context.

TPS, which is also limited to dialogic contexts, fulfills a similar interpersonal function. It occurs exclusively in replies to questions. Thus, it is not compatible with an utterance given out of the blue without a proper interactional context (see (31)). Nor does it occur in utterances that follow non-interrogatives (see (32)).

5. The following example pointed out by a reviewer may cast a doubt on this observation, as it is uttered without a linguistic antecedent.

(i) [Situation: The speaker lives all alone. One day, he went to the kitchen to get a bottle of wine. He opened the door of the refrigerator, looked at the bottle, and said]

Speaker: Ø-wa: yametokuka.
Ø-top refrain
‘I will refrain from drinking this.’
(31)  **Hazimemasite.**  \{Watasi-wa/*Ø-wa: John desu.\}

How do you do? \{I-top/*Ø-top\}  J.  \textit{cop}

‘How do you do? I’m John.’

(32)  A:  **John-wa kyo ga gakkoo-ni ko-naka-tta rasii yo.**

\textit{J.-top}  today \textit{school-to come-not-past} I hear \textit{prt}

‘I heard that John didn’t come to school today.’

B:  \{John-wa /*Ø-wa: \}

\{J.-top /*Ø-top\}  kaze-demo \textit{hiitan daroo.}

‘John may have caught a cold or something.’

This contextual restriction reflects the discourse-related function of the TPS construction. As Arita (2005) observes, the stranded topic particle behaves as a response-marker, an item that specializes in indicating that the speaker is performing an act of reply. It denotes that the speaker has acknowledged the addressee’s question as having been directed to him/her and that the forthcoming utterance, which is designed to provide required information, is given in response to it. In this respect, the stranded topic particle is also similar to a performative verb. It includes the connotation “I (am going to) reply to you”.

### 4.2  Syntactic encoding of speaker-addressee interactions

The above discussion has revealed that both a stranded topic particle and a sentence-final particle grammaticize speaker-addressee interactions. Speas and Tenny (2003; henceforth S&T) argue that pragmatic notions such as “speaker” and “addressee” are represented syntactically in the phrase structure. According to them, speaker,
addressee and utterance are all arguments realized in two-layered Speech Act Phrases, as in (33).

S&T argue that this structure is analogous to VP shells as postulated in Larson (1988) for the dative construction. The speaker argument in the higher Speech Act Phrase parallels the agent argument in VP in constituting the agent of a speech act. The content of the utterance and the addressee correspond to theme and goal arguments respectively. From this perspective, a speech act can be characterized as a process by which the utterance content (“theme”) is transmitted by the speaker (“agent”) to the addressee (“goal”).

(Speas and Tenny 2003: 320; with minor notational changes)

One advantage of S&T’s approach in relation to the present discussion is that it successfully captures the interpersonal communicative functions associated with stranded topic and sentence-final particles. Recall that both can be considered as overt reflections of speaker-addressee relations in specifying how the speaker delivers a particular utterance to the addressee. Therefore, it comes as no surprise that they appear in a projection which encodes speaker-addressee interactions.

S&T characterize the Speech Act Phrase as Rizzi’s (1997) ForceP, a projection headed by an illocutionary force marker. This characterization is problematic, however. As discussed in Section 3.3, Japanese sentence-final forms are divided into illocutionary force markers and sentence-final particles. It was shown that while the former head ForceP, the latter head a distinct projection above ForceP. As a result, they can co-occur in a fixed order, and a sentence-final particle makes no contribution to determining the illocutionary force of a sentence (see (24a–d)). If sentence-final particles were assimilated into the class of illocutionary force markers, it would be difficult to give a consistent account of these facts.

Another problem with S&T’s analysis is that it fails to predict the non-involvement of speaker-addressee interaction in monologues. Recall that S&T’s Speech Act Phrase equals Rizzi’s ForceP. Thus, (33) is in fact no different from a two-layered ForceP structure. As discussed in Section 4.1, sentence-final particles are excluded from non-diologic utterances. Their absence is associated with non-involvement of an addressee in the discourse. This means the structure of the relevant sentence lacks ForceP layers containing speaker and addressee arguments.
altogether. It would consist solely of the projection serving as the utterance content argument. Nevertheless, this scenario incorrectly predicts that a non-dialogic sentence has no specification of illocutionary force at all, which is not the case, given that such sentences are clearly declarative. Alternatively, one might assume that at least the lower ForceP is retained, so as to guarantee declarative force marking. Still, retention of the lower ForceP inevitably entails involvement of an addressee argument, which is at odds with the characterization of non-dialogic utterances given above.

4.3 An alternative analysis

The discussion so far leads to the following conclusion. First, illocutionary force markers and sentence-final particles must be structurally distinguished: apparently they head distinct phrases, namely, ForceP plus a higher projection. Second, speaker and addressee arguments clearly belong to the latter.

In order to maintain S&T’s insight on syntax-pragmatics interaction while incorporating these two points, I propose a slight modification on S&T’s idea and postulate the following structure.

(34) \[ \text{saP (Ø-wa:)} \text{[sa}^{\prime} \text{ speaker sa}^{\prime}\text{[sa*P [ForceP ... ]sa*P [ADDRESSEE sa}*0\text{] sa}^0\text{ ]}]) \]

The Speech Act domain is located above ForceP as a distinct layer. It consists of two projections, saP and sa*P. The speaker argument is located in Spec-saP. The content of the utterance is realized as ForceP and located inside the lower projection sa*P along with the addressee argument. Since a stranded topic particle and a sentence-final particle appear outside ForceP, they would both be located in the saP-sa*P zone. Let us thus assume that a stranded particle is merged in the outer specifier of saP, and that a sentence-final particle is generated either in sa*0 or sa0. Recall that TPS and sentence-final particles occur exclusively in root clauses. This means that only a root clause will contain a saP-sa*P zone. This seems plausible, as the domain encodes the performative aspects of an utterance which cannot be represented in a subordinate clause.

Now if TPS belongs to saP, it is predicted that a stranded particle will be insensitive to clause types. This prediction is borne out, but only partially. As illustrated below, TPS is possible in a declarative sentence (35B), an imperative sentence (36B), and an exhortative sentence (37B). However, it does not occur in interrogative sentences like (38B, 39B).

6. The asterisk added to the lower Speech Act head and its projections simply marks the distinction between the higher Speech Act projection and the lower one.
(35) A: *Sono yubiwa-wa dare-ga mituketa no?*  
the ring-top who-nom found Q  
‘Speaking of the ring, who found it?’
B: Ø-wa: *watasi-ga mituke-masita.*  
Ø-TOP I-nom find-PAST.DECL  
‘Speaking of the ring, I found it.’

(36) A: *Kono hon-wa dare-ni kaese-ba ii no?*  
this book-top who-dat return-if good Q  
‘Speaking of this book, to whom should I return it?’
B: Ø-wa: *John-ni kaesi-nasai.*  
Ø-TOP J-dat return-IMP  
‘Speaking of this book, return it to John.’

(37) A: *Rensyuu-wa itu hazimeru no?*  
practice-top when start Q  
‘Speaking of practice, when do we start?’
B: Ø-wa: *imasugu hazime-yoo.*  
Ø-TOP right.now start-exh  
‘Speaking of practice, let’s start right now.’

(38) A: *John-wa kyou gakgoo-ni ko-naka-tta rasii yo.*  
J.-top today school-to come-not-PAST I.heard PRT  
‘I heard that John didn’t come to school today.’
B: (*Ø-wa:) *nande ko-naka-tta no?*  
Ø-TOP why come-not-PAST Q  
‘Speaking of John, why didn’t he come?’

(39) [on the phone]  
A: *John-wa moo uti-o de-masi-ta ka?*  
J.-top already home-acc leave-polite-PAST Q  
‘Has John left home yet?’
B: (*Ø-wa:) *mada sotira-ni tuite-nain desu ka?*  
Ø-TOP yet your.place-at arrive-not cop Q  
‘Speaking of John, hasn’t he arrived at your place yet?’

Note also that TPS is compatible with some interrogative sentences.

(40) A: *Kono nimotu-wa doo sitaraii no?*  
this baggage-top what shall.do Q  
‘What shall I do with this baggage?’
B: Ø-wa: *asokoni oitoite-kureru?*  
Ø-TOP over.there leave-please  
‘Speaking of the baggage, will you please leave it over there?’
Notice that although (38B, 39B) and (40B) are of the same clause type (i.e., interrogative), they have different illocutionary forces. While the former denote questions, the latter denotes a request. In fact, (40B) can safely be rephrased by a directive sentence denoting a request.

\[(41) \quad \text{Ø-wa: asokoni oitoite-kudasai.} \]
\[\text{Ø-top over.there leave-please} \]
\['Speaking of the baggage, please leave it over there.'\]

On the other hand, (38B) and (39B) cannot be paraphrased by a sentence with an illocutionary force other than that of a question.

A crucial difference between questions and other types of utterance resides in whether the speaker has knowledge (or information) to be delivered to the addressee. Usually, a question is made when the speaker seeks knowledge that he/she does not have. In a non-question utterance, however, it is the speaker who has the knowledge. He/She may then provide the addressee with it. Given this contrast, one possible generalization is that TPS takes place only when the speaker is qualified as a knowledge-holder. I propose that this restriction is reduced to a requirement that the stranded topic particle be licensed under a Spec-Head relation by $\text{sa}^0$, which is specified for a particular type of feature.

Let us first suppose that a knowledge-holding argument carries a feature to this effect. The speaker argument carries this feature in a non-question utterance, but it does not in a question. According to Rizzi (1996, 2006), positions in the CP zone are dedicated to scope-discourse semantics, and elements occupying these positions will enter into Spec-Head agreement relations with respect to features of the relevant class.\(^7\) Simply put, items that enter into Spec-Head agreement in the CP domain share particular features. The same idea applies to the cases under discussion. In a non-question utterance, the speaker argument and $\text{sa}^0$ enter into Spec-Head agreement with respect to the knowledge-holder feature. Given the view of Spec-Head agreement as feature-sharing, this means that $\text{sa}^0$ must also have the relevant feature.

Recall that a stranded particle is located in the outer specifier of $\text{saP}$. In a non-question utterance, this will be licensed by $\text{sa}^0$ bearing a knowledge-holder feature. The same licensing mechanism fails in questions, where the speaker argument lacks the relevant feature and does not participate in Spec-Head agreement with $\text{sa}^0$.

\(^7\) In the current model of minimalist syntax, agreement is implemented in terms of the probe-goal relation rather than the Spec-Head relation (see Chomsky 2000, 2001 and subsequent works). Still, there is reason to retain feature-checking under the Spec-Head structure. See Bošković (2003/2007) and works cited therein for phenomena that may be better treated by this construct.
Consequently, sa⁰ does not carry a knowledge-holder feature and is not qualified to license the stranded topic particle.

4.4 Politeness marking in Japanese

In his analysis of the Japanese politeness marker -mas-, Miyagawa (this volume) also postulates a Speech Act structure.

\[(42)\]
\[
a. \quad \text{Peter-wa hataraki-masi-ta}. \\
\text{P.-TOP work-polite-past} \\
\quad \text{‘Peter worked.’}
\]
\[
b. \quad \text{Taro-wa [Hanako-ga ki-masi to it-ta}. \\
\text{T.-TOP H.-NOM come-polite-past COMP say-past} \\
\quad \text{‘Taro said that Hanako came.’}
\]

Based on the fact that a politeness marker signals the speaker’s intention to be polite to the hearer, Miyagawa conjectures it to be a form of second person agreement. Adopting the feature inheritance machinery (see Chomsky 2005, 2008) along with the Speech Act structure, he argues that the probe for agreement originally carried by C (indicated as “φPROBE” in the representation below) raises to the upper Speech Act head, where it is valued as second person via Agree with the hearer argument in the lower Speech Act Phrase.

\[(43)\]
\[
\left[\text{saP speaker sa⁰ φPROBE [saP hearer sa⁰ [CP C⁰ ... ]]}\right]
\quad \text{Agree} \\
\quad \text{Linear order irrelevant}
\]

A politeness marker thus entails the presence of a Speech Act layer.

As illustrated by (42a, b), a politeness marker can only occur in a root clause or in a quoted clause. Given that its occurrence is associated with the Speech Act structure, its limited distribution means that the Speech Act structure is present only in these contexts. In this respect, Miyagawa’s analysis overlaps with the idea developed in the present paper.

It is then predicted that TPS and the politeness marker exhibit the same distributional pattern. This prediction, however, is not completely borne out. Although both phenomena are limited to root and quoted clauses, TPS is subject to a further constraint. It is excluded from interrogative sentences, as illustrated by (44B). In contrast, the politeness marker can occur in a question (see (44A)).

\[(44)\]
\[
\text{[on the phone]} \\
A: \quad \text{John-wa moo uti-o de-masi-ta ka?} \\
\text{J.-TOP already home-acc leave-polite-past Q} \\
\quad \text{‘Has John left home yet?’}
\]
B: (*Ø-wa:) mada sotira-ni tuite-nain desu ka?
   Ø-top yet your.place-at arrive-not cop Q
   ‘Speaking of John, hasn’t he arrived at your place yet?’

This difference between TPS and politeness marking can be attributed to the (non-) involvement of a speaker argument in the processes which license them. As discussed in Section 4.3, the speaker argument and the head of the upper Speech Act Phrase enter into a Spec-Head agreement (feature-sharing) relation in a non-question sentence with respect to the knowledge-holder feature. The stranded topic particle is licensed by the same functional head under a Spec-Head structure. Consequently, it is licensed (indirectly) by a speaker argument that qualifies as a knowledge holder. On the other hand, the licensing of the politeness form does not require the involvement of a speaker argument. Second person agreement is made possible by Agree between the hearer argument and the uninterpretable φ-probe raised from C to the upper Speech Act head.

If this argument is on the right track, it is reasonable to conclude that the difference between TPS and the politeness form does not conflict with the view that both belong to the Speech Act domain.

5. Linking between stranded particle and topic

5.1 Null pronoun in Spec-TopP

In previous sections, we observed that TPS and topicalization take place in different parts of clause structure. It should not be overlooked, however, that TPS is characterized as a subtype of topicalization (see Section 2) due to the interpretative equivalence of TPS and topic structures. In order to give a unified account to these seemingly contradictory properties, the following structure is proposed for a sentence involving TPS.

\[(45) \quad a. \quad \text{Ø-wa: } \text{Sony-no kisyu-ga hayattemasu.} \]
\[
\begin{array}{c}
\text{Ø-top Sony-gen machine-nom popular} \\
(= 1Bc)
\end{array}
\]

\[
b. \quad [\text{saP Ø-wa: ... } [\text{ForceP } \text{TopP pro} \_i \_top' \_top [\text{Sony-no kisyu-ga hayattemasu}]] \\
\text{Top0]} [\text{Force0} ... \text{sa0}] \]

Here the stranded particle is located in Spec-saP. Moreover, TopP hosts a null pronoun pro in its specifier position, which is licensed as a topic by the Top head in the Spec-Head structure. This null pronoun is bound by the stranded particle. Through the link resulting from this binding relation, the particle indirectly takes on the status of topic.

The link in question does not result from movement (of the particle). The assumption that it involves a binding relation rather than a movement chain is supported by the following data.
(46) [In response to a preceding remark to the effect that a man running a textile company in Japan dreams of making Indonesian people dress like gangsters, speaker A says]

A: _Nande Indonesia na no?_
   why _Indonesia_ COP Q
   ‘Why Indonesia?’

B: _Ø-wa: sore-wa yappa nagare de …_
   Ø-TOP it-TOP as.before course.of.events due.to
   ‘Speaking of the reason for choosing Indonesia, it’s due to the course
   of events, as I said before.’ (intended)

(“Arihen Sekai” broadcast on 22 Sept. 2010 by TV Tokyo)

In (46B), a resumptive pronoun appears after the stranded particle. According to Saito (1985), resumptive pronouns generally appear in the absence of movement chains. Consider the following example.

(47) _Sono boosi_i-wa John-ga_ [NP ↓_CP_ {Ø/?sore_i-o}]
    that hat-TOP J.-NOM {Ø/it-ACC}
   _kabutte_ ita _hito-o_ yoku sitteiru rasii.
   wearing was person-ACC well know seem
   ‘Speaking of that hat, it seems that John knows the person who was
   wearing it very well.’ (Saito 1985:312)

Here, the topicalized phrase can be associated either with a gap or a resumptive pronoun. Notice that the link between the topic phrase and the co-indexed object crosses a complex NP island with no ill effect, indicating that no movement chain is involved, and that the empty category is a null pronoun rather than a trace. Viewed from this perspective, the occurrence of a resumptive pronoun in (46B) lends support to the structure in (45B) where Spec-TopP is occupied by a null pronoun bound by the stranded particle. This further explains the distributional difference between TPS and topicalization.

5.2 Consequences of the proposed analysis

As seen in (46B), a resumptive pronoun can appear in TPS sentences. By contrast, the following example shows that a full NP topic cannot occur in this construction.

(48) A: _Sono syorui-wa doo natta no?_
   the document-TOP what became Q
   ‘What has become of the document?’

B: _Ø-wa: John,[-ga/-wa] kareno, buka-ga nakusita to ittemasu._
   Ø-TOP J,[-NOM/-TOP] his staff-NOM lost COMP saying
   ‘Speaking of the document, John says that his staff lost it.’

The subject in (48B) cannot be marked by a topic particle, even though a topic-marked subject is otherwise fully legitimate.
(49) *John-wa sono syorui-o naku*ita.

    J.-TOP the document-ACC lost

‘John lost the document.’

In the analysis put forward here, the illegitimacy of a topic-marked NP in (48B) is attributable to the obligatory occupation of Spec-TopP by a null pronoun co-indexed with the stranded particle. Consequently, the occurrence of a distinct topic is blocked.

Viewed from a different perspective, the incompatibility of TPS and a full NP topic could mean that the stranded topic particle *must* bind a co-indexed topic *pro*. This predicts that a sentence failing to satisfy this requirement will be ruled out. To test this prediction, consider (50B).

(50) A: *John-wa kimi-ga ryuugakusuru koto-ni hantaisuru*

    J.-TOP you-NOM study.abroad fact-about disagree

    *nzyanai no? isn’t.likely Q*

    ‘Isn’t John likely to disagree about your studying abroad?’

B: Ø-*wa: tabun hantaisuru daroo-kedo,*

Ø-*TOP probably disagree may-though

    *ryuugaku-wa akirame-masen.*

studying.abroad-TOP give.up-not

    ‘Speaking of John, though he may probably disagree, I will not give up studying abroad.’

As discussed in Section 3.1, the outermost projection of a concessive adverbial clause is TopP. This means that the stranded particle in (50B) belongs to the matrix clause rather than the adverbial clause. The former contains a full NP topic *ryuugaku-wa* ‘studying.abroad-TOP’, located in the matrix Spec-TopP. Consequently, (50B) has the following structure.8

(51) [saP Ø-*i-wa: … [ForceP [TopP (=adverbial clause) pro tabun hantaisuru daroo kedo] Force0] … sa0]

8. A caveat may be in order as to why the adverbial TopP is adjoined to ForceP. Noda (1995) notes that an adverbial clause adjoined to the projection of a functional head X₀ consists of the same type of projection that constitutes the complement of X₀, as schematically illustrated below.

    (i) [XP [YP (=adverbial clause) … ] [XP X₀ YP (= complement clause) ]]]

Adopting this generalization along with the split CP structure where Force₀ takes TopP as its complement (see Rizzi 1997), I assume that the adverbial TopP is adjoined to ForceP.
In this structure, the stranded particle successfully c-commands a co-indexed null pronoun. In contrast to (50B), the following sentence, which is intended as a reply to (50A), is not grammatical.

(52) *Ø-wa: ryuugaku-wa a kirame-masen, [tabun Ø-top studying.abroad-top give.up-not probably hantaisuru daroo-kedo].

disagree may-though

A possible account is that the ungrammaticality of (52) results from a violation of the above-mentioned condition that the stranded topic particle must c-command a co-indexed pronoun.

(52) involves right dislocation of a bracketed concessive clause. Whitman (2000) argues that Japanese right dislocation involves a bi-clausal structure. Thus, (53a) would have (53b) as its underlying structure, in which two clauses S1 and S2 are separately base-generated.

(53) a. John-ga Mary-ni ei agemasita, [yubiwa-o].
   J.-nom M.-to gave ring-acc
   ‘John gave to Mary, a ring.’

   b. [XP [S1 John-ga Mary-ni ei agemasita]
      J.-nom M.-to gave
      [X' [S2 John-ga Mary-ni yubiwa-o, agemasita] X0]]
      ring-acc J.-nom M.-to gave

According to Whitman, the right-dislocated phrase can only be realized in S2, where it is co-indexed with a null constituent e in S1. He further claims that the right-dislocated phrase in fact undergoes leftward movement within S2, which is then followed by deletion of the remaining portion. These steps are illustrated in (54).

(54) [XP [S1 John-ga Mary-ni ei agemasita]
   J.-nom M.-to gave
   [X' [S2 [yubiwa-o, [John-ga Mary-ni t, agemasita]] X0]]
   ring-acc J.-nom M.-to gave

Adopting his analysis then, I propose the structure in (55) for (52).

(55) [XP [saP1 Ø-wa: e, ryuugaku-wa a kirame-masen]
   Ø-top studying.abroad-top give.up-not
   [X' [saP2 [pro, tabun hantaisuru daroo-kedo],
      probably disagree may-though
      [Ø-wa: t, ryuugaku-wa a kirame-masen]] X0]]
   Ø-top studying.abroad-top give.up-not

The two clauses saP1 and saP2 are base-generated separately, while the right-dislocated concessive clause appears only in saP2. After the concessive clause is moved out, the
remaining part of saP2 undergoes deletion. Notice that a stranded topic particle inside saP1 cannot c-command a co-indexed pro inside the concessive clause here. This gives rise to a sharp contrast with (51) in which the stranded particle successfully c-commands pro. This contrast is related to the difference in grammaticality between (50B) and (52), lending further support to the requirement that a stranded particle must bind pro in Spec-TopP.

6. Concluding remarks

This paper has examined the extent to which certain pragmatic factors are grammaticized. It has been shown that discourse-related notions such as speaker and addressee are syntactically represented in the outermost domain of phrase structure. This domain constitutes the syntax-pragmatics interface and, contra Rizzi (1997), is located on top of ForceP. This paper has attempted to argue for this position on the basis of the syntactic and pragmatic characteristics of two phenomena in Japanese. One is sentence-final particles, which have been well-studied in the literature, and the other is a previously little-noted phenomenon called topic particle stranding (TPS).

The saP-sa*P domain hosts both classes of particle. A stranded topic particle is located on the leftmost edge of this domain and a sentence-final particle appears on its rightmost edge. They encode the interpersonal communicative functions of utterances and have two properties in common. First, they occur exclusively in dialogic contexts. Second, they are observed only in root clauses. This entails that the saP-sa*P zone is unique to root sentences.

The present paper has drawn attention to some further peculiarities of TPS. For one thing, it can be observed in all types of sentence except questions. This restriction was shown to be a reflection of a requirement that a stranded topic particle be licensed in a Spec-Head configuration by a functional head with a particular type of feature. Furthermore, the stranded particle must bind (i.e., c-command) a co-indexed null pronoun in Spec-TopP, whereby it indirectly takes on the status of topic. Failure of binding results in ungrammaticality. These facts indicate that TPS, which encodes the interpersonal communicative function of an utterance, is sensitive to structural relations (such as Spec-Head and c-command) that are commonly observed in other domains of phrase structure.

References


Hatton, Shino. 1949. Gutaiteki gengo tan’i to tuusyo teki gengo tan’i (Concrete linguistic units and abstract linguistic units). Kotoba 2(12): 16–27.


Nasu, Norio. 2011. Zyosi-zanryuu ga okoru buntoo no iti nituite (On sentence-initial positions for particle stranding). Ms, Kobe City University of Foreign Studies.

Noda, Hisashi. 1995. Bun no kaisoo koozoo kara mita syudai to toritate (Topic and focus from the perspective of hierarchical structure of a sentence). In Nihongo no Syudai to Toritate...


Splitting up force
Evidence from discourse particles

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This paper proposes to split Rizzi’s (1997) ForceP into two distinct projections: Illocutionary Force (ILL) and Clause Type (CT). The proposal is meant to capture the cross-linguistic properties of discourse particles at the discourse level (they modify the illocutionary force by turning it into a more specific force reflecting the speaker’s intentions/attitude, Jacobs 1986, 1991), and also their syntactic restrictions. Specifically, each particle can occur in certain clause types, but not in others, and they are only licensed in clauses with ‘root properties’. In order to account for these facts, we will adopt a feature valuation mechanism along the lines of Pesetsky & Torrego (2007).

1. Introduction

The term ‘discourse particles’ refers to a special class of elements in different languages, which have an ‘adverbial’ function lato sensu. In contrast to the traditional class of adverbs, however, discourse particles have more abstract functions and meanings. They are used to introduce the speaker’s point of view into the discourse. By means of discourse particles, the speaker wants to stress her attitude or opinion with respect to the propositional content of the utterance.

An example of the wide and heterogeneous group of discourse particles are those lexical elements which are usually referred to as Modalpartikeln or Abtönungspartikeln (‘modal’ or ‘shading particles’ respectively, henceforth MPs) in the long German tradition of studies on this topic (cf. Thurmair 1989 and references therein). This is a special class of words (such as denn, doch, ja, schon, wohl, etc.), whose meaning and function depend on the context of use. As a consequence, they cannot be easily translated into other languages.

1. We use the term ‘discourse particles’ to refer to a particular group of (clause-integrated) discourse elements, with semantic and pragmatic properties similar to those of the class of German modal particles, which are discussed below.
The importance of these elements becomes particularly evident in spontaneous speech. Although they are avoided in written language, they turn out to be widely used in spoken language in order to make an utterance sound more natural and expressive. Let us consider the following example from German:

(1)  
Kann er denn schwimmen?  
can he PRT swim  
'Is it true that he can swim?'

By using denn, the speaker wants to stress her particular interest or concern with respect to the information asked for. The question in (1) is grammatical even in the absence of the particle. However, the sentence would lose its particular flavour.

In some cases, then, MPs turn out to be (nearly) mandatory (cf. Thurmair 1989: 24f), as in the following optative clause in German:

(2)  
Hätt ich meiner Tochter  
have.SBJV I my.DAT.SG daughter  
nur/bloß/doch geglaubt!  
PRT/PRT/PRT believed  
'The only I had believed my daughter!'  
(Thurmair 1989: 24)

As one can see from the examples, MPs (or discourse particles in general) are not part of the proposition, i.e., of that part of the utterance that constitutes the nucleus of the predication and determines its truth value (cf. Bußmann 2002: 542). They are external to the proposition, since they provide additional information about the speaker’s opinions and intentions.

In particular, discourse particles display a crucial twofold behaviour. On the one hand, they interact with clause type, i.e., with the syntactic form of the clause they occur in, since it is a well-known fact that each particle can only occur in certain types of clauses: declarative, interrogative, etc. (cf. Thurmair 1989: 49; 1993). On the other hand, they interact with illocutionary force (assertive, directive, etc.), as they contribute to expressing the speaker’s intention by modifying it (cf. Jacobs 1986, 1991).

The idea we would like to pursue in this paper is that the interaction of discourse particles with both clause type and illocutionary force can give us some hints about the syntactic distinction of the two categories, which are generally assumed to be encoded in one and the same projection, namely Rizzi’s (1997) ForceP, or are not clearly kept distinct in syntax.

2. The conceptual distinction between illocutionary force, sentence mood and sentence type is already present in Brandt et al. (1992). The term 'sentence type' refers to the syntactic form a sentence can have, while 'sentence mood' is the semantic counterpart of the sentence type (declarative, imperative or interrogative). Illocutionary force is a pragmatic category and has
This paper is organized as follows. We will first show what the functions of discourse particles are. In doing this, we will base our analysis on the tradition of studies on German MPs. Furthermore, we will take into account some discourse particles in Italian and Romanian. In particular, we will discuss their syntactic and pragmatic properties, i.e., on the one hand their clause type restriction and, on the other hand, their interaction with illocutionary force. We will also see that discourse particles are typical main clause phenomena. Finally we will show how the interaction of discourse particles with both clause type and illocutionary force can be accounted for in syntax. We will argue that their syntactic behaviour may be taken as a piece of evidence for splitting up Rizzi's (1997) ForceP and for postulating two distinct projections for illocutionary force and clause type, respectively.

1.1 Syntactic and pragmatic properties of discourse particles

The studies on discourse particles started from the research done for German and other Germanic languages. In particular, it was shown that German displays a class of adverbialex elements, which have been referred to in various ways: Modalpartikeln, Abtönungspartikeln, etc. (see, for instance, Abraham 1995, 2009a; Bayer 2001, 2008; Borst 1985; Hentschel 1986; Meibauer 1994; Ormelius-Sandblom 1997a,b; Thurmair 1989, 1991). Gradually cross-linguistic evidence has proved them to be a more widespread phenomenon. We will claim that such elements are available in Romance languages, too, such as in Italian and Romanian.

As pointed out in the previous section, discourse particles are used by the speaker to express her attitude, belief or opinion with respect to the propositional part of her utterance (cf. Thurmair 1989). Let us consider the following German sentence:

(3) Er kann ja schon Schwimmen.

he can PRT already swim

’He can already swim (it is evident/as you know).’

In this example, the speaker uses the particle *ja* to emphasize that the propositional content of her utterance (’he can already swim’) is evident and, hence, potentially known to the addressee (cf. Thurmair 1989:200). On the one hand, the speaker utters the proposition, while on the other hand she adds her personal assessment and opinions about certain aspects of this proposition (cf. Abraham 2009b).

to do with the speaker’s attitude. From a syntactic point of view, the three categories are generally not distinguished and are assumed to be encoded in Rizzi’s ForceP. We claim that finer distinctions are necessary also in syntax. See Lohnstein (2000) and Zimmermann (2009) for other proposals in this direction.
It has been argued that German MPs only occur in the *Mittelfeld* (‘middle field’) of the clause, i.e., in that part of a (main) clause in German which is delimited by the finite verb, on the left, and by its non-finite part, on the right. Indeed, the following sentences, derived from example (3), are ungrammatical:

(4) *Er kann schon schwimmen (,) ja.*

(5) *Ja kann er schon schwimmen.*

A particle such as *ja* cannot occur in the *Nachfeld* (‘final field’) nor in the *Vorfeld* (‘initial field’), i.e., before the finite verb or after the non-finite verb, respectively (cf. Coniglio 2005, 2007a,b on the position(s) of German MPs with respect to Cinque’s 1999 hierarchy of functional projections).

But here we would like to draw attention to a crucial syntactic property of German MPs (extensively discussed by Thurmair 1989, 1993 among others), which seems to hold also for discourse particles in other languages, thus having a more general validity. As already mentioned above, each particle is only compatible with specific clause types (cf. Coniglio 2008 for Italian, Law 2002 for Cantonese, Munaro & Poletto 2004 for Veneto dialects, Zegrean, in preparation, for Romanian, etc.). Thurmair (1989: 44ff) lists seven clause types for German, based on Altmann (1984: 137):

1. declaratives
2. yes/no questions
3. wh questions
4. imperatives
5. optatives
6. exclaimatives
7. wh exclaimatives

She shows that, for instance, the unstressed particle *ja* may only occur in declarative clauses, such as (3) above, while *denn* can only occur in questions (also cf. Wegener 2002; Grosz 2005; Bayer 2008), as in (1). Example (6) is ungrammatical since *denn* is incompatible with the declarative type.

(6) *Er kann (*denn*) schwimmen.*

`he can  PRT  swim`

‘He can swim.’

Hence, each particle occurs in a subset of the seven types listed above.

Beside clause type, what is fundamental for the licensing of discourse particles is illocutionary force (cf. Jacobs 1986, 1991; Thurmair 1989; Abraham 1991b; Zimmermann 2004a, b, etc.). By illocutionary force, we mean the speaker’s intention
in producing an utterance, in the sense of Austin (1962) and Searle (1975a). When uttering a sentence, the speaker performs a ‘speech act’. According to Searle (1975a), we can distinguish five main categories of speech acts:

1. assertives
2. directives
3. commissives
4. expressives
5. declarations

The illocutionary force is assertive when the speaker wants to assert the truth of the proposition, it is directive in orders and utterances requesting an action or a piece of information, and so on. The role of discourse particles in relation to the illocutionary force is that of modifying it (cf. Jacobs 1986, 1991; Thurmair 1989; Zimmermann 2004a,b).

This claim may be proven by taking into account German again, where the great number of particles sometimes allows for a fine-grained nuancing of the illocutionary force of the same clause. For instance, imperative clauses allow the insertion of a wide number of particles, such as *halt*, *mal*, *doch*, (stressed) *JA*, etc. Let’s consider example (7):

(7)  Ruf die Polizei!
    call.IMP the police
    ‘Call the police!’
    a. Ruf *halt* die Polizei!
    b. Ruf *mal* die Polizei!
    c. Ruf *doch* die Polizei!
    d. Ruf *JA* die Polizei!

*bloss, nur*, etc.

cogent order

The insertion of a discourse particle does not modify the clause type of the sentence – which is imperative in all cases – but it contributes to modify the speaker’s intention, i.e., the illocutionary force of the utterance. Although the arrow in (7) may be simplifying empirical facts, it is true that the use of a particle can turn the sentence into a simple suggestion, an order, a compelling command, etc.

Therefore, the particle has the function of modifying the illocutionary force of the utterance, in the sense that it may nuance it in accordance with the speaker’s intentions. As claimed by Jacobs (1986, 1991), particles take on the illocutionary force of a given clause (X) and turn it into a different, more precisely specified illocutionary force (X’). This idea could be represented as follows:

(8)  X + Prt = X’ (where X stands for illocutionary force)
The relation between particles and illocutionary force is a piece of evidence that the former are to be considered main clause phenomena (see Section 3).

We would like to point out here that a certain type of illocutionary force is typically mapped into syntax by means of a specific clause type. Consequently, one can usually observe a one-to-one relation between clause type (CT) and illocutionary force (ILL). Thus, for instance, a directive (requesting an action) typically corresponds to an imperative clause, as for example in (9). However, it often occurs that, for reasons of politeness, an order is indirectly expressed by means of a question, as in (10). This is what Searle (1975b) calls ‘indirect speech acts’.

\[(9)\] Call the police! \hspace{1cm} ILL = directive \hspace{1cm} CT = imperative

\[(10)\] Could you call the police? \hspace{1cm} ILL = directive \hspace{1cm} CT = interrogative

A speech act can therefore be realized by means of a clausal type that does not typically correspond to its illocutionary force. We will turn to the implications of this observation for our account in Section 4.

In the following part of the paper, we will base our investigation into some elements in Italian and Romanian on the hypothesis that, on the one hand, discourse particles must be compatible with the clause type (declarative, interrogative, etc.), but, on the other hand, they modify illocutionary force (assertive, directive, etc.) at the pragmatic level.

2. Italian and Romanian data

Over the last decades, most research has concentrated on German particles, but more recently, greater attention has been paid to Germanic languages in general, e.g. Dutch (cf. for instance Westheide 1986; van der Wouden 2000), Swedish (cf. Beijer 2005), etc.

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3. While CT corresponds to what Brandt et al. (1992) call ‘sentence type’ and its semantic counterpart ‘sentence mood’, ILL encodes illocutionary force, a pragmatic category that we assume also to be syntactically represented in the left periphery.

4. Zanuttini & Portner (2003) use the different labels ‘sentential force’ and ‘illocutionary force’ to capture the mapping onto syntax of the interpretation of utterances: “We label the force conventionally associated with a sentence’s form its SENTENTIAL FORCE, following Chierchia & McConnell-Ginet 1990” (Zanuttini & Portner 2003:40). For instance, “a sentence whose sentential force is that of asking may have the illocutionary force of ordering (Could you come at 9:00?)” (Zanuttini & Portner 2003:41).
Interestingly, the presence of particles was linked by Abraham (1991a) to a peculiar syntactic property of these languages, namely the availability of a *Mittelfeld* or of a similar syntactic space (i.e., the *nexus field* in North Germanic languages, cf. Abraham 1991a:346ff).

Whilst intriguing, Abraham’s (1991a) generalisation is contradicted by the existence of a (probably smaller) inventory of particles in languages for which the existence of a middle field has never been assumed. For instance, Italian and Romanian, two Romance languages, display such discourse particles, as we will show in the following part of the paper.

To this point, it should be noted that, cross-linguistically, particles which denote the speaker’s intentions do not always occur in the IP (as is the case for German particles), but may also occur in the C-domain (Del Gobbo & Poletto 2008). From now on, we will call all types of particles (both CP and IP particles) ‘discourse particles’. However, when referring to the specific type of sentence-internal German-like particles, we will sometimes make use of the (more restrictive) term ‘modal particles’.

Regarding Italian, several studies have argued for the existence of discourse particles (cf. Burkhardt 1985; Cardinaletti 2011; Coniglio 2008, 2011; Held 1985; Radtke 1985). In particular, the presence of German-like IP particles in Italian has already been claimed by Coniglio (2008, 2011): *pure*, *mai*, *poi*, etc. (also cf. Cardinaletti 2011 on some phonetic and morphosyntactic properties of these words). Consider the following examples:

(11)  
*Chiama pure la polizia!*  
call.imp  prt  the  police  
‘Call the police! (if you feel like it)’

(12)  
*Cosa significheranno mai quelle parole?*  
what  mean.fut  prt  those  words  
‘What (on earth) do those words mean after all?’

It may be the case that Italian also displays particles that can occur in the CP, but since these words can display different functions, and given the absence of clear syntactic criteria to distinguish them from – say – adverbs, we must make use of other (mainly semantic and pragmatic) criteria to recognize them. Under certain conditions, some

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5. There are languages, such as Cantonese (cf. Law 2002) and Veneto dialects (cf. Munaro & Poletto 2004), which also display sentence-final particles. These have been generally considered to be “CP particles” (namely, particles generated in the left periphery), which – due to the movement of the rest of sentence to a higher position – occupy the last position in the sentence (see, for instance, Munaro & Poletto 2004). See Cardinaletti (2011) for evidence that sentence-final particles are IP particles (generated in the inflectional domain), instead.
potential candidates are *almeno*, *magari*, *proprio*, *tanto*, etc. (also cf. Bazzanella 1995; Bonvino, Frascarelli & Pietrandrea 2008).\(^6\) Consider the following sentence:

\[(13) \quad \text{Tanto il libro non lo leggo.} \quad \text{prt the book neg it read.1sg} \]

'I won’t read the book in any case.'

Particles such as *tanto* seem to occupy a position internal to the C-domain. The same observation holds for a larger group of elements in Italian, which are characterized by their ability to modify the illocutionary force of the clause. Although their meaning and function is similar to that of certain (German) modal particles, syntactically they occur in the C-domain.\(^7\) No specific cartographic studies for these elements are available yet.

A possible distinction between particles occurring in the IP and those occurring higher in the left periphery can be drawn for Romanian, too. There is hardly any syntactic literature on this topic for Romanian (cf. Thun 1984 for a comparison between German and Romanian discourse particles based on their semantic-pragmatic properties). Nonetheless, it can be argued that discourse particles are found in this language as well. One example of such elements in Romanian is *doar*. With respect to the discussion on the position of particles in Romance, we note that *doar*, for instance, may surface either in a position in the CP layer, or in the IP layer:

\[(14) \quad \langle \text{Doar} \rangle \text{ de mâine cineva va veni} \langle \text{doar} \rangle \quad \text{prt from tomorrow somebody come.up.fut prt} \]

\[ \text{cu o soluție.} \quad \text{with a solution} \]

'From tomorrow on somebody will (evidently) come up with a solution.'

In (14), the first occurrence of *doar* is in the C-domain, since it precedes the topicalized element *de mâine*, while the second one is in the IP layer, following the

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\(^6\) We should note that there are probably different types of discourse elements which may occur in the C-domain. Those considered here are only the sentence-integrated ones, i.e., those not separated by comma intonation from the rest of the sentence.

\(^7\) Note that this is true only of certain uses of these words. All such words are usually poly-functional, i.e., besides being used as particles, they may also have other functions, for instance as adverbs. The only way to distinguish their use as particles from other uses is to consider their ability to report the speaker’s point of view, and thus to modify the illocutionary force of a clause in the sense of Jacobs (1986, 1991).

\(^8\) The second occurrence of *doar* here can be ambiguous between the reading as modifier of the PP *cu o soluție*, in which case *doar* is the equivalent of English *only*, and the discourse particle reading.
inflected verb and a bare quantifier in preverbal subject position, which is assumed to occupy an argumental position (Cinque 1990), namely SpecTP (cf. Motapanyane 1994; Ştefănescu 1997; Hill 2002a). Not all Romanian particles behave like this, since there are particles which may occur either only in the left periphery or in the IP. Section 2.2 will shed some light on the properties of Romanian discourse particles.

The cross-linguistic evidence for discourse particles which occur either in the CP layer or inside the IP is nothing new. See, for instance, the typology proposed in Del Gobbo & Poletto (2008), based on the results of interlinguistic investigation (such as Munaro & Poletto 2004 on Veneto dialects and Coniglio 2005 on German) (see Footnote 5). Interestingly, however, two properties seem to be common to all particles, regardless of their syntactic position, namely that they depend on the clause type for their syntactic licensing and on illocutionary force for their pragmatic and discourse functions.

2.1 Italian discourse particles

Coniglio (2008, 2011) points out that Italian displays a group of German-like IP particles (also cf. Cardinaletti 2007, 2011). Some examples are mai, mica, poi, pure, etc. Furthermore, we can argue for the existence of high particles in Italian occurring in the C-domain, as well. However, since cartographic studies on these elements are not yet available, we will concentrate here on IP (i.e., modal) particles in this language.

As observed for German MPs, Italian particles must also be compatible with clause type (cf. Coniglio 2008). For instance, the particle mai may only occur in interrogative clauses (see Obenauer & Poletto 2000):

(15)  Avrà mai letto quel libro?
       have.FUT.3sg prt read that book
       ‘(I wonder:) Did s/he really read that book?’

Although discourse particles are dependent on the clause type for their syntactic licensing, on the pragmatic level they interact and modify the illocutionary force. For instance, the particle pure in example (11) has the effect of weakening the order. In other words, the sentence in (11) differs from the one in (16) – i.e., the same sentence without the particle pure – in as much as the speaker’s order in (11) is not as cogent as in (16): the speaker just wants to emphasize that she does not intend to force the addressee to call the police.

9. Note that although German particles are confined to the highest projections in Cinque’s (1999) functional structure of the IP, they are probably syntactically linked to the CP layer via Agree or another covert operation (Coniglio 2007c, 2009, 2011).
As mentioned in 1.1, in indirect speech acts (cf. Searle 1975b), there can be a kind of mismatch between illocutionary force and clause type. Consider the following example:

(17) Puoi (*pure) chiudere la finestra?
    can.2sg  prt close  the  window
    ‘Can you close the window?’
    ILL = directive (requesting an action); CT = interrogative

In (17) the clause type is interrogative, even though we are dealing with a concealed order by the speaker, who wants the addressee to close the window. Crucially, the particle pure, which is typical of imperative contexts and may therefore usually occur in directive clauses (requesting an action), cannot occur in this example, since this is an interrogative clause. This shows that clause type is fundamental for the licensing of discourse particles.

To sum up, it was shown that Italian discourse particles have properties similar to those pointed out for German. In the next section, we will sketch a similar scenario for Romanian particles, too.

2.2 Romanian discourse particles

Romanian traditional grammars group together under the category of ‘adverbs’ many elements that have different properties in syntax, semantics, phonology and pragmatics. In certain contexts however, some of these elements appear to behave similarly to discourse particles (Zegrean, in preparation). Some studies take into account the pragmatic (and syntactic) functions of a few such elements, but they treat them as isolated items. See for instance Manoliu-Manea (1985), who analyses chiar as an ‘insinuating particle’, Manoliu-Manea (1993) for doar as element negating expectations defined as pragmatic presuppositions, Hill (2002b) and Raţiu (2010), who treat oare as an optional ‘question marker/word’. An attempt at a unifying account is thus in order in the light of recent studies and approaches to such elements.10 On the basis of syntactic,
semantic and morphophonologic evidence, candidates for the category of discourse particles have been identified (Zegrean, in preparation).

The group of possible candidates is a small class of words which are often homophonous with adverbs, or even with conjunctions (dar, see Footnote 11) or interjections (pâi). It may thus be difficult to distinguish between their uses as discourse particles and their other functions. This polyfunctionality is typical not only of Romanian particles (cf. for instance Cardinaletti 2007, 2011 on Italian and German particles).

A non-exhaustive list of such elements is given in (18):

(18) CP layer: oare, ?or, ?pâi, ?apoi11
IP/CP layer: doar, numai, măcar, barem, tocmai

In what follows, we will briefly tackle the issue of the distinction between higher (surfacing in the left periphery) and lower (occurring in the inflectional layer) particles in Romanian. We must, however, bear in mind that, like Italian, Romanian does not have a Mittelfeld in the Germanic sense.

The question of the position of discourse particles has been raised in recent literature (Cardinaletti 2011; Coniglio 2005, 2007a,b, 2011; Del Gobbo & Poletto 2008). Although MPs have been claimed to be base-generated in the IP field (cf. Coniglio 2005), some analyses have suggested that they may covertly raise to the left periphery of the clause (Abraham 1995; Coniglio 2011; Zimmermann 2004a,b). This assumption seems necessary in order to ensure the scope of the particle over the entire clause.

However, there are particles for which there is no evidence that they have been merged in the IP field. Instead, there is positive evidence of their occurrence higher in the extended left periphery (see Italian tanto in (13) above). Therefore, we could assume the logical alternative to the movement analysis, namely the base generation of discourse particles in the C-domain. We suggest that Romanian oare is one such particle.

11. Regional variants of the same item can be found, such as apoi/apâi, doar/doară/dar. This is unsurprising, since particles are notoriously known to belong to spoken language.
Some evidence pointing in this direction is the position of the particle with respect to elements in the left periphery: oare can precede a left-dislocated element (19) or a wh element (20).

(19) Oare ș i  mașina ș i=a vândut=a Ion până la urmă?
    PRT also car-ART refl=have.3sg sold=it Ion until at end
    ‘Has Ion sold his car, too, in the end (I wonder)’

(20) Oare unde va pleca Ion mâine?
    PRT where fut leave Ion tomorrow
    ‘Where will Ion leave tomorrow (I wonder)’

It can be argued that other particles, such as doar, are located either in the CP layer, or in the IP. See the discussion around (14) above.

Other particles appear to be confined to the IP layer. This was shown for Italian and German in Coniglio (2005, 2008). Such particles seem to be present in Romanian too, i.e., chiar, cam, prea, and a few others (Zegrean, in preparation).

The exact position of the particle is not crucial for the main proposal in the present paper. The theoretical account proposed in Sections 4 and 5 below holds for all particles in the CP layer or lower, but it does not apply to elements merged outside the CP (for particles external to the CP see, for instance, Cardinaletti 2011). What

12. See also Hill (2002b), who argues for the head status of oare merged as an optional complementizer in the lowest C head, namely Fin⁰. While we do not believe that oare is an (optional) complementizer, we do take her extensive syntactic support as evidence for its merging in the left periphery of the clause.

13. These elements constitute a very small class of so-called ‘semiadverbs’ or ‘clitic adverbs’, which are confined to a specific position in the string of clitic elements obligatorily adjacent to the verb in Romanian. Although not an easy task, it seems possible to distinguish between their adverbial function and their particle function, at least for some of these elements. However, a very careful approach to the data is needed for a more in-depth analysis of these elements, which must be left for further research.

14. A mechanism similar to that in Sections 4 and 5 could be developed in the case of elements (possibly present in languages other than the ones we consider in this paper) merged in one of the two highest projections that we propose, namely ILL or CT.

As for even higher sentential particles (in Japanese, for instance), these have been taken as evidence for the existence of a projection higher than the CP zone, see for instance Nasu (this volume). These elements do not determine clause type or illocutionary force, they are optional and can appear in different clause types. In the linear order, they follow an illocutionary force marker. Since Japanese is a head-final language, Nasu claims that sentence-final particles head a projection above ForceP. The layer he proposes (following Speas & Tenny 2003) is responsible for encoding speaker-adoresssee interactions, based on the idea that such particles (and also stranded topic particles) have properties relevant for
is more important, instead, is the distribution of discourse particles with respect to clause type.

*Oare* occurs only in questions (21a), strengthening the interrogative value of the clause. While still expecting a *yes/no* answer, the question is marked, since *oare* “adds a stylistic dimension to the question (e.g. doubt, wonder, irony, etc.) which is not transparent in its absence” (Hill 2002b:14). (21b) exemplifies the incompatibility of *oare* with the exclamative clause type.

\[(21)\]

\[
\text{a. } \textit{Oare a telefonat Maria aseară (așa cum promis)?} \\
\text{have.3sg called Maria last.night as how promised}
\]

‘Has Maria called last night, as she promised (, I wonder)?’

\[
\text{b. } \textit{(*Oare) ce târziu a telefonat Maria aseară!} \\
\text{what late have.3sg called Maria last.night}
\]

‘Maria called so late last night!’

*Doar* can appear in interrogatives, declaratives, and exclamatives (22). It has an adversative flavour: the speaker rejects all possibly different beliefs. Depending on the intonation of the clause, *doar* may also express evidentiality, similarly to English ‘for sure’ (Manoliu-Manea 1993).15

the interpersonal communicative functions of a speech act. However these elements differ in their syntax, and perhaps also in their semantic/pragmatic functions, from the discourse particles we consider in this paper.

15. *Doar* may also express a certain annoyance and irritation on the part of the speaker. In interrogative clauses, *doar* can have the same meaning and function as *oare*, namely the question is rhetorical with a flavour of evidentiality on behalf of the speaker:

\[(i)\]

\[
\text{Doar/Oare nu ți-am dat ce ai vrat?} \quad \text{(DEX 1998)} \\
\text{not you.DAT=have.1sg given what have.2sg wanted}
\]

‘Haven’t I given you what you wanted?!’

As already mentioned, *doar* also has an adverbial function, i.e., it is a restrictive focus adverb. This behavior is shared with *numai*:

\[(ii)\]

\[
\text{Vreau doar/numai o bucată de pâine.} \\
\text{want.1sg only/only a piece of bread}
\]

‘I want only one piece of bread.’

The two uses are clearly distinct. The particle reading of *doar/numai* can also be retrieved in (ii), but only with a highly marked intonation, i.e., stress on the verb.
Summing up, we have seen that discourse particles are present not only in Germanic languages, but also in Romance. In particular, we have shown that Italian and Romanian particles have a similar behaviour: they modify the illocutionary force of the utterance, but their distribution depends on the clause type. In Section 3, we will concentrate on the property of discourse particles of being main clause phenomena, and correlate their distribution with the view that certain types of subordinate clauses have a root-like left periphery.

3. Discourse particles as main clause phenomena

The interaction of discourse particles with the illocutionary force of the clause is proven by another fact. Their distribution shows that they are to be considered main clause phenomena, in the sense of Emonds (1970). More specifically, they can only be licensed in those clauses which – according to Haegeman (2002, 2004a,b, 2006) – are endowed with illocutionary force (see Coniglio 2007c, 2009, 2011).

In recent studies, Haegeman distinguishes two types of subordinate clauses, namely those generated inside the IP of the main clause, i.e., central adverbials (23), and those merged only after the CP of the matrix clause is projected, i.e., peripheral adverbials (24):16

(23) **Central adverbials** (Haegeman 2002: 131) = event-related

a. I think that John will buy the book if he finds it.

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16. As for complement clauses, note that although they are all syntactically ‘central’, a further distinction needs to be made in terms of factive and non-factive clauses. In particular, the latter share some properties of peripheral adverbials, such as the availability of a syntactic projection where illocutionary force is encoded (ForceP).

In this paper, we use Haegeman’s (2006) terminology to distinguish between factive and non-factive clauses. However, based on Hooper & Thompson’s (1973), Coniglio (2009, 2011) shows that it is not “factivity” that is relevant here (as proposed by Haegeman). Instead, it is “non-assertivity” (classes C and D in Hooper & Thompson 1973) that defines the complements that do not have Force.
(24) **Peripheral adverbials** (Haegeman 2002: 132) = discourse-related

a. If he *probably* won’t be in this afternoon, I won’t wait for him.

(Haegeman 2006: 1652)

b. Peripheral conditional

According to Haegeman (2002 and subsequent work), not only do the two types of clauses differ in terms of their different merging positions, but they also have different internal structures. Based on Rizzi’s (1997) Split-CP hypothesis, illustrated in (25), Haegeman (2002: 159) takes a step forward and claims that the CP is more extended in peripheral adverbials than it is in central adverbials, as shown in (26):

(25) Force (Top*) Foc (Top*) Fin IP

(26) a. Central adverbials: Sub Mod* Fin

b. Peripheral adverbials: Sub Force Top* Focus Mod* Fin

c. Root clauses: Force Top* Focus Mod* Fin

The crucial difference between central and peripheral clauses is the presence or absence of the syntactic projection ForceP, where illocutionary force is encoded. In more recent work, Haegeman (2011) claims that the ‘truncation’ account can be derived as the by-product of an operator movement taking place in central clauses. This movement prevents the overt realization of intervening lexical material. For the sake of simplicity, we will continue to refer to presence vs. absence of illocutionary force, but what we mean is presence of illocutionary force (and availability of main clause phenomena) vs. presence of the impoverished force typical of central clauses.

If we now consider discourse particles again, we observe that they may only occur in those clauses which are endowed with illocutionary force, namely in main clauses,
peripheral adverbials, in non-factive complement clauses, and in appositive relatives, as illustrated in Table 1.

Table 1. Distribution of discourse particles

<table>
<thead>
<tr>
<th>Main clauses</th>
<th>ok</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subordinate clauses</td>
<td></td>
</tr>
<tr>
<td>a. adverbial clauses</td>
<td></td>
</tr>
<tr>
<td>central</td>
<td>*</td>
</tr>
<tr>
<td>peripheral</td>
<td>ok</td>
</tr>
<tr>
<td>b. relative clauses</td>
<td></td>
</tr>
<tr>
<td>restrictive</td>
<td>*</td>
</tr>
<tr>
<td>appositive</td>
<td>ok</td>
</tr>
<tr>
<td>c. complement clauses</td>
<td></td>
</tr>
<tr>
<td>factive</td>
<td>*</td>
</tr>
<tr>
<td>non-factive</td>
<td>ok</td>
</tr>
</tbody>
</table>

This property of discourse particles is confirmed by the following contrast in Italian, taken from Coniglio (2008: 117f). See also Coniglio (2011).

(27) *Se Gianni ha detto che non verrà,*  
    if Gianni have.3SG PRT said that NEG come.FUT.3SG  
    *allora non verrà.*  
    then NEG come.FUT.3SG  

'If Gianni said that he won't come, then he won't come.'

(28) Se Gianni – come dici – ha pur detto che  
    if Gianni as say.2SG have.3SG PRT said that  
    non verrà, perché *allora ha prenotato l’hotel?*  
    NEG come.FUT.3SG why then have.3SG booked ART-hotel  

'If Gianni – as you say – said that he won’t come, then why did he book the hotel?’

The particle *pur(e)* is allowed in the conditional in (28), which is a peripheral adverbial in Haegeman’s terms, but not in the central conditional in (27).17

17. The conditional in (28) is echoic, as signaled by the parenthetical *come dici*. These types of clauses are classified as peripheral, but they are in a sense different from other peripheral clauses whose illocutionary potential is higher, such as in sentence (29). Although we cannot take up this issue here, we believe that (at least) two types of peripheral clauses should be distinguished: integrated and non-integrated ones (cf. for instance Cinque’s 2008 distinction between two types of appositive clauses). The non-integrated ones have an even greater illocutionary potential. See also Frey (this volume), and Laskova (this volume) for contributions which go in this direction.
Similar observations can be made for Romanian as well, as we see in the following examples featuring the interrogative particle oare in an (interrogative) contrastive clause (29), and doar in an appositive relative (30). The ban on their occurrence in embedded clauses is exemplified with a restrictive relative in (31).

(29) Cu Ioana am vorbit la telefon mai devreme,
with Ioana have.1sg talked at phone more early
in timp ce oare Maria a telefonat azi?
while PRT Maria have.3sg called today?
'I talked to Ioana earlier on the phone, (while) has Mary called today (I wonder),'

(30) Nu l=am mai vazut de-atunci pe Ion, căruia doar
NEG him=have.1sg more seen since Ion.ACC who.DAT PRT
i=am spus să treacă pe-aici când vrea.
1sg told that pass.by.sbjv here when want.3sg
'I haven't seen John since then, to whom I DID tell to pass by whenever he wanted.'

(31) Nu l=am mai vazut de-atunci pe băiatul căruia
NEG him=have.1sg more seen since ACC boy.ART who.DAT
(*doar) i=am spus să treacă pe-aici când vrea.
PRT him=have.1sg told that pass.by.sbjv here when want.3sg
'Since then, I haven't seen the boy to whom I DID tell to pass by whenever he wanted.'

In the following section, we will put forward a syntactic account for the two main properties of discourse particles, namely their relation to the illocutionary force of the clauses in which they appear and their clause type restrictions.

4. The syntactic representation of illocutionary force and clause type as two distinct projections

Our analysis for the syntactic representation of particles and of their relation with the discourse/pragmatic field on the one hand, and with the clausal properties, on the other hand, relies on the proposal to split up Rizzi's (1997) ForceP. Specifically, we suggest that the highest projection of the CP layer can be divided into two projections: ILL(ocutionary FORCE), where the speaker's intentions are encoded, and C(lause) T(ype), where features are present which ensure the realization of syntactic operations specific to each clause type (also cf. Roussou 2000:79, who claims that there are three C positions. In particular, the middle C is held responsible for clause-typing).
One piece of evidence that CT must be distinguished from ILL comes from the mismatch between the illocutionary force of an indirect speech act and its concrete syntactic realization. Although surfacing as an interrogative clause, (32) for instance is not a request of an information (in fact an answer to it would be odd), but a directive requesting an action on behalf of the addressee (also cf. (9) and (10) above).

(32) Could you close the window, please? (#Yes, I could.)

ILL = directive (requesting an action); CT = interrogative

If we now consider central subordinates, although it has been claimed that they do not have illocutionary force (Haegeman 2002 and further work), we observe that they do have a clause type, which is generally similar, but not identical, to a declarative in root contexts:

(33) Se piove(*!/*!), mi bagno.

‘If it rains, I’ll get wet.’

This may be taken as a further piece of evidence that CT must be encoded in a projection which is distinct from ILL. Nonetheless, we will assume that even though central subordinates do not have independent illocutionary force, they do have the projection ILL (which encodes the speaker’s coordinates), but – in contrast to ILL in peripheral clauses – it will be impoverished.

Along these lines of reasoning, we observe that if ILL is full-fledged, as in root contexts, all possible clause types are available (interrogative, declarative, imperative, etc.). In contrast, given that in central subordinate clauses ILL is impoverished, it can only be associated with a ‘pseudo-declarative’ CT.

We further suggest that CT must be lower than ILL, because:18,19

a. CT closely interacts with FinP and with the IP, since it is the projection that conveys information about the syntactic structure of the clause, for instance information on constituent movement requirements in interrogatives or exclamatives (consequently, if the syntax of the clause does not satisfy the information in CT, the derivation will crash).

18. In the present analysis, CT results from the splitting of ForceP, thus it is also assumed to be higher than the positions where CP particles are merged. However, we have little to say, for the time being, on the precise merging position of CP particles. Judgements are subtle, but it seems to us that Italian and Romanian CP particles appear to precede FamiliarTopic (and probably also ContrastiveTopic), but they do not occur higher than GroundTopic (in the sense of Frascarelli & Hinterhölzl 2007).

19. In our ‘Split-Force’ proposal, the high complementizer che in Italian, which in Rizzi (1997) is in Force⁰, will head the CT projection.
b. ILL is the syntactic projection which encodes the speaker and her attitude/intentions in relation to the discourse. It lies at the interface between syntax and pragmatics and is relevant at the discourse level.

The proposal that ILL is the highest projection of the left periphery goes along the lines of previous accounts of the syntactic representation of the Speaker in the CP domain, possibly in its most peripheral position, where it can function as an interface to the discourse. For instance, Giorgi (2008, 2009, 2010) argues for the syntactic presence of the speaker’s temporal (and spatial) coordinates in a specialized projection C-speaker as “the highest, leftmost, position in the Complementizer-layer” (Giorgi 2009: 134). Further, Speas & Tenny (2003) postulate a Speech Act Phrase (SAP), which selects the CP. In their account, the SAP is the place where the assignment of pragmatic roles (Speaker, Hearer and Utterance Content) is related to the configuration in which they appear. In particular, they follow Rizzi (1997), Ambar (1999, 2002), and Cinque (1999) in claiming that “syntactic structures include a projection whose head encodes illocutionary force”, and suggest that “this head is overt in languages that have sentence particles, clitics or morphemes indicating whether the sentence is a statement, question, etc.” (Speas & Tenny 2003: 317). Hill (this volume) proposes a very high ParticleP where Romanian particles that grammaticalized from verbs (thus still retaining some verbal properties, i.e. inflection) are projected. Under her account, the head of this projection has c-selection features probing for a complement which is the utterance, rather than a particular type of clause.

In what follows, we will put forth a feature-based account for the interaction between the two (leftmost) projections of the CP, namely ILL and CT, and the overt elements that express the speaker’s intentions/attitude, i.e., discourse particles.

5. A feature-based proposal for the interaction between illocutionary force, clause type, and discourse particles

For our account, we will make use of the recent feature valuation mechanism in Pesetsky & Torrego (2007). Given what we have said so far about the properties of discourse particles (Prt), in our proposal a Prt is assumed to enter the derivation with two uninterpretable, valued features, a feature which refers to the speaker’s intentions encoded in ILL and one which ensures syntactic compatibility with CT.20

20. Bayer (2008) was the first to propose a feature-based account dealing with the German particle denn.
Accordingly, Prt has an uninterpretable feature \( u_{\text{intent(ionality)}} \) related to its function as modifier of the illocutionary force, and an uninterpretable, valued feature \( u_{\text{type}} \), related to clause type.

\[(34)\] \( \text{Prt} \ [u_{\text{type}}][\text{val}]/[u_{\text{intent}}][\text{val}] \)

Since all clause types are associated with a specific syntax (i.e., word order), the type feature of CT will be interpretable, but unvalued [ ].\(^{21}\) This feature needs to get a value from another instance of the same feature which is present in the derivation.

\[(35)\] \( \text{CT} \ [i_{\text{type}}] \ [\ ] \)

Along these lines of analysis, ILL has an uninterpretable, unvalued feature related to the clause type \( u_{\text{type}} \) [ ], and an interpretable, but unvalued feature related to intentionality \( i_{\text{intent}} \) [ ], which, for us, reflects the modification of the canonical illocutionary force in terms of the speaker’s intentions/attitude. This intentionality feature is interpretable in ILL but its value will come from different categories (see below).

\[(36)\] \( \text{ILL} \ [u_{\text{type}}] \ [\;]/[i_{\text{intent}}] \ [\ ] \)

According to the proposal in Pesetsky & Torrego (2007), who build on Chomsky’s (2000, 2001) Agree mechanism, an unvalued feature \( F \) (a probe) looks for another instance of feature \( F \) (a goal) in its c-command domain. However, while Chomsky’s (2001: 5) approach, according to which a feature \( F \) is uninterpretable iff \( F \) is unvalued, disallows the combinations \( u_{F} \) [val] and \( i_{F} \) [ ], Pesetsky & Torrego (2007) propose that Agree is a feature sharing mechanism triggered by unvalued instances of \( F \) (whether interpretable, or not).

As an illustration, if we take the \( i_{\text{intent}} \) feature on ILL, it is obviously this high occurrence that will be interpreted at LF (it is in this high CP projection that an interpretable feature for the Speaker’s intentions will enter the derivation). However, since it does not have a value, the feature on ILL will agree with its valued, but uninterpretable instance on Prt.

In main clauses and in subordinates with root properties, the mechanism will work as follows:

\[(37)\]
\[\text{a. } \text{ILL} \ [u_{\text{type}}] \ [\;]/[i_{\text{intent}}] \ [\ ] > \text{CT} \ [i_{\text{type}}] \ [\ ] > \text{Prt} \ [u_{\text{type}}] \ [\text{val}]/[u_{\text{intent}}][\text{val}]\]

For Adger (2003), an interpretable [clause-type] feature is present on C, which “determines whether a CP is interpreted as a question or as a declarative statement” (Adger 2003: 333). In our system of ‘Split-Force’, this feature is found on CT.
b. \[\text{ILL} \left[ \text{\#type} \right] \left[ \text{val} \right] / \left[ i \text{intent} \right] \left[ \text{val} \right] \leftarrow \text{intentionality valued} \]
\[> \text{CT} \left[ \text{\#type} \right] \left[ \text{val} \right] \leftarrow \text{clause type valued} \]
\[> \text{Prt} \left[ \text{\#type} \right] \left[ \text{val} \right] / \left[ i \text{intent} \right] \left[ \text{val} \right] \]

Two notes are in order: first, the unvalued features in ILL and CT do not have the EPP requirement (cf. Chomsky 2000, 2001) that the specifier of the head they appear on be filled, thus there is no movement (remerging) operation of the particle. Second, ILL has two unvalued features, thus there are two probes on the same head. This type of head is not directly excluded by the basic assumptions of Minimalism.\(^{22}\)

Recall that for central subordinate clauses, the range of illocutionary forces that can be expressed by root-like subordinates is never available. This fact correlates with the impossibility of the illocutionary force in a central subordinate being different from the one in the matrix clause, a possibility which peripheral embedded clauses have. In our view, the projection ILL is, however, present in the structure, but the impoverished ILL of central clauses can never have the rich inventory of intentionality features that are available in root(-like) clauses. Central subordinates always come with what we shall call a \([i\text{ntent0}]\) feature. Since there are no particles with this \([i\text{ntent0}]\) feature, the insertion of an overt particle will cause the derivation to crash. The same reasoning can be made for the \([\text{type}]\) feature: there will be no particle with the precise feature that is found on the ‘pseudo-declarative’ CT in central subordinates.

Let us now illustrate how our proposal captures the clause type restrictions of discourse particles. For instance, a particle like \textit{denn} (in German) is typical of interrogative clauses, and cannot appear in declaratives. It is directly excluded by the fact that the features \([\text{type}]\) on \textit{Prt} and on ILL and CT are not the same, thus the Agree relation will not be established and the unvalued instances of \([u\text{Decl}]\) in ILL, the \([i\text{Decl}]\) in CT, and the uninterpreted feature on the particle will cause the derivation to crash.

(38) \[*\text{ILL} \left[ u\text{Decl} \right] \left[ \text{} \right] > \text{CT} \left[ i\text{Decl} \right] \left[ \text{} \right] > \text{denn} \left[ u\text{Interr} \right] \left[ \text{val} \right] \]

From the previous discussion, two potential problems arise. The first issue regards the valuation of the features in ILL and CT in clauses that lack discourse particles, given that we take \textit{Prt} to carry the values for both features \([\text{type}]\) and \([\text{intent}]\). Our approach is that the projection in which the \textit{Prt} appears overtly will in fact always be projected, in line with Cinque’s (1999: 127) proposal that the entire array of functional projections is present in every sentence. Each projection has either a marked (‘default’) or unmarked value. We assume that the covert or overt realization of a particle depends on the presence of either an unmarked or a marked value, respectively, on the head of its projection. We thus suggest that the projection of \textit{Prt} is always present and that the

\(^{22}\) For instance, ditransitive verbs have more than one selectional features (two internal arguments).
two valued, uninterpretable features must be present on its head. As with an overt `Prt` (see the discussion around (38)), the features must be identical to those on ILL and CT, otherwise the derivation will crash.

It follows that – irrespectively of whether the particle is overtly realized or not – the unvalued features on ILL and CT will be valued. Therefore, as evinced by Jacobs (1986), the overt realization of a particle signals the presence of an illocutionary force partially different from the (standard/default) one of the equivalent clause without the particle.

6. Conclusions

In this paper, the necessity of splitting up Force (Rizzi 1997) into two projections – namely ILL(ocutionary Force) and C(lause) T(ype) – has been argued for on the basis of the distribution and functions of discourse particles.

All clauses have a clause type. The distribution of discourse particles (at least in German, Italian and Romanian) indicates that each of them has to be compatible with specific clause types. We have assumed a syntactic interaction between the particles and the clause type.

Further, we have shown that, at the same time, discourse particles interact with the illocutionary force of the clause. They are typical main clause phenomena. Hence, they can only appear in root contexts (main clauses and peripheral subordinates, cf. Haegeman 2002 and subsequent work), which can be considered to have independent illocutionary force and thus to be speech acts. In particular, we have argued that the function of discourse particles is that of modifying the illocutionary force (cf. Jacobs 1986, 1991) and that this interaction must be reflected in syntax.

The twofold interaction of discourse particles with clause type, in syntax, and with illocutionary force, at the syntax-pragmatics interface, has been taken as evidence for the necessity of splitting up Rizzi’s (1997) ForceP into two different dedicated projections. In order to account for all these syntactic relations, a feature-based mechanism following Pesetsky & Torrego (2007) has been proposed. Our model captures the important empirical fact that discourse particles are main clause phenomena, and opens up the possibility for other discourse-related phenomena to be integrated as part of the clause in the extended left periphery.

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2010 (pp. 7–34).

References

Abraham, Werner. 1991a. The grammaticization of the German modal particles. In Approaches
to Grammaticalization, Vol. 2 [Typological Studies in Language 19], Elizabeth Closs
Abraham, Werner. 1991b. Discourse particles in German: How does their illocutive force come
about? In Discourse Particles [Pragmatics & Beyond New Series 12], Werner Abraham
anhand von Modalverben, Modalpartikel und Modus. Was ist das Gemeinsame, was
das Trennende, und was steckt dahinter? In Modalität. Epistemic und Evidentialität bei
Modalverb, Adverb, Modalpartikel und Modus [Studien zur deutschen Grammatik 77],
Werner Abraham & Elisabeth Leiss (eds), 251–302. Tübingen: Stauffenburg.
Abraham, Werner. 2009b. Illocutive force is speaker and information source concern. What
type of syntax does the representation of speaker deixis require? Templates vs. derivational
structure? Ms, Vienna/Munich.
Altmann, Hans. 1984. Linguistische Aspekte der Intonation am Beispiel Satzmodus. Forschungs-
berichte des Instituts für Phonetik und sprachliche Kommunikation der Universität München
19: 130–152.
[Linguistik Aktuell/Linguistics Today 24], Georges Rebuschi & Laurice Tuller (eds), 23–54.
Amsterdam: John Benjamins.
Ambar, Manuela. 2002. Wh-questions and Wh-exclamatives: Unifying mirror effects. In
Romance Languages and Linguistic Theory 2000 [Current Issues in Linguistic Theory 232],
Claire Beyssade, Reineke Bok-Bennema, Frank Drijkoningen & Paola Monachesi (eds),
Austin, John Langshaw. 1962. How to do Things with Words: The William James Lectures Delivered
Bayer, Josef. 2001. Asymmetry in Empathic Topicalization. In Audiatur Vox Sapientiae, Caroline
Féry & Wolfgang Sternefeld (eds), 15–47. Berlin: Akademie Verlag.
Bayer, Josef. 2008. From Modal Particle to Interrogative Marker: A Study of German denn. Ms,
Konstanz.
Tipi di frase, deissi, formazione delle parole, Vol. 3, Lorenzo Renzi, Giampaolo Salvi & Anna


Frascarelli, Mara & Hinterhölzl, Roland. 2007. Types of topics in German and Italian. In *On Information Structure, Meaning and Form* [Linguistik Aktuell/Linguistics Today 100], Susanne Winkler & Kerstin Schwabe (eds), 87–116, Amsterdam: John Benjamins.


Zegrean, Iulia. In preparation. The properties and syntactic distribution of discourse particles in Romanian. Ms, University of Venice.


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 C⁰, MCPs are precluded; when it is in a lower position, MCPs are available. I suggest that the movement of by to C⁰ 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 C⁰ and I suggest that movement of by to C⁰ 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. \( \lambda p \ [p = \exists x[John bought x]] \) \( \Rightarrow \) question
   c. \( \iota x [John bought x] \) \( \Rightarrow \) free relative

(2) if John arrives late
   a. LF: \( Op^w C^0 \) John arrives late in \( w \)
   b. \( \iota w [John arrives late in \( w \)] \) \( \Rightarrow \) 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, 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. \([\text{CP Op}_i \quad \text{if} \quad [\text{XP} \quad [\text{TP} \ldots \text{t}_i \ldots \text{t}_j \ldots]]])\]

b. \([\text{CP when}_i \text{C}^0 \quad [\text{XP} \quad [\text{TP} \ldots \text{t}_i \ldots \text{t}_j \ldots]]])\]

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 (1999) hierarchy as MoodPIRREALIS 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) \([\text{CP} \ldots \text{frankly/luckily/fortunately}^{\text{MODAL}} \ldots [\text{TP} \ldots \text{Op}^{\text{MODAL}} \ldots]])\]

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. jeśli, 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) \[ \text{Past}_i [\text{would} \lambda t_i [\text{if} \ldots t_i \ldots]] [\lambda t_i [\text{if} \ldots t_i \ldots]] \]

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) Esli by Petja s’el jabloko, on by \{vchera/ preferences. apple, he \{yesterday/ preferences. {vyzdorovil/vyzdoravlival}.
    if subjective, Peter ate, he \{yesterday/ subj}.
    segodnya/ preferences. yesterday/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 C^0 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 {kupił by /by kupił} Jaguara.
Janek buy.PRE.PRT.by3SG /by3SG buy.PRE.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.PRE.PRT Jaguar
‘Janek bought a Jaguar’

c. Janek kupi Jaguara. Future, perfective
Janek buy.PRE.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.PRE J. then by3SG. it
jeżdził do pracy.
drive.PRE 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.
Hypothetical indicative conditionals:

\[ \text{Jeśli Janek kupi Jaguara, to będzie nim} \]

\[ \text{If Janek buy.FUT3SG J. then FUT.IMP3SG it} \]

\[ \text{jeździł do pracy.} \]

\[ \text{drive.PRT to work} \]

’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. \[ \text{Gdyby Janek kupił Jaguara, …} \]

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. *\[ \text{Gdy Janek by kupił Jaguara, …} \]

c. *\[ \text{Gdy Janek kupiłby Jaguara, …} \]

d. *\[ \text{Gdyby Janek kupiłby Jaguara, …} \]

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 (19), where the perfective form of the verb is used without by, is that Janek bought a Jaguar (i.e., past interpretation). In (20), 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:

\[ \text{Skoro/Jeśli Janek Ø kupił Jaguara, to by nim} \]

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

\[ \text{jeździł do pracy.} \]

\[ \text{drive.PRT to work} \]

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

(20) \[ \text{Skoro/Jeśli Janek kupiłby Jaguara, to by nim} \]

Since/If Janek buy.PRTby3SG Jaguar then by3SG it

\[ \text{jeździł do pracy.} \]

\[ \text{drive.PRT to work} \]

’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, *jesli* *by* Janek (*by*) *miała*(*by*) ochoćę.  
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*+*by*+ś] [MoodP [Mood t] [VP t J Jaguara]]]]  
you buy.PRT+*by*+aux2SG Jaguar  
‘You would buy a Jaguar’
(26) \[
\left[\begin{array}{l}
Cgdy \quad \left[\text{ModP} \quad \text{by}^{i+\hat{s}}\right] \quad \left[\text{TP} \quad \text{ty} \quad \left(t_i' + t_j\right)\right] \quad \left[\text{MoodP} \quad t_i \quad \left[\text{VP} \quad \text{kupił J.}\right]\right]
\end{array}\right]
\]\[\text{when} \quad \text{by} + \text{aux2sg} \quad \text{you} \quad \text{buy.prt} \quad \text{J}.
\]

‘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 Jaguarę?
and when.by buy-INF Jaguar

‘What if we buy a Jaguar?/’How about buying a Jaguar?’

(28) A gdyby kupiono Jaguarę?
and when.by buy.Impers Jaguar

‘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 C^0 due to a requirement that C^0 be filled, (29a). 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 C^0 position. In all other types of clauses, by can surface as the second constituent in the clause, but its syntactic position is lower (29b).  

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 C^0 in Polish, do not occur in štom(Bg)/skoro(Pl) factual conditionals.
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)
Janek poszedł do restauracji i pro o menu to  
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 disloca-
tion (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 move-
ment 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 posi-
tions, 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  

(34) Kiedy/Jeśli listy (*to) Maria wysła 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…’

(35) Dzień, w którym listy (*to) Maria wysła Jankowi.
the 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 wysła, ...
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 them 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 Op₁ [c by XP (*to) [TP t by… t₁… 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 zwyciężymy to zrobić jak nam każe.*
    when.by by-deception Janek contended that not
    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 to zrobić jak nam każe.*
    since by.deception Janek contended that not we.will.win
    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’).
Moreover, na szczęście (‘luckily’) cannot occur without negation, even though (46) 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 spotkal, …
    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. 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 C0, 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 C0 appears to be specific to CFCs.

Consequently, by is never in C0 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 C0 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 Jaguar, 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 Jaguar, 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 Jaguar?
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 C0.7

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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. \[ \text{CP} \quad \text{gdy} \quad \text{[C⁰} \quad \text{by} \quad \text{[TP} \quad \text{tby} \quad \text{tgy} \quad \text{]} \quad \text{]} \]

  b. \[ \text{CP} \quad \text{jak} \quad \text{[C⁰} \quad \text{by} \quad \text{[TP} \quad \text{tby} \quad \text{tjak} \quad \text{]} \quad \text{]} \]

  c. \[ \text{CP} \quad \text{jeśli} \quad \text{[C} \quad \text{by} \quad \text{[TP} \quad \text{tby} \quad \text{]} \quad \text{]} \]

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)  \text{Gdy/Jakby} \quad \text{Janek} \quad (*\text{by}) \quad \text{nam pomógł, skończylibyśmy już.} \quad \text{when/how} \text{by} \quad \text{Janek} \quad \text{us help} \quad \text{finish} \quad \text{by} \quad \text{already}

  \text{‘If Janek (had) helped us, we would (have) finish(ed) already.’}

(52)  \text{Jeśliby} \quad \text{Janek} \quad (\text{by}) \quad \text{nam pomógł, skończylibyśmy już.} \quad \text{if.by} \quad \text{Janek} \quad \text{us help} \quad \text{finish} \quad \text{by} \quad \text{already}

  \text{‘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 factuals, 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 (52) 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/(#jeśli) wygrał, unfortunately not I won when by if by win kupiłbym Jaguar.

‘Unfortunately, I didn’t win. If I had won, I would have bought a 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/#Jeśli by był tu teraz, pomógłby nam.

‘Arek died last year. If he was here now, he would help us.’

(56) Nie martwilbym się, gdyby/#jeśli by Marek był starszy, 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 C0 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 C0, 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 correlativeization

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]₁ [ … proform₁ … ] ==⇒ 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. Iatriidou (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 syntactic position of Polish *by* and Main Clause Phenomena

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 razie/*wtedy skończylibyśmy wcześniej.*

since/if Janek by us yesterday help then in that 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 C0 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. [jesli/gdyby ...]i [ to wtedy_i ... ] ==> hypothetical
b. *[skoro/jesli ... ]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 C0. However, every time *by* is in C0 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 moment 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 C0 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

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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.

References


Asarina, Alya. 2006. The subjunctive and tense in Russian. Ms, MIT.


Iatridou, Sabine. 2010. Some thoughts about the imperfective in counterfactuals. Talk at *Athens reading group in linguistics*, University of Athens.


B. COMPLEMENTIZERS AND VERB-SECOND

A main clause complementizer

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This paper focuses on Romanian main clauses that display the complementizer 'that', and may also allow for the re-iteration of this element at the left periphery. The analysis capitalizes on the proposal in current studies that a field for encoding conversational pragmatics is projected at the left periphery of clauses above ForceP. The spell-out of Force as 'that' is seen as an option when the derivation proceeds beyond this level in assertive clauses. The re-iteration of 'that', reflecting the re-iteration of ForceP, is then related to the need of locality for the C-to-T feature transfer inherent to any phase.

1. Introduction

This paper aims to account for the distribution of the complementizer că ‘that’ in Romanian main clauses, where it may occur on an optional basis, as in (1). The puzzle is that că obligatorily heads subordinate clauses (embedded or adjunct), as in (2), but it can never head matrix clauses (3). Hence, what is the status of că ‘that’ in (1)?

(1) Hai (că) bineînțeles (că) vine până la urmă.
    PRT that obviously that comes up to end
    ‘Really, she/he’ll obviously come in the end.’

(2) a. A spus *(că) vine.
    has said that comes
    ‘She/he said that she/he is coming.’

1. There are two distinct complementizers 'that' in Romanian: că (< Lat. quod), with indicatives; and ca (< Lat. quia), with subjunctives. With certain matrix verbs, indicative complements may be headed either by că in Force or by de in Fin (i); [că de] co-occurrence is ruled out.

(i) S-a-nțâmplat că/de –a venit la timp.
    se-has-happened that/de has come in time
    ‘It happened that she/he arrived in time.’
b.  Nu plec *(că) n-am de ce.
    not go-1sg that not-have-1sg for what
    'I don't go because there's no reason why I should.'

(3)  (*Că) bine am petrecut!
    that well have partied
    'What a good time we had!'

The analysis proposed here establishes a cause-and-effect relation between the presence of lexical items with pragmatic interpretation (i.e. speech acts, evaluatives, evidentials, epistemics) and the incidence of matrix că 'that'. According to its distribution in embedded/subordinate clauses, că 'that' is in Force0. The hypothesis is that “verby” speech act particles select ForceP că 'that' not for clause typing (which is the function of că in subordinate clauses) but for utterance typing (e.g. assertion versus illocutionary force). Separate selection according to clause typing versus illocutionary force has also been noticed for independent reasons in Coniglio and Zegrean (this volume).

For the second issue, that is, the re-iteration of ‘that’ as in (1), I point out that it occurs at the border of distinct sub-fields in the functional domain of the clause left periphery. The justification proposed will consider the need of locality for feature transfer/inheritance between C and T (i.e. Force to Fin/T). Accordingly, the analysis supports the hypothesis put forth in current studies that the left periphery of clauses is more complex than acknowledged so far (see also Nasu this volume). In light of the Romanian data, the asymmetry between root and embedded left peripheries consists in the presence of a pragmatic predicative shell in the former but not in the latter. That is, the pragmatic predicative head competes with the substantive categories for the c-selection of ForceP; so, for example, the clause has either pragmatic head > că 'that' or V > că 'that', but not both in relation to the same ForceP (e.g. *V > pragmatic head > că 'that').

2. Theoretical and empirical background

The analysis is developed in the cartographic framework, since the data indicate the need to sort out the mapping of the left periphery above the level of discourse semantics. The assessment aims, first, to identify the hierarchical level at which că ‘that’ is merged in main clauses when it occurs more than one time, as in (1). To do that, I adopt the articulation of the CP field as proposed in Rizzi (1997 and further work), which involves the hierarchy in (4).

(4)  ForceP > TopP > FocP > FinP > TP

The representation in (4) will be applied to declarative clauses only, since că ‘that’ is in complementary distribution with interrogative and relative CPs. For declarative clauses, the mapping in (4) points out that the relevant issue is at the level of ForceP,
because: (i) declarative main clauses in Romanian do not provide evidence for the projection of CP/ForceP (Alboiu 2002 a.o.); and (ii) că ‘that’ in subordinate clauses is in Force⁰ (Hill 2007b a.o.). That is, an asymmetry arises between main and embedded CP in Romanian, as only the latter articulates ForceP.

More precisely, declarative main clauses may display the order TopP > FocP > Fin/T (the latter containing the inflected verb), but do not provide evidence for a ForceP, Romanian being a non-V2 language. From a Minimalist perspective, Alboiu (2002) considers these structures as TPs (C/T are collapsed), where topic and focus are merged in Spec,TP, in a local relation with the verb raised to T. Her observations are based on the distribution of (post-verbal) subjects and weak cross-over effects. Alternatively, in the cartographic framework, we may say that declarative main clauses are truncated structures, stopping at TopP (see also Nasu for Japanese, this volume). The problem is that none of these approaches accommodate the external merge of că ‘that’ in (1).

Embedded clauses with indicative or conditional verb forms are obligatorily headed by că ‘that’, which precedes TopP > FocP. On the basis of word order, Hill (2007b) locates că ‘that’ in ForceP, where it is merged to check the clause typing feature (i.e. [−question] versus [+question]). This analysis of că ‘that’ suggests a first account for the ungrammaticality of (3): the clause in (3) is an exclamative and triggers elements with operator features to its ForceP, on par with interrogative clauses (Zanuttini & Portner 2003), whereas că ‘that’ is not compatible with operators (e.g. in the way que ‘that’ would be in French Qu’il fait beau! ‘What a nice weather!’).

Giving the background sketched above, the data in (1) seem to contradict the results of current studies by displaying că ‘that’ in a main clause. If că ‘that’ spells out Force⁰, what is ForceP doing in a main clause, as in (1), and what allows for its repetition in this construction?

3. ForceP goes with the flow

The first observation on the distribution of că ‘that’ in (1) is that it must follow elements that belong to conversational pragmatics, being otherwise ungrammatical at the left periphery. That is, că ‘that’ cannot follow topic, focus or subjects, as in (5).

(5) a. La mare (*că) pe Ion (*că) l-a luat.
   to sea.top that MRK Ion.FOC that him-has taken
   ‘To the sea shore, she/he took Ion, not Maria.’

   b. Nimeni (*că) n- a plecat.
   Nobody that not has left

According to the mapping in (4), merging of că ‘that’ in (5) is hierarchically deviant, since the projections of discourse pragmatics and the subject are lower than Force.
By the same reasoning, particles like hai and the adverbs with evidential interpretation as in (1) are higher than Force. Hence, one may infer that the presence of such elements triggers an extended representation of the CP field, beyond the ForceP level in (4), and that this operation automatically involves the projection of ForceP, since the hierarchical structure cannot skip on functional projections. Thus, ForceP in (1) is inactive insofar as it is not probed by a selecting substantive category, and it has a default [−question] value; this would explain the optionality of că ‘that’, that is, the optional spell-out for Force₀.

This account is completely in line with the cartographic framework, but it deviates from the map in (4) by implying further mapping to the left, for a field dedicated to conversational pragmatics. Even if we adopt this extended view, there are still two issues to be clarified: first, we have to be sure that constructions as in (1) are mono-clausal for both particles and evidentials; second, if they are mono-clausal, we have to understand why we can have a repetition of că ‘that’ in (1) since the mapping of the CP in (4) involves only one ForceP.

4. Mono-clausal main clauses

This section shows that constructions as in (1) are mono-clausal, and that the elements preceding că ‘that’ belong to one CP field. These elements are, however, hierarchically higher than topic and focus constituents, and they all yield E-modality readings (i.e. speech act, evaluative, evidential, epistemic). For the time being, I will use the generic term E-modals, but a more accurate distinction will be applied later, by following the taxonomy in Cinque (1999). The main observation is that E-modals belong to two categorial classes: particles (a.k.a. interjections) and adverbials. I use the term adverbials instead of adverbs because, as argued below, these are functional items and do not have the lexical properties of adverbs, which are substantive categories.

In Romanian, adverbial E-modals may optionally be separated from the utterance by că ‘that’, as in (6).

(6) a. Pebune (că) vine. on.good that comes ‘Really/frankly, she/he comes (I swear).’

b. Bineînţeles (că) vine. of.course that comes ‘Of course she/he’s coming.’

c. Pesemne (că) vine. likely that comes ‘She/he’ll likely come.’
One may suppose that the adverbial preceding că ‘that’ belongs to a BE predicate (e.g. ‘it is likely that…’), from which BE is deleted. In that case, the constructions in (6) would be bi-clausal, and că ‘that’ occurs with the expected complementizer function. That, however, cannot be the case. Teodorescu (1972:93–101) noticed, in a traditional grammar framework, that că ‘that’ is obligatory versus optional in embedded Romanian clauses, so examples as in (6) must have a different analysis.

This observation has been confirmed in formal grammar (Hill 2007b). First, many E-modals are adverb-based, and adverbs do not combine with the copula BE to form a predicate (only adjectives allow for that), as in (7). So the structure in (6) must be mono-clausal.

(7) (*E) bineînteles că vine.
    is of course that comes
    Intended: ‘It is obvious that she’ll be coming.’

Second, the syntactic properties of E-modal adverbials differ from the properties of full-fledged adverbs. Consider (8): the high E-modal allows no modifiers (8a) or substitution through PPs (8b), whereas their non-E equivalent displays both properties (8a’; 8b’).

(8) a. (*Foarte) normal că vine.
    very normally that comes
    ‘Obviously she/he comes.’
    a’. Vorbește foarte normal.
    speaks very normally
    ‘She/he speaks in a very normal fashion.’

b. (*in mod) normal că vine.
    in way normal that comes
    ‘Obviously she/he comes.’
    b’. Vorbește în mod normal.
    speaks in way normal
    ‘S/he speaks normally.’

Finally, the interpretation of the modal is different according to its location in the structure: when it is lower than Force, the adverb may have propositional or predicative scope, none of which qualifies for an E-reading; when it is higher than Force, only the E-reading is possible:

(9) a. Spunea că normal vine la 7.// se poartă în said that normally comes at 7// se behaves in
    mod normal.
    way normal
    ‘She says that usually he comes at 7.’// ‘She says that he behaves naturally.’// *She says obviously he’s coming at 7.
b. **Normal că vine la 7.**
   normal that comes at 7
   ‘Obviously he’s coming at 7.’ //usually/*in a natural way

Thus, for **normal** in (8) and (9), we deal with two different syntactic items, and their interpretation is strictly dependent on their hierarchical position (i.e. above or below Force).

For further clarification, the assessment in relation to Force takes into consideration the Force > Top > Foc hierarchy, as in (10a). Top constituents are those that receive a shifting or familiar reading. Hanging Topics (HT), as in (10b) do not count for this assessment, as they are placed at a much higher level than ForceP and are un-embeddable (10c).

(10) a. **Normal că Ion la mare se duce, nu la munte.**
   normal that Ion-TOP to sea-FOC SE goes not to mountain
   ‘Obviously, Ion goes to the sea, not in the mountains.’

b. **Ion, normal că nimeni nu-l mai vrea pe el.**
   Ion-HT normal that nobody not-him more wants PRT him
   ‘As for Ion, obviously nobody wants him anymore.’

c. (**Ion**), **auzisem (**Ion** că (**Ion** nimeni nu-l vrea.**)
   Ion-HT heard Ion-HT that Ion-HT nobody not-him wants
   ‘As for Ion, I heard that nobody wants him.’

Parallel to E-adverbials like **normal** in (8), (9), there are E-modal particles, like **hai** in (1), which are classified as interjections in traditional grammar (Croitor-Balaciu 2006). Vulpe (1980:64–68) points out that they often resort to “expletive” **că** ‘that’ to create “false subordination”, as in (11). Some of these interjections are onomathopoeia (11a), while others are grammaticalizations based on verbs (11b) or nouns (11c).

(11) a. **Hop (că) le ies ceia nainte.**
   PRT that to.them come those in.front
   ‘Oops, those ones come up in front of them.’

b. **Hai (că) viu, nu te teme.**
   PRT that come.1SG not refl be.afraid
   ‘Ok, I’m coming, don’t be afraid.’

c. **Zău (că), din păcate, nu ştiu.**
   PRT that from sins not know.1SG
   ‘Frankly, I don’t know, unfortunately.’

These examples attest that **că** ‘that’ occurs in main clauses, since there is no evidence of a higher propositional domain. In formal grammar, Hill (2007a) shows that even verb-based particles like **hai** do not generate vP/TPs, so they never qualify as matrix predicates selecting **că** ‘that’ clauses as complements (see also Haegeman & Hill 2010).
The discussion of (7) to (11) clarifies one issue: constructions with E-modals and că ‘that’ are mono-clausal. This entails that E-modals are mapped higher than ForceP, and that their presence in the representation necessarily triggers the presence of all lower functional phrases, including ForceP. From this point of view, the optional spell-out of ForceP follows from its default feature value for assertion but not from sentence typing, the latter involving selection by a lexical (versus pragmatic) head.

This explanation, however, is not sufficient: the examples in (7) to (11) show one E-modal at a time, whereas (1) displays two co-occurrences of că ‘that’. It is, thus, necessary to look at the hierarchical structure of E-modals, in relation to the utterance, and in relation to each other, to understand why and/or how this double spell-out occurs.

5. A hierarchy for E-modals

This section will consider the hierarchy of E-modals in relation to each other. For that, I follow the map in Cinque (1999), which has been shown to apply to Romanian declarative clauses (Hill 2007b) when no adverbial fronting takes place (i.e. under default intonation, with no prominence reading on fronted adverbs).

For adverbial E-modals, Cinque (1999) distinguishes two types of functional projections situated above TP, as shown in (12): MoodPs convey assertions where the source of assessment or information is the speaker; and ModPepistemic conveys the speaker’s attitude towards the information. This hierarchy works in Romanian, as in (13)/(14).

(12)  Mood_{SPACT} > Mood_{EVAL} > Mood_{EVID} > Mod_{epistemic}
     cinstit ‘frankly’ > din nefericire ‘unfortunately’ > precis
     ‘surely’ > probabil ‘probably’

     frankly from no.happiness not-him want-1PL  
     ‘Frankly, unfortunately we don’t want him.’

     b. *Din nefericire, cinstit nu-l vrem.  
        from no.happiness frankly not-him want-1PL

     c. Din nefericire, precis nu vine.  
        from no.happiness surely not comes  
        ‘Unfortunately, she/he’s not coming for sure.’

     d. *Precis, din nefericire nu vine.  
        surely from no.happiness not comes
The data presented in this paper bring in another class of E-modals, which is not discussed in Cinque (1999); namely, particles. Hierarchically, particles are higher than MoodPs > Mod_{epistemic}. Syntactically, their properties are different from MoodP/ModP. As shown in Haegeman & Hill (2010), these particles behave like verbs insofar as they may display some person inflectional morphemes, and they agree with vocative nouns in the way verbs may agree with their subjects. This is briefly illustrated in (15), and it is valid for all particles arising from the grammaticalization of verbs.

(15) a. Hai – haide - haideți
invariable PRT.1PL PRT.2PL
b. Lăsați(*lasă) fetelor, că e bine.
PRT.2PL PRT.2SG girls.VOC that is well
‘There-there, girls, all is well.’

Hill (2007a) shows that such particles do not project to vP or TP, despite their “verby” morphology. Rather, they are a good illustration for the hypothesis in Speas and Tenny (2003) that speech acts behave as predicates and project a functional shell in order to saturate the pragmatic roles (i.e., speaker, hearer, sentience), in the same way substantive verbs project a vP to saturate their thematic roles. Along these lines, the items that belong to the Particle field are syntactically different from Cinque’s adverbials.

Keeping that in mind, the immediate task is to establish the hierarchical place for particles in relation to the adverbial E-modals. As shown in (16a), particles precede MoodP_{speechact} under the default intonation; hence, they must be merged higher than Cinque’s MoodP sequence. This hierarchy correctly predicts that particles and adverbial E-modals may co-occur, as in (16b). However, when that happens, the interpretation does not overlap, as shown in (16c, d).

2. In (14b) the epistemic cannot precede the Mood elements, unless it is read as an adverbial modifier (e.g. in Spec, AdvP: pesemne cinstit ‘in a likely honest/frank way’) or the evaluative is read as a PP instead of its grammaticalized evaluative form (e.g. ‘likely from unhappiness’ versus ‘likely unfortunately’).
6.

E-modals and clause typing

This section relates the hierarchy PARTICLE > că ‘that’ > MOODP to the CP hierarchy mapped in (4). This exercise applies to main and embedded clauses, aiming to clarify
the function of ForceP when it is optionally and/or repeatedly spelled-out as că ‘that’ in root clauses, as in (1).

6.1 Word order in main clauses

The test of word order has to determine, first, how many times că ‘that’ may be repeated in the main clause, and at what points in the hierarchy. So far we know that că ‘that’ may follow particles, and, according to examples as in (6), it may also follow the MoodP sub-field. But can it also intervene between particles, if there is more than one, or in-between adverbial MoodPs, when they co-occur? In other words, the test aims to determine whether că ‘that’ is some kind of an obligatory head for each E-modal phrase (e.g. with the adverbial in the Spec position), or whether it merges as a separate phrase. Note that this goes against the predictions in this paper, where adverbial E-modals are considered X0 versus XP, and, therefore, they are in the head Mood0, which means că ‘that’ cannot occupy the same position. However, the same elements are considered XPs in other studies (including Cinque 1999), so the test is necessary to settle this issue for our case study. Consider (17).

(17) a. Ioane, hai (că) cinsti (*că,;) din nefericire
   Ion-VOC PRT that frankly that of unfortune
   (*că) bineînţeles (că) pesemne (că) şi
   that obviously that probably that also
   din cauza veniturilor, mie nicodată
   for cause.the income.the-TOP to.me-TOP never-FOC
   nu mi se va acorda o bursă.
   not me se.arb will grant a scholarship
   ‘Ion, really, to be frank, unfortunately I will obviously NEVER be
   granted a scholarship, probably because of my income too.’

b. Ioane, hai (*că) lasă (că) cinstit, …..
   Ion-VOC PRT that PRT that frankly

Cinstit (*că) nu vine.
frankly that not comes
‘Frankly, she/he’s not coming.’

d. Din nefericire (*că) nu vine.
from.unfortune that not comes
‘Unfortunately, she/he’s not coming.’

e. Bineînţeles (că) nu vine.
of.course that not comes
‘Of course she/he’s not coming.’

f. Pesemne (că) nu vine.
probably that not comes
‘She/he’s probably not coming.’
The clause in (17a) is awkward at the level of performance, although it is grammatical. More precisely, the string of E-modals is unlikely to be realized in full, as in (17a), and at least the last two occurrences of că ‘that’ are most likely to be spelled-out once (any of them) rather than twice in a row. For confirmation of its (in)compatibility with că ‘that’, each E-modal has been re-checked separately in (17b–f). The results are as follows: (17b) shows that că ‘that’ cannot merge in-between particles that may cluster in ParticleP.3 (17c–d) show that adverbial MoodPs that are hierarchically higher in the MoodP sub-field cannot be followed by că ‘that’, only the evidential allows for it (17e). Since the evidential is hierarchically the lowest MoodP of the MoodP cluster, it means that the computation sees the MoodPs as one sub-field, and that că ‘that’ is merged between this sub-field and the next one, that is, ModP. ModP is also followed by că ‘that’, which separates it from the TOP > FOCUS field. Therefore, the general pattern is that că ‘that’ occurs between the sub-fields of the left periphery, but not between the members of the same sub-field.

According to these observations, că ‘that’ is not in a local Spec-head relation with the E-modals, but rather, it heads its own projection, which must be ForceP, re-iterated in the field of conversational pragmatics, as in (18).

\[
(18) \quad [\text{PartP hai} \ [\text{ForceP că} \ [\text{MoodPspeechact} \ [\text{MoodPeval} \ [\text{MoodPvid} \ [\text{ForceP că} \ [\text{ModPepist} [\text{ForceP că} \ [\ldots]]]]]]]
\]

The function of ForceP as defined for the mapping in (4) is to type the clause it heads. In (17)/(18), the declarative main clause displays the default [−question] type, so a ForceP is not needed. The proposal is that in the absence of a probe for clause typing, ForceP is associated with pragmatic typing, and the mechanism for this association, as well as its justification, need to be determined.

So far, the justification for ForceP in (18) has been the projection of an extended functional field that encodes conversational pragmatics, above the field for discourse pragmatics (Topic/Focus). The existence of such field has been argued for on independent grounds, and emerges from a need to account for the morpho-syntactic encoding of the addressee (e.g. Miyagawa 2010, and this volume) and for ordering restrictions in topicalization (e.g. Nasu this volume) among others.

Using this proposal as a framework, my argument was that when such an extended functional field is completely projected (i.e. up to the ParticleP), ForcePs are necessarily projected as well, as part of the clause representation. This also has as natural consequence the absence of initial că ‘that’ in Romanian main clauses, as shown in (3) – that is, if there is no ParticleP, there is no high ForceP. Note that the ParticleP stands for a wide range of speaker-oriented items (e.g. exclamatives, vocatives, ostensives), not only for injunctive particles, as further shown in (19). Any of these trigger the

3. For restrictions on particle clusters see Haegeman & Hill (2010).
projection of the re-iterated ForceP, although the actual spell-out of ForceP as că ‘that’ may depend on further locality constraints, as explained below.

(19) a. *Doamne că frumos mai e!  
   God that beautiful more is  
   ‘Goodness, how beautiful it is!’

b. *Iată că vine.  
   look here that comes  
   ‘There she/he comes.’

Acknowledging that ForceP in the main clause is the result of an extended hierarchy, the question still remains as to why there are so many ForcePs in the representation, and at those particular locations. An explanation in this direction must start with the properties of the Particle head, which is obligatory to license main clause că ‘that’. The relevant property is that particles behave as heads of pragmatic predicative shells, as mentioned in the previous section (i.e., following Speas & Tenny 2003, and with the implementations in Hill 2007a; Haegeman & Hill 2010). Heads of predicates have c-selection features that probe for a certain complement, which, in the case of Particle0, is the utterance (versus a particular sentence typed clause).

As an illustration, consider again the distribution and interpretation of hai:

(20) a. Hai că nu e bun la nimic.  
   PRT that not is good at nothing  
   ‘OK (obviously) he’s not good at anything.’

b. Hai (*că) nu te mai prosti.  
   PRT that not you more silly:be-IMP  
   ‘Don’t be silly (- enough!).’

c. Hai că sigur nu vine.  
   PRT that for sure not comes  
   ‘Definitely, she/he’s not coming.’

When hai heads an imperative main clause, as in (20b), it may only select a null ForceP, since imperatives entail illocutionary features that are operator-like and are, thus, incompatible with că ‘that’. Conversely, when hai heads a declarative main clause, it selects a că ‘that’ ForceP. Intrinsically, hai is an injunctive (i.e., based on the grammaticalized form of ‘go’ in Turkish), but the precise injunctive interpretation depends on the type of ForceP hai selects, and, as shown in (20c), on the presence or absence of lexical elements in its ForceP complement. That is: in (20b) hai has illocutionary force, intensifying the imperative reading of the verb; in (20a) hai takes the evaluative Mood reading of its ForceP complement; in (20c), hai only enhances the evidential reading of the MoodP sigur ‘definitely’ (it encourages the hearer to accept the evidential). The point is that the pragmatic head probes for pragmatic features, illocutionary
force qualifying as such. The sentence type of the sentential complement could be the same (e.g. indicative declarative), but the illocutionary force it saturates differs (e.g. evaluative or evidential). Along these lines, ForceP in (18) checks the c-selection features of a “matrix” pragmatic functional heads (e.g. for a certain type of assertion versus commands in (20)).

As pointed out for (17a), a re-iteration of că ‘that’ is grammatical, but rarely realized concurrently at three points. Shorter constructions are preferred, on the pattern in (17c–f) and (19), (20), and these constructions are very productive in colloquial register. For such cases, the question is whether ForceP is probed by each type of pragmatic functional head or whether they are just copies of the highest ForceP probed by Particle⁰. In this respect, the theoretically desirable hypothesis is that the hierarchy in (18) is invariably underlying all main/root clauses, and Particle⁰ is an active probe even when it is non-lexical, giving that a root clause is always recognizable as an assertion or non-assertion, and has a recognizable degree of speaker-orientedness. This is in line with the intuition in Ross (1970) that any root clause is embedded under a performative verb – which, in the foregoing paper, corresponds to a predicative pragmatic head, rather than a non-lexical substantive verb. If we follow this path of reasoning, there is always a high ForceP in main/root clauses, which is always pragmatically typed, although the spell-out as că ‘that’ is subject to a lexicalization constraint. More precisely, taking into consideration that many of these particles display că ‘that’ as a suffix, the constraint might be that pragmatic că needs a phonological host (e.g. parcă ‘seemingly’, cică ‘as.said’, las că ‘there-there’, iacă ‘look.here’), and it would not be spelled-out if the selecting Particle⁰ is not lexical.

Along these lines, all the instantiations of ForceP in (18) are copies of the highest ForceP selected by Particle⁰. If ParticleP contains more than one particle/expression, as in (17b), only the one merged in the hierarchically lower Particle⁰ c-selects ForceP. The spell out că ‘that’ may lexicalize one or another copy of ForceP, or all of them, concurrently. When only one copy is spelled out, in short constructions as in (18c–f), că ‘that’ may stand for hierarchically different ForcePs. For example, că ‘that’ spells out the medial ForceP in (6a, b), but the lowest ForceP in (6c).

The next question concerns the repetition of ForceP: what justifies it? An account for this phenomenon must take into consideration the feature checking constraints on CPs defined in the Minimalist framework (e.g. Chomsky 2008). In particular, C⁰, at the edge of phases, has not only features that can be probed from a selecting matrix head but it is also associated with EPP and phi-features. The latter set must be transferred to T for a successful licensing of subjects in finite clauses. Feature transfer and inheritance takes place in a local domain. In the cartographic framework, this would involve a transfer from Force to Fin within the CP. In (18), the highest ForceP is far from Fin/T, and other heads may qualify for the feature transfer/inheritance. For example, Hill and Mladenova (2011) show that certain discourse projections may interfere with
the feature transfer. Thus, re-iteration of ForceP after each different type of functional sub-field, reflects a requirement on locality, so that Force⁰ may reach a local relation with Fin/T (within the lowest functional sub-field, above T).

The consequence of this analysis is that functionally (pragmatically) c-selected ForceP must occur in complementary distribution with the lexically c-selected ForceP, where clause typing takes place. That is, since ForceP in (20) is functionally selected by Particle⁰, the verb of another vP (phase) cannot probe ForceP across ParticleP. This restriction is tested below.

6.2 Word order in embedded clauses

The test in (21) proposes to embed (18) from its highest level and gradually reduce it, to see what is the highest functional level in an embedded left periphery.

(21) a. *Am auzit că hai (că) nu vine.
   have heard that PRF that not kommt
   Intended: ‘I've heard that, well, she/he's not coming.

b. Ziceam *(că) hai (că) probabil (c)- o veni el.
   said that PRF that probably that will come he
   ‘I was thinking that, chances are, he’s probably coming.’

c. Operatorul meu bine instruit îți zice *(că)
   operator.the my well instructed to you says that
   (*hai) bineînțeles (că) se poate…
   PRF obviously that Refl can
   ‘My operator tells you that it is obviously possible.’

d. Bănuiesc *(că), din păcate, probabil (că) n-o să vină.
   guess-1sg that from sins that probably that not-will come
   ‘I guess that, unfortunately, she’s probably not coming.’

As shown in (21a), ParticleP cannot be embedded. Exceptions apply to verbs of subjective thinking ('tell myself', 'think in my head'), which allow for indirect free speech, as in (21b), where there is no proper embedding but rather a transition to direct speech. When the same verb is used as a regular reportative, as in (21c), ParticleP is disallowed. Apart from ParticleP, the rest of the hierarchy in (18) can be regularly embedded: (21c) displays the evidential ‘obviously’, signaling the MoodP sub-field; (21d) displays the evaluative ‘unfortunately’, signaling the MoodP sub-field, and the epistemic ‘probably’ – ModP. Both the evidential and the epistemic can be followed by că ‘that’, although another că ‘that’ occurs higher, obligatorily, after the matrix verb.

The word order in (21) indicates that the representation of ForceP in (18) is preserved under embedding as well. That is, the matrix verb probes the highest Force⁰ in (18) for both clause typing and illocutionary force, and the same copies occur at
the same hierarchical levels, to ensure locality for feature transfer to Fin/T. The difference consists in the replacement of Particle\(^0\) with V\(^0\) as the selector of the highest Force\(^0\).

The examples in (21) provided information on the clause typing mechanism in declarative clauses. The same configurations may also allow for extraction across că ‘that’, as in (22).

(22) a. A spus *(că) probabil (că) nu va mai
    has said that probably that not will more
    cumpăra casa.
    buy house.the
    ‘He said that he’ll probably not buy the house.’

b. ?Ce a spus *(că) probabil (*că) nu va
    what has said that probably that not will
    mai cumpăra?
    more buy
    ‘What did he/she say he/she might have written that he/she’ll send us?’

c. Ce spunea *(că)-ar fi scris *(că) ne trimite?
    what said-3sg that-would be written that to.us sends
    ‘What did she/he say she/he might have written that she/he’ll send us?’

The example in (22) allows for recursive ForceP. However, when extraction applies to this context, only the higher, obligatory ForceP is allowed, as in (22b). The deletion of the second ForceP is not due to some constraint on recursivity, because (22c) has recursive ForceP and is grammatical. The problem in (22b) is that only the Force\(^0\) that is at the edge of the CP phase may project a Spec that serves as escape hatch for extraction, whereas the lower Force\(^0\) lacks this property. In (22c), both Force heads are also phase edge heads, so two Spec, ForceP positions are available for wh-movement. Thus, constructions as in (22b) must delete the lower ForcePs.

7. Conclusions

This paper started with the empirical puzzle illustrated in (1): Romanian main/root clauses may display the complementizer că ‘that’, which may also be repeated in the same construction. Current studies do not make provisions for such occurrences. The investigation proceeded in steps: First, constructions as in (1) have been shown to be main clauses (versus bi-clausal). Then, că ‘that’ has been tested for all its concurrent possibilities in a main clause, and for its compatibility with the items that lexicalize the functional projections at the left periphery of clauses. The result was that the hierarchy of the left periphery for clauses as in (1) had to be extended beyond the level of ForceP in cartography (Rizzi 1997), namely, by articulating a Mod\(_{epistemic}\) field, a MoodPs field
and a ParticleP field. Că ‘that’ is systematically spelled out in-between these fields, while it is ungrammatical within such a field. The conclusion was that a representation that extends to ParticleP necessarily projects all the lower phrases, which includes ForcePs.

The analysis was couched in the feature transfer/inheritance theory, where Force$^0$ is equated with C$^0$. The gist is that Particle$^0$, as a predicative head, selects ForceP for utterance/illocutionary typing. The feature transfer from Force$^0$ to Fin$^0$/T$^0$ cannot take place across two functional sub-fields, since one of these functional heads may compete with T$^0$ for feature inheritance. Re-iteration of ForceP is thus delaying the feature transfer up to its lowest occurrence, which is in local relation with Fin$^0$/T$^0$. Confirmation for this operation comes from extraction configurations: due to the requirement for Spec,ForceP as an escape hatch in these constructions, only the highest ForceP may occur; the deletion of the lower ForcePs triggers the deletion of the functional fields intervening between the highest ForceP and FinP, so other heads do not cause a local-violation for the feature transfer. Along these lines, Particle$^0$ and V$^0$ are in complementary distribution since both need to select ForceP for clause/utterance typing.

References


The status of complementizers in the left periphery

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In Section 1 we argue that the nominal nature of complementizers in many languages (notably wh-items in Romance) points to the conclusion that this extra embedding layer is nominal (cf. Rosenbaum 1967). In Section 2 we address the question whether the structures they create are more similar to headed relatives (Arsenijević 2009; Kayne 2010, to appear) or to free relatives (Manzini & Savoia 2003, 2005, 2011). In Section 3 we consider some of the empirical reasons that would recommend distinguishing between complementizers and wh-items, including selection, islands and order in the left periphery. We also consider finiteness restrictions (Section 4). In Section 5 we conclude by indicating what this line of research implies for Main Clause Phenomena.

1. Introduction: Data and analyses

Italian che ‘that’ introduces finite declaratives, as in (1a), and finite relatives, as in (1b). However, che also introduces finite and non-finite interrogatives with the meaning of ‘what’ as in (1c)–(1d). Furthermore, che appears as the wh-determiner of complex interrogative NP’s, as in (1e).

(1) a. Mi hanno detto che vengi domani.
   to.me they.have said that you.come tomorrow
   ‘They told me that you are coming tomorrow.’

   b. Sono quelli che chiamo sempre.
      they.are those that I.call always
      ‘They are those that I always call.’

   c. Che fai?
      what you.do?
      ‘What are you doing?’

   d. Non so che fare.
      not I.know what to.do
      ‘I don’t know what to do.’
What shirt have they worn?

Manzini and Savoia (2003:95) propose that Italian *che* is to be identified with the *wh*-operator with which it is homophonous. We argue that the expressions preceded by *che* in (1) “have a similar LF with *che* introducing a variable. The different interpretations stem from the fact that [...] *che* binds the internal argument of a verbal predicate” as in (2a); or “*che* binds a variable with sentential content”, as in (2b); or, finally “*che* binds the internal argument of a nominal predicate” as in (2c).

1. what shirt they have worn
   ‘What shirt have they worn?’

(2)

a. [che x [fai (x)]] (cf. (1c))

b. [che x [x: vieni domani]] (cf. (1a))

c. [che x [camicia (x)]] (cf. (1e))

This proposal is compatible with a conventional syntax, so that the complementizer reading corresponds to the positioning of *che* in a C head position, while the *wh*-reading corresponds to *che* filling an A’-position in the left periphery of the sentence, as in (3a) vs. (4). On the other hand, for Manzini and Savoia (2005, 2011) complementizer *che* heads a nominal projection, as in (3b), rather than the C functional projection on the sentential spine.

(3)

a. [CP che [IP vieni domani] (cf. (1a))

b. [QP che [IP vieni domani]

(4) [QP che [IP fai] (cf. (1c))

Arsenijević (2009) and Kayne (to appear) arrive at conclusions comparable to those of Manzini and Savoia. Kayne’s proposal in particular reverses Kayne’s (1976) very influential idea that the relative *que* of French is really the *que* complementizer, by proposing instead that “*that* isn’t [a complementizer]. The *that* that introduces sentential complements is really a relative pronoun. […] The claim that English sentential *that* is a relative pronoun must be taken to extend […] for example, to Italian *che*, to French *que* […] From the present perspective *that* is not a Force0 in Rizzi’s (1997) sense nor the head of a CP phase in Chomsky’s (2001) sense” (Kayne to appear). What Kayne proposes is that “sentential complements and sentential subjects are always accompanied by a head noun […] Either it will be raised from within the relative in a way largely parallel to what happens with overt *fact* […] or a silent noun will be so raised”.

The role that the abstract noun plays is more explicit in Arsenijević’s (2009) work. In the syntax proposed by Arsenijević, English *that*, which semantically introduces a lambda operator, syntactically occupies the conventional C position. The variable over which the lambda operator abstracts corresponds to the Spec of a Force head. This position can be saturated by a nominal expression with Force content such as *claim* or
by its abstract incorporated counterpart for verbs such as *to claim* (analyzed as *make claim*) – “just like the DP of the head saturates the abstracted reference value of the relativized element of the R(estrictive) R(elative) C(lause)” (Arsenijević 2009: 42). In these terms the overall structure assigned to (5a) is as in (5b) (examples are Arsenijević’s (3) and (5a) respectively).

(5) a. The claim that John kissed Mary
    b. $[\text{DP the claim [force:claim]} [\text{ForceP [Var]}] \text{that} [\Lambda] \text{IP John… } ]$

For Manzini and Savoia, Italian *che*, both as a *wh-* and as a complementizer, is a lambda operator, exactly as for Arsenijević. However, the variable it abstracts over is a propositional variable (restricted by the embedded sentence). In other words, the analysis of complement sentences is much closer to what would be called a free relative. Thus in the free relative in (6a) the variable introduced by *chi* ‘who’ is closed by an existential: ‘I seek somebody such that he can repair it well’. Similarly, in (6b) the complement sentence amounts to ‘I seek a state of affairs such that they repair it well (in it)’.

(6) a. *Cerco chi lo aggiusti bene.*
    I.seek who it repair well
    ‘I am looking for somebody to repair it well.’

b. *Cerco che lo aggiustino bene.*
    I.seek that it they:repair well
    ‘I am seeking that they repair it well.’

Therefore, one issue raised by the comparison between the various works considered so far concerns whether embedded complement clauses are to be construed as headed relatives (Arsenijević, Kayne) or as free relatives (Manzini and Savoia). We will provide empirical evidence in favor of the latter analysis in Section 2. Note preliminarily that *che* can also introduce a conventional free relative, as in (7).

(7) *Fai che ti pare.*
    do what you likes
    ‘Do as you like.’

*If* clauses are relevant in this connection, since there is independent literature treating them as relatives – specifically as free relatives (Tomaszewicz, this volume). Thus, for Bhatt and Pancheva (2006), “the null operator in Spec, CP of *if*-clauses and likely the *when* itself in e.g. German conditionals, is a definite binder of the possible world variable”. As Bhatt and Pancheva note, the proposal that there is a covert operator in the Spec, CP of conditional *if* clauses goes back to Larson (1985), where the focus of the discussion is interrogative *if* clauses. For the latter, Larson posits the presence of a covert *whether*, which he extends to conditional *if* clauses.
While Kayne and Arsenijević do not mention conditionals, Manzini and Savoia (2003: 105–106) note that in some Romance varieties the ‘if’ complementizer again belongs to the k-, i.e., wh-, series, and can potentially be identical to (one of) the declarative complementizers in the language. Therefore we propose that “in the tradition of Lewis (1975) the sentence introduced by se [‘if’] is interpreted as the restriction of a propositional variable, bound in particular by adverbs of quantification […] As such we expect its syntax to parallel that of the propositional che […] For embedded yes-no questions we can again assume that se introduces an indefinite propositional variable and this in fact establishes a wh-question ranging over the proposition”. Indeed, if clauses play a role in the discussion in Section 2.

Before proceeding it is important to make clear that our claims are not about ‘syncretism’. The conclusion that sentential embedding takes place through a relative-like structure is supported by lexical identity in languages like standard Italian in (1) where the complementizer is identical to a wh-item. At the same time there are many Romance languages in which lexical identity does not hold.1 In fact, our claims are not even about the Romance family, or about the Germanic family, where demonstratives lexicalize both relative pronouns and complementizers (cf. in particular Kayne to appear, 2010). Rather, we propose that a general mode of sentential embedding in natural languages is relative-like, hence ours is ultimately a claim about Universal Grammar.

A related point that must be made clear is that we are not merely advancing proposals about grammaticalization. There is a considerable amount of literature pointing to the conclusion that the complementizer historically arose through the grammaticalization of a wh-item/relative pronoun. Yet such a conclusion is quite distinct from the one we are interested in, namely that there is no complementizer, but only wh-items. A useful reference is to Roberts and Roussou (2003). According to them, the English complementizer that (the Romance complementizer che/que etc.) has a grammaticalization relation to the demonstrative (or wh-item respectively), where grammaticalization in general consists of the reanalysis of a given category as a piece of the functional architecture of the sentence (here C). Our position is not that the complementizer ‘grammaticalizes’ a nominal determiner. Rather we are claiming

1. For instance, as pointed out by one of our anonymous reviewers, Romanian has two complementizers câ and ca (respectively the definite and indefinite complementizer, in the sense to be defined in Section 2), and distinct wh-items for ‘which’ (care) and ‘what’ (ce). The most that can be said about this is that all of these elements belong to the same morphological c-(wh-) series. Similarly, in the variety of Laconi in (11), where there are again two complementizers, neither is identical to a wh-item, though one of them belongs to the same morphological series tf- as many wh-items.
that only the category nominal determiner is real. Complementizer is only a descriptive label for a particular set of occurrences of the nominal determiner.

Finally, we are not implying that different modes of complementation are not possible. Embedding through verbs of saying (i.e., quotatives) is a well-known alternative (cf. Manzini & Savoia (2011)). Of particular relevance here is the discussion of Bengali by Bayer (1999, 2001), who shows that this language (like a number of Indo-European languages of the same area) has a double complementation pattern. Sentential complements can be introduced by the same sentence-initial je form that appears in relative clauses (the Indo-European pattern); alternatively, in a more restricted set of environments (excluding for instance factives and perception verbs) Bengali may present a quotative sentence-final element (corresponding to the sole possible pattern of embedding in the Dravidian languages in contact). Bayer’s discussion again exemplifies the distinction that we have drawn between the account proposed here and accounts in terms of grammaticalization. Thus for Bayer (2001:Section 3.2) “the formal coincidence between the complementizer je and the relative pronoun je is not accidental, the null theory being that they are the same”; yet the conclusion is that they are not in fact the same, because “the operator je is reanalyzed as a complementizer”.

Since one of the themes of the present discussion concerns the headed or free relative status of che/that sentences, it is also interesting to note that Axel (2009) explicitly argues that dass-sentences in German originate from free relatives. Of course “was sich verändert hat, ist lediglich, dass das Pronomen zum Komplementierer rekategorisiert wurde” (28). In other words, the (free) relative analysis is entertained only as the source of a reanalysis process leading to a complementizer structure. Here the thesis is different – namely that there is no complementizer structure different from the free relative one.

2. Complement clauses: Headed or free relatives?

The headed relatives view of complementation involves of course abstract constituents, in particular the empty nouns (FACT etc.) of Kayne (to appear). It is true that Arsenijević (2009) invokes the analysis of transitives/unergatives of Hale and Keyser (1993), according to which they correspond to the incorporation of a nominal predicate into a causative one. Thus (8a) would be underlyingly (8b), for reasons independent of the issue at hand.

(8) a. They claim that John kissed Mary.
    b. They make the claim that John kissed Mary.

As far as we can see, however, claim can be incorporated with a causative predicate to the extent that it is itself a predicate, as in (9) rather than (8b). In other words,
claim cannot be construed as a nominal endowed with a determiner layer, which is crucial to define a headed relative clause. In short, either there is a determiner and a nominal structure and we have a headed relative; or there is a predicate, and we have complex predicate formation. But as far as we can tell, the two things cannot be combined.

(9) They make claim that ...

Thus we conclude that recourse to not independently motivated structure is inevitable in headed relatives approaches to complementation – authorizing a general criticism on grounds of restrictiveness. More interestingly, Manzini and Savoia (2005, 2011) provide empirical arguments in favor of their (free relative-like) analysis. One relevant set of facts has to do with languages where two \(k\)-complementizers are present, for instance many Central and Southern Italian varieties (cf. Ledgeway (2005)) or Romanian (cf. Footnote 1). In Guglionesi (Abruzzi) in (10), one of the two complementizers, \(ka\), is systematically found to introduce complements to verbs of ‘saying’ and ‘knowing’, as in (10a). The other complementizer, \(ke\), is found to introduce complements to verbs of ‘believing’ and ‘wanting’, as in (10b). The same is true for \(ka\) and \(tfi\) respectively in Laconi (Sardinia) in (11).

(10) a. \(m\) \(\text{mne dott} ka\) \(ve\) \(k\varepsilon\). Guglionesi
   to.me they.have said that he.comes tomorrow
   ‘They told me that he will come tomorrow.’

   b. \(vuj\)\(\text{ka vi} k\varepsilon\).
   I.want that you.come tomorrow
   ‘I want you to come tomorrow.’

(11) a. \(m\) \(\text{anti nau} ka\) \(\text{ennis kraza}\). Laconi
   to.me they.have said that you.come tomorrow
   ‘They told me that you come tomorrow’

   b. \(b\text{zi tfi en}d\hbox{\hskip 1pt}as\) \(k\ra\).
   I.want that you.come tomorrow
   ‘I want you to come tomorrow.’

The difference between the two complementizers in (10)–(11) is fairly naturally construed as a difference between two types of quantificational closures for the variable abstracted over by the complementizer. We can assume, for instance, that the \(ka\) complementizer corresponds to a definiteness closure, akin to that provided by a definite determiner. This means that the LF of examples (10a) or (11a) is of the type in (12a). By contrast, the LF of sentences like (10b) or (11b) could include an existential closure, as in (12b).

(12) a. They told me the \(x\): \(x\) he comes tomorrow
    b. I want for some \(x\): \(x\) he comes tomorrow
Manzini and Savoia (2005, 2011) show that in all varieties with double complementizers, any overlap between them and wh-items involves the indefinite complementizer and not the definite one. For instance, in Guglionesi, ka is also ‘what’ while ka doesn’t overlap with the wh-system (on Laconi, cf. Footnote 1). We argue that this follows from (12) and the reasonable assumption that wh-items introduce variables closed existentially, which cannot be associated with definiteness properties.

Assuming then that (12) holds, what we are interested in here is the fact that in Guglionesi the indefinite complementizer also introduces relative clauses, as shown in (13), to the exclusion of the definite complementizer.2 In Laconi a more complex pattern emerges, whereby the indefinite complementizer introduces restrictive relatives, as in (14b) and the definite complementizer introduces appositive relatives, as in (14a). In none of the varieties tabulated by Manzini and Savoia (2005, 2011) does the definite complementizer introduce relatives to the exclusion of the indefinite one.

(13) ɛkkullɔ ka vvado sembra. Guglionesi
he.is that that I see always
‘He is the one that I see all the time.’

(14) a. sɔrrɛ ðua ka eʃte ammiya mia. Laconi
sister yours that is friend mine
‘Your sister, who is a friend of mine.’

b. futi ˈguuzzu tfi tserriu zempre. Laconi
they.were those that I.call always
‘They were the ones that I always call.’

A language like Guglionesi in (13) is not at all easy to account for in the analysis of Arsenijević (2009) and Kayne (to appear), for both the silent nominal invoked by Kayne and the Force nominal of Arsenijević are construed as bona fide nominals. Thus it is not clear why they are not restricted to the relative pronoun ke, as real relatives are. By contrast, if the complementizer does not introduce a nominal variable, but a propositional one, as in Manzini and Savoia (2003), at least the description of the Guglionesi facts is straightforward. We will say that ke can introduce propositional and individual variables alike, while ka is specialized for propositional contents, and will not bind the individual variables of conventional relative clauses.3

2. Note that this example does not involve a who relative, since ‘who’ is ki in this language.

3. In Romanian, as pointed out by one of our anonymous reviewers neither că (the definite complementizer) nor ca (the indefinite one) can introduce relatives; rather relative clauses are normally introduced by wh-elements (Dobrovie-Sorin 1990). In present terms this means that both că and ca are specialized for sentential variables.
We also have no particular problem in accounting for languages where both complementizers introduce relatives, alternating in restrictive and non-restrictive relatives cf. Laconi in (14). Restrictive relatives, whose variable is in the scope of the operator that also binds the head noun, are introduced by tʃ (compatible with a quantificational closure). Non-restrictive relatives, which are outside the scope of the head noun determiner, will correspondingly be introduced by definite ka. Consider, however, theories of complement clauses as headed relatives. The prediction would be that the ka complement sentence of Laconi in (11a) is an appositive relative while the tʃi complement sentence in (11b) is a restrictive relative. We fail to see how this would work.

In short, we conclude that facts pertaining to the lexicalization of the relative pronoun in varieties with two complementizers favor the view of complementation as free relativization (no abstract head nouns).

The second set of facts to be considered in support of our analysis involves hypothetical/interrogative sentences. The complementizer system of Italian, like that of English, has a specialized lexicalization for the interrogative/hypothetical complementizer, se ‘if’, as in (15). In Laconi, on the other hand, the ‘if’ of the system, as in (16), is represented by the indefinite complementizer tʃi, already seen in complement sentences in (11b) and in restrictive relatives in (14b).

(15)  a. Se piove, (spesso) esco.
     if it.rains often I.go.out
     ‘If it rains, I (often) go out.’
     b. Non so se viene.
        not I.know if he.comes
        ‘I don’t know if he’ll come’

(16)  a. tʃi ‘bɛʁɛdɛ nɔ bɛsso.
     that it.rains not I.go.out
     ‘If it rains, I won’t go out.’
     b. nɔ iʃʃu tʃi ˈdʒu tsɛrriu.
        not I.know that him 1.call
        ‘I don’t know if I shall call him.’

Hypothetical sentences are interpreted in much the same way proposed above for complement sentences, i.e., as the restriction of a propositional variable. According to Lewis’s (1975) classic treatment, the latter is bound by an adverb of quantification, or by a generic quantifier in the absence of other overt quantifications. Thus the sentence in (15a) has an LF of the type in (17a), if the adverb of quantification is computed. Otherwise the propositional variable is closed by a universal quantification, as in (17b).

(17)  a. For many situations/possible worlds x: x it rains, I go out (in x).
     b. For all situations/possible worlds x: x it rains, I go out (in x).
We assume that the embedded interrogative interpretation follows if the variable introduced by ‘if’ (and restricted by the proposition following it) is licensed in the scope of a question operator, yielding (18).

(18) I wonder for which situations/possible worlds x: x John comes.

At this point the characterization of the ‘if’ complementizer is fundamentally the same as for the indefinite complementizer in (12b), where the variable that the complementizer introduces is closed quantificationally. Therefore we fully expect that they can be lexicalized by the same item, as indeed happens in Laconi in (11), (16). If hypotheticals are treated as free relatives, as independently argued by Bhatt and Pancheva (2006), but complement sentences are treated as headed relatives, following Arsenijević (2009), Kayne (to appear), capturing the Laconi syncretism of declarative and hypothetical complementizer seems again problematic.

In short, the lexical coincidence between declarative and hypothetical/interrogative complementizers provides further evidence that complement sentences are restrictions on propositional variables introduced by the complementizer (i.e., free relatives) – as standardly assumed for hypotheticals.

If anything, our problem is how to characterize languages like Italian (English etc.) that have two distinct complementizers for declaratives and hypotheticals. Following the discussion so far, the definite complementizer introduces a propositional complement akin to a definite description, as in (12a), while the indefinite complementizer introduces a quantification, as in (12b). The latter is also true of the proposition introduced by ‘if’, as in (16), which therefore needs to be further differentiated. Now, as discussed by Adger and Quer (2001) the declarative complementizer ordinarily embedded by a verb like know, as in (19a) alternates with the ‘if’ complementizer in the scope of non-veridical operators, as in (19c). Only the co-occurrence of the ‘that’ complementizer with an embedded indicative in (19b) yields a presupposed (factive) reading; the ‘if’ complementizer in (19c) forces the sentence to be read within the scope of the negation operator – as does the subjunctive in (19b–c), independently discussed by Manzini (2000).

(19) a. *Sa che/*se sono/*sia guarito.
   he knows that/if I.am/I.be recovered
   ‘He knows that/*if I have recovered.’

b. Non *sa che sono/sia guarito.
   not he knows that I.am/I.be recovered
   ‘He doesn’t know that I have recovered.’

c. *Non *sa che sono/sia guarito.
   not he knows that/if I.am/I.be recovered
   ‘He doesn’t know if I have recovered.’
The fact that ‘if’ is triggered in the scope of a non-veridical operator with an otherwise declarative (factive) verb, as in (19), points the way to a characterization of the contexts ‘if’ specializes for. Non-veridical operators are the fundamental contexts triggering (negative) polarity items (Giannakidou 1998). We suggest that the complementizer system of languages like Italian (English, etc.) is sensitive to polarity, so that comple-
mentizers (i.e. nominal heads responsible for introducing propositional variables) are lexicalized by two different items in non-polarity and polarity contexts, surfacing in polarity contexts as se in Italian, if in English etc.

Summarizing so far, elements such as Italian che are lambda abstractors, and as such can lexicalize relative pronouns and wh-phrases in questions, as well as comple-
mentizers, at least under the account given in this section.

3. Potential problems

Consider then the syntactic structures projected by so-called complementizers. Donati (1998, 2006), Cecchetto and Donati (2010) propose that movement of a wh-head can either project its label or not. The first alternative yields the sentence-external positioning of the wh-head in free relatives, while the second yields the sentence internal positioning of wh-heads/phrases in headed relatives and questions – so that a structure like (20a) would characterize a wh-question or a headed relative, while (20b) would represent the free relative. Assuming that the lexical content of che and hence its categorization remain invariant, and that the complementizer projects upon Merger, as the wh-item does in free relatives, we obtain structures like (21) for complement sentences, parallel to (20b).

\[
\begin{align*}
(20) & \quad \text{a. } [\text{CP } \text{che } [\text{IP } \text{fai} ] & \quad (\text{cf. (1c)}) \\
& \quad \text{b. } [\text{QP } \text{che } [\text{IP } \text{ti pare} ] & \quad (\text{cf. (7)}) \\
(21) & \quad [\text{QP } \text{che } [\text{IP } \text{vieni domani} ] & \quad (\text{cf. (1a)})
\end{align*}
\]

Now, the question arises how we can distinguish predicates selecting for a sentence and predicates selecting for a nominal argument if a che headed sentence is a QP, as in (21), and so is a nominal free relative, as in (20b). It is easy to see that the problem arises only if selection targets syntactic categories, i.e., it is c-selection, in the sense of Grimshaw (1979). In fact, the literature contains convincing arguments that c-selection can be abandoned in favor of (interpretively based) s-selection. In partic-
ular, Pesetsky (1991) argues that s-selection need only be supplemented by what he calls l(exical)-selection, and not by c-selection. If so, selection is neutral with respect to the labeling issue in (20)–(21). In terms of s-selection, complementizers introduce propositional variables, while conventional noun phrases correspond to individuals;
hence they can be distinguished independently of whether they bear the same categorial label or not.4

Another potential problem is represented by islands. Complement sentences are not islands. By contrast, relatives are islands, descriptively corresponding to Complex NP islands. If we adopt structures like (20b) and (21) for complement sentences and (nominal) free relatives alike, shouldn't extraction be blocked in all of them, as an instance of Complex NP island? Again the answer depends on the theoretical characterization of the descriptive phenomenon of Complex NP islands. Recall that under Chomsky’s (1973) original proposal, Complex NP islands depended on the existence of a C(OMP) node providing an ‘escape hatch’ for Subjacency in S(entences) but not in NPs. Chomsky’s (2001) phases and their Edge Features seem to play essentially the same role in minimalist theory. If ‘escape hatches’/EFs are defined with respect to syntactic categories, then (20b) and (21) will not guarantee the required distinction between complement sentences and relatives. On the other hand if ‘escape hatches’/EFs are defined in terms of interpretive content, we can assume that they are associated with nominal elements introducing propositional variables, i.e., complementizers, as in (21), though not with the same elements introducing individual variables, as in (20b). The asymmetry with respect to Complex NP islands follows.

Another major set of empirical considerations concerns the relative order of complementizers/wh-phrases and other material in the left periphery. Our basic take on this issue is the same as for selection or islands. In cartographic theories enforcing a functional sequence in the syntax, it may in fact be necessary to distinguish the various contexts by means of different categorizations. But a different view has it that the functional hierarchy reflects interpretive generalizations at the LF interface. The latter view is in principle compatible with simpler categorizations of the type proposed here. As before, the question is one of empirical adequacy.

Consider the position(s) of the complementizer itself. Material related to the quantificational and informational structure of the sentence (topic, focus, etc.) can be found under the complementizer, representing one of the core instances of embedded Main Clause Phenomena. This is familiar from English as well as from Romance languages; in (22) we provide just one example from Italian.

4. Varieties like Guglionesi in (10) or Laconi in (11) (or Romanian, cf. Footnote 1) are sensitive to finer selectional properties. Importantly, the discussion of Section 2 establishes that the different declarative complementizers of these languages are characterized by interpretive properties (cf. (12)), which means that s-selection is necessary in this case, rather than merely possible.
(22) So che loro, questo hanno preso (non quello)
I know that they this have taken (not that)
'I know that they have taken this one (not that one).'

At the same time there are many Romance languages in which the che-type complementizer follows a wh-phrase in both main and embedded interrogatives. This pattern is quite robust in Northern Italian varieties; in (23) we exemplify just one of them, the Piedmontese variety of Castellazzo Bormida; note that a topic also precedes the wh-phrase.

(23) marjo dall'wɔ k u drwɔm Castellazzo
Mario where that he sleeps
'Where does Mario sleep?'

Rizzi’s (1997) articulated left periphery provides an excellent fit to the data in (22)–(23) (cf. the discussion of Northern Italian dialects by Poletto (2000)). Recall that for Rizzi there are three C positions namely $C_{\text{Force}} - C_{\text{Focus}} - C_{\text{Finiteness}}$ in this order; in between there are topic positions, while focus is hosted in the Spec of the Focus head. Following Rizzi (1997), we may analyze (22) as a consequence of the embedding of the complementizer in the higher C position, namely Force, where it is followed by topic and focus material. In turn, examples like (23) can be analyzed as involving the positioning of the complementizer in the lower C position (Finiteness) where focus and topic phrases precede it.

Under the view that we are defending here, examples of the form in (22) are not problematic, since we expect that the sentence embedded under the nominalizing che-element can in principle include topic and focus material, along the lines of (24a) (see Section 5 for more discussion of embedded Main Clause Phenomena). However, one may wonder what sentential skeleton supports the left peripheral material in examples like (23), if $k$ is a Q element, as opposed to the low C of Rizzi (1997). We propose that precisely because the complementizer is the head of an independent constituent, it is in principle possible to postulate a left periphery for it as well. In this schema of explanation, therefore, the wh-phrase that precedes $k$ in (23) belongs to the left periphery of the complementizer itself, roughly as in (24b).

(24) a. $[Q\text{ che } [\text{Top}\text{ loro } [\text{Foc}\text{ questo } [\text{IP} ... $$

b. $[\text{Top}\text{ marjo } [\text{Foc}\text{ dallwɔ } [Q\text{ k } [\text{IP} ... $$

At this point the important question arises of whether a left periphery of the type in (24b) is restricted to complementizer headed noun phrases or whether it can associate with noun phrases in general. To the extent that the structure of noun phrases parallels that of sentences, noun phrases are predicted to host left-peripheral material exactly as sentences do (Szabolcsi 1994). Yet sentences can host question operators, which ordinary noun phrases cannot host. Within the model that we are suggesting,
this asymmetry can be captured on semantic grounds. Thus nouns introducing propositional variables – i.e., complementizers – will support the relevant set of operators, whereas ordinary nouns will not. In fact, the generalization about the positioning of left peripheral material seems to be essentially the same already reviewed for ‘escape hatches’. The distinction between individuals and propositions with respect to the ability to support certain operators is stipulated here. But exactly the same is true of Chomsky’s (1973) original proposal of a C(OMP) node providing an ‘escape hatch’ for Subjacency in S(entences) but not in NPs. From an empirical point of view, the crucial point is that our hypothesis accounts both for data in which the complementizer has topic and focus material to its right, as in (22) and for data in which it has topic and focus material to its left, as in (23), and thus matches the descriptive power of an articulated C field of the type in Rizzi (1997). Yet the two theories are obviously not notational variants. In particular, if left-peripheral material occurring after the complementizer is associated with the embedded sentence, as in (24a), while left-peripheral material occurring before the complementizer is associated with the left periphery of the complementizer itself, as in (24b), we predict that the two left peripheries should be combined. The simplest verification of this prediction is that topics can not only precede the cluster of *wh*-phrase and *che*, but they can also follow it, as in (25).

(25) \[\text{dal'lwɔ kǝ r mat r drɔm } \text{Castellazzo} \]

where that the girl she sleeps
‘Where is the girl sleeping?’

Data of the type in (25) are associated by the present theory with structures of the type in (26), in which the left periphery projected by the complementizer combines with the left periphery projected by the sentence embedded under it. In other words topic and focus material both precede and follow the complementizer in the same example.5

(26) \[\text{[Foc dallwɔ [Q kǝ [Top r mat [IP ...} \]

Poletto (2000), working essentially within Rizzi’s (1997) framework, argues (for comparable examples) that *che* is inserted in an intermediate position of the C field, distinct from the higher C position (Force for Rizzi (1997)) involved in examples like (22), and from the lower C position (Finiteness for Rizzi (1997)) involved in (23). Thus, theories of CP recursion can match the descriptive power of the present theory by postulating three separate complementizer positions. This type of account takes advantage of one of the descriptive strengths of cartographic theory, namely the

5. We assume that the embedded subject doubled by the subject clitic is a topic. Manzini and Savoia (2005, 2011) also discuss examples involving subject clitic inversion, i.e., V-to-C, under *wh*-che sequences.
possibility of fine-tuning the functional hierarchy to match subtler data. This, however, is also one of its main drawbacks, since it is not clear that there is any order that it could not accommodate. The present account is more restrictive, since it basically only allows for two (potentially identical) series of elements to the right and to the left of the complementizer with no possibility for further expansion. To the extent that this theory is descriptively adequate, it seems preferable, precisely because of its relative rigidity.

In short, the preceding discussion suggests that selection, islands and constituent order in the left periphery do not necessarily require complementation and other wh-structures to be differentiated by syntactic labelling. On the contrary, the interpretive properties of lexical heads and the way they combine are sufficient to provide the required differences. In all three cases (islands, left periphery, order) the basic contrast seems to be the one between sentential operator (complementation) vs. individual operator (relatives and questions).

4. The interaction with (non-)finiteness

Finiteness provided the basis for Kayne’s (1976) distinction between que/che as complementizer in declarative and relatives and as wh-item in questions. Consider Italian, where che ‘what’ introduces both finite and infinitival questions, as illustrated in (1c) and (1d). We repeat the relevant examples in (27), providing tensed and untensed alternatives for both matrix and embedded contexts.

(27) a. _Che fai/fare?_ 
   what you.do/to.do
   ‘What are you doing/to do?’

   b. _Non so che fai/fare_ 
   not I.know what you.do/to.do
   ‘I don’t know what you do/to do.’

In contrast with (27), complementizer che is restricted to finite contexts; infinitival embeddings involve prepositional introducers like _di_ ‘of’ in (28a). The same is true of relative che as in (28b).

(28) a. _Mi hanno detto di/*che essere venuti_ 
   to-me they.have said to/that be come
   ‘They told me that they had come’

6. See Manzini and Savoia (2005, 2011) for a treatment of double complementizers in terms of the recursion of this structure.
b. *il libro da/*che leggere
   the book by/that read
   'the book to read/be read'

The issue is complicated by the fact that finiteness is not as clear a notion as one may hope. Finiteness has two components – one relating to tense/mood/aspect, and another relating to agreement. Luckily, some Romance languages allow these two components to be distinguished, since they feature agreeing infinitives. A case in point are Sardinian varieties, including Paulilatino in (29). Both inflected and non-inflected infinitives can be introduced by a prepositional complementizer, as in (29a) – but inflected infinitives also allow for the finite complementizer, as in (29b), as independently observed by Jones (1993). The finite complementizer, then, is sensitive not to the temporal/modal/aspectual properties of the verb, but to the presence of an agreement inflection.

(29) a. ... innantis de 'ennere-(ne) 'iɛzɛɾ Pualilatino
   ... before to come-3PL they
   '... before they came'

b. ... innantis ki 'ennere-ne 'iɛzɛɾ
   ... before that come-3PL they
   '... before they came'

We assume that the so-called agreement inflection of the finite verb is a lexicalization of the EPP argument of the sentence (Manzini & Savoia 2005, 2007). If no lexicalization of the EPP argument is present, either by an inflection or by a lexical subject, as is the case for non-inflected infinitives, the EPP argument is introduced as a variable at the interpretive interface (Manzini 2009). This variable can then be given a bound reading (control/raising) or a generic reading (arbitrary control). In such terms, the restriction of the che complementizer to finite sentences – including inflected infinitivals – can be restated as its incompatibility with an EPP variable. We assume that the presence of an EPP variable within the sentence defines an open predicate, rather than a proposition. If the finite complementizer of Romance, (English etc.) takes a proposition as its complement, it will be incompatible with the open expression resulting from the presence of the EPP variable, yielding (28a).7

---

7. Our analysis makes a striking prediction, namely that the complementizer will not be able to embed even a finite sentence whose EPP requirement is satisfied by a variable. This essentially is the that-t filter, which Roussou (2010) independently accounts for by assuming English that requires a propositional complement, excluding a variable EPP argument. On the other hand, according to the classical conclusion of Taraldsen (1978), languages like Italian lack that-t filter effects in that they are null subject languages. We assume that in null subject languages the morphological-level argument (the inflection) suffices to satisfy the EPP; the latter therefore closes off the proposition even in instances of wh-extraction from the EPP position.
A twist on the finiteness problem is introduced by the ‘if’ complementizer. In a language like Italian, hypothetical se ‘if’ is restricted to finite sentences, as in (30a), while interrogative se normally occurs in front of infinitival questions, as in (30b). Now, recall that in Laconi the same tfi form lexicalizes both the declarative complementizer and the polarity (i.e., hypothetical/question) one. As it turns out, while declarative tfi is restricted to finite sentences, interrogative tfi combines with infinitivals, as in (31).

(30) a. *Se piovere, ...
   if to.rain
   ‘I don’t know whether to go out.’

   b. Non so se uscire
      not I.know if to.go.out
      ‘I don’t know whether to go out.’

(31) nɔ tfiˈʃi uʃdu tʃɛrriˈai  Laconi
      not I.know if him to.call
      ‘I don’t know whether to call him.’

In the discussion in Section 2, we interpreted the interrogative complementizer as a wh-element ranging over propositions in the scope of a question operator. We must conclude that this interpretation makes Italian se or Laconi’s tfi compatible with embedded EPP variables. By contrast, hypothetical tfi and se observe exactly the same restrictions as tfi or che introducing complement sentences. In other words, what removes the finiteness restriction is the question operator.8

8. The present analysis can be usefully compared with that of Kayne (1991), for whom the finiteness constraint on French si or English if depends on the fact that the PRO is governed by the complementizer and hence excluded by it. For Kayne, the lack of such a constraint on Italian interrogative se is due to the relatively high position of the infinitive, which protects PRO from government by the complementizer. That the position of the infinitive is higher in Italian than in French (or English) is shown, according to Kayne (1991), by the fact that the clitic precedes the infinitive in French, while it follows the infinitive in Italian. However, Kayne (1991:95) acknowledges that his theory ends up incorrectly predicting that Italian che is compatible with the infinitive, since on the evidence of cliticization the infinitive is in the same high position in both complement and interrogative sentences. Similarly in Laconi the tfi complementizer does not combine with infinitival declaratives, as predicted by Kayne (1991) on the basis of the preverbal position of the clitic, but combines with infinitival questions, despite the fact that the position of the clitic and hence of the infinitive does not vary.

Under Kayne’s (1991) account, whether is oblivious to the finiteness of the sentence it embeds because it is not a complementizer at all, but a wh-phrase – where these two notions are given a structural characterization, as a C head and a C Specifier respectively. However, a structural characterization as a C Specifier cannot be applied to Laconi’s tfi in interrogatives – since we would then not be able to predict that the same element excludes non-finite sentences in declarative contexts.
To reiterate our conclusions, the question context removes the finiteness requirement on propositional tʃi in Laconi, which can introduce infinitival interrogatives, as in (31), though not declaratives or hypotheticals. If this is so, we can equally say that it removes the finiteness requirement on individual che, which can then introduce infinitival questions, as in (27), though not relatives, as in (28b). This means that the contrast in (27) vs. (28) does not depend on che being a wh-phrase in (27) and a complementizer in (28) (contra Kayne (1976)); rather, che in (28b) is the relative pronoun (i.e., individual operator) of traditional descriptions. Finally, in Italian the propositional variable in the scope of an interrogative operator is introduced by se, as in (30); se behaves like tʃi in Laconi, with the finiteness restriction lifted in interrogatives, but not in hypotheticals.9

In several respects, the picture presented so far is still a simplified one. Consider for instance French que. According to Obenauer (1976), Goldsmith (1981), que appears regularly with matrix infinitival questions, as in (32a), but only in some embedded infinitival contexts, for instance in (32b) with je ne sais que, but not in (32c) (where quoi is found instead).10

(32)  
(a) Que faire avec ma vie?  
what to.do with my life  
‘What to do with my life?’
(b) Je ne sais que faire  
I not know what to.do  
‘I don’t know what to do.’
(c) Je lui ai demandé quoi faire avec ses valises.  
I him have asked what to.do with his bags  
‘I asked him what to do with his bags.’

One obvious difference between (32b) and (32c) is represented by the presence or absence respectively of the negation operator – and some modal operator seems also to be implied by the interpretation of the matrix question in (32a). Quite interestingly, in several Italian varieties the presence of a negative operator licences an infinitival relative introduced by che. For instance, in Camporeale (Sicily) in (33), relatives

9. While Italian se or Laconi tʃi can introduce infinitival questions, neither English if nor French si can do so (cf. Footnote 8). In present terms, this means that French si and English if must embed complete propositions, even if they are construed in the scope of an interrogative operator.

10. There is at least one complicating factor – namely that que cannot introduce embedded finite interrogatives. The literature (Poletto & Pollock 2004; Sportiche 2011) suggests that this might be tied to another requirement on que, namely that in finite matrix sentences it always occurs with subject clitic inversion. We are agnostic about this matter.
headed by a negative polarity item can be introduced by *ki* as well as by a preposition. In early Italian in (34), it is fairly normal to find infinitival relatives introduced by *che* when the head is a bare N in negative polarity contexts (Brambilla Ageno 1964:402–403).

(33)  

\[
\text{unn aju nentt di/}ki\text{ dari-tt} \quad \text{Camporeale}
\]

\[
\begin{array}{l}
\text{not I have nothing of/that to give-you} \\
\text{‘I don’t have anything to give you.’}
\end{array}
\]

(34) a.  

\[
\text{Non ho carlino che in borsa portare} \\
\begin{array}{l}
\text{not I have penny that in my.purse carry} \\
\text{‘I don’t have a penny to carry in my purse.’}
\end{array}
\]

\text{(Cronica aquilana rimata di Buccio di Ranallo 136, 6)}

b.  

\[
\text{Non avevano quasi pane che mangiare} \\
\begin{array}{l}
\text{not they had almost bread that to.eat} \\
\text{‘They hardly had bread to eat.’}
\end{array}
\]

\text{(Le novelle di Gentile Sermini da Siena 32, 364)}

Similarly in negative polarity contexts, several varieties which do not have infinitival relatives introduced by *che* nevertheless allow for free relatives introduced by *che*, as shown for Guglionesi in (35a) and for Italian in (36).

(35) a.  

\[
\text{non tingo ka mmanyne/ffa} \quad \text{Guglionesi}
\]

\[
\begin{array}{l}
\text{not I have what to.eat/to.do} \\
\text{‘I don’t have anything to eat/to do.’}
\end{array}
\]

b.  

\[
\text{non tingo njendo da dotf} \\
\begin{array}{l}
\text{not I have nothing to say} \\
\text{‘I don’t have anything to say.’}
\end{array}
\]

(36)  

\[
\text{Non hanno che/da mangiare}
\]

\[
\begin{array}{l}
\text{not they have what/ by to.eat} \\
\text{‘They don’t have anything to eat.’}
\end{array}
\]

The data in (32)–(36) strengthen the conclusions reached before on the finiteness restriction. Specifically, we propose that the non-veridical negation operator, like the non-veridical question operator, removes the finiteness (EPP-completeness) requirement on *che* complements in the free relatives of Italian and Guglionesi in (35)–(36) and on the headed relatives of early Italian and Camporeale in (33)–(34). In turn, French is a language where the question operator needs to be supported by the negative operator in order to licence *que* in infinitival questions, as in (32).

In short, the finiteness constraint imposed by *che* on its sentential complements (formally an EPP-completeness requirement) does not hold when *che* is read in the scope of a non-veridical operator. As a consequence, *che*, both as an argument (cf. Italian (27)) and as a complementizer (cf. Laconi’s (31)), can introduce infinitival questions, i.e., infinitival sentences in the scope of a question operator. Other
non-veridical operators, in particular negation, play a role in licencing *che* in infinitival relatives and free relatives, as well as in infinitival questions in French (cf. (32)–(36)).

5 Conclusions: Main Clause Phenomena

Complementizers represent one of the fundamental asymmetries between embedded and main clauses. We may therefore want to consider whether the proposals we put forward favor some particular perspective on Main Clause Phenomena – i.e. on their exclusion from a subset of embedded contexts.

In general, the approach we are taking does not sit easily with the ‘syntacticization of semantics’ embodied by functional hierarchies and most often associated with the cartographic approach (Cinque & Rizzi 2008). Thus in Section 3, we have seen that under the present analysis, selection, island and order phenomena refer directly to interpretive primitives (for instance the propositional or individual content of the variable introduced by *che*). This means that the present proposal is incompatible with truncation treatments of embedded Main Clause Phenomena, to the effect that certain adverbial clauses have a less extended left periphery available to them (Haegeman 2006), simply because there is no functional hierarchy to which the truncation could apply.

Haegeman (2007), on the other hand, analyzes temporal clauses as involving movement of a *wh*-like temporal operator (Larson 1987), and argues that the impossibility of embedding left-peripheral material in temporal clauses depends on the fact that this material creates a Minimality intervener for the movement of the temporal operator. Haegeman (2011) in turn adopts the syntax of Bhatt-Pancheva (2006) for conditionals as free relatives, and accounts for restrictions on the left-peripheral material they embed in the same way as for temporal clauses, assuming that the free relative (i.e., conditional) operator also moves. As discussed by Haegeman (this volume), the movement account derives the truncation account, rather than representing an alternative to it. At the same time, it does not require a rigid ordering of the left periphery, since mutual exclusions are the consequence of general movement constraints. As Haegeman notes, the fact that Main Clause Phenomena are generally allowed in complement clauses is also compatible with the (free) relative analysis of complementation defended in this chapter, provided the variable bound by the complementizer is high enough that topics/foci do not intervene on its path.

For De Cat (this volume), Larson and Sawada (this volume), however, any syntactic treatment, including the movement one, is insufficient to capture facts that depend on the interpretive economy of the sentence, rather than on its syntactic make-up. Both quote contrasts like the one in (37). According to Hooper and Thompson’s (1973) original proposal, Root Transformations are possible in asserted but not in presupposed sentences – hence in (37a), where the *because*-clause is asserted, but not in (37b) where the *because*-clause is presupposed.
Larson and Sawada suggest that presupposed sentences correspond to the restriction of event quantifications, while asserted sentences correspond to the scope of the quantification. For instance, in (37a) the main clause material provides the restriction on an existential quantification and the subordinate because clause supplies its scope, i.e. 'For some event x of stopping eating by Helen and Jack, x was because the children trooped into the room'. This is reversed in (37b), where the because clause provides the restriction and the main clause the scope. Correspondingly, Larson and Sawada's generalization is that Root Transformations are possible in scopes, hence in the because clause in (37a), but not in restrictions, hence not in the because clause in (37b). The explanation they suggest for their generalization is that Root Transformations introduce an existential closure in the sentences where they occur. Clauses that restrict the event quantification, like the adjunct clause in (37b), are incompatible with this existential closure, while those that are in the scope of the quantification are compatible with it, as is the case for the adjunct clause in (37a). The point is that the movement theory of Haegeman does not capture the contrast in (37), because it is entirely placed within the computational component; hence it cannot make reference to such LF interface notions as restrictors vs. scope, let alone pragmatic notions such as asserted vs. presupposed.

Interestingly, the discussion of Main Clause Phenomena/Root Transformations just reviewed revolves around the same fundamental question as much of the discussion about complementizers in the rest of the chapter, i.e., whether the right level of explanation for the relevant phenomena is the computational component (working on syntactic labels, functional hierarchies, etc.) or rather the LF interface, where quantificational structure and related notions (for instance propositional vs. individual variables) come into play. Given their interconnection, it is possible that the answer will ultimately be the same in both domains. In any event, what we have argued here is that complementizer phenomena target interpretive primitives at the LF interface.

References

The status of complementizers in the left periphery


Minimality and embedded V2 in Scandinavian*

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The paper focuses on the syntactic and interpretive properties of subordinate clauses in Mainland Scandinavian and Icelandic. Assuming a cartographic CP structure (Rizzi 1997; Haegeman 2006, a.o.), the syntactic properties and distribution of embedded V2 in Scandinavian follow from restrictions imposed by information structure and are explained in light of relativized minimality. It is argued that the final interpretation each embedded clause receives is the result of the specific derivation of such a clause. It is proposed that embedded V2 and topicalization result from V-to-Fin and D-linking of a topic, which is an operator that A′-moves through Spec,FinP. The ungrammaticality of embedded topicalization and V2 in certain clauses (e.g. factive, Wh- or relative clauses) is explained as the result of minimal intervention effects with the operator that derives the clause and contributes to the interpretation of the sentence.

1. Introduction

In Scandinavian languages, the V2 requirement holds for all main clauses and is basically realized through two different types of sentences with the linear order illustrated in (1).

(1) a. XP V S …
    b. S V (Adv/Neg)…

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As it is, (1) does not tell us anything about the real position of the constituents, but merely illustrates the surface linear order, which is ambiguous with respect to the scope of the verb and the target position of the preverbal constituent.

The order in (1a) indicates that any non-subject constituent with a proper feature specification can precede the verb and gives rise to verb-subject inversion. By contrast, the preverbal element in (1b) is the subject.

The main problematic aspects in understanding the syntax of V2 clauses can be schematically summed up as follows:

i. How can we determine the scope of verb movement?
ii. Is there a root/embedded asymmetry?
iii. Is there any structural difference between subject and non-subject initial V2 clauses?

i. The claim that the verb always reaches the complementizer field in Germanic main clauses (cf. Vikner 1995, a.o.) is originally based on the following observations: there is a complementary distribution between V2 and complementizers in embedded clauses of West Germanic languages (Dutch, German, see Den Besten 1977/1983; Platzack 1985), and subject-verb inversion is triggered when another constituent is topicalized (cf. 1a), which resembles the inversion found in root Wh-questions, for instance.

ii. The distribution of V2 in Scandinavian embedded clauses has been extensively discussed (Vikner 1995; Holmberg & Platzack 1995 and ref. therein; Rögnvaldsson & Thráinsson 1990; Brandtler 2008; Hröarsdóttir et al. 2007; Wiklund et al. 2007, 2009; Julien 2007 and 2009; a.o.). Following the proposal that cases of embedded V2 may result from verb movement to the CP field (cf. Vikner 1995 for a detailed comparative analysis), two main approaches attempt to explain embedded V2 in languages where the complementizers are not in complementary distribution with verb movement, e.g. Scandinavian languages, (cf. Heycock 2005): (a) embedded V2 is possible in clauses with a recursive CP (Vikner 1991, 1995; Holmberg & Platzack 1995; Watanabe 1992; Iatridou & Kroch 1992, cf. Vikner & Schwartz 1996); (b) verb movement targets a lower projection, so no complementary distribution with complementizers is predicted.

iii. Given that V2 is generalized to all main clauses in Scandinavian languages, it has been assumed that also subject-initial clauses (i.e. 1b) have V-to-C.1

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1. The reader interested in Faroese is referred to Thráinsson et al. (2004) and Bentzen et al. (2009), a.o.

2. See Zwart (1997) for an asymmetric treatment of V2, according to which the verb targets a lower position in the IP field, in subject-initial clauses.
Accordingly, both preverbal subjects and non-subjects should target the same position (or domain), but what distinguishes non-subject initial V2 clauses, cf. (1a), from subject-initial V2 ones, cf. (1b), is the character of the first position, which ideally should be A’ in the former case, but A in the latter. This difference can be accounted for by either postulating that there is a subject position in the C-domain (cf. Platzack 2009; Poletto 2000 for Romance varieties) or that the specifier of the C-head may have both A- and A’-properties (cf. Haebeleri 2002). I disregard the details of this debate and assume that subjects can A-move to the C-domain without being A’-extracted.

In this paper, I take Norwegian and Swedish as paradigmatic languages for the Mainland Scandinavian system. By contrast, the Insular Scandinavian system is represented here by Icelandic only. The Faroese system has much more complex behavior which cannot be properly addressed in this paper.3 I propose that genuine cases of embedded V2 have V-to-Fin, i.e. the verb targets the lower complementizer position in a Split-CP system (Rizzi 1997; cf. Wiklund et al. 2007). By “genuine” here, I mean clauses where the verb moves higher than sentential adverbs in Mainland Scandinavian. For Icelandic, I assume that the position of the verb is not exclusively determined by a CP trigger, but may also depend on mood marking (cf. Franco 2010b), by V-to-I, as proposed by Vikner (1995); Bobaljik and Thráinsson (1998); Thráinsson (2010), a.o.

The proposal advanced in the paper capitalizes on the observation that the availability of V-to-Fin seems to depend on specific interpretative properties attributed to the sentence containing a V2 complement. This possibility is explained in syntactic terms as the result of a feature-checking mechanism probed by FinP, which encodes a [finiteness] feature (Rizzi 1997; Eide 2008) and may require a specification by a D-linking operator (OP), by virtue of its double verbal/nominal nature. Checking of [finiteness] is operated by V-to-Fin, whereas preverbal topics become D-linked by moving through Spec,FinP. The interpretation resulting from V-to-Fin is that the event expressed by the clausal predicate is independently anchored to the discourse. Clauses where V-to-Fin and embedded topicalization are impossible are derived by movement of a different OP, which binds a variable merged in the lexical domain (strong island contexts) or in the functional domain of the clauses (as for weak factive islands). Each type of OP-binding mechanism assigns a specific interpretation to the clause, for instance the propositional content of factive clauses is interpreted as presupposed. This

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3. I disregard the details of the debate on the scope of verb movement in Icelandic embedded V2 clauses, namely whether it is due to independent V-to-I (Holmberg & Platzack 1995 and 2005; Rögnvaldsson & Thráinsson 1990; Thráinsson 2010, a.o.) or V-to-C (Hróarsdóttir et al. 2007; Wiklund et al. 2009). Cf. Footnote 1 above.
account for the syntactic derivation of non-V2 clauses correctly predicts minimality effects with embedded topicalization.

The paper is structured as follows: Section 2 briefly illustrates the distribution of V2 in different types of embedded clauses; Section 3 presents the proposal: the ungrammaticality of embedded V2 is explained by the hypothesis that the A′-movement of a (non-subject) argument to a preverbal position triggers minimality effects with the movement of a subordinating OP. In Section 4, the scope and trigger of verb movement in V2 clauses are accordingly defined.

2. Distribution of embedded V2 in Scandinavian

With respect to embedded V2, Scandinavian differs from West Germanic in that verb movement is not in complementary distribution with overt complementizers. Scandinavian embedded V2 may surface in either of the two options given in (2) below (cf. with main clause V2 in (1) above).

(2) a. C XP V S …
    b. C S V (Adv/NEG)…

The two orders illustrated in (2) have a different distribution in embedded contexts, which has been discussed in previous literature (see Wiklund et al. 2009, a.o.) and can be accounted for by a comparative analysis of clause-typing. Due to the restricted distribution of clauses with the order in (2a), Scandinavian languages have been referred to as “limited embedded V2” (Vikner 1995:65), in contrast to West Germanic (e.g. German).

In line with the facts presented in this paper, the difference concerning embedded V2 in Mainland Scandinavian and Icelandic can be summed up as follows:

(3) a. Mainland Scandinavian has “limited embedded V2”, that has been attributed to the selectional properties of bridge-verbs (Vikner 1995), but this proposal has some problems (Hróarsdóttir et al. 2007, Julien 2007). When embedded V2 is not possible, the clause can neither have the order in (2a) nor the one in (2b);

b. According to Vikner (1995) Icelandic has so-called “symmetric V2”\(^4\), since V2 is found also in non-complement clauses, such as relative clauses, and clauses in adjunct or subject position (Heycock 1995, and

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\(^4\) The alleged “symmetry” results from linear constraints on word order. In Icelandic the verb is in second position both in main and subordinate clauses, whereas Mainland Scandinavian languages display a more salient root/embedded asymmetry due to the fact that the verb generally follows phrasal adverbs and negation in subordinate clauses.
ref. therein). Nonetheless, some clauses can only have the order in (2b), not the one in (2a), in Icelandic; i.e. in some clauses no topicalization is possible but subject-initial V2 is attested.

In a recent paper, Hrafnbjargarson and Wiklund (2009) challenge the claim that Icelandic has so-called symmetric V2, however, and remark that some clauses allow the order in (2a) but impose a restriction on the type of fronted XP. For instance, locative and temporal phrases can be topicalized more freely than argument phrases, also in weak-island contexts (i.e. factive clauses, cf. Hrafnbjargarson & Wiklund (2009) for data and a fine-grained distinction).

2.1 Declarative complements

According to the data presented by Hróarsdóttir et al. (2007), and Wiklund et al. (2009), embedded non-subject initial V2 is possible only in a restricted range of contexts both in Mainland Scandinavian and Icelandic. This type of V2-clause necessarily involves V-to-C, since the presence of a preverbal non-subject constituent (here simply referred to as “topic”) “forces” verb-subject inversion. Apparently, non-subject initial embedded V2 clauses have a similar distribution in all Scandinavian languages, although a non-V2 clause (i.e. where the verb follows sentential adverbs or negation in a subject-initial clause) is in principle “always an option” in Mainland Scandinavian embedded contexts (Brandtler 2008; Julien in prep.), whereas the situation is exactly the opposite in Icelandic (i.e. V3 orders are marginal, when accepted, cf. Angantýsson 2007).

It has been argued that the distribution of embedded V2 in declarative complements varies according to the selectional properties of the matrix predicate (cf. Hooper & Thompson’s 1973 classification, Hróarsdóttir et al. 2007; Julien 2007 and in prep.; Wiklund et al. 2009; Hrafnbjargarson & Wiklund 2009). These properties are summed up as follows. (i) Assertive and weak assertive complements, complements to some perception verbs and to verbs indicating a mental state (see Wiklund et al. 2009 for details) allow embedded V2 both with the linear order given in (2a) (non-subject-initial V2) and the one in (2b) (subject-initial V2) in Icelandic as well as in Mainland Scandinavian. In other words, both verb movement and topicalization may obtain in these complements in the two language groups. (ii) Factive complements, non-assertive complements or complements to modified/negated assertive and semi-factive verbs generally have a different behavior in Icelandic and Mainland

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5. Icelandic and Mainland Scandinavian are not the same, because in Icelandic "the word order V>Neg is found also in contexts where the same word order is impossible in the Mainland Scandinavian languages" (Wiklund et al. 2009).
Scandinavian. With some degree of variation both subject-initial and non-subject-initial V2 is ungrammatical in Mainland Scandinavian (see (5) below), whereas Adv/Neg-V orders are grammatical. I will propose that the variation depends on the interpretation assigned to the entire clause, rather than on fixed selectional properties of the matrix predicate (cf. Section 3). In Icelandic, subject-initial V2 (as in 4b) is the default option, whereas S Adv-V orders are marginal, if not ungrammatical (see Angantýsson 2007 & Thráinsson 2010).

(4) Non-assertive/Factive complements:
Hann sá eftir
he regretted
a. *að þetta lag hafði hann ekki sungið
that this song had he not sung
“He regretted that he didn't sing this song”
b. að hann hafði ekki sungið
that he had not sung
“He regretted that he had not sung”

[Hróarsdóttir et alia (2007), 56: (18); (19)]

(5) *Han ångrade
He regretted
a. att den här sången hade han inte sjungit
that this here song.the had he not sung
“He regretted that he didn't sing this song”
b. att han hade inte sjungit
that he had not sung
“He regretted that he had not sung”

[Hróarsdóttir et alia (2007), 58, 59: (23);(22)]

(iii) Hrafnbjargarson and Wiklund (2009) argue that in Icelandic, a V2 clause formed by a preverbal topic and V-S inversion is an acceptable complement to a factive verb like hárma, but not to the predicate sá eftir (both verbs mean “to regret”). They attribute this difference to the pragmatics of the two predicates (the first can embed a clause containing new information for the addressee, whereas the latter cannot), which is also compatible with the present proposal.

Points (i)–(iii) provide only a descriptive generalization which excludes more controversial facts. In some cases, modified or negated semi-factives or assertive predicates allow embedded topicalization not only in Icelandic but also in Mainland Scandinavian.6 The presence of embedded V2 in Mainland Scandinavian seems to

6. For an example of embedded topicalization under negated semifactives and assertive verbs, see Section 3.
depend on specific interpretative properties attributed to the sentence containing a V2 complement. This possibility is explained in syntactic terms by the proposal in Sections 3–4.

On the one hand, the fact that semi-factive predicates such as “to know” may select V2 complements (with either S-V-Adv order or preverbal topics) in all Scandinavian languages indicates that factivity per se is not a good criterion to discriminate V2 from non-V2 complements. On the other hand, the restrictions on embedded V2 display an interesting correlation with the presence of a syntactic island (weak factive islands, negative islands, Wh-islands).

Let us assume that Scandinavian embedded V2 patterns as illustrated above (cf. (i)–(iii); Wiklund et al. 2009; Bentzen 2010 and Hrafnbjargarson & Wiklund 2009). We can now infer which types of predicates/matrix clauses select V2 complements on the basis of (i)–(iii). Two questions arise at this point: Question 1. What blocks topicalization in declarative complements to (most) non-assertive and factive predicates in Scandinavian? Question 2. What triggers verb movement in certain clause-types in Icelandic but blocks it in their Mainland Scandinavian correlates?

The importance of providing complete, separate answers to questions 1 and 2 is crucial for understanding the mechanisms yielding surface V2, and disambiguating the scope of verb movement. Some recent accounts propose that Scandinavian embedded V2 is related to the interpretation of the whole matrix clause (Julien 2007); or to the possibility that the subordinate clause is interpreted as expressing the so-called Main Point of Utterance (MPU, conveying the pragmatically relevant content of the sentence, Wiklund et al. 2009, following Hróarsdóttir et al. 2007). Nevertheless, a clear definition of the syntactic licensing conditions for embedded V2 has not been given yet (although Bentzen 2010 discusses the possibility of a minimality-based approach).

Moreover, an account of embedded V2 based on its pragmatics cannot be applied to Insular Scandinavian, or at least not to Icelandic, since Icelandic can have embedded surface V2 even in those clauses where it is not “pragmatically” expected by the aforementioned accounts. Rather, a syntactic explanation for the target of verb movement in Icelandic embedded clauses is required (cf. Question 2 above). There is reason to believe that the pragmatics of Icelandic embedded clauses is connected to different syntactic properties of this language. In recent work (Franco 2010b), I suggest that the presence of morphological subjunctive in Icelandic (but not in other Scandinavian languages) enables the activation of a syntactic mood-checking mechanism, with different, mood-related, interpretive properties. The resulting word order is surface linear V2 order, but this is due to the encoding of Mood in the high IP field, and to scope interaction with other sentential adverbials.

Regardless of the different interpretations that V2 vs. non-V2 clauses may have, a separate issue is which syntactic device blocks topicalization in the embedded clause
types considered so far (cf. Question 1). This question extends to other clause-types where topicalization is not possible.

2.2 Other types of subordinate clauses

In this subsection, I first discuss non-subject initial V2 and then subject-initial V2 clauses. In addition to clauses that usually display weak island properties (e.g. factive or modified/negated assertive complements), other clause-types do not allow non-subject initial V2 in Scandinavian.

Typical non-V2 subordinate clauses in Mainland Scandinavian are those derived by A′-dependencies (relative clauses; indirect Wh- questions), as well as indirect Y/N questions and certain adverbial clauses. Compare the declarative non-subject initial complements in (4) and (5) to the relative clauses in (6) and the indirect questions in (7):

(6) Relative clauses
   a. *stelpan [sem bókina gaf Haraldur ekki] (Icelandic)
      girl.the that book.the gave Harald.NOM not
      “The girl to whom Harald didn't give the book”
   b. *den flicka [som sitt hår har kammat] (Swedish)
      the girl that her hair has combed
      “The girl that has combed her hair”

(7) Indirect Wh- questions
   a. *þeir spurðu [hvern í beinn] (Icelandic)
      they asked who to town.the
      hefði rútan flutt klukkan sjö
      had bus.the carried clock seven
      “They asked whom the bus had carried to town at seven o’clock.”
   b. *Jag undrade [vem (som)] (Swedish)
      I wondered who that
      till partner skulle hon välja
      as partner would she choose
      “I wondered who she would choose as a partner”

The ungrammaticality of topicalization in extraction contexts (e.g. relative or interrogative clauses) can be explained in terms of minimality, i.e. argument topicalization creates an island for A′-extraction in Germanic. For this reason, non-subject initial V2 is often considered a root phenomenon (de Haan 2001; Heycock 2005 for references), obtaining in embedded clauses with root status, but not in clauses that are dependent on a matrix, i.e. real subordinates. This paper shares the idea that embedded (non-subject initial) V2 is not
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straightforwardly interpretable as a root phenomenon (Heycock 2005),7 following the suggestion made for the interpretation of English contrastive topics (Bianchi & Frascarelli 2009).

With regard to adverbial clauses, Hrafnbjargarson and Wiklund (2009) argue that embedded topicalization, when possible, is limited to certain types of clauses, even for speakers of the less restrictive variety of Icelandic (Icelandic A, cf. Hrafnbjargarson & Wiklund 2009: 27–28). Specifically, temporal and conditional clauses pattern together with embedded Wh-clauses 8 in not allowing any kind of preverbal topic in any Scandinavian language. By contrast, concessive, purpose and reason clauses may allow a topic, not only in Icelandic but also in Swedish, “if the fronted element is a spatial or temporal adjunct” (Hrafnbjargarson & Wiklund 2009:29):

(8) *Han gömde sig så att hela dagen* he hid self so that whole day:the
    *skulle hans mor tro att han var på skolan* would his mother believe that he was at school:the
    “He hid himself so that his mother the whole day would think that he was at school” [Hrafnbjargarson & Wiklund (2009): 29, 13b]

With regard to subject-initial clauses, Mainland Scandinavian patterns differently from Icelandic once again. On a par with those declarative complements where non-subject initial V2 is not possible (cf. Section 2.1), neither subject-initial relative clauses nor indirect questions can have verb movement across a sentential adverb or negation in Mainland Scandinavian, as (9b) and (10b) show. By contrast, the common9 linear order of these types of clauses in Icelandic is (C) S V Adv/Neg, as illustrated by examples (9a) and (10a).

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7. Nor is V2 analyzed as the straightforward result of the selectional properties of the matrix verb (e.g. Vikner 1995, who defines classes of “bridge verbs” on the basis of their semantic features).

8. In hvort- (whether-) clauses topicalization is more acceptable. Cf. also Thráinsson 2007 and the discussion in Section 3.

9. According to Angantýsson (2007), and data I collected in a small survey of 7 Icelandic speakers of different ages, (C) S Adv V orders are also possible in some subordinate clauses, although only marginally accepted in many cases. Interestingly, V3 orders are more acceptable in relative clauses and indirect questions, whereas they are usually rejected in contexts where embedded topicalization is an option (e.g. in declarative complements of assertive predicates, see Angantýsson 2007 for details). This restriction on V3 is explained by assuming that V-raising depends on a specific feature-checking requirement active in some clause-types but not in others, cf. Section 4.
(9) Relative clauses

a. *maðurinn sem hann talar stundum við* (Icelandic)
   man-the that he talks sometimes to
   “The man to whom he sometimes talks”

b. *den flicka som inte har/*har inte kammat sitt* (Swedish)
   the girl that not has/has not combed her
   hår än
   hair yet
   “The girl that hasn’t combed her hair yet”

(10) Indirect Wh- questions

a. *Maria spurði hvern hann talaði stundum við* (Icelandic)
   Maria asked whom he talked sometimes with
   “Maria asked to whom he sometimes talked”

b. *jag undrar vem som inte har/*har inte blivit* (Swedish)
   I wonder who that not has has not become
   sjuk än
   ill yet
   “I wonder who has not been ill yet”

Disregarding the descriptive “general vs. limited embedded V2” distinction, these facts receive a principled explanation in terms of what triggers V-movement in each language. As proposed in Franco (2010b), and compatibly with Thráinsson (2010), the fact that Icelandic has unmarked embedded V2 may result from V-to-Fin (arguably for the same contexts where Mainland Scandinavian allows embedded V2), or from V-to-I, triggered by a functional head in the IP field (e.g. Mood). The facts sketched in Sections 2.1 and 2.2 are summed up in (11).

(11) a. *Subject-initial V2 (S V adv)*
   Embedded subject-initial V2 is always possible in Icelandic regardless of the type of predicate in the matrix. In Norwegian and Swedish, the verb can neither cross sentential adverbs nor negation in Wh-islands, adverbial clauses, indirect Y/N questions, and complements to modified or non-assertive and factive verbs. For these languages, embedded subject-initial V2 is possible in arguably the same contexts where non-subject initial V2 is allowed (cf. Wiklund et al. 2009).

b. *Non-subject-initial V2 (XP V S)*
   Non-subject initial V2 (where XP is an argument) is ungrammatical/very degraded for all Scandinavian languages in exactly the same contexts (e.g. weak and strong islands).
Since what distinguishes subject from non-subject initial V2 clauses is the presence of a preverbal, non-subject topic, and on the basis of (11a), we may conclude that in the clauses where $S \rightarrow V \rightarrow Adv$ is ruled out in Mainland Scandinavian, there is a syntactic mechanism blocking topicalization of an internal argument (both in Mainland and Insular Scandinavian).

Given the facts in (8) (cf. Hrafnbjargarson & Wiklund 2009, and Franco 2009), we can further distinguish two different types of topicalization, as in (12a) and (12b):

(12)  
\begin{enumerate}
\item \textbf{Fronting locative/temporal adverbials}  
Possible in declarative clauses, some adverbial clauses and marginally in indirect Y/N questions across Scandinavian languages. Not possible in subordinate clauses derived as $A'$-dependencies (relative clauses, embedded Wh-clauses).
\item \textbf{Fronting of internal arguments}  
Generally ungrammatical or very degraded in Wh-islands, adverbial clauses, indirect Y/N questions, and complement to modified or non-assertive and factive verbs.
\end{enumerate}

The facts described in (11) and (12) are explained in the remainder of the paper with a relativized-minimality account for deriving different types of Scandinavian embedded clauses.

3. The proposal

The impossibility of fronting an internal argument in Wh-islands, adverbial clauses, Y/N questions, and complements to modified or non-assertive and factive verbs is explained under the hypothesis that argument topicalization triggers minimality effects with the variable-binding relation created by a subordinating operator (cf. Haegeman 2010). This hypothesis raises the following problem: Why is Mainland Scandinavian subject-initial V2 not attested in the clause types mentioned above, given that preverbal subjects, contrary to topics, do not trigger minimality effects with OP-variable binding?  

10. This question makes sense only if we assume that subjects can be $A'$-moved to the CP (cf. Haeberli 2002), otherwise subject-initial V2 is ruled out for Mainland Scandinavian due to the fact that these languages do not have independent V-to-I (cf. Vikner 1995; Holmberg & Platzack 1995), and assuming that subject-initial V2 must involve $A'$-movement of the subject. I thank an anonymous reviewer for pointing this out. However, the assumption that subjects are always $A'$-moved in subject-initial V2 clauses (take, for instance, main clauses) is equally problematic because subject topicalization is in fact an extraction which should trigger ECP
The answer is connected to the scope of verb movement. Specifically, I argue that there is an independent reason for which V-to-Fin cannot take place, and Mainland Scandinavian subject-initial V2 is also ruled out. V-to-Fin is triggered when [finiteness] requires overt checking on FinP. The interpretation resulting from V-to-Fin is that the event expressed by the clausal predicate is independently anchored to the discourse. In clauses without V-to-Fin, by contrast, the predicate does not need anchoring because the embedded clause inherits the discourse-reference of the matrix clause.

Let us consider in detail how intervention effects are triggered where embedded topicalization takes place, and why such effects arise in some clauses but not in others. All clauses where topicalization is impossible are dependent on the matrix, and cannot receive a root interpretation (cf. also Heycock 2005; De Haan 2001; Haegeman 2006 and 2010). As mentioned above, argument topicalization is ruled out in weak islands (cf. 4a and 5a), Wh-islands (relative clauses, cf. (6)), and embedded Wh-clauses (cf. 7). Topicalization is equally impossible in many adverbial clauses:

(13) a. *Ég fór [þegar í baðkerinu voru 20 mýs] (Icelandic)
   I left when in bathtub.the were 20 mice
   “I left when there were 20 mice in the bathtub”
   [Thráínsson 2007, 328, 6.42]

b. Hann fer ekki í sund [af því að heitu pottunum finnst honum svo gött að sitja í]
h he goes not in swimming because hot pots finds he so good to sit in.
   “He does not go swimming because he finds it so good to sit in the hot tubs”
   [Hrafnbjargarson & Wiklund 2009:36, 25]

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11. I adopt a cartographic approach (Rizzi 1997). Accordingly, the CP is split into several functional heads: (Sub)...Force...(Topic)...(Focus)...(Mod)...Fin. See Franco (2010b) for a detailed description of their properties in Scandinavian.

12. The fact that Icelandic has unrestricted subject-initial embedded V2 is discussed in Franco (2010b).

13. The study of the consequences for the computation of the truth-conditions and the pragmatic properties of clauses with independent vs. anaphoric discourse anchoring is left to future research.
The impossibility of finding topicalization in a clause subordinated to a matrix is explained by minimality. In subordinate clauses, an operator “blocks” the periphery. Consider the schematic representation of the periphery of a subordinate clause given in (14):

\[(14) \quad [\text{SubP} \text{OP}_{\text{sub}} \text{ForceP}\langle \text{OP}_{\text{sub}} \rangle \text{〈OP}_{\text{default}}\rangle \langle \text{TopP} \ast \text{OP-XP} \rangle \text{ModP} \]

\[\quad \text{FinP} \langle \text{OP}_{\text{sub}} \rangle \text{Fin} [\cdots \text{VP} \cdots] \]

In this perspective, the acceptability of non-argument fronting in some types of adverbial clauses, as in (8) above, must depend on more factors: (i) Temporal/local adverbials are not operators and front to ModP (cf. Rizzi 2004; Haegeman 2006); (ii) ModP must be an available position in the clause (i.e., its selection depends on the clause-type); (iii) the adverbial clause is not derived by movement of an OP minimally intervening with the preposed adverbial.

The fact that ModP is a potential probe for adverbial preposing only in some types of adverbial clauses, i.e. in concessive, purpose and reason clauses (cf. Hrafnbjargarson & Wiklund 2009), but not in temporal and (central) conditional clauses must depend on the specific mechanism for the derivation of each clause-type. In clauses formed by A’-extraction (e.g. in relative and embedded Wh-clauses), adverbial preposing to ModP is generally not licensed, at least in Mainland Scandinavian. In this case Spec,FinP is occupied by the non-spelled-out copy of the Wh-OP (the Wh-OP eventually moves to SubP), thus Spec,FinP is an unavailable intermediate step for adverbial preposing to Spec,ModP.

3.1 Wh-islands

As is known from a vast literature, Wh-clauses are derived by movement of a Wh-OP to a position in the complementizer domain. According to Rizzi (1997), the verb/subject inversion of Wh-questions found in many languages is a residual V2 phenomenon. In Rizzi’s view, a Wh-criterion requires the creation of a local configuration between the Wh-moved item and the verb. The Wh-item targets a criterial position in the C-domain (located in the Focus field, cf. Rizzi 1997, and Benincà & Poletto 2004) where its features can be interpreted. The notion of “criterion” is closely related to that of illocu-

14. An anonymous reviewer points out that an operator in the left periphery may not necessarily block it, since higher projections, hosting elements that do not interfere with the OP path, might still be available. I share this view, however the availability of such projections (e.g. Hanging topic, cf. Bianchi & Frascarelli 2009) seems restricted to root clauses.

15. Icelandic seems to allow for adverbial preposing more often, in connection with the availability of the stylistic fronting mechanism in the grammar. See Franco (2009) for details and Hrafnbjargarson and Wiklund (2009) for additional facts.
ton, because, in dependent clauses, the Wh-position in the Focus field is a non-criterial intermediate step for the Wh-OP, which targets the higher Sub(ordinator)P. In his seminal cartographic work, Rizzi (1997) shows that movement of a Wh-OP (such as in questions) gives rise to minimality effects with other OP-fronting operations.

The consequent prediction is that topicalization is impossible when another OP has fronted, i.e., in island contexts. This is borne out by facts concerning both indirect and direct Wh-questions. The basic interpretive difference between main and subordinate Wh-clauses (e.g. direct and indirect questions) is the lack of independent illocutionary force in the latter. The Wh-OP is a subordinator (see also Manzini, this volume, for a proposal concerning the status of complementizers), and does not undergo criterial movement (and criterial freezing) to a WhP in the Focus field. This different featural endowment gives indirect Wh-clauses the sentential force (cf. Zanuttini & Portner 2003) but not the illocutionary force of direct questions. In other words, indirect questions have the interrogative clause type but cannot be independent questions because they lack illocution, see Coniglio & Zegrean (this volume) on the distinction between illocutionary force and clause type.

Assuming that preverbal topics in Scandinavian have an OP-status (cf. Eythórsson 1996), the derivation of subordinate Wh-clauses by movement of a Wh-OP triggers minimality effects with topicalization, as expected. This is shown in the structure given in (15) below. Such effects are visible in cases such as (7b).

(15) \[ [\text{SubP}[+\text{int}]] \text{Wh-OP}_{\text{Force}[\text{def}]} \text{Ø} (\text{TopP} *\text{XP})_{\text{WhP}} \langle \text{Wh-OP} \rangle_{\text{FinP}} \langle \text{Wh-OP} \rangle \]

If Y/N questions are derived by movement of a Y/N-OP, analogously to Wh-clauses, topicalization is in principle ruled out. It seems conceptually plausible that indirect Y/N questions are formed by movement of a truth-conditional OP, related to the interpretation of the matrix predicate and whose semantics consists of the exclusive disjunction of the answer pair. In Icelandic, however, minimality effects of a fronted topic in an indirect Y/N question are not as serious as those in indirect Wh-questions, as shown by the pair in (16). The fact that any topicalization is ruled out in direct Y/N questions may be explained by the fact that in root clauses the OP-movement is criterial, i.e. related to the interrogative illocution.

(16) þeir spurðu

they asked

a. *[[hvern í beinn hefði rútan flutt klukkan sjö]]

who to town.the had bus.the carried clock seven

“They asked whom the bus had carried to town at seven o’clock.”

b. ?[[hvort í beinn hefði rútan komið klukkan sjö]]

whether to town.the had bus.the came clock seven

“They asked whether the bus had come to town at seven o’clock”

[Thráinsson 2007, 352, 7.27]
The different degree of degradation of the two sentences in (16) may be directly dependent on the different number of matching features in the two A′-moved elements (i.e. the interrogative OP and the topic, cf. Starke 2001). In (16a) the topic is a PP with at least a [+N] feature that interferes with the features of the extracted Wh-argument hvorn. By contrast, the Y/N-OP hvort in (16b) does not seem to have much in common with the topicalized constituent, beside its OP-status.

A similar analysis explains the ungrammaticality of topicalization in relative clauses derived with OP-movement to a position in the high left periphery. In the cartographic literature, this position is labeled RelP and located quite high in the C-domain structure. Given the clause-typing nature of the relative OP, I assume that RelP is SubP [+rel]. This analysis is supported by the fact that topicalization in relative clauses is ungrammatical in all Scandinavian languages, as illustrated in (6) above. In (6), the occurrence of a topic creates an intervention effect with the A′-movement of the relative OP and yields an ungrammatical result.16

3.2 Weak islands (factive and non-assertive clauses)

A problematic point is raised by the split between two groups of declarative complements: those that allow topicalization and V2 (usually identified as complements to “bridge-verbs”, cf. Section 2) and those that do not. Why is topicalization blocked in the latter group, i.e., in factive and non-assertive complements and often in modified/negated assertive complements? It can also happen that negated or modified factive/non-assertive complements allow topicalization, whereas their non-negated/modified counterparts do not (cf. Julien 2007). How can the present proposal solve this puzzle?

16. A′-extraction out of a relative clause is in some cases possible in Swedish, as is shown in (ia) (Christer Platzack p.c.) and (ib), (Björn Lundquist p.c.). The possibility to extract seems to depend on the type of relative clause: topicalization is grammatical out of a subject relative, but not out of an (in)direct object relative, as in (ic):

(i) Blommor känner jag en man
flowers know I a man
   a. [som säljer]
      who sells
   b. [som kan sälja dig]
      who can sell you
   c. * [som du kan sälja]
      who you can sell

(i) reveals a subject/object asymmetry in A′-dependencies, which is found elsewhere in Mainland Scandinavian, such as in the complementation structure of relative clauses and indirect questions (cf. Thráinsson 2007, Section 8.3 and ref. therein; Boef & Franco in prep.).
I propose that all declarative clauses where topicalization is banned are subordinated by an OP-variable binding mechanism. According to Meinunger (2004), embedded V2 clauses are derived by movement of a semantic assertive OP (ASS), which binds the V2 clause. Such an OP is the head of a Speech Act projection. Meinunger’s proposal is not fully compatible with the present one, under the assumption that V2 topics (XP in (17)) are indeed OPs, because the presence of two OPs in the same structure should in principle determine some scope-related effects. However, the interpretation of a sentence like (18) seems quite straightforward, and does not reveal any such effect.

(17) \[ \text{SAP} \text{ASS-OP... [SubP[decl] Force[ass]} \langle \text{ASS-OP} \rangle \text{TopP XP} \text{FinP Fin V [IP...} \]

(18) *Han* sa *att* *den här sången kunde han sjunga på bröllopet*

He said that this here song. the could he sing on wedding. the

"He said that he could sing this song at the wedding"

This problem is obviated if we assume that the topicalization is itself movement of a D-linking OP that pragmatically anchors the fronted constituent to the discourse. This characterization of embedded V2 clauses accounts for the interpretive relevance of the phenomenon without attributing independent illocution to embedded V2 clauses, similarly to what has been proposed for embedded C-topics in English by Bianchi and Frascarelli (2009).

Non-V2 complements, Wh- and relative clauses are instead derived by a subordinator OP, and the nature of the OP itself varies. I disregard the proposal that there is a silent noun, and propose that what is bound by the OP is a variable merged in the functional field, with the function of making the propositional content of the clause be interpreted as presupposed. The nature of the OP deriving presupposed clauses is in

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17. It is not clear to me whether Meinunger assumes that the ASS-OP is moved from a position in the V2 clause (left periphery) or is base-generated in the matrix CP. In any case, this OP takes scope over the V2 clause where another OP (the topic) has fronted.

18. There is vast literature suggesting that factive complements are derived by merger of a silent noun (e.g. “the fact”, optionally overt in some cases) at the edge of the subordinate (cf. Watanabe 1993; Zanuttini & Portner 2003; Aboh 2005; Krapova 2008 a. o.). This mechanism consists of A′-binding a silent NP in the C-domain by means of an OP selected by the matrix predicate.

19. Cf. Kiparsky and Kiparsky (1970) who propose that adjunct extraction out of factive complements is blocked by extra structure, and Basse (2008) for a recent reformulation. For the opposite proposal, according to which non-factives are derived by OP-movement, see De Cuba (2006, 2010) and Nichols (2001).
some respects similar to the OP of indirect Y/N questions, with the difference that in presupposed clauses the OP is assigned a truth value ($OP_T$), whereas in Y/N questions the OP encodes the disjunction of opposite truth-values.

The prediction is that movement of an OP creates a (weak) island. The expectation is borne out by the fact that topicalization of an XP in a “factive” clause is impossible, because it triggers intervention effects with the A’-chain created by the movement of the OP to SubP in this type of complement. It is already well-known that factive complements have weak island properties (cf. Rooryck 1992). The C-domain structure of the complement to a factive predicate such as the Scandinavian equivalent of *regret* in (20), where topicalization is ungrammatical, is given in (19):

\[
(19) \quad \left[\text{Matrix: regret} \quad \left[\text{SubP: } \text{OP} \text{ForceP: } \langle OP_{T} \rangle \text{ TopP: } \langle *\text{XP} \rangle / \langle (OP_{T}) \text{ FinP: } \langle OP_{T} \text{ Fin} \rangle \right. \right. \right. \bigg] \text{Ø…}
\]

\[
(20) \quad \text{*Han ångrade att den här sången hade han} \quad \text{(Swedish)}
\]
he regretted that this here song.the had he

```
in te sjungit]
not sung
```

“He regretted that he didn’t sing this song”

The same analysis applies to the complements of non-assertive predicates, such as *deny*, whose factual content of belief is either denied or rejected by the speaker (in this case the value computed on the variable will not be T (true) but F (false)).

3.3 Negative islands and declarative complements of modified predicates

The same proposal extends to negated or modified assertive complements. These complements are derived by movement of an irrealis (-R) OP meeting the selectional requirements that the modified or negated matrix predicate imposes on its complement. The facts seem much more controversial in this case. The first expectation is that, whenever an assertive or semifactive matrix predicate is negated or modified (e.g. by a modal), topicalization is not possible, but this is in contrast with facts for both Mainland Scandinavian and Icelandic:

\[
(21) \quad \text{Þau sögdu ekki [að spona mat bordadi hann}} \quad \text{(Icelandic)}
\]
they said not that such food ate he

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bara á þorri.moonth
```
only on þorri.month

“They didn’t say that he only ate such food during January and February.”

[Wiklund et al. 2009, 59]

As a consequence, we cannot assume that whenever an assertive/semi-factive matrix predicate is negated or modified, topicalization is impossible or dispreferred. Here I limit my observations to cases where it indeed is.
I propose that embedded topicalization in negated/modified assertive or semi-factive complements is blocked in relation to the scope of negation/a modifier, standardly assumed to have operator properties.

3.4 Predictions

Let us consider two cases: (i) the matrix assertive or semi-factive predicate is negated; (ii) the matrix predicate is modified, e.g. by a modal verb.

i. According to De Haan (2001), V2 is not possible if negation is interpreted as having scope over the embedded clause.\(^{20}\) This means that matrix negation scoping over the entire sentence binds a variable in the embedded clause. This is derived syntactically with a subordinating OP (\(\text{OP}_{-R}\)) linked to the matrix negation. The OP moves to the left periphery of the embedded clause and prevents any topicalization, as in (22):

\[
(22) \quad \begin{array}{r}
\text{Matrix:} & \text{not say/discover} \\
\text{SubP} & \text{OP}_{-R} \text{ForceP} \langle \text{OP}_{-R} \rangle \langle \text{TopP} * \text{XP} \rangle \langle \text{FinP} \langle \text{OP}_{-R} \rangle \rangle \langle \text{OP} \rangle \\
\end{array}
\]

The structure in (22) cannot apply to all complements of negated assertive/semi-factive verbs because such a generalization would be disconfirmed by the facts (see the perfect grammaticality of topicalization in (23) below). The grammaticality of preverbal non-subjects in the embedded clauses in (23) can be attributed to the restricted scope of negation. Indeed, the matrix predicates in (23) are not NEG-raising verbs (cf. Rooryck 1992):

\[
(23) \quad \begin{array}{l}
\text{a. jeg visste ikke} \quad \text{at slike hus selger de faktisk hver dag} \\
\text{I knew not} \quad \text{that such houses sell} \quad \text{they actually every day} \\
på det meklerfirmaet.] \quad \text{(Norwegian)} \\
\text{at that real-estate agency} \\
\text{“I didn’t know that they sell such houses every day at that} \\
\text{real-estate agency.”}
\end{array}
\]

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\(^{20}\) De Haan (2001) notes this for the interpretation of embedded V2 in West Frisian:

\[
\begin{array}{l}
\text{(i) } Hy \text{ komt net} \\
\text{he comes not} \\
\text{a. [omdat it min waar wie].} \\
\text{because it bad weather was} \\
\text{“He doesn’t come because it was bad weather” (but for some other reason).} \\
\text{b. [omdat it wie min waar].} \\
\text{because it was bad weather} \\
\text{“He doesn’t come because it was bad weather” (i.e. the reason why he} \\
\text{doesn’t come is bad weather).}
\end{array}
\]
b. Men mekleren sa ikke [at slige hus selger
but broker. the said not that such houses sells
han regelmessig.]
he regularly

“But the broker didn't say that he sells such houses on a regular basis.”

By contrast, a NEG-raising predicate such as believe disallows embedded topicalization because its negation scopes over its complement, compare (24) below with (23a):

(24) *Jeg tror ikke [at slige hus selger
I believe not that such houses sell
de faktisk hver dag på det meklerfirmaet] (Norwegian)
they actually every day at that real estate
“I did not believe that they actually sell such houses on a regular basis.”

This analysis is further supported by the fact that, when the matrix negation licenses an NPI in the embedded clause, ens in (25), thus scoping over it, topicalization is not possible:

(25) Jag visste inte (Swedish)
I knew not

a. [att de ens sålde sådana hus]
that they even sold such houses
“I did not know that they even sell such houses.”

b. *[att sådana hus sålde de ens]
that such houses sold they even
“I did not know that they even sell such houses”

[Christer Platzack p.c.]

ii. The matrix predicate is modified, for instance by a modal verb. The modifier contributes to the selectional properties of the matrix predicate which in turn selects a subordinate clause inheriting the matrix illocution. Wide scope of the modal on the whole clause results in the structure below:

(26) [Matrix could say/discover
\[\text{SubP}\ OP_{-R}\ ForceP\langle OP_{-R}\rangle_{\text{TopP}}^{\langle OP_{-R}\rangle_{\text{FinP}}}\langle OP_{-R}\rangle_{\text{IP}}\langle OP_{-R}\rangle_{\text{OP}}\ldots\]

According to (26), the irrealis OP selected by the modified matrix predicate binds a variable in the functional field of the embedded structure. The modal scope width is ensured by the presence of the irrealis OP, whose movement in the embedded left periphery “blocks” embedded topicalization:21

21. Richard Larson (p.c.) remarks that it is not necessary to postulate OP movement in these cases, and the derivation could be an instance of long-distance Agree, as long as the
In a relativized minimality framework, the modal nature of \(\text{OP}_R\) cannot explain why intervention effects should occur when fronting a (non-modal) operator-XP, such as a preverbal topic in a V2 clause. In fact, Julien (in prep.) reports that some Swedish and Norwegian speakers accept topic-extraction not only from subject-initial (cf. (28a)), but even from non-subject initial embedded clauses (cf. (28b)), contrary to what is commonly expected (cf. Andersson 1975; De Haan 2001):

(28) Den artikkelen sa ho (Norwegian)
    this paper.DEF said she

a. % [at ho hadde ikkje tid til å lese]
    that she had not time to read
    “This paper she said that she didn’t have time to read.”

b. % [at I.GÅR fekk ho ikkje tid til å lese]
    that yesterday got she not time to to read
    “That article, she said that, yesterday, she could not find
    the time to read it.”

The extraction facts in (28) can be explained syntactically with relativized minimality, without assuming that embedded V2 is related to an assertion (Julien, in prep.). In (28a) there is no plausible candidate acting as an intervener to \(A^\prime\)-topic extraction, under the assumption that the subject \(ho\) is in an A-position both in non-V2 and in V2 clauses. Acceptance of a complement clause with the order Adv-V-Subj, (28b), is subject to variation among speakers. This variation is explained with the possibility to front locative and temporal adverbials to a non-quantificational position in the C-domain (ModP). Moreover, the extracted topic Den artikkelen has such a different feature specification with respect to the fronted adverbial I GÅR that it may not trigger relevant minimality effects in undergoing extraction. The prediction is that arguments

minimality effects can be accounted for in terms of intervention in the checking mechanism of the features encoded in the C-domain. This suggestion is worth exploring.

22. According to Julien (in prep), Swedish patterns in the same way. Christer Platzack (p.c.) judges the Swedish translation of (28a) OK, but that of (28b) ungrammatical, which suggests that focalized non-subjects (a temporal adverbial in the case above) and preverbal subjects in a V2 clause have a different feature specification.
or adjuncts undergoing $A'$-OP movement to a (higher) quantificational position (e.g. contrastive Topic or Focus, cf. Bianchi and Frascarelli 2009) in the C-domain create an island to extraction, inasmuch as they act as interveners to further $A'$-movement. Such a prediction is borne out by facts attested not only in Mainland Scandinavian, but also in Icelandic (cf. Hrafnbjargarson et al. 2010):

(29) *"Hver sagði han [að þessar bækur hefði gefið Kára]? (Icelandic) who said he that these books had given Kari "Who did he say had given these books to Kari?"

[Hrafnbjargarson et al. 2010, 11a]

It is known from Vikner (1995) (cf. also Bentzen 2010, & Hrafnbjargarson et al. 2010) that argument or adjunct extraction out of subject-initial V2-clauses is ungrammatical in all Germanic V2 languages except Yiddish and Icelandic (given proper restrictions on the mood of the embedded predicate, in the latter):

(30) a. *Hvernig sagði hún [að börnin höfðu alltaf lært sögu]? how said she that children-the have(COND) always learned history

b. *Hvordan sagde hun [at børnene havde altid lært historie ___]? how said she that children-the have always learned history

"How did she say that the children have always learned history?"

The unacceptability of (30b) vs. the partial acceptability of (28a) and the full acceptability of (30a) does not depend on the subject status, because in all the examples above, the subjects are allegedly in A-positions. Instead, V-raising across a sentential adverb or negation seems to be licensed by other factors, independently of the nature of the preverbal constituent. An analysis of the feature-checking mechanism triggering embedded verb second is required, and a tentative proposal is sketched in the next section.

4. The trigger of V-to-Fin

Let us consider contexts where the verb is expected to raise to Fin$^{23}$ and topicalization is also possible. From the present perspective, the possibility of having embedded

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23. For additional support for V-to-Fin see Haegeman 1996; Cardinaletti 1990, 1992, 2010 and references therein.
topicalization in some clauses tells us that in those clauses the verb may raise to Fin even if the preverbal element is the subject. This holds for both Mainland Scandinavian and Icelandic, but does not amount to saying that all subject-initial V2 clauses in Icelandic have V-to-Fin (pace Wiklund et al. 2007, cf. Thráinsson 2010). The question is what triggers V-to-Fin in subject-initial embedded V2 clauses where topicalization is possible, for instance in declarative complements. Given that these clauses do not display verb-subject inversion, we cannot assume that V-to-Fin depends on the OP status of the preverbal topic. Two possibilities then emerge: (1) The preverbal subject is A′-moved on a par with preverbal topics and triggers V-to-Fin. This hypothesis is disconfirmed for cases where weak pronominal subjects precede the verb in V2 clauses; (2) V-to-Fin is triggered by some specific feature encoded in Fin, assuming that this position is the target of verb movement. This hypothesis has the advantage of solving the economy problem that emerges under the assumption that V-to-Fin is required by fronting an OP to the C-domain, namely that V-to-Fin is dependent on topic fronting. According to Rizzi (1997), a criterion on the C-domain is satisfied if either the specifier or the head of a criterial projection is overtly realized, but a realization of both (Roberts & Roussou 2002) would be anti-economical.

The question is how to explain the V2 constraint (one and only one preverbal element can move), once we discard the idea of a locality relation between preverbal XP and V postulated in terms of Spec-Head relation. As long as the preverbal element is A′-OP moved, any other A′-movement to the left periphery is banned by minimality.24 But why are multiple frontings not possible in subject-initial V2 clauses, if the subject is A-moved?

A tentative answer concerns the trigger of V-to-Fin. I argue, along with Eythórsson (1996), that argument V2-topics are OP, and I derive this property from their need for discourse anchoring via a D-linking operation targeting the CP (cf. also Sigurðsson 2011).

I suggest that FinP encodes both verbal and nominal features, i.e., Finiteness and Definiteness. In a V2 clause, FinP is the active probe triggering V-to-Fin to check [finiteness], and requiring a specification by a D-linking OP (associated to an overt topic). Topics become D-linked by moving through Spec,FinP, on their way to the criterial Spec,TopP position. In clauses without V-to-Fin, the feature specification of the subordinate FinP is simply “inherited” from the matrix.

In V2 clauses, the feature specification of FinP bans Wh-extraction in Mainland Scandinavian. Extraction out of a subject-initial V2 clause is possible in Icelandic,

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24. Relativized minimality (cf. Rizzi 1990) accounts for different degrees of degradation of clauses where different types of frontings are tested. For a discussion of how an intervention account could explain the distribution of embedded V2 see also Bentzen (2010).
however, because in this case V2 is the linearization of V-to-I (cf. also Thráinsson 2010):

(31)  a. *Vem sa han [att han hade inte
whom said he that he had not
gett den här boken]? (Swedish)
given this here book
“Who did he say that he had not given this book to?”

b. Hverjum heldur þú
whom think you
[að María gefi ekkki t svona bækur ]? (Icelandic)
that Mary gives not such books
“Who do you think that Mary does not give such books to?”

[Thráinsson (2010) 19, 28–29]

5. Conclusion

The intervention account for the syntax of embedded V2 presented here is based on facts that suggest the presence of a semantic/pragmatic (null) OP, triggering minimality effects with Wh-fronting. Such an OP has specific clause-typing properties and depends on the selectional requirements of the matrix predicate and on the interpretation of the whole sentence. In this perspective, V2 as V-to-Fin is non-redundant for economy principles, as it lexically realizes the head of a projection that would otherwise remain silent, given that the D-linking OP associated with a constituent targets a higher criterial position.

The contribution of this proposal amounts to providing a unitary syntactic account of embedded V2 in various Scandinavian languages. I have argued that embedded V2 depends on the interpretive properties of each specific clause, and is restricted by relativized minimality. With respect to existing proposals, this idea proves particularly effective in explaining some cases of embedded verb second that are otherwise not predicted (cf. Section 3).

References


Krapova, Iliana. 2008. Bulgarian relative clauses with the invariant complementizer deto ‘that’. The Third Annual Meeting of the Slavic Linguistics Society. The Ohio State University, Columbus, Ohio, USA, June 10–12, 2008.


Sources: IGLOO Swedish grammar, P. Svenonius. (http://www.hum.uib.no/a/svenonius/lingua/flow/co/gram/rfgrsv/rfgrsv.html)
Against a uniform treatment of second position effects as force markers*

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This paper investigates two constructions, Verb Second and second position cliticization. These constructions involve placement of a certain element (a finite verb or clitics) in the position following the clause-initial constituent, with seemingly few restrictions as to what this constituent might be. A common way of accounting for V2 is to assume that it is a force marker. This paper challenges this view. It investigates the history of V2 and second position cliticization as well as different environments in which both constructions are found. The investigation leads to the conclusion that second position effects encompass a number of different operations, only some of which can be argued to mark force.

This paper analyzes two patterns in which a member of a certain natural class follows the initial syntactic constituent, with seemingly few restrictions as to what this initial constituent might be. The first pattern is so-called Verb Second (V2), exemplified in (1) for Dutch, the other involves second position cliticization and is illustrated in (2) for Serbo-Croatian (S-C).

(1) Gisteren las ik dit boek.
   Yesterday read I this book
   ‘Yesterday I read this book.’

(2) Vi ste mu je predstavili juče
    you are_AUX him_CL.DAT her_CL.ACC introduce_PART yesterday
    ‘You introduced her to him yesterday.’ (Bošković 1997:148)

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Movement in syntax normally occurs in order to establish a relation with a particular category; it targets a designated structural position and results in feature checking. The operations exemplified in (1) and (2) are curiosities, as the placement of the finite verb and the clitics seems to be constrained only by the requirement that they follow the initial constituent, with apparently few restrictions as to what this constituent can be. This is especially evident in the case of second position cliticization. In (3a), the accusative clitic follows a temporal adverb, whereas in (3b) it is stuck between two wh-elements.

(3)  
(a)  \textit{Sutra ga deca ne-če videti}  
\textit{tomorrow him\textsubscript{CLACC} children neg-fut.3PL see\textsubscript{INF}}  
‘The children will not see him tomorrow.’  
(S-C, Progovac 1996: 425–426)  

(b) \textit{Koliko im ko daje?}  
\textit{How-much them\textsubscript{CLDAT} who gives}  
‘Who gives how much to them?’  
(S-C, Rivero 1991: 335)  

A common idea in the literature (see for example Brandner 2004; Koster 2003; Meinunger 2004; see also the debate in \textit{Theoretical Linguistics} 32-3 2006) is to assume that V2 is a way of marking the illocutionary force of a clause. This paper challenges this assumption. An investigation of the diachrony of V2 and second position cliticization, and in particular distinct properties of force-related- versus general-second position cliticization indicate that V2 is an umbrella term for a number of operations, only some of which are related to force marking.

This paper has the following organization. Section 1 looks at the general properties of V2 and analyzes the interpretations that various types of V2 operations bring about. Next, using diachronic evidence from Germanic as well as data related to embedded V2 from Scandinavian languages, it investigates whether it is correct to assume, as is common in the literature, that all instances of V2 placement specify force. Section 2 analyzes second position cliticization in Slavic. It has commonly been assumed since Wackernagel (1892) that the two processes are instances of the same mechanism; therefore, an investigation of the conditioning factors for second position cliticization may shed light on the source of V2 in Germanic. In particular, this section analyzes the diachrony of cliticization patterns in Slavic, which involved a shift of pronominal clitics to second position but did not affect force-related clitics, which have always been in second position. Moreover, this part of the paper contrasts properties of force-related cliticization with general second position cliticization, and the comparison leads to a conclusion that the two processes involve a different mechanism, even though they produce the same surface word order.
1. Properties of V2

Verb Second has been extensively analyzed in generative linguistics since Den Besten's (1983) work on Dutch and Thiersch's (1978) on German. In all Germanic languages in which the V2 rule is at work except for Icelandic and Yiddish, the operation is a main clause phenomenon. Thus, excluding some specific cases that will be discussed in Section 1.1, the verb normally may not raise to second position in embedded clauses that are introduced by a complementizer.

(4) a. *Ik geloof [CP dat [IP Jan de waarheid spreekt]]
   'I believe that Jan the truth speaks`
   'I believe that Jan is telling the truth.'

   b. *Ik geloof *[CP, dat spreekt, [IP, Jan de waarheid t]] (Dutch)

Observing the complementary distribution between the complementizer and the fronted verb, Den Besten postulated that the finite verb raises from its base position and moves to C, replacing the complementizer. Den Besten’s account has been significant for both empirical and theoretical reasons, as it was the first case of head movement in the generative literature and also the first study in which a functional category COMP (C) was interpreted as a head in the X-bar framework (see Holmberg 2010).

However, much as this analysis has been insightful, it has been observed that not all V2 patterns have the same interpretations even though the linear position of the verb is constant. In particular, the concern was about the interpretation of the elements preceding the verb, that is the material occurring in the “prefield”. For instance, Travis (1984) has pointed out that whereas subjects marked for nominative case have a neutral reading in the prefield, objects located in front of the verb are necessarily interpreted as foci, or as in the Swedish example in (5), (contrastive) topics.

(5) Tidningar läser barnen inte
    newspapers read the-children not
    ‘Newspapers, the children don’t read.’ (Holmberg 2010)

Travis captured the variation by assuming that that the subject is in Spec, TP in German, and that consequently, the finite verb is not always in C in V2 patterns. However, there are many more elements of various types that can be located in the prefield (e.g. adverbs, particles, wh-phrases; see Holmberg 2010 and the references cited therein for a detailed overview) and the interpretation status of these elements is more complex that just the subject versus non-subject distinction. Consequently, a question that arises is whether V2 is a uniform phenomenon that involves V-to-C movement, or whether it encompasses a number of distinct operations that result in the same linear verb placement. Frey (2006) proposes that prefield (that is the material
preceding the verb in a V2-clause) may be filled in three ways in German, which suggests that the corresponding verb placement is not identical. First, the prefield may contain certain adverbial elements (such as ein Glück in (6)), which according to Frey must be base-generated in Spec, CP, as they are never found in the middle field (the area following the finite verb), nor do they enter into a licensing relationship with the verb in located in C⁰.

(6) Ein Glück habe ich den Regenschirm dabei.

‘Fortunately, I have the umbrella with me.’ (German, Frey 2006: 243)

Second, the prefield may be targeted by the highest constituent in the middle field, such as the PP mit der Axt in (7b), which moves to Spec, CP in (7c). Although this is a case of A′-movement, it is different from “typical” A′-movement operations, as it does not lead to any semantic and pragmatic effects: the pragmatic markedness which is induced by scrambling the PP mit der Axt to the highest position in the middlefield in (7b) remains when the PP subsequently raises to the prefield in (7c). This latter movement takes place only to satisfy an EPP requirement of C⁰, and for this reason, Frey terms it “formal movement”.

(7) a. (dass) Otto mit der Axt den Baum gefällt hat.

‘… that Otto has cut the tree with the axe.’

b. (dass) [mit der Axt], Otto t, den Baum gefällt hat.

c. [mit der Axt], hat t', Otto t, den Baum gefällt.

(German, Frey 2006: 241)

Third, prefield may host elements that receive non-neutral interpretation, such as topics or foci, which end up there via “true” A′-movement. This option is exemplified in (8b) with Den Max, a long distance topic that receives contrastive interpretation and pitch accent.

(8) a. Ich erzähle dir was über Max

‘I am telling you something about Max.’

b. Den Max meint Eva, dass der Chef theACC Max thinks Eva that the boss mitnehmen sollte take-along should

‘Eva thinks that the boss should take Max along.’ (German, Frey 2006: 244)

Summarizing, Frey observes that the elements preceding the verb in V2 patterns may either be base-generated or moved there, with or without interpretative import.
Although in all these cases the finite verb is uniformly located in second position, these facts seem to suggest that V2 encompasses a number of different operations, even though they all produce the same surface order.

1.1 V2 as a force marker

A common proposal, which is addressed in this paper in detail, is to analyze V2 as a way of encoding the illocutionary force of a clause. On the whole, this idea seems well-motivated and there are a number of strong reasons to adopt it. First, in Dutch and German the fronted verb is in complementary distribution with the complementizer, which directly specifies the force of an embedded clause. Consequently, it seems logical to assume that either the complementizer or the verb moves to a syntactic position in which they can check a force feature.

Second, in many Scandinavian dialects V2 is permitted in embedded clauses in the presence of a complementizer, depending on the strength of assertion expressed in the sentence. This fact has been extensively discussed in the literature (see, for instance, Hooper & Thompson 1973; Andersson 1975; Wechsler 1991; Meinunger 2004; Wiklund et al. 2009). It has been observed that the less presupposed (more asserted) the complement of a main verb is, the more likely it is to allow V2.

For instance, the verb say expresses strong assertion and consequently permits the V2 order in its complement clause, as in (9a), where the finite verb kunne may move across negation in the subject-initial embedded clause. By contrast, the verb regret involves weak assertion, and V2 in its embedded clause is impossible; the verb cannot cross negation (see (9b)).

(9)  a. *Han sa at han kunne ikke synge i bryllupet

      He said that he could not sing in wedding-the
      ‘He said that he could not sing at the wedding.’

   b. *Han anget på at han hadde ikke sunget

      he regretted on that he had not sung
      ‘He regretted that he hadn’t sung.’

(Norwegian, Wiklund et al. 2009: 1918, 1920)

The availability of V2 in embedded clauses in Scandinavian may also depend on the semantics of the complementizer. For instance, Wechsler (1991) points out that clauses that are selected by complementizers expressing strong assertion such as fast(än) ‘although’ or eftersom ‘since’ in Swedish permit the V2 order.

(10) a. Hugo studerar lingvistik fastän han har aldrig

      Hugo studies linguistics although he has never
      varit intresserad av språk
      been interested in language
A question that arises is how to capture the observed distribution of embedded V2 in relation to the degree of assertion in syntactic terms. To the best of my knowledge, no precise formalization linking the degree of assertion to the functional structure of the clause exists. However, for an evaluation of proposals that encode assertion syntactically, see Haegeman (this volume).

1.2 Challenges to the treatment of V2 as a uniform force marker

Although it is clear that the availability of V2 in embedded clauses in Scandinavian is related to a force value, it is a matter of debate whether V2 is a means of marking force in all declarative clauses in languages such as Dutch or German and what kind of force information is expressed there. The assumption that V2 always expresses force has been made by Brandner (2004) and Koster (2003), among others. Brandner proposes, in line with Cheng's (1997) *Clausal Typing Hypothesis*, that all clauses must be typed, that is explicitly specified as declarative, interrogative, or some other type. This can be done morphologically via a force-marking particle in languages such as Korean or Persian. Languages that do not have morphological material of this type must resort to movement, such as V2 in Germanic. A question may be posed about languages such as English, in which verb movement to license force is limited to specific contexts, such as yes-no questions, wh-movement or negative inversion. Brandner claims that such languages only mark deviation from declarative.

However, there are serious problems with the assumption that V2 is directly related to force licensing. Even though some syntactic mechanisms that result in V2 placement do express force, V2 seems not to be a sufficient, and not even a necessary condition to mark force. For instance, Wiklund (2009) points out that even though the V2 pattern correlates with specific force values in many cases, it is not clear why it is not permitted in all complement clauses that express a high degree of assertion in Scandinavian, for example those that are selected by the verb *upptäcka* 'discover'.

(11) Olle upptäckte att Lena inte hade gått.
    Olle discovered that Lena not had go
    ‘Olle did not discover that Lena had not left.’

(Swedish, Wiklund 2009: 30)

Furthermore, Wiklund notices that there are elements such as assertive particles, speech act adverbials, and swear words (exemplified by the italicized words in (12)) that clearly specify some force value. Yet even if these elements are present in an embedded clause marking force features overtly, V2 order is not required.
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(12) a. *Hon upptäckte att han ju inte hade rest
   she discovered that he you-know not had go

b. Vi upptäckte att de nämligen/minsann inte hade kommit
   we discovered that you see/indeed not had come
   (Swedish, Wiklund 2009:33)

Finally, Wiklund observes that although the V2 order is normally required in matrix clauses in Swedish, there are main clause structures in which V2 is impossible. These structures include exclamatives, which clearly render a specific type of force meaning. In such structures, the verb must remain in situ, which is unexpected if V2 uniformly licenses force.

(13) a. *Att han inte var där!
    That he not was here

b. *Att han var inte där!
   (Swedish, Wiklund 2009)

Summarizing, there is a clear relation between the possibility of embedded V2 and a force value in certain Scandinavian dialects. However, although V2 is obligatory in matrix clauses in the very same dialects, it is precluded when some other types of force are expressed, for instance in exclamatives.

1.3 Diachronic arguments against the treatment of V2 as a uniform force marker

This subsection briefly presents diachronic changes in the V2 pattern in Germanic in order to establish whether these changes reflected modifications of force marking, which is to be expected if V2 is always directly related to force specification. In contrast to the majority of contemporary Germanic languages, Modern English has “residual” V2 (Rizzi’s 1991 term), restricted to negative inversion, yes/no-questions, wh-questions, and similar contexts.

(14) a₁. Never have I been so angry.
   a₂. *Never I have been so angry.

b₁. Where have you been?
   b₂. *Where you have been?

Diachronic data from Old Germanic, especially from Gothic and Old English (OE), indicate that although the verb normally remained low in the structure, it could raise outside the VP largely in the same contexts in which V2 occurs in Modern English (see Eythórsson 1995; Fuss 2003; Axel 2007), as exemplified for the wh-movement in Gothic in (15).

(15) Ýsa skuli þata barn wairþan?
   'What shall that child become'
   (Gothic, Eythórsson 1996:110)
There are a number of cases in which the verb movement is expected to take place in Gothic (for instance, in *wh*-questions), yet it is blocked in the presence of certain second position particles. These particles are clitics that appear in second position and include elements such as the coordinating particle *-uh*, the interrogative particle *-u*, and the modality (or emphatic) particles *þan, nu* and *auk* (see Ferraresi 1997, Fuss 2003).

(16) a. *Hvan-uh þan þuk seßum gast jah ga-lapodedum?*
   when-PRT PRT you saw1PL stranger and PERF-invited1PL
   ‘And when did we see you as a stranger and invited you?’

b. *Hvan u òaujai im frauja þis weinagardis?*
   what PRT do them owner of-the vineyard
   ‘What then shall the owner of the vineyard do to them?’

(Gothic, Fuss 2003:200)

Fuss (2003:200) points out that these clitics express force-related properties, such as focus, clause-type, or the matrix-embedded distinction. He argues that their placement merely imitates the position of similar particles in the original Greek texts that were used as the sources of the Gothic translations. However, this claim is debatable, as clitics normally have a very rigid distribution in languages and any change to their position makes a sentence that contains them unpronounceable. Hence, it is also possible to postulate that there were two ways of checking the force of a clause in Gothic, either by moving a verb to a force-related projection or merging a particle there, and that the two elements competed for the same position.

Moving to Early Middle English, this language had structures with “general” V2 placement that resembled V2 in Modern German or Dutch, as there are attested instances of the finite verb that immediately follows clause-initial objects, adverbs, and prepositional phrases (see (17)). However, Fuss (2003) proposes that these cases do not involve verb movement to C. Rather, he argues that they are formed with a topic filling the prefield in Spec, CP, the verb located in T, and the subject in a lower position within the VP.

(17) \[ CP \text{On twam þingum} \mid Tp \text{þæfde} \mid Vp \text{God} ]
   in two things had God
   *þoes mannès sawle gegodod*
   the man’s soul endowed
   ‘God had endowed man’s soul with two things.’

(van Kemenade 1987:18, quoted in Fuss 2003:206)

These structures disappeared around 1350–1425 and conspicuously, the process coincided with the emergence of the expletive *there* and the loss of null pronouns (Van Kemenade 1987; Haeberli 1999). Fuss (2003) attributes the change to the development
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of an EPP feature in T, which requires the subject position to be filled. Of course, this is one of many possible explanations of the diachronic change with respect to the V2 pattern. In the earlier stages of Germanic, verb movement was certainly related to force marking. Crucially, however, the decline of “general” V2 in Early Middle English that is reminiscent of the order found in most contemporary Germanic languages is not attributed to any modification of force specification. Such a modification would be expected if all V2 orders were directly related to force marking.

2. Second position cliticization in Slavic

The subsequent part of this paper discusses second position cliticization and its relation to force marking in Slavic. The purpose of this discussion is to show that, as in the case of V2 in Germanic, only a subset of second position effects are force markers. This section has the following organization. It begins with a general overview of the properties of second position cliticization in Section 2.1. Next, Section 2.2 discusses the diachrony of second position cliticization in Slavic and shows that initially the pattern was restricted to force clitics; pronominal clitics moved to second position later and only in some Slavic languages. Finally, Section 2.3 juxtaposes the distribution of force clitics with other second position clitics in contemporary Slavic languages.

2.1 Properties of second position clitics

Until recently, in the generative tradition, the study of cliticization had been focused on the Romance languages, which in their contemporary stages have verb-adjacent pronominal clitics. In the Slavic languages, verb-adjacent clitics are found only in Bulgarian and Macedonian. All the other Slavic languages that have clitics place them in second (Wackernagel) position. These languages include Czech, Slovak, Slovene, and Serbo-Croatian. Moreover, Slavic has a larger repertoire of clitics at its disposal than Romance. It is not only pronominal forms that can be clitics; clitics also include modal verbs, the auxiliary verb BE, and particles that specify illocutionary force. Both verb-adjacent and second position clitics must appear in a sequence according to a specific order, which is given in (18). The operator clitics are the highest ones in the structure; they are followed by auxiliary clitics except for the 3rd person singular form of the auxiliary BE, which comes last in the sequence, following the pronominal clitics.

(18) operator clitics > aux (except 3rd SG) > refl > dat > acc > 3rd sg aux
(see Franks & King 2000)

It has been mentioned at the beginning of this paper that second position clitics do not target a designated position in the structure and that at first blush it seems that
the only requirement that matters for their placement is that they appear after the initial constituent. As far as the former property is concerned, there is indeed some evidence indicating that Wackernagel clitics are hosted in different projections in different sentences. For instance, Bošković (1995:247) observes that ambiguous adverbs, such as *pravilno* ‘correctly,’ acquire different interpretations depending on the presence of particular clitics in a clause. Thus, as shown in (19a), when a sentence contains the auxiliary clitic *su* without any pronominal clitics, both the manner and the sentential readings of *pravilno* are possible. However, when the auxiliary clitic *su* is accompanied by the dative clitic *joj*, the sentential interpretation is excluded. Following a standard assumption that sentential adverbs are located higher in the structure than manner adverbs, Bošković explains this contrast by suggesting that the auxiliary clitic lands higher in (19a) than in (19b), when it co-occurs with the dative clitic.

(19) a. *Oni su pravilno odgovorili Mileni* they are$_{AUX}$ correctly answer$_{PART.PL}$ Milena$_{DAT}$ ‘They did the right thing in answering Milena.’ ‘They gave Milena a correct answer.’

   b. *Oni su *joj *pravilno odgovorili* they are$_{AUX}$ her$_{DAT}$ correctly answer$_{PART.PL}$

   ‘*They did the right thing in answering her.*’ ‘They gave her a correct answer.’

   (S-C, Bošković 1995:247)

Even though clitics in almost all cases appear adjacent to each other and must follow the ordering of the template in (18), Bošković (2001) observes that in some cases it is possible to split them, for example by a parenthetical, as in (20). This suggests that they are not hosted adjoined to the same head.

(20) *?Oni su, kao to sam vam rekla, predstavili se Petru* they are$_{AUX}$ as am$_{AUX}$ you$_{DAT}$ said introduced self$_{ACC}$ P$_{DAT}$

   ‘They, as I told you, introduced themselves to Petar.’

   (S-C, Bošković 2001:50)

Furthermore, Wilder and Ćavar (1994: 9) notice that some speakers of Serbo-Croatian allow VP-fronting with an auxiliary clitic within the VP. Interestingly, the speakers that allow VP-fronting also permit the auxiliary clitic to be split from the pronominal clitics, as in (21), which again indicates that the clitics do not land in the same projection.

(21) *Dali ga Mariji su Ivan i Stipe.* give$_{PART.M.PL}$ it$_{ACC}$ Marija$_{DAT}$ are$_{AUX}$ Ivan and Stipe

   ‘Give it to Marija, Ivan and Stipe did.’

   (S-C, Bošković 2001:50)

Given the fact that pronominal and auxiliary clitics do not target a designated position in Serbo-Croatian, and that their placement is dictated by the requirement that they
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be located after the initial element in a sentence, it may seem that their position is governed by phonological requirements. This is in fact what was suggested earlier in the literature, on the basis of examples like the ones in (22), in which clitics may occur after the initial phrase or a word; in the latter case apparently giving rise to the split of a syntactic constituent. For instance, Halpern (1992) proposes that in the strings of the type in (22b) clitics are placed after the first element bearing stress via the operation of prosodic inversion.

(22) a. Taj čovjek je volio Milenu
   this man is\textsubscript{AUX} love\textsubscript{PART,MSG} Milena
   ‘That man loved Milena.’

b. Taj je čovjek volio Milenu
   this is\textsubscript{AUX} man love\textsubscript{PART,MSG} Milena
   (S-C, Bošković 2001:12)

In (22b) the auxiliary clitic intervenes between the demonstrative and the noun within the same NP. However, Wilder and Ćavar (1994) and Progovac (1996) point out that the separation of a demonstrative from a noun is regularly possible in Serbo-Croatian, as this language permits Left Branch Extraction. Consequently, there is nothing exceptional about the clitic placement in (22b); in fact, non-clitic material may occur in this position, too.

(23) a. Tog je Milena voljela čovjeka
   that is\textsubscript{AUX} Milena love\textsubscript{PART,ESG} man
   ‘Milena loved that man.’

b. Tog Milena voli čovjeka
   that Milena love\textsubscript{S,SG} man
   Milena loves that man.’
   (S-C, Bošković 2001:12)

Moreover, under closer scrutiny it turns out that clitics may only follow the initial element if this element is a syntactic constituent, that is, if this element is able to undergo movement as a unit.\footnote{An anonymous reviewer questions this statement, quoting the data in (ia), in which the auxiliary clitic intervenes between the first name and the family name. However, as was already noted by Franks (1997), non-clitic finite verbs may appear in this position, too (see ib), so (ia) does not show that clitics may split syntactic constituents.}

As an example of this property Progovac (1996)

\begin{itemize}
  \item (i) a. Lava sam Tolstoja čitala
    Leo\textsubscript{ACC} am\textsubscript{AUX} Tolstoi\textsubscript{ACC} read\textsubscript{PART,ESG}
    ‘Leo Tolstoi, I have read.’

  \item (i) b. Lava čitam Tolstoja
    Leo\textsubscript{ACC} read\textsubscript{PRES,SG} Tolstoi\textsubscript{ACC}
    ‘Leo Tolstoi, I read.’
   (S-C, Bošković 2001:16)
\end{itemize}
provides sentences with clause-initial complex NPs, which may not be split by clitics, even though the most initial noun, such as roditelji ‘parents’ in (24), receives stress.

(24) a. \[NP_{\text{roditelji}} \text{uspe\'nih studenata} \text{su se razisli} \]
parents successful\text{students} are\text{REFL} dispersed

‘The parents of the successful students dispersed.’

b. *Roditelji su se uspe\'nih studenata razisli  
\cite{S-C, Progovac 1996:418}

Another example illustrating the same property contains two conjuncts. For the majority of speakers it is impossible to place the clitics after the first conjunct, given that it is not extractable and as such, it is not a syntactic constituent.

(25) a. Sistra i njen mu\'z \text{\'ce mi ga pokloniti}
sister and her husband will me give

‘My sister and her husband will give it to me.’

b. *Sestra \text{\'ce mi ga i njen mu\'z pokloniti}  
\cite{S-C, Progovac 1996:419}

Summarizing, it seems that the distribution of second position clitics is in many ways similar to the distribution of V2 in Germanic. Both types of operations involve placement of a member of a certain natural class after the initial constituent. In the case of clitics, there is no designated syntactic position that they occupy in the structure, which suggests that there is no uniform syntactic trigger for their movement.

2.2 Diachrony of second position cliticization in Slavic

The following section discusses the placement of clitics in Old Church Slavonic, the oldest Slavic literary language (the earliest records come from the 10th century). An intriguing property of Old Church Slavonic cliticization is the fact that the clitics that express the illocutionary force of a clause (operator clitics) have a distinct distribution than other clitics. Namely, Radanovi\'c-Koci\'c (1988:151) points out that the three force clitics: the question/focus particle \text{l\'i}, the complementizer clitic \text{bo} ‘because’, and the focus particle \text{\'ze} were the only clitics that occurred in second position in all contexts, as exemplified in (26).

(26) a. A\text{\'ste li oko tvo\'e l\'okavo b\text{\'o}det\text{\'}e}.
If your eye evil \text{IS\text{PERF}}

‘If your eye should be evil.’  
\cite{Radanovi\'c-Koci\'c 1988:151}

b. A\text{\'ste li \text{\'ze} ni i nov\text{\'o}j\text{\'o} razderet\text{\'}e}.
If not also new tear \text{\text{FUT}}

‘Or else the new one will tear.’  
\cite{Pancheva et al. 2007}
Pronominal clitics in Old Church Slavonic were in most cases verb-adjacent. This is indicated in (27); note also that the pronominal clitics do not need to cluster with the force clitics located in second position.

(27) a. Elisaveti že isplòni se vreme roditi ei.
   Elizabeth foc fulfilled refl time give-birth her\textsubscript{DAT}
   ‘When it was time for Elizabeth to have her baby...’
   (OCS, Pancheva et al. 2007)

b. Oca moego vò têxò dostoitò mì byti.
   father my in these be-appropriate më\textsubscript{DAT} be
   ‘I had to be in my Father’s house?’ (OCS, Pancheva et al. 2007)

c. Ašte desnaē tvoē rôka soblažbaeò tê.
   if right your hand sins you\textsubscript{ACC}
   ‘If your right hand causes you to sin.’
   (OCS, Radanović-Kocić 1988:154)

Radanović-Kocić (1988:153) observes that although there were cases of second position pronominal clitics, all the accusative clitics in this position were then also verb-adjacent (cf. 28a). Dative clitics were more common in second position, in particular in the presence of an operator clitic (cf. 28b). Željko Bošković (p.c.) remarks that some of them could be ethical datives. Ethical datives are force clitics, as they do not refer to any real arguments, but instead they are used to establish intimacy between the speaker and the hearer.

(28) a. Sòdii tê prèdastò šlousè
   judge you\textsubscript{ACC} hands-over guard\textsubscript{DAT}
   ‘The judge hands you over to the guard.’
   (OCS, Radanović-Kocić 1988:156)

b. Dobrēe bo ti estò.
   better as you\textsubscript{DAT} is
   ‘It is better for you.’

In some of the Slavic languages that emerged later the pronominal clitics started to shift toward second position. In Migdalski (2010), I observe that the process coincides with the loss of morphological tense distinctions. In a nutshell, Old Church Slavonic had a highly complex system of tenses, with two simple past aspectual tenses, aorist and imperfect. The present and past perfect were formed with an (active) \textit{l}-participle accompanied by the auxiliary BE in the imperfective aspect and the imperfect tense (or the imperfective form of the aorist), respectively. Future forms were constructed with the perfective form of the auxiliary BE and the infinitive (or the \textit{l}-participle in the so-called Future (II) as the main verb. All the relevant tense forms are exemplified in (29).
In addition, virtually all verbs were marked for perfective or imperfective aspect, the way it happens in contemporary Slavic languages, in which the majority of verbs and nominalizations form regular aspectual pairs (perfective vs. imperfective).

The tense chart in (29) indicates that in some cases aspect was marked twice on the verb. For example, aorist forms, which already express perfectivity, were in addition marked as perfective or imperfective via aspectual morphology. Likewise, it was also possible to have perfective or imperfective variants of verbs marked for the imperfect past tense. Most Slavic languages simplified the tense system, losing the aspectual tenses, and currently they use aspectual or modal morphology to render temporal specifications. The only languages that retained aorist and imperfect were Bulgarian and Macedonian, which are also the only languages to have retained verb-adjacent pronominal clitics. The other languages that kept pronominal clitics moved them to second position. I point out in Migdalski (2010) that the timing of this process seems to be strictly related to the decline of the simple past tenses. For instance, aorist disappeared quite early in Old Slovene, and correspondingly, pronominal clitics emerge very early in this language as well, as they are found already in the oldest Slovene text from the 10th–11th century. In Serbo-Croatian, especially in the dialects of Montenegro, aorist is a narrative tense that is still “taught” at schools, but it can only be used with verbs marked for perfective aspect, which suggests that it has lost its temporal interpretation. To capture the relation between the loss of morphological tense and verb-adjacent clitics, I propose in Migdalski (2010) that the change involved the loss of TP, as a result of which pronominal clitics could not adjoin to T any more and ended up in second position.

Summarizing, although second position clitics expressed force in Old Church Slavonic, second position cliticization in Modern Slavic is not uniformly related to
force marking. If this were the case, it could be expected that as a result of the shift of pronominal clitics to second position, all sentences that contain pronominal clitics started to explicitly specify a force type. As far as can be determined, this did not happen, though.

2.3 Properties of force clitics in Slavic

Most Slavic languages have retained some second position force-related clitics, whether they have second position pronominal clitics or not. One of them is li, which either licenses yes-no questions or marks the element that proceeds it as focalized.

(31) Koga li Petar voli?
    whom Q Peter loves
    ‘Who on earth does Peter love?’

The next subsections of this paper show that when compared to other second position clitics, force clitics display a distinct distribution with respect to the position in the structure as well as the syntactic and semantic status of the host (see Migdalski (2009) for a detailed discussion). These differences indicate that force-driven movement to second position cannot be equated with general second position cliticization.

2.3.1 Position in the structure

In Section 2.2 I mentioned that some dative clitics targeted second position in Old Church Slavonic and that at least in some cases, they seemed to be ethical datives. Ethical datives are found in contemporary Serbo-Croatian as well. Bošković (2001:60) observes that they have a different distribution than argumental dative clitics: they may appear above sentential adverbs, on a par with auxiliary clitics (see also example (19) in Section 2.1). This means that they raise higher than other pronominal clitics.

(32) Oni su ti pravilno odgovorili Mileni.
    they are AUX you DAT correctly answer PART.M.PL Milena DAT
    ‘They did the right thing in answering Milena.’
    ‘They gave Milena a correct answer.’

Like Serbo-Croatian, Czech has Wackernagel pronominal and auxiliary clitics as well. It also has the clitic li, which displays special requirements with respect to the direction of cliticization. Namely, Toman (1996:507) observes that whereas pronominal clitics may either encliticize (as in the case of the first clitic ji in the infinitival clause in (33))

---

2. See also Tomaszewicz (this volume) for an analysis of by, a clitic that functions as a conditional auxiliary and a subjunctive mood marker in some Slavic languages.
or procliticize (the second clitic $ji$ in the matrix clause in (33)) in Czech, $li$ may only be an enclitic. The # symbol indicates potential prosodic breaks.

(33) a. \textit{Poslouchat (\textasteriskcentered) ji (\textasteriskcentered) by ji (\textasteriskcentered) asi nudilo}\nl_{\text{INF}} \hspace{2cm} h_{\text{ACC}} \hspace{2cm} h_{\text{ACC}} \hspace{2cm} \text{probably bore}
\‘It would perhaps bore her, to listen to her,\’

b. \textit{Máte(\textasteriskcentered) pochyby, zatelefonujte na informace.}\n\text{have}_{2\text{PL}} + q \hspace{2cm} \text{doubts call}_{2\text{PL}} \hspace{2cm} \text{at information}
\‘If you have doubts, call the information.\’ \hspace{2cm} \text{(Cz, Toman 1996: 507–508)}

2.3.2 Categorial status of the host

In some Slavic languages force clitics impose specific restrictions concerning the grammatical category of their hosts. For example, the clitic $li$ in Czech, exemplified in (33) above, may only be hosted by a verb. Consequently, the variant of (33b) in (34) is unacceptable, because $li$ is adjacent to a noun or an adverb, rather than the verb.

(34) *\textit{Pochyby/\textasteriskcentered}dnes-li máte....\ndoubts/today q \text{have}_{2\text{PL}}\hspace{2cm} \text{(Cz, Toman 1996: 508)}

A similar constraint is at work in Polish, even though this language has weak pronouns, rather than second position pronominal clitics. Like Old Church Slavonic, Polish uses $że$ as an emphatic second position particle. Bafiński (2000) points out that $że$ may only encliticize to verbal hosts, such as the auxiliary clitic -$ś$ in (35).

(35) a. \textit{Do Katowic-że-ś pojechal?}\nto Katowice_{\text{GEN} + \text{FOC} + \text{AUX}._{2\text{SG}}} \hspace{2cm} \text{go}_{\text{PART.F.SG}}
\‘You went to Katowice?!\’

b. *\textit{Do Katowic-że pojechal-ēś}? (Pl)

2.3.3 Syntactic nature of the host

Force clitics may also impose specific restrictions with respect to the syntactic status of the host. Example (36a) shows that in Serbo-Croatian auxiliary and pronominal clitics may be preceded by heads and phrases, but the clitic $li$ may only follow heads (see (36b)).

(36) a. \textit{Skupe (je) knjige (je) Ana čitala.}\n\text{expensive is}_{\text{AUX}} \hspace{2cm} \text{books is}_{\text{AUX}} \hspace{2cm} \text{Ana read}_{\text{PART.FSG}}
\‘Ana read expensive books.\’

b. \textit{Skupe (li) knjige (*li) Ana čita?}\n\text{expensive q books q \text{Ana reads}}
\‘Does Ana read expensive books?\’ \hspace{2cm} \text{(cf. Bošković 2001: 27)}

Bošković (2001: 31ff) captures the restriction by proposing that $li$ in Serbo-Croatian is defective and is not able to project a specifier. Therefore, the only elements that may
adjoin to *li are heads. Interestingly, the same restriction is observed in Russian, even though Russian does not have any auxiliary or pronominal clitics.

(37)  *Doroguju *li knigu (*li) ona kupila?

\[\text{expensive q book q she buy}_{\text{PART,SG}}\]

‘Did she buy an EXPENSIVE book?’

(Rus, Rudin, King & Izvorski 1998:215)

Summarizing, the various constraints imposed by force clitics on their hosts presented in this section indicate that these clitics have an entirely different distribution than other second position clitics. Moreover, the constraints hold regardless of whether a given language has any other second position clitics or not. These facts show again that it is not correct to treat all second position elements in a uniform fashion, and that only some of them should be taken to specify force.

3. Conclusion

This paper has investigated two types of patterns exhibiting second position effects, V2 and second position cliticization. The former pattern is often taken to be a marker of the illocutionary force of a clause. An analysis of the diachrony of the V2 pattern in Germanic and second position cliticization in Slavic, as well as a comparison of properties of force-related versus general second position cliticization reveals that second position effects cover a number of different operations. Only some of them are directly related to force marking, although all of them result in a uniform placement of the verb or a clitic in second position.

References


C. ADVERBIAL CLAUSES

The syntax-discourse interface in adverbial clauses*

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This paper discusses the typology of adverbial clauses with special attention to the gradient properties of the so-called main clause phenomena and information structure. I will give an analysis of a new paradigm of adverbial clauses discovered by traditional descriptive Japanese grammarians, and relate their findings to a number of papers presented in this volume, in particular the ones by Haegeman, Miyagawa and Coniglio & Zegrean.

1. Introduction

This paper aims to discuss some typological aspects of adverbial clauses with special attention to gradient properties of the so-called main clause phenomena and information structure. Based on a particular typology of Japanese adverbial clauses by traditional descriptive grammarians, I provide an analysis of the gradient properties of adverbial clauses, and try to explain the paradigm with special reference to the papers by Haegeman, Miyagawa and Coniglio & Zegrean contained in this volume.

The paper is organized as follows. In Section 1, I introduce a new paradigm of adverbial clauses in Japanese which explains the gradient properties of adverbial clauses

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in terms of the availability of functional heads. Section 2 provides an analysis of the new paradigm introduced in Section 1 and tries to account for the paradigm with reference to a number of papers contained in this volume. Section 3 summarizes the discussion.

2. A new paradigm of adverbial clauses

2.1 The availability of functional heads

In this section, I introduce a new paradigm of the typology of adverbial clauses in Japanese discovered by traditional descriptive grammarians. To proceed with this task, however, it is necessary to first clarify the basic hierarchical structure of functional heads in Japanese. Consider the following example which illustrates a sequence of particles associated with the verb *narabe* (‘arrange’) as it could appear in a root clause:

(1) ...*narabe-* rare- tei- na- kat- ta-
    arrange- Passive- Aspect- Negation- Tense- Speaker’s Mood-
    soo -yo.
    Interpersonal- Mood

‘(Things) do not seem to have been arranged, do they?’

In (1), the verb *narabe* ‘arrange’ is followed by the Passive particle *rare*, which in turn is followed by the Aspect particle *tei*, etc. According to Baker’s (1985) Mirror Principle, this sequencing of the particles can be interpreted in the following way. The verb is merged in a position lower than the Passive particle *rare*, which in turn is merged lower than the Aspect particle *tei*; by transitivity, the verb is merged lower than the Aspect particle. Applying this logic to the other particles in (1), the following hierarchical ordering of the Japanese clausal functional heads emerges, where Polarity includes Positive and Negative forms.¹

(2) Voice < Aspect < Polarity < Tense < Speaker’s Mood < Interpersonal Mood

Based on the rigid ordering of functional heads in (2) and their availability in various clauses, Minami (1974) identifies four clause types, listed in (3). He shows that adverbial clauses can only belong to groups A, B and C, which he thus considers to be the three basic types of adverbial clauses.

¹. Among the traditional Japanese grammarians, it is a common practice to postulate the functional head Polarity rather than Negation, perhaps because Japanese abounds with negative polarity items (*rokuna* ‘good/decent/satisfactory’, *sukosisika* ‘only a little’, *mattaku* ‘at all’ etc.) as well as positive polarity items (*bakari* ‘only’, *kurai* ‘much’, *made* ‘even’, etc.).
(3) Group A. Voice
Group B. Voice, Aspect, Polarity, Tense
Group C. Voice, Aspect, Polarity, Tense, Speaker’s Mood
Group D. Voice, Aspect, Polarity, Tense, Speaker’s Mood, Interpersonal Mood

Minami relates the internal functional structure of the (adverbial) clauses to their ‘degree of subordination’: Group A clauses, which contain only the Voice head, show the highest degree of subordination, while Group D clauses, which display the full range of functional heads, have the lowest degree of subordination, i.e., they are highest in the structure. Minami makes two further important observations: (i) clauses belonging to Group C and Group D may include constituents which are associated with the topic particle *wa*, a phenomenon which Miyagawa (this volume) generally takes to be a main clause phenomenon; and (ii) Group D allows interpersonal mood particles, which appear exclusively in main clauses (see Endo 2011a for interpersonal particles) and are never available in adverbial clauses. Group D is also compatible with the quotation particle, which also never appears in an adverbial clause.²

From the perspective of main clause phenomena, this paradigm suggests that there is gradience in the functional structure of adverbial clauses ranging from Group A to Group C which correlates with the availability of main clause phenomena: the more functional elements a given adverbial clause contains, the more it allows main clause phenomena.

---

2. The use of the quotation particle *to* is illustrated below:

(i) *John-wa [oo samui to] itta.*

John-TOP [Oh cold quote] said

'John said “Oh, it is cold”.'

The term “quotation” might be a misnomer since the particle *to* may also be used to introduce a mimetic expression to create an adverb; as illustrated below:

(ii) *John-wa eda-o paki-to otta.*

John-TOP branch-ACC “paki”-to broke

'John broke a branch with the sound “paki”.'

(iii) *John-wa buru-to furueta.*

John-TOP “buru”-to shiver

'John shivered with cold.’

The quotative particle *to* may be used without a main verb, in which case the embedded clause introduced by the particle *to* is interpreted as a main clause:

(i) *Saa iku zo to.*

OK go! PRT quote

'OK, let’s go.’
Elaborating on Minami’s original (1974) classification, Noda (2001) proposes a more fine-grained classification, identifying six types of adverbial clauses, again based on the diagnostic of which functional heads (FH) may appear in adverbial clauses. His classification is reproduced in the table in (4), where Noda’s term “interpersonal mood” is changed into “speech act”:

<table>
<thead>
<tr>
<th>G</th>
<th>FH</th>
<th>Voice</th>
<th>Asp</th>
<th>Pol</th>
<th>T</th>
<th>Mood</th>
<th>Speech-act</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group A: nagara ‘while’</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group B: zuni ‘without’</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group C: ba ‘if’</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group D: toki ‘when’</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group E: node ‘because’</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
<td>no</td>
</tr>
<tr>
<td>Group F: ga ‘though’</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>no</td>
<td>no</td>
</tr>
</tbody>
</table>

This table reads as follows. The intersection of the hierarchically ordered functional heads in the top row and the adverbial clause head listed in the left most column is ‘yes’ or ‘no’. If it is ‘yes’, this means that the relevant functional head can appear in an adverbial clause headed by the particular subordinator indicated; if the intersection is labelled ‘no’, it means that such a functional head cannot appear in the relevant adverbial clause. For instance, the subordinator nagara ‘while/with’ introduces an adverbial clause from group A in Noda’s (2001) classification. The intersection of nagara in the far left column and Voice in the top row is ‘yes’, meaning that the functional head Voice can appear in the adverbial clause headed by nagara; in contrast, the intersection of nagara and the higher functional element, Aspect is ‘no’, meaning that the Aspectual head tei cannot appear in the adverbial clause headed by nagara, as illustrated in (5b).

(5)  

a. Neko-wa (atama-o nade-rare-(tei) nagara) zitto si-tei-ta  
cat-top head-ACC pat-Passive-(*Aspect) while still stay-ASP-PAST  
‘While its head was being patted, the cat stayed still’

b. TV-o mi nagara gohan-o tabe-tei/*hajime-ru.  
TV-ACC watch while/with rice-ACC eat-Progress/ Incept-Present  
‘I was eating rice while watching TV’

In addition to this pattern concerning the internal structure of adverbial clauses, Noda noted two further interesting correlations with respect to the internal structure of adverbial clauses and with respect to their external syntax. The first is that there is a correlation between the presence of an adverbial clause and the functional heads in
the matrix clause: each type of adverbial clause has what Noda calls a ‘concord’ relation with a functional head in the matrix clause. By a concord relation, he means that the presence of a given adverbial clause coincides with the availability of a specific type of functional head in the matrix clause. Thus, the presence of an adverbial clause headed by *nagara* ‘with/while’ which belongs to Group A, labelled the ‘Aspectual’ type by Noda, leads to the presence of the progressive aspect particle *tei* in the matrix clause, rather than the inceptive aspect particle *hajime*. This correlation is illustrated in (5b) above.

Noda then shows that there is a correlation between the availability of functional heads in an adverbial clause and the functional projections in the matrix clause. This correlation can be expressed in the $X'$-theoretic terms in the following way:

(6) a. The subordinator in an adverbial clause has a selectional feature, which specifies the type of the functional head that may appear as its complement.

   b. The selectional feature for the complement of the associated auxiliary element in the matrix clause is the same as the selectional feature for the complement of the subordinator in the adverbial clause.

Here, the specific selectional feature refers to FHs like Passive, Aspect, etc. listed in (4). Thus, the top-most head in each of the six types of adverbials in (4) specifies the feature present on Z in the $X'$-schema in (7) below.

(7) Equation: Y = Z

\[
\begin{align*}
& \text{(i) } X = \text{functional head of matrix clause} \\
& \text{(ii) } Y = \text{complement of } X \\
& \text{(iii) } Z = \text{functional head in adverbial clause} \\
& \hspace{1cm} \text{licensed by } X
\end{align*}
\]

For instance, a Group A adverbial clause headed by *nagara* ‘with/while’ requires the presence of a designated functional head related to Aspect in the matrix predicate, and has a selectional feature [Voice], determining the functional sequence in the embedded adverbial clause. As a consequence, the adverbial clause can contain the Voice particle *rare*, but cannot contain a higher functional head like the Aspectual particle *tei*, as in (5b).

The observed correlation between the typology of adverbial clauses and the availability of functional heads is systematically exemplified for all clause types below. Adverbial clauses are delimited by square brackets, the concord relation between the adverbial clause and the functional heads in the matrix clause is represented by an arrow. Having illustrated Group A in (5), below I only illustrate the other Groups.
2.2 Group B (negation type): Zuni (‘without’)

This type of adverbial clause requires a non-Negation functional head in the matrix clause, which is assumed to be an unpronounced default form, suggesting that the real restriction is Polarity, rather than Neg. The correlation is illustrated in (8a). In addition, this type of adverbial clause itself can contain only the functional heads Voice and Aspect, and no higher head in the functional hierarchy such as Tense, as in (8b):3

(8) a. [Yoku mi zuni] kat q/* nakat-ta.
carefully examine without buy-Positive NEG-PAST
‘I bought it without examining it carefully.’

such.a.place-at stand ASP -PAST without here-to come-IMP
‘Instead of standing in such a place, come over here.’

2.3 Group C (conditional type): (Kere)ba ‘if’

This type of adverbial clause is headed by a subordinator of the conditional type like ba, which has an alternative form, kereba. The availability of the conditional adverbial clause of Group C requires a non-past form in the matrix predicate, as shown in (9a). The conditional clause itself can contain the functional heads Voice, Aspect and Negation, but is not compatible with higher functional heads such as speaker’s mood, cf. (9b).4

(9) a. [Ame-ga hu reba] hanabi-taikai-wa junensu-ru/*ta.
[rain-NOM fall if] firework-festival-TOP postpone-Present/*Past
‘If it rains, the firework festival will be postponed.’

b. [Koogai-ni sun dei reba] kisetu-no
[suburb-in live ASP if] season-GEN
uturikawari-ga yoku wakari-masu.
change-NOM well see-polite
‘If you live in the suburbs, you can see the changing of the seasons clearly.’

3. The example in (8b) is not included in Noda (2001). I am grateful to Hisashi Noda (personal communication) for offering me the concrete example in (8b).

4. The example in (9a) is take from Noda (1989).
2.4 Type D (temporal type): *Toki-(ni) ‘when’*

This type of adverbial clause is headed by the temporal subordinator *toki* ‘when’. The presence of such a temporal adverbial clause correlates with the specific past particle *ta* in the matrix clause, as illustrated in (10a). Noda notes the fact, well-known among the traditional descriptive Japanese grammarians, that the past tense form *ta* is used when the event expressed by the adverbial clause has ended either (i) prior to the speech time (‘speech-time *ta*’) or (ii) prior to the reference time of the matrix clause (‘reference-time *ta*’). Though temporal adverbial clauses do have a temporal particle, it should be noted that this is restricted to *ta* with the reference time interpretation. This suggests that the temporal adverbial clause does not have a fully fledged internal syntactic structure with respect to tense specification. The temporal adverbial clause does, however, display a fully fledged internal structure of a polarity type, which is immediately below T in the functional hierarchy in (1): it can host the functional heads Voice, Aspect and Polarity. Higher functional heads such as Speaker’s mood are unavailable. The functional particles available in temporal clauses are illustrated in (10b).

\[
\text{(10) a. } \text{Boku-wa [umare-ta} \text{ toki] taizyuuu-ga sukuna-katta/*i.}
\]
\[
\text{I-} \text{TOP be.born-PAST when weight-NOM low-PAST/PRESENT}
\]
\[
\text{‘When I was born, I weighed little.’}
\]

\[
\text{b. } \text{[Doonimo naranakunat-ta toki-ni]-wa denwa-o kudasai.}
\]
\[
\text{too.late to.do.anything-PAST when-at-TOP call-ACC give-IMP}
\]
\[
\text{‘When things turn out to be too late to do anything, give me a call.’}
\]

2.5 Group E (reason type): *Node ‘because’*

The availability of this type of adverbial clause correlates with a neutral speaker’s mood (NSM=φ) in the matrix clause, and is incompatible with other expressions of speaker’s mood such as evidential *rasii ‘seem’, as illustrated in (11a). The adverbial clause itself can contain the functional heads Voice, Aspect, Negation and Tense, but is incompatible with the higher functional heads such as Speaker’s mood, as illustrated in (11b).

\[
\text{(11) a. } \text{[Yasu-i node] kat-ta φ/* kau-rasii.}
\]
\[
\text{inexpensive-is because buy-PAST NSM buy-mood}
\]
\[
\text{‘Because it was inexpensive, I bought it.’}
\]
Because my daughter was not finished with her homework, I scolded her.

2.6 Group F (concessive type): Ga ‘although’

Because of the presence of a concessive, an adverbial clause of Group F correlates with a matrix interpersonal mood element that is not of the interrogative type (=β). Non-interrogative interpersonal mood is the default null form, cf. (12a). The adverbial clause itself can contain the functional heads Voice, Aspect, Negation, Tense and Speaker’s mood, but is incompatible with the higher head such as Interpersonal (Int. pers.) mood, as in (12b):

(12) a. [Kankyoo-wa yoi ga], huben-desu-β/*-ka.
   environment-TOP good.is though inconvenient-polite-β/*Q
   ‘Although the environment is good, it is inconveniently located.’

b. [Kankyoo-wa yoi-daroo-(*ne) ga] huben-desu
   environment-TOP good.is-Spk’sMood-(*Int.pers.mood)
   although inconvenient-polite
   ‘Although the environment might be good, it is inconveniently located.’

To summarize, Noda established that the internal structure of each type of adverbial clauses has a concord relation with a particular functional head in the associated matrix clause. The intuition behind Noda’s discovery can be expressed as follows: different types of adverbial clauses are associated with different kinds of functional heads in the matrix clause. The higher hierarchically that the functional head in the matrix clause is, the more functional heads the associated adverbial clause may contain. It is this gradient nature of different types of adverbial clauses that will be of our main concern below.

The concord relation between adverbial clauses and the functional hierarchy in the matrix clause suggests that there is a correlation between the merger of the adverbial clause and the relevant matching functional head in the main clause. Put differently, one can postulate that the matrix functional head signals the timing of the merger of the adverbial clause. This would lead to the prediction that the lower an adverbial clause is situated in Table (4), the later it will be merged with the associated clause and the further from V on its left it will appear (see also Williams 2009 for a similar idea). This prediction seems to be largely borne out, as illustrated below, where (A)–(E) refers to the adverbial clauses of Groups (A)–(E) in Table 4.
(13) a. Ame-ga fure-ba (C), soto-ni ika-zuni (B), ie-ni iru. rain-nom fall.if (C) outside go.without home-at stay Lit.: ‘If it rains, without going out, I stay home.’

b. Kyuukou-ni natta-node (D), toshokan-de hon-o cancel.class get.because library-in book-acc yomi-nagara (A) sugosita. read-while spend.time
Lit.: ‘Since the class was cancelled, with reading books in the library, I spent.’

To summarize this section, we have established the following points:

i. Adverbial clauses in Japanese differ with respect to how much of the clausal functional sequence they may contain (Minami 1974);

ii. The internal structure of adverbial clauses of Groups A to F correlates with the presence of designated functional heads in the associated matrix clause (Noda 1989).

3. Explaining Noda’s paradigm

In this section, I relate the findings established in Section 1 to analyses of main clause phenomena in the current literature and specifically in Haegeman (2011, this volume) and Coniglio and Zegrean (this volume).

3.1 Haegeman (2011/this volume)

First of all, it is well known that English conditional clauses are incompatible with the ‘high’ mood adverbs of the Cinque (1999) hierarchy. As shown in (14), they resist Evaluative markers (14a), Epistemic markers (14b) and Evidential markers (14c). To account for this observation, as well as for their incompatibility with main clause phenomena, Haegeman (2011, this volume) proposes that conditional clauses are derived by the movement of an operator (Op) from the specifier position of the Irrealis Mood to a clause-initial subordinator position headed by if, as shown schematically in (14d). Assuming that the Irrealis Mood operator shares relevant features with the high modals, the movement will be blocked by the presence of the high modals because movement of a mood type operator from irrealis mood phrase skips adverbs of the same mood type.5

5. Haegeman (2011) assumes Starke’s (2001) version of RM, where the moved element may not skip elements of the same type. Rizzi’s (2004) version of RM requires that the landing site of the moved element not be of the same type.
(14) a. *If they luckily arrived on time, we will be saved. (Evaluative)

b. *If George probably comes, the party will be a disaster. (Epistemic)

c. *If the students apparently can't follow the discussion in the third chapter, we'll do the second chapter. (Evidential)

d. [Sub [MoodPspeech act > MoodPevaluative > MoodPvividentia > MoodPepistemic > TP > MoodPirrealis

As Haegeman (2011, this volume) argues, the operator movement account opens up the possibility of eliminating the truncation strategy proposed in Haegeman (2006). According to the truncation account, adverbial clauses are structurally deficient: those adverbial clauses in which certain functional heads cannot appear are claimed to be truncated. As Haegeman (2011) notes, Haegeman (2006) had to stipulate that a certain portion of the adverbial clauses is truncated without there being a principled reason why this is so. In particular, relating the structural reduction to presence or absence of ‘Assertion’ proved problematic (see her paper for discussion). Moreover, truncation would have to be selective in that Romance Clitic left dislocation remains available in adverbial clauses in which, by hypothesis, higher Mood functional heads are absent. This would mean that even when the higher mood projections are unavailable, the left-peripheral topic projection must be instantiated.

The discussion above has revealed that Japanese adverbial clauses display restrictions to the availability of mood markers. As it stands the account is cast in terms of structural deficiency, i.e. truncation: adverbial clauses are projected up to a specific functional head in the hierarchy. For instance, aspectual adverbial clauses headed by nagara (‘while/with’) can only contain the Voice head, and are incompatible with the higher functional heads. Based on the hierarchy in (1), repeated here in (15), we might propose that such clauses are projected only up to the VoiceP level.

(15) Voice < Aspect < Polarity < Tense < Speaker’s Mood < Interpersonal Mood

Given Haegeman’s analysis, one may wonder if the same empty operator movement strategy can be invoked to account for the restrictions on the functional projections in Japanese.

At first sight, the answer to this questions seems to be negative. In terms of Haegeman’s empty operator movement approach to adverbial clauses, we would assume that the empty operator starts out from the functional projection that dominates the one that can be seen attested in the relevant adverbial clause. For instance, the aspectual adverbial clause headed by nagara ‘while/with’ would be derived by movement of an
empty operator from Aspect Phrase, which dominates VoiceP. Thus by locality conditions on movement, the higher mood projections are illicit as they would intervene for the movement of the null Aspectual operator:

\[(16) \quad \text{Speech-actP} \rightarrow \text{MoodP} \rightarrow \text{TenseP} \rightarrow \text{PolarityP} \rightarrow \text{AspectP} \rightarrow \text{VoiceP} \rightarrow \text{Op}^* \]

The proposed movement account thus captures the observation that the adverbial clause can contain the Voice projection, and that it cannot contain higher functional heads such as Tense. However, there are problems with the overall implementation of such a movement account.

The problem is that the operator movement account of temporal clauses, which is the basis of Haegeman’s movement account, relies on independent evidence that is at first sight not available in Japanese. Haegeman’s (2011, this volume) generalised movement account of adverbial clauses originates from the movement account of temporal clauses (Geis 1970, 1975, 1985; Larson 1985, 1987 etc.), which crucially hinges on the ambiguity of complex temporal clauses. To see this point, consider the English sentences in (17a) and (17b):

\[(17) \quad \begin{align*}
    &a. \quad \text{I saw Mary in New York [before she claimed [that she would arrive]].} \\
    &b. \quad \text{I saw Mary in New York before she asked how to fix the car.} \\
    &c. \quad \text{Watasi-wa Mary-ni [kanojo-ga tuku to] iu mae-ni] New I-top Mary-dat [she-nom arrive c claim before] New York-de atta.} \\
    &\quad \text{York-in met}
\end{align*}\]

English (17a) is ambiguous: it may mean that I saw Mary before she made the claim (high reading) or before the time of her predicted arrival (low reading). Note that the latter interpretation is barred in (17b), where it is assumed that a temporal operator moves from within the adjunct clause to the initial position of the clausal complement of before, violating Subjacency. These data are well known in the literature (Geis 1970, 1975, 1985; Larson 1985, 1987 etc.) and have standardly been invoked in support of the movement analysis of temporal clauses.

In contrast to the temporal clauses in English, Endo (2011b) and Miyagawa (this volume) show that Japanese temporal clauses such as (17c), which corresponds to English (17a), only have the high construal of the temporal conjunction. This can be taken as evidence that Japanese temporal adverbial clauses are not derived by operator movement and that the blocking effect observed should be derived differently. Bearing this contrast in mind, I propose to capture this unselective blocking effect in adverbial clauses by assuming that a subordinator is directly base-generated in a functional head position in the adverbial clause and that the subordinator blocks
further merger of functional heads. For instance, I propose that the subordinator of the Aspect type nagara ‘while/with’ is base-generated in the head of Aspect in the aspectual adverbial clause. Furthermore, I argue that an adverbial clause is derived by successive merger of functional elements, and that the merger stops with the merger of the subordinator. This is why no elements higher than Aspect may appear in the adverbial clause of the aspectual type. Recall from (4) that an aspectual adverbial clause of Group A cannot contain an aspectual particle. This now follows from the analysis proposed: in my account the aspectual particle and the subordinator of the Aspect type nagara ‘while/with’ compete for the same head position of Aspect. In essence, my account claims that adverbial clauses are structurally reduced, i.e., it is a version of a truncation account.

(18)  \[ V < \text{Voice} < \text{Aspect} < \text{Negation/Polarity} < \text{Tense} < \text{Mood} \]

nagara ‘while/with’

To sum up so far, the derivation of adverbial clauses is not homogeneous: (i) English adverbial clauses are derived by movement of an empty operator from TP-internal functional head, (ii) Japanese adverbial clauses are derived by base-generation of a subordinator in a designated functional head and do not involve operator movement.

Given that the account I propose here is in essence a return to the truncation approach espoused in Haegeman (2006), one may wonder if there is in fact any need for postulating the movement account at all, and if the movement account is relevant for Japanese. Recall that the ambiguity of adverbial clauses such as in (17a) has been the basis for movement account. In this context, an interesting puzzle observed by Miyagawa (this volume:10) becomes relevant. Miyagawa correctly observes that while the ambiguity in English temporal adverbial clauses (cf. (17a)) is absent in Japanese toki temporal clauses, it is not completely absent from the language. In fact, the relevant ambiguity does arise for a Japanese temporal adverbial clause, if the adverbial clause is suffixed by a Case particle. This is illustrated in (19), in which the toki clause is associated with the particle ni, and the ambiguity arising in (17a) is also available here:

6. An alternative explanation for the selectional restriction on the functional head in each type of adverbial clauses is a (head) movement account according to which the subordinator originates in the associated head position and moves to a left peripheral subordinator position. This analysis would capture the fact that a subordinator is interpreted in the highest subordinate position as assumed by Haegeman (2011). See Endo (2011b) for such an approach. The current base-generation approach needs to assume that a base-generated subordinator covertly moves into the highest subordinator position.
Although Miyagawa does not offer an explanation for this contrast, I suggest that a cue to the solution of this puzzle as well as the source of the difference between Japanese and English may lie in another paradigm observed by the traditional descriptive grammarian Masuoka (1997).

Before going into the relevant observation, I note that Japanese is a \textit{wh-in situ} language. To derive the scope of \textit{in situ} \textit{wh} constituents, one proposal in the literature is that \textit{in situ} \textit{wh} constituents are associated with a null operator which is related to the left peripheral Question particle (\textit{ka}) (Watanabe 1992). Typically, a \textit{wh}-element in a temporal adverbial clause without a case particle cannot be related to the matrix question particle, hence cannot have matrix scope. In a discussion of adverbial clauses associated with a Case particle, Masuoka notes that (i) an adverbial clause suffixed by a Case particle is focalized, and (ii) a \textit{wh}-element in such a focalised adverbial clause can be associated with a matrix question particle (Q-particle) \textit{ka} in the matrix clause and receive matrix scope. Thus (20a) is degraded because the \textit{wh}-constituent \textit{nani-o} (‘what’) cannot be associated with the matrix question particle \textit{ka}. The adverbial \textit{toki} clause in (20b) is associated with a case particle \textit{ni} and now the \textit{in situ} \textit{wh}-phrase can take matrix scope.

\begin{enumerate}
\item \textit{?Nani-o siteiru toki kono hon-o yonda no.desu ka?} \hfill (20a)
\item \textit{Nani-o siteiru toki-ni kono hon-o yonda no.desu ka?} \hfill (20b)
\end{enumerate}

Masuoka shows that when an adverbial clause is not suffixed by a Case particle as in (20a), the adverbial clause is not focalized, and the \textit{wh}-element \textit{nani} ‘what’ inside the adverbial clause cannot be associated with a Q-particle \textit{ka} in the matrix clause. Masuoka himself does not give an explanation for this intriguing fact. So let us ask how Masuoka’s paradigm can be explained.

Let us continue to assume with Watanabe (1992) that to derive the clausal scope of an \textit{in situ} \textit{wh}-phrase an empty operator moves from a \textit{wh}-element into the local domain of the Q-particle \textit{ka} in Japanese. On this assumption the degraded status of (20a) is not surprising. This is because the empty operator movement is blocked by
the Condition on Extraction Domain (CED), according to which movement out of an unselected domain like an adverbial clause is prohibited.

The question arises of how to account for the amelioration effect in (20b), apparently induced by the suffixation of a Case particle. What is it that allows the _wh_-element _nani_ ‘what’ to take scope out of the adverbial clause in (20b)? Endo (2007) suggests that any additional syntactic operation creates a new semantic effect. In the case at hand, the presence of the suffixation of a case particle creates a semantic effect, specifically that of focus. Thus, on this account the adverbial clause with a Case particle in (20a) is focalized, as Masuoka observes. A second effect of the insertion of the _ni_ particle is that the _wh_-constituent in the adverbial clause is allowed to escape the CED effect and have matrix scope.

I propose that the Case particle is the head of Focus Phrase (FocP). Consequently, the adverbial clause is associated with a ‘left periphery’, i.e., FocP. Thus, within the adverbial clause a specifier position becomes available. The amelioration effect in (20b) is accounted for as follows: The empty operator associated with a _wh_-element may move into the adverbial [Spec, FocP], and the entire adverbial clause can be interpreted as the focus of the question. Assuming that an element interpreted as the focus of the question must be licensed in the local domain of Q, the FocP dominating the entire adverbial clause, which is the focus of the question, may undergo large scale pied-piping to the local domain of the Q-particle _ka_ in the matrix clause without violating the CED in covert syntax, cf. (21).

\[
\text{(21) Step 1: adverbial clause=}[\text{FocP}[\text{Op wh}]\text{...][Case]}\text{...}[\text{matrix clause...Q}] \\
\text{Step 2: adverbial clause=}[\text{FocP Op...[ wh]...][Case]}\text{...}[\text{matrix clause...Q}] 
\]

That the entire adverbial clause is brought to the local domain of Q by large scale pied-piping is suggested by the fact that the most natural answer to the question in (20b) is an entire adverbial clause rather than a simple DP.

\[
\text{(22) A: } \text{Nani-o siteiru toki-ni kono hon-o yonda no.desu ka?} \\
\text{polite Q} \\
\text{‘What did you read a book when you were doing?’} \\
B: \text{Cookie-o take teiru toki-ni desu.} \\
\text{cookie-ACC eat ASP when-DAT polite} \\
\text{‘When I was eating cookies.’}
\]
I note that the correlation of movement to the left periphery of an embedded clause with large scale pied piping has been noted before. I refer to Munaro (2005) and also to Danckaert (2011) for an illustration from Latin and for a survey of the relevant literature.

With this background, let us ask how Miyagawa’s new paradigm can be explained. Why is it possible for the subordinator *toki* (‘when’) to acquire the low reading, if a case particle is present in its left periphery and the clause is focalised? Given our argument developed so far, we can rephrase the question in the following way: Why is it that once an adverbial clause is focalized, as a result of a case particle being present, it becomes possible for a temporal empty operator to move within an adverbial clause? Let us continue to assume that the Case particle creates a Focus projection above an adverbial clause. This entails that now a specifier position is available above the subordinating conjunction. An empty temporal operator may then move into the [Spec, FocP] within the temporal adverbial clause, as depicted below:

\[
\text{(23) adverbial clause=}[\text{FocP}…\text{TP}…\text{temporal Op}…]\text{Case}]\ (\text{low})
\]

The ambiguity of this type of adverbial clause can now be derived: (i) if the temporal operator moves from the higher layer of the adverbial clause into the [Spec, FocP], we obtain the high reading, cf. (24a); (ii) if the temporal operator moves from the lower embedded domain in the adverbial clause into the [Spec, FocP] in the temporal adverbial clause, we obtain the low reading, cf. (24a).

\[
\begin{align*}
\text{(24) a. } & \quad [\text{FocP}…\text{TP}(1)…\text{temporal Op}…\text{TP}(2)…]\…\text{Case}] \ (\text{high}) \\
\text{b. } & \quad [\text{FocP}…\text{TP}(1)…\text{TP}(2)…\text{temporal Op}…]\…\text{Case}] \ (\text{low})
\end{align*}
\]

At this point, one may wonder why the operator should target FocP in Japanese adverbial clauses at all. I suggest that this stems from the typology of the driving force for movement. Miyagawa (2010) claims that in a discourse-prominent language like Japanese movement is triggered by a discourse-related feature like focus, and that these are computationally equivalent to phi-features in Indic-European languages such as English. Thus, if a temporal adverbial clause in Japanese is a FocP, the focus feature associated with Foc attracts and triggers movement of an empty operator within the adverbial clause. In the absence of a case particle, and hence of FocP, I assume Rizzi’s (1997) economy of projection to the effect that the phrase is not projected because it
is unnecessary. If an empty operator were to be selected in the Numeration, it would remain in the base-generated position without a driving force to move to bind a variable, in violation of Full Interpretation, according to which an operator-variable pair is a legitimate syntactic object. Therefore, adverbial clauses without a Case particle cannot use the movement strategy to get a high reading.

Observe that our findings with respect to the role of the Case particle and the focus projection in Japanese show that the operator movement account cannot as such be dispensed with in favour of a return to truncation as the only strategy to derive adverbial clauses: as shown by Japanese *toki* clauses, both strategies are needed.

To summarize the discussion so far, we have explored the possibility that there are two ways to derive (temporal) adverbial clauses and seen that both the truncation strategy and the movement strategy are available. We also arrive at the conclusion that languages may vary parametrically in the deployment of these strategies: an empty operator always moves in English temporal *when* clauses, while in Japanese temporal *toki* clauses an empty operator moves only in case a Case particle is selected, projecting FocP which can host the moved operator. In the absence of a Case particle, Japanese temporal adverbial clauses have no driving force to move an empty operator and thus have to select a non-movement strategy, where a subordinator is base-generated in a clausal functional head.

3.2 Coniglio and Zegrean (2010/this volume)

Let us also briefly consider Noda’s findings from the perspective of work by Coniglio and Zegrean (this volume). Based on the distribution of various discourse particles, they propose to split Rizzi’s (1997) ForceP into two projections: Illocutionary Force and Clause Type (see Nasu 2010 for the possibility of further splitting up the ForceP). In Japanese, a clause type may be signalled by inflection, which can be reasonably considered to be at the IP-level. For instance, the verb *mi* ‘look’ is inflected as *mi-ru* for declarative clause type and as *mi-ro* for imperative clause type. Recall that Noda’s classification of functional heads in Japanese places interpersonal mood particles in the right periphery, which corresponds to a sequence of illocutionary force elements that follow verbal inflectional elements. For instance, the interpersonal mood particle *yo* is used when the speaker assumes that the addressee does not know the propositional content of his utterance and wants to draw the addressee’s attention to it. On the pragmatic level, the particle *yo* has the effect of strengthening the illocutionary force of request (see Endo 2011a for illocutionary force of Japanese particles). The sentences in (25) exemplify the main properties of clause typing particles: (25a) shows that the imperative inflection *ro* signals the clause type as imperative; (25b) shows the interpersonal modal particle *yo* as an illocutionary force particle.
in the right periphery. As noted above, the imperative inflection *ro* always precedes the illocutionary force particle *yo*, as in (25c), suggesting that illocutionary force element is higher than the functional head signalling the clause type, cf. Coniglio and Zegrean (2010). In addition, quite similarly to German, Italian and Romanian CP-level particles (Coniglio & Zegrean 2010), Japanese interpersonal modal particles may appear in clause-initial position in front of a nominal constituent suffixed by the topic particle *wa*, which is generally assumed to be found in the CP zone, as shown in (25d). This fact strengthens the idea that illocutionary force elements are found in the CP zone. Finally, like the Romanian discourse particle *oare* that is found in the CP zone (Coniglio & Zegrean this volume), an interpersonal particle adds a stylistic dimension to the question (doubt, wonder, irony, etc.), as illustrated in (25e). For additional discussion of the syntax of discourse particles, see also Hill (2007a, b; 2008) and Haegeman and Hill (2011).

(25)  
\begin{enumerate}
\item \textit{Are-о mi-ро}
\textit{that-ACC look-Imperative}
\textit{‘Look at that!’}
\item \textit{Are-о mi-ру-yo}
\textit{that-ACC look-Declarative-PRT}
\textit{‘I will look at that.’}
\item \textit{Are-о mi-ро-yo.}
\textit{that-ACC look-Imperative-PRT}
\textit{‘Hey, look at that!’}
\item \textit{Yo/Ne, are-wa henda-zо.}
\textit{PRT that-TOP strange-PRT}
\textit{‘Hey, that’s strange?’}
\item \textit{Moo iku no ka yo.}
\textit{already go FIN Q PRT}
\textit{‘Are you already going?!’}
\end{enumerate}

Keeping in mind the dichotomy of clause typing inflectional elements in the IP zone and interpersonal mood particles in the CP zone, consider now the following fact. As shown in (26a–b), clause-typing inflections, especially the declarative particle *ru*, may appear in adverbial clauses such as *ga* (‘although’) or *node* (‘because’) clauses, while the illocutionary force particles *yo/ne* may not, as in (26c). This suggests that splitting up of the illocutionary force elements and clause-typing elements is independently required to capture the internal distribution of functional elements in the adverbial clauses, along the lines of Coniglio and Zegrean (2010).

(26)  
\begin{enumerate}
\item \textit{Watasi-gа mi-ru kara,…}
\textit{I-NOM look-Declarative because}
\textit{‘Because I will look at it,…’}
\end{enumerate}
4. Concluding remarks

In this paper I first introduced a particular typology of adverbial clauses, based on the work by traditional Japanese descriptive grammarians. Subsequently, I tried to explain the paradigm of adverbial clauses with reference to the papers contained in this volume from the viewpoint of syntax-discourse interface. The conclusions are that with respect to the derivation of adverbial clauses, as discussed in Haegeman (this volume), it would seem at first sight that both a truncation account and a movement derivation account are needed to derive the properties of Japanese temporal adverbial clauses and that Japanese offers evidence for the enriched left periphery argued for in Coniglio and Zegrean (this volume).

References


Haegeman, Liliane & Hill, Virginia. 2011. The syntacticization of discourse. Ms, Ghent University and University of New Brunswick-SJ.


Noda, Hisashi. 2001. Tanbun·Fukubun to text (Simplex sentences·complex sentences and text). In Fukubun to Danwa (Complex Sentences and Context), Noda Naoshi, Takashi Masuoka, Mayumi Sakuma & Yukinori Takubo (eds). Tokyo: Iwanami.


Subjunctive mood, epistemic modality and Main Clause Phenomena in the analysis of adverbial clauses*

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This paper discusses the two types of adverbial clauses extensively analysed in Haegeman's works – central and peripheral clauses – in relation to the properties of the Bulgarian non-past verbal form. I propose that this form is the core instantiation of subjunctive mood and that while absence of temporal specification is the core ingredient of all subjunctive forms the modal shades often associated with subjunctives are an additional ingredient to anchor the non-deictic forms. I argue that the distribution of the bare non-past form is a strong argument in favour of the distinction between central and peripheral clauses. Additionally, I show, on the basis of the Bulgarian data, that peripheral clauses can be subdivided into two subgroups – premise and adversative clauses.

1. Introduction

Haegeman's (2003, 2006, 2010a, b, this volume) work on adverbial clauses has shown that these clauses are not a homogenous group and can be divided into at least two large subgroups, which the author calls central and peripheral clauses. Two phenomena, extensively discussed in Haegeman's works, have been claimed to mark the distinction between these two subgroups – the ban on high modals and the occurrence of Main Clause Phenomena (henceforth MCP).

The present work analyses future-oriented central and peripheral clauses in turn, mainly in terms of the distribution of the Bulgarian non-past form (henceforth NPF). Additionally, the discussion on peripheral clauses will focus on

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the type of epistemic modality these clauses allow as well as on the occurrence of some MCP.

Central clauses will be discussed mainly in relation to the NPF, a peculiar verbal form that can be used in main clauses only if preceded by the future particle šte or the modal subjunctive particle da. In future-oriented central adverbial clauses, as well as in relative clauses, the NPF can appear in the absence of such modal particle.

I provide evidence that the NPF, though not marked for mood (in the sense of Giorgi and Pianesi 1997), has the interpretation of what is standardly viewed as a subjunctive form. As will become clear from the analysis, the NPF is simply a verbal form that cannot make deictic reference, i.e. it cannot place an event in relation to the utterance time. Moreover, unlike the indicative forms used in adverbial clauses, the NPF does not introduce any presupposition as to the possibility that the event it describes might really take place. This is very much in line with Schlenker's (2005) analysis of subjunctive, according to which “all the subjunctive feature contributes is the understanding that there is no presupposition that the if-clause denotes a world which is in the Context Set” (Schlenker 2005). It will be suggested that an analysis of the NPF along these lines can be extended to all embedded clauses containing the bare NPF.1

The analysis of the properties of the NPF leads to the conclusion that the core property of forms considered as subjunctives is that they are temporally underspecified, and that to the extent that they are also marked for mood, that mood marking is an additional ingredient. Evidence for this conclusion comes from Bulgarian central adverbial clauses, where the NPF appears without being accompanied by the modal particle da, showing that the temporally unspecified form and the modal particle da are syntactically independent. The modal component of subjunctive verbs has different functions. For instance, in Bulgarian, the particle da is used to establish a relation between the embedded clause and the matrix predicate, in contexts in which this is necessary (complement clauses are an example). In other languages, modal elements may also be used in order to facilitate non-deictic/anaphoric reference.

The bare NPF cannot appear in peripheral clauses, which will be discussed in Section 3. The non-past form can only be used if preceded by the future particle or the modal particle da. Apart from setting apart central adverbial clauses from peripheral clauses, the use of the NPF distinguishes also between two subtypes of peripherals clauses – premise and adversative clauses. The distinction between

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1. The label “bare NPF” refers to those occurrence of the non-past form where it appears without being preceded by a particle.
these two subtypes will also be discussed in relation to epistemic modality and certain MCP.

The paper is organized as follows: Section 2 discusses central adverbial clauses and also provides evidence for the independence of the NPF and modal and future particles. Section 3 presents the analysis of peripheral clauses, and Section 4 gives the conclusions.

2. Central adverbial clauses

2.1 The issue

I use the term “central adverbial clauses” to refer to conditionals, temporal adverbial clauses, and clauses denoting spatial location and quantity/duration, as well as to clauses describing the way an event is realized. What places all these clauses in one group is the fact that, in Bulgarian, all of them contain a bare NPF when they denote future events. Consider examples (1) and (2).

(1) Ako Ivan dojde navreme, šte izlezem zaedno.
    if Ivan comes.NPF on time, fut go-out.NPF together
    'If Ivan comes on time, we will go out together.'

(2) Šte si trāgna, kogato dojde Ivan.
    fut refl leave.NPF when comes.NPF Ivan
    'I will leave when Ivan comes.'

The NPF dojda ‘come’ is a perfective present form\(^2\), also called “perfective non-past form” or “a bound form” (since it has to be generally preceded either by a particle or by a conjunction). Since it cannot refer to the utterance time, I refer to it as a non-deictic form.

Since the NPF in (1) and (2) is a perfective form, one might be tempted to suggest that its impossibility to refer to the present moment is only due to its aspectual characteristics. However, the NPF has a perfective and an imperfective variant, whereby the imperfective NPF formally coincides with the imperfective form of the present tense. This amounts to saying that the imperfective form is actually ambiguous between an indicative and a non-indicative variant. So, in main clauses, the imperfective form can occur without being preceded by any particles thus behaving as an indicative present tense form. In embedded contexts such as central adverbial clauses for example, the same form, appears as a non-deictic form and requires the

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2. Bulgarian, as a Slavic language, distinguishes formally between perfective and imperfective aspect.
presence of a conjunction or, in other contexts, of a particle. To avoid ambiguities,
in the following examples, I mainly concentrate on the perfective variant of the NPF.

In sentences (3) and (4), the NPF is preceded by the so-called “modal subjunctive
particle” and by the future particle, respectively.

(3) Ivan iska Maria da dojde na partito.
    Ivan wants Maria DA comes.NPF to party-the
    ‘Ivan wants Maria to come to the party.’

(4) Ivan šte dojde na partito.
    Ivan FUT comes.NPF to party-the
    ‘Ivan will come to the party.’

(5) Ivan da dojde vednaga pri men!
    Ivan DA comes.NPF immediately to me
    ‘Ivan should immediately come to me!’

Examples like (3) are analysed in the literature as instances of subjunctive mood
(see Krapova 1998, 2001; Kucarov 1994; Nicolova 2008), its occurrence being
marked only by the presence of the modal particle da. Actually the particle da is
considered the only marker of subjunctive mood in Bulgarian.3 Sentence (4), on
the other hand, is an example of an NPF occurrence in a main clause. Here the
non-past form is preceded by the future particle šte. (5) illustrates an imperative
main clause, which contains the NPF preceded by the particle da. In a similar
fashion, the Romance subjunctive can appear in non-indicative main clauses, a
phenomenon that has not yet received a satisfactory explanation. I return to this
issue in Section 2.6.

The generalization is that, in declarative main clauses, the NPF is preceded by the
future particle; the particle da can precede the NPF only in non-declarative main clauses.
In complement clauses, the NPF can occur either preceded by the future particle or by
the particle da (if subjunctive is selected). In central adverbial clauses (examples (1)
and (2)), neither future particle nor modal da are available.

It was mentioned above that the NPF cannot refer to the present moment and
therefore I suggested that it can only have an anaphoric and not a deictic interpreta-
tion. The same has been suggested in the literature for subjunctive forms. It is widely
accepted that subjunctive forms are temporally underspecified/non-deictic forms
(Raposo 1985; Picallo 1985; Haegeman 1987; Iatridou 1993; Varlokosta & Hornstein
1993; Giorgi & Pianesi 2001; Tomaszewicz 2009; Giorgi 2010). Their temporal

3. The same considerations are valid for Modern Greek since this language, similarly to
Bulgarian, uses a particle (na) to form subjunctive verbs (Rivero 1987, 1994; Terzi 1991,
specification is interpreted as anaphoric with respect to the matrix predicate. Indeed, what I will take to be the core characteristic of any subjunctive form is its temporal underspecification, i.e. that it can be used in reference to an event without establishing a relation with the utterance time. Potentially, a subjunctive form can make a (non-deictic) reference to any event, no matter whether it is situated in the future, in the past or even in the present.

If it is not surprising that the da constructions pattern with Romance subjunctive forms, what is striking is that the NPF itself can also have a non-deictic interpretation, the interpretation generally attributed to subjunctive forms, even in the absence of the particle da. Put differently, non-deictic reference, a property that is typically associated with the “subjunctive” is a property both of the NPF preceded by the particle da and of the bare NPF. We conclude that the temporal underspecification which I take to be the hallmark of the subjunctive is NOT directly a function of the modal markers. Bulgarian shows this very clearly since the temporal underspecification is present in central adverbial clauses and in a subset of relative clauses (see Section 2.3.2) in the absence of the modal marker.

2.2 The proposal

Given that, even in the absence of the modal particle da, the bare NPF displays the non-deictic interpretation, we can infer that in Bulgarian the so-called subjunctive modal particle da is not, as it has been considered so far, the canonical marker of subjunctiveness in Bulgarian. I propose that the NPF form itself is a subjunctive form, irrespective of whether the modal particle is present or not. As to the role of da, its presence is required in those contexts in which a relation between the embedded clause and the matrix attitude predicate needs to be established (cf. Giorgi & Pianesi 1997; Giorgi 2010). I return to this issue in Section 2.5.

Claiming that the NPF is itself a subjunctive form has consequences insofar as it amounts to saying that generally what are called subjunctive forms are not necessarily modal forms (in the sense of Giorgi and Pianesi 1997) and that the core property of the subjunctive is that it is temporally non-deictic. This proposal is very much in line with Schlenker’s (2005) analysis which suggests that subjunctive is a default option, a form, which does not introduce any presuppositions. In the next subsection, I comment on some examples offered in Schlenker (2005). The indicative, on the other hand, when used in adverbial clauses, introduces the presupposition that it is possible, that the event described in the clause might really occur.

4. Krapova (1998, 2001) challenges this view, suggesting that some Bulgarian and Modern Greek subjunctive forms are specified with [+T] and therefore are not interpreted anaphorically. For details I refer the reader to her works.
In the next subsection, I present evidence that the NPF is a subjunctive form by comparing it to the English and the Italian subjunctive and indicative forms.

2.3 The NPF in comparison with the Italian and English indicative and subjunctive forms

2.3.1 Adverbial clauses

The analysis presented in this section aims at showing that, in conditional clauses, the interpretation of the NPF consistently patterns with that of the Italian and English subjunctive forms and consistently differs from that of the Italian and English indicative forms.

To begin with, consider the following pair of Italian sentences taken from Giorgi and Pianesi (1997).

(6) Se Maria danzasse, tutti l’ applaudirebbero.  
if Maria danced.SUBJ.IMP everyone her applaud.COND  
’If Mary danced, everyone would applaud her.’

(7) Se Maria danza, tutti l’ applaudiranno.  
if Maria dances.PRES everyone her applaud.FUT  
’If Mary dances, everyone will applaud her.’

Giorgi and Pianesi note that the subjunctive antecedent in (6) differs from the indicative antecedent in (7) in that, in the first case, but not in the second, the speaker, for some reason, considers it improbable that Mary will dance. The authors conclude that it is the form of the imperfect subjunctive that creates this expectation. Notice, however, that, apart from being able to create such expectations, the Italian imperfect subjunctive could also be completely neutral. The following sentence can be uttered by a speaker who has not yet heard the weather forecast for tomorrow and has absolutely no expectations.

(8) Se domani facesse bel tempo, andremmo  
in montagna.5  
in montagna.5  
if tomorrow make.SUBJ.IMP nice weather, (we)would.go  
to mountain  
’If tomorrow the weather is nice, we would go to the mountains.’

We could conclude that the speaker can use an imperfect subjunctive antecedent in all cases, unless she has evidence that, tomorrow, the weather will be nice. In the latter case the indicative is required.

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5. I thank Francesco Costantini for discussion on the Italian examples.
Notice that this generalization is in line with Schlenker’s (2005) analysis of the English one-layer past subjunctive conditionals. Consider sentence (9), taken from Schlenker (2005).

(9) If you played tomorrow, you would win.

Schlenker points out that the conditional antecedent is not necessarily interpreted as counterfactual. It could also be uttered “in situations in which it is not presupposed that the addressee won’t play tomorrow” (Schlenker 2005). On the other hand, the indicative form, exemplified in (10), can be uttered only if the speaker considers it possible that the event of playing might really take place.

(10) If you play tomorrow, you will win.

As for temporal adverbial clauses, sentence (11) clearly illustrates how the Italian indicative form introduces a presupposition. The context is the following: On her way to the post office, the speaker sees a friend of hers and says that she is going to the post-office even though she does not have an idea whether the post-office is open on that day. Notice that, in this context, an Italian speaker cannot utter the following sentence, which contains an indicative verb.

(11) #Mentre aspetto in fila, farò il crociverba.

‘While I am waiting in the queue, I’ll be solving a cross-word puzzle.’

This sentence is not acceptable since it presupposes that the speaker will in any case wait in a queue. Example (11) could only be saved if the speaker begins her sentence with: “If the post office is open,….”

The following examples show that a Bulgarian adverbial clause containing an NPF can be uttered in the same context.

(12) Dokato čakam na opaška, šte rešavam krástoslovica.

‘While I am waiting in queue I do. FUT solve NPF cross-word puzzle.

(13) Kato izljava ot poštata šte ti se obadja.

‘After I go out of the post office, I will call you.’

The reason why the Bulgarian NPF is possible in this context is that it does not create the presupposition that the event will take place. Therefore, the speaker does not need to start her sentence with: “If the post office is open”. The adverbial clause containing an NPF is just a hypothetical statement about an event that could or could not take place. Therefore I conclude that the Bulgarian NPF patterns with the English one-layer past subjunctive and the Italian subjunctive.
Now, notice that the verb in example (12) is imperfective and that in (13) is perfective. The possibility to use both aspects confirms what was stated above, that the properties of the NPF are not related to the aspectual properties of the verb. Thus while Italian distinguishes between a present indicative and a present subjunctive form, the Bulgarian present imperfective form is ambiguous. In a main clause, it functions as an indicative form. In embedded contexts it can function as an NPF.6

2.3.2 Relative clauses

In this section, I present further evidence that the interpretation of the Bulgarian NPF patterns with the interpretation of the Italian subjunctive and differs from that of the Italian indicative.

It is a well-known fact that the use of the subjunctive in relative clauses is related to the non-specificity of the nominal constituent (cf. Farkas 1985). More precisely, a subjunctive verb cannot be used in a relative clause when the containing nominal refers to a specific entity; the subjunctive means that only a de dicto interpretation is available. When used in a relative clause, the indicative, on the other hand, makes a de re interpretation possible. The following examples illustrate that the NPF clauses, similarly to the Italian subjunctive clauses, can only have a de dicto interpretation.

In (14) the bracketed relative clause contains an indicative prometterà, and thus the containing DP can be taken to refer to a specific individual, i.e. Pietro, as suggested by the continuation. No such continuation is available in (15), in which the relative clause contains the subjunctive prometta.

(14) Giovanni promuoverà un impiegato [che stasera Giovanni promise.FUT an employee [that tonight prometterà fedeltà all’ azienda] - Pietro. promise.FUT loyalty to-the company] - Pietro 'Giovanni will promote one employee that this evening will promise loyalty to the company. This will be Pietro.'

(15) Giovanni promuoverà un impiegato [che stasera Giovanni promise.FUT an employee [that tonight prometta fedeltà all’ azienda] - *Pietro. promise.SUBJ.IMP loyalty to-the company *Pietro

In (16) the NPF is accompanied by the future particle šte and the containing nominal may receive a specific reading. Hence, the continuation “who is a close friend of mine” is acceptable. The same continuation is unacceptable in (17), because in this example the relative clause contains the bare NPF, hence the nominal cannot refer to a specific individual.

6. I am not going to discuss the reasons for this ambiguity here.
In sum, in relative clauses the NPF patterns with subjunctive forms in Italian and is incompatible with the specific *de re* interpretation.

In the next subsection, I briefly present Giorgi and Pianesi’s (1997) morphosyntactic analysis of Italian subjunctive forms and its possible extensions to Bulgarian subjunctive forms.

### 2.4 Giorgi and Pianesi’s (1997) analysis of subjunctive forms

Analysing the occurrences of the Italian subjunctive forms in complement clauses, Giorgi and Pianesi (1997) claim that the Italian complementizer *che* can lexicalize two different sets of features – the features of the complementizer of indicative clauses (18) as well as those of the subjunctive complementizer (19), which are labeled “MOOD” and project MOODP. In (19) the subjunctive verb moves to AGR and *che* spells out MOOD.

\[(18) \quad \ldots \left[ \text{CP} \left[ C \text{che} \right] \left[ \text{AGR} \left[ \text{TP} \ldots \right] \right] \ldots \right] \]
\[(19) \quad \ldots \left[ \text{MOODP} \left[ \text{MOOD} \text{che} \right] \left[ \text{AGR} \left[ \text{TP} \ldots \right] \right] \ldots \right] \]

The phenomenon “complementizer deletion”, is possible only with subjunctive verbs. For Giorgi and Pianesi complementizer deletion in fact obtains when MOOD is realized syncretically with AGR projecting as a hybrid MOOD/AGRP:

\[(20) \quad \ldots \left[ \text{MOOD/AGR} \left[ \text{TP} \ldots \right] \right] \]

In contexts of complementizer deletion, the subjunctive verb is claimed to move to the syncretic projection MOOD/AGR. When the complementizer is present, the MOOD projection is occupied by the subjunctive complementizer. The subjunctive verb is in AGR/T and moves to MOOD at LF, in order to check its mood features.
Following Higginbotham (1995), the authors hypothesize that in complements of attitude predicates, the embedded T contains the temporal coordinates of the attitude event, since the embedded clause must be anchored to it. Since the matrix verb selects the embedded CP, the movement from T to MOOD, triggered by the mood feature on the verb, “locates the verb in the correct configuration for tense agreement with the main verb” (Giorgi 2010: 54).

Returning to the Bulgarian data, recall that NPF itself does not contain a modal component, rather this is provided by an external particle. I propose that the obligatory presence of the modal particle da in ‘subjunctive’ complement clauses compensates for the lack of a modal component on the NPF. While Italian subjunctive forms contain a mood feature, overtly realized by their subjunctive morphology, and thus can move to MOOD, Bulgarian verbs do not have such features and hence cannot move. For this reason, the presence of the modal particle is crucial in contexts in which a relation with a matrix attitude predicate has to be established.

2.5 On the role of the modal particle in relative clauses

It is more complicated to determine the role of the modal particle in relative clauses. As was mentioned in the beginning, relative clauses are a context which allows the NPF to appear both with or without the modal particle. Its presence or absence results in a different interpretation. I will limit myself to presenting the interpretative difference between the two cases. The formal reasons for this distinction remain outside the scope of this article. Consider sentences (21) and (22).

(21) Šte naema momiče, koeto da pomogne na Maria.
  fut hire girl who da help.npf to Maria.
  ‘I will hire a girl, to help Maria.’ (The girl will have to help Maria.)

(22) Šte se oženja za momiče, koeto mi obeštæe, če
  fut relf marry to girl who me promise.npf that
  šte mi bade vjarno.
  fut to-me be faithful.
  ‘I will marry a girl who promises to be faithful to me.’

With the first sentence the speaker expresses her purpose, the reason why she needs to hire a girl. With the second sentence, the speaker does not so much express his purpose but rather states that he would only marry a girl that meets a certain requirement (if ever he meets such a girl). So it seems that the particle da is used when there is someone who needs something for some purpose or is looking for something. This is also illustrated by the following example.
(23) *V seloto njama žena, kojato da tâče kilimi.*

In village-the there-is-not woman who *da* weaves NPF rugs

‘In this village there is no woman who can weave rugs.’

The relevant detail is that this sentence can be uttered as an answer to someone who is looking for such a woman, though this is not mentioned in the sentence. However, (23) would be inappropriate in the context of advertising, or in any utterance which simply informs. One could probably hypothesize the presence of a covert attitude predicate in the contexts where the modal particle is needed. I leave the issue for further research.

2.6 The NPF in the broader context of subjunctive forms

In the above discussion, I argued that the Bulgarian NPF is a subjunctive form, but that it is devoid of the *mood* feature in the sense of Giorgi and Pianesi (1997). The NPF form is non-deictic and it also lacks a modal specification. In central adverbial clauses this non-deictic, temporally unspecified, NPF is appropriate since such clauses are temporally dependent on the matrix clause (see Haegeman 2003). Indeed, in view of Haegeman’s movement derivation, it could be proposed that the modal and future particles are obligatorily absent as they would intervene with the operator movement that derives such adverbial clauses much in the way that high modal markers in the sense of Cinque (1999) are incompatible with such adverbials (see Haegeman 2010b, this volume). The movement of the operator in adverbial clauses can then be seen as the connecting device that links the temporally unspecified NPF (i.e., the subjunctive) to the tense of the matrix clause.

Going back to Romance languages, as I suggested above, the difference between the Bulgarian NPF based subjunctive forms and the Romance subjunctive forms seems to be that, while Romance languages use “ready-made” modal subjunctive forms, in languages like Bulgarian, the NPF subjunctive form is not intrinsically associated with *mood*. A separate modal element is used instead. As we argued above, however, Bulgarian contains a verbal form, which, when separated from the modal particle, preserves its non-deictic interpretation.

As already mentioned, for me the core characteristic of any subjunctive form is its possibility to make reference to an event without establishing a relation with the utterance time: a subjunctive form can make a (non-deictic) reference to any event, no matter whether it is situated in the future, in the past or even in the present. In Bulgarian this non-specific component of the subjunctive is rendered by the NPF. However, we have seen that subjunctives are often also taken to contain a modal particle. Given the lack of temporal specification inherent to the subjunctive, I propose that an additional device is needed to connect it up to a temporal domain. In the case of central adverbial clauses, this can be achieved through the movement of the operator.
Recall that in Bulgarian a bare NPF cannot occur in a main clause (irrespective of whether the main clause is declarative or not). This follows directly from our discussion: the NPF is temporally underspecified and hence cannot be used to anchor an event to the utterance time. It is the modal component of the subjunctive form that is responsible for the possibility of subjunctive forms to appear in main clauses.

2.7 The NPF in the context of central adverbial clauses

The analysis of the NPF quite naturally fits in the discussion on central adverbial clauses due to the fact that Haegeman (2010b) analyses conditionals as derived by movement of an operator from Cinque’s (1999) MoodPIRREALIS to the left periphery of the clause. Since, as stated in Cinque (1999) and reported in Haegeman (2010b), irrealis mood is used “when the speaker doesn’t know if the proposition is true” (Cinque 1999:88), which corresponds to the interpretation of subjunctive forms (see also Tomaszewicz 2009, this volume), an interesting issue for further research would be to see how the difference between subjunctive and indicative conditional and temporal clauses can be accounted for. As was discussed above, in contrast to subjunctive verbs, indicative verbs introduce the presupposition that the event is realizable and could be realized (Schlenker 2005). In that case it is no longer the case that the speaker does not know whether the proposition is true, but what she says is that it might be true.

In the next section, I turn to peripheral clauses. I discuss the distribution of the NPF in these contexts: we will see that the bare NPF is not available and only the modal variant is available. I also show that peripheral clauses are not a homogenous group and contain at least two different subgroups of clauses that exhibit different semantic and syntactic characteristics.

3. Peripheral adverbial clauses

This mainly descriptive section focuses on peripheral adverbial clauses. I first discuss the ways in which the Bulgarian data contribute to the discussion on the two types of adverbial clauses. Second, I try to isolate two subtypes of peripheral clauses.

The discussion of the Bulgarian subjunctive introduced in Sections 1 and 2 is relevant for the typology of adverbial clauses. We have just seen that central adverbial clauses allow for the NPF subjunctive, i.e., the bare form without a modal particle (24). In peripheral adverbial clauses the NPF is also available but it cannot appear as a bare form (25) and must be accompanied by the modal or future particle (26).

(24) Ako Ivan si dojde n avreme, šte izle zm zaen o.
    if Ivan co mes back.on-time, FUT go out together
    ‘If Ivan comes back on time, we will go out together.’
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(25) *Štom Ivan si dojde navreme, šte izležem zaedno.
if/since Ivan comes back.NPF on-time, FUT go-out.NPF together

Bulgarian, has a specialized complementizer štom/“since” that can only appear in peripheral clauses in its premise interpretation. Such a complementizer exists also in Polish (see Tomaszewicz, this volume). Its use for Bulgarian is illustrated in (26).

(26) Štom tja šte idva s nas, šte vzemem
since she FUT come.NPF with us FUT take.NPF

hrana za poveče hora.
food for more people

‘If/Since she will come with us, we will take food for more people.’

This type of premise clauses, also called factual conditionals (Iatridou 1991), introduce a presupposition that a person different from the utterer of the sentence believes the proposition of the if-clause to be true. In such peripheral adverbial clauses, the bare NPF is ungrammatical.

The peripheral concessive clause in (27) on the other hand contains a subjunctive form with da.

(27) Makar i da e studeno, njama da si vzema žiletkata.
even and DA is cold NEG DA REFL take cardigan-the

‘Though it is cold, I will not take my cardigan.’

In what follows, I concentrate on the distinction between two subtypes of peripheral clauses: premise peripheral clauses as illustrated in (26) and adversative peripheral clauses, which I will illustrate presently.

Going back to example (27), we saw that the subjunctive preceded by the modal particle da can be used in peripheral clauses. The same type of subjunctive is illustrated in (28) with a peripheral clause introduced by dokato ‘while’. In peripheral clauses of this kind, the subjunctive is necessarily accompanied by a change in the illocutionary force of the clause. Consider the following example:

(28) Na Ivan moga da prostja, dokato Petăr vaobšte da
To Ivan (I)can DA forgive while Peter at-all DA

ne mi se mjarka!
NEG to me appear

‘I can forgive Ivan but Peter should never again appear in front of my eyes!’

In what follows, I take it that the difference between the peripheral clause in (27) and that in (28) reflects a deeper grained distinction between two subtypes of peripheral clauses, which I discuss below in relation to epistemic modality and the occurrence of tag questions and fronting.
As stated above, one distinction between central and peripheral clauses relates to the possibility to use epistemic adverbs. While central clauses do not allow epistemic adverbs (see Haegeman 2002, 2006, 2010a,b & Lahousse 2010), peripheral clauses do not place a ban on their occurrence. The absence of epistemic modals is considered by Haegeman 2010b to be a reflex of the movement derivation of the conditional clause. I have suggested that the same approach might account for the use of the bare NPF in central clauses. Returning to štom-clauses, sentence (29) illustrates that these clauses freely allow for epistemic adverbs.

(29) Štom tja verojatno šte idva s nas, šte vzemem
since she probably FUT come with us FUT take
hrana za poveče hora.
food for more people
‘If/since she will probably come with us, we will take food for more people.’

In addition, apart from distinguishing between central and peripheral clauses, epistemic modality turns out to distinguish between at least two subtypes of peripheral clauses – premise clauses and adversative clauses. The distinction will be related to the type of epistemic modality used in the clause (in the sense of Lyons 1977). I show that these two types of clauses also display a difference in behaviour with respect to tag questions and argument fronting.

To begin with, consider the following two groups of examples (taken form Haegeman 2002, 2006).

Group A

(30) If [as you say] it is going to rain this afternoon, why don't we just stay at home and watch a video?

(31) If we are so short of teachers, why don't we send our children to Germany to be educated?

Group B

(32) John is currently doing a Ph.D in linguistics, while his daughter is probably going to study medicine.

(33) If these problems we cannot solve, there are many others that we can tackle immediately.

(34) If aphids we did not worry about, snails we did.

(35) If anemonies you don't like, why not plant roses instead?

These two groups of clauses can be distinguished both semantically and syntactically. For the peripheral clauses in Group A I retain the term “premise clauses” and for those in Group B I use the term “adversative clauses”.

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Lyons (1977) points out that there exist two different types of epistemic modality, which he calls subjective and objective. This issue is analysed also in Papafragou (2006) in the context of generative grammar. To give an example, the epistemic modal in (36) can be interpreted in two ways, either as reflecting the speaker's own opinion/uncertainty, or as simply reporting what meteorologists have said.

(36) It may rain tomorrow. (Lyons 1977)

In the first case, we are dealing with what Lyons calls “subjective epistemic modality”. The second case is an instance of what he calls “objective epistemic modality”, i.e. modality that does not express the doubt of the person who utters the sentence but the opinion of the authority that provided her with that information. The same ambiguity is illustrated once again in sentence (37), this time by an epistemic adverb.

(37) It will probably rain tomorrow.

Notice that, while this English sentence is ambiguous between the subjective and the objective reading of the epistemic adverb, Bulgarian offers a non-ambiguous context, in which the modal adverb can only be interpreted as an objective epistemic modal.

(38) Utre verojatno štjalo da vali, ama az ne vjarvam.

tomorrow probably FUT(evid.) DA rain but I NEG believe

‘They say, it will probably rain tomorrow but I don’t believe it.’

The disambiguation strategy consists in the fact that the verb form štjalo, “they say it will” is an evidential mood form, i.e. in this case it expresses reported speech, someone else’s words. The epistemic adverb can only receive an objective interpretation. Therefore, we can add ‘but I don’t believe it’. If the modal adverb expressed the speaker’s attitude, it would be completely impossible to add the same continuation.

Going back to conditionals, since if-clauses of the central clause type cannot host any type of epistemic modality, an if-clause containing an epistemic modal can only be interpreted as a peripheral clause. This is clearly seen in example (39), taken from Papafragou (2006).

(39) If it may rain tomorrow, people should take their umbrellas.

If the main clause of this sentence advises the people to take their umbrellas, the speaker has some knowledge about the described event, which is based on the information provided by some authority. Clearly, if the clause expresses what the speaker knows about an event, the same clause can hardly express the speaker’s uncertainty about that same event. Therefore, this sentence can only express objective epistemic modality and belongs to the subgroup of premise peripheral clauses.

As already stated above, premise peripheral clauses can be analysed on a par with presupposed contexts. Notice that, in spite of what is sometimes argued in the literature, factive sentences actually seem to allow for epistemic adverbs: Basse (2008) gives (40)
and (41)). This is at first sight unexpected since being taken to express presupposed content, such clauses could hardly be expected to accommodate the speaker’s attitude.

(40) John knows that Mary *probably/unfortunately* can’t come to the party.

(41) John hates that Mary *obviously* doesn’t like him.

The issue can be resolved by suggesting that factive complements are indeed incompatible with expression of subjective epistemic modality but that these sentences are compatible with *objective* epistemic modals, which do not express the speaker’s own attitude.

Summing up, premise clauses are peripheral clauses in that they allow epistemic adverbs but the latter do not express the speaker’s own attitude.

Turning to the group B, I show that adversative clauses behave differently in the sense that they allow for subjective epistemic modality. Adversative clauses include, for instance, English peripheral clauses introduced by the conjunction *while*, as well as a subset of the peripheral clauses introduced by the conjunction *if*, and its Bulgarian correspondent *ako*. Consider the following sentence:

(42) Mary likes preparing sweets while her sister *probably* doesn’t like cooking at all.

The *while* clause contains an epistemic modal which clearly expresses the speaker’s opinion and not that of someone else. So such adversative clauses contrast with premise clauses in which subjective epistemic modals were disallowed.

In Bulgarian the different status of the two types of peripheral clauses can also be illustrated by the (im)possibility to form tag question-like constructions. In Hooper and Thompson (1973), tag questions are considered main clause phenomena. Such a pattern can be formed with the particle *nali* in Bulgarian. As the following examples show, *nali* tags can be added to adversative but not to premise clauses. (See Haegeman 2002, 2003 for tag questions with *while* clauses in English).

(43) *Ivan raboti vărhu teorijata, dokato Maria podgotvja* *Dannyasha, nali?*  
Ivan works on the theory-the while Mary prepares data-the, *doesn’t-she*  
‘Ivan works on the theory while Mary prepares the data, *doesn’t she?’

(44) *Ne moga da se sâglasja s teb, štom dannite*  
NEG can da refl agree with you since results-the  
*pokazvat drugo, nali?*  
show something-else, *don’t-they*  
(intended reading) ’I can’t agree with you if the data show something different, *don’t they?’
The incompatibility of the tag question with a premise clause appears to be related to the fact that the information such a clause conveys is presupposed.

Apart from clauses introduced by dokato, some clauses introduced by the conjunction if also seem to qualify as adversative clauses. The following examples, taken from Haegeman (2006), allow fronting, as the author herself points out.

(45) If these problems we cannot solve, there are many others that we can tackle immediately.

(46) If aphids we did not worry about, snails we did.

(47) If anemones you don’t like, why not plant roses instead?

If-clauses with premise interpretation, on the other hand, do not seem to allow fronting, as shown below.

(48) * If this exam you passed, why don’t you take a rest now?

(49) * If this problem you can’t solve, why don’t you try the next one?

(50) * If your paper Mr. Smith hasn’t read yet, why don’t you find another teacher to read it?

Bulgarian signals the distinction between premise and adversative if-clauses using different conjunctions. While premise if-clauses are introduced by the conjunction štom, adversative clauses use the conjunction ako, which is that also used in central conditionals.

(51) Ako reklamata ja haresah, to samijat film napravo
if trailer-the it (I)liked TO itself-the film really
me razočarova.
me disappointed
‘If I liked the trailer, the film itself really disappointed me.’

Like the adversative clauses introduced by dokato/’while’, adversative if-clauses, are compatible with subjective epistemic adverbs.

(52) Ako teksta njakak si verojatno šte uspeja da go preveda,
if text-the somehow probably FUT manage DA it translate
to säs zadačite njama da moga da se spravja
instead with problems-the NEG DA be able DA manage
‘If I will probably manage somehow to translate the text, the problems I will not be able solve.’

Summing up, the two types of peripheral clauses discussed here have in common the property that neither of them allows for the Bulgarian bare NPF, and hence contrast with central adverbial clauses in which the bare NPF is possible. However,
based on the distribution and interpretation of epistemic modals, of argument fronting in English and on the distribution of tag questions, illustrated here for Bulgarian, we conclude that adversative clauses are closer to root clauses than premise clauses. The contrasts seem to reflect also the assertive vs. presupposed nature of the clauses. A full formalization of the contrast must be subject to future research. Premise clauses, on the other hand, appear to be morphologically, semantically and syntactically distinct.

4. Conclusions

The aim of this paper was to discuss two contexts extensively analysed in Haegeman’s work on adverbial clauses (2002, 2003 etc.) – central and peripheral adverbial clauses, in the context of the Bulgarian data. The proposed analysis reveals that there is a correlation between these two contexts and a range of other syntactic phenomena such as the subjunctive mood, epistemic modality and the occurrence MCP.

The analysis starts out from an inquiry into the nature of what are usually taken to be the subjunctive forms. I propose that the Bulgarian NPF has a non-deictic, temporally unspecified reading, an ingredient of the interpretation also found with the Italian subjunctive forms and which is distinct from that of Italian indicative forms. I have also shown that the modal particle da, which has been considered the hallmark of the subjunctive mood in Bulgarian, is absent in various contexts while the non-deictic temporal interpretation remains intact. On the basis of these considerations, it was suggested that the core of the subjunctive form might be morphologically more reduced forms, not necessarily containing a modal feature and that the modal feature is then an add-on to the temporally unspecified core subjunctive.

The focus of section three was on peripheral clauses, which, unlike central clauses, do not allow the bare NPF. Peripheral clauses were claimed to be a non-homogenous group. The type of epistemic modality they allow for, the occurrence of certain MCP, as well as the distribution of certain conjunctions were used as diagnostics to distinguish between two subtypes.

References


On two types of adverbial clauses allowing root-phenomena*

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Peripheral adverbial clauses show many differences from central adverbial clauses, one being that they allow certain root-phenomena, whereas central adverbial clauses do not allow any. A third class of adverbial clauses has to be distinguished, which in German contains continuative \(w\)-relatives and free \(dass\)-clauses. These allow more root-phenomena than the peripherals and show other signs of greater independence. The paper argues that central and peripheral adverbial clauses are differently licensed syntactically, the former by the host’s verbal projection, the latter by Force in the host’s periphery. Moreover, adverbials of the third class are not syntactically licensed at all; they are orphans, being only semantically linked to their associated clause by a specific discourse relation.

1. Introduction

Especially due to the work of Liliane Haegeman on English (e.g. Haegeman 2002ff.), it is well-known that there exist adverbial clauses which may exhibit at least certain root phenomena, that is, patterns which can only occur in main clauses and in special subordinate clauses. Haegeman calls the adverbial clauses which allow root phenomena peripheral adverbial clauses, distinguishing them from so-called central adverbial clauses.

The present work studies several properties which distinguish central and peripheral adverbial clauses in German. However, equally important for the subsequent discussion is a property which does not differentiate the two types: with the members of both types no independent speech act can be performed. The fact that peripheral adverbial clauses allow certain root phenomena but are not able to perform their own speech act indicates that indeed they have an illocutionary potential but that they are ‘speech act parasites’ on their host clause. The paper makes a proposal as to how this borderline status of peripheral clauses is reflected in syntax.

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Furthermore, the paper aims to show that, importantly, a third type of adverbial clause has to be distinguished. These adverbial clauses are able to perform a separate speech act. Thus, they are not speech act parasites on the host clause; rather, as will be argued, they are directly anchored to the speaker. After the study of distributional differences between peripheral adverbial clauses and the members of this third type, it will be proposed that the latter adverbials are not syntactically integrated at all although they are verb-final clauses. Rather, they are syntactic orphans; their dependency on their host clause is solely semantic. These adverbials are called non-integrated adverbials.

The paper is organized as follows. In Section 2, basic differences between German central and peripheral adverbial clauses are presented. It is shown that although peripheral adverbial clauses display signs of non-integration, they may occupy the prefield position of a German verb-second clause, a position integrated into the host clause. Section 3 shows that German modal particles, whose occurrence constitutes a root phenomenon, may occur in a peripheral adverbial clause. Section 4 draws conclusions from these observations for the syntactic licensing of peripheral adverbial clauses. Section 5 compares peripheral adverbial clauses with the non-integrated adverbials, and discusses the syntactic status of the non-integrated ones. The section also contains a brief consideration of why grammar should supply non-integrated adverbial clauses.

2. The differences between central and peripheral adverbial clauses

With respect to the degree of integration into their host clauses, two classes of adverbial clauses are distinguished in the literature. The more integrated ones Haegeman (2002ff.) calls central adverbial clauses (CACs), and the less integrated ones peripheral adverbial clauses (PACs). Examples of the former class are temporal adverbial clauses, event-related conditionals, event-related causals, final clauses, and clauses of manner. Examples of the latter class are adversatives, concessives, and argument-related causal clauses (justifying clauses). Helpfully, as we will see shortly, in German event-related causal clauses and argument-related causal clauses can be distinguished by different complementisers: an event-related causal clause is introduced by weil, and an argument-related causal clause by da.

In the following, some of the distinguishing properties are illustrated with German examples. Let us start with the semantic difference between weil-causal clauses and da-causal clauses. Pasch (1989) observes that in (1a) the da-clause does not relate to the content of the matrix clause since if this were so, the result would be semantically ill-formed. According to Pasch (1989), a da-clause relates to the epistemic mode of the matrix clause. The da-clause yields the reason for the speaker’s belief that the matrix
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(1) a. *Es hat Frost gegeben, weil die Heizungsrohre geplatzt sind.
    EXPL has frost been because the heating-pipes burst have (PAC)

b. Es hat Frost gegeben, da die Heizungsrohre geplatzt sind. (CAC)

Next, German CACs allow a correlative element (COR) while PACs cannot have a correlative:

(2) a. Maria ist deshalb gegangen, weil Max kam.
    Mary has COR gone because Max came (CAC)

b. *Maria ist deshalb gegangen, da Max kam.
    Mary has COR gone because Max came (PAC)

CACs, but not PACs, can be in the scope of negation in the main clause:

(3) a. Peter wird nicht kommen, sobald er kann, sondern sobald es Clara erlaubt.
    Peter will not come as-soon-as he can but as-soon-as it Clara allows (CAC)

b. *Peter wird nicht kommen, obwohl er arbeiten muss, sondern obwohl er schlafen sollte.
    Peter will not come although he work must but although he sleep should (PAC)

CACs following the main clause may carry the nuclear stress of the whole construction, i.e. the whole construction may constitute one focus-background partition. The same is not possible with PACs.

(4) Was hat Maria gesagt?
    'What did Mary say?'
       Peter travels to Paris because he there a conference attends (CAC)

   (PAC)

A CAC may be questioned, but not a PAC:

(5) Warum bleibt Hans zu Hause?
    'Why is Hans staying at home?'
    a. Weil seine Frau krank ist.
       because his wife ill is (CAC)

b. *Da seine Frau krank ist.
    because his wife ill is (PAC)
Furthermore, if the associated clause is transformed into a question, a CAC becomes part of that question; this is different for a PAC:

(6)  
   a. *Geht Peter nach Hause, weil er müde ist? (CAC)  
      goes Peter home because he tired is  
   b. *Geht Peter nach Hause, da er müde ist? (PAC)  
   c. *Ist Maria für Physik begabt, während ihr Bruder nur an Sprachen interessiert ist? (PAC)  
      is Mary for physics gifted while her brother only in languages interested is

The examples in (6) should be read with one intonation contour that includes the dependent clause (cf. Footnote 8). According to my judgements, under this contour (6b,c) are not good. However, even those informants who do find (6b,c) fairly good agree that there is a significant difference between (6a) on the one hand and (6b,c) on the other. For example, a possible answer to (6a) could be “Nein, er geht nach Hause, weil er noch arbeiten muss” (No, he is going home because he still has some work to do). A corresponding answer is not possible for (6b). Likewise, in (6c) the adversative clause is not part of the question. If the question is accepted as grammatical at all, a possible answer can only relate to the matrix clause.1

Finally, it is possible to have binding of a quantified DP into a CAC. In (7a), the CAC is extraposed; in (7b), the CAC is in the middle field, i.e. inside the TP-domain:

(7)  
   a. Kein Linguist, sollte Bier trinken, wenn er Durst hat. (CAC)  
      no linguist should beer drink when he thirsty is  
   b. Keiner, hat, als er unterbrochen wurde, protestiert. (CAC)  
      nobody has when he interrupted was protested

How do PACs behave? Let us first consider binding into a PAC following the matrix clause. This is not possible:

1. A reviewer doubts the judgement of (6c) by suggesting slightly changing (6c) into (i), which sounds good with the PAC as part of the question.

   (i) Sollte Maria für Physik begabt sein, während ihr Bruder nicht mal die Grundrechenarten beherrscht? (PAC)  
      should Maria for physics gifted be while her brother not even the basic rules of arithmetic masters

Note, however, that (i) strongly tends to be understood as a rhetorical question. It is presupposed that the content of (i) is true. In view of the analysis of PACs given below, it is to be expected that (i) is fine.
(8) a. *Jede Kollegin, ist am Sonntag am Institut gewesen, während sie sonst bei schönem Wetter einen Ausflug macht.
   every colleague has on Sunday at the institute been while she otherwise in nice weather an excursion goes-on
   (PAC)
b. *Kein Kollege wirkt richtig erholt, obwohl er lange im Urlaub war.
   no colleague appears really recovered although he long on holiday was
   (PAC)

One might conclude that in (8), the PACs are just extraposed to an adjoined position which is too high to allow binding of a constituent of the matrix clause into them. However, this cannot be right since the judgements do not change if the PACs occur inside the TP-domain.

(9) a. *Jede Kollegin, ist am Sonntag, während sie sonst bei schönem Wetter einen Ausflug macht, am Institut gewesen.
   (PAC)
b. *Kein Kollege wirkt, obwohl er lange im Urlaub war, richtig erholt.
   (PAC)

Drawing her conclusions from English PACs data, which are equivalent or similar to the data with German PACs just reported, Haegeman (2002) proposes that in English, PACs adjoin to the CP of the associated clause. PACs are merged after the associated CP has been projected completely. In a footnote, Haegeman (2002) even entertains the idea that the structure of a PAC and its host is like that of a coordination.

At least for German, this cannot be quite correct. PACs may occur in the prefield, (10), and the prefield does not correspond to a position adjoined to CP. Rather, according to the well-founded assumption in generative syntax, the prefield corresponds to the specifier position of a functional projection in the left periphery of the clause; standardly this is taken to be the specifier position of CP (SpecCP).

(10) a. Obwohl Hans lange im Urlaub war, wirkt er nicht erholt.
   although Hans long on holiday was appears he not recovered
   (PAC)
b. Während Hans sonst bei schönem Wetter einen Ausflug macht, ist er gestern zu Hause geblieben.
   while Hans otherwise in beautiful weather an excursion goes-on has he yesterday at home stayed
   (PAC)

In a verb-second clause (V2-clause), SpecCP has to be filled. In current syntactic theories, the prefield is a derived position. No contentful element is considered to be base-generated there; rather the prefield is the target of Ā-movement. Thus, for German the statement in (11) is assumed (see for a recent reference Haider 2010). To the best of my knowledge, for any verb-second language, an assumption in the spirit of (11) is adopted.
(11) With the possible exception of expletives, the prefield is filled with an element whose base position is lower in the clause.

(11) implies that an element sitting in the prefield is completely integrated into the structure of its clause. This assumption is generally taken for granted and is explicitly stated in König and van der Auwera (1988):

(12) The prefield in German is an unequivocal position of integration.

A phrase occupying the prefield is considered a constituent of the sentence. It is assumed – however, not proven – that all sentence constituents are licensed inside the core of the clause, i.e. TP-internally. This assumption underlies the thesis in (11), and it also holds in non-generative accounts. However, under this perspective PACs would need to receive a similar syntactic treatment to CACs, and it would seem to be impossible to account for all the differences between the two types of sentences observed above. Even worse, (9) clearly shows that PACs are not base-generated TP-internally. To put it in other words: according to the 'prefield test', PACs are normal constituents of the clause, fully integrated into the clause, while according to the data in (2)–(9) PACs fail important tests for integration, and are not base-generated inside TP.

In Section 4, it will be shown that the seemingly conflicting evidence can be reconciled and that (11) is in fact an incorrect assumption.

3. PACs, the root-phenomenon modal particles and Force

German modal particles (MPs) may occur in various types of root clauses:

(13) a. 1931 war Hitler ja noch nicht an der Macht. (Thurmair 1989: 104)
    1931 was Hitler MP not yet in the power

b. Was ist denn hier passiert?
   What has MP here happened

c. Und nun mach dich mal an die Arbeit! [...] (Thurmair 1989: 185)
   and now get yourself MP on to work

As Jacobs (1986), Thurmair (1989), and Coniglio (2011), among others, emphasise, an MP occurring in an independent clause interacts with the illocution of the clause. For example, there are MPs which strengthen (ja) or weaken (mal) a command; there are MPs which indicate that the speaker’s assertion runs against an assumption of the hearer (unstressed doch), that it makes salient a fact that follows from the common ground (ja), or which indicate that the speaker’s justification for his assertion is reduced (wohl).

It is known that the occurrences of MPs belong to the so-called root-phenomena (Bayer 2001; Coniglio 2011; Coniglio & Zegrean this volume). Root-phenomena can
only occur in root-clauses and in the restricted set of root-like dependent clauses. The
classic examples of root-like dependent clauses are the object clauses of verbs of say-
ing and of verbs expressing a doxastic attitude. Standard examples of non-root-like
dependent clauses are the object clauses of so-called factive predicates (like regret, be
surprised) and of predicates which are inherently negative (avoid, be impossible). Clas-
sic examples of so-called root-phenomena are English topicalisation and Germanic
V2. The root-sensitivity of MPs is shown by the fact that they may occur in a root-like
clause but not in a non-root-like one:

\[(14)\]
\[
a. \quad \text{Maria fiel ein, dass Hans (ja) längst hier sein müsste.}
\]
\[
\text{to-Maria occurred that Hans MP long-ago here be should}
\]
\[
\text{(Thurmair 1989: 109)}
\]
\[
b. \quad \text{Er leugnete, dass er die Zeugin (ja) unter Druck gesetzt habe.}
\]
\[
\text{he denied that he the witness MP under pressure put have-subj}
\]

In contrast to the MPs occurring in the main clauses in (13), in (14a) the MP ja does
not express an attitude of the speaker regarding the utterance but an attitude of the ref-
erent of the matrix subject regarding a potential utterance that (s)he could have made.

Coniglio (2011) systematically studies the behaviour of MPs in adverbial clauses.
He finds that PACs are good hosts for MPs:

\[(15)\]
\[
a. \quad \text{Gestern ist sie den ganzen Tag zu Hause geblieben, während sie doch}
\]
\[
\text{otherwise in nice weather mostly an excursion goes-on}
\]
\[
\text{yesterday has she the whole day at home stayed while she MP otherwise in nice weather mostly an excursion goes-on}
\]
\[
\text{(Thurmair 1989: 78)}
\]
\[
b. \quad \text{Er hat die Prüfung nicht bestanden, trotzdem er ja recht intelligent ist.}
\]
\[
\text{he has the exam not passed even though he MP quite intelligent is}
\]
\[
\text{(Thurmair 1989: 78)}
\]
\[
c. \quad \text{Max könnte etwas hilfsbereiter sein, da wir ihn doch höflich gefragt}
\]
\[
\text{Max could a-little more-helpful be because we him MP politely asked have}
\]

In contrast, CACs usually do not tolerate MPs:

\[(16)\]
\[
a. \quad \text{*Maria ging oft in die Staatsoper, als sie ja in Wien lebte.}
\]
\[
\text{Maria went often to the State-Opera-House when she MP in Vienna lived}
\]
\[
\text{(CAC)}
\]
\[
b. \quad \text{*Wenn es schon Frost gibt, erfrieren die Rosen.}
\]
\[
\text{when it MP frost is freeze-to-death the roses}
\]
\[
\text{(Brauße 1994: 112)}
\]
\[
c. \quad \text{*Während er wohl den Brief schrieb, ist er gestört worden.}
\]
\[
\text{while he MP the letter wrote has he disturbed been}
\]
\[
\text{(Asbach-Schnitker 1977: 49)}
\]
Sometimes a weil-clause or a wenn-clause may host an MP:

\[
\begin{align*}
(17) & \quad \text{a. } \text{Weil er halt zu lange redete, hat man Max das Wort entzogen.} \\
& \quad \text{because he MP too long talked have they Max the word taken-away} \\
& \quad \text{b. } \text{Wenn sie halt doch Durst bekommt, trinkt Maria Bier.} \\
& \quad \text{when she MP MP thirsty gets drinks Mary beer}
\end{align*}
\]

However, such weil- and wenn-clauses are not central adverbial clauses but are PACs: they cannot have a correlate, (18a), they cannot be in the scope of negation in the associated clause, (18b), and it is not possible to bind into an adverbial containing an MP, (18c), cf. Coniglio (2011). Thus, standardly weil and wenn introduce CACs, but weil- and wenn-clauses can be PACs if triggered by the presence of an MP.

\[
\begin{align*}
(18) & \quad \text{a. } *\text{Man had Max deshalb das Wort entzogen, weil er halt zu lange redete.} \\
& \quad \text{they have Max COR the word taken.away because he MP too long talked} \\
& \quad \text{b. } *\text{Man had Max das Wort nicht entzogen, weil er halt zu lange redete, sondern weil ...} \\
& \quad \text{they have Max the word not taken.away because he MP too long talked, but because…} \\
& \quad \text{c. } *\text{Kein Linguist, sollte, wenn er, halt doch Durst bekommt, Bier trinken.} \\
& \quad \text{no linguist should when he MP MP thirsty gets beer drink}
\end{align*}
\]

In sum, there is evidence that PACs in contrast to CACs may host MPs. Given the root-sensitivity of MPs, this is evidence that PACs belong to the root-like subordinated clauses, whereas CACs do not. ⁴

These observations reveal something about the syntactic structure of PACs since on the one hand an MP interacts with the illocutionary force of its clause and, on the other, it arguably needs some sort of formal licensing.

Rizzi (1997) proposes that as part of the structure of the clause’s left periphery (the CP layer), there exists a functional projection Force, which represents the clause type and may also encode the clause’s specific illocutionary force. Modifying Rizzi’s (1997) proposal, Haegeman (2002, 2006), Coniglio (2011) and Bayer (to appear) among others assume that root-clauses and root-like dependent clauses possess a Force-projection,

---

2. This is confirmed by the fact that in English, PACs allow topicalisation in contrast to central adverbials (Haegeman 2002):

\[
\begin{align*}
(i) & \quad \text{a. We don’t look to his paintings for commonplace truths, though truth they contain none the less.} \\
& \quad \text{(PAC)} \\
& \quad \text{b. *If these final exams you don’t pass, you won’t get the degree.} \quad \text{(CAC)}
\end{align*}
\]
while non-root-like clauses do not (see also Coniglio & Zegrean this volume for arguments to represent clause type and the possible illocutionary force of a clause by different functional projections). The proposal is that it is the Force-projection which makes possible topicalisation, V2 or the occurrence of an MP. Hence, important ingredients of this proposal are that, first, only root-contexts tolerate phrases containing a Force-projection, and second, only phrases containing Force allow so-called root-phenomena.

An immediate consequence of this proposal is that PACs, being root-like, have a projection which encodes illocutionary force and that CACs, not being root-like, do not have such a projection. Note, however, that the argumentation of the present article remains neutral as to whether there in fact exists a special additional functional projection in the left periphery representing the illocutionary force of its clause or whether in a clause with illocutionary force, the C-projection, which every non-reduced clause possesses, is enriched with a feature encoding this force. Thus, in the following, when I speak of a Force-projection it is just to be understood as referring to the syntactic representation of the illocutionary force (or illocutionary potential, see below) of a clause in its left periphery.

Another consequence of the proposal is that complement dass-clauses may or may not possess a Force-projection. In general, complement dass-clauses are not root-sensitive. Hence, they do not always have Force. However, a dass-clause which hosts an MP is root-sensitive, (14a,b). Such a dass-clause necessarily has Force. A final consequence worth mentioning is that although the presence of Force is a necessary condition for V2, it obviously is not a sufficient condition for V2. The root-like dass-clauses with an MP and the root-like PACs are verb-end. These sentences have Force without allowing V2.3

4. The licensing of PACs

In the last section, the proposal was adopted that root- and root-like clauses, to which PACs belong, have a Force-projection (or a C[+FORCE]-projection), whereas non-root-like clauses, to which CACs belong, do not.

Haegeman (2002) states that Force either has to be anchored to a speaker or to a potential speaker. The Force-projection of an independent sentence is directly anchored to the speaker. The Force-projection of a root-like complement clause is anchored to the referent of the logical subject of the superordinated sentence, a potential speaker.

---

3. It is likely that the reason is simply that in these sentences, Force is already occupied by the complementiser such that there is no target position available for the verb-movement in V2, German being a language which does not allow ‘CP-recursion.’
Thus, according to Haegeman, a PAC, not being a complement, is directly anchored to the speaker. This fits her suggestion that PACs are adjoined to a root clause, or may even constitute with the host a kind of coordinated structure.

It was stated above that the fact that a PAC may occupy the prefield of a German V2-clause shows that this proposal cannot be the full story. Therefore, I propose that there exists another way of anchoring a Force-projection, namely indirectly via a Force-projection which is anchored. This is what happens with PACs: their Force-projection is not directly but indirectly anchored to a (potential) speaker because it is licensed by the Force-projection of the superordinated clause, which in turn is anchored to a (potential) speaker. Thus, I propose in addition to (19) the constraint (20) for subordinated phrases with an illocutionary potential:

(19) Any Force must be (directly or indirectly) anchored to a (potential) speaker.

(20) A subordinated phrase containing a Force-projection must be licensed either
   i. by a subcategorising verb whose logical subject denotes a potential speaker, or
   ii. by a Force head.

In the following, I argue that condition (20) allows us to deduce many of the peculiarities PACs show.

Thurmair (1989) and Coniglio (2011) assume that MPs can only occur in clauses which constitute an independent speech act. Under this view, all root-like dependent clauses are associated with their own speech act. Likewise, Haegeman (2002, 2006) supposes that with a PAC and its host two independent speech acts are performed. However, the following data show that this strong assumption can hardly be maintained. It seems more appropriate to say that MPs may also occur in clauses which have an illocutionary potential. Consider the following examples:

(21) a. ??Du wirst erstaunt sein, da ich hiermit kündige. (PAC)
    you will astonished be because I hereby quit

b. *Hast du noch Hunger? Da ich noch viel Essen übrig habe. (PAC)
    are you still hungry since I still a-lot-of food left have

c. *Hans wurde gewählt, [obwohl er es gar nicht wollte, nicht wahr?/oder?] (PAC)
    Hans was elected though he it at-all not wanted did he?

d. *Ich werde nach Hause gehen, während ich dir (hiermit) rate, zu bleiben. (PAC)
    I will home go while I you hereby advise to stay

(21a,d) show that it is (nearly) impossible to use a PAC as a performative. (21b) shows that a da-clause cannot justify the speech act made with the main clause. In (21c) the attempt fails to form a tag question with the concessive clause. These observations suggest that the view that all root-like dependent clauses constitute an independent speech act is too strong an assumption. Note that the situation is different with
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denn- or weil-V2-clauses. (22) shows that, for example, these sentences can be used as performatives and can justify a speech act.

(22)  a. Du wirst erstaunt sein, denn/weil ich kündige hiermit.
you will astonished be because I quit hereby


Given our assumptions, the fact that PACs cannot be illocutionarily independent of their host is to be expected. The Force of a PAC is licensed by means of the Force of its superordinated clause. Thus, its Force is dependent on the Force of its host. That a phrase is illocutionarily independent presupposes that its Force is directly linked to a speaker. A PAC is not directly linked to a speaker.

Hence, it can be said that the fact that a PAC possesses Force only encodes that the PAC has an illocutionary potential, which needs for its realisation the piggyback of a Force which encodes illocutionary force. In general, Force just encodes the necessity of the phrase to be finally anchored to a speaker or to a potential speaker, i.e. this anchoring might be indirect via a Force-projection which is directly anchored.

Let us move to another property of PACs. Interestingly, PACs can belong to an embedded clause. In this case, the embedded clause has to occur in a root-context, i.e. the embedded clause has to be root-like. This is shown by (23a,b). Note that this restriction does not hold for CACs, cf. (23c,d); they may occur in non-root-environments.

Paul thinks/regrets that Otto comes since he money needs (PAC)

b. Max meint/*bestreitet, dass Maria Fußball liebt, während Paul für Opern schwärmt.
Max thinks/denies that Maria soccer loves while Paul about operas is-crazy (PAC)

4. Let us briefly compare the following cases:

(i)  a. Hans ist ein wenig dumm, während seine Frau sehr klug ist.
Hans is somewhat dumb while his wife very intelligent is (PAC)

Hans is somewhat dumb in contrast is his wife very intelligent

In (ib), we find two separate assertions of equal importance; in (ia), given the discussion in the text, there is only one assertion involved. Arguably, the parts of this complex assertion are not of the same weight. The main clause seems to be more at issue than the während-clause. However, importantly, the speaker is committed to the content of the adverbial clause; the clause is challengeable (cf. Verstraete 2007). This, then, is a crucial difference between PACs and CACs. A PAC is challengeable; the content of a CAC is taken for granted by the discourse participants (modulo the adverbial relation, of course).
c. Paul bedauert, dass Otto kommt, weil er Geld braucht. \quad \text{(CAC)}

d. Max bestreitet, dass Maria wegfuhr, während Paul krank war.
   Max denies that Maria went-away-on-a-trip while Paul ill was \quad \text{(CAC)}

That the subordinated clause which is the host of the PAC has to occur in a root-inducing context is due to the PAC’s Force-projection. This Force-projection has to be locally licensed by a Force head. An embedded clause with a licensing Force has to occur in a root-context to get its Force licensed. In the well-formed variants of (23a,b), the Force-projection of the PAC is licensed by the Force of the embedded dass-clause. In the ungrammatical ones, the subordinated dass-clause occurs in a non-root-context and cannot have a Force-projection. Therefore, the PAC’s Force-projection cannot be licensed. Since CACs do not have Force, their hosts are not restricted to Force-licensing environments. Note that if a PAC were just adjoined to a CP-node that was insensitive to the illocutionary status of its host, the differences observed in (23) would not be expected.

As observed in (8) and (9), an element of the host cannot bind into a PAC. However, if a PAC is part of an embedded structure, an element of the superordinated clause may bind into it, since the complete embedded structure occurs in the c-command domain of any matrix element.

(24) Jeder dachte, andere werden bevorzugt, während er doch der Richtige sei.
   everybody thought others were favoured, while he MP the right-one is \quad \text{(PAC)}

The next property of PACs to be discussed played a crucial role in the discussion above: a PAC may occupy the prefield of a V2-clause. A V2-clause has Force in its left periphery. Again, it is irrelevant whether there is a special structural position SpecForce or whether the prefield corresponds to SpecCP, with CP carrying the feature [+force]. Just for convenience of expression, I speak of SpecForce.

Since for the licensing of PACs, condition (20ii) is relevant, and since licensing is a local relation, we arrive at a new view about the options for filling the German prefield of a V2-clause. A PAC has to be licensed by Force of its host clause. This condition can be fulfilled if the PAC is base-generated in SpecForceP. Thus, the condition (11) should be replaced by the conditions in (25) (cf. Frey 2011):

(25) Options for filling the prefield of a clause S in German
   With the possible exception of some formal elements,\textsuperscript{5} the prefield is filled either

\textsuperscript{5.} Possible examples of such elements are the expletive es or the scope marking w-phrase in a w-scope marking construction.
i. by movement of an element base-generated inside the TP-domain, or
ii. by base-generation of an XP with an illocutionary potential (i.e. an XP with a non-independent Force) in SpecForce of S, XP being licensed by Force of S.

An XP which is licensed by Force of the clause functioning as its host may be called a Force-element. PACs are the Force-elements mainly discussed in this paper, however, below some other Force-elements are considered.6

According to (25ii), a Force-element may be base-generated in the prefield of a V2-clause, i.e. in SpecForceP. As another option for its positioning in the syntactic structure, I assume that a Force-element may be adjoined to the Force-projection of its host and be licensed there by Force. Phonetically, such a phrase adjoined to Force may be realised to the left or to the right of its host.7 Furthermore, it may also be realised in parenthetical niches related to the licensing Force. In the middle field, such parenthetical niches are at the very top and follow each sentence constituent. Thus, if a PAC is serialised in the middle field, it appears as a Force-related parenthetical and not as a constituent of the TP-domain, i.e. it does not occur in the middle field as a regular constituent.

This brings us into a position to consider the next properties of PACs. Section 2 presented data which show that PACs cannot have a correlate, that they cannot be in the scope of negation in the host clause, that no element of the host clause may bind into them, and that they cannot carry the nuclear stress of the construction consisting of the host clause and the PAC. These properties are consequences of the

6. Note that although in Section 3 it was demonstrated that MPs can only occur in clauses which have Force, MPs are not Force-elements. The same holds for sentence adverbials like glücklicherweise (‘fortunately’) or anscheinend (‘apparently’). Frey (2004) argues that in the TP-domain of a German fully specified clause there is a structural position for sentence topics to the left of sentence adverbials and MPs. In terms of phrase structure, this means the TP-internal Topic-projection selects the projection which may host MPs and sentence adverbials. Sentence topics are only possible in clauses with illocutional potential, i.e. in clauses which have a Force-projection in their left periphery.

7. If a PAC follows its host it is adjoined to, in German the result normally sounds much better than if it precedes its host, cf. (29b) below. However, the following example with a preceding concessive is, albeit marked, quite good:

(i) Obwohl Hans krank ist, seiner Frau scheint es sehr gut zu gehen.
although Hans ill is his wife seems very fine to be (PAC)

Thus, at this point I would blame non-syntactic reasons for the preference to have PACs follow if they are adjoined, especially since in German with the prefield there is an excellent position available for PACs if interpretative and discourse-pragmatic needs favour having them begin the complex structure.
fact that in syntactic structure, a Force-element may appear in its host's prefield, or it may be adjoined to its host's ForceP. In both cases, the Force-element is outside the c-command domain of any TP-internal element of the host clause.

Another property observed above is that a PAC, in contrast to a CAC, cannot be questioned, cf. (5). One might speculate that the reason that PACs cannot be questioned is that in this case the matrix clause would only contain material that is taken as given, i.e. the matrix clause’s Force would exclusively cover given material, which is not compatible with the illocutionary function encoded in Force. In the case of a questioned CAC the adverbial belongs to the domain of the matrix clause’s Force.

Another contrast between PACs and CACs is that if the associated clause is transformed into a question, a CAC becomes part of that question, whereas a PAC does not, cf. (6). It is reasonable to assume that a PAC’s illocutionary potential is assertive by default. A PAC’s illocutionary potential has to be compatible with the illocutionary force of the whole construction. This is not fulfilled in (6b–d).8

Finally, with regard to (1) it was observed that PACs do not relate eventualities, but CACs do. These semantic facts hold because PACs are licensed by Force and central adverbials are licensed TP-internally. Only an adverbial which is licensed inside the TP of its matrix clause can relate to the eventuality denoted by the matrix clause.

Let me conclude this section with some remarks about other elements licensed by Force. First, there are speech-act-related adverbials that may appear in the prefield (Pittner 1999), (26a,b). As to be expected these adverbials may appear in the middle field only parenthetically, (26c).

(26)  a. Wenn du mich fragst, könnten wir uns um 17:00 treffen.  
     if you ask could we refl at 5 pm meet
     b. Am Rande bemerkt bin ich etwas enttäuscht von dir.  
     by the way am I somewhat disappointed in you
     c. Ich bin – am Rande bemerkt – etwas enttäuscht von dir.

Given their distribution and their semantic content, it seems reasonable to assume that these speech-act adverbials belong to the Force-elements. Other examples of Force-elements are given by the prefield constituents in (27) (cf. also Meinunger 2004). Again, these constituents cannot appear in the middle field, except as parentheticals.

---

8. The judgements for (6b–d) change if the verb-final clauses get their own question intonation. In this case the sequence of the two clauses, each having a question intonation, is interpreted as one question.
(27)  
\begin{align*}
\text{a. } & \text{Wenn Eva sich nicht irrt, reist Karl nach Lund.} \\
& \quad \text{if Eva refl not is-wrong travels Karl to Lund} \\
\text{b. } & \text{Ein Glück habe ich den Regenschirm dabei.} \\
& \quad \text{a luck have I the umbrella with-me}
\end{align*}

In (27a), the prefield constituent is again used to make a meta-linguistic statement; it is what Haegeman (2002) terms a "premise conditional". This sentence can be paraphrased as 'if Eva is not wrong, the following statement holds: Karl will travel to Lund'. The prefield constituent in (27b) transforms the structure into a kind of exclamative. The sentence shares with regular exclamatives the property of factivity and the emotive attitude of the speaker towards the proposition expressed. In the analysis of exclamatives, the specification of Force plays a crucial role (cf. e.g. Zanuttini & Portner 2003). Thus, it seems reasonable to assume that the prefield constituents in both (27a,b) do not enter into a licensing relation with the verb or with any verb-related functional projection, but are licensed by Force.

Haegeman (2002) gives the conditional in (28a) as an example which is neither a premise nor an event conditional. The German examples (28b,c) also show that this conditional clause is not a PAC (and surely not a CAC); it cannot occupy the prefield. In Pittner (1999), this kind of conditional is called an (Ir-)Relevanzkonditional ("(ir) relevance conditional").

(28)  
\begin{align*}
\text{a. } & \text{If you are hungry, there's food in the fridge.} \\
\text{b. } & \text{Wenn du Hunger hast, ist Essen im Kühlschrank.} \\
\text{c. } & \text{Wenn du Hunger hast, Essen ist im Kühlschrank.}
\end{align*}

Given the content of a relevance conditional, it is no surprise that it behaves differently from a premise conditional. A relevance conditional does not affect the Force of its associate clause. Rather it sets a scene relative to which the illocution of the associated clause might be relevant.

As discussed at length above, a PAC may appear in the prefield of a V2-clause in German, (29a). In German, only one Spec-position in the left periphery may be occupied, so there is only one 'prefield' (the special construction 'Linksversetzung' being an exception). In (29b), Hans occupies the prefield. In an adjoined position, a PAC favours being right-adjoined to Force, i.e. clause-finally. As to be expected, in English, the corresponding PAC may precede its clause perfectly, (29c). The subject remains TP-internal; SpecForceP hosts the PAC.

(29)  
\begin{align*}
\text{a. } & \text{Während seine Frau arbeitslos ist, hat Hans einen anspruchsvollen Job.} \\
& \quad \text{(PAC)} \\
\text{b. } & \text{Während seine Frau arbeitslos ist, Hans hat einen anspruchsvollen Job.} \\
& \quad \text{(PAC)} \\
\text{c. } & \text{While his wife is unemployed, John has a high-powered job.} \\
& \quad \text{(PAC)} \quad \text{Haegeman 2002}
\end{align*}
Let me finish this section with a remark on Haegeman’s more recent treatment of the difference between the internal syntax of CACs and PACs. In her new articles on this topic (for example, Haegeman 2010, this volume) Haegeman assumes that PACs as well as CACs have a fully equipped left periphery, i.e. the structure of the left periphery of a CAC is not truncated in comparison to that of a PAC. Haegeman argues that the pertinent differences between CACs and PACs should be explained differently. She assumes that conditional and temporal CACs are derived by movement of an operator from a TP-internal position to the left periphery. She now rules out the root-phenomenon of argument fronting in English conditional and temporal CACs by assuming that fronted arguments give rise to intervention effects on movement. That ‘high’ adverbials are possible in PACs but not in CACs is also seen as a result of intervention effects on movement in CACs. For a PAC Haegeman sees two options. Either its operator movement is high up and hence the path of operator movement that derives the PAC does not interfere with the movement operations that derive the main clause phenomena, or no operator movement takes place to derive PACs.

It is obvious that this new analysis of Haegeman’s is not compatible with the present findings, the simple reason being that in this new approach PACs and CACs should behave the same with regard to their external syntax, since from the outside there is no difference between the two types. However, the present paper argues that there are important differences between PACs and CACs with regard to their external syntax, which have important consequences for embedding, binding, the possibility of a correlate etc. The differences in external syntax are seen here as the result of the differences in their left peripheries.

Coniglio (2011) raises further questions about Haegeman’s new approach: Which operators are moved in other central adverbial clauses, say, causal or final ones? Where are these operators base-generated? Finally, a sentence like the non-restrictive relative clause in (30), which obviously shows movement of a ‘low’ operator, does not show intervention effects.

(30) Ich habe gestern mit dem Chef gesprochen, welcher hoffentlich unser Problem lösen wird.
    I have yesterday with the boss talked who hopefully our problem solve will

Coniglio (2011)

5. The differences between peripheral and non-integrated adverbial clauses

Let us now consider a further class of adverbial clauses, which show interesting differences from PACs. As will soon become clear why, the members of this class are called
non-integrated adverbial clauses (NACs). (31) exhibits a continuative $w$-relative, a continuative $d$-relative, and a free dass-clause,$^9$ respectively:

(31) a. *Emma gewann die Schachpartie, was Oskar ärgerte.*
Emma won the chess-match which Oskar annoyed

b. *Maria gibt ihrem Mitarbeiter ein Buch, das der gleich ins Regal stellt.*
Maria gives her assistant a book that he right-away onto-the shelf puts

c. *Er ist verrückt, dass er ihr jetzt nachreist.*
he is crazy that he her now follows

‘He is crazy to follow her now.’

These clauses are verb-final adverbial clauses. One might be led, erroneously as I will argue, to assume that they are syntactically dependent in some way on the clauses preceding them.

To begin with, we can observe that if one applies the tests of Section 2 to NACs, one finds that they do not share any of the properties with CACs, i.e. they do not allow a correlate, they cannot be questioned, it is not possible to bind into them, and so on and so forth. Furthermore, NACs are perfect hosts for MPs, (32). Thus, with regard to all these properties, they behave like PACs. Given the considerations in Section 3, the last property is a strong indication that NACs possess a Force-projection.

(32) a. *Emma gewann die Schachpartie, was Oskar eben (MP) doch (MP) ärgerte.*

b. *Maria gibt ihrem Mitarbeiter ein Buch, das der wohl (MP) gleich ins Regal stellt.*

c. *Er ist verrückt, dass er ihr jetzt eben (MP) doch (MP) nachreist.*

However, in the following various properties are considered which show that NACs are crucially different from PACs. First, an NAC cannot be positioned in the prefield:

(33) a. *Was Oskar ärgerte, gewann Emma die Schachpartie.*

b. *Dass er ihr jetzt nachreist, ist er verrückt.*

Yet, perhaps one could assume that the ungrammaticality of (33) is not due to a structural property of the NACs but follows from their semantics, in so far as their content continues the content of the associated clause or justifies its assessment, such that the NACs should also follow their associated clauses linearly. If this

---

9. A free dass-clause gives reasons for the assessment expressed in the prior clause based on the fact that it denotes (Reis 1997).
reasoning is true, (33) does not tell us anything about structural differences between NACs and PACs.

This is different with the remaining properties to be considered. In the previous section, it was observed that a PAC cannot be used to perform a separate speech act. Crucially, NACs show a different behaviour.

   (NAC) (cf. Holler 2008)
   see you father home for-which I you thankful be-subj

b. Max hat sich auch beworben, weshalb ich hiermit zurücktrete.
   (NAC) (cf. Reis 1997)
   Max has refl as-well applied why I hereby withdraw

c. Hans wurde gewählt, [worüber wir uns gewundert haben, nicht wahr?/oder?]
   Hans was elected about-which we refl surprised were, weren’t we?
   (NAC)

d. Maria gibt ihrem Mitarbeiter ein Buch, [das der gleich ins Regal stellt, nicht wahr?/oder?]
   (NAC)

e. Ist denn etwas los, dass Max so schreit? (NAC)
   ‘Is something wrong, that Max is screaming like that?’ (Reis 1997)

(34a) demonstrates that the continuative w-relative clause is possible as an assertion when the associated clause is a question/request. In (34b), a continuative w-relative clause is used as a performative, in (34c,d) a continuative w-relative and d-relative, respectively, are the basis for a question tag, and in (34e) the speech act performed with the preceding clause can be justified by means of an assertive free dass-clause (Reis 1997).

Hence, with an NAC an independent speech act is carried out. I take this as evidence that in contrast to the Force of a PAC, the Force of an NAC is not dependent on the Force of its associate clause. Rather, an NAC’s Force is directly anchored to the speaker. For syntax, this means that the Force of an NAC is not licensed by the Force of its associate clause; an NAC’s Force is as independent of its surroundings as the Force of any independent clause.10

10. I remain neutral as to whether clauses which have an independent Force also have a super-structure encoding the speech act that furnishes information about the speaker and the hearer and their relationship; see Miyagawa (this volume) for the adoption of such a structure for the analysis of politeness marking in Japanese.
Let us see what can be said about the external syntax of an NAC. The first fact to note concerns its position relative to a PAC. As might be expected given the observations so far, an NAC has to follow a PAC:

   (NAC < PAC)
   he has come although he actually no time had about-which refl everyone happy-was
   b. *Er ist gekommen, worüber sich alle freuten, obwohl er eigentlich keine Zeit hatte.
       (NAC < PAC)
   c. Du bist verrückt, während deine Schwester vernünftig ist, dass du das ganze Geld verjubelst.
       (PAC < NAC)
you are crazy while you sister intelligent is that you the all money blow
   d. *Du bist verrückt, dass du das Geld verjubelst, während deine Schwester vernünftig ist.
       (NAC < PAC)

The data in (35) by themselves do not prove too much. However, they obviously support the evidence given by (34) that NACs are less strongly connected to the associated clause than PACs.

Now, in my opinion the following observation is crucial for the determination of the external syntax of NACs:

(36) a. *Hans meint, Maria wird auch kommen, worüber sich alle freuen werden.
       Hans thinks Maria will too come about-which refl everyone happy will-be (NAC)
   b. *Max berichtet, dass Maria ihrem Mitarbeiter ein Buch gibt, das der gleich ins Regal stellt.
       Max reports that Maria her assistant a book gives that he right-away onto-the shelf puts (NAC)
   c. ?*Hans glaubt, dass Fritz blöd ist, dass er Erna den Mantel bezahlt.
       Hans believes that Fritz stupid is that he (for)-Erna the coat pays (NAC)
       (cf. Reis 1997)

The examples in (36) show that NACs cannot occur as part of an embedded structure. Note that in (36), the NACs’ associated clauses occur in a root-context, i.e. in a context in which a PAC together with its host clause can occur.

I take the fact that an NAC cannot occur in an embedded structure as a strong indication that it is not part of the syntactic structure of its associated clause. An NAC is semantically dependent on its associated clause, but it is, unlike a PAC, not syntactically dependent.
Further evidence for this assumption is given by the fact that PACs are possible in answers to all-focus questions, whereas NACs are not. The reason is again that an NAC does not build one syntactic structure with its associated clause; the answer to a w-question, however, has to be built by one syntactic structure:

(37)  Was hat Maria erzählt?
‘What did Mary tell?’

a.  Peter ist heute ins Schwimmbad gegangen, obwohl es stark regnete.
    (PAC)
    Peter has today to-the swimming-pool gone although it heavily rained

b.  #Peter ist nach Paris gereist, worüber sich alle gewundert haben.
    (NAC)
    Peter has to Paris travelled about-which refl all surprised were

c.  #Peter ist gröszenwahnsinnig, dass er sich einen Porsche kauft.
    (NAC)
    Peter is megalomaniac that he refl a Porsche buys

That NACs are not part of the syntactic structure of their associated clauses while PACs are can also explain other differences. For example, in contrast to PACs, which can be completely deaccented (cf. Frey 2011), NACs necessarily are prosodically non-integrated in the sense that they need to have their own focus-background structuring, (38). That a clause must have its own focus-background structuring is taken as a sign of the independence of the clause (Brandt 1990; Reis 1997).

(38)  a.  *Emma gewann die Schachpartie, was Maria MAX erzählte.  (NAC)
      Emma won the chess-match which Maria Max told

b.  *Emma gewann die SCHACHpartie, was Maria Max erzählte.  (NAC)

   c.  Emma gewann die SCHACHpartie, was Maria MAX erzählte.  (NAC)

In sum, NACs are syntactically true orphans in the sense of Haegeman (1991). They are licensed in discourse by interpretation.

The analysis which Antomo and Steinbach (2010) propose for weil-V2-clauses cannot be adopted for the NACs considered here and also is problematic for the analysis of weil-V2-clauses. A weil-V2-clause, illustrated in (39a), behaves with regard to the properties considered in the present paper like an NAC. In particular, a weil-V2-clause cannot occur in an embedded structure, (39b).

(39)  a.  Hans ist nun sehr reich, weil seine Frau hat ihm viel Geld geschenkt.
      Hans is now very rich because his wife has him a-lot-of money given

b.  *Maria behauptet, Hans ist nun sehr reich, weil seine Frau hat ihm viel Geld geschenkt.
Antomo & Steinbach (2010) assume that constructions with a \textit{weil}-V2-clause are paratactic with \textit{weil} as a coordinating conjunction:

\begin{align*}
\text{(40)} & [\pi_\text{CP}_1 [\pi_\text{weil}_\text{CP}_2 \text{ sie arbeitet zu viel}]]
\end{align*}

However, there is no evidence that a \textit{weil}-V2-clause and its associate clause should constitute one syntactic node. What is more, one needs extra stipulations to account for the fact that \textit{weil}-V2-clauses cannot occur embedded together with their associate clauses. After all, a structure like (40) would lead one to expect that embedding should be possible. The same would be true if a similar treatment were assumed for the NACs considered in the present paper. Likewise, one would expect that NACs should be possible in answers to all-focus questions.

Cinque (2008) proposes a structure like (40) for his analysis of non-integrated non-restrictive relative clauses, \textit{H0} being an empty head:

\begin{align*}
\text{(41)} & [\text{HP CP} [\text{HP H0 CP}]]
\end{align*}

However, no empirical evidence is given for this proposal; rather Cinque (2008:119) writes: “we must also assume that the ‘Discourse Grammar’ head \textit{H}, as is the general rule for sentences in a discourse, blocks every ‘Sentence Grammar’ relation between its specifier and complement […], despite the asymmetric c-command relation existing between the two […].”

Hence, it appears that structures like (40) or (41) do not have much empirical justification, and that they require adopting extra stipulations. Thus, it seems appropriate to accept that there are clauses which are semantically dependent on their preceding clause but are not related syntactically to this clause.\textsuperscript{11} However, these non-integrated dependent clauses seem to induce a specific discourse relation by which they are linked to the preceding sentence and by which they get licensed.

Using the framework of ‘Segmented Discourse Representation Theory’ of Asher and Lascarides (2003), Holler (2009) undertakes first steps towards investigating the discourse relations by which continuative \textit{w}- and \textit{d}-relative clauses as well as \textit{weil}-V2-clauses are linked to their associated sentences. Holler finds that a continuative \textit{w}-relative clause is linked to its antecedent by a subordinating discourse relation called ‘Commentary’, a \textit{d}-relative clause is linked by the coordinating discourse relation ‘Narration’, and a \textit{weil}-V2-clause by a subordinating discourse relation called ‘Explanation'. ‘Explanation*(α,β); being conceived as a so-called metatalk-relation, means that β justifies the utterance of α.

\textsuperscript{11} Since continuative \textit{w}-relatives and \textit{d}-relatives do not build a syntactic constituent with their associates, cf. (36a,b), (37b), I also believe that the Par(enthetical)-projection, which de Vries (this volume) proposes to host a parenthetical and the expression it is linked to, cannot be employed to relate a continuative \textit{w}- or \textit{d}-relative to its associate.
One might ask why speakers should choose an NAC when NACs are, as claimed here, syntactically and illocutionarily independent and why they do not just use a regular main clause with the same content. Holler (2009) argues that discourse segments which are related by a coordinating discourse relation are of equal informational weight, whereas in the case of a subordinating relation, the subordinated discourse segment is of less informational weight than the dominating discourse segment. Under this perspective, for example the choice of a continuative $w$-relative clause instead of a semantically equivalent main clause makes perfect sense: the content of the continuative $w$-relative clause is marked as being less important for the content of the overall text than the content of its associated clause. A similar reasoning applies to the choice of a weil-V2-clause instead of a regular main clause. Arguably, this also holds for a free dass-clause. In the case of a $d$-relative clause the situation is different since here the non-canonical verb-final clause induces a coordinating discourse relation like the corresponding main clause would do. However, if we compare the two possibilities in (42a,b), we find an interpretative difference with regard to a possible continuation like (42c), for example.

(42) a. *Maria gibt ihrem Mitarbeiter ein Buch, das der gleich ins Regal stellt.*
    (NAC)

b. *Maria gibt ihrem Mitarbeiter ein Buch. Das stellt der gleich ins Regal.*

c. *Das hat alle erstaunt.*
    that has all astonished

If (42a) is continued by (42c), it is understood that the astonishment regards the content of both preceding clauses, whereas if (42b) is continued by (42c), the astonishment concerns only the content of the second clause of (42b). Thus, the two clauses in (42a) describe one single complex event, whereas the two clauses in (42b) describe a sequence of two events.

Already these cursory observations indicate that it makes sense for (German) grammar to offer non-canonical constructions like NACs. They allow something sui generis to be expressed which is not offered by semantically equivalent independent main clauses.

6. Summary

The main goal of this article was to show that PACs and NACs have very different licensing conditions, which give rise to different formal and interpretative properties. Among the formal differences are: PACs in contrast to NACs can appear in the prefield of a V2-clause; PACs can appear with an embedded clause,
while NACs cannot; NACs have to follow PACs; and NACs in contrast to PACs are necessarily prosodically non-integrated. Among the interpretative differences are: NACs in contrast to PACs are not possible as parts of answers to all-focus questions; NACs need to have their own focus-background structuring, whereas PACs do not; finally and most importantly, NACs but not PACs constitute independent speech acts.

The paper has argued that a PAC has to be syntactically licensed by a left peripheral projection of its host clause which is anchored to a speaker or a potential speaker, often called Force. In contrast, an NAC is not part of the syntactic structure of its associated clause; it is syntactically a true orphan in the sense of Haegeman (1991). Thus, although NACs have formal properties of dependent clauses (e.g. the presence of a complementiser or the clause-final position of the verb in Germanic OV-languages), they are syntactically independent of the clauses they relate to semantically and, therefore, are root-clauses syntactically. An NAC is licensed by a specific rhetorical relation which connects it with its associated clause.

The interpretative differences between PACs and NACs follow from their different statuses. For example, since PACs are formally dependent on their host clauses, they cannot constitute independent speech acts, whereas NACs, which syntactically are independent root-clauses, can.

The paper suggests that in German at least four types of dependent clauses should be distinguished: (i) verb-final complement clauses without Force and CACs; (ii) verb-final complement clauses with Force and complement V2-clauses – their Force is licensed by a root-inducing subcategorising verb; (iii) PACs – their Force is licensed by the Force of their host clause; and (iv) NACs – they are syntactically independent of their associate clause; their Force is directly anchored to the speaker.

References


Haider, Hubert. 2010. The Syntax of German. Cambridge: CUP.


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