Parentheticals
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Volume 106

Parentheticals  
Edited by Nicole Dehé and Yordanka Kavalova
Parentheticals

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Preface

This volume is based on the workshop on Parenthetical Constructions, which was held as part of the 28th Annual Conference of the Deutsche Gesellschaft für Sprachwissenschaft (DGfS), hosted by the University of Bielefeld in February 2006. The aim of the workshop was to bring together prosodic, syntactic, semantic and pragmatic approaches to parentheticals in order to achieve a more comprehensive insight into this phenomenon than previously known, and to combine theoretical and empirical perspectives.

We would like to thank all participants of that workshop, the speakers for their presentations and the audiences for their interest in the workshop and the stimulating and fruitful discussions of the questions raised in the course of the three workshop days.

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Parentheticals

An introduction*

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Parentheticals are expressions that are linearly represented in a given string of utterance (a host sentence), but seem structurally independent at the same time. They have been argued to interrupt the prosodic flow of an utterance, introducing intonational breaks and featuring prosodic properties different from those of their host. They are outside the focus-background structure of their host utterance and are usually associated with non-truth conditional meaning. Parentheticals typically function as modifiers, additions to or comments on the current talk. They often convey the attitude of the speaker towards the content of the utterance, and/or the degree of speaker endorsement.

The challenge for any linguistic analysis is to explain first, why expressions which lack integration in the overall sentence in so many respects appear within that utterance, i.e., are a linear constituent of the utterance, and second, how the relation between parenthetical and host clause can best be explained. Should parentheticals be dealt with in narrow syntax, or should they be considered a mere performance phenomenon, explained in terms of utterance interpretation alone? In what way(s) are they linked to their host clauses and are there differences between the various types of parentheticals in this respect? What can prosody tell us about the syntactic relation between parenthetical and host, and about their meaning?

In linguistic research, parentheticals represent a rather peripheral and often neglected phenomenon. However, they have received more attention in recent years. A recent overview and introduction to the phenomenon has been provided by Burton-Roberts (2006).

Parentheticals are a motley crew. Elements that have been considered parentheticals in the literature include expressions as varying in length / complexity, category and function as the following: one-word expressions such as what, say,*

* We have benefited from discussions with Bas Aarts, Ad Neeleman, and Anne Wichmann, and the participants of the workshop on Parenthetical Constructions at the 2006 DGfS Annual Conference. We would like to express our thanks to all of them.
like (cf. (1)) and sentence adverbials (cf. (2)), comment clauses (cf. (3)a, b) and reporting verbs (cf. (3)c), nominal appositions (cf. (4)a) and non-restrictive relative clauses (cf. (4)b), question tags (cf. (5)), and clauses which may (cf. (6)c) or may not (cf. (6)a) be introduced by a connector, and which can (cf. (6)b) or cannot (cf. (6)a) be elliptical. Their places of interpolation are variable, including positions such as between head and complement, between subject and predicate, and between modifier and head; they occur sentence-initially, -medially and -finally. The interruption is sometimes marked by backtracking, i.e., repetition of some part of the frame utterance after an interpolation, leading back to the main proposition (cf. (7)). Some parentheticals are not semantically or pragmatically related to the host utterance at all, but represent a separate, detached utterance interwoven with the host due to the situational context (cf. (6)d). (Here and below, parentheticals are printed in italics.)

1. We use English examples here solely for reasons of illustration and convenience. There can be no doubt that parentheticals are frequent and of similar types in many other languages. (Cf., for example, Payà 2003 for examples of parenthetical insertions in spontaneous spoken Catalan.) The examples in (1) through to (7) are taken from two corpora: the British Component of the International Corpus of English (ICE-GB) and the Diachronic Corpus of Present-day Spoken English (DCPSE). Both corpora were compiled at and are available from the Survey of English Usage at University College London. More information on both corpora can be obtained from http://www.ucl.ac.uk/english-usage/. For ICE-GB, see also Nelson, Wallis and Aarts (2002). Finally, the spoken material in the two corpora is not marked by any punctuation and the examples here are taken as they appear.
(3) Comment clauses and reporting verbs
   a. And uh that marvellous tone poem Shropshire Lad I think shows what might have come from a a most talented man (ICE-GB: s1b-032, #159)
   b. And the woman had brought up two kids with this guy and you know lived all her life with him and basically he pissed off (ICE-GB: s1a-080, #147)
   c. The reason for the Prime Minister’s resignation she said was to enable Cabinet colleagues to enter the ballot (ICE-GB: s2b-020, #13)

(4) Nominal appositions and non-restrictive relative clauses
   a. She claimed that the new Prime Minister Jim Callaghan had offered his predecessor the job of Foreign Secretary in his government (ICE-GB: s1b-040, #4)
   b. And then you had a theologian talking about the Big Bang <,> which I thought was brilliant (ICE-GB: s1a-096, #202)

(5) Question tags
   a. They’re called Gasser the people next door are they (ICE-GB: s1a-057, #30)
   b. He suffered great mental distress didn’t he after the war (ICE-GB: s1b-032, #164)

(6) Clauses
   a. It’s been a mixture of extreme pleasure I’ve had hundreds of letters from all sorts of people who have enjoyed the book and considerable irritation because of being constantly interviewed (ICE-GB: s1b-046, #2)
   b. For those of us who remember nineteen sixty-five one or two of our listeners may Tory party uh leadership contests used to be uh as the cardinals in Rome and leaders would emerge (ICE-GB: s1b-024, #1)
   c. Because on this on this theory and it’s very deeply held uh good educational news is by definition inadmissible as evidence <,> (ICE-GB: s2a-021, #91)
   d. Well esterases are able in organic solvents to carry out a number of useful can you hear me all right now organic uhm processes to produce things like food products (ICE-GB: s2a-034, #13)

(7) Backtracking
   a. But a different role <,> uh because when we get to the time of uh Ezra as with the more classical Wellhausen uh hypothesis when we get to the time of Ezra we have the further narrowing of the office of priest (ICE-GB: s1b-001, #9)
b. I suppose you write the trend words as you check out the mistakes you might <,,,> God I hope not but you might embody a whole new theory of syntax (DCPSE: DL-B31, #342)

It is the aim of this introduction to present an overview of the behaviour of and recent research on parenthetical constructions, and to thus set the background for the reader against which the contributions to this volume have been put together. In Section 4 of this introduction, the individual contributions are briefly summarised.

1. Syntax

As noted in previous work, most recently Burton-Roberts (2006), parentheticals are problematic in a strictly syntactic account because in syntactic theory (since Kayne 1994), linear order is usually assumed to be determined by hierarchical relations (but cf. De Vries 2003). Parentheticals, however, seem to be linearly integrated in, but structurally independent from, their host. A number of authors have shown that parentheticals are not visible to the host in the same way as arguments or adjunct constituents are, i.e., they are not subject to the same syntactic operations in the host (cf. Espinal 1991: 729–735 and Haegeman 1988: 233–235 for more comprehensive overviews). For example, parentheticals cannot undergo movement, be questioned, or become the focus of an *it*-cleft construction (cf., e.g., Espinal 1991: 729ff, Haegeman 1988: 233, Quirk et al. 1985: 504ff). As opposed to adjuncts, they do not count as first constituents in verb-second languages such as German and Dutch, where the verb must appear after the first constituent in main clauses (Espinal 1991: 730f, Ackeman and Neeleman 2004: 97), and they behave differently with regard to gapping structures (Espinal 1991: 731f). Moreover, parentheticals do not seem to be under the scope of quantifiers or any operators in the host clause (Espinal 1991: 731f, Haegeman 1988: 234, Peterson 1999: 235).

However, it has also been shown that certain syntactic relations between parenthetical and host do exist. For example, anaphors in a parenthetical can be bound by antecedents in the host clause (Hoffmann 1998: 302), and, as shown by Ackema and Neeleman (2004: 98), parentheticals can be secondary predicates taking a DP in the host structure as subject, and they can contain parasitic gaps that are licensed by A’-movement in the host clause (cf. also D’Avis 2005, Haider 2005 and Pittner 1995 for binding and scope relations between parenthetical clause and host utterance). In the present volume, De Vries argues that anaphors in a parenthetical cannot be bound from outside.

Thus, it seems that parentheticals are a Janus-faced lot. In dealing with this apparent contradiction between far-reaching structural independence of the par-
enthetical on the one hand and linear order and certain existing relations on the other hand, two main syntactic approaches to parentheticals have been put forward. While the first one holds that parentheticals are structurally independent from their host and accounts for linearization and apparent surfacing relationships along the lines of semantic association (e.g., Peterson 1999), utterance interpretation (e.g., Haegeman 1988), or serialization in the phonetic component (e.g., Haider 2005), the second one assumes syntactic integration of the parenthetical into the host, usually in terms of adjunction. Naturally, accounts within these two groups vary in their details and we can only give a rather incomprehensive and selective overview here.

At the extreme end of the unintegrated approach is Haegeman (1988), who argues that parentheticals are orphan constituents which are syntactically unattached at all levels of representation, and whose interpretation follows from general principles of utterance interpretation. Similarly, Peterson (1999) maintains that there is no syntactic relationship between parenthetical and host, but that there is a semantic ‘bond’ between the two which accounts for their association, including pronoun-antecedent and gap-antecedent relationships. Espinal (1991) agrees with Haegeman (1988) on (i) “the existence of syntactic independence between host and disjunct(s) at every syntactic level of representation” and (ii) “the existence of conceptual relationships between the logical representations” involved (Espinal 1991: 741), but she also argues that linearization is nevertheless syntactic. In her alternative account, complex syntactic structures have multiple root nodes and involve separate planes in a three-dimensional space.

The idea behind the other main approach to the syntax of parentheticals, the integrated approach, is to account for linearization and certain syntactic relations that exist between the parenthetical and its host in the syntactic structure. In a series of publications in the 1970s and early 1980s, it has been argued that parentheticals are adjoined constituents. Ross (1973), Emonds (1973, 1976, 1979) and McCawley (1982) all assume the same underlying structure which has the parenthetical as a sister and daughter of the root node S. The accounts differ in the way they derive the surface word order in which a parenthetical appears in a non-peripheral position. While under Ross’ (1973) Sliffting analysis the parenthetical starts out as a main clause whose complement moves across it to the left resulting in the adjunction structure, Emonds (1973, 1976, 1979) suggests postponing of a constituent of the host structure, and McCawley (1982) proposes crossing branches. The latter treats parenthetical placement on a par with other “order-changing transformations”, among them scrambling, Heavy NP Shift, Relative Clause Extraposition and Right Node Raising. More recently, Corver and Thiersch (2002) argue that speaker-oriented parentheticals (cf. also Reinhart 1983) are structurally identical to adverbs. D’Avis (2005) suggests adjunction of the parenthetical to the
closest phrasal projection (the projection in whose vicinity it is interpreted) along with intonation-guided interpretation of the interpolated constituent in order to account for the ambivalent properties of parentheticals. These accounts are incompatible with the observation that parentheticals and adverbials behave differently in many respects (cf. above).

In a more innovative account, De Vries (2005) takes parenthesis along with common and specifying coordination as evidence for the relation *behindance* as a third dimension of the grammar next to dominance and precedence. *Behindance* is a local relation between nodes which is not subject to c-command and which encodes paratactic relations. It can thus account for the apparently opposing properties of parentheticals which surface in the linear string of a sentence but are not subject to the usual syntactic relations and operations. Mark de Vries’ contribution to the present volume builds on this idea.

Finally, Ackema and Neeleman (2004: 99) conclude from their discussion that “a parenthetical cannot affect the syntax of the host clause, but grammatical requirements imposed by material in the parenthetical can be satisfied by elements in the host clause”. They account for this generalisation in a theory of feature matching called *Insertion*, which crucially builds on the *Inclusiveness* condition (Chomsky 1995: 228; cf. also Neeleman and Van de Koot 2002, and Ackema and Neeleman 2004: 99ff). In this theory, the syntactic representation of the parenthetical is connected to the representation of the host via insertion of the former in a non-terminal node of the latter. The desired results of this process are that first, inserted elements (parentheticals) are invisible to operations that apply in the host structure, and second, it is impossible for parentheticals to introduce licensing functions.

Along with the question of whether or not parentheticals are integrated in the syntax of the frame utterance, there is another research question that deserves to be addressed here. For some expressions, there has been a debate about whether or not they are base-generated parentheticals at all. One such phenomenon is the parenthetical verb (Urmson 1952) or comment clause (e.g., Quirk et al. 1985: 1112ff) in English. Expressions such as *I think, I feel* (cf. (8), adapted from Ross 1973: 133, and (9)a), b), taken from Emonds 1973: 333) have been considered parentheticals at least since Jespersen (1937). A related phenomenon is the verb-initial (V1) construction in German, exemplified in (10). The debate is between a base-generated parenthetical analysis on the one hand (e.g., Jackendoff 1972, Emonds 1973, 1976 for English comment clauses; Reis 1995, 2002 for German V1
expressions; cf. also Schelfhout, Coppen and Oostdijk 2004 for Dutch), and an extraction analysis on the other hand (e.g., Ross 1973 for English comment clauses; Grewendorf 1988, Haider 1993, Tappe 1981, Wagner 2004 for German V1). Under the latter analysis, the parenthetical expression starts out as the matrix clause taking the rest of the utterance as complement, and ending in the parenthetical position as a result of a movement operation (cf. (11)).

(8) Max is a Martian, I think/ I feel/ don’t you think.

(9) a. John came later than Sue, I think.
   b. John came, I think, later than Sue.
   c. I think (that) John came later than Sue.

(10) a. Wen sagt Karl hat Ernst gesehen?
    Whom says Karl has Ernst seen
    ‘Whom does Karl say Ernst has seen?’
   b. Wen denkst du hat Wolfgang angerufen?
    Whom think you has Wolfgang called
    ‘Whom do you think Wolfgang has called?’
   c. Martin möchte glaubt Hans die Theorie beweisen.
    Martin wants thinks Hans the theory prove
    ‘Hans thinks Martin wants to prove the theory.’

(11) Extraction analysis
   a. Wen sagt_k Karl t_\{CP t_\{C hat Ernst t_\{t_1 gesehen t_2\}\}\?
   b. [John came later than Sue]_t_ I think t_.

In this volume, Christian Fortmann, Tanja Kiziak and Markus Steinbach contribute to the discussion of German verb-initial clauses.

2. Semantics and pragmatics

Just as we are faced with various approaches and schemas when dealing with the syntax of parentheticals and host, the treatment of parenthetical structures in semantic and pragmatic contexts is not uniform either. Along with various approaches to identical parenthetical structures, we also encounter works with focus on different grammatical representations – parenthetical clauses, phrases, and

2. Emonds argues against the parenthetical originating as a matrix clause and for its base-position at the right periphery of the sentence. He does, however, relate final and medial comment clauses (cf. (9)a), b)) transformationally, such that the medial parenthetical position is derived from the final one.
one-word expressions. In this section, we will touch upon a few works which have focused on the status of parentheticals in semantics and pragmatics.

Before delving into any particular approach, the speculations that parentheticals may be an instance of disfluency need to be addressed. Are parentheticals the result of unplanned discourse and spontaneity with no relation to the utterance which they interrupt? Consider Burton-Roberts’ (2006: 180) example of a parenthetical lacking syntactic and discourse relations given in (12) (cf. also example (6) d) above).

(12) The main point – why not have a seat? – is outlined in the middle paragraph. Burton-Roberts’ argument is that even though the parenthetical clause is not associated syntactically, nor pragmatically with the host, its occurrence is constrained by the host structure and the interpolation position of the parenthetical on the linear axis is severely limited.

In the same vein, the implementation of the backtracking device (cf. (7) above) encourages perceptions of the parenthetical expression as an instance of disfluency. In particular, Biber et al. (1999: 1067f) describe the use of backtracking to mark a disfluency and as a direct consequence of online processing. In their analysis, it is distinctively longer parentheticals which put pressure on the temporary memory of the hearer and backtracking is called upon to ease the processing of the utterance.

At the opposite end, linguists argue that parentheticals are in fact the result of a deliberate stylistic choice (e.g., Blakemore 2005: 1167f, Dehé and Kavalova 2006: 302ff). In Blakemore’s case, the mere fact that parentheticals are encountered in written as well as spoken material, where the written text is subjected to revisions and repairs, defies any claims that parentheticals are ‘errors’ of online communication. Indeed, instances of parentheticals are abundant in written corpus material too, where they are often marked orthographically by dashes, commas, or brackets; cf. (13) for an example from ICE-GB.

(13) She becomes greedy (and who can blame her) for recognition. (ICE-GB: w1a-010, #136)

The relation between host and parentheticals is captured in Blakemore’s (2005: 1179) compelling observation that “host and parenthetical make a collective contribution to the interpretation of the utterance at the level of implicit content” [our italics]. Thus, the parenthetical is seen as a beneficial option which guarantees optimal relevance. It is not accidental and should not be treated as an instance of disfluency. In Dehé and Kavalova (2006) parenthetical what is seen to implicitly communicate assumptions which assist the recovery of the proposition. The authors argue that without the parenthetical, the hearer will not be in a position to directly access certain implications and the hearer may stray away from the in-
tended inferential route. The speaker’s motivation for opting for a parenthetical insertion is discussed in Kavalova’s contribution in this volume.

Comparing examples (12) and (13), it is immediately obvious that the expressions in italics are significantly different. It may be useful to draw a line here and exclude any interruptions addressed to a different person or located on a different discourse plane from that of the class of parentheticals. This is exactly what Tagli- cht (1998: 195) suggests. He disqualifies expressions like ‘thank you,’ ‘Come in!’, which are “addressed to the same person as the surrounding utterance but unconnected with it”. In other words, true members of the parenthetical class carry some relevance to the interpretation of the host.

In an early study by Urmson (1952, 1963), parentheticals are seen as expressions that do not contribute to the truth-conditionality of the host utterance, but only indicate its illocutionary force. In an attempt to show that the language harbours verbs which do not describe goings on, but only function as signals to guide the hearer to a proper appreciation of the statement, Urmson discusses ‘parenthetical verbs’ which include verbs like suppose, believe, think, expect, regret, etc. (cf. also examples (8) and (9) above). In their function the author likens them to stage-directions. Relying on the existence of basic conventions which govern the use of discourse, Urmson (1952: 484) justifies the licensing of these verbs by language – the speaker uses them as discourse devices in order to “prime the hearer to see the emotional significance, the logical relevance, and the reliability of our statement”. Hence, parenthetical verbs are seen as showing rather than stating, and their function has the nature of a comment on the main proposition.

In addition to parenthetical verbs, and ignoring syntactic form differences, Urmson (1952: 486f, 1963: 228f) identifies certain adverbs (sentential adverbials) which share the same role and grammatical relation to the indicative sentence with parenthetical verbs – they all signal the force of the utterance to which attached (cf. e.g., (2)). Moreover, the sentence position of adverbs can vary, just as in the case of parenthetical verbs. Some of the adverbs mentioned are luckily, happily, certainly, presumably, unfortunately and are seen as indicators which modify the sentence by giving “a warning how [it is] to be understood” (Urmson 1952: 486, 1963: 228).

In analysing mitigation as a way to modify speech acts, Fraser (1980) lists parenthetical verbs as a strategy employed by the speaker to indicate intent to mitigate. Mitigation in his account is seen as a device to soften an unwelcome effect and is always associated with reducing the harshness or hostility a speech act may have on the hearer. The reasons for that may be altruistic as well as self-serv- ing. Following Urmson, Fraser (1980: 348f) also includes sentential adverbials under this strategy and reiterates that these are less personal than parenthetical verbs. In this volume, Schneider’s contribution focuses on parentheticals as mitigators.
While in Urmson’s account parenthetical verbs are seen as indicators *per excellence* and as being inherently non-truth conditional, Ifantidou-Trouki (1993) opens a discussion on issues unanticipated by speech-act theorists. She studies the sentence adverbials associated with parenthetical verbs in Urmson (1952, 1963) in the context of utterance proposition, testing four groups of sentence adverbials for truth-conditional meaning. Her results reveal that while attitudinal (unfortunately, sadly) and illocutionary (frankly, honestly) adverbials are indeed non-truth conditional, hearsay (allegedly, reportedly) and evidential (obviously, clearly) adverbials affect the truth conditions of the host utterance.

Ifantidou-Trouki develops her account in the framework of Relevance Theory (Sperber and Wilson 1986/1995) and along with the question of truth-conditional, she also examines the type of information sentence adverbials encode and the way they encode it. Because evidential and hearsay adverbials are truth-conditional, she argues, they must be treated as encoding conceptual information. For attitudinal and illocutionary adverbials, she shows that although they do not contribute to the truth conditions of the utterance, these too encode elements of conceptual representation. However, while the former two contribute to the proposition expressed, the latter two contribute to higher-level explicatures. Higher-level explicatures are expressions which do not contribute to the truth conditions of the utterance, but they may be true or false in their own right. In a different study of a parenthetical expression, Dehé and Kavalova (2006: 300ff) establish that parentheticals can encode procedural information, too. They apply three diagnostic tests to demonstrate that parenthetical what does not encode concepts. Also, parenthetical what is argued to contribute to the implicit aspect of communication.

The lack of semantic interaction between host and parenthetical resonates in Potts (2002) analysis of parentheticals as a source of conventional implicatures, i.e., they are not part of the assertive content of the utterance. The treatment of parentheticals as non-at-issue entailments is also captured in their inability to express controversial proposition or main themes (Potts 2005: 7). Similar to Fraser’s observation that mitigation involves certain effects that arise as a result of the utterance, conventional implicatures too are influenced by the properties of the utterance and usually receive their interpretation within its domain. Potts (2005: 43) refers to this as a one-way dependency where the conventional implicature is “saturated by something from the at-issue realm”. Conceptually, this resembles Ackema and Neeleman’s (2004) one-sided dependency between host and parentheticals as outlined in the previous section; this also supports the view that parentheticals are to be differentiated from disfluency phenomena.

So far the role of the parenthetical gravitates around the host and how this additional expression assists its interpretation. However, Blakemore (2006: 1684) underlines that not all parentheticals achieve relevance by contributing to the in-
interpretation of their hosts. Based on previous research, she distinguishes two types of parentheticals: grammatical (including non-restrictive relative clauses, nominal appositions and parenthetical adverbial clauses) and discourse. While grammatical parentheticals can contribute to what is implicitly or explicitly communicated by the host (like the ones we have discussed so far), discourse parentheticals (e.g., (14)) contribute their own cognitive effects but exclusively “in a context of assumptions made accessible by the interpretation of the host”.

(14) What Iraq needs is education. We do not need to begin with the children – they will follow – but with the adults. (from Blakemore 2006: 1685)

More specifically, in (14) the parenthetical achieves relevance by providing an answer to a question which the speaker assumes is raised by the interpretation of the first part of the host: and what about the children? As Blakemore (2006: 1985) convincingly argues, “[t]his does not affect the relevance of the host, which lies in the proposition that the education of the adults of Iraq must come before the education of the children”. She further notes that correct interpretation of the utterance is endorsed by its exact place of interpolation – the parenthetical achieves its relevance only in the immediate proximity of a particular constituent. Places of interpolation and proximity conditions in the context of host-parenthetical relations are investigated in Kavalova’s contribution to this volume.

Along with studies of parentheticals encoding procedural and conceptual information, and contributing to the explicit and implicit aspects of communications, other linguists have focused their research on the speaker’s tailoring of the utterance with the assistance of parenthetical expressions. While for Urmson (1952, 1963) the exact position of the parenthetical verb is not seen as crucial from an interpretational point of view, Taglicht (1984: 22–25) considers this important and discusses parenthetical expressions as participating in information structuring. He implements parenthetical phrases (of the comment clause type) to analyse textual structure; more specifically, the marking of theme and rheme. Taglicht demonstrates that comment clauses can function as partitions.3 In (15)a) the com-

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3. Ziv (2002) supports this view and extends it to give parentheticals the status of a processing instruction for the purposes of information structuring. Specifically, she focuses her study on parenthetical expressions which surface in second position as in (i):

(i) a. John, I believe, will not attend the meeting this evening.
   b. This evening, I believe, John will not attend the meeting.

Ziv (2002: 9) demonstrates that when in second position, “the parenthetical is used to segment the information unit and is interpreted as a device which helps link the constituent immediately preceding it to the prior discourse”. More importantly, she observes that this linking function is not to be attributed to the semantics, but rather to the positional and intonational properties of the parenthetical.
ment clause you know marks the theme, John. In (15)b) the comment clause I think marks the rhyme a warmer climate.

(15)  a. John, // you know, / has // painted the shed.
MTh partition Op Rh

b. They // prefer, / I think, / a warmer climate.
Th Th partition MRh

Crucially, the marked theme and rhyme contain an intonation focus and they are always assessed by the hearer as conveying new information (Taglicht 1984: 28). The relationship between places of interpolation and focus is also discussed in Dehé and Kavalova (2006: 301f).

In the context of information structure, Brandt’s (1996) comparison between subordination on the one hand and parenthesis on the other hand comes to the conclusion that the two phenomena represent different aspects of text structuring. While subordinated constituents are part of the focus background structure of the main utterance and provide background information, parentheticals contribute additional information on a plane parallel to the main information. This parallel level of information has its own focus background structure. Therefore, subordination and parenthesis do not compete with, but complement each other.

Having given an overview of previous research on the syntax and pragmatics of parentheticals, we will now move on to prosody. Prosodic research has received a lot of attention in recent years, and two contributions in the present volume focus on prosodic patterns of parenthetical constructions.

3. Prosody

It is a common belief that a parenthetical interpolation “interrupts the prosodic flow of the frame utterance”. The quotation is from Bolinger (1989: 185) and refers to parenthesis in English, but the assumption is a general one and has also been put forward for a number of other languages. There seems to be general agreement in the literature that parentheticals form their own prosodic domains, set off from their host by pauses and/or tonal cues (cf. Astruc 2005 for a recent overview). Typical prosodic characteristics of parentheticals are: surrounding pauses / preceding and following prosodic boundaries (e.g., Altmann 1981, Astruc 2005, Bolinger 1989, Payà 2003, Taglicht 1998), lower pitch (e.g., Astruc 2005, Bolinger 1989, Crystal 1969, Fleischer and Michel 1975, Local 1992, Payà 2003), diminished loudness (e.g., Crystal 1969, Local 1992, Payà 2003), increased tempo (e.g., Crystal 1969, Fleischer and Michel 1975, Local 1992, Payà 2003), rising-type tones (e.g., Bolinger 1989 and Crystal 1969 for English, Astruc 2005 and Payà 2003 for
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Catalan, Frota et al. 2005 for Spanish), and the blocking of sandhi rules (e.g., Frota 2000 for fricative voicing, syllable degemination and vowel adjacency resolution in European Portuguese). It is also possible for the parenthesis to be marked by higher, rather than lower pitch (e.g., Bolinger 1989, Fleischer and Michel 1975, Wichmann 2001). Parentheticals are furthermore marked by falling-rising pitch at the end of immediately preceding material (Local 1992). Any one of these features can be suspended depending on the parenthetical’s function, length and position (Bolinger 1989; cf. Wichmann 2000: 96f for examples), which implies that none of the defining features, including the intonational break so frequently referred to in the literature, qualifies as a necessary condition for parenthesis.

Despite the assumption in the literature that the intonational features of parentheticals depend on various factors, among them their length / relative weight (e.g., Bolinger 1989, Schubiger 1958) and syntactic make-up (Bolinger 1989), it has often been taken for granted that strings that qualify as parentheticals in the syntax have certain defining prosodic characteristics, and prosodic features of parentheticals have been taken to be a cue to their syntactic status (e.g., Burton-Roberts 2006, Hoffmann 1988, Safir 1986, Haegeman 1988, Reis 1995, d’Avis 2005, among many others). In accounts like these, there is often a certain risk of circularity in the argumentation. On the one hand, it is assumed that syntactic parentheticals are marked by certain prosodic features; on the other hand, these prosodic features help to identify a parenthetical interpolation in the syntax. It is worth mentioning at this point that the assumption that strings that are parentheticals in the syntax form their own intonational domains and are thus prosodically set off from the rest of the utterance follows from prosodic theory (Nespor and Vogel 1986, Selkirk 1986, 1995, Truckenbrodt 1995 and related work), where major prosodic boundaries are predicted at major syntactic boundaries. Since parentheticals have either been considered linear strings outside the syntactic structure of the host sentence, or, if integrated, syntactic adjuncts at best, mapping onto separate intonational domains would be predicted, accompanied by the usual intonational features. This has indeed been argued in the relevant literature. Based on the assumption that parentheticals are “external to the root sentence they are associated with”, Nespor and Vogel (1986: 188) assume that they “form intonation domains on their own”. This assumption has been corroborated by experimental

4. Experimental work using written material has shown that punctuation marks such as commas or hyphens setting parentheticals off from their host are usually translated into rather strong prosodic boundaries in (read) speech (e.g., Beckman and Edwards 1990 for English, Fagyal 2002 for French, Frota 2000 for European Portuguese). In general, experimental work seems to confirm the idea about separate phrases (cf. also Astruc 2005), while actual spoken language data from spontaneous speech does not necessarily do so (Wichmann 2001, Peters 2006, Dehé, this volume).
results showing that parentheticals are often preceded and/or followed by silent pauses (e.g., Astruc 2005, Fagyal 2002), are preceded and terminated by a high boundary tone (e.g., Astruc 2005), trigger final lengthening effects (e.g., Fagyal 2002), and block sandhi rules (e.g., Frota 2000). However, it has also been shown recently that parentheticals do not form a single class prosodically (e.g., Astruc 2005). They may or may not bear a nuclear accent, and, as has been demonstrated for English in particular, certain parentheticals can indeed be prosodically integrated in prosodic domains in their immediate vicinity. For example, certain cases of verbal parenthetical expressions like *I think* can be part of the prehead of an intonation domain (Crystal 1969: 235). Moreover, parenthetical expressions like comment clauses *I think, I suppose, you see* in utterance-final or medial position may continue a preceding tonal contour, typically a falling or a fall-rise contour, and can come without a preceding pause (Armstrong and Ward 1926: 27f, Crystal 1969: 268, Schubiger 1958: 98, Wichmann 2001: 186). Taglicht (1998: 196) maintains that parentheticals may, in intonational phrasing, group to the left, but not to the right. And finally, parentheticals may be part of a word-searching, hesitant phase, and need thus not be part of the intonational analysis at all (Wichmann 2001: 186). Peters (2006) has put forward a similar idea of integrated patterns for a dialect of German. He shows that (i) not all parentheticals form their own intonational phrase, and (ii) not all parentheticals break up the intonational phrase of their matrix sentence. He identifies four integration types: (1) prosodic parataxis (the parenthetical is in its own intonational phrase), (2) prosodic incorporation (no distinct intonational contour on the parenthetical; rather, the parenthetical forms part of the general contour of the string in which it is wedged), (3) prosodic parenthesis (material surrounding the parenthetical forms an intonational contour that is interrupted by and continued after the parenthetical; according to Peters, this type parallels syntactic parenthesis), and (4) a mixed type, which combines prosodic parataxis with prosodic parenthesis. Given the evidence provided in these studies, it seems obvious that syntactic parenthesis cannot be straightforwardly translated into prosodic parenthesis. On the contrary, there is a lot of variation in the prosodic realization of strings that have been argued to be parentheticals in the syntax, in particular, but not exclusively, in spontaneous speech. In this volume, the papers by Nicole Dehé and Sandra Döring address related questions for English and German, respectively.

Ladd (1986, 1996) takes the prosodic behaviour of parentheticals as evidence for limited recursion in prosodic structure, formalised as the Compound Prosodic Domain (CPD; Ladd 1996: 244). Specifically, he suggests a structure where a domain of one level in the prosodic hierarchy (the domain made up of the parenthetical) is embedded in a larger domain of the same level (the domain made up of the host), the latter being the domain across which declination applies. This is re-
lated to Peters’ (2006) prosodic parenthesis. Ladd’s argumentation is partly based on Cooper and Sorensen’s (1981) study which shows that if a parenthetical is taken out of a given host structure, the declination of the matrix clause is essentially the same as that of a clause without a parenthetical. Cooper and Sorensen (1981: 72ff) compared sentence pairs such as the one given in (16)a and b. Pitch values were measured for all underlined syllables. Crucially, the peak F0 values within the parentheticals were much lower than within the rest of the utterance, and pitch levels were resumed after the parenthetical at the point at which they were interrupted. The parenthetical was not integrated in the overall downward trend. Furthermore, comparing sentences of type (16)a with those of type (16)b, the points measured for the matrix clause, underlined in (16)a and b, did not essentially differ whether or not interrupted by a parenthetical. Cooper and Sorensen conclude that parentheticals do not disrupt the overall prosodic structure of the utterance, but that they have their own declination domains instead. For Cooper and Sorensen’s examples, prosodic theory would predict intonational phrasing as in (16)c. However, Ladd (1986) argues that the fact that parentheticals do not seem to affect the overall declination of the utterance makes sense if we take the matrix clause as one single phonological domain instead of assuming the phrasing indicated in (16)c. Specifically, he suggests that the matrix clause forms a domain across which declination applies, regardless of whether or not it is interrupted by another domain. This leads him to suggest the structure in (16)d, where the whole sentence forms one prosodic domain, with the parenthetical embedded in the structure as another prosodic domain of the same level in the hierarchy. Ladd (1996: Ch. 6.3) then develops this idea further and suggests the CPD analysis.

(16)  a. The book on the table was a gift from my mother.
       b. The book on the table, it seems to me, was a gift from my mother.
       c. (The book on the table) (it seems to me) (was a gift from my mother)
       d. (The book on the table (it seems to me) was a gift from my mother)

The idea that parentheticals do not affect the overall declination of the spoken utterance receives support from at least two further pilot studies. In an attempt to define parentheticals prosodically, Wichmann (2000: 99) states that her examples from the Spoken English Corpus (SEC; cf. Wichmann, 2000: 3 for references) all have in common that “if they were deleted they would leave the rest of the utterance prosodically coherent”. Furthermore, Dehé and Kavalova (2006) suggest that one-word parenthetical what does not affect the overall declination of the utterance in which it occurs.
4. This volume

The papers in this volume are organised according to the components of the grammar they address. The first and by far the largest group of papers addresses questions related to the syntax of parenthetical constructions, and in particular the syntactic relation between the host structure and the interpolated parenthetical structure. Certain papers also focus on the semantics and pragmatics interactions between host and parenthetical and the motivation for parenthetical insertion. Finally, this volume features two papers on the prosody of parentheticals.

The paper by Francesca Del Gobbo, *On the syntax and semantics of appositive relative clauses*, focuses on appositive relative clauses that can modify certain quantified nominals. The author shows that in order to account for the data, we need to treat the appositive relative pronoun as E-type. She also provides a solution for the well-known contradictory behaviour of appositive relative clauses as both independent sentences and modifiers of a phrase. Her observations contribute to a detailed analysis of the differences between restrictives and appositives, and she makes the empirical prediction that no language with prenominal relatives should allow appositive clauses.

One of the two main objectives in the contribution by Gunther Kaltenböck, *Spoken parenthetical clauses in English: a taxonomy*, is to offer a detailed analysis of the parenthetical class in terms of variety in syntactic form and to unify the plethora of terminology associated with parentheticals. To avoid circularity in the process of identifying and defining parentheticals, the author establishes three syntactic criteria which are to be distinguished from the functional features of parentheticals. Kaltenböck discriminates between parentheticals proper and instances of anacolutha, discourse markers, and questions tags. In the context of the first objective, he also incorporates a detailed analysis of comment clauses. His findings are summarised in an elaborate taxonomic representation.

The paper by Yordanka Kavalova, *And-parenthetical clauses*, focuses on a specific parenthetical construction. She opens with a detailed presentation and analysis of the types of *and*-parenthetical clauses occurring in the two corpora used, which culminates in the introduction of two types of parentheticals: anchored and floating. Then some key differences between canonical coordination and *and*-parentheticals are considered. Syntactically, Kavalova favours an approach based on Ackema and Neeleman’s (2004) *Insertion* theory over both the integrated and the unintegrated approaches. To account for the preferred places of interpolation and also the relations between host and parenthetical, the paper concludes with a section on the speaker's motivation to use such constructions, developed in the context of Relevance Theory.

In his paper, Christian Fortmann concentrates on the origins of the internal argument of the verb in verb-first constructions and related constructions missing an overt verbal complement. While he dismisses a transformation account from the outset – where the parenthetical is the root structure and the host its complement, the author examines three hypotheses for the syntactic representation of the ‘missing’ argument, specifically the option of an implicit argument, the presence of a trace or copy, and the representation of the null argument by an empty pro-nominal category $e_p$, which is anaphorically linked to the host. He argues in favour of the latter option, i.e., the presence of an empty pronoun. Certain restrictions observed for the constructions discussed are also analysed.

Tanja Kiziak experimentally investigates the question of whether the construction is best accounted for under a parenthetical or an extraction analysis. Using the magnitude estimation technique along with the pattern matching technique, she carried out a series of related experiments. Her results provide supporting evidence for the parenthetical analysis.

Markus Steinbach focuses on the syntactic and semantic properties of the verb-first integrated parentheticals (VIPs) in German. He distinguishes three classes: interrogative *glauben*-VIPs, declarative *glauben*-VIPs and interrogative *fragen*-VIPs, and establishes that the first one is a V2-structure, whereas the other two are V1-structures. For the former, argument licensing is seen in the context of topic drop and non-canonical licensing. Steinbach applies the same approach to declarative *glauben*-VIPs only to discover that the topic drop analysis is not plausible here. Instead, *glauben*-VIPs are licensed in a non-canonical way in semantics. The same analysis works for *fragen*-VIPs.

Mark de Vries’ paper *Invisible constituents? Parentheses as B-merged adverbial phrases* addresses from a syntactic point of view the above described problem that parentheticals are linearly integrated in the host structure, but at the same time show behaviour that suggests structural independence. Based on examples mainly from Dutch and English he argues that parentheticals are in fact structurally integrated, but that parenthetical and host do not interact in terms of c-command-based relations (his *Invisibility* hypothesis). He accounts for these properties by developing two concepts: $b$-inclusion represents a paratactic hierarchy (as opposed to a syntactic hierarchy represented by $d$-inclusion) and blocks c-command, while specifying coordination accounts for and formalises the similarities between coordination, apposition and parenthesis.
While the papers by Fortmann, Kiziak and Steinbach focus on German and examine the syntax of verb-first constructions and related parenthetical clauses lacking an overt complement, the contribution by Stefan Schneider studies their function. In his contribution, *Reduced parenthetical clauses*, he focuses on mitigating reduced parenthetical clauses (RPCs) in French, Italian, and Spanish. Drawing on data from 22 major corpora in the three languages, the author offers a 4-way typology of RPCs based on pragmatic criteria. Further, he establishes that RPCs can operate on more than one utterance component. The proposed typology and observations are supported by a syntactic and a pragmatic fact discussed in the conclusion.

Two contributions to this volume take a closer look at prosodic properties of parenthetical constructions. In her contribution *The relation between syntactic and prosodic parenthesis*, Nicole Dehé analyses a number of spontaneous British English speech data taken from ICE-GB, showing that several prosodic patterns can be found with parentheticals. They can be “prototypical” in that they show all the characteristic features such as preceding and following intonational breaks and a change in pitch and tempo. However, they can also be prosodically integrated in the hosting material in various ways. Dehé concludes that the prediction made by prosodic theory that parentheticals form separate intonation domains (e.g., Nespor and Vogel 1986) is too strong in the light of actual spoken language data. Sandra Döring’s contribution *Quieter, faster, lower, and set off by pauses? Reflections on prosodic aspects of parenthetical constructions in Modern German* discusses five examples from a corpus of authentic spoken data from debates of the German House of Parliament. All five examples are cases of interpolated clauses. Her main empirical result is that these clausal parentheticals do have their own intonation domain which is clearly set off from the host clause by prosodic features, such as a potential pause, accelerated speech rate and a change in pitch level/ range. She particularly concentrates on the transition zone between the host clause and the left edge of the parenthetical. However, not all features have to be realised simultaneously, which corresponds to previous research findings (e.g., Bolinger 1989, Wichmann 2000).

Overall, there is a lot of variation in the prosodic realisation of syntactic interpolations, initialising questions for future research on the relation between the syntactic type and category of the parenthetical and its prosodic characteristics, among others.

To conclude, this volume offers a unique selection of papers studying the parenthetical phenomenon. It encompasses research findings on parentheticals from different European languages, presents an enviable breadth of coverage in terms of approaches, methodologies and forms, and supports the belief that for a comprehensive analysis we need to consider all aspects of grammar. Each of the papers
touches on the relation between host and parenthetical and they collectively answer many of the questions outlined in this introduction. Naturally, some questions remain open for future research and new research questions arise from the discussions.

5. References


Syntax and its interfaces
Spoken parenthetical clauses in English

A taxonomy*

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This article investigates English parenthetical clauses, a category which subsumes a wide range of forms and generally lacks a clear definition in the literature. The aim of the study is to systematise the class of parenthetical clauses with a view to highlighting its internal stratification and establishing an operational definition. For methodological reasons this is done with the help of purely syntactic criteria, viz. clausal form and lack of syntactic attachment as two necessary features, and positional flexibility as an additional feature of core members of the class. These criteria allow for the delimitation of parenthetical clauses from related categories, such as interrogative tags, discourse markers, anacolutha, and provide for a clear internal structure of the class in the form of a taxonomy of subtypes.

1. Introduction

The term parenthetical, though widely used in linguistics, often lacks a clear definition and shows surprising variation in the number of forms it is taken to subsume. This article therefore takes a closer look at spoken parenthetical clauses in English with the aim of delimiting this class from related categories and highlighting its internal structure in the form of a taxonomy of subtypes. Exact delimitation and differentiation of subcategories is of course not an end in itself but an indispensable prerequisite for any corpus-based investigation, which requires a clear and operational definition for data retrieval, as well as any investigation into the functional nature of this class. All too often in linguistic analyses parentheticals are taken to be a uniform functional category. The wide range of syntactic subtypes, however, suggests considerable functional diversity. Clear differentiation and delimitation of

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these subtypes provides the necessary basis for a more detailed and fine-grained functional description of parentheticals.

Parenthetical clauses (PCs for short) have an interesting borderline status, crossing, as it were, the boundaries of syntax. On the one hand, PCs are part of syntax in terms of linear precedence: they intersect with other structures (their host structures) on the linear plane, sharing with them a terminal string. On the other hand, they fall outside the scope of syntax since this linear order is not controlled by independently motivated principles governing the linearisation of underlying structures (e.g., c-command). They are related to their host by linear adjacency but are not part of any larger syntactic unit. This ‘peripheral’ position of PCs, where the principle of linearity overrules that of hierarchical relations is, of course, difficult to account for in a grammar and has been a particular concern of generativists. On the one hand, it has led to proposals to extend the grammar to include such fringe phenomena by adding an extra level of representation (e.g., Emonds’ 1979 extra E-node, Safir’s 1986 level of LF-prime; cf. also Espinal’s 1991 three-dimensional approach) or stipulating elaborate transformations (e.g., Ross’ 1973 Slifting transformation, Jackendoff’s 1972 sentential adverb source, McCawley’s 1982 crossing branches in SS, Lakoff’s 1974 amalgamation rules). On the other hand, it has led to analyses which exclude PCs from the domain of grammar altogether, treating them simply as utterance phenomena (e.g., Haegeman 1991, Peterson 1999, Burton-Roberts 1999, 2006).

The dilemma for grammatical analysis is clear: as units which lack an explicit (hierarchical) syntactic link with the host construction, relying merely on pragmatic bonds, they represent performance phenomena. As units which intervene on the linear plane, however, they interact with the level of competence. PCs thus straddle the distinction between (externalized) E-language, i.e., what speakers produce, and (internalized) I-language, i.e., what grammars generate (Chomsky 1986), or the distinction between speech and language (cf. Burton-Roberts 1999 for a discussion of the relation between the two).

Given their unclear status on the boundary between syntax and performance features, it is not really surprising that the term parenthetical has come to be used rather indiscriminately in a variety of different ways and lacks a clear definition. It is often used as a convenient cover term for a wide range of different, only vaguely related forms. The aim of the present paper is therefore to systematise the class of PCs with a view to establishing a clear definition which delimits it from related categories. To illustrate my points I will draw on different types of data: invented examples, examples from the literature, and corpus data from the British Component of the International Corpus of English (cf. Nelson et al. 2002).

Section 2, first of all, establishes the need for action by providing a brief overview of pertinent uses and definitions of the term parenthetical. Section 3 discusses some
methodological problems in defining the class of parentheticals, arguing for a clear separation of formal and functional criteria and for the adoption of a definition based on purely syntactic terms. Section 4, then, turns to the delimitation proper. It is based on three criteria, viz. syntactic form (4.1), lack of syntactic attachment (4.2), and positional flexibility (4.3), which successively narrow down the class of parentheticals. Section 5, finally, delimits PCs from related but nonetheless distinct categories, viz. question tags (5.1), discourse markers (5.2) and anacolutha (5.3). Section 6 provides a brief summary.

2. Status quo: an overview

The concept of parenthesis is already part of the repertoire of traditional grammar and style manuals, where it is used primarily with reference to orthography (e.g., Fowler 1906: 247–248). Jespersen (1973: ch. 25) includes under “parenthetic clause” comment clauses of the type *This, I think, is modern*, reporting clauses, non-restrictive relative clauses, and so-called ‘speaker’s asides’ (cf. Jespersen 1940, V: 252; 1924: 112). Kruisinga (1932, II § 2413) speaks of “parenthetic sentences” in terms of simple or compound sentences which interrupt another sentence and are used “to make a statement or an observation that may serve to make the situation…clearer, or to add a comment” (1932, II: 484).

Parenthesis in a more restricted sense is discussed by the philosopher Urmson (1952). In this first in-depth investigation of parenthetical verbs he makes the point that, contrary to the generally held belief in philosophy, there is a class of verbs which does not describe ‘goings-on’. This group of verbs includes *suppose, know, believe, guess*, which in first person present tense simple can be used parenthetically. As such, they can take initial, medial, and final position in the clause and “orient the hearer aright towards the statement with which they are associated” (Urmson 1952: 491).

A predominantly functional definition is offered by Nosek (1973: 100), a member of the Prague School. For him parenthesis is “a dependent satellite part of the utterance, wedged into a non-compact primary (frame) utterance from which it differs. Parenthesis … expresses a secondary communication... and a commentary”. It is interesting to contrast this with the purely syntactic definition in a generativist framework, where parenthesis is equated with disjunct constituents, i.e., those “identified as independent syntactic constituents or, more generally as independent syntactic structures within another syntactic structure” (Espinal 1991: 727).

Instead of parenthesis Quirk et al. (1972: 778–780) introduce the term ‘comment clause’, i.e., disjuncts or conjuncts which “may occur initially, finally, or medially, and have a separate tone unit” (ibid.). The following five subtypes are identified:
main clause (*I believe*), adverbial clause introduced by *as* (*as you know*), nominal relative clause (*What's more*), to-infinitive clause (*to be honest*), -ing clause (*speaking as a layman*).

To this list -ed clauses (*Stated bluntly*) are added by Leech and Svartvik (1975: 216–217), who also give a brief functional description of comment clauses: they “are so called because they do not so much add to the information in a sentence as comment on its truth, the manner of saying it or the attitude of the speaker” (op. cit. 216).

The number of comment clause types is further expanded by Petola (1983) to a total of 15, mainly by a rather loose characterisation of the term ‘clause.’ They include the following additional types: inserted main clause, sentence apposition (*But it won’t happen – worse luck*), non-additive and-clause, non-alternative or-clause, non-conditional if-clause, elliptical predicative in front position (*More important,...*), interjections, adverbs, prepositional phrases. Petola’s (1983: 103) definition of comment clauses is a combination of semantic and syntactic aspects: “1) their reference is metacommunicative, i.e., they comment on the truth value of a sentence... on the organization of the text or on the attitude of the speaker; 2) they are parenthetic in relation to the ‘head proposition’”.

Quirk et al. (1985: 1112–1118) retain the term ‘comment clause’ and the previously identified five subtypes. The syntactic definition in terms of “parenthetical disjuncts” is now complemented by the functional specification that they are “either content disjuncts that express the speakers’ comments on the content of the matrix clause, or style disjuncts that convey the speakers’ views on the way they are speaking” (op. cit. 1112).

Biber et al. (1999) operate with both the concept of parenthetical and that of comment clause, without however explicitly distinguishing the two. A parenthetical is defined as “an interpolated structure...a digressive structure...which is inserted in the middle of another structure, and which is unintegrated in the sense that it could be omitted without affecting the rest of that structure or its meaning” (Biber et al. 1999: 1067). ‘Comment clauses’, on the other hand, “are loosely connected to the main clause, they normally lack an explicit link, and they are usually short and can appear in a variety of positions” (Biber et al. 1999: 197), i.e., initially, medially and finally. They typically occur in first or second person present tense and “comment on a thought rather than the delivery or wording” (Biber et al. 1999: 197); e.g., *I think*.

The term used by Huddleston and Pullum (2002) is ‘parenthetical’; the label ‘comment clause’ does not figure in their framework. By parenthetics they mean “expressions which can be appended parenthetically to an anchor clause but which

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1. As pointed out by a reviewer, ‘functional’ here relates to the pragmatic description of the speech act present in the PC.
also have a non-parenthetical use in which they take a declarative content clause as complement – expressions like *I think, don’t you think?*” (Huddleston and Pullum 2002: 895). Parentheticals thus resemble Biber et al.’s (1999) comment clauses, but are more restricted by their explicit ‘transformational’ relationship to non-parenthetical uses. On the other hand, they are also considerably wider since they are not accorded a specific commenting function, and as such include also, for instance, some of Biber et al.’s “reporting clauses”, viz. those preceded by the reported speech (Huddleston and Pullum 2002: 1024, 1027).

From this brief overview of definitions it becomes clear that there is no general agreement on the exact delimitation of parentheticals, let alone on the use of a uniform terminology. (1) summarises the different syntactic forms parentheticals have been associated with, with some representative references.

(1) Syntactic categories commonly included under parenthetical

A. **Main clause / parenthetical parataxis**
   He called John – *he is one of his best friends* – to find out what had happened
   (e.g., Petola 1983: 103–104, Quirk et al. 1985: 977 note, Biber et al. 1999: 138)

B. **Coordinated main clause (with and / or) / parenthetical coordination**
   For several years now – *and I don’t mean to be cynical* – we have been trying to overcome this problem

C. **Main clause-like ‘comment clause’**
   The solution, it seems / I believe, is an easy one

D. **Reporting clause**
   She was very happy, *he said.*
   Next year, *John announced,* I will move to London
   (e.g., Huddleston and Pullum 2002: 1024, 1027, Schelfhout 2000, Wichmann 2001: 179)

E. **Non-restrictive relative clause**
   – ad-nominal: *John, who lives in London,* is travelling to France
   – nominal: *What is more interesting,* he finished his paper
   – sentential: Mary went on holiday to Crete, *which is probably what you’d like to do*

F. **Content clause (appositive clause)**
The excuse she gave – that there had been a traffic jam – was ridiculous (e.g., Huddleston and Pullum 2002: 1358)

G. **Adverbial clause / clausal adjunct**
- finite: As you probably know, I won't be here next week
  That's a Ming vase, if I'm not mistaken
- non-finite: I'm a bit overwhelmed, to be honest
  I doubt, speaking as a layman, whether this will be the right solution
  Stated briefly, there is no quick solution to the problem

H. **Question tag**
Mary is coming tomorrow, isn't she?

I. **Right node raising / interpolated coordination / shared constituent coordination**
He is, or at least he was, a great actor
(e.g., Quirk et al. 1985: 976–977, Peterson 1999: 242–243)

J. **Amalgam(ation)**
He gave this I prefer not to know how awful paper

K. **Verbless clause**
The visitors, most of them students, were rather surprised
(e.g., Huddleston and Pullum 2002: 1359)

L. **Adverbial phrase**
Frankly, I don't know what to say about this

M. **Adjective phrase**
The chairman, angry at the delay, demanded a full report
(e.g., Espinal 1991: 726, Petola 1983: 107, Huddleston and Pullum 2002: 1359)
N. **Prepositional phrase**

*In brief*, the film has been a great success
(e.g., Petola 1983: 107, Espinal 1991: 727, Skrebnev 1959: 61)

O. **Noun phrase**

– Apposition: Annie Lennox, my favourite **pop singer**, has a new song out

– Vocative: Today’s topic, **ladies and gentlemen**, is astrophysics

P. **Interjection**

Damn, we’ve missed the train

Q. **Discourse marker**

John, **you know**, is not going to come tonight
(e.g., Biber et al. 1999: 197, 140, 1075, Stenström 1995: 291, Quirk et al. 1985: 1113–1115)

3. **Methodological problems**

The overview in Section 2 shows that most characterisations of parentheticals, either explicitly or implicitly, make use of different types of criteria, usually mixing formal (syntactic, prosodic) and functional ones without clear indication as to which is taken as primary. This may give the impression of comprehensive delimitation, but is often just an attempt to come to terms with an inherent problem: parentheticals cannot be defined by themselves, as “in isolation, there is nothing particular which identifies a parenthetical” (Espinal 1991: 728). They derive their existence, as it were, from their interaction with a host clause. This interaction, however, takes place purely on the linear plane, not on a relational (i.e., dependency) level. The relation between host and parenthetical is, in fact, a non-relation, at least syntactically (cf. Section 4.2). The extraneous nature of parentheticals has resulted in their being defined mainly negatively, in terms of what they lack, viz. a syntactic link to the host clause, phonological integration, a fixed position, meaning in truth-conditional terms. The only positive characterisation seems to be in terms of their communicative function (cf. Ziv 1985: 191), which explains the frequent combination of formal with functional criteria for definition. This blending of formal and functional properties, which is most conspicuous in the concept of
‘comment clause’, where the term itself makes reference to a functional category, however suggests a one-to-one form-function relationship, which is not tenable. What is needed for an adequate definition of parentheticals, therefore, is a clear separation of formal and functional criteria or at least a specification of the exact relationship between the two, i.e., which is auxiliary and which primary.

The mixture of different types of criteria for definition also entails a serious problem for data analysis, that of circularity. As Wichmann (2001: 181) points out with reference to prosodic definitions, “[i]f parentheses are identified on the basis of prosody alone, the investigation of the prosody is a potentially circular business”. The same applies to all other criteria, notably communicative function. If the aim is to explore the functional properties, an identification of parenthesis on the basis of functional characteristics is, of course, highly problematic.

Apart from the issue of circularity, we also need to consider reliability of the criteria and ease of identification. Because of their ‘formal’ nature, the syntactic criteria of form, structural independence, and positional flexibility are comparatively easy to identify. The same cannot be said about prosodic and functional criteria.

Prosodically, the most obvious feature identified for parentheticals is that of a separate tone unit (i.e., separate nucleus) often reinforced by pauses. It has been pointed out by various studies, however, that this is by no means a reliable criterion. A considerable number of parentheticals is not marked in this way. Bolinger (1989: 186), for instance, emphasises that any of the prosodic features typically found with parentheticals (pause, lowered pitch, terminal rise) may be suspended. Similarly, Espinal (1991: 734) notes that “having an independent intonational unit is neither a sufficient nor a strictly necessary property to identify parentheticals”, a view supported by Reinhart (1983: 178–179) and Mittwoch (1979: 407). The inconsistency of prosodic marking is also confirmed by corpus data, as pointed out, for instance, by Stenström (1995: 292) and Wichmann (2001: 186).

Functionally, parentheticals have been described as expressing some speaker comment (e.g., Quirk et al. 1985: 1112, Petola 1983: 103), which “in some way, qualifies that which is expressed by the sentence to which they are appended” (Ziv 1985: 182), with a wide range of possibilities: they may “strengthen or weaken the force, or specify the form, of the speaker’s attitude to the content of the expression with which they occur” (ibid.). As such, “their reference is metacommunicative” (Petola 1983: 103). More generally still, they have been characterised as expressing “additional information” (Biber et al. 1999: 137), information of secondary importance (Hoffmann 1998: 304), which is syntactically ‘backgrounded’ (Huddleston and Pullum 2002: 896).

2. Cf. also the articles by Dehé and Döring in this volume.
Given the relative unreliability of prosodic features and the ‘negative’ character of syntactic criteria, which specify the relation between parenthetical and host in terms of what it is not, and the wide variety of syntactic forms involved, it is not really surprising that most definitions incorporate a functional characterisation of some form. It provides a convenient uniform bracket for a syntactically diverse and rather elusive concept. The price for this smallest common denominator, however, lies in its unconstrained and vague nature. Functional-pragmatic concepts, by their very nature, are often less clear-cut than formal ones; an attempt to find a functional label able to accommodate a wide range of syntactic forms only exacerbates the problem. A term such as ‘speaker comment’ may be wide enough to subsume diverse syntactic subtypes, but it is also too unrestricted to provide a useful criterion for delimitation, especially when working with corpus data.

In view of the problems associated with prosodic and functional properties, the present study relies exclusively on syntactic criteria for the purpose of delimitation. They are discussed in detail in Section 4.

4. Delimiting the class: three criteria

This section investigates the three formal criteria of syntactic form (Section 4.1), lack of syntactic attachment (Section 4.2), and positional flexibility (Section 4.3), which will allow us to successively constrain the class of PCs and highlight its internal stratification.

4.1 Syntactic form

The overview in Section 2 has shown that the class of parentheticals may include a variety of different syntactic forms. The focus of the present investigation is, however, exclusively on parenthetical clauses, i.e., the clausal category. Excluding non-clausal elements has the advantage of increasing homogeneity of the class, which is particularly important given the obvious functional diversity of entities such as interjections, vocatives, discourse markers, and adverbials. Secondly, non-clausal items are more prone to being syntactically integrated into the host than clausal ones. Unlike inserted clauses, which are always by definition syntactically external, non-clausal entities allow for varying degrees of syntactic integration. This potential for integration is most obvious with adverbs, where prosodic realisation determines their syntactic interpretation: with a separate tone unit, as in (2a), they are parenthetical, whereas without prosodic separation, as in (2b), they are not. In contrast, a clausal constituent, such as in (3), will always be parenthetical, irrespective of prosodic realisation.
(2) a. She described herself, *engagingly*, as an environmentalist
   b. She described herself *engagingly* as an environmentalist

(3) She described herself, *I believe*, as an environmentalist

By applying the criterion of clausal constituency a number of the parenthetical categories listed in (1) above are filtered out. Table 1, which distinguishes between clausal and non-clausal categories, illustrates this.

**Table 1.** Clausal vs. non-clausal parentheticals

<table>
<thead>
<tr>
<th>clausal</th>
<th>non-clausal</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Main clause</td>
<td>K. Verbless clause</td>
</tr>
<tr>
<td>B. Coordinated main clause</td>
<td>L. Adverbial phrase</td>
</tr>
<tr>
<td>C. Main clause-like comment clause</td>
<td>M. Adjective phrase</td>
</tr>
<tr>
<td>D. Reporting clause</td>
<td>N. Prepositional phrase</td>
</tr>
<tr>
<td>E. Non-restrictive relative clause</td>
<td>O. Noun phrase</td>
</tr>
<tr>
<td>F. Content clause</td>
<td>P. Interjection</td>
</tr>
<tr>
<td>G. Adverbial clause/ clausal adjunct</td>
<td>Q. Discourse marker</td>
</tr>
<tr>
<td>H. Question tag</td>
<td></td>
</tr>
<tr>
<td>I. Right node raising</td>
<td></td>
</tr>
<tr>
<td>J. Amalgam(ation)</td>
<td></td>
</tr>
</tbody>
</table>

There are of course various borderline cases. Verbless clauses, for instance, have been excluded from the clausal category owing to their lack of a VP. Conversely, some discourse markers are, by virtue of their form, potential candidates for inclusion under ‘clausal’, e.g., *you know, I mean*. These cases will be given special attention in Section 5.2. Instances of Right Node Raising and amalgamation, on the other hand, have been grouped under clausal since they typically contain a verb, even though the VP is incomplete. They will be discussed in Section 4.2.

Application of this clausal filter is a first step towards constraining the class of parentheticals, viz. to PCs. They will be further restricted in the following two sections.

4.2 Lack of syntactic attachment

It is generally agreed that PCs have no obvious syntactic link to the clause they seem to be attached to, i.e., their host. They are, in other words, syntactically disjunct, with non-syntagmatic relations, which lie outside the syntagmatic relations of parataxis (e.g., coordination) and hypotaxis (e.g., subordination and complementation). Huddleston and Pullum (2002: 1350) speak of a “lack of integration into the syntactic structure”, which distinguishes what they call “supplementation”
from dependency constructions and coordination. An additional feature distinguishing supplements from dependency constructions (but one it shares with coordination) is their non-headedness (i.e., not functioning as dependent to a head), a logical consequence of their lack of syntactic integration. Parenthetical clauses are thus not only syntactically non-dependent on their host, but also syntactically not attached or integrated (i.e., do not form a syntactic unit with the host); they are merely adjacent to the host, i.e., they intersect with the host structure purely on the linear axis and are not linked by any syntactic nodes – a fact that has proved to be a particular problem for models of syntactic representation.

4.2.1 Reviewing the evidence

The syntactic independence of PCs can be demonstrated with a number of tests which show that they do not participate in syntactic processes and hence do not form a syntactic unit with their hosts. McCawley (1982: 96, 1998: 751), for instance, uses the VP-deletion test to show that VP ellipsis operates on VPs including a parenthetical as if the parenthetical were not there. Cf.:

(4) John talked, it seems, about literature and Mary did too (= Mary talked about literature; ≠ Mary talked too; ≠ Mary talked, it seems, about literature)

Similarly, pronouns with a VP antecedent behave as if the parenthetical clause were not there; it does not count as part of the antecedent (McCawley 1982: 96–7; 1998; Peterson 1999: 234).

(5) John talked to us, it seems, about literature, but Mary would never do that (= Mary would never talk to us about literature; ≠ Mary would never talk to us, it seems, about literature)

Moreover, it has been demonstrated, for instance, that parentheticals cannot be the focus of a cleft sentence, cannot be questioned, are not under the scope of quantifiers, and are unaffected by negation in the host clause, i.e., they are outside its scope (e.g., Jackendoff 1977, Emonds 1979, Fabb 1990, Espinal 1991, Haegeman 1991, Burton-Roberts 1999).³

These tests thus provide convincing evidence that PCs are unattached ‘orphans’ (Haegeman 1991) at syntactic structure. However, there are also some syntactic characteristics that seem to suggest control of the host clause over the PC. One such exception are sequence-of-tense facts. Ross (1973: 139–140), for instance,

³. Syntactic independence of certain parentheses is questioned, on the other hand, by Hoffmann (1998: 300–303), who detects varying degrees of grammatical and functional (in)dependence with certain syntactic types of parenthetical, as well as Ackema and Neeleman (2004: 96–99), who argue for some syntactic relation based on the fact that, for instance, parentheticals in Dutch can be secondary predicates taking a DP in the host for subject.
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claims that a non-factive parenthetical verb in past tense is incompatible with present tense in the host clause. E.g:

(6) *There is something funny about Venus, it seemed to me (Ross' ex. 19f)

This claim, however, is challenged by obvious counterexamples such as (7), which shows that tense mismatch is less objectionable with other non-factive verbs.

(7) There is something funny about Venus, I thought/ claimed/ maintained

In (7) the sentence can be read as a form of direct speech and as such is perfectly acceptable. The prototypical position of such a reporting PC is of course before the host and, interestingly, such a position also considerably improves Ross’ example. Cf.:

(8) It seemed to me, there is something funny about Venus

This seems to be an indication that tense agreement (back-shift of tense) in parentheticals is not so much a syntactic process restricted to the intra-sentential domain but rather a pragmatic one. It therefore does not invalidate a view which takes PCs to be syntactically independent from their host clauses.

Another characteristic of PCs which challenges the view of syntactic independence is discussed by Reinhart (1975, 1983), who distinguishes two types of PCs: parenthetical-subject oriented and speaker-oriented, exemplified in (9) and (10) respectively (Reinhart’s 1983, ex. 16 and 19).

(9) He would be late, John said = parenthetical-subject oriented
(10) John will be late, he said = speaker-oriented

Parenthetical-subject oriented PCs are shown to differ from speaker-oriented PCs in that they have obligatory ‘backward pronominalization’ (i.e., cataphoric pronominal reference; cf. *John would be late, he said) and tense agreement (cf. *He will be late, John said). While the back-shift of tense can be treated as a more general pragmatic principle (see above), obligatory cataphoric reference could be seen as a counterexample to the claim that PCs are not involved in any syntactic process. However, Reinhart (1983: 192) herself argues that the backward anaphora is the result of independently motivated performance constraints, viz. the convention that in our culture people do not normally refer to themselves with full nouns. Since the host clause in these cases is similar to direct quotes (Reinhart 1983: 178, 189, 192) and as such understood as having been uttered by John, pronominal reference is the only possibility here. As an alternative explanation it is also possible to argue along the following lines: with speaker-oriented PCs the focus (in terms of informational salience) is on the host clause, which asserts a particular state of affairs, while the PC only adds extra information about the speaker’s source of information. Sentences with parenthetical-subject oriented PCs, on the other
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hand, have an entirely different communicative function, viz. that of reporting a speech act (John saying something). The focus is thus on both the reporting frame plus ‘quote’. The prototypical position of such reporting frames is before the quote (John said: ‘He would be late’), motivated by greater ease of processing, with the expected sequence of first the full NP (John) and then the (anaphoric) pronoun. Example (9) is simply a case of marked word order with a postponed (right-dislocated) reporting clause. The restrictions on pronominalization in Reinhart’s examples therefore can be taken as the result of functional requirements, viz. the question of communicative focus (asserting or reporting) together with word order preferences.

A third potential problem for the view that parentheticals do not partake in syntactic processes are negative and interrogative PCs. As pointed out by Ziv (1985: 186–188), the occurrence of negative and interrogative PCs is subject to considerable restrictions as regards the form of the respective host clause, which could indicate a syntactic constraint. A negative PC, thus, can only occur in combination with a host clause which is also negative, as illustrated in (11).

(11) a. The book is not very interesting, I don’t think
    b. *The book is very interesting, I don’t think

The question to be answered here is whether this restriction is the result of an intra-sentential syntactic process or whether it can be attributed to independently motivated pragmatic principles. Ziv (1985: 187) argues for the latter pointing as evidence to the same restriction across sentence boundaries with non-parenthetical negative verbs (e.g., The book is not very interesting, I don’t think so vs. *The book is very interesting. I don’t think so). Further evidence for a functional-pragmatic restriction comes from Knowles (1980: 388), who shows that syntactically negative PCs may actually be acceptable in combination with a positive host, provided the semantic ‘sum’ of the PC is positive (e.g., The book is very interesting, I don’t deny). The same semantic-pragmatic principle can be shown to be at work with a negative PC linked to a negative host, as in (11a). Although the PC is syntactically negative, its pragmatic meaning is actually positive: it makes a positive claim to the truth of the proposition of the host. If this positive meaning of the PC were changed to a negative one, i.e., one that reinforces the negative meaning of the host clause, the resulting sentence is also unacceptable (*The book is not very interesting, the book/it is), even though the PC is syntactically positive, a form typically allowed by negative hosts. What counts, then, is not the syntactic form but the pragmatic function of the PC.

4. The backshift of tense is a direct result of this reporting function, enabling the speaker to create a distancing effect between him/her and the ‘quote’, indicating that s/he is not the original source.
A similar functional explanation can be found for interrogative PCs, which, on the face of it, seem to be restricted to interrogative hosts (i.e., in syntactic terms), as illustrated in (12).


However, it has been shown by Mittwoch (1979: 409) that a declarative host as in (12b) may in fact occur with an interrogative PC, provided the host has a rising intonation and thus functions as a question, cf. (13).

(13)  The book is INteresting, *do you think?

This is an indication that the link between interrogative PCs and their hosts is not a syntactic but a pragmatic one. The pragmatic function of interrogative PCs has been identified by Knowles (1980: 390) as “seeking confirmation of the truth of the main proposition”. Consequently, an assertive (declarative) host results in a pragmatic contradiction: it only makes sense to ask for confirmation if the information of the host clause is not asserted.

4.2.2 Non-syntagmatic links

The evidence discussed so far thus provides strong support for the view that PCs are syntactically independent from their hosts. In other words, a PC is not a constituent of the host clause and hence there is no structural relationship between it and its host. There is, however, a semantic-pragmatic link with the host, which may take various forms with varying degrees of attachment. To analyse the different types of semantic links in more detail it is useful to systematise the class of PCs on the basis of formal criteria and distinguish between syndetic (with a formal link) and asyndetic (without a formal link) PCs.

A)   Syndetic PCs

Syndetic PCs are those introduced by an overt marker, which links the PC to the host clause. Typically, such markers are, what Huddleston and Pullum (2002: 1354) call, “indicators”, such as namely, that is, that is to say, especially (cf. 14), but may also include other elements, viz. coordinators, subordinators and relative elements, as illustrated in (15) – (17). The terms coordinator, subordinator, relative element are, of course, misleading as these elements do not have syntactic value since the PC is not a constituent of the clause (cf. Section 4.2.1). They are therefore best subsumed under ‘indicator’ as well.

(14)  Indicator:

       Many clauses are asyndetic, that is they do not have an overt marker
(15) Coordinator:
   For several years now – and I don't mean to be cynical – we have been trying without success to overcome these problems

(16) Subordinator:
   a. The warning – that prices should be lowered – was ignored
   b. He is a real bastard – if you don't mind the expression

(17) Relative element:
   Mary is away on business, which is convenient

What these non-syntagmatic links indicate is some semantic-pragmatic link to the host clause, or what I refer to as the anchor. In example (14), for instance, that is indicates that the PC provides an ‘explanation’ of its anchor (asynthetic). In example (15) the ‘coordinating indicator’ and has ‘additive function’. For the examples in (16) and (17) the type of semantic-pragmatic link is more difficult to specify, but also clearly there:

   Thus, we can note with content clauses (or complement-like clauses) such as (16a) that, although they are not syntactically licensed by a head (like proper complement clauses), they must still be semantically compatible with their anchor, as illustrated by the adapted versions (18a) and (18b) (cf. Huddleston and Pullum 2002: 1315).

   (18) a. *The question – that prices should be lowered – was ignored
   b. *The warning – whether prices should be lowered – was ignored

For peripheral adverbial clauses (adverbial-like clauses) such as (16b) Haegeman (1991: 246–248) suggests that, although syntactically unattached orphans, they are semantically linked to the host, with the head of the PC (the subordinator, e.g., if) being coindexed with the host clause. The open variable in the form of an index in the propositional form of the PC imposes certain conceptual constraints on the host at the level of discourse rather than syntax. Full interpretation of the PC is achieved only pragmatically in a given context, when it becomes integrated into the representation schemas associated with other propositions, following the general principles of utterance interpretation, as developed in Relevance Theory (Sperber and Wilson 1995).

For non-restrictive relative clauses, such as (17) a similar non-syntagmatic link has been identified (e.g., Fabb 1990, Burton-Roberts 1999, 2006). Although differing in details of their analyses, modern accounts of non-restrictive relative clauses

5. Unlike Huddleston and Pullum (2002), the term anchor is used here for the element in the host clause to which the PC is semantically related. It is either a constituent of the host clause (as in examples 14 and 16) or the entire host clause (as in example 17).

6. Cf. also the article by Kavalova in this volume.
assume a link between relative pronoun and its antecedent only on a semantic-pragmatic level. Burton-Roberts (1999: 38–40), for instance, argues that the pronoun-antecedent relationship between the non-restrictive relative clause and its host is one that is only contextually interpretable and therefore does not invoke (syntactic) coindexing but (semantic-pragmatic) coreference, as exemplified by B’s answer in (19).

(19)  A: Mary is away on business  
     B: Which is convenient (cf. That’s convenient)

A further candidate for the category of syndetic PCs, viz. instances of Right Node Raising, will be dealt with below together with asyndetic amalgamation.

B) Asyndetic PCs
Unlike syndetic PCs, whose syntactic form in some way indicates that they are dependent utterances which need to be pragmatically linked to a host, asyndetic PCs have no overt marker indicating such a link. In terms of syntactic form, it is possible to distinguish three different subtypes, which also differ in their relationship to the host. They are briefly discussed in the following.

Self-contained PCs are main clauses, whose syntactic independence is already signalled by their form, i.e., that of independent and self-contained clauses. They are exemplified in (20).

(20)  a. Mary – *I hate to tell you this* – is coming over to visit  
     b. Mary – *is that her real name?* – is coming over to visit  
     c. Mary – *don’t forget* – is coming over to visit  
     d. Mary – *is she persistent!* – is coming over to visit

As a clear sign of their independence, there are no constraints on the clause type of the PC. The examples in (20) show that the PC may take the form of a declarative, an interrogative, an imperative, or an exclamative. The relationship between PC and host is thus a non-syntagmatic one, sometimes reinforced by a pronominal link (as in 20a, b, d) but not necessarily so (20c). The connection between host and PC is established by the interruption and hence structural incompleteness of the host clause, which forces the listener to establish some pragmatic link between the two, often aided by contextual features, as in (21).7

(21) And what we found <,> was uhm <,> could you turn the slide projector off please uhm very substantial mortality differences within this population (ICE-GB: s2a-047, #110)

7. Examples with a text code are from the British component of the International Corpus of English. <,> indicates a short pause.
Limitations on permitted combinations of host and PC only apply on a pragmatic level, as in the case of clashing illocutions illustrated in (22).

(22) a. *Mary – *I hate to ask you this *– is coming over to visit
    b. *When is Mary – don’t forget – coming over to visit?

A special type of self-contained PCs are placeholder PCs, as illustrated in (23).

(23) a. Your your <,> uh what’s this called thorax <,> is probably vibrating far too much (ICE-GB: s1a-018, #53)
    b. When I was going to my school in Great Dunmow a couple of well last week there was a place that had loads of these uhm what do you call them <,> rails for sale (ICE-GB: s1a-042, #221)

As the name suggests, these self-contained PCs occur in a place in the host clause where a single word or phrase (typically an NP) would be expected. They have filler function, allowing the speaker to ‘buy time’ to provide a specific lexical item, typically a noun. A special variant of this type are semantic gap-filling clauses (Biber et al. 1999: 1066) as in (24), which differ from placeholder PCs in that the elusive word is not actually supplied by the speaker. Instead, the inserted clause fills its position. Without it the host clause would remain syntactically incomplete. Semantic gap-filling clauses can therefore not be taken as prototypical PCs.

(24) Isn’t it where all the last century upper middle classes used to drive around on Sundays in their uhm what are they called uhm <,,> (ICE-GB: s1a-006, #218)

The second category of asyndetic PCs is that of reduced PCs (Schneider 2006), or gap-containing PCs. They are illustrated in (25).

(25) a. You could I suppose commission some prints of you yourself (ICE-GB: s1a-015, #37)
    b. Britons he said could compete and win (ICE-GB: s2b-005, #129)

As can be seen from the examples, these PCs are linked to their host in that they contain a syntactic gap (typically the complement of the verb) which is filled conceptually by the host clause. This gap-antecedent relationship holding between PC and host is one that is contextually interpretable and, as argued by Burton-Roberts (1999: 40) and Peterson (1999: 237), does not involve (syntactic) coindexing but (semantic/pragmatic) coreference. The lack of syntactic dependence of the PCs is particularly interesting given the existence of a non-parenthetical counterpart construction, illustrated in (26), where the verb in question functions as matrix predicate governing a complement clause (cf. also Section 4.3).

(26) a. I suppose that you could commission some prints of you yourself
    b. He said that Britons could compete and win
It is possible to distinguish two subtypes of reduced parenthetical clauses (RPCs) based on the semantic category of the verb: comment RPC and reporting RPCs. While both types contain assertive predicates (Hooper 1975), comment RPCs typically make use of some verbs of thinking in first and second person present tense, as illustrated in (25a), and reporting RPCs make use of message conveying verbs (reporting verbs, verba dicendi), typically in third person and not limited to present tense, as illustrated in (25b). Reporting RPCs differ from commenting RPCs also in allowing a certain amount of flexibility in their word order, provided the subject is non-pronominal: cf. The flight will be delayed, John says/says John, by two hours.

The third candidate for the category of asyndetic PCs are instances of amalgamation (Lakoff 1974) where one constituent is shared by the host sentence and the inserted clause, as in (27a). They can also take syndetic form (with a coordinator) typically referred to as Right Node Raising, “interpolated coordination” (Quirk et al. 1985: 976–977), or “elliptical parenthetical clause” (Peterson 1999: 232), as in (27b).

(27) a. And I uh used to get maybe it was five five pounds as a birthday present (ICE-GB: s1a-076, #78)
   b. He is, or at least he was, a great actor

As with RPCs, the link between host and PC in these cases is established by a conceptual ‘gap’ which is however not filled by the entire host clause but by a complement in the host. This link is stronger than with RPCs, which can be seen from the fact that the inserted clause does not have positional flexibility but is tied to one specific position in the host clause. Moreover, it can be questioned with a tag question (He is, or at least he was, a great actor, wasn't he?), which is normally impossible with PCs. Cases of amalgamation and Right Node Raising are therefore excluded from the present taxonomy of PCs.

4.3 Positional flexibility

The third syntactic criterion for delimiting the class of PCs is that of their positional flexibility, a direct result of their lack of syntactic attachment. It has variously been pointed out (e.g., Ziv 1985: 182, Corum 1975: 137, Peterson 1999: 237,
Urmson 1952) that PCs are not tied to a specific position in the host clause but may occur in several locations, i.e., in initial, medial or final position.\footnote{Some scholars use the term 'parenthetical' exclusively for interpolated juxtaposition, while end-to-end sequencing is referred to, for instance, as “peripheral juxtaposition” (Peterson 1999) – a practice that is not adopted here. Cf. also the distinction between 'interpolation' and 'appendage' by Huddleston and Pullum (2002: 1355).}

(28) a. *I think, I’d like to answer that in a slightly different way (ICE-GB: s1a-001-117)
   b. And the Labour Party I believe want sanctions to work (ICE-GB: s1b-035-28)
   c. and that’s one of the main points the main thing, that that prevents that, I’m sure (ICE-GB: s1a-002-72)

The general flexibility notwithstanding, there seem to be certain constraints on the position within the host that can serve as a ‘niche’ for insertion of a PC (e.g., Emonds 1973: 335–336, McCawley 1998: 751, Peterson 1999: 238–240). Compare, for instance, the following examples (from Emonds 1973: 335, ex. 12).

(29) a. *He likes every, I believe, friend of John
   b. He likes, I believe, every friend of John

(30) a. *John pushed, they claimed, a child into the street
   b. John pushed a child, they claimed, into the street
   c. John, they claimed, pushed a child into the street

(31) a. *F. Mitterrand was in front of – there was no other place to be – the Parliament
   b. F. Mitterrand was in front – there was no other place to be – of the Parliament (Espinal 1991: 735, ex. 54a)

Emonds (1973: 335) tries to capture these restrictions within his ‘Parenthetical Formation’ transformational rule by specifying that what follows the parenthetical in the host clause must be a phrasal constituent. This approach, however, takes the PC to be a constituent of the host clause, in contrast to the non-syntagmatic view outlined in Section 4.2.

What the examples (29) – (31) indicate is that there are certain ‘weak spots’ in the syntax of the host clause which admit insertion of PCs more readily than others. Restrictions on interpolation, although correlating with syntactic constituent structure, however seem to be mainly a matter of performance and processing constraints (as suggested for instance by Espinal 1991: 753 and Peterson 1999: 239). Such a view is supported by the fact that the asterisked examples in (29) – (31) can be improved by either changing the semantic type of PC into a metalin-
guistic comment or by increasing end-weight of the host clause or both, as can be seen from the acceptable versions (32) – (34).

(32) He likes every, I hope this is the right word / if I may say so, friend of John

(33) a. John pushed, I still find it hard to believe / you probably won’t believe me, a child into the street
   b. John pushed, I believe, a child with a red anorak and a woolly hat into the street

(34) F. Mitterrand was in front of, you probably won’t be surprised to hear this, the French Parliament in Paris

The question of preferred positions of PCs in the host clause is also closely connected with the scope of a parenthetical. What is meant by scope here is of course not a syntactic relationship (defined in terms of c-command), but a semantic-pragmatic association between the PC and some ‘anchor’ in the host clause. Depending on the position of the PC its scope may change, as in (35a), where it covers the entire host clause, and (35b), where it may be over the NP some prints (depending on context and delivery).

(35) a. You could I suppose commission some prints of you yourself (ICE-GB: s1a-015, #37)
   b. You could commission I suppose some prints of you yourself

The change in scope, depending on the position in the host clause, could be taken as an indication that PCs are in fact less independent from syntax than was suggested in Section 4.2. However, the scope of the PC can be shown to depend on the semantic value of the parenthetical and potential anchors in the host. Compare, for instance, examples (36a) and (36b), where the scope changes with the different (semantic) type of PC from being over the entire host clause in the former to only the preceding NP his strange behaviour in the latter.

(36) a. His strange behaviour – it must be admitted – caused a terrible outrage
   b. His strange behaviour – what else would you call turning up for dinner dressed as a smurf – caused a terrible outrage

Similarly, in the different versions of (37) the scope of the PC (indicated by underlining) is manipulated by the choice of lexical items.

(37) a. His strange behaviour caused a – it must be admitted – terrible outrage
   b. His strange behaviour caused a – I’m sorry to say – a slight outrage
   c. His strange behaviour caused a – I’m relieved to say – a slight outrage

While syntactic flexibility is not a necessary characteristic of PCs (syntactic independence alone is already sufficient), it identifies the core/prototypical members
of the class. These are RPCs, self-contained PCs, and ‘adverbial’ PCs. With RPCs, however, there is a particular problem for delimitation if they occur in clause-initial position, as in (38), where they are difficult to distinguish from matrix clauses, especially if the *that*-complementizer has been omitted.

(38) So *I suppose* that it is a bit late (ICE-GB: s1a-083, #113)

Various views have been expressed on the status of such initial clauses with and without *that* complementizer. They are either taken to be parenthetical (e.g., Kärkkäinen 2003, Kruisinga 1932: 486, Ross 1973, Thompson 2002, Thompson and Mulac 1991), matrix clauses (e.g., Peterson 1999: 236, Stenström 1995: e.g., 293, 296, Svensson 1976: 375), or ambiguous, i.e., allowing interpretation as both matrix clause and PC depending on context and type of ‘matrix’ predicate (e.g., Aijmer 1972: 46, Biber et al. 1999: 197, Huddleston and Pullum 2002: 896, Quirk et al. 1985: 1113, Recanati 1984: 326, 346, 348, Urmson 1952: 481).¹¹

In the absence of hard and fast evidence for any of the positions it seems reasonable to adopt a cautious approach and exclude all instances of initial clauses with a *that*-complementizer from the class of PCs. Initial clauses without *that* are best only taken into account if they are clearly separated from the complement/host clause by means of a pause or some intervening material such as hesitation sounds (*uh, uhm*) or other fillers (*you know, I mean*). This restrictive policy is motivated by methodological considerations as it avoids the inclusion of possible ambiguous examples and as such provides the basis for a more systematic corpus analysis of potential differences in use between the different syntactic types.

5. Related categories

In the process of delimiting the class of PCs we have narrowed down the category of potential candidates by excluding non-clausal parentheticals as well as syntactically dependent clauses and finally by positing the criterion of positional flexibility for core members of the class. As a final step in the delimitation process I will now distinguish PCs from three closely related categories, viz. interrogative tags, discourse markers, and anacolutha.

¹¹ A detailed discussion of *that*-omission in extraposed subject clauses is provided by Kaltenböck (2006).
5.1 Interrogative tags

Owing to their clausal form, interrogative tags look superficially similar to PCs. There is also a functional similarity, as can be seen from the examples in (39) (cf. also Ziv 1985: 189, Knowles 1980: 381–384).

(39) a. The project should be finished by next week, wouldn’t you agree?
    b. You are not proposing to finish the project by next week, are you?

In the present framework, however, tag questions are not included in the class of PCs, as some properties seem to indicate a syntactic link to their host clause:

(a) Obligatory anaphoric reference of the pronoun in a tag question.\(^{12}\)
(b) Reversed polarity of question tags: a negative tag attaches to a positive host clause and vice versa.\(^{13}\)
(c) Tense constraints: the tag preserves tense and aspect of the host, as exemplified in (40).

(40) a. *You are working for IBM, don’t you?
    b. *You work for IBM, aren’t you?

d. The exact (elliptical) form of the tag is shaped by the form of the host VP, more precisely the type of main verb and possible auxiliaries (e.g., John is ill, isn’t he/*doesn’t he/*hasn’t he). This contrasts with the relative freedom in the choice of (lexical) verbs in PCs (e.g., John is ill, I think/suppose/reckon).

e. Sentence-final position: owing to their close dependence on the form of the host VP, tags typically occur in sentence-final position. Unlike PCs, a tag can only be added once the form of the host VP has been established, as illustrated in (41).\(^{15}\)

\(^{12}\) Although superficially similar, Self-contained PCs such as (20)a, b, d do not have any of the features listed in (a) – (e).

\(^{13}\) However, this property has to be taken with caution since anaphoric processes can be relegated to the area of discourse rather than sentence grammar (cf. Ziv 1985: 189–190, Knowles 1980: 383) and therefore do not represent clear evidence for a syntactic link.

\(^{14}\) As argued by Ziv (1985: 190), however, this property seems to be pragmatically motivated rather than conditioned by sentence grammar, a view also supported by the existence of so-called “constant polarity tags” (Huddleston and Pullum 2002: 892), e.g., He is ill, is he; He isn’t ill, isn’t he. The latter example is rejected by many native speakers. However, it cannot be ruled out completely; cf. Huddleston (1970), Knowles (1980: 380), Huddleston and Pullum (2002: 892).

\(^{15}\) Although Knowles (1980: 383) argues that the reduced movability of tags can be explained pragmatically in terms of anaphoric constraints on the pronominal subject and the auxiliary of the tag, claiming that “these anaphoric elements can only occur to the right of their anaphors”, this is questionable given the possibility of cataphoric reference for personal pronouns.
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5.2 Discourse markers

Overlap with discourse markers is minimal as they are mainly single non-verbal items (cf. Brinton 1996: 32, Aijmer 2002: 2 for inventories) and as such formally distinct from PCs, which are a clausal category, i.e., contain a verb. Possible overlap between the two categories is restricted to a small set of elements, more precisely: *I mean, I see, I think, you know, (you) see, mind you, look, listen. All of these have previously been discussed under the heading of discourse marker (e.g., Östman 1981, Erman 1987, Schiffrin 1987, Schourup 1985) as well as under the heading of comment clause (cf. Section 2, (1)). The reason for regarding these expressions as discourse markers lies in their formulaic nature, which is a direct result of the process of grammaticalization that has given rise to them in the first place. Grammaticalization is of course equally at work with RPCs such as *I guess, I think, I suppose (e.g., Thompson and Mulac 1991) but unlike discourse markers, which have already completed the process, RPCs are not fully grammaticalized yet. While it is difficult to decide where exactly to draw the dividing line between fully grammaticalized clauses (i.e., discourse markers) and those that may just be on their way to full grammaticalization (i.e., RPCs), it seems reasonable to include only I think in the class of PCs. First, parenthetical I think – despite its relatively fixed character as independent epistemic fragment – still permits considerable variation in form, as is evidenced by the following attested variants: I don’t think, I thought, I certainly/just think, we think, I would/should think. Such variations are excluded in the case of typical discourse markers such as I mean, you know; only in their uses as matrix clauses is some variation possible (but still less so than with I think; cf. I don’t mean, I meant, *I certainly/just mean, we mean, *I would/should mean). Second, I think differs from typical discourse markers in terms of distribution and possible syntactic functions. As pointed out by Stenström (1995: 293, 296), I think occurs substantially more often in interpolated position than I mean, you know, you see and is also exceptional in its greater likelihood to act as a matrix clause.

5.3 Anacoluthon

Another area of potential overlap is between PCs and anacolutha (syntactic blends), which are also a typical feature of spoken language. In both cases the speaker leaves a construction incomplete: in the case of PCs only temporarily so, with the construction being resumed and completed after the parenthetical insertion; in the case of anacolutha it stays incomplete. An example is given in (42), which is in fact a case of multiple blending with two incomplete constructions (indicated by underlining).

(42) So when you graduated then when did because you said I think coming up the stairs that that you’ve been applying for lots of different jobs (ICE-GB: s1a-034, #144)

The difference between PCs and anacolutha is thus that the former follow a clear and relatively predictable pattern, whereas the latter fall into the category of performance error, caused by working memory limitations (Biber et al. 1999: 1065). Despite the clear structural difference between the two, there are cases where identification may prove difficult:

First, there are cases where the first clause (host clause) remains incomplete but where the intervening second clause forms part of the first, as in (43). These are instances of semantic gap-filling clauses (as discussed in Section 4.2).

(43) Now Dickens setting his uh Tale of Two Cities has the meeting of the I forget the name of the girl or the man indeed so uh probably boring both of them uhm characters (ICE-GB: s1a-020, #203)

Second, there are cases where resumption of the first clause after the insertion may not be clear, as illustrated in (44), where the speaker loses track of the original construction after a lengthy insertion (cf. pause and hesitation sound). However, the speaker still manages to pick up the original (reversed pseudo-cleft) construction, which is shown by the use of copular *is* after the insertion (cf. *The only problem is...*), only to abandon it after that. Since there is a clear sign of resumption (even if abandoned), examples such as these may be classified as PCs rather than anacolutha.

(44) The only problem with that Estelle Road place I mean I’d still be happy to have it at the price that I offered <short PAUSE> uhm is the other thing that we’ll need <long PAUSE> about all those places (ICE-GB: s1a-023, #207)
6. Conclusion

The aim of this article has been to delimit and systematise the class of parenthetical clauses, which lacks a clear definition in the literature (cf. Section 2). For methodological reasons (cf. Section 3) this has been done with the help of purely syntactic criteria: clausal form (4.1) and lack of syntactic attachment (4.2) as two necessary characteristics and positional flexibility (4.3) as an additional feature of core members of the class. This procedure allows us to delimit the class of PCs from other, related categories (cf. e.g., Section 5) and establish the internal stratification of this class in the form of a taxonomy of subtypes, which is summarised in Figure 1.

Figure 1. Syntactic types of parenthetical clauses (syndetic PCs in italics, asyndetic PCs recte)

This taxonomy provides not only an operational definition for the identification and corpus extraction of PCs, but also a useful basis for the investigation of their functional and prosodic properties. As could be seen, PCs are far from a monolithic, uniform syntactic category. It is therefore difficult to make any general claims about their functional and prosodic behaviour, despite some attempts in the literature. To capture their functional and prosodic behaviour it seems necessary to recognise the internal stratification of this class and clearly distinguish between the different syntactic subtypes, each of which displays a relatively high degree of homogeneity syntactically and therefore, presumably, also functionally and prosodically.
References


Spoken parenthetical clauses in English: A taxonomy


Integrated parentheticals and assertional complements*

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German has three different kinds of verb-first integrated parentheticals (VIPS), which differ from other kinds of parentheticals in several respects: (i) VIPS have verb-first order; (ii) they form one focus-background-structure with their host; (iii) the proposition expressed by the host is linked to the implicit propositional argument of the parenthetical predicate; (iv) VIP-constructions are hybrid structures with two clauses mutually depending on each other, and (v) declarative VIP-constructions are subject to embedded root restrictions. In this paper, I argue that non-canonical licensing is the basic property of all three kinds of VIPS. Especially property (v) provides an argument against analyses assuming canonical argument linking and topic-drop in declarative VIPS. As a consequence, declarative VIPS turn out to be genuine verb-first structures.

1. Introduction

Parenthetical constructions have recently become the focus of attention again. They interact in various ways with their host clauses and show different degrees of prosodic, syntactic, and semantic integration. In addition, they often compete with alternative realizations such as embedded clauses or independent main clauses. A thorough study of parentheticals thus has to consider prosodic, syntactic, semantic, and pragmatic aspects of parenthetical constructions and compare them to competing constructions. This paper focuses on syntactic and semantic properties of a very specific kind of parenthetical in German, namely so-called verb-first integrated parentheticals (VIPS) as illustrated in (1a). In contrast to many other kinds of parentheticals, VIPS have two specific properties: they show a very high degree of

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integration into their host clause and, more interestingly, VIPs share many properties with matrix clauses selecting V2-complements such as (1b). In both cases, the V2-clause is linked to the second (propositional) argument of the VIP- or matrix-predicate *glauben* (‘believe’). Hence, the VIP does not only depend on the host clause but the host clause also depends on the VIP. This seems to be one reason for the high degree of integration of VIPs. I argue in this paper that VIP-constructions are hybrid structures. Moreover, VIPs, like matrix clauses selecting V2-complements, form one focus-background-structure with the V2-host clause.

   Martin wants.to [believes Hans] the theorem prove  
   ‘Hans thinks Martin wants to prove the theorem.’

b. Hans glaubt (*nicht) [Martin möchte das Theorem beweisen.]  
   Hans believes (not) [Martin wants.to the theorem prove]  
   ‘Hans (does not) think(s) Martin wants to prove the theorem.’

c. Hans glaubt (nicht) [dass Martin das Theorem beweisen möchte.]  
   Hans believes (not) [that Martin the theorem prove wants.to]  
   ‘Hans (does not) think(s) that Martin wants to prove the theorem.’

d. Welches Theorem [was glaubt Hans] möchte Martin beweisen?  
   which theorem [what believes Hans] wants.to Martin prove  
   ‘Which theorem does Martin think Hans wants to prove?’

Embedded V2-clauses are an instance of the so-called embedded root (or dependent main clause) phenomenon (cf. Reis 1997, Gärtner 2002, and Truckenbrodt 2006). They can replace common embedded V-final clauses like (1c). However, it is a well-known fact that a V-final clause cannot be replaced by a corresponding V2-clause in every context as can be seen in (1b, c). V2-complement clauses are, for example, ungrammatical with negated declarative matrix clauses (see section 6 for a more detailed discussion of this issue).

In this paper, I focus on semantic and pragmatic properties of VIPs and present a puzzle for argument linking in VIP-constructions. I argue that VIPs should be subsumed under the notion of embedded root phenomenon. VIP-host clauses obey similar restrictions as V2-complement clauses but differ crucially from V-final clauses. One consequence of this argumentation is that the propositional argument of the VIP-predicate in (1a) cannot be canonically licensed by dropping a pronominal element in sentence-initial position. The data discussed in this paper therefore constitute a problem for standard analyses assuming topic drop in VIPs. However, as we will see below, alternative analyses relying on empty pronouns or non-canonical licensing also face problems.

This paper is organized as follows: Section 2 starts off with a brief survey of VIP-constructions in German. In section 3, I discuss two possible analyses of licensing the propositional argument: topic drop and non-canonical linking. Before
I evaluate these two analyses, I take a closer look at various kinds of VIPs in section 4. It turns out that three different kinds of VIPs must be distinguished: (i) *glauben*-VIPs hosted by a declarative clause, (ii) *glauben*-VIPs hosted by an interrogative clause, and (iii) *fragen*-VIPs, which can only be hosted by an interrogative clause. Section 5 turns to interrogative *glauben*-VIPs, comparing interrogative *glauben*-VIPs to *was*-parentheticals like (1d). I propose a uniform analysis of argument licensing for both parenthetical constructions. This analysis involves topic drop and non-canonical licensing. Section 6 turns to declarative *glauben*-VIPs. I argue that a topic drop analysis is not available in this case. Hence, the propositional argument of declarative *glauben*-VIPs cannot be syntactically linked to a pronoun that is dropped in sentence-initial position. Therefore, it must be licensed in a non-canonical way in semantics (section 7). In section 8, I illustrate that this analysis of declarative *glauben*-VIPs can also be applied to *fragen*-VIPs. The final section briefly summarizes the main findings of this paper.

2. Verb-first integrated parentheticals (VIP)

Example (2) illustrates that VIPs, regardless of their position in the host clause, always have V1-order. Moreover, the proposition expressed by the host is always linked to the implicit second propositional argument of the VIP-predicate. In the following, I call this argument the propositional argument. In addition, VIPs show a high degree of prosodic integration into their host clause, i.e., there are no clear intonational breaks between the VIP and its host and the VIP does not form a focus-background-structure of its own (cf. Reis 1995b: 48). Note that all positions in (2) are niches for (various kinds of) parentheticals in German: (i) parenthetical constructions are licensed in prefinite position between the sentence-initial element and the finite verb; (ii) they can be inserted into the middle field; (iii) and they can follow their host clause in final position.1

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1. The following aspects may influence grammaticality judgements: (i) judgments may vary slightly depending on the niche the parenthetical is inserted into (see Schelfhout et al. (2003, 2004) for a corpus-based study of possible positions for VIPs in Dutch); (ii) judgments on VIPs containing 1st and 2nd person subjects may differ from judgments on VIPs containing 3rd person subjects; (iii) subject oriented VIPs have to be distinguished from speaker oriented VIPs, especially with VIPs containing 1st person subjects (cf. Reinhart 1983 and Corver and Thiersch 2001). Since I am mainly interested in the realization of the implicit propositional argument of the VIP-predicate, I neglect these issues in this paper. In the following, I mostly use third person examples inserted either into prefinite or postfinite position. Note finally that more research on the prosodic integration of VIPs (as opposed to the prosodic non-integration of other kinds of parentheticals) is necessary to get a clear picture of prosodic (dis-)integration of VIPs.
The class of VIP-predicates includes verbs of saying, thinking, and believing and verbs of asking. Besides *glauben* and *fragen*, typical verbs are *meinen* (‘think’), *denken* (‘think’), *sagen* (‘say’) and *wissen wollen* (‘want to know’). VIP-predicates in general have the following three lexical properties (Reis 1995a: 61): (i) they always select a propositional argument, which is lexically specified as a finite sentential argument in structural object position (and in the declarative case also realizable as a V2-clause); (ii) they do not include preference predicates, factive and implicative predicates, and negative/negated predicates; and (iii) they include (nonnegative/unnegated) verbs of saying as well as epistemic and attitudinal verbs.

Especially VIPs in prefinite position like (3a) are controversially discussed in the literature. Above all, this is due to Reis (1995a,b), who convincingly argues against an extraction analysis of prefinite VIPs as illustrated in (3b) (i.e., long topicalization of *Hans*). Among other things, Reis shows that VIPs in prefinite position display all relevant syntactic and semantic properties of postfinite VIPs. She offers a uniform analysis of VIPs which treats all instances of *glaubt Martin* in (2) as VIPs (cf. 3c). Following this line of argumentation, there is no need to assume extraction from a V2-clause in examples like (3).³

2. Advocates of an extraction analysis are among others Tappe (1981), Grewendorf (1988), and Staudacher (1990). To my knowledge, Mrotzek (1991) was the first to refute some of their arguments for extraction from V2-clauses. See also Pittner (1995), Corver and Thiersch (2001) and Schelfhout et al. (2004).

3. Reis’ (1995a,b) analysis is supported by the following arguments: First, verbs of asking license VIPs although they do not select V2-complements (cf. example (i) and section 4 below); second, VIPs in second position share all crucial properties with VIPs in postfinite positions (e.g., prosodic integration, binding, modal particles); and finally, VIPs differ from long extraction out of dass-complements. Moreover, experimental studies also seem to favor a parenthetical analysis of these constructions (cf. Kiziak 2004, this volume) Note, however, that Reis’ discussion lacks a clear argument against the extraction analysis in (3b).

(i) a. Wer, fragt Hans, wird das Theorem beweisen.
   ‘Hans asks who will prove the theorem.’

b. *Hans fragt, wer wird das Theorem beweisen.
   Hans asks who will prove the theorem’
   Hans [believes Martin] wants.to the theorem prove
   'Martin believes that Hans wants to prove the theorem.'

   b. [Hans, glaubt Martin [ t', möchte t, dieses Theorem beweisen ]]] (= long
      extraction)

   c. [Hans [glaubt Martin] möchte dieses Theorem beweisen] (= VIP)

In this paper, I follow Reis’ line of argumentation and analyze (3a) as an instance of a prefinite VIP. Prefinite VIPs share all relevant syntactic, semantic, and pragmatic properties with their postfinite counterparts in (2). The VIPs in (2) raise at least six interesting questions:

1. How are VIPs syntactically integrated into their host?
2. How are VIPs prosodically integrated into their host?
3. How can we account for the V1-order in VIPs?
4. How is the propositional argument of the VIP-predicate licensed?
5. What is the nature of the semantic and pragmatic relation between VIPs and their host?
6. What is the discourse function of VIPs?

This paper is confined to questions 4 and 5 but I also touch on question 3, for which the answer to question 4 is of special importance. I also believe that the answers to these two questions also shed some light on the three remaining questions not discussed in this paper. In the next section, I turn to question 4 and discuss two options of licensing the propositional argument of the VIP-predicate.

3. Licensing the propositional VIP-argument

Reis (1995a: 65f) discusses two different possibilities of linking the propositional argument of a VIP-predicate (cf. also Reis 2002). It can either be linked to a pronoun that has been dropped in sentence-initial position as is illustrated in (4b) or it is non-canonically licensed in semantics. In the latter case, it is not linked to a phonologically empty element in syntax. Instead, the propositional argument is

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4. For question 1, see Espinal (1991), Richter (1997), Corver and Thiersch (2001), De Vries (2003), Ackema and Neeleman (2004), and d’Avis (2005), among others. VIPs in prefinite position are of course the most interesting challenge to every theory of integration and linearization. For the problem of integration, see d’Avis (2005) and Reis (1997).
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semantically linked to the proposition denoted by the host clause, illustrated by the dotted line in (4c).5

   Hans believes Martin wants to the theorem prove

b. Canonical linking, coreference and topic drop:
   \[ \text{CP} \emptyset_2 [\text{C'} glaubt_1 [Martin t_2 t_1]] \] \quad (\emptyset = \text{das (‘that’), es (‘it’), …})

\[ \theta \text{ assignment} \]

c. Non-canonical linking:
   \[ \text{CP} [\text{C'} glaubt_1 [Martin t_1]] \]
   \[ p = \text{beweisen-möchte <h,t> \land glaubt <m,x>} \]

According to (4c), VIPs are genuine V1-structures in syntax. An analysis that assumes structure (4b), on the other hand, implies that VIPs are V2-structures with an obligatorily dropped pronoun in sentence-initial position. Support for the topic drop analysis comes from the observation that in German, sentence-initial subjects and objects can only be dropped under certain conditions (cf. Gärtner and Steinbach 2003). First, the null-pronominal in Spec,CP must be a prominent discourse referent (cf. 5).

(5) a. \emptyset komme gleich.
   come 1st Sg soon
   ‘I’m coming soon.’

b. A: Was ist denn mit dem Kennedy?
   what is Part with the Kennedy
   ‘What about Kennedy?’

B: \emptyset kenne ich nicht.
   know I not
   ‘I don’t know him.’

Second, the null-pronominal can denote either an individual or a proposition (cf. 6).

(6) A: Martin glaubt, dass Hans das Theorem beweisen möchte.
   Martin believes that Hans the theorem prove wants to
   ‘Hans believes that Martin wants to prove the theorem.’

B: \emptyset glaube ich auch.
   believe I also
   ‘I think so, too.’

5. A third possibility is that the host clause is base generated in the complement position of the VIP-predicate (cf. Ross 1973 and Emonds 1976). According to this analysis, the host is the deep structure object of the parenthetical. For arguments against this analysis, see Reis (2002: 19f).
And third, it can neither be a 1st or 2nd person object (cf. 7a) nor can it be assigned dative case (cf. 7b).

(7) a. A: Mögen sie dich in deiner neuen Klasse?
   like they you in your new class
   ‘Do they like you in your new class?’
   
   B: *∅ kann keiner leiden.
   can nobody like
   ‘Nobody likes me.’

   b. A: Und wieso hat den Asylanten niemand geholfen?
   and why has the asylum seekers nobody helped
   ‘Why didn’t anyone help the asylum seekers?’
   
   B: *∅ hilft hier doch nie einer.
   helps here for all that never one
   ‘No one ever helps them over here.’

Since the propositional argument of the VIP-predicate is 3rd person and does not receive dative case, the second and third conditions are met. Note that the topic drop analysis offers an elegant explanation of argument linking and V1-order in VIPs. Moreover, this analysis only relies on standard principles of grammar. Canonical linking and topic drop are thus clearly preferable to non-canonical linking. However, topic drop in VIPs can only apply if the null-pronominal is also a prominent discourse referent, i.e., if the first condition for topic drop is also met. In section 6, I present a puzzle for the first condition of topic drop: I show in detail that in VIPs hosted by a declarative clause, the propositional argument is always assertional. Hence, it cannot be a prominent discourse referent and topic drop is blocked by the first condition. As a consequence, the propositional argument must be licensed either by some other kind of argument drop specific to VIPs or by non-canonical linking.

4. A VIP is not a VIP is not a VIP: A typology of VIPs

Before discussing the (dis-)advantages of the topic drop analysis and the non-canonical licensing analysis in detail, it is necessary to take a closer look at the data. As usual, things turn out to be more complex than expected. In particular, this holds for the selectional properties of VIP-predicates. German has two different kinds of VIP-predicates: verbs like glauben (‘believe’), which select declarative complement clauses, and verbs like fragen (‘ask’), which select interrogative com-
plement clauses. Since the first one can be inserted into two different host clauses, we end up with three different kinds of VIP-constructions:

(8) a. VIPs containing verbs like *glauben* (‘believe’) can be hosted by declarative clauses (cf. example (1) above).

b. VIPs containing verbs like *glauben* (‘believe’) can also be hosted by interrogative clauses (cf. examples (9) and (10) below).

c. VIPs containing verbs like *fragen* (‘ask’) can only be hosted by interrogative clauses (cf. examples (12a,b) below).

In the following presentation, I always use *glauben* (‘believe’) and *fragen* (‘ask’) as two representative examples of the two different kinds of VIP-predicates: *glauben*-VIPs represent the classes in (8a) and (8b), i.e., they can be inserted into declarative and interrogative hosts, whereas *fragen*-VIPs represent class (8c), i.e., they can only be hosted by interrogative clauses.6

According to (8), the host clause of *glauben*-VIPs does not need to be declarative. *Glauben*-VIPs can also be inserted into interrogative hosts, as can be seen in the following example.

(9) Was, glaubt Martin, möchte Hans beweisen?

‘What does Martin think that Hans wants to prove?’

In addition to wh-interrogatives, *glauben*-VIPs can also be hosted by yes/no-interrogatives as is illustrated in (10).7

(10) Wird Hans [?glaubt sie/ ?glaubst du ] heute das Theorem beweisen?

‘What does she/do you think? Will Hans prove the theorem today?’

At first glance, this is surprising because *glauben* does not select an interrogative complement clause (cf. 11a). *Glauben* selects either a nominal expression denoting

6. Verbs of saying, which are not completely identical to verbs of thinking and believing, also belong to classes (8a) and (8b). *Glauben* is the most illustrative example because it neither selects interrogative complement clauses nor does it trigger a reported speech reading. By contrast, verbs of saying select declarative and interrogative complements and they do trigger a reported speech interpretation in VIP-constructions (see Mrotzek 1991, Reis 1995b, and Steinbach 1999).

7. Note that *glauben*-VIPs hosted by yes/no-interrogatives are less acceptable than *glauben*-VIPs hosted by wh-interrogatives. One reason for this difference in acceptability may be that VIPs have a strong preference for positions adjacent to the finite verb (cf. Schelhout et al. 2003, 2004 for Dutch). In yes/no-interrogatives the position preceding the finite verb is not available and the position immediately following the finite verb seems to be not optimal for prosodic reasons. Therefore, the VIP must be inserted in a less optimal position in the middle field.
a proposition (cf. 11b) or a declarative complement clause which can either be a V-final clause (cf. 11c) or a V2-clause (cf. 11d).

(11) Martin glaubt …
    Martin believes …
    a. * … was möchte Hans beweisen.
       … what wants.to Hans prove
    b. … diese Geschichte.
       ‘ … this story.’
    c. … dass Hans das Theorem beweisen möchte.
       that Hans the theorem prove wants.to
       ‘ … that Hans wants to prove the theorem.’
    d. … Hans möchte dieses Theorem beweisen.
       Hans wants.to this theorem prove
       ‘ … Hans wants to prove the theorem.’

This mismatch between the selectional restrictions of *glauben* in matrix clauses and *glauben* in VIPs is summarized in Table 1. Although *glauben* does not select interrogative complements, *glauben*-VIPs can be inserted into interrogative hosts.

### Table 1. Selectional restrictions of *glauben* and *glauben*-VIPs

<table>
<thead>
<tr>
<th></th>
<th>declarative</th>
<th>interrogative</th>
</tr>
</thead>
<tbody>
<tr>
<td>complement of <em>glauben</em></td>
<td>+</td>
<td>−</td>
</tr>
<tr>
<td>host of <em>glauben</em>-VIP</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>

German has a second class of VIP-predicates, which differ from verbs of saying, thinking, and believing. The examples in (12) illustrate that *fragen*-VIPs can only be inserted into interrogative hosts.

(12) a. Was, fragt Martin, möchte Hans beweisen.
      what asks Martin wants.to Hans prove
      ‘Martin asks what Hans wants to prove.’

    the theorem asks Martin wants.to Hans prove

Since *fragen* only subcategorizes for interrogative complements (cf. 13a,b), the selectional properties of *fragen* in VIPs and matrix clauses match. Both, V2-clauses and V-final clauses (cf. 13c,d) are ungrammatical with *fragen*. 
(13) a. Martin fragt, *was* Hans beweisen möchte.
   Martin asks what Hans prove wants.to
   ‘Martin asks *what* Hans wants to prove.’

b. Martin fragt, *ob* Hans das Theorem beweisen möchte.
   Martin asks if Hans the theorem prove wants.to
   ‘Martin asks *whether* Hans wants to prove the theorem.’

   Martin asks that Hans the theorem prove wants.to
   ‘Martin asks *that* Hans wants to prove the theorem.’

d. *Martin fragt, Hans möchte das Theorem beweisen.
   Martin asks Hans *wants.to* the theorem prove

(13b) shows that *fragen* does not only select wh-interrogatives but also yes/no-interrogatives. Hence, *fragen*-VIPs are expected to be also grammatical with yes/no-interrogatives. This is confirmed by the example in (14).

(14) Möchte Hans, fragt Martin, das Theorem beweisen?
   wants.to Hans asks Martin the theorem prove
   ‘Martin asks whether Hans wants to prove the theorem.’

The selectional restrictions of *fragen* in matrix clauses and *fragen* in VIPs are summarized in Table 2. In this case, there is no mismatch between the selectional restrictions of the matrix predicate and the VIP-predicate. The host clause and the complement clause basically obey the same selectional restrictions.8

<table>
<thead>
<tr>
<th>Table 2. Selectional restrictions of <em>fragen</em> and <em>fragen</em>-VIPs</th>
</tr>
</thead>
<tbody>
<tr>
<td>declarative</td>
</tr>
<tr>
<td>complement of <em>fragen</em></td>
</tr>
<tr>
<td>host of <em>fragen</em>-VIP</td>
</tr>
</tbody>
</table>

It has already been mentioned that VIPs show a very high degree of integration into their host clause and that VIP-constructions share many properties with sentences containing V2-complement clauses. The VIP-predicates in (15b,c), like the matrix predicate in (15a), license complement subjunctive forms (cf. Reis 1995b). By contrast, non-integrated parentheticals such as (15d) cannot license complement subjunctive forms.

8. One difference is that matrix interrogatives hosting *fragen*-VIPs have either V1- or V2-order whereas embedded interrogatives selected by the matrix predicate *fragen* always have V-final order. Unlike embedded declaratives, embedded interrogatives are always V-final. I argue below that embedded V2 is related to proto-assertional force which may exclude V2 for embedded interrogatives. Moreover, I show in section 8 that the host clause and the propositional argument must be of the same logical type. Syntactic properties such as the position of the verb do not matter.
(15) a. Peter glaubt, Petra sei/wäre nach Berlin gefahren.  
Peter believes Petra is/subj.to Berlin gone  
‘Peter thinks Petra went to Berlin.’

b. Wohin, glaubt Peter, sei/wäre Petra gefahren?  
where.to believes Peter is/subj.to Petra gone  
‘Where does Peter think Petra went?’

c. Wo liege, fragt sie, das Problem.  
where lies.subj. asks she the problem  
‘Where is the problem, she asked.’

d. *Petra sei/wäre – und das glaube Hans  
Petra is/subj.to – and that believes Hans  
übrigens nicht – nach Berlin gefahren.  
by.the.way not – to Berlin gone  
‘Hans does not believe, by the way, that Petra went to Berlin.’

The examples in (15b,c) show that the VIP does not only depend on the host but that the host also depends on the VIP. Although the VIP is inserted into the host, it may license subjunctive verb morphology thus indicating that the host is dependent on the VIP. A VIP and its host clause seem to form a hybrid construction with two clauses mutually depending on each other. This is further confirmed by the following three observations: First, the host clause realizes the internal propositional argument of the VIP-predicate, that is, the host clause is semantically an argument of the VIP-predicate. Second, pronouns in VIPs can be bound by quantifiers in the host clause and vice versa. The examples in (16) show that VIP-constructions are not asymmetrical. A quantifier contained in a VIP can bind into the host clause (cf. d’Avis 2005: 264).9

9. Sentential adverbials provide additional evidence. In (i), only the VIP glaubt Hans takes scope over the adverb tatsächlich. The corresponding interpretation can be described as Hans believes that Martin really proved the theorem. By contrast, the salient interpretation of the corresponding (non-integrated) wie-parenthetical in (i) is that Hans’ belief that Martin has proven the theorem is confirmed by the host clause (i.e., Hans believes that Martin has proven the theorem and this is actually true). Hence, the adverb is part of the assertion of the speaker who is confirming Hans’ belief (expressed by the wie-parenthetical). Unlike the VIP, the wie-parenthetical does not have scope over the adverb (cf. also footnote 14).

(i) Martin hat tatsächlich, glaubt Hans/wie Hans glaubt, das Theorem bewiesen.  
Martin has really believes Hans/as Hans believes the theorem proven  
‘Hans believes that Martin really proved the theorem.’

‘Hans believes that Martin has proven the theorem and this is actually true.’
(16) a. Fast jeder der Schüler hat die letzte Aufgabe, glaubt er, richtig gelöst.

Almost each of the pupils has the last exercise believes he correctly solved

‘Almost each of the pupils thinks that they have correctly answered the final question.’

b. Die letzte Aufgabe, sagt fast jeder, fand er am schwierigsten.

the last exercise says almost everybody found he most difficult

‘Almost everyone says that they found the final question most difficult.’

Third, the illocutionary force of the whole construction is not only determined by the host clause but also by the VIP. The two most interesting cases in this respect are interrogative glauben-VIPs (17b) and interrogative fragen-VIPs (17c).

(17) a. declarative glauben-VIPs are assertions

b. interrogative glauben-VIPs are questions

c. interrogative fragen-VIPs are assertions (and can be indirect questions)

Glauben-VIPs hosted by interrogative clauses are less problematic than they may appear at first sight. In the next section, I argue that interrogative glauben-VIPs are themselves interrogative clauses. They have the same structure as was-parentheticals such as (21b) below. In both cases the sentence-initial position is occupied by a wh-word which is dropped in interrogative glauben-VIPs. Hence, there is no mismatch between host and VIP in (18a). Both of them are interrogative clauses. Similarly, declarative glauben-VIPs match their hosts. They are both declarative clauses.

By contrast, fragen-VIP-constructions are not genuine questions although they are inserted into an interrogative host. Recall from Table 2 that fragen does not select a declarative complement. Hence, an appropriate answer to the interrogative fragen-VIP-construction in (18b) does not exist. Fragen-VIP-constructions can only be used as indirect questions. By contrast, interrogative glauben-VIPs like (18a) permit a corresponding answer since glauben, unlike fragen, selects a declarative complement.

(18) a. A: Was, glaubte Martin, möchte Hans morgen beweisen?

what believed Martin wants.to Hans tomorrow prove

‘What did Martin think that Hans wants to prove tomorrow?’

B: Das zweite Theorem, glaubte Martin, möchte

the second theorem, believed Martin wants.to

Hans morgen beweisen. Hans tomorrow prove

‘Martin thought that tomorrow Hans wants to prove the second theorem.’
b. A: Was, fragte Martin, möchte Hans morgen beweisen?
   what asked Martin wants to Hans tomorrow prove
   'Martin asked what Hans wants to prove tomorrow?'

   B: *Das zweite Theorem, fragte Martin, möchte Hans
   the second theorem asked Martin wants to Hans
   morgen beweisen.
   tomorrow prove

As a consequence, fragen-VIPs, unlike interrogative glauben-VIPs, are less acceptable in the scope of a question predicate such as wissen wollen (‘want to know’):

(19) Und deshalb will ich nun Folgendes wissen:
    and therefore want I nun the following know
    'And therefore I would like to know the following':

   a. Was wird, glaubt Martin, Hans morgen beweisen?
      what will, believes Martin, Hans tomorrow prove
      'What does Martin think that Hans will prove tomorrow?'

   b. *Was wird, fragt Martin, Hans morgen beweisen?
      what will, asks Martin, Hans tomorrow prove
      'Martin asks what Hans will prove tomorrow.'

Moreover, fragen-VIPs also license complement subjunctive forms as has been illustrated in (15c) above. Hence, in (15c) the interrogative host clause cannot be used to ask a question. In interrogative fragen-VIP-constructions, there is an interesting mismatch between the interrogative host and the declarative fragen-VIP. Whereas the interrogative host is used to ask a question, the declarative VIP is used to make an assertion. Since both clauses are dependent on each other (the VIP is adjoined to the host and the host is a semantic argument of the VIP), fragen-VIP contructions cannot be true questions. However, like certain embedded questions, they can be used as indirect questions. This difference between interrogative glauben-VIPs and interrogative fragen-VIPs is further confirmed by the following two observations. First, with a second person subject only glauben-VIPs can be used to ask a direct question:

(20) a. Was wird, glaubst du, Martin morgen beweisen?
      what will, believe you, Martin tomorrow prove
      'What do you think Martin will prove tomorrow?'

   b. Was wird, fragst du, Martin morgen beweisen.
      what will, ask you, Martin tomorrow prove
      'You ask, what Martin will prove tomorrow.'
Second, only *glauben*-VIPS are grammatical in so-called *was*-construction like (21a) and *was*-parentheticals like (21b). By contrast, *fragen* is ungrammatical in both constructions as examples (21c,d) illustrate (cf. Höhle 1996 and Reis 1996).

(21) a. Was glaubt Hans, welches Theorem Martin beweisen möchte? (*was*-construction)
   'What does Hans believe which theorem Martin wants to prove?'

b. Welches Theorem, was glaubt Hans, möchte Martin beweisen? (*was*-parenthetical)
   'Which theorem does Martin think Hans wants to prove?'

c. *Was fragt Hans, welches Theorem Martin beweisen möchte? (*was*-construction)
   'Finally, Hans was able to prove the theorem because he asked, I believe, Martin for advice'

d. *Welches Theorem, was fragt Hans, möchte Martin beweisen? (*was*-parenthetical)
   'Now, Hans is going to prove the theorem which Martin, I believe, has shown to him.'

In sum, VIPS can be inserted into V1-, V2-, and V-final-clauses. Interestingly, some VIPS show a 'subcategorization mismatch': *glauben*-VIPS can be inserted into V1- and V2-clauses but also into clauses with V-final pattern and they cannot only be hosted by main clauses but also by embedded clauses as is illustrated in (i). We return to adverbial clauses and relative clauses in section 6.

   Hans could the theorem finally prove because he [believe I] Martin for advice asked has
   'Finally, Hans was able to prove the theorem because he asked, I believe, Martin for advice'

   Hans proves now a theorem which Martin him [believe I] shown has
   'Now, Hans is going to prove the theorem which Martin, I believe, has shown to him.'
into declarative and interrogative host clauses although glauben does not select interrogative complement clauses. Fragen, on the other hand, obeys the same selectional restrictions irrespective of whether it is a matrix- or VIP-predicate. Moreover, the VIP seems to take scope over its host. Hence, although the VIP is syntactically inserted into the host clause, semantically the host clause is dependent on the VIP. At first sight, interrogative glauben-VIPs are the most interesting examples for every linking theory. The VIP is inserted into an interrogative host although its predicate does not select an interrogative complement. Therefore, I first investigate interrogative glauben-VIPs and related constructions.

5. Interrogative glauben-VIPs

We already saw that interrogative glauben-VIPs differ from interrogative fragen-VIPs in one crucial respect. Only the former are true questions whereas the latter are embedded questions. The meaning of the interrogative glauben-VIP in (22a) can be paraphrased as follows: the speaker wants to know from the hearer for which x Hans believes that Martin wants to prove x. (22b) is one possible answer to this question. The host clause contains the focus of the sentence which corresponds to the wh-word of the question in (22a). A simplified semantic representation of the question is given in (23).

\[(22) \ a. \ \text{Welches Theorem, glaubt Hans, möchte Martin beweisen?} \]
\[ \quad \text{which theorem believes Hans wants.to Martin prove} \]
\[ \quad \text{‘Which theorem does Hans think Martin wants to prove?’} \]
\[ \ b. \ \text{Martin glaubt Hans, möchte das \[}_Z\text{ZWEIt}e\text{ Theorem beweisen.} \]
\[ \quad \text{Martin believes Hans wants.to the second theorem prove} \]
\[ \quad \text{‘Martin thinks Hans wants to prove the second theorem.’} \]

\[(23) \ \lambda p \exists x [ \text{Theorem(x) } \land p = \text{Hans glaubt, dass Martin x beweisen möchte }] \]

The semantic representation in (23) can be derived if one assumes that the VIP in (22a) and the corresponding was-parenthetical in (21b), repeated in (24) below, share the same underlying structure. Was-parentheticals are closely related to VIPs. Both VIPs and was-parentheticals are integrated parentheticals that can be inserted into wh- and yes/no-interrogatives. Semantically, the host clause of both kinds of parentheticals is a restriction on the existential quantification over propositional variables. In addition, the same predicates are licensed in was-parentheticals and interrogative glauben-VIPs and both parenthetical constructions can adequately be paraphrased by each other (cf. Reis 2002).
Welches Theorem, was glaubt Hans, möchte Martin beweisen?

'Which theorem does Hans think Martin wants to prove?'

Dayal (1993, 1996, 2000) offers an indirect dependency approach for was-parentheticals. According to Dayal the VIP-initial wh-word is base-generated in the complement position of glauben and moves to Spec,CP. In addition, the trace of this wh-word is coindexed with the interrogative host clause as is illustrated in (25).

(25) \[ \text{CP}_1 \text{welches Theorem [CP}_1 \text{was}_1 \text{ glaubt Hans t}_1 \text{ ] möchte Martin beweisen ]} \]

Now the crucial question is how to interpret was-parentheticals? The semantic representations of the parenthetical and its interrogative host are given in (26ab). The wh-word was is used to ask for a proposition. Therefore, the existential quantifier binds a propositional variable in (26a). The crucial point is that was also introduces the variable T, which is coindexed with the host clause. Dayal (1996: 112) calls T “a mnemonic for Topic.” The variable T, which forms the covert restriction of the wh-word of the parenthetical, is of the same type as the interrogative host. Semantically the host clause is itself a question, i.e., a set of propositions (26b). It can therefore serve as the overt restriction of was. Functional application yields the correct semantic representation in (26c).

(26) Syntactic analysis of was-parentheticals (cf. Dayal 1996, 2000)

\[ \text{CP} \text{ Welches Theorem [CP}_1 \text{ was}_1 \text{ glaubt Hans [DP t}_1 \text{ ] ] möchte Martin beweisen]} \]

a. Was-parenthetical: \[ \lambda T \lambda p \exists q [ T(q) \land [ p = \text{glaubt(Hans,q) } ] ] \]

b. Host clause: \[ \lambda p \exists x [\text{Theorem (x) } \land [ p^1 = \text{möchte-beweisen(Martin,x) } ] ] \]

c. \[ \Rightarrow \lambda p \exists q [ \exists x [ \text{Theorem(x) } \land [ q = \text{möchte-beweisen(Martin,x) } ] \land [ p = \text{glaubt(Hans,q) } ] ] ] \]

According to Dayal’s analysis, the interpretation of the propositional argument of the VIP-predicate glauben consists of two parts. On the one hand, a wh-word is base-generated in the complement position of the parenthetical. As already mentioned, glauben selects a propositional argument and the wh-word was can be used to ask for propositions (cf. 27).

(27) Was_1 glaubt Hans t_1?

'What believes Hans

‘What does Hans believe?’

On the other hand, the interrogative host clause is coindexed with the trace of was and serves as a restriction on the existential quantification over the propositional argument q of the parenthetical predicate. The set of possible answers is basically deter-
mined by the wh-word *was* contained in the *was*-parenthetical. Possible answers are propositions because *was* determines quantification over propositions. These propositions are further restricted by the interrogative host. Hence, the host clause determines the set of possible answers in cooperation with *was*. In (26), the background of the corresponding answer is {Hans believes that Martin wants to prove x theorem} and the focus is a member of the following set {the first, the second, my, his, …}).12

Coming back to interrogative *glauben*-VIPs, I want to argue that this analysis of *was*-parentheticals can also be applied to *glauben*-VIPs inserted into interrogative hosts. The main difference between these two corresponding parenthetical constructions is the missing wh-word in sentence-initial position of the *glauben*-VIP as is illustrated in (28).

(28) Welches Theorem [(was) glaubt Hans] möchte Martin beweisen?
    which theorem (what) believes Hans wants to Martin prove
    ‘What does Hans believe which theorem does Martin want to prove?’

The syntactic and semantic representation of the VIP-construction in (28) can thus be derived if we assume that *was* is dropped in sentence-initial position, everything else being equal. This analysis correctly predicts that VIPs yield the same interpretation as the corresponding *was*-parentheticals. The analysis relies on dropping the sentence-initial wh-word and coindexing the host clause with the restrictor of the wh-word. The latter can be understood as a semantic operation of non-canonical linking because the proposition of the host clause is semantically linked to the variable $T$ introduced by the wh-word *was*.13

Let us summarize the core points of our analysis so far: interrogative *glauben*-VIPs hosted by an interrogative clause CP_INT can be derived in the same way as *was*-parentheticals if *was* is dropped in sentence-initial position and the host clause is non-canonically linked to the semantic variable $T$. This is illustrated in (29).

---

12. Note that some semantic mechanism must ensure the coindexation of the host clause and the trace in complement position. Under Dayal’s analysis the host clause is adjoined to CP and it is coindexed in syntax with the trace in complement position. But this syntactic analysis can only derive sentence-initial *was*-parentheticals. It cannot derive *was*-parentheticals inserted in different pre- and postfinite positions. In these cases, the host clause cannot simply be adjoined to the parenthetical. Hence, syntactic coindexation of the host and the trace is neither sufficient nor necessary. We come back to this issue at the end of the next section.

13. *Was* drop might be licensed by the structural similarity between *was*-parentheticals and declarative VIPs discussed in the next subsection. Note, however, that this is merely a stipulation which requires further historical research. From a semantic point of view, *was* drop would be the optimal analysis. However, assuming a syntactic operation of *was*-drop in VIPs is clearly ad hoc and only supported by semantic arguments. By contrast, an alternative analysis relying on non-canonical linking only as discussed in section 7 below does not provide the correct input for the semantic interpretation of interrogative *glauben*-VIPs (cf. Reis 2002: 19f). Note that similar problems also arise for other kinds of analysis. We come back to this problem in section 7.
Interrogative glauben-VIPs: Was-drop in sentence-initial position and coindexation of was and interrogative host clause

\[
\text{[ was}_1 \text{ glaubt}_2 [ \text{Hans } t^i_1 t^i_2] \land \text{CP}_{\text{INT}}^i \rightarrow \left[ \emptyset \text{ glaubt}_2 [ \text{Hans } t^i_1 t^i_2] \right] \land \text{CP}_{\text{INT}}^i
\]

The V1-pattern follows directly from this analysis. Glauben-VIPs hosted by an interrogative clause are common V2-clauses with the sentence-initial wh-word being dropped. In addition, this analysis can explain why glauben-VIPs can be inserted into interrogative clauses although glauben does not select an interrogative complement clause. Glauben-VIPs are genuine questions and the interrogative host serves as the restriction on the proposition that is denoted by was. Hence, the interrogative host can be perfectly integrated into the semantic representation of the parenthetical. Furthermore, it correctly predicts not only wh-interrogatives but also polar interrogatives to be grammatical in was-parentheticals and glauben-VIPs. And finally, this analysis also explains why so-parentheticals are ungrammatical with interrogative hosts. In German, wh-words have to move to sentence-initial position. However, in (30) wh-movement and was drop is blocked because the sentence-initial position is occupied by so.14

14. The picture is more complex with wie-parentheticals (cf. also footnote 9 above). The wie-parenthetical in (i) can be interpreted in two different ways: either the host clause confirms Hans' belief that Martin has proven the theorem (i.e., Hans believes that Martin has proven the theorem and this is actually true) or the wie-parenthetical is interpreted in the same way as the corresponding VIP.

(i) Martin hat, wie Hans glaubt/glaubt Hans, das Theorem bewiesen.
Martin has as Hans believes/believes Hans the theorem proven

Wie-parentheticals, like interrogative glauben-VIPs, can be inserted in interrogative hosts (cf. ii). The decisive point is that wie-parentheticals only yield the first interpretation when they are inserted into interrogative hosts. This is in line with our analysis which predicts that the ‘VIP-interpretation’ is blocked in this case since was drop is impossible. The wie-parenthetical in (ii) presupposes that the pollsters believe that the SPD will also lose in Berlin. The speaker asks the hearer whether s/he shares the pollsters’ belief, i.e., whether s/he also thinks that the SPD will lose the election in Berlin. By contrast, the glauben-VIP and the was-parenthetical yield the parenthetical reading outlined above, i.e., the speaker asks for the pollsters’ opinion on whether the SPD will also lose in Berlin.

(ii) Wird die SPD, wie die Meinungsforscher glauben/(was) glauben die
Will the SPD as the pollsters believe/(what) believe the
Meinungsforscher, auch in Berlin verlieren?
pollsters also in Berlin lose
‘Will the SPD as the pollsters believe also lose in Berlin?’
‘What do the pollsters believe? Will the SPD also lose in Berlin?’

Note finally that wie-parentheticals do not have V1- or V2- but V-final order (for further discussion see Steinbach 1999).
(30) *Welches Theorem, so glaubt Hans, möchte Martin beweisen?
Which theorem so believes Hans wants to Martin prove
‘Which theorem does Hans think Martin wants to prove?’

So far, I have only told half of the story. In the next section I turn to declarative host clauses. I am mainly interested in the question whether the analysis proposed for interrogative *glauben*-VIPS can also be applied to declarative *glauben*-VIPS. In order to decide on this, I have to take a closer look at the restrictions on parenthetical constructions with declarative host clauses.

6. Declarative *glauben*-VIPS

Three possibilities arise if we try to apply the analysis proposed for interrogative *glauben*-VIPS in the previous section to declarative *glauben*-VIPS: (i) the analysis of declarative *glauben*-VIPS is similar to the one of interrogative *glauben*-VIPS and involves both topic drop of a sentence-initial pronoun and non-canonical licensing. (ii) We can do without topic drop or (iii) without non-canonical licensing. In this section, I argue that VIPS hosted by declaratives do not permit topic drop. Consequently, the propositional argument must be licensed either by some kind of argument drop which is specific to VIPS or it remains implicit and must be non-canonical licensed.

Let us assume for the sake of argument that the analysis of interrogative *glauben*-VIPS can also be applied to their declarative counterparts. In addition, we may assume that instead of the wh-word *was* another pronominal element (e.g., the demonstrative pronoun *das* (‘that’)) is base generated in the complement position of *glauben*.15

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15. Other possibilities might be *so* or *es* (for *zo* in Dutch see Schelfhout 1998 and Schelfhout et al. 2004). However, both options are confronted with problems. As opposed to *das* and *so*, the object pronoun *es* is usually ungrammatical in sentence-initial position (i.b). So, on the other hand, cannot always replace *das* (i.c and i.d). Only *das* can always be used as an object of a verb that selects a propositional argument. Furthermore, when *so* is used together with *das*, only *das* is linked to the propositional argument of the predicate (i.e). Therefore, the demonstrative pronoun *das* seems to be the best candidate for a topic drop analysis (cf. also Reis 1995a: 61f and Gärtner and Steinbach 2003).

(i) a. Hans möchte, *das/so/es* glaubt Martin, das Theorem beweisen. [*? das/so/es]*
Hans wants to that/so/it believes Martin the theorem prove
‘Martin thinks that Hans wants to prove the theorem.’

b. *Das/so/??es* glaubt Martin. [*– es]*
That/so/it believes Martin
(31) Martin möchte, das glaubt Hans, das Theorem beweisen.

‘Hans thinks that Martin wants to prove the theorem.’

Like *was* the demonstrative pronoun *das* moves to sentence-initial position, where it can be dropped. In addition, it is also coindexed with the proposition denoted by the declarative host clause $\text{CP}_{\text{DEC}}^i$ as illustrated in (32).

(32) Possible analysis for declarative *glauben*-VIPs: Das-drop in sentence-initial position and coindexation of *das* and declarative host

$[ \text{das}_t \text{glaubt}_t [\text{Hans}_t \text{t}_1 \text{t}_2] ] \land \text{CP}_{\text{DEC}}^i \rightarrow
[ \emptyset \text{glaubt}_t [\text{Hans}_t \text{t}_1 \text{t}_2] ] \land \text{CP}_{\text{DEC}}^i$

(32) permits a unified analysis of interrogative and declarative *glauben*-VIPs. With interrogative hosts, the wh-pronoun *was* is used, while with declarative hosts, the demonstrative pronoun *das* is used. Unfortunately, this analysis faces a number of problems. Note first that unlike the interrogative pronoun *was*, the demonstrative pronoun *das* is coreferent with the host clause. Thus in declarative *glauben*-VIPs, the host clause does not serve as a restriction on the pronoun *das*. There is no implicit ‘topic’ (the variable $T$) in declaratives and the host clause is not non-canonically ‘linked’ to some variable in the semantic representation of the parenthetical but coreferent with the propositional argument of the VIP-predicate. This difference in interpretation does not seem to be crucial since it is due to a lexical difference between wh-pronouns and demonstrative pronouns: the wh-word *was* is quantificational whereas the demonstrative pronoun *das* is not (cf. also Stechow 1996: 12). Nevertheless, the host clauses are coindexed with different semantic elements in interrogative and declarative *glauben*-VIPs.

Second, *so*- and *wie*-parentheticals pose a more serious problem. They can only be inserted into declarative host clauses like (33a). As already mentioned above, interrogatives like (33b) cannot host *so*- and *wie*-parentheticals (for *wie*-parentheticals see also footnote 14). This restriction does not follow from an analysis which relies on pronoun drop in sentence-initial position. Topic drop is impossible on the assumption that *so* as well as *wie* occupies the sentence-initial position of the parenthetical. Hence, the examples in (33) do not support a topic drop analysis for

c. Martin glaubt/behauptet/meint *das*/*so* (auch). [– so]
   Martin believes/claims/thinks that/so (too)
d. *Das*/*so* glaube/finde ich nicht. [– so]
   That/so believe/think I not
   ‘I don’t think so’
e. *So* glaubte/sagte Martin *das*. [– so]
   So believed/said Martin that
declarative parentheticals. Non-canonical argument linking seems to be necessary at least for *so*- and *was*-parentheticals.

(33) a. Hans möchte, so glaubt Martin/ wie Martin glaubt, das Theorem beweisen.
   ‘Martin believes that Hans wants to prove the theorem.’

   b. *Welches Theorem, so glaubt Martin/ wie Martin glaubt, möchte Hans beweisen?
   ‘Which theorem does Martin think Hans wants to prove?’

Third, at first sight, the syntactic structures of interrogative and declarative *glauben*-VIPs seem to look alike in German. However, in English declarative integrated parentheticals clearly differ from their interrogative counterparts in syntax. While the former have simple SV-order (34a), the latter have subject-aux-inversion (34b), which supports an operator movement analysis of interrogative parentheticals. Moreover, declarative integrated parentheticals are also licensed in English, although English does not have object drop in sentence-initial position. Emonds (1976: 43ff) argues that in declarative integrated parentheticals in English, a proform may be deleted in complement position (for German see Fortmann, this volume). However, this account does not explain the V1-pattern of VIPs in German.

(34) a. There were no other applicants, I believe, for that job.

   b. Where does he live now, do you think?

Finally, there is a more fundamental problem for an analysis of declarative *glauben*-VIPs that is based on topic drop: The host clause of VIPs must not be a ‘topic’. Recall that topic drop is only licensed if (i) the dropped element occupies the sentence-initial position and (ii) the context provides a prominent discourse referent, the topic. Condition (i) is trivially fulfilled because in VIPs the sentence-initial position is not occupied by any other constituent. On the other hand, it is not easy to decide whether VIPs also fulfill condition (ii). The prominent discourse referent is the proposition denoted by the host clause, which is coreferent with the dropped pronoun *das*. However, the propositional argument cannot serve as a (discourse) topic in VIPs and related constructions because it is always assertional. Therefore the host clause must not be a topic.

VIP-constructions are sensitive to typical embedded root restrictions. It is a well-known fact that V2-complements are assertional whereas V-final complements need not be so. Assuming that the host clauses of VIPs, which are also V2-clauses, are always assertional, VIP hosts should behave more like V2-complements and dif-
fer from V-final complements (for the correlation of verb-movement and sentence mood in German, see Lohnstein 2000, Gärtnert 2002, Truckenbrodt 2006, and below). In the following, I compare declarative glauben-VIP constructions (VIPCs) to sentences containing V2-complements (V2CCs) and V-final complements (VFCCs) to illustrate that VIPCs are subject to the same embedded root restrictions as V2CCs. The crucial examples are negation, negative predicates, dative objects, correlative pronouns, backgrounded complements/hosts and negative quantifiers in relative and adverbial clauses. In all examples, VIPCs pattern with V2CCs.

Consider negation first. The example in (35a) illustrates that V2CCs cannot be interpreted in the scope of negation. The VIPC in (35b) behaves the same way whereas the VFCC in (35c) is perfectly grammatical (cf. also Höhle 1996 and Reis 1996).

(35)  

a. *Martin glaubt nicht, Hans möchte das Theorem beweisen. (V2CC)  
   Martin believes not Hans wants.to the theorem prove

b. *Hans, glaubt Martin nicht, möchte das Theorem beweisen. (VIPC)  
   Hans believes Martin not wants.to the theorem prove

c. Martin glaubt nicht, dass Hans das Theorem beweisen möchte. (VFCC)  
   Martin believes not that Hans the theorem prove wants.to

   ‘Martin does not think that Hans wants to prove the theorem.’

Second, V2CCs and VIPCs are also ungrammatical with negative predicates like bezweifeln (‘doubt’). VFCCs, on the other hand, are again grammatical.

(36)  

a. *Martin bezweifelt, Hans möchte das Theorem beweisen. (V2CC)  
   Martin doubts Hans wants.to the theorem prove

b. *Hans, bezweifelt Martin, möchte das Theorem beweisen. (VIPC)  
   Hans doubts Martin wants.to the theorem prove

c. Martin bezweifelt, dass Hans das Theorem beweisen möchte. (VFCC)  
   Martin doubts that Hans the theorem prove wants.to

   ‘Martin doubts that Hans wants to prove the theorem.’

Third, source datives like dem Lehrer (‘the teacher’) in (37) are not acceptable in V2CCs (cf. Steinbach 2002: 9). Again, VIPCs are also ungrammatical whereas VFCCs are perfectly grammatical.

(37)  

a. *Martin glaubt dem Philosophen, Hans möchte das  
   Martin believes the philosopher Hans wants.to the theorem prove
   Theorem beweisen. (V2CC)

b. *Hans, glaubt Martin dem Philosophen, möchte das  
   Hans believes Martin the philosopher wants.to the theorem prove. (VIPC)
   Theorem beweisen.
c. Martin glaubt *dem Philosophen*, dass Hans das Theorem beweisen möchte. (VFCC)
   ‘Martin believes the philosopher that Hans the theorem proves wants.to prove the theorem.’

Fourth, Reis (1997) argues that V2CCs are syntactically less integrated than VFCCs, which are absolutely integrated. Among other things, V2-complement clauses cannot appear in sentence-initial position and they do not permit the correlative pronoun *es* in the middle field. Again, VIPCs, unlike VFCCs, pattern with V2CCs.

(38) a. *Martin glaubt *es*, Hans möchte das Theorem beweisen. (V2CC)
   Martin believes it Hans wants.to the theorem prove
   b. *Hans, es glaubt Martin/ glaubt Martin es, möchte das Theorem beweisen. (VIPC)
       Hans it believes Martin it believes Martin it wants.to the theorem wants.
   c. Martin glaubt *es*, dass Hans das Theorem beweisen möchte. (VFCC)
       Martin believes it that Hans the theorem wants.to prove
       ‘Martin believes that Hans wants to prove the theorem.’

A fifth difference between V2CCs and VIPCs on the one hand and VFCCs on the other concerns backgrounding. (Embedded) V2-clauses seem to be degraded if they are discourse linked in their entirety. This is illustrated by the brief dialog in (39). Narrow focus on the matrix clause or the VIP results in deaccenting the rest of the clause in the answers in (39a-c). The degraded status of the V2CC in (39a) and the VIPC in (39b) might follow from the assumption that deaccented constituents are considered to be discourse linked (i.e., non-assertional).

(39) Q: What do you think? Who believes that Hans wants to prove the theorem?
   a. A: #MARTin glaubt, Hans möchte das Theorem beweisen. (V2CC)
       Martin glaubt Hans wants.to the theorem prove
   b. A: #Hans, glaubt MARTin, möchte das Theorem beweisen. (VIPC)
       Hans believes Martin wants.to the theorem prove
   c. A: MARTin glaubt, dass Hans das Theorem beweisen möchte. (VFCC)
       Martin believes that Hans the theorem prove wants.to prove the theorem.’

The final restriction on V2CCs and VIPCs concerns relative and adverbial clauses. German has two different kinds of relative clauses: V-final relative clauses like (40a) and V2-relative clauses like (40b) (cf. Gärtner 1998, 2001). V2-relative claus-
es are subject to the same restrictions on embedded roots as V2-complements. This is illustrated by the examples in (40c,d). As opposed to the V-final relative clause, the V2-relative clause is ungrammatical in the scope of negation. Recall from footnote 11 that VIPs can also be inserted into relative clauses (cf. 40e). Interestingly, V-final relative clauses which contain a declarative glauben-VIP such as (40f) are ungrammatical in the scope of negation. This example illustrates again that the host clause of declarative glauben-VIPs must be assertional.16

(40) a. Hans beweist ein Theorem, das Martin aufgestellt hat. (VF-relative clause)
Hans proves a theorem which Martin established has

b. Hans beweist ein Theorem, das hat Martin
Hans proves a theorem which has Martin aufgestellt. (V2-relative clause)
established

‘Hans proves a theorem which Martin established.’

c. Hans beweist kein Theorem, das Martin aufgestellt hat. (VF-relative clause)
Hans proves no theorem which Martin established has

16. Adverbial clauses that permit V2 are subject to the same restriction. Unlike the V-final ad-

junct clause in (i.b), the V2-adjunct clause in (i.a) cannot be interpreted in the scope of negation
because it is assertional. Therefore only sentence (i.b) is ambiguous between a wide scope and a

narrow scope reading. Sentence (i.a), on the other hand, can only mean that she did not go to

Frankfurt and the reason for this is that she is ill (cf. Gärtner 1998).

(i) a. Sie fuhr nicht nach Frankfurt [ weil sie ist krank. ]
She went not to Frankfurt because she is ill

b. Sie fuhr nicht nach Frankfurt [ weil sie krank ist. ]
She went not to Frankfurt because she is ill

Interestingly, the narrow scope reading is also blocked when the adverbial clause contains a VIP
(cf. ii.a), irrespective of the word order in the adverbial clause. Again, the VIP triggers an asser-
tional reading of the adverbial clause.

(ii) Hans hat das Theorem nicht bewiesen, weil es, glaube ich, zu schwer ist ...
Hans has the theorem not proven because it believe I too difficult is ...

‘Hans didn't prove the theorem because it is, I believe, too difficult …’

a. *… sondern weil er nicht mehr Zeit hatte
… but because he had no more time.

b. … Er wird es nicht mehr versuchen
… he will it not again try

‘… He won't try it again.’
d. *Hans beweist kein Theorem, das hat Martin aufgestellt. (V2-relative clause)
   ‘Hans proves no theorem which Martin established.’

e. Hans beweist ein Theorem, das, glaube ich, Martin aufgestellt hat.
   ‘Hans proves a theorem which I think, Martin established.’

f. *Hans beweist kein Theorem, das, glaube ich, Martin aufgestellt hat.
   ‘Hans proves no theorem which I think, Martin established.’

We can conclude that VIPCs obey the same restrictions as V2CCs. The (implicit) propositional complement of declarative *glauben*-VIPs must be assertional. But this contradicts an analysis that assumes topic drop because topics require a prominent discourse referent. Topics are prominent discourse referents which cannot be assertional (i.e., they must be presuppositional). Moreover, we have already

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17. Negation, negative predicates, and source datives are grammatical in parentheticals such as (i) that contain a demonstrative pronoun. Note, however, that these parentheticals are not integrated and interpretationally self-contained (cf. Reis 1995b). There seems to be a strong correlation between non-canonical argument licensing and integration.

(i) a. Hans hat gestern – (und) das glaubt Martin (übrigens) nicht – tatsächlich das zweite Theorem bewiesen.
   Hans has yesterday – (and) that believes Martin (by.the.way) not – really the second theorem proven
   ‘Yesterday Hans really proved the second theorem, which (by the way) Martin does not believe.’

b. Hans hat gestern – (und) das bezweifelt Martin (übrigens) – tatsächlich das zweite Theorem bewiesen.
   Hans has yesterday – (and) that doubts Martin (by.the.way) – really the second theorem proven
   ‘(By the way) Martin doubts that Hans really proved the second theorem yesterday.’

   Hans has yesterday – (and) that believes Martin the philosopher – really the second theorem proven
   ‘Martin believes the philosopher that Hans really proved the second theorem yesterday.’
seen that so- and wie-parentheticals are grammatical with declarative host clauses (cf. (33) above) although they do not license topic drop. In this case the sentence-initial position is not available for topic drop, that is, non-canonical argument licensing is also necessary for this kind of parenthetical.

(41) Topic drop is not possible
(i) in so- and wie-parentheticals because Spec,CP is occupied by so and wie
(ii) in declarative glauben-VIPs because the host clause is assertional

In sum, the interpretation of the propositional argument of VIPs cannot be explained on the basis of pronominal coreference and topic drop. Since topic drop is not available, the propositional argument must be licensed either by some other kind of argument drop in sentence-initial position specific to VIPs or it remains implicit and must be non-canonically licensed. In the next section, I argue that argument linking in VIPs can be subsumed under the notion of non-canonical licensing, which is needed for independent reasons. Hence, this analysis relies neither on a VIP-specific operation of argument drop in sentence-initial position nor on empty objects in complement position.

7. Non-canonical licensing

In the previous section, I have argued that the predicate of declarative glauben-VIPs has a propositional argument that cannot be linked to a topicalized syntactic constituent. Hence, the corresponding semantic representation contains a free variable in the position of the second argument. Steinbach (2002) argues that free argument variables can either be bound by an operator (argument saturation) or deleted (argument reduction) if the verb permits argument reduction. These operations are semantic in nature and apply to free semantic variables (i.e., argument variables that are not linked to a syntactic expression). If they apply to the first semantic argument of a verb, the passive interpretation (existential quantification over the first argument variable), the middle interpretation (generic quantification over the first argument variable), or the anticausative interpretation (deletion of the first argument variable) can be derived. There is no need to stipulate empty (pronominal) elements in syntax to which a semantic role of the predicate is ‘assigned’.

This approach can be extended to argument licensing in VIPCs and V2CCs in general if one assumes a third semantic operation for the interpretation of implicit arguments. A free argument variable cannot only be saturated or reduced but it can also be linked to a related semantic entity under certain conditions (for ad-

(42) Free argument variables can be
   a. bound by an operator (∃, gen) (argument saturation, i.e., passives and middles)
   b. deleted (argument reduction, i.e., anticausatives)
   c. non-canonically licensed (i.e., implicit agents in passives, V2-complements, VIPs, V2-relative clauses)

Non-canonical licensing is subject to the following conditions (cf. also Espinal 1991, Reis 1995a, and Asher 2000).

(43) Non-canonically licensing
   a. Both the free argument variable and the corresponding (propositional) argument are included in the same focus-background-structure (i.e., integration)
   b. Both the free argument variable and the corresponding (propositional) argument are of the same logical type (i.e., the argument must obey the s-selectional restrictions of the predicate)

We have already seen that integrated parentheticals form a single focus-background structure together with their host (i.e., condition (43a)). Furthermore, the host clause is of the same logical type as the free argument variable (i.e., condition (43b)). Both, the host clause and the implicit argument denote propositions. Hence, both conditions are fulfilled and the free argument variable can be linked to the proposition denoted by the host. The same holds true for interrogative glauben-VIPs, where the host clause is non-canonically linked to the implicit semantic variable T introduced by the wh-pronoun was. In both kinds of glauben-VIPs, the host clause is non-canonically linked to the second argument position. In addition, was-drop is also needed in order to derive the correct interpretation of interrogative glauben-VIPs. Moreover, in interrogative glauben-VIPs the host clause is not linked to the second argument variable of the predicate but to the semantic variable T, which is an implicit restriction on the existential quantification introduced by the wh-word was. Hence, non-canonical licensing is essential for the interpretation of both kinds of glauben-VIPs. This is summarized in (44):

(44) a. Interrogative glauben-VIPs:
   Was-drop and non-canonical linking (coindexation of semantic variable T and interrogative host clause)
   b. Declarative glauben-VIPs:
   Non-canonical linking (coindexation of semantic argument variable and declarative host clause)
Furthermore, we saw that both the V2-complement clause and the host clause of integrated parentheticals are assertional. This seems to be related to the following observation discussed in Gärtner (2002): V2 declaratives have proto-assertional force. Gärtner argues that proto-assertional force is responsible for forcing V2-complements out of the scope of modal operators and negation. The same holds true for VIP-hosts, which have also V2-order. Recall that the host clause is semantically an argument of the VIP-predicate. Moreover, embedded proto-assertional force is only licensed if it is ‘parasitic’ on the force (potential) of their matrix clause or if it is ‘absorbed’ on arguments of predicates denoting acts of assertion. While the first condition applies to adverbial V2-clauses and V2-relative clauses, the second condition is responsible for V2CCs and declarative VIPCs (see also Hopper and Thompson 1973, Wechsler 1991, Reis 1997, Green 2000, Lohnstein 2000, and Truckenbrodt 2006). Note finally that this analysis can also derive the restrictions on VIPS hosted by adverbial and relative clauses as illustrated in footnote 17 and example (40) above. Since the propositional complement of a VIP-predicate is (proto-)assertional, it is correctly predicted that adverbial and relative clauses hosting a VIP cannot be in the scope of negation.

In syntax, the VIP is adjoined to the host clause in prefinite or postfinite position. There is no direct relation between the VIP-predicate and its argument, that is, non-canonically licensing also affects syntax. Likewise, Reis (1997) and Gärtner (2001) argue that V2-complement clauses and V2-relative clauses, which are both also non-canonically licensed, are base generated in non-canonical syntactic positions. V2-complement clauses are adjoined to VP, whereas V2-relative clauses, like VIP-hosts, are base-generated outside CP. By contrast, V-final complement clauses occupy the canonical complement position inside VP and V-final relative clauses are base-generated DP-internally. There seems to be a strong correlation between embedded V2 and non-canonical syntactic and semantic licensing (but see Gärtner 2002).

In sum, the propositional argument of the declarative glauben-VIP is not linked to a syntactic (complement) position but only linked to the proposition denoted by the host clause in semantics. If this line of argumentation is correct, how can we account for the V1-order of declarative glauben-VIPs? Note that in German the unmarked word order in declarative clauses is V2. Since in declarative glauben-VIPs, Spec,CP is not occupied by an empty topic, the subject of the VIP is expected to move to this position, that is, we expect that declarative integrated parentheticals in German have the same subject-verb order as their English counterparts. I think there are basically two possible ways to analyze word order in VIPs. On the one hand, VIPs may be analyzed as V2-clauses containing an empty (quotative) operator in clause-initial position. Corver and Thiersch (2001) argue that integrated parentheticals in Dutch contain an operator in Spec,CP (which possibly also binds a variable in complement position, cf. also De Vries 2006 and
Fortmann, this volume). This account might also solve the problem already mentioned in footnote 13. Recall that the omission of the sentence-initial wh-word in interrogative was-parentheticals is only motivated by semantic reasons. Syntactically, this operation is ad hoc. Was-drop in sentence-initial position seems to become superfluous if one assumes that the quotation operator can be specified either as +wh or –wh. In interrogative glauben-VIPs, it is specified as +wh and binds a +wh-variable.

On the other hand, one may follow Reis (1995a), who proposes that VIPs are genuine V1-clauses. (for arguments in favor of the V1-status of declarative VIPs, see Reis 1995a). In German, V1-clauses can be used as narrative declaratives without a topic-comment structure. Önnerfors (1997a) argues that declarative V1-clauses are topicless comment clauses. This corresponds to the pragmatic properties of VIP-constructions discussed in the previous section. Moreover, we already saw that VIP-constructions are hybrid structures with two clauses mutually depending on each other. Therefore, the VIP may be parasitic on the clause structure of the host. Following this line of argumentation, one might assume that in interrogative glauben-VIPs, the VIP-internal wh-word can be deleted because the illocutionary force of both the VIP and the host clause match. This account is supported by the observation that was-drop is only possible if the underlying was-parenthetical occupies a sentence-internal or sentence-final position but ungrammatical if it occupies the sentence-initial position. Note that further research on empty quotation operators, wh-drop, and V1-declarative clauses in German is necessary in order to decide which of the above analyses is adequate (for V1-clauses in German, see Auer 1993, Önnerfors 1997a,b, and Reis 2000a).

8. **Glauben and fragen**

So far, two kinds of VIPs have been analyzed. I have argued that was-parentheticals and interrogative glauben-VIPs belong to the same class. Both are true questions that have been analyzed as indirect dependency configurations involving was-drop and non-canonical linking. Hence, a wh-word base-generated in the complement position of the VIP-predicate is either overtly or covertly present. In the latter case, it is dropped in sentence-initial position. The host clause is linked in a non-canonical way to the variable \( T \) introduced by the wh-word was and serves as a restriction on the existential quantification over propositions. Consequently, was-parentheticals and interrogative glauben-VIPs are genuine V2-clauses. By contrast, declarative glauben-VIPs belong to a different class. Topic drop of

18. Thanks to one of the reviewers for pointing this out to me.
a demonstrative pronoun is not available for independent reasons. Hence, the second argument variable of the VIP-predicate is not realized in syntax and the host clause is linked in a non-canonical way to the second argument variable in semantics. The proposition denoted by the host clause is coindexed with the free argument variable of the VIP-predicate. In this section I finally argue that 

In section 2, we have already seen that 

In this respect 

In 

Moreover, we already saw that in 

The interrogative host is used to ask a question, but the declarative VIP is used to make an assertion. Since both clauses depend on each other, 

In 

Therefore, argument linking in 

Fragen-VIPs can only be inserted into interrogative hosts because they only select interrogative complements. Consequently, 

The host clause cannot be interpreted as a restriction on the overt or covert wh-word. Therefore, the semantic representation of the was-parenthetical in (45) containing a question predicate is ungrammatical. According to (45b), 

This, however, violates the selectional restrictions of 

Hence, there is no grammatical answer corresponding to the question in (45a).

(45) a. *Was fragt Martin, welches Theorem möchte Hans beweisen?

What asks Martin which theorem wants to Hans prove

b. *λp ∃q [ ∃x [ theorem(x) ∧ [ q = want-to-prove(m,x) ] ∧ [ p = ask(h,q) ] ]]

Glauben-VIPs, unlike Fragen-VIPs, can be inserted into declarative hosts because they subcategorize for a declarative complement clause. Furthermore, they can be inserted into interrogative hosts because the host is interpreted as the overt restriction on the (dropped) wh-word in sentence-initial position of the VIP. Thus, 

glauben always selects a declarative complement even if it is inserted into an interrogative parenthetical construction. In all three cases the selectional properties of the VIP-predicate are identical to the selectional properties of the matrix-predicate.
The selectional restrictions of *glauben* need not be changed (or extended) in VIPs. *Glauben* always selects the same clause type, no matter whether it is a VIP- or a matrix-predicate. Note finally, that the V2-pattern of the host clause of *fragen*-VIPs does not provide a problem although *fragen* only selects V-final clauses. The categorical status is irrelevant because the host clause is only linked in semantics to the second argument of the VIP-predicate. In syntax, the host clause is not licensed by the VIP-predicate since it does not occupy the canonical argument position (i.e., the complement position of the VIP-predicate). According to (43b), the host clause and the propositional argument must only be of the same logical type. This is further confirmed by the following example, where the host is an echo question.19

(46) Peter, fragte er, will WOhin gehen.
Peter asked he will where go
‘Peter will go WHERE, he asked.’

9. Conclusion

In this paper, I argued that three different kinds of VIPs must be distinguished. The analysis of interrogative *glauben*-VIPs is based on Dayal’s (1996) analysis of *was*-parentheticals. Interrogative *glauben*-VIPs as well as *was*-parentheticals are true questions. The host clause serves as a restriction on the wh-word. The only difference between interrogative *glauben*-VIPs and *was*-parentheticals is that the former involve *was* drop in sentence-initial position. Hence, *glauben*-VIPs hosted by interrogative clauses are (underlying) V2-structures.

By contrast, this analysis cannot be applied to declarative *glauben*-VIPs and *fragen*-VIPs. I argued that declarative *glauben*-VIPs do not permit topic drop since the propositional argument is (proto-)assertional. Hence, declarative *glauben*-VIPs and interrogative *fragen*-VIPs are genuine V1-structures. The propositional argument of the VIP-predicate cannot be linked to a pronoun dropped in sentence-initial position. As a consequence, the corresponding semantic representation contains a free argument variable, which is non-canonically licensed. *Fragen*-VIPs, which can only be inserted into interrogative hosts, are analyzed similarly to declarative *glauben*-VIPs. The analysis proposed for the propositional argument of *glauben* in declarative VIPs might be extended to embedded V2-clauses in general. The basic assumptions of my analysis are summarized in (47).

(47) a. Interrogative *glauben*-VIPs:
Was-drop & non-canonical licensing (host = restrictor)

19. Thanks to one of the reviewers for example (46).
Non-canonical licensing seems to be the basic property of all VIP-constructions. Although the host clause is always (non-canonically) linked to the propositional argument of the VIP-predicate, it yields quite different interpretations. In was-parentheticals and in the corresponding interrogative glauben-VIPs, on the one hand, the set of propositions denoted by the (interrogative) host restricts the proposition that is asked for. In declarative glauben-VIPs and in interrogative fragen-VIPs, on the other hand, the host clause is linked to the second argument of the VIP-predicate, which is either a proposition or a set of propositions. This difference in interpretation follows from the fact, that the second argument position in was-parentheticals and interrogative glauben-VIPs is occupied by a wh-word. Therefore, the host clause can only be linked to the (covert) restriction on the existential quantification over propositional variables.

I already mentioned that VIPs are highly integrated into their host. Syntactically, the VIP depends on the host clause it is adjoined to. Semantically, the host clause also depends on the VIP since it is either an argument of the VIP-predicate (47b,c) or a restrictor to the second argument of this predicate (47a). Consequently, the illocutionary force of the VIP-construction is not only determined by the host clause but also by the VIP. (48) illustrates that fragen-VIPs are the most interesting case with respect to illocutionary force since the illocutionary force of the VIP does not match the illocutionary force of the host. By contrast, interrogative and declarative glauben-VIPs are unproblematic.

(48) a. Interrogative glauben-VIPs:
   parenthetical = V2-interrogative & interrogative complement
   host = interrogative clause
b. Declarative glauben-VIPs:
   parenthetical = V1-declarative & declarative complement
   host = declarative clause
c. Interrogative fragen-VIPs:
   parenthetical = V1-declarative & interrogative complement
   host = interrogative clause

Note finally that according to the analysis proposed in this paper the selectional properties of VIP-predicates need not be changed. VIP-predicates are always subject to the same selectional restrictions as the corresponding matrix predicates.
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The complement of reduced parentheticals*

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This contribution is concerned with a quite frequent type of parenthetical construction in German like *Theo kam – sagt Paul – mit seinem Hund (Theo brought – says Paul – his dog)*. The propositional argument of the parenthetical verb is not saturated within the boundaries of the parenthetical string. However, its interpretative content is provided by the host clause. I argue that the missing argument is nevertheless present in the syntactic representation. Two possible modes of representation, namely by an implicit argument or by a trace/copy of the host, are rejected in favour of a representation by an empty pronominal which is anaphorically linked to the host. Based on this account, I further discuss apparent restrictions on the lexical choice of the parenthetical verb and its co-constituents.

1. Preliminaries

Parentheticals may occur in quite different shapes. In German, Noun Phrases as well as maximal projections of other lexical categories and clauses are candidates for parenthetical insertion into a hosting clause or phrase (cf. Altmann 1981). Of course, the decision to analyse a given string as a parenthetical hinges on some prerequisites, possibly non trivial ones. The characterization of parentheticals usually does not employ a single criterion but a number of properties. Among these properties, however, two are chiefly referred to. A parenthetical string is prosodically separated from the surrounding constituents by intonational breaks and it functions as a comment on the hosting clause by the speaker. The parenthetical constructions to be discussed in this article meet these two quasi-definitional conditions.¹

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¹ As argued in the editors’ introduction to this volume, intonational breaks do not necessarily mark a parenthetical string. However, in the cases under consideration, it is uncontroversial that the parentheticals are marked by intonational breaks – which are indicated by dashes ‘ – ’.
A particular type of sentential parenthetical construction in German is represented by the examples in (1).2

   ‘Theo brought – Paul says – his dog.’

In all three cases the parenthetical string has the shape of a clause. However, the parenthetical clauses in (1) differ from other instances of clausal parentheticals and clauses in general. They contain a verbal predicate which is subcategorized for a clausal complement – *verba dicendi* and *verba sentiendi* are the prototypical cases. However, there is no constituent within the boundaries of the parenthetical that saturates the propositional argument of the verb. Instead, it is the hosting clause itself which seems to provide the missing argument. This view is certainly motivated by the interpretation of the whole construction.

This type of construction is by no means a peculiarity of the syntax of German. It occurs in other languages as well (cf. e.g., Schneider, this volume, for Romance).3 However, there may be differences between languages with respect to its specific form. Due to the fact that they do not contain an otherwise obligatory argument, the parentheticals in (1) have been dubbed *reduced parenthetical constructions*.4

2. The second line in the glosses should be read with some caution. The English translation does not always match all aspects of the interpretation of its counterpart in German which are relevant to the analysis. This concerns effects from the position of the parenthetical within its host as well as effects from constituent order and lexical choice within the parenthetical. The so-parenthetical (1b) does not have a literal counterpart in English at all. The choice of the adverb so, however, is crucial for certain peculiar restrictions on this construction discussed in section 4.

3. An English example: «*I’m not – as you know – in the habit of speaking on any concert except the Thursday-night previews; but a curious situation has arisen, which merits – I think – a word or two. You’re about to hear a rather – shall I say – unorthodox performance of the Brahms D-minor concerto...*” Leonard Bernstein, introductory remarks on a performance together with Glenn Gould, Carnegie Hall, April 6, 1962. A parallel construction in French is discussed in Desmets and Roussarie (2000).

4. There is also a fourth type of reduced parenthetical formed by a verb-second clause:

   ‘Theo owns a I believe rather dangerous dog’
While the parentheticals in (1b) and (1c) have the same form as ordinary verb-second and verb-final clauses respectively, example (1a) is a special case. Apparently, the parenthetical has the structure of a verb-first clause. Verb-first clauses in German are canonical interrogative yes-no-questions if used as independent main clauses. The parenthetical in (1a), however, has declarative mood.

Interrogative verb-first clauses likewise may be inserted as a parenthetical as in (2).

    Theo came has Paul it told with his dog
    'Theo brought – did Paul say that? – his dog.'

But the interrogative parenthetical in (2) crucially differs from the case in (1a) as the propositional argument that is selected by the verb erzählt is actually saturated by a constituent within the parenthetical string, namely by the pronominal das. The fact that the reduced parenthetical has declarative mood has to be accounted for. Brandt et al. (1992) suggest that verb-first clauses in German may constitute declaratives independent of a constituent filling the SpecCP position. Alternatively, an empty operator may be assumed to fill this position. However, the question of how to determine the content of the empty constituent in SpecCP will not be pursued here because the licensing of the propositional argument of the verb cannot depend on it in general. The main concern of the following considerations will be the syntactic representation of the propositional argument of the parenthetical’s verb. In (1b) and (1c), the SpecCP of the parenthetical clause is undoubtedly filled by the pronominal adverbs so and wie respectively. Hence, there is no reason to postulate an empty operator in these constructions anyway.5

Since the representation of the parenthetical verb’s argument does not depend on the type of the parenthetical, as shall be demonstrated in the following, another interesting topic, the structural relation of the parenthetical to the hosting clause, will not be discussed either.6

The interpretation of Verb-second reduced parentheticals slightly differs from the cases in (1). The content of the belief in (ia) does not comprise the complete proposition of the host. Rather, it seems to be restricted to the identification of the object. (ia) may be paraphrased by: Theo owns a dog, and I believe this dog is a rather dangerous one. Possibly, this interpretation results from insertion of the parenthetical into the object noun phrase instead of insertion into the clause.

5. A recent proposal by Potts (2002), who postulates an empty operator in the case of as-parentheticals – the counterparts of the wie-parenthetical in English – will be discussed in section 3.4.

6. The reader is referred to Fortmann (2005) where an analysis of the structural relation between the parenthetical and its host is elaborated in the framework of Lexical Functional Grammar.
The fact that the reduction of the parenthetical verb’s complement is independent of the internal structure of the parenthetical clause leads us to conclude that the representation of the verb’s complement is alike in the three cases in (1). Therefore a uniform account of this option should be achieved if possible. The goal of the present study is to show that such a uniform account is actually well-motivated.

It is obvious that any analysis of this construction is based on some syntactic representation. However, investigations dealing primarily with semantic or pragmatic properties of the reduced parenthetical quite often are not very explicit about these structural underpinnings. There are two possible modes of modelling the syntax of the parenthetical string with respect to the verb’s complement. Either the respective argument is present in the syntax and, hence, can be described in terms of syntactic description or it is dispensed from the syntactic representation. In this case some kind of post-syntactic procedure of argument saturation has to be assumed.

This has been proposed for instance by Espinal (1991) for reduced parentheticals in general and by Reis (1995) for a special variant, which she calls Verb-first integrated parentheticals (VIP). Prosodic integration (i.e., the lack of intonational breaks), which is a defining property of VIPs, is assumed to be a prerequisite of post-syntactic theta-role assignment (Reis 1995: 71f). However, reduced parentheticals that are separated from their host by intonational breaks obviously do not meet this requirement. Espinal on the other hand refers to discourse information which is accessible to fill the argument slot of the verb in a post-syntactic process.7 But without any further restriction post-syntactic argument saturation seems too powerful a device since availability of relevant information from the discourse usually does not suffice to meet the argument structure requirements of a verb in German.

Therefore a syntactic representation of the reduced parenthetical construction which includes the representation of the verb’s complement within the boundaries of the parenthetical string is worth to be considered.

There is one imaginable account in terms of direct complementation which has to be rejected from the outset; namely the assumption that the parenthetical forms the root structure with the host as its complement clause. In the case of wie-parentheticals, such an account is unsuitable anyway because root sentences do not have verb-final structure.8 In the other two cases such an account would re-

7. Espinal does not dispense with a syntactic representation of the verb’s complement. She employs an empty node to represent the verb’s complement in the syntactic representation of the parenthetical string (Espinal 1991:747). However, the function of this empty node remains unclear in the face of post-syntactic theta role assignment.

8. The case of verb-final exclamatives may be neglected. Wie-Parentheticals do not function as such.
quire rather idiosyncratic and bizarre movement operations applying to arbitrary sequences of terminal elements of the host, which do not form one of its constituents. This would be necessary because of the variety of positions a parenthetical can occupy in the string of the hosting clause. This means that the propositional argument of the verb has to be represented somehow within the structure of the parenthetical itself independent of the representation of the host.

It is convenient to recapitulate the possible modes of syntactic representation of an unexpressed argument of a (verbal) predicate. Three cases have to be taken into consideration.

– The complement is represented by an *implicit argument* of the verb listed in the verb’s lexical argument structure. Verbs like *essen* (*eat*) instantiate this option in a lexicalist theory of argument structure.
– The complement is represented by a *trace or copy* of the hosting clause within the parenthetical.
– The complement is represented by an *empty pronoun* within the parenthetical.

In the following the first two options will be rejected in favour of the third one.

2. The syntactic representation of the missing argument

2.1 Against the implicit argument account

Several verbs are subcategorized for an internal argument which may optionally be left unexpressed. If expressed explicitly, the argument functions as either a direct object (marked for accusative case (3a)) or an indirect object (marked for the dative (3b)).

(3)  

a. Theo öffnet selten die Tür, wenn man klingelt.
   Theo opens seldom the door-ACC if one rings
   ‘Theo seldom answers the door if someone rings.’

b. Theo hilft widerwillig seinem Chef.
   Theo helps reluctantly his boss-DAT
   ‘Theo helps his boss reluctantly.’

If the respective argument is missing, as in (4), it is still present in the interpretation of the clause. That means it is still part of the argument structure of the verb. For stylistic reasons, an adverbial modifier is often required if the argument is missing.

(4)  

a. Theo öffnet selten, wenn man klingelt.
   Theo opens seldom if one rings
   ‘Theo rarely answers the door when someone is ringing.’
b. Theo öffnet, wenn man laut klingelt.
   Theo opens if one aloud rings
   ’If you ring loudly, Theo answers the door’

c. wenn Theo öffnet, können wir eintreten.
   if Theo opens can we enter
   ’When Theo answers the door, we can enter.’

d. Theo hilft widerwillig.
   Theo helps reluctantly

Although, in principle, an implicit argument is possible with these verbs the interpretation of the resulting construction is subject to selectional restrictions with respect to this argument. So for instance, the sentence in (4a) is an appropriate utterance, only if the speaker refers to an event of opening a door. If the object does not meet the selectional requirements of the verb, as in (5), the argument cannot remain implicit. (5b) cannot be interpreted in the sense of (5a), even if the content of the object can be inferred from the context of the utterance.

   (5) a. Theo öffnet gerade die Sardinenbüchse.
       Theo opens just the sardine tin
       ’Theo is opening the sardine tin.’

   b. Theo öffnet gerade. ≠ (5a)
       Theo opens just

Verbs which select a propositional argument may also impose selectional restrictions on their clausal complement. The verb *glauben* (‘believe’), besides certain other verbs, requires a declarative clause and is not compatible with an interrogative one.

   (6) a. Paul glaubt dass Karl mit seinem Hund kam.
       Paul believes that Karl with his dog came
       ’Paul believes that Karl brought his dog.’

   b. *Paul glaubt wer mit seinem Hund kam.
       Paul believes who with his dog came
       *’Paul believes who brought his dog.’

Like other verba dicendi and verba sentiendi, *glauben* may constitute the predicate of a reduced parenthetical. If the propositional argument of this verb had to be represented as an implicit argument analogously to the implicit object of, say, *öffnen* (‘open’), the selectional restriction on the complement would also be expected to hold. But this is not the case. A parenthetical with the verb *glauben* is possible with an interrogative as well as with a declarative host (cf. Steinbach, this volume, Reis 1995). This holds for verb-first as well as for *wie*-parentheticals. But also *so*-parentheticals are not in principle excluded from insertion into an interrogative host.
The selectional restriction by the verb on its complement’s clause type may be overridden in a parenthetical construction. For that reason, the representation of the verb’s argument by means of an implicit argument does not fit. The insertion of so-parentheticals into an interrogative host is no doubt subject to narrower restrictions when compared to the other two constructions. But a satisfactory explanation of these restrictions has to take into account the role of the adverb so (cf. section 4). It cannot be based on selectional restrictions by the verb alone.

2.2 Against the trace or copy account

The representation of the unexpressed argument by means of a trace (or a copy of the moved constituent) would require an antecedent and some movement operation from which the trace emerges. Due to the interpretation of examples as in (1), the complete host clause would have to function as the antecedent of the trace. Movement presupposes that the host originates from a position within the parenthetical. Since the parenthetical is included in the terminal string of the host, one movement operation alone would not suffice to derive the resulting structure. Instead, after extraction of the complement from the parenthetical clause and its adjunction either to the left or to the right, an arbitrary partial string of the complement would have to be split off from it and then adjoined to the opposite edge of the parenthetical. This is obviously not in accordance with otherwise attested movement operations within clauses in German.9

9. A noun phrase, for instance, can only be moved to the SpecCP position as a whole. NP-split only allows for moving a constituent of the NP/DP. It is impossible to move the D- or N-head together with preceding material. Remnant movement, which may be considered, also faces the problem that the C-head of the complement clause would have to be moved together either with
Instead of a movement operation leaving a trace one might favour some kind of ellipsis as a result of (phonological) deletion of a copy of the host within the parenthetical.\textsuperscript{10}

\[(8) \text{ Theo kommt – glaubt Paul } \text{ Theo kommt mit seinem Hund }\]
\[
\text{ Theo comes believes Paul Theo comes with his dog mit seinem Hund.}
\]
\[
\text{ with his dog}
\]
\[
\text{ ’Theo is bringing, Paul believes, his dog.’}
\]

But an already familiar objection can be raised against this analysis: It was shown above that the host does not fulfil the selectional requirements of the parenthetical’s verb. Therefore a structure like the one as sketched in (9) would be ill-formed.

\[(9) \text{ wer kommt – glaubt Paul } \text{ wer kommt mit seinem Hund – }\]
\[
\text{ who comes believes Paul who comes with his dog mit seinem Hund?}
\]
\[
\text{ with his dog}
\]
\[
\text{ ’Who – Paul believes – is bringing his dog?’}
\]

A further objection arises from the possibility of multiple parenthetical insertion.

\[(10) \text{ Theo – sagt Paul – ist heute – sagt Fritz – mit seinem Hund }\]
\[
\text{ Theo says Paul has today says Fritz with his dog sagt Karl – gekommen.}
\]
\[
\text{ says Karl – come}
\]
\[
\text{ ’Theo, says Paul, today brought, says Fritz, his dog, says Karl.’}
\]

The utterance of a sentence like (10) is possible as, for instance, a résumé of a number of assertions made by different persons. In this case, however, the respective utterances referred to by the parentheticals do not have to be completely identical. It is only necessary that the differing assertions refer to an identical event, which is possible in a scenario as given in (11).\textsuperscript{11}

\[\text{its specifier in one case or as part of a non-maximal C’-projection in the other depending on the position of the parenthetical within its host.}\]

\textsuperscript{10}. It should be noted that the structure in (8) slightly differs from a direct complementation structure, an option which is rejected in section 1:

\[(i) \text{ wer kommt glaubt Paul } \text{ wer kommt mit seinem Hund.}\]
\[
\text{ who comes believes Paul who comes with his dog}
\]

\textsuperscript{11}. In the case of identical statements made by different speakers it seems much more natural to insert only one parenthetical formed by a coordination structure as in (i) instead of (10).

\[(i) \text{ Theo ist heute – sagen Paul, Fritz und Karl – mit seinem Hund gekommen.}\]
\[
\text{ Theo is today say Paul, Fritz and Karl with his dog come}
\]
   Paul: Theo has come
   ‘Paul: Theo came.’

b. Fritz: ein Mann ist heute gekommen.
   Fritz: a man has today come
   ‘Fritz: A man came today.’

c. Karl: jemand ist mit seinem Hund gekommen.
   Karl: someone has with his dog come
   ‘Karl: Someone has brought his dog.’

The structural representation of the complement of the parenthetical predicate must therefore provide for some flexibility of interpretation. If the complement were represented by an unpronounced copy of the host in (10), only a uniform interpretation would be available and its truth conditions would be violated in reference to a context like (11). Note that the representation of the complement by an implicit argument, as discussed in section 2.1, is likewise incompatible with the interpretation of (10).

We have to conclude that neither a trace nor a copy of the hosting clause can serve as an adequate representation of the complement of the parenthetical verb.

2.3 Empty pronoun

In the preceding discussion one issue has not yet been considered, namely those verba dicendi et sentiendi that occur as the predicate of a reduced parenthetical do not normally allow for an empty complement. The fact that the complement of the verb may be missing in the case of a parenthetical construction therefore seems peculiar. There are some verbs whose complement is optional in other structural contexts, too. The verb *erzählen* (‘tell’), for instance, does not obligatorily require an overt complement.

(12) Paul erzählt gerne.
   Paul tells with.pleasure
   ‘Paul enjoys telling stories.’

The verb *erzählen* resembles verbs like *öffnen* or *helfen* (‘help’), as far as their internal argument may be realized by an object noun phrase and the interpretation of
the implicit argument is restricted. Other verbs like sagen or meinen do not offer this possibility.

(13) *Paul sagt/meint (gerne).

Paul says/believes (with.pleasure)

*Paul says/believes (with pleasure)

(13) is impossible as an utterance out of the blue. However, in certain discourse contexts, the propositional argument may be missing even with these verbs. If the content of the propositional argument of a verbum dicendi is already present in the discourse by virtue of a previous utterance of some speaker, this argument need not be expressed by a syntactic complement. The case is illustrated by (14):

(14) A: Morgen wird das Wetter besser!

“Tomorrow becomes the weather better”

B: (Ja!) Hoffen alle. Aber ich glaub’ das nicht

“Yes hope all but I believe that not

“Yes, everyone hopes so. But I don’t believe that.”

As a first approximation we can state that a silent complement is available with a verbum dicendi, if its content can be inferred from an anaphoric relation to an appropriate assertion present in the discourse. A comparable constellation is given with the parenthetical construction. In this case, the host clause constitutes an utterance which can provide for the content of the parenthetical verb’s complement. The only difference between the constellation of the discourse in (14) and the parenthetical construction amounts to the fact that in the former case two utterances of two different speakers are given, whereas in the latter, the host as well as the parenthetical are uttered by the very same speaker.

Modelling the relation between the parenthetical verb and its host by means of an anaphoric relation gives us a hint at how to represent the verb’s complement within the syntactic structure of the parenthetical clause. The prototypical elements for establishing anaphoric relations within a discourse are pronomininals. Hence, representing the complement of the parenthetical verb by an empty pronoun seems a promising way of explanation. Of course, more evidence than just an – albeit plausible – analogy is desirable for the justification of this hypothesis. And such evidence is actually available, since for each type of reduced parenthet-

12. In the case of (12) we are strongly inclined to assume that Paul likes to tell stories and not that he likes to report facts.

13. Note that the exclamative Ja functions as a confirmation by the speaker. It does not provide the internal argument of the following verb hoffen.
cal in (1) there exists a counterpart with an overt pronominal, namely the personal pronoun es or the demonstrative das.

   Theo came says Paul it with his dog
   ‘Theo brought – says Paul – his dog.’

   Theo came so says it Paul with his dog
   ‘Theo brought – so says Paul – his dog.’

   Theo came as it Paul says with his dog
   ‘Theo brought, says Paul, his dog.’

The examples in (15b,c) are derived from the corresponding cases in (1b,c) by mere insertion of the pronominal into the otherwise unmodified parenthetical string, namely the position of the finite verb relative to the other constituents of the parenthetical is not altered. A little more has happened in (15a). Here, not only has the pronominal es been inserted, but the structure of the parenthetical has also changed from an apparent verb-first clause to a verb-second clause. This is necessary to preserve the declarative mood of the parenthetical since verb-first clauses regularly have interrogative mood if all the verb’s thematic roles are saturated by overt arguments. Movement of the subject NP Paul to SpecCP, then, results from a strong tendency to avoid a pronominal es in this position.14

On the other hand, insertion of the pronominal es without changing the clause structure of the parenthetical in (1a) is not excluded per se, but then the parenthetical would change from a declarative to an interrogative clause.

   Theo came says it Paul with his dog
   ‘Theo brought – is Paul saying that? – his dog.’

The change to a verb-second clause in (15a), however, may be regarded as an epiphenomenal effect if it is assumed that the verb-first structure of the parenthetical conceals an underlying structure with an empty element filling the SpecCP position, i.e., a verb-second structure. This view may be extrapolated from the analysis of as-parentheticals developed by Potts (2002), but, as already mentioned in section 1, the question of how to represent the left periphery of the verb-first parenthetical does not directly bear on the representation of the verb’s complement.

14. If a demonstrative das is chosen instead of es, it can fill the SpecCP of the parenthetical clause Theo kam – das sagt Paul – mit seinem Hund.
Insertion of an overt pronominal into a reduced parenthetical as in (15) does not affect its interpretation with respect to its truth condition. However, that does not mean that the interpretation of the parenthetical is not at all affected by such an operation. On the contrary, there are interpretative effects especially with respect to the pragmatics and to information structure. But these effects can reasonably be attributed to the choice of an empty vs. an overt pronoun, a topic to which we will return.

Anyway, as a result of the preceding considerations, we may assume that the complement of the parenthetical predicate is represented by a pronominal empty category $e_{pro}$, which fills the base position of the complement of the verb. Unlike overt pronominals, which tend to be moved to the left periphery of the *Mittelfeld*, there is no a priori reason to postulate that the $e_{c}$ is also subject to this tendency.

\begin{align*}
(17) \ a. \ & \text{Theo kam – sagt Paul } e_{pro} \text{ – mit seinem Hund.}^{15} \\
& \text{Theo came – says Paul} \ e_{pro} \text{ with his dog} \\
& \text{’Theo brought – Paul says – his dog.’}
\\
& \text{b. Theo kam – so sagt Paul } e_{pro} \text{ – mit seinem Hund.} \\
& \text{Theo came – so says Paul} \ e_{pro} \text{ with his dog} \\
& \text{’Theo brought – Paul says – his dog.’}
\\
& \text{c. Theo kam – wie Paul } e_{pro} \text{ sagt – mit seinem Hund.} \\
& \text{Theo came – as Paul} \ e_{pro} \text{ says with his dog} \\
& \text{’Theo brought – as Paul says – his dog.’}
\end{align*}

There is yet another parallel between a parenthetical with an overt pronominal complement and one without. In the preceding section the case of multiple parenthetical insertion was mentioned (cf. (10)). Multiple insertion is also possible in cases like (18) and (19) with an overt pronominal complement within the parenthetical.

\begin{align*}
(18) \ & \text{Theo ist heute – Fritz sagt es – mit seinem Hund – Karl} \\
& \text{Theo has today – Fritz says it with his dog – Karl} \\
& \text{sagt es – gekommen.} \\
& \text{says it – come} \\
& \text{’Today Theo brought, says Fritz, his dog, says Karl.’}
\\
& \text{(19) Theo ist heute – so sagt es Fritz – mit seinem Hund – so} \\
& \text{Theo has today – so says it Fritz with his dog – so} \\
& \text{sagt es Karl – gekommen.} \\
& \text{says it Karl – come} \\
& \text{’Today Theo brought, says Fritz, his dog, says Karl.’}
\end{align*}

\footnote{15. One might consider (17a) a case of *topic drop*. In the next section it will be argued that a topic-drop account does not cover the whole range of verb-first parentheticals. The position of the empty pronoun will be discussed in more detail in section 3.1.}
As in (10) the statements made by the parentheticals’ subjects may differ slightly as long as they refer to the same event. The flexibility in the choice of the antecedent by the overt pronoun is on a par with the flexible interpretation of the complement in the case of a reduced parenthetical. This correspondence further confirms the correctness of representing the verb’s complement by an empty pronoun in the latter case.

The argumentation thus far has been focussed on parenthetical constructions with a declarative host clause. Reduced parentheticals, however, can occur within an interrogative host as well. (20) gives examples for all three types of reduced parentheticals.

(20) a. wer kommt – glaubt Paul – mit seinem Hund?
   who comes believes Paul with his dog
   ‘Who – does Paul believe – is bringing his dog?’

b. wer kommt – wie Paul glaubt – mit seinem Hund?
   who comes as Paul believes with his dog
   ‘Who is bringing – as Paul is believing – his dog?’

c. kommt Theo – so scheinen einige jedenfalls zu glauben
   comes Theo as seem some anyway to believe
   – mit seinem Hund?
   with his dog?
   ‘Is Theo bringing, at least that is what some people seem to believe, his dog?’

d. warum kommt Theo – so scheinen einige jedenfalls zu
   why comes Theo so seem some anyway to
   glauben – mit seinem Hund?
   believe with his dog
   ‘Why is Theo, that’s what some people seem to believe, bringing his dog?’

16. (18) and (19) are appropriate summaries in a discourse context like (i).

(i) Fritz: Theo ist heute gekommen.
   Fritz: Theo is today come
   ‘Fritz: Theo came today.’

   Karl: Theo ist mit seinem Hund gekommen.
   Karl: Theo is with his dog come
   ‘Karl: Theo brought his dog.’

17. It should be noted that the parenthetical is inserted into a position following the finite verb of the host. Insertion of the parenthetical into a position immediately adjacent to the wh-phrase in (20b,c) may be less acceptable (cf. Steinbach, this volume). I suppose that conditions on interpretation come into play here. so- and wie-parentheticals seem to require that they are preceded by some constituent of the host that expresses some asserted information if they are inserted into an interrogative host.
In the case of a \textit{wh}-interrogative host, insertion of a so-parenthetical may be judged less possible in some cases.

\begin{itemize}
  \item[(21)] ??wer wird – so vermutet Fritz – mit seinem Hund kommen?
  \begin{itemize}
    \item who will
    \item so assumes Fritz
    \item with his
    \item dog
    \item come
  \end{itemize}
  \begin{itemize}
    \item ‘Who will, thinks Fritz, bring his dog?’
  \end{itemize}
\end{itemize}

At first sight, the choice of the parenthetical verb seems responsible for the somewhat deviant status of (21). But in cases like (21), the contribution of the pronominal adverb so must also be taken into consideration – an issue that we will return to in section 3.4. Insertion of a so-parenthetical containing an interrogative verb is good anyway.

\begin{itemize}
  \item[(22)] wer wird – so fragt Fritz – mit seinem Hund kommen?
  \begin{itemize}
    \item who will
    \item so asks Fritz
    \item with his
    \item dog
    \item come
  \end{itemize}
  \begin{itemize}
    \item ‘Who will, asks Fritz, bring his dog?’
  \end{itemize}
\end{itemize}

Now, the parentheticals in (20) also permit pronominal insertion just like their declarative counterparts.

\begin{itemize}
  \item[(23)] a. wer kommt – Paul glaubt es – mit seinem Hund?
  \begin{itemize}
    \item who comes
    \item Paul believes it
    \item with his
    \item dog
  \end{itemize}
  \begin{itemize}
    \item ‘Who is bringing, as Paul believes, his dog?’
  \end{itemize}

  \item[(23)] b. wer kommt – wie Paul es wohl glaubt – mit seinem Hund?
  \begin{itemize}
    \item who comes
    \item as Paul it
    \item particle
    \item believes
    \item with his
    \item dog
  \end{itemize}
  \begin{itemize}
    \item ‘Who is bringing, as Paul believes, his dog?’
  \end{itemize}

  \item[(23)] c. kommt Theo – so scheinen es einige jedenfalls zu glauben – mit seinem Hund?
  \begin{itemize}
    \item comes
    \item Theo
    \item so seem
    \item it
    \item some
    \item anyway
    \item to
    \item believe
    \item with his
    \item dog
  \end{itemize}
  \begin{itemize}
    \item ‘Is Theo, as some people seem to believe, bringing his dog?’
  \end{itemize}

  \item[(23)] d. warum kommt Theo – so scheinen es einige zu glauben – mit seinem Hund?
  \begin{itemize}
    \item why
    \item comes
    \item Theo
    \item so seem
    \item it
    \item some
    \item to
    \item believe
    \item – mit
    \item seinem
    \item Hund?
    \item – with
    \item his
    \item dog
  \end{itemize}
  \begin{itemize}
    \item ‘Why is Theo, as some people seem to believe, bringing his dog?’
  \end{itemize}

  \item[(23)] e. wer kommt – so fragt Fritz es immer wieder – mit seinem Hund?
  \begin{itemize}
    \item who comes
    \item so asks
    \item Fred
    \item it
    \item always
    \item again
    \item with
    \item his
    \item dog
  \end{itemize}
  \begin{itemize}
    \item ‘Who is bringing, Fred keeps asking, his dog?’
  \end{itemize}
\end{itemize}

The parallelism between (20)/(22) and (23) justifies the representation of the complement of reduced parentheticals within interrogative hosts by an empty pronominal in (20), too.
The parallelism between reduced parentheticals and their counterparts with an overt pronominal complement does not only direct the choice between the alternative modes of syntactic representation on the condition that this complement is actually represented in the syntax. It also provides some indirect support of this latter assumption itself. If instead some post-syntactic saturation of the complement is postulated, the parallelism has to be accounted for. There seems to be no a priori reason that would prevent for instance an ellipsis like interpretation of the complement under string identity with the host. This means that, in order to account for the interpretative facts, even a post-syntactic analysis would have to refer to distinctions that have quite clear categorial foundations in the syntax.

3. Some restrictions on the reduced parenthetical

Reduced parenthetical clauses are subject to a number of restrictions on the choice of their main verb and some further constituents such as for instance negative elements (cf. Reis 1995 for an overview) or certain kinds of adverbials. Since these restrictions may give rise to some scepticism about the proposed analysis, they will be considered in this and the following sections.

3.1 Restrictions on the predicate

One such restriction, which might be a consequence of conditions on the predicate, concerns the grammatical function of the missing complement. It is quite commonly assumed that the missing complement is restricted to the object argument of the parenthetical verb (cf. Reis 1995). If true, the restriction has to be stated in terms of the argument structure of the verb instead of grammatical functions because the verbal predicate of the parenthetical permits passivization.

   Theo comes is claimed with his dog
   ‘Theo is bringing, people claim, his dog.’

   Theo comes so is claimed with his dog

   Theo comes as claimed is with his dog

A more suitable formulation of the restriction, then, has to refer to the status of the missing complement as an internal argument of the verb. This might also capture cases like (25), in which the verb is optionally subcategorized for a clausal subject. In this case, the parenthetical verb might be analysed as an unaccusative and the
complement as its internal argument, although this assumption may not be unproblematic.\textsuperscript{18}

Theo comes stands on the note with his dog  
‘Theo is bringing, it says on the note, his dog.’

However, we also have to consider constructions like (26).

Theo comes boomed out of the telephone with his dog  
‘Theo is bringing, it boomed down the telephone, his dog.’

Theo comes wonders \textit{refl.} Paul with his dog  
‘Paul is surprised that Theo is bringing his dog.’

dröhnen in (26a) certainly does not count as a bona fide unaccusative verb and the complement of the inherent reflexive verb \textit{sich wundern} in (26b) alternates with a prepositional object. The same holds true for a number of other verbs like \textit{informieren}, \textit{aufklären} (‘inform’).

The fact that verbs like \textit{aufklären} may form the predicate of the parenthetical also provides an argument against an otherwise imaginable account of the verb-first parenthetical in terms of topic drop (Huang 1984, Sternefeld 1985). Topic drop is restricted to subjects and objects in German. It is impossible with prepositional objects. Hence, a consistent account of the whole range of facts about reduced parentheticals cannot be achieved under a topic drop analysis and neither is a derivation of the verb-first parenthetical from an underlying \textit{so}-parenthetical appropriate. The adverb \textit{so} does not function as a kind of correlate of the verb’s argument which is dropped in the verb-first construction (cf. section 3.3).

Restrictions on the grammatical function of the missing argument do not directly bear on the choice of the parenthetical’s predicate. Hence, it seems more adequate to explain restrictions on the predicate by reference to semantic and/or pragmatic conditions on the interpretation of the parenthetical construction as a whole.

\textsuperscript{18} Selection of the auxiliary \textit{sein} is one indicator of unaccusativity in German. At least in some dialects, the perfect participle of the verb \textit{stehen} may select for the auxiliary \textit{sein} instead of \textit{haben} – but not all speakers allow that choice.

(i) Theo ist vor der Tür gestanden.  
Theo is before the door stood  
‘Theo stood at the door.’

However, it may be less clear that \textit{sein} is also appropriate in the case of the parenthetical.
3.2 Restrictions on negation

Another restriction that holds for reduced parentheticals is the prohibition against negative or negated predicates (cf. Reis 1995). Utterances like (27) are unacceptable.

   Theo comes say I not with his dog
   *’Theo is bringing, I’m not saying, his dog.’

   Theo comes contest I with his dog
   *’Theo is bringing, I deny, his dog.’

Of course, verba dicendi are not resistant to negation in general. The unacceptability of (27) rather points to some general pragmatic conditions on parentheticals. The case may be regarded as an instance of Moore’s Paradox: a speaker cannot felicitously make a statement of the form: \( p \land \neg p \). But this would happen if both the host and the parenthetical represented two independent statements attributed to the very same speaker. The assertion of the host is simultaneously denied by the parenthetical resulting in a pragmatically improper contradiction.

However, the restriction on negation is even narrower than illustrated by the examples in (27) since negation is equally prohibited with a non-first-person subject within the parenthetical.

   Theo comes says Fritz not with his dog
   *’Theo is bringing, Fritz is not saying, his dog.’

   Theo comes contests Fritz with his dog
   *’Theo is bringing, Fritz denies, his dog.’

We can state, as a matter of fact, that (without any further proviso) the assertion of the host may not be contradicted by the assertion that is attributed to the subject of the parenthetical in the case of a verb-first reduced parenthetical. This restriction also points to general pragmatic conditions on discourse coherence.

3.3 Restrictions on adverbial modification

Besides negation, certain sentence adverbs such as allerdings (‘admittedly’, ‘though’) and jedoch (‘however’) are prohibited in reduced parentheticals, too.\(^{19}\)

---

\(^{19}\) It should be noted that adverbs that function as sentence adverbs may also have as second use as focus elements which emerges if e.g., the subject *ich* in (29a) is stressed (cf. Frey 2004). This reading is not pertinent here.
    Theo comes say I though/however with his dog
    *’Theo is bringing, I’m saying though, his dog.’

    Theo comes says admittedly/however Fritz with his dog
    *’Theo is bringing, Fritz says though, his dog.’

Adverbs like *jedoch* constitute a contrast or incompatibility between the sentence in which they occur and some other statement. They further presuppose that a contrasting statement is present in the (immediately) preceding discourse. In the case of (29), however, the assertion of the host is identical with the assertion that is attributed to the parentheticals’ subject. Hence no contrast emerges and the discourse requirements of the contrasting adverb are not met. The case of the sentence adverbs is in some sense complementary to the case of negation. Without any explicit marking (cf. (27), (28)), the assertion of the parenthetical may not contradict the assertion of the host. If a contrast is explicitly marked as in (29), the assertion of the parenthetical must not imply the assertion of the host.  

20. For reasons of space, the discussion is restricted to verb-first reduced parentheticals. The facts about *so-* and *wie-*parentheticals are parallel. Examples with negation and negative predicates are listed in (i) and (ii); (iii) and (iv) illustrate the case of contrasting sentence adverbs.

(i)  a. *Theo kommt – so sage ich nicht – mit seinem Hund
    Theo comes so say I not with his dog

    Theo comes so contest I with his dog

    c. *Theo kommt – so sagt Fritz nicht – mit seinem Hund
    Theo comes so says Fritz not with his dog

    d. *Theo kommt – so bestreitet Fritz – mit seinem Hund
    Theo comes so contests Fritz with his dog

    Theo comes as I not say with his dog

    Theo comes as I contest with his dog

    c. *Theo kommt – wie Fritz nicht sagt – mit seinem Hund
    Theo comes as Fritz not says with his dog

    d. *Theo kommt – wie Fritz bestreitet – mit seinem Hund
    Theo comes as Fritz contests with his dog

    Theo comes so say I admittedly/however with his dog

    b. *Theo kommt – so sagt allerdings/jedoch Fritz mit seinem Hund
    Theo comes so says admittedly/however Fritz with his dog
3.4 Parentheticals with an overt pronominal complement

Let us now turn to the corresponding parentheticals with an overt pronoun.

   Theo comes I say it not with his dog
   ??‘Theo is bringing, I’m not saying it, his dog.’

      Theo comes I contest it with his dog
      *‘Theo is bringing, I’m denying it, his dog.’

   Theo comes Fritz says it not with his dog
   ??‘Theo is bringing, Fritz is not saying it, his dog.’

      Theo comes Fritz contests it with his dog
      ??‘Theo is bringing, Fritz is denying it, his dog.’

The examples in (30a) and (31) are by no means grammatical. Nevertheless their deviance may be judged as not as severe as in the case of (30b). This shift can be attributed to the fact that in the unmarked case the verb bears the sentence stress. These examples improve considerably if the verb is emphasized so that a contrastive reading arises. This effect is further strengthened if a contrastive sentence adverb is also inserted into the parenthetical.21

   Theo comes I say it however not everyone with his dog
   ‘Theo is bringing, though I’m not telling anyone, his dog.’

      Theo comes Fritz says it however not with his dog
      ‘Theo is bringing, though Fritz doesn’t say so, his dog.’

      Theo comes Fritz contests it however with his dog
      ‘Theo is bringing, though Fritz denies it, his dog.’

In the first place we have to conclude that in (32a) the trap of self-contradiction induced by the negation is circumvented and that the parenthetical is sufficiently

      Theo comes as I admittedly/however say with his dog

      Theo comes as Fritz admittedly/however says with his dog

21. Emphasis is indicated by small capitals.
different form the host clause to license the presence of the adverb *jedochn*. But there is a remarkable restriction on the interpretation of the verb *sagen* in (32a).

*Sagen* is ambiguous. It may either mean the act of uttering a statement or it may convey the claim that its complement expresses a true proposition. However, in the case of (32a) the speaker is committed to the first reading which is forced if a dative object is added to the parenthetical. The second reading is unavailable for the following reasons. Uttering the host clause, the speaker is committed to its truth. This, however, would be denied by uttering the parenthetical, which is a clear case of Moore’s paradox. For the very same reason, (30b) is an improper statement since the verb *bestreiten* implies the rejection of the host clause due to its lexical meaning. Under the first reading no such conflict arises. The speaker does not deny the truth of the host. Instead he only refrains from revealing his knowledge.

In the case of (32b,c), the interpretation is more liberal since both readings of the verb *sagen* are compatible with the whole construction. As the assertion of the host is attributed to two different speakers, a self-contradictory statement does not arise.\(^{22}\)

In contrast to these parentheticals with an overt pronominal argument, a reduced parenthetical with a negated or negative predicate, however, does not improve even if a contrasting sentence adverb is also inserted.

\[
\begin{align*}
\text{(33) a.} & \quad \text{Theo kommt – sagen ich } \text{jedochn} \text{ nicht – mit seinem Hund.} \\
& \quad \text{‘Theo is bringing – though I’m not saying that – his dog.’}
\end{align*}
\]

\[
\begin{align*}
\text{b.} & \quad \text{*Theo kommt – sagt Fritz } \text{jedochn} \text{ nicht – mit seinem Hund.} \\
& \quad \text{‘Theo is bringing, though Fritz is not saying that, his dog.’}
\end{align*}
\]

\[
\begin{align*}
\text{c.} & \quad \text{*Theo kommt – bestreitet Fritz } \text{jedochn} \text{ – mit seinem Hund.} \\
& \quad \text{‘Theo is bringing, though Fritz denies it, his dog.’}
\end{align*}
\]

We are now confronted with the somewhat peculiar situation that the overt expression of the pronominal crucially affects the pragmatic conditions on the parenthetical construction compared to the reduced parenthetical. This may cast doubt on the representation of the complement by an empty pronominal in the latter case because, prima facie, there is no obvious reason why the phonological content of a pronoun should affect the choice of the verbal predicate. There is, however, a sensible explanation of these facts.

\(^{22}\) Some speakers may be more restrictive with respect to (32b). They do not accept the claim reading of *sagen*. Since the compatibility restrictions are pragmatic in nature this is not an extraordinary fact.
3.5 The position of e\textsubscript{pro} within the parenthetical string

In (32) the overt pronominal is not inserted into an arbitrary position within the parenthetical but into a position preceding the sentence adverb. This is not the position of the complement of the verb but a derived position. With respect to the reduced parenthetical it is argued above (cf. section 2.3) that the empty pronominal is generated in the base position of the verb's complement.

While there are specific reasons for an overt pronominal to move to the left periphery of the Mittelfeld in German (cf. Cardinaletti 1999, Lenerz 1992, 1994) there are no a priori reasons for an empty category to behave alike. On the other hand, even though the tendency to occupy a peripheral position is quite strong with overt pronominals it is not obligatory.\textsuperscript{23} In a constellation like (32), however, the overt pronominal seems to be restricted to a position preceding the sentence adverb. If the order is reversed, the acceptability considerably decreases.

   "Theo is bringing – though I'm not saying that – his dog."
   "Theo is bringing, though Fritz is not saying that, his dog."
   "Theo is bringing, though Fritz denies it, his dog."

(34) is in fact no better than (33), the example with the reduced parenthetical. Under the assumption that the empty pronominal fills the complement position of the verb, as does the overt pronominal in (34), the deviant status of (33) becomes less mysterious.

\textsuperscript{23}. The tendency to move the pronominal to the left periphery of the mittelfeld is stronger with \textit{es} than with other personal pronouns which moreover may be stressed. But the occurrence of \textit{es} in a position following a sentence adverb is not per se excluded (cf. Lenerz 1992) although it may be less preferred. This also holds for a pronominal which refers to a statement already present in the discourse.

(i) Theo hat einen kleinen Skandal provoziert als er mit
   "Theo provoked a minor scandal when he turned up with his dog at reception. But Carl has probably already/not reported this to you."
Now, two questions arise. What distinguishes the position before the sentence adverb from the position following it? How does this distinction affect the constructions under discussion?

In a recent article Frey (2004) identifies the position preceding a sentence adverb as a *topic position* in the clause structure of German. Based on the concept of *aboutness topic* in the sense of Reinhart (1981, 1995), Frey argues that a phrase which contains material that a statement is about has to occupy this topic position.

One might argue that movement of an overt pronominal into the *Wackernagel Position* preceding a sentence adverb is independent of the assignment of some discourse function. That is true, but we have to ask the opposite question whether a pronominal preceding a sentence adverb may assume the topic position as described by Frey. Since there seems to be no reason to deny this possibility in principle, we have to consider the interpretation of the construction.

The interpretation of the parentheticals with an overt pronominal complement, in fact, gives support to an analysis of this pronoun as a topic. Reconsider the case of (32a).

(32)  

Theo comes I say it however not with his dog  
'Theo is bringing, though I'm not telling anyone, his dog.'

Due to the occurrence of the first person pronoun *ich* the subject of the parenthetical and the speaker are identified. The same holds true of their respective statements because of the anaphoric relation of the pronoun *es* to the host. In order to avoid a self-contradicting statement the following conditions hold in (32a).

The scope of the negation is restricted to the verb, which has to be stressed. Because of the identity of the speaker and the parenthetical’s subject, the interpretation of the verb *sage* in (32) is restricted to a meaning corresponding to the verb *utter*. Negation within the parenthetical, furthermore, is only felicitous if the re-
sulting contrast is explicitly marked. Explicit marking is provided by the contrasting adverb *jedoch*, which, in turn, requires two contrasting statements. This contrast is forced if the statement expressed by the host functions as the topic of the parenthetical clause, indicating that it is already present in the discourse. On the other hand the content of the host constitutes the topic of the parenthetical just in case the pronoun, which is linked to the host, occupies the clause internal topic position as in (32a). This line of reasoning can easily be extended to the other examples in (32b) and (32c). If, however, the overt pronominal cannot be interpreted as a topic since it occupies a position following the adverb as in (34), the discourse requirements are not optimally met.

The same effect emerges if, as assumed in the examples in (35), the empty pronominal fills a position following the adverb.24

If neither negation nor a contrastive adverb are contained in the parenthetical, the empty pronominal may be generated in the canonical object position. This constellation has already been anticipated in (17).

   Theo came says Paul $e_{pro}$ with his dog
   ‘Theo brought – Paul says – his dog.’

   b. Theo kam – so sagt Paul $e_{pro}$ – mit seinem Hund.
   Theo came so says Paul $e_{pro}$ with his dog

   c. Theo kam – wie Paul $e_{pro}$ sagt – mit seinem Hund.
   Theo came as Paul $e_{pro}$ says with his dog
   ‘Theo brought – as Paul says – his dog.’

The discrepancy between (32) and (33) does not undermine an analysis of the verb’s complement in terms of an empty pronominal. It emerges from a mismatch between the interpretation of the parenthetical clause in which the empty pronominal fills an argument position of the verb and the discourse requirements that are imposed by both the contrasting adverb and the negation.

---

24. It should be noted that the requirements on the position of the pronominal relative to the sentence adverb result from the negation and the choice of a *contrastive* adverb. In a case like (i) with a non-contrastive adverb the pronominal may follow the adverb as well, as the adverb may occur in the reduced parenthetical.

   Theo comes Paul said even it yet before with his dog

   Theo comes says Paul even yet before with his dog
3.6 Transition to a mono-clausal interpretation

The assumption concerning the position of the empty pronominal may also shed some light on another facet of the reduced parenthetical, namely the tendency towards a monoclausal interpretation.

In general, the two parts of a parenthetical construction, the host and the parenthetical, constitute two assertions (or questions or a combination of both) by the speaker, who performs two speech acts by uttering them.

\[
\text{(36) Theo hat – er ist Klempner – die Heizung im Handumdrehen repariert.}
\]

\text{Theo has – he is plumber – the heating in a jiffy fixed}

‘Theo has – he is a plumber – fixed the heating in a jiffy.’

In this example the host and the parenthetical form two statements which are both attributed to the speaker. Furthermore the parenthetical is interpreted as a comment that provides support in order to confirm the truth or plausibility of the host.

The same holds of a parenthetical with a verbum dicendi predicate and an overt pronominal complement.

\[
\text{(37) Theo hat – Fritz sagt es – die Heizung im Handumdrehen repariert.}
\]

\text{Theo has Fred says it the heating in a jiffy fixed}

‘Theo has – Fritz says – fixed the heating in a jiffy.’

Uttering (37), the speaker makes a claim about Theo, namely that he has fixed the heating and a second one about Fritz, namely, that he has made (by and large) the same statement as the speaker himself. Although the parenthetical serves as a confirmation of the speaker’s statement, the assertion of the host is attributed to the speaker.

However, in the case of a reduced parenthetical the situation changes.

\[
\text{(38) Theo hat – sagt Fritz – die Heizung im Handumdrehen repariert.}
\]

\text{Theo has says Fritz the heating in a jiffy fixed}

‘Theo has – Fritz says – fixed the heating in a jiffy.’

At first sight, the interpretation of (38) seems quite similar to the interpretation of a true complementation structure like (39) with the verbum dicendi forming the predicate of the root clause.

\[
\text{(39) Fritz sagt dass Theo die Heizung im Handumdrehen repariert hat.}
\]

\text{Fritz says that Theo the heating in a jiffy fixed has}

‘Fritz says that Theo has fixed the heating in a jiffy.’

In (38) the speaker’s assertion of the host obviously recedes into the background in favour of the assertion of the parenthetical alone. As a consequence, the assertion of the host seems to be attributed to the parenthetical’s subject alone instead of the
speaker. Since the empty pronoun cannot be interpreted as a topic of the parenthetical due to its syntactic position, it is not necessary to presuppose that an independent statement of the host is already present in the discourse. This fact suggests an interpretation according to which the utterance of the host is attributed to the parenthetical’s subject alone; hence, the direct complementation-like interpretation of (38).

4. So-parenthetics

Let us now turn to the second type of parenthetical construction, the so-parenthetical. Prima facie, the only difference of this construction compared to the verb-first parenthetical lies in the presence of the adverb so. Therefore, this element might be considered a kind of correlate which saturates the argument of the verb. But this assumption is questionable for a number of reasons. so would be a quite idiosyncratic correlate as compared to the canonical correlates es (for subject and object clauses) and darauf/darüber (for prepositional object clauses). Furthermore, its occurrence is not restricted to reduced parenthetics. Rather, it may occur to-

25. Reinhart (1983) already differentiates between speaker oriented sentences containing parentheticals and subject oriented sentences containing parentheticals in English. According to her analysis, this difference emerges from different syntactic structures. Speaker oriented parentheticals originate as adjuncts to the host. Subject oriented parentheticals are derived by slifting of the host (in the sense of Ross 1973) from the complement position within the parenthetical. As argued above, a movement analysis is problematic for parentheticals in German.

26. Although the interpretation of (38) shifts in the way described, the speaker is not completely released from his responsibility for the truth of the host because the simultaneous negation of the host by the speaker as in (i) is odd.

(i) ?Theo hat – sagt Fritz – die Heizung im Handumdrehen repariert aber das stimmt nicht.

Theo has says Fritz the heating in a jiffy fixed but this is wrong.

The divergence of (i) is not as severe as in the case of (ii)

(ii) *Theo kommt, aber das stimmt nicht.

Theo comes but this is wrong.

but a touch of Moore’s paradox is still present in (i). In a complementation structure like (iii) no such effect emerges.

(iii) Fritz sagt, dass Theo kommt, aber das stimmt nicht.

Fritz says that Theo comes but that is wrong.

‘Fritz says that Theo will come but that is wrong.’
gether with verbs which denote an act of utterance but do not take a clausal argument, such as *reden, sprechen*.

(40) Theo kommt – so reden die Leute – mit seinem Hund.
Theo comes so talk the people with his dog
‘Theo is bringing, that’s what people are saying, his dog.’

As already mentioned in section 2, the choice of the parenthetical’s predicate is more restricted with *so*-parentheticals. All these facts call into question an analysis of the adverb as a mere correlate.

Frequently, an identity condition with respect to the illocutionary type of the host and the complement of the parenthetical’s verb has been considered (cf. Tappe 1981, Grewendorf 1988, Haider 1993, Pittner 1993). There is no agreement on whether this condition holds for parentheticals in general or only for certain constructions, in particular the *so*-parenthetical. First of all it should be clear that such a condition does not account for the restrictions on negation and adverbial modification discussed above in sections 3.2 and 3.3. Furthermore, it cannot be as strict as selectional restrictions on the clause type usually are in cases of clausal complementation (cf. examples in (20) and (23)). It is thus sensible to inquire into the contribution of *so* to the interpretation of the whole construction.

It is quite obvious that an anaphoric relation is established between the argument of the parenthetical’s verb and the host clause.

Theo comes so says (it) Fritz with his dog
‘Theo is bringing – that’s what Fritz is saying – his dog.’

However, unlike other verb-second parentheticals and the verb-first parenthetical, a second relation to the host can be detected in the case of *so*-parentheticals which is established by the adverb *so*. There is a considerable contrast between (42a) and (42b).

(42) a. Theo hat – Fritz bestreitet es jedoch – die Heizung im
Theo has Fritz contests it however the heating in
Handumdrehen repariert.
a jiffy fixed
‘Theo fixed – though Fritz denies it – the heating in a jiffy.’

b. *Theo hat – so bestreitet es Fritz jedoch – die Heizung
Theo has so contests it Fritz however the heating
im Handumdrehen repariert.
in a jiffy fixed
‘Theo has, Fritz denies it however, fixed the heating in a jiffy.’
It is clear that this contrast cannot be accounted for by appealing to a selectional restriction by the verb or to a condition on clause type correspondence. Preferably, an explanation has to consider the two aspects of form and content of the statement which is attributed to the parenthetical’s subject and to the speaker respectively. In (42a) it is the content expressed by the host which *Fritz* denies to be true. The reference to this content is mediated by the anaphorical relation of the pronoun *es* to the host. It is obvious that *Fritz* cannot have uttered the host clause in order to deny its truth. On the other hand, if he has uttered the host clause, the verb *bestreitet* is the wrong choice for the parenthetical’s predicate. Both cases end up in a contradiction.

Such a contradiction, however, seems to arise in (42b). This can be explained in the following way. The adverb *so* functions as an adverbial modifier expressing the mode in which the subject *Fritz* conveys the content referred to by the pronominal *es*. The literal form of an utterance can reasonably be considered a mode of expressing its content. The adverb *so* is linked to the host. The target of this link, however, is not the content of the host but its literal form. Hence the contradictory interpretation is forced in (42b) that the denial by Fritz is expressed in the form of the statement which is denied.

The twofold relation to the host is also attested by constructions with a host containing an idiomatic predicate. As the parallel interpretations of (43a) and (43b) confirm, this is independent of the overt or non overt realization of the complement within the parenthetical.

   Theo has so says it Paul yesterday into.the grass bitten
   ‘Theo, that’s how Paul puts it, kicked the bucket yesterday.’

   Theo has so says Paul yesterday into.the grass bitten
   ‘Theo, that’s how Paul puts it, kicked the bucket yesterday.’

The host clause in (43) can be paraphrased by (44) with the corresponding non idiomatic predicate *sterben* (*to die*).

(44) Theo ist gestern gestorben.
   Theo is yesterday died
   ‘Theo died yesterday.’

But in the case of (43) we are inclined to attribute the literal utterance of the host but not its paraphrase in (44) to the parenthetical’s subject. This fact follows from

27. In (42b) the adverb *so* refers to the form of the whole host clause. Partial reference may be possible, too, so for instance in the case of multiple parenthetical insertion; cf. (19).
the assumption that the adverb *so*, which refers to the literal form of the host, modifies the parenthetical predicate.

The simultaneous attribution of the host to the speaker and the parenthetical’s subject can be cancelled by adding negation and the contrastive adverb *jedoch* to the parenthetical. But this is only possible with an overt pronominal argument of the verb preceding the adverb *jedoch*.

(45) a. Theo hat – so sagt *es* Paul jedoch *nicht* – gestern.
   Theo has so says it Paul however not yesterday
   ins Gras gebissen
   into.the grass bitten
   ‘Theo, however Paul does not put it like that, kicked the bucket yesterday.’

b. ??Theo hat – so sagt Paul jedoch *es* nicht – gestern
   Theo has so says Paul however it not yesterday
   ins Gras gebissen.
   into.the grass bitten
   ‘Theo, however Paul does not put it like that, kicked the bucket yesterday.’

c. ??Theo hat – so sagt Paul jedoch *e*$_{pro}$ nicht – gestern
   Theo has so says Paul however not yesterday
   ins Gras gebissen.
   into.the grass bitten
   ‘Theo, however Paul does not put it like that, kicked the bucket yesterday.’

We can conclude that, with respect to the occurrence of a contrasting sentence adverb within the parenthetical, the *so*-parenthetical and the verb-second/verb-first parenthetical pattern alike. Insertion of such an adverb is only possible if the complement of the verb is represented by an overt pronoun preceding the adverb, otherwise, it is barred.

5. *Wie*-parentheticals

*Wie*-parentheticals are verb-final clauses. Therefore the structure of the left periphery is not as easy to determine as in the case of verb-first and verb-second parentheticals. Recently, Potts has given an account of *as*-parentheticals (the English counterpart of the *wie*-parenthetical) which he explicitly claims holds cross-linguistically (Potts 2002: 637). According to his analysis, *as* is a preposition which is complemented by a CP with an empty C$^0$ head. The specifier of the CP is filled by an empty operator binding a trace in the complement position of the verb. It has already been argued that an empty operator account is not well-motivated for parentheticals in German. The categorization of *wie* as a preposition is also question-
able since *wie* may otherwise function as a *wh*-proadverb (in interrogatives) or as a relative proadverb (in relative clauses). Surely, the fact that *wie* is regularly categorized as an adverb alone may not suffice as an argument against its being a preposition. But its categorizing as a preposition is rather ad hoc without any independent motivation.

An analysis as a free relative clause has been proposed for French *comme*-parentheticals by Desmets and Roussarie (2000). Such a move seems promising also for an account of the *wie*-parenthetical in German. *wie* functions as a modal modifier of the parenthetical predicate while the free relative parenthetical has the same function with respect to the host. This is evident for instance in the interpretation of (46).

    Theo has as Paul say would into.the grass bitten
    ‘Theo – as Paul would put it – kicked the bucket.’

The parenthetical specifies the mode in which the speaker expresses the fact that Theo died. Indeed, he employs the idiom *ins Gras beißen* which represents the mode in which *Paul* usually expresses the fact that someone died.

Further support for the free relative clause account is provided by a parenthetical construction which is completely parallel to the *wie*-parenthetical except that the locative proadverb *wo* occurs instead of *wie*.

(47) ich habe – wo Paul mir gesagt hat – die Schlüssel gefunden.
    I have where Paul me said has the keys found
    ‘I found the keys where Paul told me (that they would be).’

Finally, placement of *wie* in SpecCP of the parenthetical clause is compatible with the representation of the verb’s complement by an empty pronoun (cf. (17c)).

Like the other two types, *wie*-parentheticals are subject to restrictions on the choice of the predicate, negation and adverbial modification. However, they are not completely parallel. For instance, insertion of negation and a contrasting adverb, which is possible with verb-first and *so*-parentheticals, seems somewhat odd.

(48) ?Theo hat – wie es Paul jedoch nicht sagt – gestern
    Theo has as it Paul however not says yesterday
    ins Gras gebissen.
    into the grass bitten
    ‘Theo, though Paul doesn’t put it that way, kicked the bucket yesterday.’

An explanation of these facts has to take into account the contribution of the adverb *wie* and the interpretative effect arising from the modification of the host by the parenthetical. These issues deserve further investigation but they are not in
conflict with the proposed representation of the complement of the parenthetical’s verb by an empty pronominal.

6. Summary

Based on the assumption that the arguments of a verb have to be saturated by constituents in the syntactic representation of a clause it is argued that the empty argument of a reduced parenthetical is represented by an empty pronominal category which is anaphorically linked to the host. This account is motivated by the fact, that a reduced parenthetical can be transformed into a non-reduced one by insertion of an overt pronoun.

Certain restrictions on the choice of the predicate, on negation and on the insertion of adverbs, which hold irrespective of the overt or non-overt realization of the verb’s complement, are attributed to a prohibition against contradicting statements by the speaker and the parenthetical’s subject. Some further restrictions on reduced parentheticals emerge from the position of the empty pronoun and its exclusion from the topic position in the Mittelfeld of a clause. Orthogonal to the overt or covert representation of the parenthetical verb’s argument, the relation of the adverb so to the host in the case of a so-parenthetical as well as the adverbial function of a wie-parenthetical with respect to the host are sources of restrictions on the parenthetical’s predicate, negation and adverbial modification.

References


Long extraction or parenthetical insertion? Evidence from judgement studies*

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There has been a long-standing discussion of German constructions such as *Wer glaubst du hat Recht?* They could either be analysed as a host clause *Wer hat Recht?* plus parenthetical insert *glaubst du* or as a long extraction from a verb-second clause. We contribute to this debate by using the magnitude estimation technique to test whether the predicate restrictions advanced in favour of the parenthetical analysis (Reis 1995) are borne out in judgement studies. We will see that the overall tendencies of our experiments favour the parenthetical account.

1. Two competing analyses

For structures like (1), two competing accounts exist: an extraction and a parenthetical analysis.

(1) Wen denkst du hat Wolfgang angerufen?
    whom think you has Wolfgang called
    ‘Whom do you think Wolfgang has called?’

From the outset, both analyses are plausible. In German, there are subordination structures with and without overt complementizer. In (2), both clause types serve as an argument of the matrix predicate. While the two clause types are identical in function, there is a larger syntactic contrast. In subordinate clauses with an overt

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1. We will translate this kind of construction with the English extraction construction. No preliminary decision in favour of the extraction analysis for the German data is meant by this.
complementizer, usually *dass* (‘that’), the finite verb occupies the clause-final position. By contrast, in complementizerless subordinate clauses the finite verb (*hat* in (2b)) is the second constituent after a phrasal topic (here *Wolfgang*). This topic is often the subject, as in (2b), but any other constituent is possible in that position. Complementizerless subordinate clauses thus are dependent verb-second clauses (henceforth V2-clause). Normally, V2-clauses are matrix clauses in German, and there has been some disagreement on whether or not a dependent V2-clause is a true complement clause (e.g., Reis 1997, Müller 2004: 213).

(2) a. Du *denkst*, dass Wolfgang Peter angerufen *hat*.
    you think that Wolfgang Peter called has

   ‘You think that Wolfgang has called Peter.’

   b. Du *denkst*, Wolfgang *hat* Peter angerufen.
    you think Wolfgang has Peter called

   ‘You think Wolfgang has called Peter.’

German permits long extractions from complement clauses with overt complementizer *dass* as in (3), derived from (2a), although some speakers judge these structures to be marginal.

(3) *Wen* *denkt* sie, dass Wolfgang angerufen *hat*?
    whom thinks she that Wolfgang called has

   ‘Whom does she think that Wolfgang has called?’

On the face of it, an extraction analysis thus seems feasible for example (1), too. It could be analysed as a long *wh*-movement from a dependent V2-clause with a structure like (2b) as derivational basis. However, a parenthetical analysis for (1) cannot be excluded, either: German permits parenthetical inserts in this position (4a). Moreover, the omissability of the parenthetical insert from the host clause is characteristic of parenthetical constructions in general, and leaving out the *denkst* *du*-sequence in (1) results in a perfect matrix question, (4b).

(4) a. *Wen* *so* fragt sie, *hat* Wolfgang angerufen?
    whom so asks she has Wolfgang called

   ‘Whom, she asks, has Wolfgang called?’

   b. *Wen* *hat* Wolfgang angerufen?
    whom has Wolfgang called

   ‘Whom has Wolfgang called?’

Both long extraction and parenthetical analyses have been formulated in the literature, and we will henceforward refer to structures like (1) as ‘controversial constructions’. The analysis as a long extraction from a V2-clause was first suggested by Thiersch (1978), and it still appears to be the standard generative view, even if
some generative linguists have adopted the parenthetical analysis (e.g., Bayer 2005). On the extraction analysis, (5), the embedded finite verb has moved to C as in any standard German dependent V2-clause. The SpecC-position, which normally contains a phrasal topic, is occupied by an intermediate trace left behind by the \textit{wh}-constituent on its way to the initial position of the overall sentence. This intermediate trace explains why the first constituent of the dependent V2-clause is never overtly realized: a trace is by definition a phonetically empty element. Put briefly, the extraction analysis posits a subordinate clause structure with successive cyclic movement of the \textit{wh}-constituent.

\begin{align*}
(5) & \text{Wen}_i \text{ denkst du } [\text{CP}_1 \text{ ti } [\text{C}_1 \text{ hat}_k \text{ Wolfgang}_1 \text{ angerufen}_k ]]? \\
\end{align*}

The parenthetical analysis has been championed by Reis for the last decade, but she was not the first to propose this analysis (e.g., Andersson and Kvam 1984). On this account we are faced with a paratactic combination of verb-first parenthetical and host clause, (6). Details about the verb-first syntax of the parenthesis and the interpretational relationship between host and parenthesis are addressed in Steinbach (1999) and Reis (1995: 65–72, 2002: 21). See also the papers by Steinbach and Fortmann in this volume.

\begin{align*}
(6) & \text{Wen [denkst du] hat Wolfgang angerufen?} \\
\end{align*}

Although the debate is not new, no definitive answer has yet been found. One major problem is that it is difficult to find any clear evidence which distinguishes between the two accounts. Nevertheless the question is of great theoretical interest, not only because of the central role that movement structures play in many versions of generative grammar, but also because of the implications that it has for the structure of the German clause.

2. Comparing three structures

Some linguists have argued explicitly against a parenthetical analysis, e.g., Tappe (1981), Grewendorf (1988) and Staudacher (1990). One of their basic assumptions is that parenthetical inserts have to be prosodically unintegrated from their host clause, and much of their evidence rests on this assumption. As Grewendorf (1988: 85) correctly points out, the controversial construction does not fulfill this criterion as there are no intonation breaks in the construction. Reis (2002) interprets this lack of intonation breaks not as a counter-argument to the parenthetical analysis, but instead she establishes prosodic integration as a defining characteristic for a different type of parenthetical, which she names “integrated parentheticals”. She argues that integrated parentheticals occur in all typical insertion slots, for exam-
ple in clause-final position in (7a) or in post-subject position in (7b), and thus exist independently of the controversial construction. Note that integrated parentheticals are not necessarily verb-initial: according to Reis (2002) there also exist so- (7c) and wie-parentheticals (7d) which are prosodically integrated ((7c) = Reis 2002: 24a, (7d) = Reis 2002: 23b).

(7)  a. Wen hat Wolfgang angerufen, glaubst du?  
\hspace{1cm} whom has Wolfgang called think you  
'Whom has Wolfgang called, do you think?'

b. Wen hat Wolfgang glaubst du angerufen?  
\hspace{1cm} whom has Wolfgang think you called  
'Whom has Wolfgang, do you think, called?'

c. In der Partei so glaubt sie muss vieles anders werden.  
\hspace{1cm} in the party so believes she must much other become  
'A lot must change in the party, so she believes.'

d. In der Partei muss wie sie sagt vieles anders werden.  
\hspace{1cm} in the party must as she says much other become  
'As she believes, a lot must change in the party.'

One observation which seems to support the extraction analysis is the similarity between the controversial construction and the long extraction from dass-clauses, which is uncontroversially considered an extraction construction. Reis (1995) concedes that the two constructions almost always correspond both in function and in meaning, but this should not be mistaken for structural similarity. She argues that there are a number of cases where the controversial construction behaves differently from dass-extractions and more similarly to other integrated parentheticals like the ones in (7). Examples are the distribution of modal particles, relative predicate scope or interpretational features. She therefore concludes that the controversial construction must be analysed parenthetically.

One of Reis' (1995) core arguments concerns predicate restrictions. She claims that a number of predicates can appear as matrix predicates in long extraction constructions, but that they do not occur in prosodically integrated parentheticals, i.e., in so-, wie- and verb-first-parentheticals as in (7). The relevant predicates are preference predicates (e.g., vorziehen ‘prefer’), strong factive predicates (e.g., bedauern ‘regret’), negative or negated predicates (e.g., bezweifeln ‘doubt’) and adjectival predicates in general (e.g., klar sein ‘be clear’). While for her, all of these are to a greater or lesser extent acceptable in long extractions from dass-clauses, they can never constitute the predicate of an integrated parenthetical.

We aim to contribute to the extraction versus parenthesis debate by testing experimentally whether Reis’ predictions about the controversial construction are
borne out. To this end, we carried out a series of judgement studies in which we focused on predicate restrictions as a test case. The overall research program consisted of a series of four separate experiments. In all of these, the participants had to judge structures which are relevant for the parenthesis versus extraction debate with a range of predicates. The aim was to test whether the structures would respond similarly to different groups of predicates. We will present the results in three major steps.

3. Study series part I: dass-extraction and controversial construction

In our first two experiments we compared the long extraction from dass-clauses (henceforth dass-extraction) and the controversial construction.

3.1 Methodology

In all experiments, we elicited the judgements by applying the magnitude estimation technique (Bard and Sorace 1996, Keller 2000). The judgement data provided by magnitude estimation is both relative and gradient. Informants were instructed to judge how good or bad structures are in comparison to a reference item, which remains on the screen. Each new judgement is effectively also relative to the informant's own previous judgements. Each of the informants thus develops their own judgement scale: they can use all positive numbers including decimals, and there is no lower or upper bound, i.e., they can always introduce a score which is better or worse than all of their previous scores. A major advantage of magnitude estimation is that the results are numerical and form an interval scale, so that standard statistical tests can be applied. Since all informants see all conditions and we expect each person to make the differences in judgements that we are interested in, we utilize the repeated measures analysis of variance as our main statistical test.

The experiment was made available on the web using the WebExp software package (Keller et al. 1998). Participants were first presented a page of instructions, explaining the nature of the task. The object of interest was specified as the spoken language, rather than the written form and they were instructed to judge the sentences using the criterion whether they “sound natural”. After filling in a personal details form, participants carried out two practice phases in order to familiarize themselves with the magnitude estimation technique. In the first task they had to assign numeric values to line lengths relative to a reference line. In the second practice phase the technique was extended to judging sentence naturalness. Only after this stage did the elicitation of the judgements reported here begin.
3.2 Dass-extractions versus controversial constructions: outline of the study

Featherston (2004) carried out a judgement experiment to investigate the quality of ‘bridgeness’, i.e., the extent to which a verb permits extraction from its complement clause. He tested eight different matrix predicates in four structures, among them the dass-extraction and the controversial construction. The judgement study was not intended as a contribution to the parenthesis versus extraction debate, and Featherston adheres to the standard generative view in analysing the controversial construction as a long extraction. In the present paper, some of the conclusions in Featherston (2004) will be revised. Among other things, Featherston concludes that the controversial construction and the dass-extraction behave alike, which contradicts Reis’ claims. However, Featherston did not include any of the predicates which according to Reis are decisive due to the purported difference in predicate restrictions of the two constructions. Therefore, we carried out a follow-up study which was designed to overlap with some of the conditions in Featherston’s experiment to provide comparability, but additionally included preference predicates and adjectival predicates, i.e., two of the predicate classes which Reis claims display diverging judgements in the dass-extraction and the controversial construction. The structures which were investigated in both experiments are schematically represented in (8), i.e., the controversial construction in (8a) and the dass-extraction in (8b) – see (1) and (3) above or (9) below for instantiations of the patterns in (8).²

(8) a. *Welches* OBJECT [validity indication] VERB SUBJECT?

   b. *Welches* OBJECT [validity indication] dass SUBJECT VERB?

With ‘validity indication’ we refer to the predicate-subject sequence which constitutes the matrix clause in the dass-extraction and the parenthetical insert or matrix clause in the controversial construction. An example for such a validity indication is *glaubst du* (‘believe you’). In the experimental sentences, the validity indication contained the predicates to be tested. Both experiments elicited judgements of the predicates *glauben* (‘believe’) and *hoffen* (‘hope’). Featherston’s experiment moreover included the reporting predicates *sagen* (‘say’), *behaupten* (‘claim’), *fürchten* (‘fear’), *erzählen* (‘tell’), *erklären* (‘explain’), and the negative predicate *bezweifeln* (‘doubt’). As stated, the emphasis of the follow-up experiment was on preference predicates

². We used extractions from dass-clauses throughout our study series, although most of the preference predicates normally select wenn-clauses. If the preference predicates appear in the present indicative, the wenn-clause can be replaced by a dass-clause without incurring changes in the semantics (Fabricius-Hansen 1980: 180f). In order to have as little variation as possible caused by the complementizer, we set all experimental clauses in the present indicative and used dass-clauses with them. The only exception is the predicate *wollen*, which needs subjunctive.
and adjectival predicates and contained the following additional predicates: \textit{wollen} ('want'), \textit{wünschen} ('wish'), \textit{vorziehen} ('prefer'), \textit{bevorzugen} ('prefer'), \textit{jemandem lieber sein} ('be preferable to somebody'), \textit{ratsam sein} ('be advisable'), \textit{das Beste sein} ('be the best'), \textit{besser finden} ('find something better'), \textit{klar sein} ('be clear') and \textit{bekannt sein} ('be known'). In sum, a total of 18 different predicates were covered in the two studies, eight in Featherston’s experiment and twelve in the follow-up study with an overlap of two verbs (\textit{glauben} 'believe' and \textit{hoffen} 'hope').

The subject of the validity indication was third person singular \textit{er} in Featherston’s and second person singular pronoun \textit{du} in the follow-up study unless the predicate to be tested was an adjectival predicate, which in German combines only with third person singular neuter \textit{es}. In both experiments the interrogative constituent was the direct object in the accusative.

The lexis in the experimental materials was controlled for length and lemma frequency in both experiments. Moreover, the material was designed to match with the semantic requirements of the tested predicates to avoid negative judgements caused by implausibility. Featherston’s study contained ten, the follow-up experiment eleven lexical variants of the experimental material. In (9) we present an instance of the types of sentences we tested.

\begin{enumerate}
\item \textit{Welchen Bewerber glaubst/bevorzugst du stellt das Projekt ein?}  
\textit{Which applicant do you believe/prefer the project will employ?}
\item \textit{Welchen Bewerber glaubst/bevorzugst du, dass das Projekt einstellt?}  
\textit{Which applicant do you believe/prefer that the project will employ?}
\end{enumerate}

3. The impersonal pronoun \textit{es} functions as a correlative with the adjectival predicates. In this function, it can also occur with most preference predicates, e.g., \textit{Ich ziehe es vor, wenn du kommst}. (I prefer for you to come). This correlative \textit{es} can be omitted under certain circumstances, which largely depend on verbal idiosyncrasies. In an informal pilot study we tried to establish the omissability of the \textit{es} with the predicates and structures we tested. However, this pilot study did not produce clear preferences. We therefore included an \textit{es} in brackets in the sentences where at least some informants from the pilot study had opted for it. In the actual experiment, we thus left it to the informant to include or omit the \textit{es} according to his/her preferences, the purpose of which was to exclude ‘noise’ caused by the (dis)preference for an \textit{es}. We were careful to insert the \textit{es} with a particular predicate either in both or in neither of the two construction under investigation, so that no irrelevant distinction was made between them due to the (\textit{es}). In our later experiments, we omitted \textit{es} in all cases. As we shall see, the overall tendencies remain the same.
In both experiments, participants were recruited by flier, resulting in data from 28 participants in each experiment. We refer the reader to Featherston (2004) and Kiziak (2004) for separate discussions of the studies and further details about material and additional conditions. Both studies addressed further topics, which have no immediate relevance for the parenthesis versus extraction debate and which are therefore neglected in this paper. Let us be clear that the follow-up study was deliberately designed to be compatible with Featherston’s data.

For evaluation we apply the pattern matching technique (Featherston 2004). The basic idea is that, if the two structures in (8) are structurally alike, i.e., if both of them are extraction constructions, they will respond similarly across the range of test cases, here a hierarchy of predicates. If, on the other hand, the two constructions are structurally different, we should not expect the same correspondence.

3.3  

**Dass-extractions and controversial constructions: Results**

For graphical presentation, the data was first normalized by subtracting the subject’s mean from each score and then dividing it by the subjects’ standard deviation (conversion to z-scores). This effectively unifies the different scales that the individual subjects adopted for themselves, and allows us to inspect the results visually.

Figure 1 collapses the results from the two experiments. Judgement scores are represented by the vertical axis. Higher scores indicate better judgements, lower scores indicate worse judgements. On the horizontal axis, the predicates are ordered by judgement scores in the *dass*-extraction condition. Note that this alignment mirrors the two studies: the predicates of Featherston’s study are the first eight verbs to the left, while the follow-up study used *glauben* (‘believe’) and *hoffen* (‘hope’) from this group, but then extended the range further to the right, i.e., judgements of the ten verbs on the right side stem from the second experiment. Since *glauben* (‘believe’) and *hoffen* (‘hope’) were tested in both experiments, they served as overlap and tool for the unification of the two data sets.

Inspection of the graph reveals that the best predicates are typical predicates of thought and speech. Ratings decline as the predicates get semantically more complex. The predicates on the right-hand side of the x-axis are adjectival and preference predicates. It is apparent that the ordering by scores distinguishes the two subgroups of predicates that Reis establishes: on the left of *bezweifeln* (‘doubt’) we find the predicates that should be possible in both extraction and integrated parenthetical constructions, and to the right of *erklären* (‘explain’) we encounter those predicates that are supposedly impossible as parentheticals but possible as matrix predicates in extraction contexts.
The judgement of the clear case, i.e., the dass-extraction, declines fairly evenly as the predicates become worse bridge predicates. The controversial construction, on the other hand, starts off better than the dass-extraction, but declines more steeply with the negative, preference and adjectival predicates, plunging past the dass-extractions to become worse than them. The error bars represent 95% confidence intervals for the mean values. If they do not overlap or overlap only a little, they show clearly distinct scores. It can thus be seen that our structures show clear differences both with those predicates for which the controversial structure is better as well as for those predicates for which the controversial construction is worse. That the two structures produce clearly contrasting patterns of response to the hierarchy of predicates is strong evidence of a difference.4

Reis argued that the dass-extraction is less sensitive to predicate restrictions than the controversial construction with preference, adjectival and negative predicates. Our results thus confirm her judgements on this data. This finding therefore suggests that Reis may also be right in rejecting an extraction analysis of the controversial construction as a more parallel behaviour of structurally related con-

4. For the predicates on the very right, the two constructions converge. It is the dass-extraction which is judged relatively poor with these predicates. A likely explanation for this is the weak factivity of bekannt sein (‘be known’) and klar sein (‘be clear’), since factivity is generally assumed to have a negative influence on dass-extractions. Why das Beste sein (‘be the best’) receives low acceptability in the dass-extraction is not entirely clear. The judgements do, however, not contradict the overall pattern we found. The two constructions still respond differently: if we take glauben as a reference point, we can see that the drop in acceptability is much larger for the controversial construction than it is for the dass-extraction with the predicates on the right-hand side.
structions would be expected. This however does not yet force the analysis of the controversial construction as a parenthetical. It might firstly be argued that we have not yet ruled out an alternative account of the difference we found in this data, namely the V2-subordination factor. Secondly we have not provided any positive evidence for a parenthetical analysis. We have investigated these issues in two additional experiments.

4. **Open question I: dependent V2-clauses**

So far our results have shown that there are differences between the dass-extraction and the controversial construction. Does this mean that the two constructions have to be given different structural analyses? Not necessarily. Possibly both constructions are extraction constructions, but just one of them is affected by an additional factor. One such factor could be the quality of V2-subordination. On the extraction analysis, the controversial construction is considered a long extraction from a dependent V2-clause, which means that these two structures are closely related. The dass-extraction on the other hand is obviously not directly linked to V2-clause subordination.

There is good reason to think that this might be a relevant factor. In German only a limited range of predicates allow dependent V2-clauses. V2-subordination seems to work for predicates of thought and speech, i.e., for exactly those predicates in our study series for which the controversial construction received relatively good judgements. But we have to ask whether preference, adjectival and negative predicates also permit V2-subordination. If not, the results of our study can be explained under an extraction analysis: it might be the marginality of the V2-subordination and not any parenthetical feature which is responsible for the controversial construction’s sharper drop in acceptability with these predicates.5

5. A further question with regard to V2-subordination is whether or not bridge predicates and those predicates permitting V2-clauses constitute the same set. Of course the answer to this question hinges on what linguists define as extraction constructions in the first place, thus relating it to the extraction/parenthesis discussion at hand. Space does not permit us to say more on this interesting topic than that our overall results would tend to imply a three-way distinction: bridge predicates (in dass-extractions) versus parenthetical predicates (in integrated parentheticals) versus predicates selecting a dependent V2-clause. This constrasts with the view in Featherston (2004).
4.1 Dependent V2-clauses: outline of the study

This study was similar to the previous experiments in that it aimed at comparing the judgments of different structures across a range of predicates, again using the magnitude estimation methodology. First, we wanted to see whether we could replicate our previous finding of a contrast between the *dass*-extraction and the controversial construction across verbs. The templates (10a) and (10b) are thus the same as in our earlier experiments, examples of which were given in (9) above. The second and possibly more interesting comparison is between declarative dependent V2-clauses and the controversial construction. We wanted to test whether there is a direct influence of the former on the latter, i.e., whether the behaviour of the controversial constructions can be explained with reference to simple dependent V2-clauses. (10c) represents this third structure and (11) spells out the template.

(10) a. *Welches* OBJECT [validity indication] VERB SUBJECT?
    b. *Welches* OBJECT [validity indication] *dass* SUBJECT VERB?
    c. [validity indication with subject-predicate-order] SUBJECT VERB OBJECT.

(11) Er glaubt/bevorzugt, die Firma wählt diesen Standort aus.
    he believes/prefers the company chooses this location PART
    ‘He believes/hopes/prefers the company chooses this location.’

As before the range of predicates in the validity indication formed a parameter of experimental manipulation. For this experiment, we focussed on a subset of the twelve predicates from the previous work. We included four thinking and reporting predicates (*glauben* ‘believe’, *hoffen* ‘hope’, *fürchten* ‘fear’ and *erzählen* ‘tell’), six preference predicates, among them two adjectival predicates (*wollen* ‘want’, *wünschen* ‘wish’, *bevorzugen* ‘prefer’, *vorziehen* ‘prefer’, *lieber sein* ‘be preferable’ and *ratsam sein* ‘be advisable’), one adjective of certainty (*klar sein* ‘be clear’) and one negative predicate (*bezweifeln* ‘doubt’). As before, the predicates can be divided into two subgroups: firstly those predicates with which the controversial construction scored better than the *dass*-extraction in the first study, i.e., predicates of thought and speech, and secondly those with which it scores worse, i.e., all the others.

One change was that we used third person singular pronouns as subjects in the validity indication, i.e., either *es* (‘it’) with the impersonal adjectival predicates or *er* (‘he’) otherwise. We had used the pronoun *du* (‘you’) in our earlier study. A conference audience suggested that we should test whether the results are replicable despite this slight modification. If so, the differences we found earlier cannot be attributed to the choice of pronoun. We provided 12 versions of the material and included 15 filler items. The 31 participants were recruited by flier.
4.2 Results

The results of this study were again normalized for visual presentation. We will present the results in two steps: Before discussing the relation of V2-subordination and controversial construction, we will first explore whether the data of this study replicates the behaviour of the *dass*-extraction and controversial construction reported before in section 3.

4.2.1 *Dass*-extraction versus controversial construction

In our previous study, see Figure 1, we noted that the judgement scores of the controversial construction start out higher than the *dass*-extraction but then descend much more steeply, crossing over the scores of the *dass*-extraction as we consider predicates towards the middle and lower end of the predicate continuum.

Figure 2 shows that the basic trend of this data is replicated in the third study. The controversial construction again starts out better than the *dass*-extraction with the thinking and reporting predicates, but declines much more rapidly than the *dass*-extraction with the predicates towards the right-hand side, i.e., with the preference, adjectival and negative predicates. We carried out a repeated measures analysis of variance by subjects and items on this data (Clark 1973), and applied the Huynh-Feldt correction of degrees of freedom where appropriate. The factor Verb was significant both by subjects and by items, the factor Structure only by subjects. The important measure here, however, is the interaction of Verb and Structure, which shows that the constructions do not respond to the continuum of verbs in the same way. This interaction was robustly significant both by subjects and items \( F_1(11,330) = 4.23, p_1 < 0.001; F_2(11,121) = 3.07, p_2 = 0.003 \). This puts the empirical reality of the effect that we identified beyond doubt.

In comparison to the results from our previous work shown in Figure 1, two things need further comment. First: the difference between the two structures appears to be smaller in this study, i.e., the error bars overlap more often and do not show as much spatial distance as before. This is probably due to the additional conditions which were considered in the two studies. In Kiziak (2004), all tested structures were complex interrogative constructions and the majority of predicates were relatively poor bridge predicates. In the present experiment we incorporated both better bridge predicates and declarative dependent V2-clauses which are less complex than the *wh*-interrogative structures and therefore receive notably better acceptability scores on the whole. Due to this wider coverage of different levels of acceptability the distinctions between *dass*-extraction and controversial

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6. The omnibus ANOVA showed two significant main effects and a significant interaction, which justifies a pairwise comparison as done in the following two sections.
construction may appear smaller in the present study. However, as the statistical analysis above proves, the general picture is the same in both studies.

**Figure 2.** dass-extraction versus controversial construction in experiment III; general pattern replicated

The second comment concerns the controversial construction in combination with the predicate wünschen (‘wish’). Acceptability is surprisingly high in this case. Contrary to Reis’ intuition and differently from our earlier study, wünschen is rated substantially better than other preference predicates in the controversial construction. In fact it is rated as good as the speech verb erzählen (‘tell’). It is not fully clear to us what causes the positive judgement of wünschen. We suspect an irrelevant effect, perhaps related to the change of person of the subject. It should be obvious, however, that the results in Figure 2 resemble our previous findings in Figure 1 even more closely when wünschen is neglected. There is no need, however, to exclude wünschen from the results as the overall trend is still clearly visible.
4.2.2 Dependent V2-clauses versus controversial construction

Figure 3 displays the judgements of the controversial construction and simple dependent V2-clauses. We arranged the predicates on the x-axis in such a way that the acceptability curves of the two structures are as parallel as possible. This choice of alignment is guided by our quest to understand whether the behaviour of the controversial construction merely reflects the quality of dependent V2-clauses with the tested predicates. If judgements of the controversial construction are negative only when the V2-clauses receive low acceptability scores, this points towards a direct influence of the V2-subordination on the controversial construction rather than to parenthetical features. Reis’ observations about the perceived differences between dass-extraction and controversial construction would then not constitute an argument for the parenthetical analysis as the finding would be related to V2-subordination, not extraction.

Over eight of the predicates we do indeed find a consistent pattern of the dependent V2-clause and the controversial construction. We placed them on the left of the x-axis. In each case, the controversial construction is judged worse than the V2-subordination with the same predicate, but this is probably due to the complexity of a wh-question in comparison to a simple declarative clause. However, we
do not find parallel behaviour for the whole range of predicates we tested. For the predicates *wollen* (*wish*), *lieber sein* (*be preferable*), *ratsam sein* (*be advisable*) and *klar sein* (*be clear*) on the right-hand side of the chart, no direct correlation between the two structures can be established. While the controversial construction receives low acceptability judgements with these predicates, the dependent V2-clauses display much better scores. For example, while *lieber sein* (*be preferable*) is judged as negatively as *vorziehen* (*prefer*) in the controversial constructions, judgements of the same two predicates differ notably in the V2-subordination construction. Taking the picture as a whole, the pattern of the controversial construction cannot be fully explained in terms of the V2-clauses’ behaviour. The repeated measures analysis of variance supports these conclusions. As before, the important measure is the interaction of Verb and Structure which is highly significant both by subjects and by items ($F_1(11,330) = 6.66, p_1 < 0.001; F_2(11,121) = 4.73, p_2 < 0.001$). The Structure x Verb analysis thus reveals that the controversial constructions and the declarative V2-clauses are judged differently across the continuum of predicates.

Of course, it would be interesting to understand why the V2-clauses receive relatively bad judgements with some of the tested predicates. It is not quite clear what factors are responsible for the low scores of the V2-subordinations with *bevorzugen* (*prefer*) and *vorziehen* (*prefer*). Several factors seem likely to have played a role. For example, speakers might prefer these predicates with a correlative *es* in their matrix clause, which we did not include in our example sentences. So instead of (12a), they might prefer (12b).7

(12) a. Er zieht vor, die Reisegruppe besichtigt diesen Palast.
he prefers PART the guided.group visits this palace
‘He prefers the guided group to visit this palace.’

b. Er zieht *es* vor, die Reisegruppe besichtigt diesen Palast.
he prefers it PART the guided.group visits this palace
‘He prefers the guided group to visit this palace.’

Other possible explanations take into account the rather high stylistic level of these two verbs or – especially in the case of *bevorzugen* – their relative length.

Summing up the results from this experiment, two points seems noteworthy: First, the contrast between *dass*-extraction and controversial construction from the

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7. The reason why we did not include *es* in our material is the same as in footnote 4, i.e., lack of consensus in the pilot study. We refrained from including *es* in brackets this time, as it was pointed out to us that (*es*) might cause additional processing cost for the informants rather than making their preferred choice of omitting or putting an *es* available to them.
first studies was replicated, and second, the controversial construction’s behaviour cannot be explained by attributing it only to the quality of the V2-subordination.

5. Open question II: other integrated parentheticals

So far we have seen that judgements of the dass-extraction and the controversial construction diverge in a way which cannot easily be reduced to factors such as the quality of simple dependent V2-clauses. But this is essentially negative evidence which only suggests analysing the controversial construction differently in some way from the dass-extraction. It does not necessarily support a parenthetical analysis. We therefore sought positive evidence, and examined whether or not uncontro-versial integrated parentheticals and the controversial construction pattern alike.

5.1 Clear parentheticals versus controversial construction: outline of the study

This magnitude estimation study again explored different structures with regard to their predicate restrictions. As before we included the dass-extraction as a contrast to the controversial construction in order to relate the various substudies in our series and to see whether our earlier findings could be replicated, i.e., (13a) versus (13b). The main purpose of this experiment was the comparison of the controversial construction and an uncontroversial instance of verb-first integrated parentheticals, i.e., (13a) versus (13c).

(13) a. Welches OBJECT [validity indication] VERB SUBJECT ADVERBIAL?
   b. Welches OBJECT [validity indication] dass SUBJECT VERB ADVERBI-
      AL?
   c. Welches OBJECT VERB SUBJECT [validity indication] ADVERBIAL?

We chose verb-first integrated parentheticals (= V1-parentheticals) rather than integrated so- or wie-parentheticals (see (7)) so as to match the controversial construction as closely as possible. Note that some linguists reject the existence of V1-parentheticals, for example Ross (1973) or Wagner (2004). Ross argues that clause-final V1-parentheticals (e.g., Wen hat Wolfgang angerufen glaubst du?; cf. (7a)) are in fact instances of matrix clauses, whose V2-complement has moved to the clause-initial position SpecC. The purported V1-parenthetical (or rather, the matrix clause in this analysis) can then be moved or slifted further to the left into the niches of the preposed V2-clause (e.g., Wen hat Wolfgang glaubst du angerufen?; cf. (7b)). On a slightly different account, Wagner (2004) also proposes lifting of the V2-clause to SpecC as a first step. The lifting of the dependent V2-clause is then
followed by heavy XP-shift of material in this V2-clause to the right periphery of the overall clause, i.e., to the right of the predicate-subject-sequence which in other accounts constitutes the V1-parenthetical. Reis (1997: 139) strongly opposes the possibility of a preposed V2-clause, stating evidence from binding. Instead, she analyses such structures as a matrix V2-clauses with a clause-final V1-parenthetical. Reis’ claim that there are no preposed V2-clauses may be somewhat controversial, and we therefore focused on the clause-internal V1-parentheticals, for which a slifting- or heavy-XP-shift-analysis has generally not been adopted by extraction advocates. Haider (1993) for example acknowledges the existence of V1-parentheticals in insertion slots to the right of the finite verb.

In our experiment, we placed the V1-parenthetical immediately to the right of the subject of the host clause. To get clause-internal rather than clause-final V1-parentheticals, we introduced an adverbial, e.g., *im Frühjahr* (‘in spring’), in each of the twelve material versions, (14c). Apart from that, we retained the material from the previous experiment. We recruited the 27 participants in the main refectory of Tübingen University.

(14) a. Welchen Vorschlag glaubt/bevorzugt er setzt der Vorstand im Frühjahr um?
   Which proposal believes/prefers he implement the board in the spring PART
   ‘Which proposal does he believe/prefers the board will implement in spring?’

b. Welchen Vorschlag glaubt/bevorzugt er dass der Vorstand im Frühjahr umsetzt?
   Which proposal believes/prefers he that the board in the spring implement?
   ‘Which proposal does he believe/prefers that the board will implement in spring?’

c. Welchen Vorschlag setzt der Vorstand glaubt/bevorzugt er im Frühjahr um?
   Which proposal implement the board believe/prefers he in the spring PART
   ‘Which proposal will the board implement in spring, does he believe/prefers?’

8. Wagner’s analysis with heavy-XP-shift seems to us to be weakly motivated. Normally, heavy-XP-shift is applied in order to make the (verbal) head available earlier, whereas in Wagner’s analysis heavy-XP-shift does not have any such purpose. Looking at our example (14c), heavy-XP-shift would have to cover an adverbial (*im Frühjahr*) plus verb particle (*um*), i.e., a sequence of words which does not constitute a single phrase. Moreover, it is not clear to us why heavy-XP-shift should affect a verbal particle such as *um*.

9. In traditional topological terms, clause-internal translates as ‘in the Mittelfeld’ and clause-final as ‘in the Nachfeld’. The adverbial marks the right-hand edge of the Mittelfeld.
5.2 Results

Results were again normalized for visual presentation. Before discussing the results of the post-finite V1-parentheticals, we will briefly report the results of comparing the dass-extraction to the controversial construction.10

5.2.1 Dass-extraction versus controversial construction

The results of this study confirm the findings of our previous experiments. The controversial construction is again judged better than the dass-extraction with the predicates of thought and speech, but acceptability judgements with preference, adjectival and negative predicates generally showed the reverse pattern. As before, the repeated measures analysis of variance gives support to a difference in judgements of the two constructions across the range of predicates we tested as the interaction of the factors Verb and Structure is highly significant both by subjects and by items ($F_1(11,286) = 5.51, p_1 < 0.001$; $F_2(11,121) = 4.489, p_2 < 0.001$).

5.2.2 Post-subject integrated V1-parenthetical versus controversial construction

In an earlier study, Featherston (2001) inter alia compared V1-parentheticals in post-finite and post-subject position to the controversial construction. He used the verb meinen (‘to think, to believe’) in all conditions, i.e., a predicate which is generally considered a good parenthetical predicate. One of the insights from Featherston’s experiment is that post-subject V1-parentheticals were judged slightly worse than the controversial construction. We should bear this in mind when discussing the results of our own experiment.

In this graph we ordered the predicates on the horizontal axis according to the acceptability scores they achieved in the controversial construction. The guiding question of our investigation was whether or not the controversial construction and the uncontroversial V1-parentheticals respond in a similar manner and thus favour a parenthetical analysis of the controversial construction.

The generalization seems to be that the judgements of the controversial construction are slightly better than the scores of the post-subject parentheticals. Only one condition seems less compatible with this analysis:ollen, but even this is within the bounds of random variation. This distribution is quite consistent with the findings of Featherston’s (2001) study that the controversial construction is rated slightly better than the V1-parenthetical in the dispreferred post-subject position. We see no sign here of the clear contrast in pattern we have repeatedly observed between the dass-extraction and the controversial construction. So even if the uncontroversial V1-parentheticals and the controversial construction are not

10. As before (footnote 8), the omnibus ANOVA justifies a pairwise comparison.
judged perfectly equally, the differences are neither big nor systematic enough to contradict a common analysis of the two constructions.

The statistics support this view: while in the repeated measures analysis both the factor Structure and the factor Verb were significant by subjects and by items (all ps < 0.05), there is no significant interaction of these two factors, either by subjects or by items ($F_1(11,286) = 1.786, p_1 = 0.056; F_2(11,121) = 1.447, p_2 = 0.218$). This lack of interaction indicates that the two constructions respond similarly to the continuum of predicates we tested. As the issue to be evaluated in this comparison is of similarity rather than difference, we also tested the correlation coefficients of the relevant cases. We first considered the dass-extraction and the controversial construction which showed a Pearson's correlation of 0.727. It is of course natural that both constructions respond to the continuum of predicate quality. The controversial construction and the clear parentheticals, however, display a much stronger Pearson's correlation of 0.928. The statistical analysis thus makes the very close relationship between the clear parenthetical and the controversial construction quite apparent.
6. Summing up the evidence

In this section we will go through our findings, pointing out the evidence for the different accounts as we go along, before we draw an overall conclusion on the implications of our data for the parenthesis versus extraction debate. Before turning to syntactic accounts, we shall briefly address an explanation which attributes the effects to lexical factors. Our study showed the clearest results with preference predicates, and there is some evidence that these are a special verb class (see Frank 1998: 2–8, Meinunger 2004). First, they normally select dependent clauses with *wenn* (‘if’) rather than *dass* (‘that’) as propositional arguments, and they prefer these to be in the subjunctive mood. Second, preference predicates are often most natural with a correlative *es* (‘it’) as a placeholder for a dependent V2-clause, while predicates of speech and thought do not generally allow this. This could mean that the relationship between a preference predicate and its dependent clause is syntactically different from the relationship between a more standard verb of saying or reporting and its complement clause. However, if we relate our results merely to lexical factors, we might be missing important generalizations. This is all the more true since the negative and adjectival predicates we tested show the same tendencies as the preference predicates. We will therefore put to one side the solely lexical account, although a closer examination of preference predicates is certainly called for.

Throughout this series of studies we have repeatedly seen the same basic pattern in the relationship between the controversial construction and *dass*-extraction: while the controversial construction is judged better than the *dass*-extraction with the predicates of thought and speech, this relation is reversed for preference, adjectival and negative predicates. This effect was robustly significant in our experiments. We may therefore say that it is established that these two constructions do not respond in an entirely equivalent way to the predicates. We have demonstrated that a difference exists, but it is an additional step to show that the factor causing the difference is uncontroversially the factor in question.

We therefore carried out a further experiment to see whether the behaviour of the controversial construction would correlate with the judgements of simple dependent declarative V2-clauses, as these two structures are closely related under an extraction account. Demonstrating a close match between these two structures would suggest that it is just this factor which differentiates the controversial construction and the *dass*-extraction. We could then attribute this difference to this V2-subordination factor, which would make the alternative parenthesis analysis unnecessary. However, the results from the follow-up study did not show a close correlation between controversial construction and dependent V2-clauses, on the contrary, there were clear differences.
In our next study we sought positive evidence on whether the controversial construction would show similarities in response pattern to clear cases of parentheticals. We compared the controversial construction to V1-parentheticals in the post-subject position and found a strikingly similar pattern between them across the range of predicates. Our studies have thus provided three pieces of evidence: the controversial construction patterns differently to dass-extractions, differently to V2-declaratives, but similarly to uncontroversial parentheticals. This weight of evidence must be taken as solid support for the parenthetical analysis.

Nevertheless, alternative accounts are possible, and we shall mention two of them here. The first of these relates to the effect of an overt complementizer on the processing of a marginal structure; the second allows the possibility that informants are adopting different analyses of the controversial construction.

If both the controversial construction and the dass-extraction were extraction constructions, both would exhibit a decline in perceived well-formedness as a normal response to the bridge quality of the matrix predicate. But the extractions from dass-clauses show a less marked drop in acceptability than the controversial constructions. Perhaps the presence of an overt complementizer helps the processing of marginal structures by providing a clear indication that what follows should be interpreted as a subordinate clause. Even the most marginal constructions with dass might thus be judged better because their intended analysis is unambiguous, although the structure itself is fairly unnatural. The examples with dependent V2-clauses have no such clear marker of subordination, and so their analysis as matrix clause plus subordinate clause is much less obvious. That processing complexity and uncertainty of analysis can lead to degraded judgements has been demonstrated (cf. Featherston 2004, Cowart 1996 for discussion). Thus when the acceptability of constructions is generally low, a clear marker of intended analysis may trigger better judgements: the presence of a complementizer ‘rescues’ the structure. This seems a possible account of what is going on, but let us note that such an account would also predict that the V2 declaratives, since they too have no complementizers, should pattern with the controversial constructions, contrary to our finding in section 4. To counter this point, one might speculate that dass unfolds its role as rescuer only in contexts which are generally hard to process, as in a long movement construction with a poor bridge predicate. Another observation which weighs against this alternative account is that the close match of the controversial construction and the clear parentheticals in the last experiment would not be predicted by it.

An anonymous reviewer suggests that the entertainment of multiple analyses should give rise to longer reaction times. We hope to investigate this in future work.
The second possible group of alternative analyses depends upon the assumption that speakers may have more than one analysis of the same surface structure, and that neither of the two proposed analyses of the controversial construction excludes the other. This would for example allow the possibility that our informants were judging one analysis at one end of the predicate continuum and another at the other end. Reis (2002: 27) strongly opposes the idea that an extraction and a parenthetical analysis might coexist or be blended for the controversial constructions, as in her view, the parenthetical analysis excludes the extraction analysis. The reasons for this are related to her analysis of dependent V2-clauses for which she rejects the standard assumption that they are complement clauses in a syntactic sense. In her view, dependent V2-clauses are syntactically relatively ‘unintegrated’ and not governed by their matrix predicate. According to the “Condition on Extraction Domains” (Huang 1982), extraction is only possible from strictly governed domains. Thus allowing for an ‘extraction from V2-clause’-analysis of the controversial construction besides a parenthetical account contradicts her analysis of dependent V2-clauses as being relatively unintegrated. Our data provides no evidence to reject this dual analysis and it should at least be considered a possibility.

In conclusion, we started out with the question whether the controversial German construction is an extraction construction or a parenthetical. Finding the answer to this question would settle a dispute which has been going on in the literature for the past decade and longer. We believe that our experiments have revealed interesting evidence which bears on this controversy even if it does not conclusively decide the issue. For example it is so far not clear precisely which factors trigger the negative judgements of preference predicates in the controversial construction. Some of our results thus call for further research. But taken together, the results from our study series weigh in favour of the parenthetical analysis and against the conventional extraction analysis.

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And-parenthetical clauses*

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The paper focuses on and-parenthetical clauses. It opens with a discussion on their typical places of interpolation and recognises two major types: a) anchored parentheticals and b) floating parentheticals. The and-clauses are then contrasted to coordination proper. The syntactic relation of the parenthetical with the host is examined in the context of the integrated and the unintegrated approaches, but only to demonstrate that none of them is satisfactory. Instead, I refer to the Insertion theory of Ackema and Neeleman (2004) to accommodate and-parentheticals. Finally, this paper analyses the speaker’s motivation behind using such cumbersome interruptions and I conclude that it is in line with his aim at optimal relevance. The examples presented in this study are collected from two English corpora.

1. Introduction

The common perception of parenthetical constructions is that they interrupt the syntactic string and often the prosodic flow of a host structure, and even though they become part of the linear representation of the host, if only by virtue of being on the same representational axis, parentheticals are seldom perceived as part of the conventional structure of the host. This view of parenthetical constructions appears incomplete and somewhat paradoxical, especially in the context of grammar where linear order is seen as a function of hierarchical structure (cf. the Linear Correspondence Axiom, Kayne 1994). In other words, the hierarchical structure of a syntactic string (in particular the structural relations it displays) determines the ultimate linear ordering. Consequently, to argue in favour of an approach where these constructions are irrevocably excluded from, and denied any relation to, the host appears unwarranted.

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This article contributes to the ongoing discussion of the relations between host and parenthetical, and aims at proposing a reconciliatory hypothesis. A second objective, although only briefly discussed here due to space limitations, is to draw attention to the speaker’s motivation and choice to wedge a parenthetical structure into his main utterance, thus arguably obstructing the ease of processing. To this end, this work concentrates on the study of parenthetical clauses; more specifically, clauses which are introduced by the connector and. It also offers a detailed description of the instances of and-parentheticals encountered to date.

The study presented here is based on 70 corpus examples, which are all extracted from the spoken material of two British English corpora: the British Component of the International Corpus of English (ICE-GB) and the Diachronic Corpus of Present-day Spoken English (DCPSE). Both corpora are developed by the Survey of English Usage (SEU), University College London. The collected material offers a sample of British English of the 1960s and the 1990s. In addition, each parsing unit is accompanied by its corresponding sound file, which offered some valuable insights into the structure under scrutiny.

Examples of parenthetical and-clauses are given in (1) through (3) below:

1. Unfortunately for him <,,> and it is a serious thing at his age <,,> he’d fractured a leg (DCPSE: DL-J04, #53)
2. Madam will the Minister confirm that come the single uh Common Market that three hundred million E E C nationals could and I emphasise could seek employment in this country without the need to obtain a work permit (ICE-GB: s1b-059, #40)
3. and <,> a great many miners and I’m glad about that too <,> are inhabiting council houses in in in in Derbyshire <,> (DCPSE: DL-D01, #153)

The article is organised in the following manner: Section 2 is typology-driven, where the collected examples of and-parenthetical clauses are carefully examined to reflect their typical places of interpolation. Consequently, two types of the analysed structure are identified. Section 3 draws the line between coordination proper and and-parenthetical clauses, establishing that the two structures are different in certain

1. For information on the corpora, visit the SUE website: www.ucl.ac.uk/english-usage. For ICE-GB, see also Nelson, Wallis and Aarts (2002). Note that in both corpora the spoken material is not marked by any punctuation and here all examples will be presented as they appear in the corpus. For convenience, the target parenthetical structure will be additionally italicised.
2. In the corpus convention, the angle brackets mark the pause(s) in an utterance. The number of commas in brackets corresponds to the length of the pause, such that the more the commas, the longer the pause.
3. The numbering used in this article to refer to parsing units extracted from DCPSE may not directly match those in the final release. This is because I’ve used a beta release for this study.
ways. Section 4 questions two traditional views of parentheticals and their relation to their host. Based on the insertion theory developed by Ackema and Neeleman (2004), it offers a compromise, where parentheticals are associated with and matched to a host node without physically becoming part of the host structure. The invisibility theory accounts for many of the controversies between the two main approaches. Section 5 briefly distinguishes parentheticals from asides and other disfluency phenomena. Accepting that the parenthetical has a role to play with respect to the host, the speaker’s motivation to insert such a long interruption in the flow of the main utterance is studied and some of the effects this insertion has on the final interpretation of the utterance are discussed. Section 6 offers a conclusion.

2. Typology

2.1 Typical places of interpolation – distributional patterns

Based on the collected data set, the most typical places of interpolation for and-parenthetical clauses are, in no particular order, as given below: between syntactic head (N, V, Adj) and its dependent (phrasal or clausal), (4), (5), (6) and (7); between copula and predicate, (8); at the edge of a core clause, i.e., between an adverbial clause and the main clause, (9); between core clausal constituents, e.g., subject and VP (10); between an auxiliary and the main verb, (11):

(4) I personally take [NP the view] and I’ve informed the Soviet Government of this [NPPO/CL that the visit of the Ballet would be more acceptable to all of our people...] (DCPSE: DL-E02, #242)

(5) nor is it uh legitimate for us to [V acquire] and I underline the word acquire [OD/NP Iraqi territory] (ICE-GB: s1b-027, #54)

(6) In fact I [V was very candidly] and I repeat my acknowledgment of the candour [OD/CL that it was placed before him in January last] (ICE-GB: s2a-063, #083)

(7) I find it [AdjP quite useful] and this is obviously somewhat simplified but nevertheless quite useful [AdjPost/CL to recognise the concept of something I choose to call the innovation chain] (ICE-GB: s2a-037, #77)

(8) Well our question [V was] and I’ve asked this before [CS/CL is this necessary for a tragedy] (DCPSE: DL-A05, #405)

(9) [A/CL Because on this theory] and it’s very deeply held uh [CL good educational news is by definition inadmissible as evidence] (DCPSE: DI-I01, #91)
(10) [SU Mr Heath’s government] and I’m not complaining because I’d advocated this at a previous time <„> [VP introduced the threshold system]… (DCPSE: DL-E02, #114)

(11) He [VP [Aux was] and I think you would agree with me at the outset [V looking]] at expanding his business at that time not selling it (ICE-GB: s1b-064, #172)

(12) What is [unfair] for and I think what Tony Travis has failed to point out is that … (ICE-GB: s1b-034, #68)

To date, I have collected 70 examples of and-parenthetical clauses from the two corpora already mentioned. 33% of the examples are of the type of interpolation illustrated in (9); 19% of the collected and-parenthetical clauses occur between the main verb and its dependent (clausal – 77%, and nominal – 23%), as illustrated in (5) and (6); 16% are of example occurrences between the subject and the VP, as illustrated in (10); 9% occur between a noun-head and its dependent. The remaining 23% are evenly distributed between some of the positions mentioned above or other less typical occurrences, e.g., in (pseudo-)clefts, of which I have come across only one example, see (12).

From these examples it immediately transpires that unlike other types of parentheticals discussed in the literature, for example the one-word parenthetical what – which has a clear preference for the position in front of a numeral (cf. Dehé and Kavalova 2006), these parenthetical clauses do not follow a particular interpolation pattern. While parenthetical what is taken to owe its surface position in the immediate vicinity of a numeral to a feature matching process operating independently from the internal syntax of the host, the place of interpolation for the and-clauses does not seem to be driven by a specific syntactic process. I return to this later.

At this stage, based on the available data, it can only be suggested that parenthetical and-clauses are more likely to occur at the edge of an XP than within an XP. To base this claim on a total of 70 examples is perhaps too bold a statement, which is why I refer to this as a tendency only. 17% of the and-clauses occur within an XP, whereas the remaining 83% are wedged in-between XPs. In most of the “within XP” examples, the parenthetical clause interrupts immediately in front of a clausal complement, which can be attributed to the grammatical rule for heavy

4. Even though this instance clearly classifies as an example of subject-parenthetical-predicate, I have listed it separately because of its internal structure – it’s a pseudo-cleft. Moreover, the structure of the parenthetical clause in (12) mirrors the structure of the host, i.e., both are pseudo-clefts. Such a copy trend is not observed in any of the other instances (see any of the above examples). Controversially, this could mean that (12) is not to be seen as an example of the construction under investigation here. However, this example is in the list of parentheticals because the and-clause is uttered much faster and lower than the rest of the utterance.
constituents (e.g., a clausal complement) to come towards the end of the clause (cf. Peterson 1999: 239, also Newmeyer 2003: 684). Finally, none of the collected examples illustrates an instance of an and-parenthetical clause in final position. They are all interlaced within the host.

2.2 Types

From a purely descriptive point of view, when analysing the parentheticals with respect to the host clause, two prevailing types emerge: anchored parentheticals and floating parentheticals.

2.2.1 Anchored parentheticals

The first type is that of and-parenthetical clauses occurring to the right of an anchor located in the host. Consider the following example where the anchor is underlined:

(13) Uh uh whilst I would nationally fund the system and it's ninety per cent funded from the Exchequer now we must recognise that I would retain the office of Chief Constable (ICE-GB: s1b-033, #12)

(14) Because on this theory and it's very deeply held uh good educational news is by definition inadmissible as evidence (ICE-GB: s2a-021, #91)

Because of its direct link to the anchor in the host, the and-parenthetical manifests a proximity loyalty. If the parenthetical structure is misplaced (albeit following its observed preferred place of interpolation, viz. between XPs and not at the end of sentence), the sentence immediately becomes less felicitous or even ungrammatical. This is illustrated in (15) and (16):

(15) # Whilst I would nationally fund the system, we, and it's ninety per cent funded from the Exchequer now, must recognise that I would retain the office of Chief Constable.

(16) #* Whilst I would nationally fund the system, we must recognise that I would retain the office of Chief Constable, and it's ninety per cent funded from the Exchequer now.

In the same vein, it must be noted that because of this close-knit relation between anchor and parenthetical, it is perhaps no surprise that these instances of paren-

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5. The term anchor in this sense is used by Huddleston and Pullum to refer to any types of ‘supplements’ that are semantically related to a host constituent (Huddleston and Pullum 2002: 1351).
tithetical and-clauses exhibit an elaborate correspondence to non-restrictive relative clauses, cf. (17) and (18): 6

(17) Whilst I would nationally fund the system, which is ninety per cent funded from the Exchequer now, we must recognise that I would retain the office of Chief Constable

(18) Because on this theory, which is very deeply held, good educational news is by definition inadmissible as evidence.

In the context of anchored parentheticals, another subtype emerges from the data set. Here, an element of the host is repeated in its exact form in the parenthetical, cf. (19) (= (2)). 7

(19) Madam will the Minister confirm that come the single uh Common Market that three hundred million E E C nationals could and I emphasise could seek employment in this country without the need to obtain a work permit (ICE-GB: s1b-059, #40)

(20) nor is it uh legitimate for us to acquire and I under <unclear-word> word underline the word acquire Iraqi territory (ICE-GB: s1b-027, #54)

As with other examples of anchored parentheticals, their position is limited to that immediately after the repeated element. The relation between the motivation for repetition and the use of verbs like emphasise and underline will be touched upon in Section 5.

2.2.2 Floating parentheticals

The second major type is that of parentheticals which are not related to a particular element of the host. I refer to these as ‘floating’ parentheticals because often their position is not strictly fixed (as opposed to the preferred position next to the anchor described above). Consider the examples in (21) and (22):

6. Undoubtedly, for the and-parenthetical clause to be transformed into an NRR, the well-established prerequisites for NRRs should be observed, viz. the anchor should be a proper name, a definite description (as in (17): the system), or a specific pronoun (cf. Quirk et al. 1985: 1118f).

7. Quirk et al. (1985:1119) discuss a somewhat similar case of a word or a morphological variant of the word which gets repeated as the noun head in a type of appositional clause, viz. resumptive clauses, e.g.,

(i) She expresses her belief in the economic recovery of the country, a belief that was well founded.

(ii) The President announced that he would run for a second term, an announcement that was acclaimed by most members of his party.

However, while the speaker’s motivation to implement this repetitive usage may spring from a similar pragmatic source, the illustration above is to be differentiated from resumptive clauses.
(21) What this graph represents is the fact that for English <,> uhm and this work owes uh not a little debt to Eileen Whitley <,> uhm <,> we have syllables which are distinct in being … (ICE-GB: s2a-030, #85)

(22) I personally take the view and I've informed the Soviet Government of this <,,,,,> that that visit of the Ballet would be more acceptable to all of our people including myself (DCPSE: DL-E02, #242)

Here a split-sentence approach may be adopted, where the host is seen as one complete utterance and the parenthetical clause as a second, with the and connecting the two together. This autonomy is reflected in the way the parenthetical clause niches. Due to the lack of anchoring elements, the clause can interrupt the host at different points and the result is still felicitous. In (23) the symbol @ marks some of the possible places of interpolation for (22), where @ = the parenthetical clause:

(23) I personally take the view @ that @ that visit @ of the Ballet @ would be @ more acceptable @ to all of our people @ including myself. 8

However, the split-sentence approach directly contradicts the Linear Correspondence Axiom and confuses the status of the parenthetical in the string of the host. This issue will be addressed in Section 4.

As with the first type, here too I distinguish two subtypes. It could be argued that while in (22) the parenthetical is linked both semantically and pragmatically to the host (see for example the implementation of ‘this’, also the topic in the parenthetical is shared by that of the host), in (21) the utterance comes across as an afterthought and is not related to the immediate proposition. In addition, the topic of the parenthetical is no longer the graph and what it represents, but it acknowledges Eileen Whitley’s contribution.

This section has identified a few properties of parenthetical and-clauses, but apart from a description of observations, no particular analysis has been offered yet. The sole aim of the section was to list possible similarities and differences, which will then be addressed in the body of this article. To summarise, parenthetical and-clauses are seen as generally independent and omissible structures. However, some of them still exhibit a certain affinity to the host and are susceptible to restrictions by way of referring to anchors or by replicating host constitu-

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8. It could be argued that the positioning of the parenthetical slightly alters the emphasis of the utterance. For example, while in (22) the whole proposition, viz. that the visit of the Ballet would be more acceptable to all, is in the scope of the parenthetical clause, i.e., this is what he has informed the government of, in (i) it could be argued that what is actually in the scope of the parenthetical is ‘more acceptable’ only.

(i) I personally take the view that that visit of the Ballet would be, and I have informed the Soviet Government of this, more acceptable to all of our people.
ents. Provisionally, the host clause and the parenthetical require to ultimately be computed as one. This poses the question of if and how parentheticals are related to the syntax of the host. This question is additionally supported by the clear lack of flexibility in the movement potential of the anchored type. The second type is seen as more autonomous, which is why I referred to a split-sentence approach. The parentheticals are free floating and may even not be related to the immediate propositional content of the host.\(^9\) The sections on syntax and pragmatics will attempt to offer explanations of these observations and solutions to some of these queries. But before proceeding, because of the intrinsic resemblance of parenthetical \textit{and}-clauses to instances of coordination proper, in the next section I concentrate on some differences between the two.

3. \textbf{Canonical coordination vs. \textit{and}-parenthetical clauses}

There seems to be sufficient evidence to argue against a possible equation between coordination proper and \textit{and}-parentheticals. The two features they have in common are: 1) what I have so far referred to as the connector \textit{and}, and 2) the formal similarity reflected in the fact that sometimes we coordinate clauses, which also coincides with the form of the parenthetical type under investigation. To emphasise the differences, in this section I look into omission, ellipsis, levels of coordination, and scope of subordinators.\(^10\)

3.1 Omission; form and function

One of the widely accepted characteristics of parentheticals is their omissibility. For a sentence containing a parenthetical to be grammatical, the presence of the interpolation is not seen as obligatory in the syntactic string of the host clause. In other

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\(^9\) In the section on \textit{interpolated coordination}, in a footnote Quirk et al. (1985: 977) mention that two subtypes of interpolated coordination may be identified: \textit{parenthetical coordination} and \textit{parenthetical parataxis}. Unfortunately, they don’t expand on this, but only list two examples:

(i) They asked Bill Judd – and he is one of the best managers in the country – if he would take over the team next season.

(ii) Enterprising businessman sell earthworms (they are one of the best soil conditioners) in hundreds of retail stores across the United States and Canada.

\(^10\) Even though Blakemore (2005: 1169) argues that the role “[played by] and in the interpretation of utterances containing detached conjuncts is precisely the same as the role that it plays in standard sentential coordination”, at this stage I would like to detach the interpretational role from the syntactic role. As Section 5 will show, I subscribe to Blakemore’s view, but only in a pragmatic, but not syntactic context.
words, the host can exist freely and be grammatical regardless of the parenthetical that interrupts its string. Example (24) demonstrates this simple but key feature of parentheticals:

(24) And during the last five years and I take the figures quite arbitrarily the gross national product has gone up by forty per cent in that period eighty-five to eighty-nine (ICE-GB: s2b-036, #101)

(25) And during the last five years the gross national product has gone up by forty per cent in that period eighty-five to eighty-nine.

However, the omission of one of the two or more conjoins in instances of coordination may result in ungrammaticality, cf. (26):

(26) a. Earlier after discussions in Cairo with President Mubarak he said Britain and Egypt were in agreement that there should not be any widening of the war aims beyond liberating Kuwait (ICE-GB: s2b-005, #100)

b. *Earlier after discussions in Cairo with President Mubarak he said Britain and Egypt were in agreement that there should not be any widening of the war aims beyond liberating Kuwait.

After the omission of the coordinator and and the second conjoin Egypt, the ungrammaticality of (26b) is not surprising. Coordinated conjoins usually form a constituent together which then influences, or is influenced as a whole, by the syntactic structure of the clause. Here the main verb were requires a plural subject.

I am aware that this observation is not valid for all instances of coordination we encounter in language. There are examples of coordination in which one or more of the conjoins can be left out and yet the utterance remains syntactically intact. This is particularly true for cases of listing:

(27) a. There are people here from many parts of the world and from different cultures and different backgrounds (ICE-GB: s2a-020, #107)

b. There are people here from many parts of the world and from different cultures and different backgrounds.

However, this cannot be seen as bridging the gap between and-parentheticals and coordination proper because the parenthetical construction is never seen in the context of listing (see any of the already given examples).

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11. This observation, however, is not always true for the parenthetical clause itself. While the host is perfectly formed without any assistance from the parenthetical, there are instances where the parenthetical clause needs (the context of) its host to achieve grammaticality. For examples, see (2) and (50). More on this issue in Section 4.
In addition, omissibility can be licensed when two independent clauses are coordinated, i.e., they can exist on their own. This alludes to the second type of parentheticals discussed in the previous section, where the host and the parenthetical can exist independently and a split-sentence approach was discussed. On the negative side, though, it is worth noting that and-parenthetical clauses do not exhibit a preference for the final position in the host. In the data set, they always interpolate a host structure and are never in final position. On the other hand, in a structure where two independent clauses are linked in a coordinated relation, it is always the case that one follows the other, and they do not interrupt each other:

(28) \[_{\text{CL}1}\text{Uhm well I knew Adam from last year when he was at college}] and \[_{\text{CL}2}\text{I saw his poster up about the group}] (ICE-GB: s1a-002, #117)

Typically, in coordination proper elements of equal syntactic status are coordinated. In (26) we witness coordination of two NPs: \[_{\text{NP}}\text{Britain}\] and \[_{\text{NP}}\text{Egypt}\]. In (27) there is coordination of two PPs: \[_{\text{PP}}\text{from many parts of the world}\] and \[_{\text{PP}}\text{from different cultures and different backgrounds}\]. Also, in the second PP the complements of the preposition-head are coordinated: \[_{\text{NP}}\text{different cultures}\] and \[_{\text{NP}}\text{different backgrounds}\]. In the same vein, it is well established that only syntactic constituents of the same syntactic function can be coordinated (cf. for example Huddleston and Pullum 2002: 1275). So, in (27a), even though I mentioned that the conjoins are omissible, coordination is possible because the coordinated constituents share the same syntactic function: the two PPs are adjuncts of place.\(^{12}\) A step further, the coordinated constituents share not only the same syntactic function, but they are also members of the same syntactic category, so they also share identical form.

To conclude this section, I would like to refer to one final argument with respect to coordination. Fillmore (1968: 10) has shown that apart from the syntactic requirement for grammatical coordination, the two conjoins must also have the same thematic function:

(29) a. \[\text{John}_{\text{AGENT}}\text{broke the window.}\]
    b. \[\text{A hammer}_{\text{INSTRUMENT}}\text{broke the window.}\]
    c. *\text{John and a hammer broke the window.}\n
\(^{12}\) As Huddleston and Pullum have noted, certain instances of coordination depart from the strict functional likeness just outlined. They observe (Huddleston and Pullum 2002: 1325) that these violations are minor and semantically motivated:

1. \text{all and only the corrected copies} [predicate + focusing modifier]
2. \text{our and future generations} [determiner + attributive modifier]

Clearly, these cases are very different from the clausal parenthetical structures under consideration.
Even though the two coordinated constituents in (29) share both syntactic function and form, the sentence is ungrammatical because they have different thematic functions.

To put this in the context of *and*-parenthetical clauses vs. coordination proper, looking back at the examples of parentheticals and applying the form and function syntactic requirements along with the thematic function requirement, it becomes obvious that the interpolated parenthetical does not share its form, function, or thematic role with its adjacent constituents. Instead, the parenthetical exists separately.

### 3.2 Ellipsis

Along with omission, coordination seems to differ from *and*-parentheticals in the way ellipsis is licensed. It is often the case that if two conjoins share a constituent, it can be factored out in the second one:

(30) a. and an appalling character came and sat down immediately uh uhm in front of me <,,> and engaged me in conversation (DCPSE: DL-B29, #758)

b. and an appalling character came and <he> sat down immediately uh uhm in front of me and <he> engaged me in conversation.

(31) a. they have exactly the same uh trend in Germany where they are called halb stark or half matured youths, in France brisons noirs black jackets in Australia the boys are known as bodgies and the girls as widgies (DCPSE: DL-D03, #8)

b. they have exactly the same uh trend in Germany where they are called halb stark or half matured youths, in France <they are called> brisons noirs black jackets in Australia the boys are known as bodgies and the girls <are known> as widgies

The elements in the angle brackets in the above examples can be added to the original sentence without changing the meaning of the clause and without producing an ungrammatical structure. These are the hallmarks of ellipsis (cf. Biber et al. 1999: 156). In addition, the elements elided in these examples cannot be analysed as an expansion of a simple phrase; they are seen as a coordination of two (or more) clauses.

On the other hand, ellipsis is not possible for *and*-parenthetical clauses. No elements of the structure of the parenthetical can be elided. Perhaps this is because the parenthetical is argued to be independent of the syntax of the host; it is not related to an element of the host from which it can recover an elided item. In (32), even though the main utterance and the parenthetical share the same subject-referent, *Emmanuel Shinwell*, it is not possible to omit the subject in either of the clauses.
(32) a. Emmanuel Shinwell thought and he is after all a previous Defence Minister that you can’t have informed opinion on this vital matter without… (DCPSE: DL-D04, #128)

b. *[Emmanuel Shinwell thought] and [__ is after all a previous Defence Minister] that you can’t have informed opinion on this vital matter without…

3.3 Scope of subordinators: the case of if

This test demonstrates whether a certain string falls under the scope of the subordinator or not. To implement the test, the only prerequisite is that the two constructions under consideration occur in clauses headed by a subordinator. Theoretically, the subordinator should have scope over every single constituent of the clause which it introduces. Given the detachment of parentheticals, my hypothesis is that while coordinated constructions will fall under the scope of subordinators, parenthetical and-clauses will remain beyond it. The next two examples represent the two target groups. In the first one, two clauses are coordinated and are introduced by the subordinator if. The second one is an example of an adverbial clause introduced by if, which also hosts an and-parenthetical clause.

(33) In the past [if [a dog or a chicken or something ran out into the road] and [you had to take avoiding action]] early Range Rovers used to roll around and give the impression they weren’t really going to change direction at all (ICE-GB: s2a-055, #155)

(34) Lord Baden-Powell once went on record as admitting that [if [he came across someone whose name he had forgotten] and this must have been a pretty rare event] he used to cover his lapse of memory by saying hello how’s the old complaint (DCPSE: DL-J01, #4)

To check if the syntactic string bracketed in (33) is under the scope of the subordinator if, we need to answer the following question: Under what circumstances would early Range Rovers roll around and give the impression they weren’t going to change direction at all? Is it if:

a) a dog or a chicken or something ran out into the road = P;
b) you had to take avoiding action = Q;

c) P \cup Q = U (utterance)?

Clearly, the intended meaning is the combination of the two statements denoted by P and Q. Hence, the two conjoins form one single constituent which is not only syntactically uniform, but also semantically.
For the example with the parenthetical, I follow the same schema and examine the required constituents for the utterance in (34) to be true. Namely, under what circumstances would Lord Baden-Powell cover his lapse of memory by saying: “Hello! How’s the old complaint?” Is it if:

a) he comes across someone whose name he has forgotten = P;

b) this must be a pretty rare event = Q;

c) \( P \cup Q = U \)?

Unambiguously, Lord Baden-Powell would cover his lapse of memory only if P, but not if Q, or \( P \cup Q \). Hence, Q is seen as ‘an outsider’ in this presumption and is treated as an external element to the clause introduced by if. Despite this, however, there is a clear sense that the parenthetical together with the host collectively contribute to the final interpretation of the utterance. I will return to this in Section 5. To summarise, while coordinated elements fall under the scope of subordinators, parenthetical and- clauses do not.

A few other tests can be brought forward to support the weight of the outlined differences, but for the purposes of the article, these will suffice.

4. Syntactic relations: host and and-parenthetical clauses

In the context of the two main approaches to the syntax of parentheticals, this section investigates which of the two best accommodates and accounts for the members of the and-parenthetical class.

The first approach holds that (any) parentheticals are syntactically integrated into the structure in which they occur (cf. Emonds 1973, Ross 1973, Jackendoff 1977, McCawley 1982, 1989, Corver and Thiersch 2002, Potts 2002). The second maintains that parentheticals are syntactically unrelated to the syntax of the host structure (cf. Haegeman 1988, Espinal 1991, Peterson 1999). However, as previously asserted for other parentheticals (cf. Dehé and Kavalova 2006) following Ackema and Neeleman (2004), in this section I will argue that neither of these two approaches is complete and satisfactory for the analysis of and-parenthetical clauses, and a compromise is outlined.

The next two subsections offer a quick overview of the two approaches and discuss some inherent problems.

4.1 The integrated approach

In what I refer to as the ‘integrated approach,’ though different terms and solutions are offered, the overarching assumption is that the parenthetical and the host are
dominated by the same top node. This immediately places the parentheticals not only on the linear, but also on the hierarchical axis of the host. For example, Corver and Thiersch (2002: 14f) argue that parenthetical clauses form "a constituent with the phrasal host to which [they are] attached", which ultimately gives them the status of an adjunct clause. Given that claim, if the parenthetical is indeed forming a constituent with a constituent of the host (or stands as an independent host constituent), then the parenthetical should be able to undergo a certain set of host-related operations.

The tests implemented to ascertain constituency are well-established, and I will only make a note of a couple of them. Following Quirk et al. (1985: 504f) and their tests for adjuncthood, it transpires that *-parenthetical clauses cannot become the focus of a cleft structure:

(35)  a. Emmanuel Shinwell thought *he is after all a previous Defence Minister* that you can't have informed opinion on this vital matter without...
     (DCPSE: DL-D04, #128)
     b. *It was (and) he is after all a previous Defence Minister who/that Emmanuel Shinwell thought that you can’t have …

This inability of the *-parenthetical clause cannot be explained by its form, for it is possible for an (adjunct) clause to become the focus of a cleft, cf. (36). Also, coordinated structures can be the focus of a cleft, cf. (37).

(36)  a. It was Johnny that stole her uhm money while we were away in France
     (DCPSE: DL-B25, #640)
     b. It was while we were away in France that Johnny stole her money.

(37) it’s the the <,> character of men and <,,,> the actions of men that I’m Interested in <,> (DCPSE: DL-A01, #647)

To test if the parenthetical combines with a host constituent to form an even longer (and more complex) constituent of the host structure, we can apply tests previously used in the literature for other parenthetical constructions.

4.1.1 VP-Ellipsis (McCawley 1982)

Following McCawley (1982) and applying VP-ellipsis, the status and relation of parenthetical to host VP can be tested:

(37)  a: Did they say that Emmanuel Shinwell thought, *he is after all a previous Defence Minister*, that you can’t have …
     b: No, they didn’t
Where:

a) *They didn't* = They didn't say that E. S. thought that you can't have…

b) *They didn't ≠* They didn't say that E. S. thought, and he is after all a previous D. M., that you can't have…

Unambiguously, the interpretation of B’s answer excludes the parenthetical. The intended meaning is as in a), but not b). The parenthetical does not form a constituent with the VP of the host.

4.1.2 *Temporal subordination (Haegeman 2003)*

This is a test that Haegeman applies to conditional clauses to distinguish between event-conditional and premise-conditional clauses. Here I single out the parenthetical from the rest of the utterance by comparing the tenses used in each of the two. The prediction is that if the parenthetical clause is in any way dependent on the host, then its tense will be temporally subordinated to that of the main utterance (host). On the other hand, if the choice of tense is not determined by that of the host, but instead by factors that determine the choice of tense in an independent clause, then the parenthetical is clearly detached from the host. Consider the following two examples:

(38) It might mean and I think it will mean increasingly that they will have to work in term (DCPSE: DL-I02, #47)

(39) If your back-supporting muscles tire (future), you will be at increased risk of lower-back pain.

(40) In fact I was very candidly told and I repeat the acknowledgment of the candour that it was placed before him in January … (ICE-GB: s2a-063, #083)

In short, that the parenthetical is not temporally subordinated to the host is illustrated in (38) where the future reference in the parenthetical is expressed independently of the future in the host. Consider (39) for an example where the future reading of the sub-clause is dependent on the future time reference in the matrix. In (40) the present tense in the parenthetical is clearly independent from the past of the host. Consequently, we cannot accept that the parenthetical is temporally subordinated to the host since nothing in the main utterance seems to have influence on or determine the tense of the interpolation. Haegeman’s conclusion for

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13. In this instance, the parenthetical clause will be attributed to the speaker who is reporting on what ‘they’ said (or rather, what they did not say), but not to what they actually said. This, of course, reinforces the detachment of parenthetical.

14. (39) is an example from Haegeman (2003: 320). The phenomenon illustrated here is sometimes referred to as ‘will deletion’.
premise-conditionals applies here too – the parenthetical is seen as a construction detached from the host.

Along similar lines, in Section 3.3, the scope of the subordinator if was tested, and it was ascertained that the parenthetical falls beyond it. But if the parenthetical clause were a constituent or part of a constituent of the if-clause, then it should have also been under its scope.

Although the following two tests are stylistic, but not syntactic, they fit the present argument that parentheticals are difficult to account for in terms of hierarchical structures. First, Blakemore (1987) points out that therefore establishes a discourse connection between two (or more) independent clauses. Hence, it cannot be used to connect two clauses one of which is a constituent of the other. (41b) is ungrammatical because therefore attempts to connect two clauses that are dependent on each other. On the other hand, in (42), if semantically acceptable, therefore can be introduced to connect the host with the parenthetical – hence they are, following Blakemore, two independent clauses.

(41) a. it was Pertelote who said that he suffers from constipation (DCPSE: DL-A01, #824)

b. *It was Pertelote who therefore said that he suffers from constipation.

(42) and I’ve often wondered and therefore it’s a great conflict personally between what I enjoy doing myself and what I do for a living whether understanding is something that really belongs only to yourself … (DCPSE: DL-D07, #6)

The second test refers to backtracking. It deserves a separate subsection.

4.1.3 Backtracking

The detachment of the parenthetical clause from the host is also reflected in a phenomenon not necessarily restricted to parentheticals only – ‘backtracking’. And-parenthetical clauses are occasionally surrounded by repeated host constituents. In nearly 9% of my data this phenomenon is observed. This is not a co-incidence. ‘Backtracking’ is a device used by the speaker to remind the hearer that what he has just heard was only a diversion, an aside, and is not to be treated as part of the main utterance. It also assists the hearer to quickly resume the interpretation of the main utterance, i.e., to pick it up where it was left. The speaker uses backtracking to sever the parenthetical away from the host. There appears to be a tendency for backtracking to be employed by the speaker when longer than usual and-parentheticals are interjected. However, this statement is purely observational and is not based on any scientific data due to the insufficient number of examples with backtracking I have in my data set. It remains to be investigated. In (43) the and-paren-
thetical is surrounded by *I believe that if* from the main utterance, whereas in (44) the parenthetical is detached from the host by *that the Iraqi people* [*they*]:

(43) But I but I believe that if at this stage *and it isn’t too late because it’s only what six months* [*yes since your brother died I believe that if you can bear to begin to really get in touch with those real feelings of pain* … (DCPSE: DL-D08, #135)

(44) And I think *that the Iraqi people* and there are large numbers of them honourable and decent who have been suppressed and repressed and tortured and beaten and bombed over all of these years *that they* are going to exert their view

(ICE-GB: s1b-036, #71)

Arguably, backtracking is implemented by the speaker to signal that he himself perceives the parenthetical as a string outside the boundaries of the main utterance.

The multi-faceted evidence offered in this section forces us to conclude that *and*-parenthetical clauses are not to be treated as a constituent of any particular sequence in the host structure.\(^\text{15}\) At this stage, it seems fair to assume that these interpolations are not structurally integrated into the syntactic string of the host. This, in turn, leads to the second approach to the study of parentheticals: the unintegrated approach.

4.2 The unintegrated approach

According to the unintegrated approach, parentheticals are not structurally part of the host, but instead are generated separately and are related to the host structure by a discourse-governed process of linearisation. For example, Haegeman (1988: 250) argues that the interpretation of parentheticals is accounted for in terms of processing, by way of recognising the comma intonation which parentheticals are associated with, a “syntactically determined PF property of parentheticals”. She maintains that the interpretation of the sentence is fully interpreted only in the context when “non-linguistic elements can be accessed, i.e., at the level of utterance processing” (Haegeman 1988: 261):

(45) If you don’t mind. (in a situation where one is about to take one’s seat and the neighbour has to move a bit)

Proposals of the ‘radical orphanage’ type (consider also the LF’-level introduced in Safir 1986) are difficult to reconcile. As Mark de Vries argues (this volume), “pa-

\(^{15}\) In addition to this, studies of the prosody of parenthetical clauses have confirmed that parentheticals do not disturb the prosodic flow of the host either (cf. Cooper and Sorensen 1981, Wichmann 2001). For example, Cooper and Sorensen (1981) experimentally show that parenthetical clauses are not integrated in the overall downward trend of the host, but instead they have their own declination domain. (But see Dehé’s contribution in this volume for an alternative view.)
parentheses, like any other linguistic material, have both sound and meaning. That is, they are interpreted as well as pronounced; therefore, they must be present at the LF interface and the PF interface”.\textsuperscript{16}

Linguists who argue in favour of the unintegrated approach (e.g., Safir 1986, Haegeman 1988, Espinal 1991, Peterson 1999) predict that there can be no syntactic relation whatsoever between the material in the parenthetical and material in the host. This claim is undermined by data discussed in Ackema and Neeleman (2004) for Dutch, reproduced in (46).\textsuperscript{17}

\begin{equation}
\text{dat Jan, althans volgens zichzelf, geweldig is that John, at least according to himself, wonderful is} \\
\text{‘that John is wonderful, at least in his own eyes’}
\end{equation}

In (46) they demonstrate that an anaphor in the parenthetical can have its antecedent in the host. Some of their other examples show that parentheticals can contain parasitic gaps that are licensed by A’-movement in the host; they can also be secondary predicates that take a DP in the host structure for subject (cf. Ackema and Neeleman 2004: 98ff). Based on examples of this nature, the authors conclude that “a parenthetical cannot affect the syntax of the host clause, but grammatical requirements imposed by material in the parenthetical can be satisfied by elements

\textsuperscript{16.} Albeit beyond the scope of this paper, parentheticals seem to influence and alter the prosodic structure of the host. Parentheticals violate phonological phrasing. It’s assumed (Selkirk 1986) that for English the right edge of a syntactic phrase coincides with the right edge of a phonological phrase. In other words, there is a phonological boundary at every syntactic edge. More importantly, there is no prosodic boundary between a head and its complement. In this context, consider (i):

\begin{enumerate}
  \item nor is it uh legitimate for us to acquire and I underline the word acquire Iraqi territory (ICE-GB: s1b-027, #54)

  \begin{itemize}
    \item \textit{Prediction: (for us) (to acquire and I underline the word acquire Iraqi territory)}
    \item \textit{Actual: (for us) (to acquire) (and I underline the word acquire) (Iraqi territory)}
  \end{itemize}

  \text{}For a more detailed account, see Dehé and Kavalova (2006) and also Dehé’s and Döring’s contributions in this volume.

\textsuperscript{17.} In Hoffmann (1998) similar data is discussed for German. In these examples Hoffmann demonstrates that reflexive pronouns located in the parenthetical are bound by a (major) constituent in the host (Hoffmann 1998: 302):

\begin{enumerate}
  \item Hanna hat, \textit{sich} nicht schonend, die Arbeit zu Ende gebracht. \\
    \text{Hanna has herself not sparing the work to end brought} \\
    \text{‘Hanna has finished the work without sparing herself.’}
  \item Hanna hat ihn, \textit{sich} nicht schonend, bei der Arbeit gesehen. \\
    \text{Hanna has him himself not sparing with the work seen} \\
    \text{‘Hanna has seen him working. He didn’t spare himself.’}
\end{enumerate}
in the host clause” (Ackema and Neeleman 2004: 99). Considering examples like these, a belief that no syntactic link whatsoever between host and parenthetical may exist must be abandoned. But what are the consequences for and-parenthetical clauses?

4.3 Insertion of parentheticals in a non-terminal node

It is not difficult to construct an example of an and-parenthetical clause where relations of the type discussed by Ackema and Neeleman (also Hoffmann, 1998; cf. fn. 17) are displayed. For example, let us consider the case of an anaphor located in the parenthetical that needs to be bound by a suitable antecedent in the same phrase or sentence, cf. (47): 18

(47) John, has, and I know it’s all about himself, written a book about fishermen off the Irish coast.

In (47) the reflexive pronoun himself located in the parenthetical string is not bound by a suitable antecedent; at least no such antecedent is available from within the parenthetical. Principle A of the Binding Principles states that “if α is an anaphor, interpret it as co-referential with a c-commanding phrase in D” (Chomsky 1995: 100). For himself to be bound, it needs to be c-commanded. The C-command condition on binding requires that a bound constituent must be c-commanded by an appropriate antecedent. It seems that the only suitable antecedent available here is the subject of the host, John. This case is similar to the instance discussed by Ackema and Neeleman of anaphor binding in Dutch. To demonstrate that it is not only a matter of interpretation but also syntax, it is important to consider the example in (48) where the NP node containing John does not c-command the node containing the pronoun himself because the sister of this NP node is the P node of, and himself is clearly not contained within the preposition of, i.e., it is not the daughter, granddaughter, etc., of it.

(48) *The parents of John, and I suspect it’s all about himself, have written a book about children with dyslexia.

Given all the evidence, it seems incorrect to assume that the only link between host and parenthetical occurs at discourse level only.

At the same time, the analyses currently available to us are confusing. On the one hand, as argued in the previous section, there does not seem to be a strict syn-

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18. This is a constructed sentence (thanks to Nicole Dehé) that was presented for testing to seven native speakers of English in a pseudo-randomised set of examples. All seven participants agreed that this sentence sounds English and is grammatical.
tactic relation between host and parenthetical. This led to the expression of a preference for the unintegrated approach. On the other hand, the existence of examples like (47), where the and-parenthetical appears to be dependent on the syntax of the host, cannot be denied. At this stage, it appears that the only way to reconcile this controversy is to accommodate and-parenthetical clauses in the insertion theory proposed in Ackema and Neeleman (2004). They observe that while the parenthetical does not change the structure of the host, grammatical requirements imposed by elements in the parenthetical can be satisfied by material in the host (see above). Crucially, the relation between host and parenthetical is unidirectional in that the unsatisfied parenthetical feature can be satisfied by an element in the host, but not vice versa. This process does not influence the integrity of the host structure.

Ackema and Neeleman (2004: 90) define insertion as “a relation of feature matching between two nodes in different representations”. In the context of this article, the two representations under consideration are the host – called representation 1, and the and-parenthetical clause – called representation 2. For insertion of parentheticals in the syntactic string of the host, they argue (2004: 100) that it is an instance of insertion in a nonterminal node of the syntactic representation of the host. One of the immediate consequences of this observation is that inserted parentheticals, because they are inserted in a nonterminal node, become invisible in certain respects. This automatically explains why and-parenthetical clauses do not participate in any of the host-related operations discussed in Section 4.1. In addition, inserted material is not present in the host structure, but merely associated with it through feature matching. Hence, a parenthetical is not a constituent of the host.

And while the parenthetical is not part of the hierarchical structure of the host, syntactic requirements of material in the parenthetical can be satisfied by material of the host, as in (47). This, I claim, is how linearisation occurs: the properties of the parenthetical are associated with properties of the host and ordering on the linear axis takes place. Crucially, I do not suggest in any way that the parenthetical is integrated in the string of the host, but instead the two separate syntactic representations undergo a process of linear ordering on the surface. This linearisation is clearly visible in instances of the type discussed in (47). In other words, the syntactic requirement of the parenthetical – the unbound anaphor, in its search of a suitable antecedent, motivates the syntactic insertion and consequently linear ordering of the parenthetical in the host string. As a result, the and-parenthetical clause appears in a linear position that is directly related to the position of the antecedent, John in this case. Again, note that this relation is only unidirectional: from parenthetical to host, but not vice versa.

I believe this analysis is in line with Ackema and Neeleman’s approach to parentheticals not least because they distinguish three types of this insertion. And-parentheticals are an example of the second type they identify, viz. matching with
a non-licensing function, of which binding operations are a subtype (Ackema and Neeleman 2004: 101f).

In summary, while neither of the two widely established approaches to the syntax of parentheticals is sufficient to accommodate the parentheticals under consideration – both exhibit certain flaws and are unable to account for all instances of parentheticals, nor for some of the obvious relations between the two, the insertion theory, as applied to parentheticals by Ackema and Neeleman (2004), appears to offer a legitimate explanation of these strings. Following this theory, I emphasise that even though parenthetical and-clauses are related to the host, they remain unintegrated. This controversial simultaneous relation is well catered for in terms of insertion in a nonterminal node. Crucially, the relation in question is unidirectional: only material of the parenthetical can be associated with material of the host, but not vice versa; hence the grammaticality of the host is in no way dependent on the parenthetical. At the same time, this ensures the linear ordering of the parenthetical in the host string.

4.4 Location

Given that I have just argued in favour of a certain relation between host and parenthetical – a relation which is altogether based on two separate representations, and also the fact that the parenthetical is indeed contained on the linear axis of the host, the question is whether these can account for the preferred place of interpolation, i.e., the exact position at which the parenthetical interrupts the host string. If certain properties of the parenthetical are to be associated with properties of the host (linearisation), then I could speculate that this also plays a role in the preferred place of interpolation – such that all necessary requirements for the establishment of this relation are met. For example, if there is an anaphor located in the parenthetical, then for it to be satisfied, the antecedent should be positioned in such a way that it can c-command the anaphor; it should also precede the anaphor. If we return to the example discussed in (47), which I repeat here for convenience, (49), the reflexive pronoun himself needs a suitable antecedent. We established that the only available antecedent is located in the host and is the subject John. Since the antecedent should be in a position to c-command the parenthetical, the and-clause should occur to the right of John. Interestingly, in (49) the antecedent is the subject – initial sentence position; consequently, the parenthetical, at least theoretically, can occur in any position after it: it will always be c-commanded. This is indeed the case, as can be seen in (50).

(49) John, has, and I know it’s all about himself, written a book about fishermen off the Irish coast.
(50) John @ has @ written @ a book @ about fishermen @ off the Irish coast.

Unfortunately, while this informs us that for this sentence to be grammatical the parenthetical should occur in a position where it can be c-commanded by the host subject, it does not tell us anything about all the possible places of interpolation after the subject (as denoted in (50)). At this stage, I would like to support the hypothesis that the different timing of the merger of the parenthetical and-clause in the syntactic string of the host determines its semantic and pragmatic contributions. In other words, the exact place of interpolation, after all syntactic requirements are met, will be determined by the way the parenthetical influences, and relates to, the semantic and pragmatic functions of the utterance. This is the topic of the next section.

5. Why speakers use and-parenthetical clauses

The most logical question when studying these constructions is to ask ourselves what is the speaker’s motivation to interrupt an otherwise easy-flowing utterance with a cumbersome and resource-demanding additional string.

5.1 And-parentheticals: a disfluency phenomenon?

At first glance, we may want to assume that these interceptions are a mere instance of disfluency. The speaker, while trying to convey a certain message, simultaneously adds something else which is not necessarily linked to the rest of the utterance. In the case of disfluency, we are not interested in the relevance of this additional utterance. Consider the example in (51):

(51) oh yes I went down to the shop where I bought thank you where I next to the glass shop opposite Horntall Road on the Cambridge Road (DCPSE: DL-B07, #525)

In (51) the speaker is handed a cup of tea while she is speaking and she interrupts her utterance to say ‘thank you’. Notice that the speaker recovers her utterance by implementing backtracking. Given that backtracking is witnessed in 9% of the data discussed here, this may (mistakenly) force us to conclude that and-parentheticals are a disfluency phenomenon and to dismiss their relevance in the immediate context of the utterance. However, as argued in Section 4, and-parenthetical clauses, even though not contained on the hierarchical axis of their host, are strictly contained on their linear axis. In addition, there is a general feeling that these inserted clauses are somewhat different from a mere interruption along the
And-parenthetical clauses

lines of ‘thank you’. Very often it appears that these parenthetical clauses contribute to, and assist, the general interpretation of the utterance, which is why I believe that the speaker’s choice is not coincidental. I suggest that (51), by contrast, could be treated as an example of disfluency. The cup of tea and the speaker’s politeness are in no sense related to her on-going account of the shop to which she had been. In this case there is neither a syntactic, nor a discourse relation between the host utterance and the interpolated string.19 At this stage of analysis it is important to distinguish parenthetical clauses from disfluencies.

In what follows, I will address the question how and-parentheticals are different from disfluencies, which will take me to their pragmatic function in the host utterance. To pursue the hypothesis outlined here, I will couch the next section in the framework of Relevance Theory (RT, Sperber and Wilson 1995).

5.2 Relevance Theory and and-parentheticals

To address the first question raised at the beginning of Section 5, viz. what motivates the speaker’s choice to implement such a long and cumbersome utterance in the main utterance flow, I refer to Relevance Theory (Sperber and Wilson 1995). Indeed, it is curious why the speaker does not choose to have two separate utterances that are arguably easier to process, but opts for a longer one instead.

In the spirit of RT, the speaker, when communicating an utterance, aims at optimal relevance. The core principle of RT is the principle of relevance which states that “every act of overt communication communicates a presumption of its own optimal relevance” (Sperber and Wilson 1995: 158). Optimal relevance is defined in terms of cognitive effects and processing effort, so that it increases with the number of effects and decreases with the amount of processing effort required. Given that, the insertion of an additional element in the string of the utterance may be seen as burdening the process of interpretation because the processing cost is increased. So, the next question here is why inconvenience the interpretation process? I suggest that the answer to this is hidden in the hypothesis that and-parenthetical clauses assist the achievement of certain cognitive effects which would otherwise be less or fully inaccessible to the hearer to process. Hence, their contribution to the contextual effects offsets the processing cost they entail.20 I will not

19. This is in contrast with examples of and-parenthetical clauses where the insertion appears vaguely related to the host. Recall (21) where the speaker interrupts his main utterance to acknowledge the work of Eileen Whitley for the results discussed in the host. In (51) the speaker does not acknowledge the glass shop she’s talking about, but the interruption is there to acknowledge the hospitality of her hostess.

20. An argument along the same lines has been offered for other parenthetical constructions, e.g., what (cf. Dehé and Kavalova 2006)
develop a full account of the assumptions and effects the parenthetical clause gives rise to, nor will I discuss the explicit and implicit communication involved, but will only aim to outline the driving force behind this process.21

The speaker, when making an utterance, aims at optimal relevance. He is aware that to keep the hearer’s attention, he needs to be optimally relevant and should not digress. To communicate his intended thoughts, beliefs, etc., the speaker makes assumptions about the hearer’s contextual resources and processing ability. Based on these assumptions, the speaker chooses his style. Style in RT arises in pursuit of relevance (cf. Sperber and Wilson 1995: 218).

In his desire to be optimally relevant, the speaker aims at presenting the hearer with an utterance in such a way that early and correct disambiguation and reference assignment are achieved. Since parsing is seen as a ‘top-down’ process, i.e., the hearer constructs anticipatory hypotheses about the overall structure of the utterance on the basis of what he has already heard (Sperber and Wilson 1995: 205), temporal sequencing plays an important role in the process of identification of the propositional form, referent, etc. To place this in the context of and-parenthetical clauses, consider the following example:

(52) Emmanuel Shinwell thought *and he is after all a previous Defence Minister* that you can’t have informed opinion on this vital matter without… (DCPSE: DL-D04, #128)

The speaker, aiming at early disambiguation and reference assignment, introduces the parenthetical in mid-sentence position. On presenting the hearer with this utterance, the speaker interrupts the linear structure of his utterance to explain who Emmanuel Shinwell is: a previous Defence Minister. Now the hearer is aware that the person the speaker is referring to is not any other Emmanuel Shinwell, but the previous Defence Minister. Clearly, the utterance is not only disambiguated and referenced at an early stage, but it is also enriched by this additional piece of information and allows the hearer to assume that indeed this person is of a certain sequence and his opinion on this issue is perhaps relevant. By interrupting the main string with the parenthetical, the speaker achieves optimal relevance at a minimal cost of processing. In other words, with the insertion of the parenthetical in the main utterance at a point adjacent to the subject-referent, the speaker, obeying temporal sequencing, has achieved the three sub-tasks involved in the identification of a propositional form: disambiguation, reference assignment, and enrichment (Sperber and Wilson 1995: 185). He has provided the hearer with all necessary prerequisites (in the speaker’s view) to lead the hearer in the direction of the

21. For a much more detailed account of the role of parentheticals in the context of RT, see Blakemore (2006, ms.).
intended cognitive assumptions and process to achieve the most faithful representation of the intended utterance. Blakemore convincingly argues that some parenthetical expressions may yield cognitive effects of their own, while others only contribute to the relevance and overall interpretation of the host without yielding positive cognitive effects (Blakemore 2006). This is indeed applicable to and-parenthetical clauses.

In the same vein, as pointed to me by a reviewer, the speaker may have realised that by not assigning a timely reference to Emmanuel Shinwell, his audience may fail to recognise his intentions. At this stage of the utterance, the speaker cannot utilise any of the more conventional means to make the necessary information available, e.g., apposition or a non-restrictive relative clause: Emmanuel Shinwell, a previous Defence Minister, or Emmanuel Shinwell, who is a previous Defence Minister. The speaker has already uttered the verb and it is too late to implement apposition or a non-restrictive clause. Consequently, he resorts to using a parenthetical clause and successfully achieves the relevant effects listed above.

And-parenthetical clauses can also be used to explicitly provide information about the strength of the speaker’s commitment to the proposition in the host. Recall the example in (19)=(53) and (20), as well as their typical place of interpolation (Section 2.2.1). The example in (54) is observed:

(53) Madam will the Minister confirm that come the single uh Common Market that three hundred million EEC nationals could and I emphasise could seek employment in this country without the need to obtain a work permit (ICE-GB: s1b-059, #40)

(54) Our priority is not, and I repeat not, to… (Tony Blair, observed)

Instances like (53) and (54) are examples of epizeuxis.

These instances of and-parenthetical clauses may be said to resemble ‘coordinator-marked reduplication’ (Huddleston and Pullum 2002: 1304f). In this case, a word is repeated to achieve intensification:

(55) a. I made dozens and dozens of mistakes.
   b. The noise grew louder and louder.

In (55) the reduplication is of nouns in (a) and of comparatives in (b) (it can be of verbs, adverbs, etc. – but usually it is one word only). For example, in (55a) the speaker emphasises that the measure noun used on its own is not sufficient to offer a faith-

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22. The space here does not allow me to discuss how this is achieved. It can be done both explicitly and implicitly (see Blakemore 2006).
ful representation of his intended meaning. On recognising the reduplication, the hearer is invited to reassess his understanding of dozens in a context of an increase.

Along similar lines, the repetition of a host word in the and-parenthetical reinforces the speaker’s faithful representation of his intentions. However, while the repetition enforced by the parenthetical clause has an emphatic effect (additionally supported by verbs like emphasise and underline), it does not alter the propositional content of the host. In contrast, the propositional content in (55) is changed by intensifying reduplication. For example, (55b) does not simply emphasise a burst of noise louder than a previous one, but conveys continuity; it describes it.

The inserted parenthetical gives rise to certain contextual assumptions, which the hearer is prompted to include in his processing of the utterance: the hearer can now draw conclusions and import implications related to the speaker’s emotional state, levels of commitment, attitudes, etc. The utterance exhibits, rather than describes, the speaker’s mental and emotional states: it gives rise to non-propositional effects which would be lost under paraphrase. Without a doubt, as argued above, an extra linguistic processing effort incurred by the repetition must be outweighed by some increase in contextual effects triggered by the repetition itself. In the current parenthetical examples, it can be argued that the speaker, by employing epizeuxis, attaches a higher confirmation value to the assumption expressed than the hearer would otherwise have achieved. In (53), for example, the speaker’s degree of commitment to the expressed assumption is reflected by his emphasis on could. The insertion of the parenthetical clause strengthens the explicatures and all its contextual implications, thereby increasing the contextual effects of the utterance. This, in turn, gives rise to further implicatures and even richer contextual effects become accessible to the hearer for interpretation.

From this and previous examples, I argue that the parenthetical, though not part of the core utterance, can increase cognitive effects and influence the assumptions the hearer is intended to derive from the host. For (52), without the parenthetical, any assumptions derived by the hearer about the importance and relevance of this cited opinion based on the occupation and expert knowledge of Emmanuel Shinwell would be derived entirely on his own initiative and would have no backing from the speaker. In other words, the hearer is led by the speaker to derive more strongly evidenced assumptions about the authority of the cited opinion. Crucially, by inserting the clause, the speaker hints at the hearer that to achieve a faithful representation of his intended utterance, the hearer must access not only the concepts of the host, but also the assumptions alluded to in the parenthetical. On-
ly by considering both constructions together will the hearer be able to derive the intended proposition. This, in turn, explains the implementation of and.\textsuperscript{24}

At this level of argument, it can be suggested that the relationship between parenthetical and host is not only captured in the syntax (linearisation, but not in the form of sisterhood restrictions), but also at the level of utterance interpretation where temporal sequencing and online processing play a vital role. This observation addresses the question posed at the beginning. Depending on the intended assumptions or effects the speaker aims at, he chooses the place of interpolation for the parenthetical clause. The point of disruption is in line with the principle of relevance.

6. Conclusion

The aim of this article was to offer a detailed account of and-parenthetical clauses and to see how they fare in the context of previously established views on parenthetical constructions. To this end, I expressed a strong preference for a multi-faceted account where syntactic and pragmatic evidence are brought together to explain certain behaviour trends of the structure under consideration. This study was particularly aided by the use of corpus examples, which offer a breadth of coverage and are responsible for the easy identification of the types listed in Section 2. The section on the syntactic relation between host and parenthetical aimed to reconcile the two prevailing theories and to accommodate parentheticals in a grammar where linear order is exclusively seen as a function of hierarchical relations. Even though the adopted theory of insertion justifies a relation between host and parenthetical, it was not in a position to determine the exact place of interpolation and the motivation behind it. This was addressed in Section 5 where I argued that these disruption points are in line with the principle of relevance and are a direct result of the speaker’s aim for optimal relevance where temporal sequencing and online processing are seen as crucial.

References


\textsuperscript{24} Independently, Blakemore argues in favour of the same conclusion: the “host and the parenthetical collectively contribute to the inferential processes which yield the intended cognitive effects” (Blakemore 2005: 1174).
On the syntax and semantics of appositive relative clauses*

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In this paper I analyze appositive relative clauses that modify quantified nominals. This new data supports a theory of appositives as a phenomenon at the interface between syntax/semantics and discourse. More precisely, I propose that the appositive relative pronoun is E-type (see Sells 1985a and Demirdache 1991), and that it needs to follow its antecedent. I also propose that appositives are propositions (type t), merged to the DP they modify in narrow syntax, and moved to the matrix CP after Spell-Out and at the discourse level. I claim that merge within discourse is linear order dependent, and that at the discourse level, both PF and LF representations are available to the computational component. The designed system accounts for differences between appositives and restrictives and makes the strong empirical prediction that prenominal relative clauses cannot be true appositives.

1. Introduction

In this paper I look at appositive relative clauses that modify certain quantified nominals. I propose an analysis of the syntax and semantics of appositive relative clauses that accounts for this novel data, and explains some of the well-known differences between appositive and restrictive relative clauses.

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2. Quantified nominals modified by appositive RCs

It is well-known that appositive relative clauses can modify proper names (and pronouns), definite descriptions, and specific nominals (noticed since Smith 1964):

(1) John, who was late, came to the party with Mary.
(2) The new professor, who was late, came to the party with Mary.
(3) They invited a student from UCLA, who arrived late.

On the other side, it has been noted that appositive relative clauses cannot modify quantified NPs (Ross 1967, Rodman 1976, McCawley 1981, 1988):

(4) *Every*/No professor, who was late/busy, came to the party with Mary.

As for restrictive relative clauses, we know that they can modify quantified nominals, definite descriptions, and specific nominals:

(5) Every/No professor that we invited came to the party.
(6) The professor that we invited came to the party.
(7) They invited a new student from UCLA that I had never met before.

But restrictives cannot modify proper names (or pronouns):

(8) *John that we invited came to the party.

What we learn from the data above is that while restrictives and appositives are in complementary distribution when proper names (or pronouns) and quantified NPs are involved, both types of relatives can modify definite descriptions and specific nominals.

A first account that comes to mind is one in terms of type-driven interpretation. We could in fact hypothesize that it is the semantic type of the nominals and relative clauses that determines their reciprocal distribution. Before spelling out how such a proposal would work, let's have a look at the appositive relative clause and its denotation. Both Sells (1985a) and Demirdache (1991) propose to treat the appositive relative pronoun as an E-type pronoun. Namely, such a pronoun, differently from what happens in restrictive relative clauses, is referential, hence it denotes a singular term. If this is the case, then, assuming a movement structure as the one indicated in (9), restrictive relative clauses end up denoting predicates, hence expressions of type <e,t>. For appositives, instead, we end up with a denotation that is the same as that of independent sentences. In other words, appositives are propositions, or expressions of type t (see Partee 1975 for a similar proposal, but also Kempson 2003, for a different approach within the framework of Dynamic Syntax).
Furthermore, since appositives are not crucial for the interpretation of the nominals they modify, they do not need to be semantically computed with it (see Potts 2005). Let us then temporarily assume the existence of the following principle:

(10) Principle of Independent Computation:
If two sister nodes α and β are of a basic type (type e or t), the node which gets the t value is computed separately.

Such a system would correctly derive the distribution of appositives and restrictives (see Del Gobbo 2003b). But upon closer scrutiny the facts are more complicated. Notice first that there is a close parallelism between the appositive relative clauses in sentences (1)-(4) and the following sequences of sentences in a discourse:

(11) John came to the party with Mary. He was late. (cf. (1))
(12) The new professor came to the party with Mary. He was late. (cf. (2))
(13) They invited a student from UCLA. He arrived late. (cf. (3))
(14) *Every/*No professor came to the party with Mary. He was late/busy. (cf. (4))

More precisely, we have the same grammaticality judgments. The sentences in (11)–(14) seem to confirm part of the approach outlined above, namely appositives are propositions, and whatever principles are responsible for the grammaticality/ungrammaticality of the sentences in (11)–(14), should be responsible for
the grammaticality/ungrammaticality of the ones in (1)–(4). Namely, appositives would qualify as an instance of anaphora across discourse.

However, notice that when other quantifiers are taken into consideration, the parallelism between independent sentences and appositives breaks down:

(15) *Few students, who were late, came to the party with their parents.
(16) Few students came to the party with their parents. They were late.
(17) *Most students, who were late, came to the party with their parents.
(18) Most students came to the party with their parents. They were late.

If appositives were to be explained simply as an instance of discourse anaphora, we would not be able to account for the contrasts in (15)–(16) and (17)–(18). Moreover, contrary to what is usually assumed, it seems that in some cases quantified nominals can indeed be modified by appositives:

(19) They invited few students, who arrived very late.
(20) They invited most students, who arrived very late.

The main difference between the examples in (15)-(17) and the ones in (19)-(20) is the position of the appositive with respect to the matrix clause.

The observation that we can make from the data introduced above is that while appositives seem to behave like propositions (the sentences that contain them are ungrammatical whenever their discourse counterparts are), the fact that they are in a specific syntactic position at a certain level of representation seems to play a role (see the contrast between (15), (17) and (19), (20)). More precisely, it seems that in order to modify certain quantified nominals, the appositive needs to be in sentence-final position (where obviously by ‘sentence’, I mean the matrix clause.)

There is a further set of examples that deserve examination. For these examples, I use Italian, but the observations I make are equally valid in English. The only difference between the previous examples and the ones below lies in the choice of the predicate inside the appositive relative clause. In (21) and (22) below, the predicate inside the appositive relative clause is one that favors a generic reading of its subject:

(21) Pochi studenti, i quali passano facilmente gli esami, few students the which pass easily the exams vengono da me a chiedere consiglio. come to me to ask advise

‘Few students, who pass the exams easily, come to me to ask for advise.’
(22) Pochi studenti vengono da me a chiedere consiglio. *Loro* passano facilmente gli esami.

‘Few students come to me to ask for advice. They pass the exams easily.’

The first interesting fact is the grammaticality of the sentence in (21): the appositive modifies a quantified nominal not in sentence-final position (in contrast with (15)). But the interpretation of the appositive pronoun differs from the one the referential pronoun gets in (22), the discourse counterpart of (21). More precisely, in (21), *i quali*, ‘who’, can only mean *gli studenti*, ‘students’, and is interpreted generically. The referential pronoun in (22) is instead ambiguous: it can have the same interpretation of the generic *gli studenti*, ‘students’, in (21), but it can also mean *gli studenti che vengono da me a chiedere consiglio*, ‘the students who come to me to ask for advice.’

If instead the verb inside the relative clause (or its main sentence counterpart) is episodic, the interpretation of the pronoun is that of a definite description:

(23) Ieri ho ricevuto pochi studenti, *i quali* erano preoccupati per l’esame di linguistica.

‘Yesterday I received few students, which were worried because of the linguistics exam.’


‘Yesterday I received few students. They were worried because of the linguistics exam.’

In both (23) and (24), the pronouns *i quali*, ‘who’, and *loro*, ‘they’, are interpreted as *gli studenti che ho ricevuto ieri*, ‘the students I received yesterday’.

It seems then that an appositive relative can modify a quantified nominal, but if the appositive is not in sentence-final position, the appositive pronoun can only be interpreted as generic and the sentence is grammatical only if the predicate of the relative clause favors such generic reading of its subject.

---

1. Notice that if the quantifier that modifies the ‘head’ of the relative is either *every* or *no*, the situation is more complex. I will return to this point at the end of section 3.
We can check if this is a correct way to describe the facts by testing appositive relative clauses not in sentence-final position with a verb that does not favor the generic reading of the subject. As expected, the sentence is ungrammatical:

(25) *Pochi studenti, i quali arrivarono troppo tardi, persero il discorso del rettore.

Few students the-which arrived too late missed the speech of the dean.

(26) Pochi studenti persero il discorso del rettore. Loro arrivarono troppo tardi.

Few students missed the speech of the dean. They arrived too late.

‘Few students missed the speech of the dean. They arrived too late.’

Before closing this section, let me make clear that the facts discussed above cannot simply be accounted for on the basis of the type of the quantifier that modifies the nominal. Let us take into consideration the distinction between ‘weak’ and ‘strong’ quantifiers as proposed by Milsark (1977): quantifiers that are barred from there sentences are ‘strong’, and quantifiers that are allowed in there sentences are ‘weak’.

Here is a table of the relevant quantifiers, the asterisk indicates that nominals introduced by that specific quantifier cannot be modified by an appositive, and the checked mark indicates that they can. When both an asterisk and a checked mark occur next to the quantifier, this indicates that the quantified nominal can be modified by the appositive, given the conditions described above (namely, if the appositive is in sentence-final position and/or if its relative pronoun can be interpreted as generic).

Table 1. Distribution of appositive relative clauses with strong and weak quantifiers

<table>
<thead>
<tr>
<th>STRONG</th>
<th>WEAK</th>
</tr>
</thead>
<tbody>
<tr>
<td>*</td>
<td>every</td>
</tr>
<tr>
<td>*/√</td>
<td>most</td>
</tr>
<tr>
<td>√</td>
<td>both</td>
</tr>
<tr>
<td>√</td>
<td>neither</td>
</tr>
<tr>
<td></td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>√</td>
</tr>
<tr>
<td></td>
<td>*/√</td>
</tr>
<tr>
<td></td>
<td>√</td>
</tr>
</tbody>
</table>
Table 2. Distribution of appositive relative clauses with quantificational/referential and quantificational determiners.

<table>
<thead>
<tr>
<th>quantificational/referential</th>
<th>only quantificational</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ a</td>
<td>∗ every</td>
</tr>
<tr>
<td>√ two, three</td>
<td>∗ all</td>
</tr>
<tr>
<td>√ some</td>
<td>∗ each</td>
</tr>
<tr>
<td>√ several</td>
<td>∗/√ most</td>
</tr>
<tr>
<td>√ many</td>
<td>∗/√ few</td>
</tr>
<tr>
<td></td>
<td>∗ no</td>
</tr>
</tbody>
</table>

Given the mixed-bag situation that we see depicted in Table 1, we can safely say that the strong vs. weak distinction cannot be responsible for the distribution of appositive relative clauses with quantified nominals. If we look at the entailment patterns that quantifiers give rise to, the resulting classification (see Barwise and Cooper 1981) still does not make sense of the occurrence of quantified nominals with appositives. I leave this to the reader to be verified. The only distinction that seems to be relevant is the one between referential and quantificational determiners, as proposed by Fodor and Sag (1982) (see Table 2).

Fodor and Sag (1982) attribute the distinguishing characteristic to the ‘relative’ or ‘absolute’ interpretation of the determiner. They suggest that a referential interpretation is possible for a noun phrase only if its determiner is construed as absolute (Fodor and Sag 1982: 393, ft. 2). When this happens, namely when the indefinite noun phrase is understood referentially, it can be modified by an appositive relative clause. But notice again that the classification in Table 2 cannot account for the full range of data presented above. In other words, the distinction proposed by Fodor and Sag (1982) between quantificational/referential and only quantificational determiners is useful in so far as it explains why certain indefinites can be modified by appositives: those are the ones that can be referential, i.e., introduced by a referential determiner. But the distinction proposed cannot say anything about those quantifiers that, as we saw, sometimes allow an appositive and sometimes do not. For those, something else needs to be said, and this will be the focus of the remainder of the paper.

To summarize, in this section I introduced new data showing that appositive relative clauses can indeed modify quantified nominals. There seems to be two different conditions under which this can happen: 1) the appositive relative clause is in sentence-final position; or 2) the appositive relative pronoun is interpreted as a generic nominal.
3. The proposal

In order to account for the data above, and for the syntax and semantics of ap-positives in general, I make a specific proposal regarding:
1. The interpretation of the appositive pronoun;
2. The sentencehood of the appositive relative.

3.1 On the interpretation of the appositive pronoun

For the interpretation of the pronoun, I propose to treat it as an E-type one (see Sells 1985a, Demirdache 1991, De Vries 2002). I therefore propose to treat appositive relative clauses as an instantiation of E-type anaphora. But what theory of E-type anaphora shall we endorse? It turns out that the best theory to account for appositives is one that is both grammatical (hence, takes care of the so-called problem of the ‘formal link’) and pragmatic (hence, takes processing into consideration). Let us look at the second aspect first.

I will assume that an appositive relative clause and the matrix clause that contains it make up a piece of discourse; in other words, at the discourse level, they are treated as two independent sentences. I will also crucially assume that at the discourse level, linear order matters. Look at the following two sentences:

\[(27) \text{ a. Rosa}_i \text{ entered the room. She}_i \text{ was wearing a hat.} \]
\[\text{ b. *She}_i \text{ was wearing a hat. Rosa}_i \text{ entered the room.} \]

(modified from Reinhart 1983)

Reinhart (1983) maintains that the linear order requirement on anaphora in such cases is attributed to discourse considerations. In normal discourse, new referents are first introduced by their proper name or by a description that enables the hearer to identify them. Once a referent is unmistakably established, we may refer back to it with a pronoun. Reinhart (1983) adds that the use of backwards anaphora is restricted by discourse and stylistic considerations. Mittwoch (1979) maintains, in fact, that it is easy to get backwards coreference if the first conjunct is pragmatically subordinated. An example of backwards anaphora, where the relevant conditions are met, is the following one:

\[(28) \text{ She}_i \text{ has the whole city at her disposal and Rosa}_i \text{ just sits at home.} \]

(Mittwoch 1979)

Sells (1987) discusses cases of backwards anaphora within complex sentences (sentences containing sentential complements or adverbials) and provides an account for them using role-predicates, in particular the notion of SOURCE. But he
does not address the issue of backwards anaphora in discourse, where by discourse I intend a sequence of independent sentences.

Likewise, all the instances of backwards anaphora discussed by Carden (1982) are within complex sentences, and not sequences of independent sentences. The only intriguing example worth mentioning is his (34), repeated below as (29):

(29) … We shall fight on the beaches, we shall fight on the landing grounds, we shall fight in the fields and in the streets, we shall fight in the hills; we shall never surrender; and even if, which I do not for a moment believe, this island or a large part of it were subjugated and starving, then our Empire beyond the seas, armed and guarded by the British Fleet, would carry on the struggle, until…

(Churchill, quoted The Second World War II: 104)

What is interesting to notice is that the anticipation of the which-appositive would not be possible, were the whole discourse not introduced by even if:

(30) a. *Which I couldn't for a moment believe, this island or a large part of it was subjugated and starving.

b. This island or a large part of it was subjugated and starving, which I couldn't for a moment believe.

c. Though I couldn't for a moment believe it, this island or a large part of it was subjugated and starving.

Something similar seems to be going on with il che (lit. ‘the that’) relatives in Italian, as brought to my attention by Guglielmo Cinque (p.c.), who suggests the following example:

(31) Ci ha detto, il che non può certo farti piacere,

‘He told us, which for sure won’t make you happy, that he would have looked for you.’

Notice that the presence of the verb dire, ‘to say’, introducing a sentential complement, is crucial for allowing backwards anaphora:

(32) a. Ti ha cercato, il che non può certo farti piacere.

‘He looked for you, which surely won’t make you happy.’

b. *Il che non può certo farti piacere, ti ha cercato.
So, somehow, the presence of *dire* and of *even if*, introducing a CP complement/adjunct, allows the appositive relative pronoun to precede its antecedent.

Notice also that while backwards anaphora is impossible in a discourse with two matrix sentences, it is possible within *if*/*when*-clauses. Here are some examples from Chierchia (1995):

(33) a. If it$_i$ is hungry, a cat$_i$ meows.
   b. When it$_i$ spots a mouse$_j$, a cat$_i$ attacks it$_j$.
   c. If he$_i$ considers it$_j$ too difficult, a teacher$_i$ won’t adopt a textbook$_j$.

Chierchia (1995) analyzes these sentences as monoclausal structures with tripartite LFs, where the *if*/*when*-clause is the restriction, an adverb (sometimes non-overtly spelled-out) is adjoined to IP, and the rest of the sentence is the scope of the adverb. He specifically proposes that backwards anaphora into a left-adjointed adjunct is made possible by ‘reconstructing’ the adjunct into its IP-internal position. The monoclausal structure is justified by the fact that an *if*/*when*-clause is part of the restriction of a quantificational adverb. Since no such adverb can be usually postulated when we have a sequence of matrix sentences, sentences that contain *if*/*when*-clauses and sequences of matrix sentences will necessarily have different LFs. It follows that the conditions on backwards anaphora will be different as well. Abstracting away from the cases of CP complements/adjuncts, which deserve further investigation and which seem to suggest that the presence of a CP complement/adjunct allows the appositive relative pronoun to look ahead for its reference, the generalization is that backwards anaphora is not allowed in discourse, under normal circumstances. I will therefore assume that an E-type or referential pronoun needs to follow its antecedent, if the two are contained in two independent sentences.²

² A similar point is made by Sells (1985a). He distinguishes between binding, cospecification and coreference:

(i) a. No grounddog$_i$ thinks that it$_i$ is a woodchuck.
   b. Harry owns some sheep$_i$. They$_i$ graze near the woods.
   c. His$_i$ father wants Martin$_i$ to move out.

He maintains that binding is syntactically-licensed anaphora, cospecification is anaphora licensed in discourse, and coreference is not really anaphora at all. He notices that backwards anaphora appears to permit only the coreferential interpretation, in other words, only coreference can go backwards:

(ii) His$_i$ mother wants [a friend of mine]$_i$ to leave. (Sells 1985a)

The anaphora here is not acceptable under a normal interpretation of the indefinite: it must be understood referentially (see Fodor and Sag 1982).
The E-type approach that better fits the appositive relative clauses facts is then pragmatic in the sense that it takes processing into consideration. Within appositives, in order for the relative pronoun to be properly interpreted, this has to be processed after its antecedent, i.e., after the 'head' of the relative clause.

The E-type approach needs to be also grammatical, in the sense that it needs to address the problem of the so-called 'formal link.' In other words, as observed by Heim (1982, 1990), we need to explain the following contrast:

(34) Every man who has a wife sits next to her.
(35) *Every married man sits next to her.

So, we need a theory that formally relates the pronoun and its antecedent. There are two types of theories of this kind already available: one is proposed by Heim (1990), the other by Elbourne (2001). Here, I will assume a mixed version of both.

Following Heim (1990), I propose that a pronoun (that is not bound) at LF is a copy of a linguistic antecedent. If the linguistic antecedent is definite (name, pronoun, demonstrative, definite description), hence it denotes an individual (type e), at LF the pronoun is an identical copy of its antecedent. If the antecedent is quantificational, hence it does not denote an individual, at LF the pronoun corresponds to a definite description, hence it is a DP whose NP obtains its denotation from the antecedent. At PF, the NP is deleted and the definite article becomes the pronoun. NP-deletion is possible only when there is a linguistic antecedent. In this respect, I follow Elbourne (2001). But, differently from Elbourne, I take the linguistic antecedent to be the nominal that linearly (hence temporally) precedes the relative pronoun. How does the NP get its denotation? Here, too, I depart from Elbourne and I follow Cooper's (1979) analysis. The reason for my choice is empirical, in the sense that Cooper's analysis provides the tools for what seems to me to be the correct interpretation of the E-type pronoun. Let us see why by considering the classical sentence:

(36) Every man who owns a donkey beats it.

According to Elbourne (2001), this sentence has the same LF as:

(37) ?Every man who owns a donkey beats the donkey.

(grammaticality judgment mine)

The above sentence does not seem to be fully grammatical. The contrast is even stronger when we have intersentential E-type anaphora:

(38) Few professors came to the party.
    a. ??The professors had a good time.
    b. The professors who came to the party had a good time.
So, within my proposal, what is deleted is an NP, for example, in (38b), *professors who came to the party*, which is not a simple copy of the antecedent, but an NP that takes its content from the antecedent noun and the matrix predicate, as originally proposed by Cooper (1979), Heim (1990), and Heim and Kratzer (1998). This is achieved in the following way: I propose, following Cooper (1979), that the pronoun is made up of a definite article plus a predicate (that can be composed of two variables):

\[
(39) \quad \text{DP } e \\
\quad \text{the } \langle e,t \rangle \text{e} \\
\quad \text{N } \text{DP} \\
\quad \text{R } \text{pro} \\
\quad \langle e,\langle e,t \rangle \rangle \text{e}
\]

The variable R receives a denotation from the context of utterance, which needs to specify a salient two-place relationship. This is provided by the matrix clause. The necessity of the salient two-place relationship, provided by the context of utterance, is therefore built in the proposal, capturing the fact that *it* in (36) doesn’t just mean *the donkey*, but *the donkey he owns*. Notice that what I take from Cooper’s (1979) and Heim and Kratzer’s (1998) accounts is how the E-type pronoun gets its denotation. I agree with them that it acquires it from the preceding sentence, through the mechanism described above. Also, with them, I believe processing to be crucial in order to resolve E-type anaphora, hence this part of the proposed account is ‘pragmatic’. But Cooper’s (1979) and Heim and Kratzer’s (1998) proposals fail to take care of the problem of the ‘formal link’. This is handled by Heim (1990), but at the cost of a procedure that is not entirely natural. The problem of the ‘formal link’ is handled best by Elbourne’s (2001) theory, because within his account the E-type pronoun is a disguised definite description, which undergoes NP-deletion. In order for NP-deletion to apply, we need a linguistic antecedent, hence the necessity of a former link is accounted for.

An anonymous reviewer points out to me the following pair of examples, originally from Grosu (2002):

(40) a. At the party, John saw few students. *They* were at home, preparing for a test.

b. #At the party, John saw few students, *who* were at home, preparing for a test.
Together with the fact that appositive relative pronouns need linguistic antecedents, while simple referential or E-type pronouns do not, the examples in (40a-b), Grosu (2002: 146) comments, point “to the conclusion that the subordinate status of appositives imposes on them some of the ‘stricter’ requirements of sentence grammar, thus blocking some of the flexibility that discourses may avail themselves of to achieve coherence”. In particular, the difference between (40a) and (40b) is due to the availability of ‘accomodation’ for (40a) but not for (40b). In other words, in discourse it is easier for a potential linguistic antecedent that is unacceptable as it stands to be made acceptable by ‘accomodation’. This does not mean that ‘accomodation’ is absolutely out in appositives, for an example, see the discussion in footnote 7.

The contrast in (40) still requires a way to distinguish the two types of pronouns. Informally put, the difference lies in the necessity vs. the possibility for the pronoun to be coindexed with its antecedents. Thereby, given that appositive relative pronouns are generated within subordinate clauses, I propose that they are required to be coindexed with their linguistic antecedent, in other words, with the ‘head’ of the relative clause. This is obviously not required of the other referential or E-type pronouns, hence their ability to refer to the complement set by ‘accomodation’ in the example in (40a).

In summary, I propose the following:

I. Appositive relative pronouns are E-type pronouns, necessarily coindexed with the ‘head’ of the relative clause.
II. In order for the appositive relative pronoun to be properly interpreted, it has to be processed after the nominal with which it is coindexed, i.e., the appositive relative pronoun has to follow its antecedent.
III. If the antecedent (or ‘head’ of the relative clause) is definite or generic, at LF the pronoun is an identical copy of its antecedent.
IV. If the antecedent (or ‘head’ of the relative clause) is quantificational, at LF the pronoun is a definite description, whose NP denotation is obtained from the context of utterance, i.e., the matrix clause.

By taking processing and the context of utterance into consideration, the account retains the ‘pragmatic’ flavor of Cooper (1979) and Heim and Kratzer (1998). By endorsing NP-deletion, it solves the problem of the formal link, and as such also qualifies as a ‘grammatical’ approach. I believe this to be a desired result.

As for pronouns interpreted as generics, when the antecedent is quantificational, I limit myself to observe the fact that when the verb inside the relative favors a generic reading of its subject, at LF the pronoun is actually a generic noun, hence a kind-referring nominal. In other words, the pronoun is able to pick up the reference of the kind denoted by the antecedent, and the whole sentence is felicitous even if the appositive is not in sentence-final position.
I now provide some illustrations on how the proposal for the interpretation of the appositive relative pronoun works. Let us start with a simple case: the appositive modifies a proper name, hence it has a definite antecedent:

(41) PF: John, who I like very much, is a fine linguist.
LF: John is a fine linguist. I like John very much.

Here, as the LF in (41) indicates, who is interpreted as John, namely the pronoun is an identical copy of its antecedent. Let us now move to a case in which the antecedent is quantificational:

(42) PF: John invited few people, who had a good time.
The [NP people John invited ti] had a good time.

Here, at LF the appositive pronoun is interpreted as the people John invited, this denotation is derived from the context of utterance, namely in this case from the matrix clause. At PF, the NP is deleted and the definite article is spelled-out as an appositive pronoun.3

The last case I illustrate is one where the antecedent is quantificational, and the appositive pronoun is interpreted as a generic noun.

(43) PF: Few students, who generally like to go to parties, showed up.
LF: [Few students] ti showed up. Students generally like to go to parties.

In the example above, the appositive pronoun is a copy of the NP inside the quantificational phrase; the generic interpretation comes about thanks to the verb of the relative clause.

So far, we looked at the interpretation and syntactic/semantic make-up of the relative pronoun. Let us consider now the issue of the independence of the appositive relative clause from the matrix clause, or its sentencehood.

3. An anonymous reviewer also points out the following examples:
   (i) John owns few books, which he nevertheless reads often.
   (ii) John owns few books by anyone famous, which he reads often.
   The point with (i) is that in order for the sentence to make sense, nevertheless requires a contrast. The contrast is present only if the E-type pronoun is interpreted as ‘the few books that John owns he nevertheless reads often’. As for (ii), in order for the negative polarity item to be licensed, we need the E-type pronoun to be interpreted as ‘the few books by anyone famous’. Given the fact that the sentences are grammatical, these interpretations must be available. This is possible if ‘few’ is re-interpreted as an adjective, adjoined to the NP. As a matter of fact, anytime we have quantifiers that can also occur as adjectives (i.e., below a definite article), we have ambiguity. So, (42) in the text will have the LF indicated there, but also the following one:
   (iii) LF: [Few people], John invited ti. The [NP few people John invited ti] had a good time.
3.2 On the sentencehood of the appositive relative

Following Haegeman’s (2003) distinction between event-conditionals and premise-conditionals, I propose that appositive relative clauses at LF are moved outside of the matrix domain (while restrictives are merged to NPs, appositives are merged to the matrix CPs; see Demirdache 1991 for a very similar account). It is the different timing of merging (see Chomsky 1995) that determines the different semantic/pragmatic contribution. Appositives, like premise-conditionals, structure the discourse: they provide additional information, in the form of backgrounded assertions (see Chierchia and McConnell-Ginet 1990). What is crucial is at what level of representation or at what stage of the derivation they are merged. In order to account for the fact that appositives do form a constituent with the noun they modify in syntax, but they generally escape scope from the matrix, I propose that appositives are merged to DP in narrow syntax (and that is where they appear in PF), but after Spell-Out they move (i.e., they undergo Copy and Merge) to CP. In other words, appositives are merged within the core, but remerged to a peripheral position for information structuring. This proposal is built on two assumptions:

1. A discourse structure, a CP mother node, is made up of two or more independent sentences in relationship of sisterhood with each other.

2. Merge within narrow syntax is linear order independent, but merge within discourse is always conditioned by temporal sequencing, so it is linear order dependent. This means that of two sentences, CP₁ and CP₂, if CP₂ is uttered after CP₁ or any constituent of CP₁, CP₂ is merged to the right of CP₁. The reason has to do with what we saw before about discourse structure and anaphoric relations: linear order is generally not considered relevant in core syntax, but it has to be relevant within discourse. This is the only way to account for the fact that within discourse, i.e., when we have a sequence of two or more sentences, a referential or E-type pronoun needs to follow its antecedent (see ex. (27) above).

I also claim that at the discourse level, namely after the appositive is remerged to the matrix and a discourse structure is created, both PF and LF representations are relevant for the resolution of the appositive pronoun. This means that there is no link between PF and LF, but their representations are both available to the computational component, once a discourse structure is created. I now clarify this by illustrating how the system works in different cases.

Let us first try to explain the following contrast:

(44) a. They invited few students, who arrived very late.
   b. *Few students, who were late, came to the party with their parents.

The sentence in (44a) has the following narrow syntax and PF representation:
(45) a. Narrow syntax and PF representation

```
               CP₁
                  /\     \
                 /  \    /\
                DP   VP  CP₂
                   |    |    |
               They V invited DP
                     |    |
                  few students who arrived...
```

At LF and in discourse, the appositive is moved to the matrix CP, CP₁.

b. LF and discourse representation

```
               CP
                  /\    /\     \
                 /  \  /  \    /\
                CP₁  CP₂ VP  who arrived...
                   |    |    |    |
                They V invited DP t
                      |    |
                  few students
```

In order to interpret the appositive pronoun, the computational component looks at both representations: from the PF representation, it gathers the information that the relative clause is contained in the matrix, and it is also in sentence-final position. From the LF representation (which should include quantifier raising, omitted in (45b) and following examples) it gathers the information it needs in order to interpret the pronoun. Namely, it sees that the antecedent is quantificational and consequently the pronoun is interpreted as a definite description, with the denotation provided by the matrix clause, i.e.: *the students that they invited*. It can be correctly interpreted as such, given the fact that all it needs for its denotation is processed before it, as indicated in the PF representation.

As for the second sentence, it has the following narrow syntax/PF and LF/discourse representations:
(46) a. Narrow syntax and PF representation

```
CP 1
   /\       \\
  /   \     \\
DP   VP    \\
  /\         \\
 /   \     \\
DP   CP 2   \\
   \       /
   few students who were late came to the party...
```

b. LF and discourse representation

```
CP
   /\       \\
  /   \     \\
CP_1 CP_2 \\
  /\        \\
 /   \     \\
DP   VP    \\
  /\         \\
 /   \     \\
DP   t     \\
   \       /
   few students came to the party...
```

Here too, given the order of the two CPs in (46a), the appositive is moved higher in LF and discourse. But the linear order information, which matters for processing, comes from the PF representation. Here, given that the appositive does not follow the entire matrix, the pronoun cannot be interpreted as E-type, because it follows only its antecedent *few students*, and this is not enough for it to get its proper denotation.

The situation is different if the predicate inside the appositive relative clause is one that favors a generic reading of its subject:

(47) Pochi studenti, i quali passano facilmente gli esami, few students, the which pass easily the exams vengono da me a chiedere consiglio. come to me to ask advise

‘Few students, who pass the exams easily, come to me to ask for advise.’

In this case, even if the appositive pronoun can only look at its antecedent for a proper denotation, (see (48a)), it can simply copy the NP inside the quantificational antecedent, and then interpret it as generic. Here, for the resolution of the appositive pronoun, we do not need the entire matrix to precede the appositive:
(48)  a. Narrow syntax and PF representation

\[
\begin{align*}
CP_1 & \\
& \downarrow \text{DP} \quad \text{VP} \\
& \quad \downarrow \text{DP} \quad \text{CP}_2 \\
& \quad \text{Pochi studenti} \quad \text{i quali non passano ...} \\
\end{align*}
\]

b. LF and discourse representation

\[
\begin{align*}
\text{CP} & \\
& \downarrow \text{CP}_1 \quad \text{CP}_2 \\
& \quad \downarrow \text{DP} \quad \text{VP} \\
& \quad \text{Pochi studenti} \quad \text{i quali non passano} \\
& \quad \text{t} \quad \text{vengono da me a ...} \\
\end{align*}
\]

Let us have a quick look now at the situation with proper names and definite descriptions. In a sentence like (49), again, given the order of the elements, the appositive moves to the matrix CP.

(49)  John, who was late, came to the party.

(50)  a. Narrow syntax and PF representation

\[
\begin{align*}
\text{CP}_1 & \\
& \downarrow \text{DP} \quad \text{VP} \\
& \quad \downarrow \text{DP} \quad \text{CP}_2 \\
& \quad \text{John} \quad \text{who was late} \\
\end{align*}
\]
b. LF and discourse representation

The pronoun is correctly interpreted, because all it needs to do is to copy the antecedent DP, namely the proper name. The same holds for definite descriptions and specific nouns.4

It remains to be explained what is it that rules out appositives whose 'heads' are modified by no and every. I maintain that the reason is linked to the necessity for the singular appositive pronoun to have a uniqueness presupposition. In order to interpret a singular appositive pronoun, we need to presuppose the existence of a unique potential referent.5

(51) a. *Kennedy invited every congressman, who is junior.
   b. *Kennedy invited no congressman, who is junior.

In (51a), the utterance Kennedy invited every congressman conveys the message that there were several congressmen involved. This is incompatible with the intended denotation for who, namely the congressman who Kennedy invited. In (51b), instead, the matrix conveys the message that no congressman was invited, so that the intended interpretation for the appositive pronoun, namely the congressman that Kennedy invited, fails to denote. So, the ungrammaticality of (51a-b) is due to presupposition failures. Notice that if the pronoun is plural, grammaticality is restored, because the pronoun can refer to the contextually salient congressmen:

(52) a. Every congressman admires Kennedy. They are junior.
   b. # Every congressman admires Kennedy. He is junior.

(53) a. No congressman admires Kennedy. They are too senior.
   b. # No congressman admires Kennedy. He is too senior.

4. Specific nominals are subsumed under definites: once the choice-function applies to them, their denotation is that of an individual, hence they are of type e. It is this denotation that the E-type pronoun copies.

5. See Heim and Kratzer (1998: 285) for an explanation of these facts, even though in that particular section of their chapter on E-type anaphora, they discuss referential and not E-type pronouns.
In (52)–(53), once we change the pronoun from singular to plural, the discourse is felicitous. Notice that this change of number is not possible in (51), because of agreement between the antecedent DP and the appositive pronoun. Where that is possible, for example in (54a) below, the sentence is again grammatical. The example in (54b) shows that because of number agreement, we cannot rescue the sentence with every, even if we locate the appositive in sentence-final position.6,7

(54)  a. At his party, Bush invited no congressmen, who were more than happy to stay at home.
     b. *At his party, Bush invited every congressman, who was more than happy to go.

6. See Fodor and Sag (1982: 393, ft. 6) for similar observations on number agreement and appositives.
7. An anonymous reviewer points to my attention the following example, from Arnold (2004):
   (i) No properly trained linguist, who would have come across this issue during her training, would have made that mistake.

   The reviewer is afraid that examples like (i) are a serious problem for my proposal, because s/he believes that E-type pronouns cannot have antecedents headed by no. The following example is also provided by the reviewer:
   (ii) *No senators voted for Kennedy, and they were all very young.

   Notice first of all that (ii) becomes grammatical once we eliminate the conjunction and. In this case, the quantified noun phrase makes a set of entities salient. Specifically, the set made salient is the complement set, i.e., the senators that did not vote for Kennedy. And this is the set that the plural pronoun they refers to in the subsequent discourse.

   Back to (i), the example does not represent a problem for my account, as the appositive pronoun here needs to be interpreted differently, along the same lines as other ‘telescoping’ examples, as studied by Roberts (1989) and Poesio and Zucchi (1992). Following them, for examples like (i) I propose an accommodation process whose outcome is that in the appositive there is reconstruction of the restrictor:
   (iii) No properly trained linguist would have made that mistake.

   If x is a properly trained linguist, x would have come across this issue during x’s training.

   Notice that this is not an ad hoc solution, as it is nevertheless necessary to account for contrasts such as the following ones:
   (iv) a. ??Every dog came in. It lay under the table.
   b. Each degree candidate walked to the stage. He took his diploma from the dean and returned to his seat.

   On the basis of contrasts such as the one of (iv), Poesio and Zucchi (1992) lay out a necessary licensing condition for the reconstruction of the restrictor. I refer the reader to their work, or to my discussion of it in Del Gobbo (2003a).
4. Differences between restrictives and appositives

In this section, I explain how the proposal of treating appositives as an instantiation of E-type anaphora can account for a great number of the differences between appositives and restrictives. Before moving on, let us also make clear that for a restrictive relative clause, I intend a modifier that is adjoined to the NP, and that semantically is a predicate, hence of type \langle e, t \rangle.

Property I: The antecedent of an appositive can be any maximal projection. Sells (1985b) maintains that anaphora in which-appositives gives evidence for treating properties and propositions as individuals in the semantic interpretations. If this is the case, we need to investigate what it means for ‘which’ in the following sentence to be an E-type pronoun:

(55) a. Mary is smart, which John never was.
    b. Mary is smart. John never was.

Potts (2000a) maintains that which-appositive traces are individual-denoting (i.e., nominalized propositions). Take the example in (55a): if we nominalize the property, the denotation of the appositive pronoun is the nominalized property [smart].

According to my system, if the ‘head’ of the relative is of type e and it linearly precedes the pronoun, the latter is replaced by a copy of the head. This gives us the right interpretation for (55a), namely: Mary is smart. John was never smart.

If properties and propositions are individuals, then my theory makes a prediction: they should behave like proper names or pronouns, hence they do not need to be sentence-final. The prediction seems to be fulfilled:

(56) Under the door mat, which is a silly place to hide something, is where John always leaves his house keys.

(57) a. Whenever I have time, which isn't often, I go there. (unambiguous)
    b. I go there whenever I have time, which isn't often. (ambiguous)

It is important to distinguish here between VP-anaphora (the kind of anaphora that we have with which-appositives) and VP-ellipsis. Sells (1985b) maintains that they are two different phenomena. For one thing, he shows that VP-ellipsis does not obey the scope restrictions that VP-anaphora does. For example, VP-anaphora fails if there is a negation in the matrix or a universal quantifier:

(58) a. Debbie is likely to succeed, which Suzi is not.
    b. *Debbie is not likely to succeed, which Suzi is.
    c. *Every girl is likely to succeed, which every woman is not. (Sells 1985b)

---

8. Following Potts (2000), I use small capitals as a shorthand for nominalized propositions.
VP-ellipsis does not obey such restrictions:

(59) a. Debbie is likely to succeed, and Suzi is not.
    b. Debbie is not likely to succeed, but Suzi is/and Suzi isn’t either.
    c. Every girl is likely to succeed, but every woman is not. (Sells 1985b)

Sells (1985b) also points out that for some speakers the contrasts in (58)-(59) are very subtle, if not available at all. He thinks that one of the influencing factor is that which is apparently undergoing a change in many American dialects and being reanalyzed as a subordinator. If this is true, in these dialects the which examples are VP-ellipsis ones and should behave like other VP-ellipsis cases. This is important because of the possible interpretation of the example below:

(60) Mary is careful with her money, which John never was.

An anonymous reviewer interprets (60) as ambiguous, as it can have both a strict and a sloppy reading. The sloppy reading, the reviewer reasons, would require which to mean being careful with x’s money, something difficult to become of type e. Cases such as (60), then, need to be analyzed as VP-ellipsis, not as VP-anaphora. VP-anaphora, by definition, should only provide us with the strict interpretation.

Property II: appositives can take sentential adverbs of modification, but restrictives cannot. This follows if we treat appositives as propositions and restrictives as properties.

Differently from what is usually assumed (property III), appositives can sometimes have a quantified nominal as their antecedent. The fact that a quantified nominal cannot be headed by every and no is explained in a theory of appositives as E-type anaphora. The E-type pronoun has the denotation of a definite description and in order to interpret it we need to presuppose the existence of a unique potential referent. But with no the speaker denies the existence of such a referent and with every the speaker conveys the message that there exists several referents. On the other hand, the availability of other quantifiers, such as few and most, is restricted by the necessity for the pronoun to be interpreted as E-type and by the position of the appositive within the matrix.

Property IV: If no sort of modal or temporal subordination applies, then no quantifier in the matrix clause can have scope over a pronoun in the appositive clause. This follows if we assume a discourse structure with two separate sentences: the quantified nominal in the matrix sentence is not able to bind the pronoun in the appositive. If instead temporal or modal subordination applies, we need to resort to accommodation, as proposed for the so-called ‘telescoping’ cases by Pesio and Zucchi (1992). The contrast below is then treated as a non-telescoping vs. a telescoping case:
    b. Every Christian, prays to God, who forgives him.  (Safir 1986: 672)

In (61b), the context allows the reconstruction of the restrictor, but this is not possible in (61a):

(62)  a. *If x is a Christian who forgives John, John harms x.
    b. If x is a Christian who prays to God, God forgives x.

*Property V*: no phrase modified by an appositive can be in the scope of a negative marker in the matrix:

(63) *Every rice-grower in Korea doesn't own a wooden cart, which he uses when he harvests the crop.

Only an indefinite phrase modified by an appositive cannot be in the scope of a negation in the matrix, and this follows from an account in terms of E-type anaphora. With the use of the negation, the speaker denies the existence of a referent; the sentence (63) is ungrammatical because in order to interpret the E-type pronoun we need to presuppose the existence of a unique referent.

(64) Every rice-grower in Korea does not pay the government tax, which is collected in January.

In (63) above the E-type pronoun cannot refer back to the indefinite *a wooden cart*, since given the context of the first sentence, its reference is not established. If the antecedent is a definite description (as in (64)), and we have an appropriate context, the nominal can be in the scope of the negation, because neither the nominal nor the appositive that modifies it are affected by it.

*Property VI*: an appositive needs to follow a restrictive.

Let us take the following example, where we have a restrictive relative clause followed by an appositive one:

(65) the student that came yesterday, who by the way I had in Syntax III

The tree diagram in (66) below represents a structure where the restrictive is joined to the NP, and the appositive to the DP. The appositive, at LF and discourse structure, is moved to the matrix CP (here, I only represent the narrow syntax structure). The appositive relative pronoun can correctly obtain the interpretation of *the student that came yesterday*, simply copying its DP antecedent.
Let us now take an example, ungrammatical, of an appositive relative clause preceding a restrictive one:

(67)  *the student, who by the way I had in Syntax III, that came yesterday

In the relevant tree diagram, (68), we attempted to merge the appositive CP to the lower NP, student, and the restrictive CP to the higher NP, student who by the way I had in syntax III.

(68)  *

The problem with the structure in (68) is that when we try to give a denotation to the appositive relative pronoun, at best we can manage to copy the antecedent NP student, but there is no way to get into the denotation also the contribution of the restrictive relative clause. In other words, in (68), the appositive pronoun cannot refer to the whole DP,
because at PF it is contained within it. This is undesirable and yields the expected ungrammaticality. 9

Property VII: Restrictives cannot combine with type e nominals, while appositives can. Within my proposal, this is accounted for by assuming two different types for the two kinds of relatives. Appositive relative clauses denote propositions, hence they are of type t, restrictives instead denote predicates, hence they are of type <e,t>. Appositive relative clauses can in theory combine with any kind of nominal, as we saw, even with quantified NPs, and this is the case because they are independent sentences, as at LF they are sister of the matrix clauses. Restrictives, instead, given the fact that they are of type <e,t>, need another predicate to adjoin to. They can find this within definite descriptions, specific nominals and even quantified ones, but they are unable to merge to nominals of type e, like proper names and pronouns, as these cannot provide a predicate for them to inersect with and the combination of a nominal of type e with one of type <e,t> would yield a nominal whose denotation is a truth value, again an undesirable result.

Property VIII: Appositive relative clauses seem not to display weak-crossover (WCO) effects, as illustrated by the contrast below:

(69) a. *?A man who his wife loves t arrived early.
    b. John, who his wife loves t, arrived early.  (Safir 1986)

There are currently two main accounts of WCO in the literature (Ruys 2000):

(70) Binding-Theoretic licensing Principle:
    Pronoun B may be interpreted as a variable bound by A only if A A- binds B.

9. An anonymous reviewer reminds me that there are some exceptions to the order restrictive > appositive, and he points out the following example, from Emonds (1979):

(i) We found that movie, which cost plenty, that you so highly recommended.

Emonds (1979) maintains that a restrictive can follow an appositive, if it is the only constituent that follows, so that the example in (ii) contrasts with the one in (i):

(ii) *We found that movie, which cost plenty, that you so highly recommended exciting.

Emonds (1979) also provides the following example:

(iii) *The children, who were charming, that you brought got sick later.

Notice that (iii), as expected by Emonds, contrasts with (iv):

(iv) The doctor examined those children, who were charming, that had gotten sick during the trip.

More work needs to be done in order to explain the contrasts above. What I can say, in the space of a footnote, is that the restrictives in (i) and (iv) seem to have undergone extraposition. Hence, what I say in the text with respect to Property VI would still hold, but we would need to look at extraposition, as an independent phenomenon, and investigate its interaction with both restrictives and appositives. For an overview and an interesting treatment of extraposition, see De Vries (2002).
None of the above principles can account for the contrast in (69), if we assume that the restrictive and the appositive relative clause both have an operator-variable structure.

If instead we assume, as in the theory postulated here, that the relative pronoun inside an appositive relative clause is an E-type pronoun, the contrast in (69) is accounted for, as its trace is not really a variable:

As illustrated in (72), the movement of the relative pronoun who in an appositive relative clause is vacuous: it is simply displacement, not an operator-variable construction. This is indeed the position taken by Lasnik and Stowell (1991: 703–707): WCO effects arise only in contexts where a pronoun is locally A'-bound at LF by a true quantifier ranging over a possibly nonsingleton set. And the appositive relative pronoun does not qualify as a true quantifier.10

5. Conclusions

At the discourse level, namely after the appositive is moved to the matrix and a discourse structure is created, both PF and LF representations are relevant for the resolution of the appositive pronoun.

---
10. Ruys (2004) criticizes Lasnik and Stowell’s (1991) account of the Weakest Crossover facts and propose a different way to deal with them. But he is still unable to explain appositives. In fact, he does not discuss them, and the view he seems to endorse (see Ruys 2004: 137, ft. 20) is in agreement with the E-type anaphora proposal here suggested.
My proposal explains the contrasts seen above, the differences between appositives and restrictives and makes a strong empirical prediction: no language with prenominal relatives (for example: Chinese, Japanese, Korean, Turkish) should allow appositive relative clauses (as also predicted by De Vries 2002, 2006). This prediction is fulfilled in Chinese, see Del Gobbo 2003a, but more work needs to be done on the other languages with prenominal relatives.

The next two questions to answer are:
1. What is the difference between an appositive and an independent sentence?
2. What is the difference between an appositive pronoun and a referential or E-type one? In other words, is it possible to derive the fact that appositive relative pronouns are necessarily coindexed with their antecedents?

Maybe an answer to the first question needs to be both syntactic and semantic. From a syntactic point of view, we could look at the Left Periphery of appositive relative clauses and of matrix clauses, and see whether there are any differences, the prediction being that appositives may have less CP layers than full, matrix sentences. Semantically, a crucial difference between matrix clauses and appositives is the one individuated by Potts (2005): only appositives have the content of conventional implicatures. As for the second question, informally put, an appositive pronoun, like a relative pronoun, marks the sentence it heads as a syntactically dependent sentence, and this may be related to its necessity to move to CP. These are only speculations at this point, but they represent the direction I would suggest to follow.

References


Invisible constituents?
Parentheses as B-merged adverbial phrases

Mark de Vries
(University of Groningen)

Parentheses are included in their host sentences, but at the same time they show unintegrated behavior. This article studies this Janus-faced phenomenon from a syntactic point of view. There are two main parts. The first introduces the term Invisibility for syntactic independence based on the absence of c-command relations, which is a particular way of defining structural independence. A number of tests indicate that parentheses and other paratactic constituents are indeed invisible, but specific attention is paid to the various difficulties that show up in establishing such a conclusion. The examples are drawn primarily from Dutch and English. The second part develops a structural proposal for parentheses within a Minimalist type of grammar which takes into account their contradictory properties. Parentheses, it is argued, are adverbial phrases attached by means of a nonsubordinative inclusion relation that can be used in other paratactic configurations as well, in particular appositional constructions.

1. Introduction

To what extent does a parenthetical belong to the sentence as a whole? As will be clear from this volume, this question has many different sides. In this contribution, I will focus on some basic syntactic issues involved. Since there are many different types of parentheses – and in fact there is no generally accepted definition of what is to be included under this notion – one might wonder which ones form a natural class such that they can be studied collectively. Perhaps somewhat unexpectedly, my strategy here will be to even widen the scope of interest initially. As a result, we arrive at a point where we can definitely distinguish two major grammatical classes, at least intuitively, namely the ones traditionally indicated by the terms hypotaxis (subordination) and parataxis (nonsubordination).
### Schema 1. A classification of paratactic constructions.

#### PARATAXIS/NONSUBORDINATION

<table>
<thead>
<tr>
<th>Type</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GENERAL COORDINATION</strong></td>
<td></td>
</tr>
<tr>
<td>Coordination [2nd conjunct]</td>
<td></td>
</tr>
<tr>
<td>clausal coordination</td>
<td><em>Jake went to school</em> and <em>Jan went home.</em> (1)</td>
</tr>
<tr>
<td>constituent coordination</td>
<td><em>Jake and Jan are going home.</em> (2)</td>
</tr>
<tr>
<td>Juxtaposition</td>
<td><em>Jake went to school; Jan went home.</em> (3)</td>
</tr>
<tr>
<td><strong>GENERAL APPOSITION</strong></td>
<td></td>
</tr>
<tr>
<td>Apposition</td>
<td></td>
</tr>
<tr>
<td>nominal apposition</td>
<td><em>Jake, our boss, told us to stay.</em> (4)</td>
</tr>
<tr>
<td>XP apposition</td>
<td><em>It is over there, (i.e.,) on the table.</em> (5)</td>
</tr>
<tr>
<td>Nonrestrictive relative clause</td>
<td><em>Jake, who is our boss, told us to stay.</em> (6)</td>
</tr>
<tr>
<td><strong>GENERAL PARENTHESIS</strong></td>
<td></td>
</tr>
<tr>
<td>Interjection</td>
<td></td>
</tr>
<tr>
<td>Hedge</td>
<td><em>He is oh! so smart.</em> (7)</td>
</tr>
<tr>
<td>Parenthetical</td>
<td></td>
</tr>
<tr>
<td>unintegrated parenthetical</td>
<td></td>
</tr>
<tr>
<td>reporting clause *</td>
<td><em>He indicated – (and) why am I not surprised – that he would love to go first.</em> (9)</td>
</tr>
<tr>
<td>comment clause **</td>
<td><em>I would like more coffee,” said Jake.</em> (10)</td>
</tr>
<tr>
<td><em>what</em>-clause parenthetical †</td>
<td><em>Paris, I suppose, is the capital of France.</em> (11)</td>
</tr>
<tr>
<td><strong>what</strong>-parentheticals in English, which are interjection-like and consist of just the word <em>what</em>, as in <em>I've been a linguist for – what – fifteen years now.</em> See Dehé and Kavalova (2006) for discussion. Note, however, that Reis (2002) uses the term <em>was</em>-parentheticals for constructions like (12) in German.</td>
<td></td>
</tr>
</tbody>
</table>

* The representation of direct speech has interesting properties that cannot be discussed here, but see Banfield (1973), Luif (1990), Collins and Branigan (1997), De Vries (2006b), and the references there.

** Reis (2000, 2002) shows at length that even sentence-final comment clauses are parentheticals (contra Ross 1973 and others; see also Wagner 2004 for a different view). However, there is a complication: although comment clauses are usually speaker-oriented, they can also be subject-oriented (that is, they convey a thought or expression by the subject of the host clause, instead of the speaker), as described in Reinhart (1983) and Corver and Thiersch (2002). A typical example is *He would be late, John, said.* If these authors are correct, subject-oriented comment clauses are not parentheses at all; rather, the apparent host is a preposed subordinate clause of the comment clause.

† This term is not to be confused with what might be called *what*-parentheticals in English, which are interjection-like and consist of just the word *what*, as in *I've been a linguist for – what – fifteen years now.* See Dehé and Kavalova (2006) for discussion. Note, however, that Reis (2002) uses the term *was*-parentheticals for constructions like (12) in German.

Parataxis, which is the class we are interested in here, comprises a wealth of different constructions, including parentheticals such as comment clauses. In Schema 1, I present a classification of paratactic constructions. This serves three goals. First, it will avert terminological confusion. (Several of the terms involved have been
used in various ways in the literature – often there is a broad and a narrow sense.) Second, it gives a first and superficial impression of the relations between the different constructions. Third, it gives me the opportunity to provide some illustrations. Evidently, the schema is not exhaustive, but it does include the most important types. The hierarchy between the items is indicated by indentation. Example sentences (and their numbers) are on the same line, but right-aligned. In each case the paratactic constituent is underlined; if there is also an anchor (see below), it is printed in italics.

The three main groups are general coordination, general apposition and general parenthesis. These can be distinguished by two important characteristics: the (in)dependence of the intonation and the presence or absence of an anchor, that is, a similar first part; see Table 1.1

Table 1. The main tripartition of parataxis.

<table>
<thead>
<tr>
<th></th>
<th>coordination</th>
<th>apposition</th>
<th>parenthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>separate intonation</td>
<td>−</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>anchor</td>
<td>+</td>
<td>+</td>
<td>−</td>
</tr>
</tbody>
</table>

The contributions by Dehé and Döring in this volume show that it is impossible to give a uniform characterization of the intonation of parentheses. (There is not always a pause, the intonation contour is not always completely independent, etc.) Nevertheless, it is clear that there is a difference between coordination and the other two. Consider (13) and (14), for instance, where the main sentence stress is indicated by capitals.

(13) a. Ik heb JOOP gezien.  
_I have Joop seen_  
‘I saw Joop.’

b. Ik heb Joop en JAAP gezien.  
_I have Joop and Jaap seen_  
‘I saw Joop and Jaap.’

c. Ik heb Joop, Jaap en JOEP gezien.  
_I have Joop, Jaap and Joep seen_  
‘I saw Joop, Jaap and Joep.’

(14) a. Ik heb JOOP, onze buurman, gezien.  
_I have Joop our neighbor seen_  
‘I saw Joop, our neighbor.’

1. The logical fourth possibility (no anchor, integrated intonation) exists as well: this would simply be an instance of hypotaxis.
In the case of coordination (13) the main stress shifts to the last conjunct. Therefore, the intonation of the host is affected by the paratactic material. In (14), this cannot be the case. If an apposition or a parenthetical is added, the main stress stays where it is. This does not mean that the parenthetic material is necessarily unstressed, but if it is accented, there will be an additional accent; the intonation of the host is not affected.

Secondly, consider the anchor in Table 1. Clearly, there is always a first and a second conjunct in coordinate constructions. The first conjunct is the anchor, the second is the paratactic phrase. The situation is comparable in appositional constructions: the apposition is added to a similar first part by definition. In appositive relative constructions the antecedent is the anchor. Parentheses, on the other hand, are more or less independent additions to the sentence; they are not directly related to some first part. In this respect, parentheses are like adverbials.

Some more properties can be related to the potential presence of an anchor; these are summarized in Table 2.

Table 2. Properties related to an anchor.

<table>
<thead>
<tr>
<th></th>
<th>coordination</th>
<th>apposition</th>
<th>parenthesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>fixed position w.r.t. anchor</td>
<td>+</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>referentially related to anchor</td>
<td>–</td>
<td>+</td>
<td>–</td>
</tr>
</tbody>
</table>

First, if there is an anchor, there is also a designated position for the paratactic phrase, namely next to the anchor (modulo extraposition). This does not apply to parentheses; as is well-known, their position is much more free – that is, syntactically; obviously there are pragmatic preferences depending on the content. (See also Stoltenburg 2003 and Schelfhout 2006 for generalizations based on corpus data from German and Dutch, respectively.) An example from Dutch is given in (15) (X = dacht Anne ‘thought Anne’):

(15) Joop (X) vertrekt (X) morgen (X) naar Londen (X).

Joop leaves tomorrow to London

Second, one might ask if the paratactic phrase is referentially related to the anchor. This is the case in appositional constructions, but not in coordinate constructions (again, it does not apply to parentheses); see the illustration in (16):
(16) a. Joop and my neighbor  
b. Joop, my neighbor

In (16a) Joop is not the same person as my neighbor, but in (16b) it is.

After this short introduction, I will go into the issue of syntactic independence in the next section. For reasons of space, and in accordance with the focus of this volume, I will largely confine the discussion to clausal parenthesis and apposition.

2. Invisibility

There is a widely felt consensus that parentheses are in some way syntactically independent of the host (see, e.g., Espinal 1991, Burton-Roberts 1999). This raises theoretical problems. Parentheses are linearly integrated within the sentence as a whole, but at the same time more or less independent. I will return to theoretical issues in section 3; here, I would like to address the empirical foundation of the idea of independence. Let me start by turning the intuition into a more specific claim; see (17):

(17) Invisibility

A paratactic phrase/clause does not interact with the host in terms of c-command-based relations.

Here, c-command amounts to being higher up in the structure but neither dominating nor embedded – see section 3.2 for a more technical definition. (Just to be clear, let me state right away that I will not be proposing absolute invisibility or a so-called orphanage approach to parataxis. Parentheses, I believe, are structurally integrated with the host, but not in a way that can be detected by c-command relations. If we put on a different type of glasses, integration effects can be revealed.)

Structural dependence should be detectable by investigating those relations that are based on the notion c-command according to the tradition in generative grammar. If parataxis is indeed independent, the Invisibility claim leads to a number of

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2. An obvious example is the linear order. Another may be the distribution of Case to nominal appositions; see for instance (54) in section 3.2 below.
predictions, such as the ones listed in (18). Here, ParP stands for a paratactic phrase or clause (in particular, parentheticals and appositive relative clauses):

(18) Predictions by Invisibility
   a. No movement: there cannot be movement from ParP into the host.
   b. No idiom chunks: no idiom can be split across a paratactic boundary.
   c. No Q-binding: a pronoun in ParP cannot be bound by a quantified expression in the host.
   d. No A-binding: a reflexive in ParP cannot be bound by an antecedent in the host.
   e. No Condition B effects: a pronoun in ParP does not cause Condition B effects with respect to a coreferent expression in the host.
   f. No Condition C effects: an R-expression in ParP does not cause Condition C effects with respect to a coreferent expression in the host.
   g. No NPIs: no negative polarity item in ParP can be licensed by an operator in the host.
   h. No PPI effects: no positive polarity item in ParP can be disqualified by an operator in the host.
   i. No dependent Force: ParP’s illocutionary Force is independent of the host’s.
   j. No dependent Mood: ParP’s Mood is independent of the host’s.

I will address these issues in turn. On a methodological note, it should be clear that it is logically impossible to illustrate the nonexistence of a certain phenomenon, but we can make it plausible. Of course a fully systematic survey is impossible within the limited space of this article, but I will highlight some representative cases. It will turn out that it is actually much more problematic to show the Invisibility of parataxis than it would seem to be at first sight, and I will discuss some of the difficulties involved. For instance, some tests are inapplicable or inapt for independent reasons. Nevertheless, I still think the overall conclusion can be upheld. The reverse outcome would be much more troublesome and we would clearly miss an important generalization.

Finally, note that Invisibility as defined above is only one way of testing the independence of paratactic material. It has also been claimed that parentheses have an independent intonation and focus-background structure, and that pro-

3. I am aware that each and every of these traditions has been challenged in the literature. However, since alternative approaches are often controversial themselves, less general, and/or not fully worked out, I think it is not unreasonable to start off with the familiar view. Notice, however, that insofar as an alternative approach is structure-dependent in a comparable way, or simply shows that c-command is not the only factor involved, it is not incompatible with the proposal advanced here. If it turns out that some phenomenon is not c-command-based after all, it will have to be discarded as a possible test for our purposes.
nominal reference to the host does not include parentheses; for comments see, among others, Espinal (1991), Pittner (1995), Hoffmann (1998), and Burton-Roberts (1999).

2.1 No movement and no idiom chunks

Movement is always to a c-commanding position, that is, from a lower to a higher position in the structure. The clearest and most uncontroversial type of displacement is \textit{wh}-movement. Some examples are given in (19), where the original position of the \textit{wh}-phrase is indicated by an underscore:

\begin{enumerate}
\item[(19)] a. What did Hank steal _?
\item b. What did the commissioner suspect Hank stole _?
\end{enumerate}

These examples involve hypotaxis. As expected, parataxis behaves differently. Extraction from a parenthetical or appositional construction is impossible; see (20):

\begin{enumerate}
\item[(20)] a. * What did the police – the commissioner suspected Hank stole _ – search his house.
\item b. * What did John greet Hank, who carried _?
\end{enumerate}

These facts follow directly from the Invisibility hypothesis.

Nevertheless, (20) can also be explained in another way. Notice that extraction out of adverbial clauses as well as restrictive relative clauses is unacceptable:

\begin{enumerate}
\item[(21)] a. * What did the police arrest Hank because he stole _?
\item b. * What did John greet the man who carried _?
\end{enumerate}

Since parentheticals are a special kind of adverbial constructions, and appositive relative constructions, like restrictive ones, are complex noun phrases, particular constraints on movement (or syntactic distance) that have been designed to explain (21) – for instance, Conditions on Extraction Domains (CED), or the Complex Noun Phrase Constraint (CNPC) – may have the same effect on (20). Thus, the \textit{no movement} property of appositions and parentheses is consistent with Invisibility, but no direct proof for it.

Still, the pattern in (20) seems to be even worse than that in (21). Furthermore, we can try to find exceptions to island constraints and see if similar exceptions can be construed with paratactic clauses. A relevant issue seems to be the following. Extraction from restrictive relative clauses is considered acceptable under certain conditions by many speakers of Danish, Swedish and Norwegian; this is a particular instance of a more general phenomenon called \textit{satsflätor}; see for instance (22), adapted from Smits (1988: 198):
(22) Vad ser jag en hund som gnager på _? [Swedish]
what see I a dog that gnaw on
‘What do I see a dog that is gnawing on?’

If we turn the relative clause into an appositive one, the sentence becomes unacceptable:

(23) * Vad ser jag Fido, som gnager på _?
what see I Fido that gnaw on
int. ‘What do I see Fido, who is gnawing on _?’

Teleman et al. (1999: 423) explicitly state that the relative clause must be restrictive; they illustrate this with the following example, which involves topicalization instead of wh-movement (my translation):

(24) a. Biljard fanns där många som spelade _. [Swedish]
    billiards were there many that played
    ‘Billiards, there were many over there that played _.’

    b. * Biljard fanns där väldigt många människor, som alla spelade _.
    billiards were there enormously many people that all played
    int. ‘Billiards, there were a great many people over there, who all played _.’

Thus, the impossibility of extraction from appositive relative clauses cannot be reduced to the impossibility of extraction from restrictive relative clauses in all cases. By contrast, Invisibility, as defined in (17), does predict the contrasts in (22)-(24).

Finally, let us briefly consider idiom chunks. Semantically transparent idioms such as to make headway (which have become famous through Vergnaud 1974) can be torn apart by a number of transformations; see (25), for example:

(25) a. How much headway did you say you made _ last month?
    b. He admired the headway we made _ last month.

However, the verb cannot be stranded in a paratactic environment; this is shown in (26) and (27):

(26) a. Lisa – and you know she made so much headway – has been laughing all day.
    b. * How much headway did Lisa – and you know she made _ – has been laughing all day?

(27) a. The horrible face that Harry made at Peter scared him. [restrictive RC]
    b. * The horrible face, which Harry made at Peter, scared him. [appositive RC]

The examples in (27) are from Vergnaud (1974).
Like (20) above, (26) is compatible with Invisibility, but it could be reduced to some constraint on movement as well. The contrast between (27a) and (27b) is more interesting. In the former, the idiom chunk **horrible face** can be related (directly or indirectly) to the object position of *made*, in the latter it cannot. Both sentences involve complex NPs; the relevant difference seems to be the paratactic boundary in (27b). Here, Invisibility would block a possible relation between the antecedent and the relative gap.4

An argument similar to the one involving (27) can be obtained by construing relative clauses with a complex antecedent containing a reflexive; see the contrast in (28), which shows two examples from Dutch, where the local anaphor *zichzelf* is used (see also the next section):

\[(28) \quad \text{a. De verhalen over zichzelf, die Joop, \textit{gisteren}}\]
\[\quad \text{\textit{the stories about se-self which Joop \textit{yesterday}}}\]
\[\quad \text{hoorde, waren gelogen. [Dutch]}\]
\[\quad \text{\textit{heard were lied}}\]
\[\quad \text{‘The stories about himself that Joop heard yesterday were lies.’}\]

\[\quad \text{b. ?* Deze verhalen over zichzelf, die Joop,}\]
\[\quad \text{\textit{these stories about se-self which Joop}}\]
\[\quad \text{toevallig \textit{gisteren}} \text{\textit{hoorde, waren gelogen.}}\]
\[\quad \text{\textit{accidentally yesterday heard were lied}}\]
\[\quad \text{\textit{int. ‘These stories about himself, which Joop accidentally heard yesterday, were lies.’}}\]

The relative clause in (28a) is restrictive, the one in (28b) appositive. In the former, the head NP can somehow be reconstructed into the object position of the relative clause; in the latter it cannot. Reconstruction is necessary to interpret the reflexive *zichzelf*, which has to be bound by the relative-internal subject *Joop*. At least superficially, the relevant difference between (28a) and (28b) is the paratactic boundary in (28b). As in (27b), Invisibility would prevent reconstruction to take place in (28b). (Again, see De Vries 2006a for a more sophisticated discussion.)

In short, no movement (18a) and no idiom chunks (18b) are observationally correct. They are at least consistent with Invisibility, but generally not conclusive evidence; some positive indications, however, can be obtained from satsflätor and split idioms involving relative clauses.

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4. See De Vries (2006a) for discussion and references concerning appositive relative clauses. It is claimed that the so-called head-raising analysis of restrictive relative constructions cannot be applied to appositive ones, which is concordant with the ideas presented here.
2.2 No Q/A-binding

Q-binding, that is, binding of a pronoun by a quantifier (more generally: variable binding), is usually defined in terms of c-command. Some felicitous examples are given in (29a,b), where the bound elements are inside an object clause and an adverbial clause, respectively:

(29) a. Nobody claimed that he was thinking about Hank.
   b. Everybody is somebody because he is a child of his parents.

The following examples, however, show that a bound pronoun cannot be inside a parenthetical:

(30) a. * Every guest – he, just arrived – was talking about Hank.
   b. * Nobody was, he claimed, the dumbest guy in the room.

If we replace the quantified expression by, say, John, the sentences are fine. In that case John and he are simply coreferential (hence, there is no binding).

Very illustrative is the difference between restrictive and appositive relative clauses. Upon hypotactic construal (restriction), the pronoun inside the relative clause can be bound by a quantified expression in the matrix; upon paratactic construal, it cannot; see (31):

(31) a. Everybody commented on the book that he read last week.
   b. * Everybody commented on Dostoyevsky’s Crime and Punishment, which he read last week.

Thus, it seems that Invisibility makes the correct predictions with respect to Q-binding.

I should mention one complication. The picture is blurred somewhat because of the possibility of E-type anaphora (on this subject, see also the contribution by Del Gobbo in this volume). A relevant example is given in (32):

(32) Every journalist has a laptop, which he uses when he writes an article.

Contrary to expectations, the pronouns inside the appositive relative clause appear to be Q-bound. This, however, cannot be the case. Consider (33):

(33) Every journalist has a laptop. He uses it when he writes an article.

Here, the relevant pronouns are in the next sentence. Therefore, they cannot be syntactically bound by definition, as there are no structural relations across sentences. This means that there must be some discourse phenomenon which has the same effect as Q-binding. E-type anaphora is subject to certain conditions; for instance, according to Sells 1985, the discourse must be continuative (see Del Gobbo
2003 and subsequent work for more discussion). This is the case in (32) and (33) but not in (30) and (31). Therefore, the examples in (30)/(31) are still relevant, and (32) is not a counterexample because it involves another process.\footnote{A reviewer notes another particular kind of (apparent) counterexamples, e.g., Every man, – except if he is totally amoral – loves his children. Here, connectors such as except or at least are used. In Van der Heijden (1999) these are analyzed as ‘insubordinators’. Insubordination, she argues, is a type of construction that is in between coordination and subordination. It has the syntax of subordination, but some semantic characteristics of coordination. A simple example is iedereen behalve Jan [Dutch] ‘everybody except John’. The example under discussion here is more complicated. Nevertheless, the use of except probably indicates that it involves subordination, which would straightforwardly explain the possibility of Q-binding.}

Next, let us turn to A-binding, that is, binding of a reflexive/anaphor from an A-position. This involves testing Condition A of the binding theory (where, incidentally, A means first, not argument). I will use some examples from Dutch, which has the unambiguous anaphor zichzelf. A simple illustration is (34), where the subject binds the object:

\[(34) \text{Joop, hielp zichzelf,} \]  
\[\text{Joop helped se-self} \]  
\[\text{‘Joop helped himself’} \]

As expected, binding into a parenthetical is unacceptable:\footnote{The example in (35a) would be fine if we replaced zichzelf by hem ‘him’; in (35b) hemzelf in the sense of ‘him himself’ seems more appropriate. Note, furthermore, that (35a) is acceptable in another reading, namely if zichzelf is bound by the local antecedent wie ‘who’.} \footnote{Hoffmann (1998: 302) argues for the opposite view on the basis of the example in (i):

\[(i) \text{Hanna hat, sich nicht schonend, die Arbeit zu Ende gebracht.} \]  
\[\text{[German]} \]  
\[\text{Hanna has herself not sparing the work to end brought} \]  
\[\text{‘Without sparing herself, Hanna has finished the work.’} \]  

However, since Chomsky (1981) it is standard to assume that present participle constructions, like infinitival to clauses, have a PRO subject. Evidently, the anaphor sich ‘her/himself’ can be locally bound by PRO, then.}
However, true anaphors must always be locally bound; compare (34) to (36):

(36) * Joop_i wilde dat ik zichzelf help.

Joop wanted that I se-self helped
int. 'Joop wanted me to help him (lit. Joop wanted that I helped himself)'

Consequently, the impossibility of A-binding into parentheticals is no proof for Invisibility, although it is consistent with it.

In short, no Q-binding and no A-binding seem to be observationally correct; Q-binding constitutes a clear indication for Invisibility, but no A-binding is explained independently.

2.3 No Condition B/C effects

According to Condition B of the Binding Theory, a pronoun cannot be locally bound; see (37):

(37) a. * John_i likes him_i.

b. John said that Sue likes him_i.

As we are interested in clausal parataxis here, it is not surprising that we do not find Condition B effects in the relevant examples:

(38) a. John_i met Sue, who didn’t like him_i.


Therefore, let us turn to Condition C. In general, R-expressions may not be c-commanded by a coreferential expression; this is illustrated for complement clauses and adverbial clauses in (39):

(39) a. * She_i said that Jane_i was listening to music.

b. * She hit Hank because Jane_i hated him.

Interestingly, these Condition C effects can be lifted in paratactic contexts, as is exemplified in Dutch in (40):

(40) a. Hij_i zei – dat is typisch iets voor Joop_i –

he said that is typically something for Joop

8. In special contexts involving deixis or focus, Condition C does not apply; an example is Only JOHN loves John. See for instance Evans (1980) and Demirdache (1997) for discussion and references.
dat hij nog liever op zijn kop ging staan. [Dutch]

that he yet rather on his head went stand

‘He said – this is typical for Joop – that he would rather stand on his head (fig.).’

b. Hij had, zei Joop, geen behoefte aan gezelschap.

he had said Joop no need to company

‘He had, said Joop, no need for company.’

c. Hij schreef een brief aan Anna, die op haar

he wrote a letter to Anna who in her

beurt beloofde Joop terug te schrijven.

turn promised Joop back to write

‘He wrote a letter to Anna, who in turn promised to write back to Joop.’

If c-command cannot cross paratactic boundaries, the absence of Condition C effects in (40) would follow straightforwardly. Thus, it seems that this type of sentences constitutes evidence for the Invisibility hypothesis.

2.4 No NPIs and no PPI effects

Negative polarity items must be in the scope of a negative element. Let us see if we can use this as a test for Invisibility. An example of a frequent NPI in Dutch is ook maar ‘even/any’ (lit. ‘also only’); see (41):

(41) a. Joop deed {weinig, *ook maar enige} moeite. [Dutch]

Joop did little NPI some effort

‘Joop took {little, *any} trouble.’

b. Joop deed nooit ook maar enige moeite.

Joop did never NPI some effort

‘Joop never took any trouble (at all).’

c. Niemand deed ook maar enige moeite.

nobody did NPI some effort

‘Nobody took any trouble (at all).’

In accordance with the predictions, an NPI inside a paratactic clause cannot be licensed by a negative element in the host (see also Peterson 1999 for some discussion):

(42) a. Niemand wilde – ik zal er {een, *ook maar enige}

nobody wanted I will there a NPI some

bemiddelaar over berichten – Joop helpen. [Dutch]

mediator on report Joop help

‘Nobody wanted – I will report {a, *any} mediator on it – to help Joop.’
b. Nooit had hij, zei Joop tegen {een gast,  
*ook maar iemand}, behoefte aan gezelschap.  
\textit{Never had he, said Joop to a guest, someone need to company}  
‘Never had he, said Joop to {a guest, *anyone}, felt the need for company.’

c. Niemand was boos op Joop, die {weinig,  
*ook maar enige} moeite had gedaan.  
\textit{Nobody was angry with Joop, who little some effort had done}  
‘Nobody was angry with Joop, who had taken {little, *any} trouble.’

However, this has an independent explanation, since NPI licensing seems to be restricted to the finite clause. Compare (43) to (41b,c):

(43) a. Niemand had geschreven dat Joop {weinig,  
\textit{nobody had written that Joop little}  
*ook maar enige} moeite zou doen.  
\textit{some effort would do}  
‘Nobody had written that Joop would take {little, *any} trouble.’

b. Ik had nog niet vernomen dat Joop {enkele,  
\textit{I had not yet learnt that Joop some}  
*ook maar enige} spullen had verkocht.  
\textit{some stuff had sold}  
‘I had not yet learnt that Joop had sold {some, *any} stuff.’

Apparent counterexamples are given in (44):

(44) a. Ik had niet verwacht/gedacht dat Joop  
\textit{I had not expected/thought that Joop}  
*ook maar enige moeite zou doen.  
\textit{some effort would do}  
‘I had not expected/thought that Joop would take any trouble (at all).’

b. Joop wekte niet de indruk dat hij  
\textit{Joop awakened not the impression that he}  
*ook maar enige moeite had gedaan.  
\textit{some effort had done}  
‘Joop did not raise the impression that he had taken any trouble (at all).’

These sentences, however, involve \textsc{neg}-raising; that is, the negation is interpreted in the subordinate clause. For instance, the meaning of (44a) is in fact that the subject \textit{did} expect/think something, namely that Joop would \textit{not} take any trouble. Therefore, the licensing of the NPI is local.
In short, although *no NPIs* is observationally correct, it does not constitute proof for the Invisibility hypothesis.9 I suppose it needs little explanation that the same can be concluded for the absence of PPI effects; consider the examples in (45a-d), which can be compared to (41) through (44):

(45)  

a. * Jake did not eat some rice.  
b. Mary was not angry with Jake, who had eaten some rice.  
c. Mary did not notice that Jake had eaten some rice.  
d. # Mary did not think that Jake would eat some rice.

In (45a) the English positive polarity item *some* cannot be used because of the negation: this is the PPI effect (of course the NPI counterpart *any* is fine in this context). The example in (45b) shows that this effect does not show up in a paratactic context. (45c) serves to illustrate the fact that PPI effects are local; (45d) is the apparent counterexample involving neg-raising.10 Thus, the status of *no PPI effects* with respect to Invisibility equals that of *no NPIs*.

2.5 No dependent Force/Mood

The examples in (46) show that the illocutionary force of a paratactic clause is independent of that of the host:

(46)  

b. Did Jake, John pondered, own a car?  
c. Does Jake, who I met last week, own a car?

Here, declarative and interrogative clauses are mixed.

Furthermore, a paratactic clause is not under the scope of a modal operator in the host. Consider the sentences in (47):

(47)  

a. Jake probably said that Mary – she is my sister – took a few days off.  
b. Jake probably said that Mary, who is my sister, took a few days off.

In these examples, what is *probable* is the complex proposition *Jake said that Mary took a few days off*, but *she/who is my sister* is not part of this.

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10. The reading in which the negation is interpreted in the main clause is fine (for instance in a contrastive context: *she did not think this, but rather that*).
In short, assuming that scope is related to c-command, it seems that no dependent Force and no dependent Mood corroborate Invisibility.\footnote{Espinal (1991), in part contradicting Ross (1973), suggests that there is also an effect that we might call no dependent Tense. However, it seems to me that the data involved are less straightforward than both Ross and Espinal suggest; I will desist from engaging in this discussion here.}

\section*{Conclusion}

The Invisibility hypothesis in (17) leads to a number of predictions (18). These were tested for clausal parenthesis and apposition. All of them seem to be observationally correct, and hence compatible with Invisibility.\footnote{I should mention that this conclusion is challenged by Ackema and Neeleman (2004: 96ff), who claim that, although a parenthetical cannot affect the syntax of the host, the reverse is possible. They intend to demonstrate this, using data from Dutch, on the basis of four phenomena: secondary predication, parasitic gaps, A-binding, and negative polarity. Unfortunately, I find all of the crucial examples they provide problematic. For instance, the possibility of binding into a parenthetical is illustrated with the sentence dat Jan, althans volgens zichzelf, geweldig is [that Jan, at least according to se-self, wonderful is], which, in my intuition (confirmed by some colleagues), is downright unacceptable: the correct form is hemzelf (not an anaphor); this judgment becomes even clearer if the sentence is completed by adding for example Jij zei 'you said' at the beginning. For reasons of space, I will refrain from reviewing the other arguments by Ackema and Neeleman.} Of course these facts only provide support for Invisibility in the absence of independent explanations, which is not always easy to establish. The results of the above discussion are summarized in Table 3.

\begin{table}[h]
\centering
\begin{tabular}{llll}
\hline
\textit{prediction (see 18)} & \textit{observationally correct, and hence compatible with Invisibility} & \textit{independently explained} & \textit{evidence for Invisibility} \\
\hline
no movement & yes & partly & partly \\
noidiom chunks & yes & partly & partly \\
nQ-binding & yes & no & yes \\
nA-binding & yes & yes & \\
nCondition B effects & yes & yes & \\
nCondition C effects & yes & no & yes \\
nNPIs & yes & yes & \\
nPPI effects & yes & yes & \\
ndependent Force & yes & no & yes \\
ndependent Mood & yes & no & yes \\
\hline
\end{tabular}
\caption{Invisibility tested for clausal parenthesis and apposition.}
\end{table}
I conclude that the evidence for Invisibility is indeed available.

A follow-up question is whether Invisibility also applies to coordinate structures (second conjuncts, to be more precise), which would imply a major generalization. In De Vries (2005a) I suggested on the basis of a smaller investigation that this is the case (see also Progovac 1998). However, I acknowledge that these results are more complicated and controversial, and future research will have to show if they can be maintained.

3. Structural proposal

Let me start this section by summarizing some important properties that parenthesis and apposition have in common:

(48) Parentheses and appositions...

a. are not selected by a head or projection in the host clause; they do not restrict the meaning of (some element in) the host, but provide additional information;

[Section 1; see also Burton-Roberts (1999) or De Vries (2006a), among others.]

b. do not affect the intonation of the host;

[Section 1; see also Schelfhout 2006. It is often claimed that the intonation can be positively characterized (‘the comma reading’) – see, among others, Bolinger 1989, Altmann 1981, Pittner 1995 –, but this is contradicted by Dehé and Döring in this volume.]

c. are linearly integrated with the host sentence;

[This is evident from the examples in sections 1 and 2.]

d. are main clauses (if they are clausal and finite), except for appositive relative clauses (see section 3.2);

[Notice, for instance, that the parentheticals in (40a), (42a) – but not the appositive relative clauses in (40c), (42c), (59) – show verb second, which is a characteristic of Dutch main clauses (contrary to the situation in subordinate clauses, which are verb final). The reporting clauses in (40b), (42b) are also main clauses. (Like yes/no questions, they are superficially verb first; see De Vries 2006b for discussion.)]

e. are opaque to c-command relations (that is, Invisible, as defined in (17)).

[This has been discussed in section 2.]

How can these properties be represented in the syntactic structure? I will approach this issue from a generative syntactic perspective. (See also Fortmann 2005 for a comparable attempt in an LFG framework.)
As a preliminary, notice that any account will have to be truly ‘integrated’. This means that parataxis must be represented in syntax. Proposals that involve fully ‘radical orphanage’ (Haegeman 1991, Burton-Roberts 1999, Peterson 1999, Fabb 1990) or the attachment of parentheses at some grammatical level beyond LF (Safir 1986) can be rejected out of hand for a simple reason: parentheses, like any other linguistic material, have both sound and meaning. That is, they are interpreted as well as pronounced; therefore, they must be present at the LF interface and the PF interface. According to standard assumptions about the organization of the grammar, there is only one way to get at these interfaces, namely via the overt syntax (this is so in the common Y-model, but also in single output models and models involving cyclic linearization). If a parenthesis were to be added at or after the LF interface (that is, after spell-out in Chomsky’s terms), there is no way it can be pronounced.13

Below, I will put forward the following hypotheses:

(49) Hypotheses
   a. Nonsubordination involves b-Merge, which creates a paratactic hierarchy.
   b. Apposition is specifying coordination.
   c. Parentheses are adjoined specifications (without an anchor).

These are treated in separate subsections. I will start with some general theoretical issues concerning nonsubordination.

3.1 Merge, inclusion, and c-command

A syntactic representation is derived in a bottom-up fashion. Merge is the basic structure building operation (Chomsky 1995); it combines separate syntactic objects into one new, larger object. Following general practice (that is, since Kayne 1984), I assume that this operation is binary. This assumption is not only conceptually the simplest, but it is also empirically supported by constituency tests, as far as it can be verified. Furthermore, Merge automatically creates a hierarchy: the two input objects are included in the output object. Since inclusion is equivalent to dominance, the result of Merge is that the output object created dominates the input

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13. Another argument for the syntactic integration of parentheses is the possibility of recursion: there can be a parenthesis inside a parenthesis; these parentheses are then interpreted on different levels. A similar issue is the possibility of ambiguity; see the end of section 3.3.
objects.\textsuperscript{14} For example, if we merge A and B and call the result C [in notation: Merge \((A, B) \rightarrow C\)], we obtain a mini-tree \(A \backslash C \backslash B\) in which C dominates both A and B.\textsuperscript{15}

Inclusion/dominance, hence subordination (and, indirectly, c-command) is ingrained in the operation of Merge as it is originally defined. This raises the question how nonsubordination can be represented in syntax, and especially how the Invisibility effects associated with paratactic construal can be explained. This is a vital problem, which, I believe, needs to be solved in a principled way.

Dominance is in fact a primitive relation in syntax. It is used to represent what we intuitively call subordination (if A is dominated by C, it is subordinated to C), but it cannot be explained in other, more basic terms. It seems that we have to draw a similar conclusion for parataxis. Paratactic construal cannot be explained or derived by more primitive means; therefore, we must accept it as a primitive of the grammar. This amounts to acknowledging the fundamental distinction between hypotaxis (subordination) and parataxis (nonsubordination) as observed by traditional grammarians (see Van Es and Van Caspel 1975, for instance).

Thus, I will assume that there is a primitive relation that represents nonsubordination, next to the one that represents subordination. This idea can easily be translated into Minimalist terms. An alternative for dominance is needed; therefore, there must be a second type of inclusion. Let us call the two types ‘d-inclusion’ (which represents subordination) and ‘b-inclusion’ (which represents paratactic construal).\textsuperscript{16} I will show that everything else more or less straightforwardly follows from this one very basic assumption.

The first direct consequence of the idea that there are two different kinds of inclusion is that there will be two types of Merge as well. In other words, two types of hierarchy can be created:

\begin{equation}
\text{(50) Two types of Merge}
\end{equation}

\begin{itemize}
\item d-Merge: the input objects are d-included in the output object.
\item b-Merge: the input objects are b-included in the output object.
\end{itemize}

\(\rightarrow\) \textit{syntactic hierarchy}

\(\rightarrow\) \textit{paratactic hierarchy}

\textsuperscript{14} A consideration of sisterhood, asymmetry, and linear ordering – however interesting – is outside the scope of this article; see De Vries (2005b) and the references there for ample discussion.

\textsuperscript{15} Of course a syntactic tree structure is only an arbitrary (but insightful) way of notating syntactic relations.

\textsuperscript{16} The labels \textit{d-} and \textit{b-} are in principle arbitrary. (They refer to the first letter of the words \textit{dominance} and \textit{behindance}. The latter term has been used in certain theories involving parallel structure for coordination, which have served as an inspiration for the present approach. Note, however, that b-inclusion is theoretically quite different from parallel structure in previous analyses. See footnotes 18 and 26 for references and some discussion.)
The ‘normal’ d-Merge gives the regular syntactic hierarchy (subordination); b-Merge produces what we can call a paratactic hierarchy. For instance, if A and B are combined into C by d-Merge, then C d-includes (dominates) both A and B. If b-Merge is used, then C will b-include both A and B, that is, A and B are paratactically construed with respect to C. (Note that there is no deeper meaning in this, since b-inclusion – parataxis – was adopted as a primitive of grammar. The above is just how it works out. We can, however, make use of the structural distinction to explain the different grammatical properties of constituents that are paratactically construed and those that are not, as will become clear in a moment.)

Three remarks are in order at this point. First, it is evident that the traditional tree notation of syntactic structures is insufficient to represent the difference between d-inclusion and b-inclusion. If, for instance, A and B are merged into C, both types of Merge in (50) would lead to the mini-tree \( \frac{A}{C\leftarrow B} \). Obviously, this is a notation problem, not a theoretical problem. I will resolve it by putting a star next to each label whose daughters have been b-merged (here C, giving \( \frac{A}{C^*\leftarrow B} \); see the next sections for more interesting examples).

Second, I should stress that b-inclusion is not a special kind of linear ordering such as precedence. Namely, precedence involves the relation between the two input categories of Merge (here, the sister nodes A and B), whereas b-inclusion involves the hierarchical relation between the output category of Merge (here, the mother node C) with respect to its input categories (here, the two daughter nodes A and B).

Third, since Merge is binary and since we can only Merge at the top of the derivation (Chomsky’s Extension Condition), syntactic structures in which b-Merge is used can be linearized at the PF-interface in exactly the same way traditional structures are linearized.

Now let us turn to c-command. A dynamic definition of the traditional c-command relation is the following: If Merge \((A, B)\) then \(A\) c-commands \(B\) and all the constituents dominated by \(B\).\(^\text{19}\) (Notice that \(A\) and \(B\) are sisters.) In the present approach, dominance translates into d-inclusion. Therefore, consider (51):

\[
(51) \quad C\text{-command} \\
\text{If Merge } (A, B) \text{ then } A \text{ c-commands } B \text{ and all the constituents d-included in } B.
\]

---

17. I will refrain from using 3D representations here, but perhaps the difference between d- and b-inclusion can be brought out more clearly if d-inclusion is drawn downward and b-inclusion backward, as I have suggested in earlier work.

18. Note that this is an essential difference between b-inclusion and ‘behindance’ as defined in Grootveld (1994), who indeed uses the latter as a precedence-like relation in a 3D-approach to coordination.

19. As far as I know, the dynamic view on c-command was initiated by Epstein (1999).
It will turn out to be useful to stick to this direct translation of the original definition of c-command, even though we expanded the syntactic model in (50). The reason is that it is now straightforward how syntactic Invisibility can be explained. Since c-command in (51) is defined over d-inclusion, it follows that the other type, b-inclusion, blocks c-command relations, and hence creates the Invisibility effect.

In short, the possibility of Invisibility is a consequence of the present approach (in which parataxis/b-inclusion is a primitive) without any additional assumption. I submit that parentheticals and appositive phrases/clauses (and perhaps all other instances of paratactic construal, including coordination) involve at least one application of b-Merge. This idea is worked out in the next sections.

### 3.2 Apposition as specifying coordination

A canonical apposition is a nonrestrictive postnominal DP modifier, as in Joop, my neighbor. Several semantic types of appositions may be distinguished, such as equatives, exemplifications or attributions (see, e.g., Quirk et al. 1985: 1308 and Heringa and De Vries, to appear). Depending on the exact semantic subtype, the connection between the two DPs can, cannot or must be made explicit by phrases like that is (to say), or, namely, or for example. What all these types have in common is that the apposition specifies the first DP. Even in equatives in which the anchor and the apposition could be reversed it is the case that the second DP provides further information on the first one to the hearer.

It seems to me that specification of this kind is syntactically comparable to common coordination. Coordination, then, is a syntactic configuration. Semantically, a number of different types of coordination can be distinguished, and specification is one of them; see (52):

(52) Semantic types of coordination

a. conjunction: the White House and the Pentagon
b. disjunction: the White House or the Pentagon
c. opposition: not the White House but the Pentagon
d. specification: the White House, (or/i.e.,) the house with the Oval Office

The (optional) presence of the coordinator or in (52d) is interesting. Quirk et al. (1985: 1301–2) state: “Apposition resembles coordination in that not only do coordinate constructions also involve the linking of units of the same rank, but the central coordinators and or may themselves occasionally be used as explicit markers of apposition.” If appositions were simply right-hand adjuncts to a noun

---

20. Note that it would be an additional assumption to generalize c-command to both types of inclusion. Evidently, such a move would be counterproductive.
phrase, the existence of coordinative heads or phrases would be unexpected. Some more examples are provided in (53); notice that (53b) is a PP apposition.

(53) a. Joop, (ofwel) onze voorzitter
    Joop or our chairman

b. boven, (namelijk/en wel) op de derde verdieping
    upstairs namely and indeed on the third story
    ‘upstairs, namely on the fourth floor’

As far as I know, the concept of specifying coordination was first introduced by Kraak and Klooster (1968: Ch.11); it is also used in Koster (2000).

The semantic differences between the various types of coordination can be attributed to the particular coordinator or connecting phrase (in combination with a phonological clue). For instance, and implies that a coordinated definite DP denotes two different individuals, whereas specifying coordination gives just one individual (see also Table 2 in the introduction). In terms of propositional logic, a conjunction of propositions is true only if both conjuncts are true, that is, the semantics involves set intersection. A disjunction is true if one or more of the conjuncts are true.21 (If individuals are coordinated, the semantics is much more complicated; see Link 1984.) Specification of A by B means that B adds information to A; by definition, it is nonrestrictive. Therefore, it is also asymmetric; the second conjunct always specifies the first. Intuitively this makes sense: in a discourse one can add information only to something that has already been mentioned. Finally, note that specifying coordination is often asyndetic (phonologically null); it does, however, always trigger an intonation break (cf. Table 1).22

If appositions are specifying conjuncts, we expect them to bear the same Case as the phrase they are attached to, given that conjuncts generally bear the same Case.23

(54) a. Du kennst doch den Jan und den Peter? [German]
    you know yet the-acc Jan and the-acc Peter
    ‘You know Jan and Peter, don’t you?’

21. The term conjunct is somewhat confusing. It refers to one of the coordinated phrases, whether the coordination as a whole constitutes conjunction, disjunction, or something else.

22. It appears that the default interpretation of an asyndetic connection is specification. Conjunction, disjunction and opposition are normally indicated by an overt coordinator. In triple (or n-ary, n≥3) coordination the first conjunction can be empty, but the final coordinator is overt, which indicates that the absence of the first is caused by backward deletion or so (other possibilities are Co-to-Co head movement or a multiple specifier analysis; see Progovac 1998 for discussion); it is not inherently asyndetic. True instances of asyndetic conjunctions always have a particular stylistic effect, e.g., intensification in an example such as Joop, Jaap, everybody left.

23. That is, apart from some instances of syntactically unbalanced coordination, as reported in Johannessen (1998).
b. Du kennst doch den Jan, meinen Cousin?

\[
\text{you know yet the-acc Jan my-acc cousin}
\]

‘You know Jan, my cousin, don’t you?’

As (54) shows, this is correct. Similar examples can be obtained from Slavic languages (Radek Šimíc, p.c.)

In schema 1 in the introduction, I subsumed appositive relative clauses under general apposition. In fact, many scholars have stressed the similarity between appositions and appositive relative clauses, for instance Delorme and Dougherty (1972), Halitsky (1974), Klein (1977), Sturm (1986), Doron (1994), Canac-Marquis and Tremblay (1998) and Koster (2000). Combining the insights by these authors with the concept of specifying coordination explicated above, I propose that an appositive relative, like an apposition, is a specifying conjunct to its anchor (antecedent). This general idea has major consequences for the analysis of appositive relatives. (De Vries 2006a argues in detail that an appositive relative clause is a semi-free relative in apposition to the overt antecedent. Unfortunately, I cannot go into this subject here for reasons of space. However, notice that, from the present perspective, an additional advantage of this approach is that it explains why an appositive relative is a subordinate clause, whereas parentheticals – which lack an anchor – are main clauses.)

Before I turn to the syntactic structure of appositions, let me briefly point out some similarities between normal conjuncts, appositions and appositive relative clauses. Of course the pattern below cannot be taken as proof for the idea of specifying coordination; it is, however, fully consistent with it.

The coordination approach to apposition implies that the anchor and the paratactic part form a constituent. Therefore, the whole construction can be topicalized. This is shown in (55), where the finite verb (in italics) signals the second position in the main clause. The usual surface position of the object is indicated by an underscore.

(55) a. Joop en Jaap heb ik vandaag niet gezien. [Dutch]

\[
\text{Joop and Jaap have I today not seen}
\]

‘I haven’t seen Joop and Jaap today.’

One might object that the Case-licenser is in the host, hence outside the ‘invisible’ apposition. However, this is only a problem on the presupposition that Case licensing of second conjuncts involves c-command, a questionable assumption. From my perspective, Case distribution is an across-the-board (ATB) phenomenon, that is, it falls under the general characteristic of second conjuncts that they can imitate properties of the first. Other examples are ATB movement, ATB Q-binding, and ATB category selection. It seems, therefore, that the head of a coordination phrase mediates the transfer of properties from the first conjunct to the second. Without claiming to understand why this is so, I observe that Case distribution falls under this ATB generalization. (Notice, by the way, that in a right-adjunction approach to apposition we cannot resort ATB, and the Case distribution facts in these constructions remain unexplained.)
b. Joop, onze voorzitter, heb ik vandaag niet gezien.
\textquote["Dutch"]{Joop our chairman have I today not seen}
'I haven't seen Joop, our chairman today.'

c. Joop, die onze voorzitter is, heb ik vandaag niet gezien.
\textquote["Dutch"]{Joop who our chairman is have I today not seen}
'I haven't seen Joop today, who is our chairman.'

By contrast, the two parts (e.g., the antecedent and the relative clause) may not be separated by preposing one of the two, such that the remainder is stranded in the middlefield. This is shown in (56) and (57).

(56) a. * Joop heb ik en Jaap vandaag niet gezien.
\textquote["Dutch"]{[Dutch]}

b. * Joop heb ik , onze voorzitter, vandaag niet gezien.

c. * Joop heb ik , die onze voorzitter is, vandaag niet gezien.

(57) a. * (En) Jaap heb ik Joop (en) vandaag niet gezien.

b. * Onze voorzitter, heb ik Joop vandaag niet gezien.

c. * Die onze voorzitter is, heb ik Joop vandaag niet gezien.

These patterns are in accordance with the Coordinate Structure Constraint (first proposed by Ross 1967), which holds that no conjunct (or any element contained in it) may be moved.

Furthermore, if appositions and appositive relative clauses are specifying conjuncts, it is not unlikely that there may be a third (fourth, etc.) part whose status equals the second, just as conjunction of more than two phrases is allowed (Jaap, Joop, (...) and Joep). Although it is pragmatically easier for common coordination, stacking of appositions and appositive relative clauses is acceptable as well; see (58) and (59):

(58) a. CEO's, dat kapitalistische tuig, dat geldbeluste
\textquote["Dutch"]{CEOs that capitalist scum that moneygrubbing schorriemorrie,}
ragtag

b. Robin Hood, onze held, onze redder in nood, …
\textquote["Dutch"]{Robin Hood our hero our savior in distress}

(59) a. Joop, die graag geheimzinnig doet, wiens
\textquote["Dutch"]{Joop who gladly mysteriously behaves whose achtergrond niemand echt kent, …
background nobody really knows}

‘Joop, who likes to behave mysteriously, whose background nobody really knows,...’
Invisible constituents?

b. de Dam, waar alle toeristen komen, waar

the Dam where all tourists come where

het beroemde oorlogsmonument staat, ...

the famous war monument stands

’t the Dam Square, where all the tourists come, where the famous war memorial is, ...

In short, I claim that general apposition is specification, which is syntactically subsumed under the umbrella of coordination.

Thus, the formal representation of apposition can be based on that of coordination, which is essentially as depicted in (60), where XP₁ and XP₂ are the two conjuncts:

\[(60) \[[\text{CoP} \text{XP}₁ \text{[Co'} \text{CoXP}₂\text{]}]\]

CoP is a coordination phrase, which is a regular X-bar category. This implies that the conjunction is a functional head (for discussion, see Munn 1987, Kayne 1994, Johannessen 1998, Van der Heijden 1999). The CoP creates a structural position for the conjunction and accounts for the coordination-internal grouping (Ross 1967 already convincingly showed that the coordinator forms a constituent with the second conjunct).

The position of the head Co can be occupied by any coordinator. For instance, ∧ and ∨ can be used for conjunction and disjunction, respectively. I will use the symbol &: to represent specifying coordination. 25 Thus, there is one general syntactic schema for the various kinds of coordination. The differences can be related to the diverse coordinative heads, each of which has a different meaning and, possibly, phonological form. Notice that the most usual spell-out of &: is (the phonological equivalent of) a comma. In short, apposition can be represented as (61), where DP₁ is the anchor and DP₂ the apposition (or, similarly, an appositive relative clause):

\[(61) \[[\&P \text{DP}₁ \text{[&'} \text{&:DP}₂\text{]}]\]

However, we are not there, yet. If (61) were to be derived by the traditional Merge, we would get a hypotactic structure, which is contradicted by the Invisibility effects discussed. What we need is a paratactic hierarchy. A straightforward solution along the lines of the theoretical proposal in section 3.1 is given in (62), which shows the derivation and its result in both a tree and a bracket notation:

25. Let me justify the choice of this symbol. The ampersand indicates that it is a special instance of conjunction/coordination; the colon indicates the specifying part (compare Koster’s 2000 ‘colon phrase’). The Dutch paraphrases en wel ‘and namely’ and ofwel ‘or namely’ directly reflect this concept.
Recall the notational convention introduced in the previous section: the star next to \( \&: \) indicates that its daughters are b-included instead of d-included. The derivation and representation in (62) imply that the appositive part is in a paratactic relationship to the anchor. Notice that, according to the definition of c-command in (51), \( \text{DP}_2 \) cannot be c-commanded by \( \text{DP}_1 \) or any phrase higher up in the tree. In effect, then, the appositive part of (62) is syntactically invisible for c-command relations. At the same time, it is included in the structure and it forms a constituent with the conjunction and the anchor. In short, all the properties listed in (48) are captured in the proposed structure.  

3.3 Parenthesis

Finally, let us turn to the structure of parentheses, or rather the structural embedding of parentheses in the host. As discussed in the previous sections, there are clear similarities between parentheses and appositions: they are invisible as well, they provide additional (nonrestrictive) information, and they often show the

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26. Can this approach be generalized to common coordination? From a theoretical point of view, such a generalization would be nice, but in the end it is an empirical question. In this respect, notice that there is a line of research that ties in with the idea of treating coordination structurally as nonsubordination. Various authors have expressed the intuition that conjuncts are not hierarchically organized (at least not in the usual way), but rather situated ‘behind’ each other; some early references are Williams (1978), Goodall (1987), Mu’adz (1991), G. de Vries (1992) and Moltmann (1992). Of course ‘being behind’ is only a spacial metaphor; it is not to be taken literally. The so-called parallel structure (or three-dimensional) approach to coordination can be contrasted with the hierarchical view in (60), which completely fails to make a structural distinction between coordination (e.g., \( X \text{ and } Y \)) and subordination (e.g., \( X \text{ with } Y \)). Since both approaches have obvious advantages and disadvantages, I proposed – building on ideas by Grootveld (1994) – a synthesis between them in De Vries (2005a), which includes a discussion of initial coordinators (as in \( \text{either...or, both ...and} \)) and distributivity effects. Notice that, nevertheless, there are substantial differences between my approach and the theories cited, even apart from the fact that they are designed for coordination only. For instance, the concept of a paratactic hierarchy (section 3.1) is new; moreover, previous parallel structure analyses predict invisibility between conjuncts, but not between paratactic material and the rest of the host clause.
same intonational break. Therefore, it seems reasonable to assume that b-Merge is involved in this domain, too.

Unlike appositions, but like adverbal constituents, parentheses do not have an anchor. Furthermore, their position within the host is relatively free (see Schelfhout 2006 and Stoltenburg 2003 for comments on Dutch and German, respectively). Thus, one might assume that parentheses are adjoined.

How exactly is some parenthetic phrase XP_{par} to be attached to the host structure? If we b-Merged XP_{par} directly with a projection of the host, the existing part of the host itself would become invisible behind the node created. This cannot be correct, of course. The solution to the problem is straightforward in principle: a parenthetical could be embedded in, say, a ‘parenthetic projection’ ParP; see (63):

(63) \[
\begin{array}{c}
\text{ParP}^* \\
\text{Par} \quad \text{XP}_{\text{par}}
\end{array}
\]

Consequently, ParP can be adjoined (by normal d-Merge) to some projection ZP in the host, as is shown in (64):

(64) \[
\begin{array}{c}
\text{YP} \\
\text{Y} \quad \text{ZP} \\quad \text{ParP}^* \quad \text{ZP}
\end{array}
\]

As a result, only the contents of ParP are invisible, but the lower part of the host structure (ZP) is not. For instance, Y does not c-command XP_{par} in (64), but it does c-command the constituents of the lower instance of ZP, as required. Thus, c-command-based licensing from the host into a parenthetical is impossible. The reverse is also true: XP_{par} and its constituents do not c-command elements of the host for the simple reason that they are embedded.

As there are many types of parenthetic phrases, the complement of Par – XP in (64) – can have many different shapes; moreover, there can be ellipsis, etc. It is impossible to go into the details of all these constructions, but what is relevant, here, is that they have a common basis, namely a phrase structure that involves the application of b-Merge.
The assumption of a ParP requires some additional justification. It seems to me that the functional head Par can be identified as a monovalent specifying conjunction. That is, Par has all the properties of &, except that it does not relate the additional information directly to an anchor. In this respect, it is noteworthy that some parentheticals can be introduced by a coordinator, too; see (65) for instance (see also Kavalova’s contribution in this volume):

(65) a. He asserted – and I wonder what you think about it – that the prisoners should be released.

b. This man stole my bicycle, or at least so I think.

Since specifying coordination is often asyndetically construed, it is not surprising that this is also the case for parenthesis.

Finally, I would like to add a note on ambiguity. Usually, parentheses are interpreted with respect to the host sentence as a whole. However, sometimes a constituent interpretation is available as well. An example of an ambiguous sentence is (66), where the parenthetical I think can be related to the host clause as a whole or the direct object:

(66) Tomorrow John will visit his grandmother, I think.

(i) ‘I think that John will visit his grandmother tomorrow.’

(ii) ‘I think that it is his grandmother that John will visit tomorrow.’

Possibly, the difference in interpretation can be captured structurally by either (right-)adjoining ParP on the constituent level (DP) or on the clausal level (CP), which, in this case, has no effect on the linear order. Further research is necessary to warrant the validity of these suggestions.

4. Conclusion

There are three types of parataxis in the broad sense: coordination, apposition and parenthesis. Here, I focused on (clausal) parenthesis and apposition, and investigated to what extent they are syntactically independent of the host. I defined syntactic Invisibility as the inability to maintain c-command-based relations with elements of the host. This leads to a variety of empirical predictions, which in some way or another all have to do with scope (such as binding, movement, polarity items). These were tested with data from English and Dutch mostly, and found to be correct. A subset of these findings constitutes proof for the Invisibility hypothesis. In a sense, then, parentheticals and the like show structural independence,
although at the same time it is clear that paratactic material must be syntactically and linearly integrated in the host sentence.

From the perspective of a Minimalist type of grammar, I tried to account for these contradictory properties by developing the concept of b-inclusion on the one hand, and the concept of specifying coordination on the other hand. The first comes down to acknowledging parataxis as a primitive in syntax, next to subordination/dominance. As for coordination in general, I argued that it is a syntactic configuration with various possible meanings, which can be related to the different coordinative heads; see schema 2:


```
<table>
<thead>
<tr>
<th>coordinative heads</th>
</tr>
</thead>
<tbody>
<tr>
<td>conjunction</td>
</tr>
<tr>
<td>disjunction</td>
</tr>
<tr>
<td>specification</td>
</tr>
<tr>
<td>other</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>bivalent</td>
</tr>
<tr>
<td>monovalent</td>
</tr>
<tr>
<td>opposition, etc</td>
</tr>
</tbody>
</table>

Symbol: ∧ ∧ &: Par ...
```

All paratactic conjunctions project into a coordination phrase (CoP). On the phonological side, specifying coordination can be associated with a paratactic intonation break. The heads &: and Par are often asyndetic, but sometimes they can be spelled out as regular coordinators such as and and or. (In this paper I have not discussed the nature of additional connecting phrases like that is to say.) Bivalent specification is used for apposition, monovalent specification for parenthesis. The latter differs from the other types in the sense that there is no anchor; for this reason parenthesis involves adjunction as well, which reveals a resemblance with adverbial material.

In order to account for the unintegrated properties of specification, I have proposed an extension of Minimalist syntax. By assumption, there are two types of structural inclusion, which I dubbed d- and b-inclusion; as a consequence, there are two types of Merge, namely d-Merge and b-Merge, which create a so-called syntactic hierarchy and paratactic hierarchy, respectively. Furthermore, I showed that it is reasonable to restrict c-command to instances involving d-inclusion. This leads to a relatively straightforward explanation of Invisibility, provided that specification involves the application of b-Merge. So far, however, the association between specifying conjunctions and b-Merge has not been theoretically forced; therefore, assume the following heuristic:

(67) Specifying coordinative heads trigger the application of b-Merge.
In order to prevent overgeneration of structures involving b-Merge, we might add an and only part to (67). However, if the suggestions in Progovac (1998) and De Vries (2005a) that common coordination shows Invisibility effects as well can be sustained in future research, (67) may eventually be generalized to the following statement: coordinative heads, and only coordinative heads, trigger the application of b-Merge.

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Semantics/Pragmatics and their interfaces
Reduced parenthetical clauses in Romance languages –
A pragmatic typology*

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The article derives from a corpus study of reduced parenthetical clauses (RPCs) in contemporary spoken French, Italian, and Spanish (cf. Schneider 2007) and proposes a typology based on pragmatic criteria. The parentheticals are first subdivided into three major groups: phatic, reporting, and mitigating RPCs. Subsequently, drawing on the contributions of Hare (1970) and Caffi (1999, 2001), the group of mitigating RPCs is subdivided in four groups: a) clauses mitigating the phrastic; b) clauses indicating the tropic and mitigating the phrastic or the neustic; c) clauses directly mitigating the neustic; d) clauses indirectly mitigating the neustic. The taxonomy is shown to be corroborated by two independent phenomena: the positional mobility of RPCs and the occurrence of RPCs in interrogative sentences.

1. Introduction

As pointed out by Hoffmann (1998: 318), within the panorama of parenthetical constructions, the reduced parenthetical clause1 (RPC) occupies a special position. Due to its various pragmatic functions and its high degree of syntactic complexity, a lot of names have been proposed for this construction, e.g., parenthetical verb (see Urmson 1952), assertive predicate (see Hooper 1975), comment clause (see Quirk, Green-

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1. Following an established German tradition, Hoffmann (1998: 318) himself calls this construction Schaltsatz.
baum, Leech and Svartvik 1985: 1112ff), disjunct sentence (see Espinal 1991), stance adverbial (see Biber, Johansson, Leech et al. 1999: 197, 864ff), and epistemic phrase (see Kärkkäinen 2003). Each of these names captures a different pragmatic or syntactic property.

Although there is a considerable amount of literature on the subject in general and the above-mentioned publications provide a first introduction to it, there are only three monographs (Cornulier 1973, Venier 1991, Andersen 1997) and a handful of articles (e.g., Bolinger 1968, Cornulier 1978, Borillo 1982, Blanche-Benveniste 1989, Andersen 1996, Hölker 2003) dedicated specifically to Romance RPCs. The present paper sums up some of the results of a corpus-based study of RPCs in contemporary spoken French, Italian, and Spanish (cf. Schneider 2007). Its aim is to propose a typology of RPCs based on pragmatic considerations, with special focus on their function as mitigators, i.e., as devices reducing speaker commitment. The classification will be shown to be supported by at least two facts, namely position within the host clause and the illocution expressed by the host.

The paper is organized as follows: After a short characterization of RPCs, I will present the corpora the study is based on and the empirical procedure followed. The parentheticals selected from the corpus texts are then subdivided into three macro-groups: phatic, reporting, and mitigating RPCs. With the aid of the pragmatic framework outlined in Hare (1970) and Caffi (1999, 2001), the group of mitigating RPCs is classified in more detail and four subgroups are defined. At the end, the typology is shown to be supported by a syntactic and a pragmatic fact.

2. A brief characterization of reduced parenthetical clauses

In conversations, French speakers occasionally insert into their sentences expressions such as, e.g., those in italics in (1) – (3):

(1) L1 [...] ça faisait partie de ces - disons donnéts that made part of these say-IMP1PL data culturelles [...] (CHOIX.19.111)
   ‘That was part of these, let’s say, cultural data’

(2) C: [...] c’est plus libre maintenant, je crois (BEECH.16)
   that.is more free now I believe
   ‘It’s freer now, I believe’

(3) FA 13 – […] c’était euh je me that.was HESITATION I myself
Reduced parenthetical clauses in Romance languages

The use of these expressions is, of course, not limited to French. Speakers of other Romance and non-Romance languages employ them, too. However, since the study presented here is based on corpora of spoken French, Italian, and Spanish, its examples and conclusions are restricted to these three languages.

The expressions in italics in (1) – (3) are neither the main clause nor a subordinate clause. They are inserted into or adjoined to the end of the sentence in a way similar to sentence adverbs. They are optional, i.e., they can be added or dropped without affecting the grammatical acceptability of the host. For example, (1) is perfectly acceptable without Fr. *disons* ‘let’s say’:

(4) Ça faisait partie de ces données culturelles.

Their position within the host is free. E.g., Fr. *disons* ‘let’s say’ can occur in several different positions within (1):

(5) *Disons* ça faisait partie de ces données culturelles.
(6) Ça faisait partie *disons* de ces données culturelles.
(7) Ça faisait partie de ces données *disons* culturelles.
(8) Ça faisait partie de ces données culturelles *disons*.

There is no overt syntactic link between them and the host, the only relation being adjacency. Nevertheless, the expressions in italics are pragmatically connected to the host, a conviction shared by virtually all studies on parentheticals since Urmson (1952). I call them reduced because the verb they contain lacks one of the arguments required by its valency.

3. The corpus analysis

In the study, I analyzed the 22 major corpora of spoken French, Italian, and Spanish comprising a total amount of 3,975,500 words and documenting spoken lan-

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2. As Ackema and Neeleman (2004: 99) conclude, “a parenthetical cannot affect the syntax of the host clause, but grammatical requirements imposed by material in the parenthetical can be satisfied by elements in the host clause”. In other words, the host can be ‘visible’ for the parenthetical but not vice versa. In the case of RPCs discussed in this paper, this implies that one of the valency requirements of the parenthetical verb is satisfied by the entire host clause (cf. also Hoffmann 1998: 318).
language of the last 30 years. With the exception of one French corpus, these collections are all publicly available, either in printed or in electronic form.\footnote{Cf. the end of the paper for publication data.} Table 1, in the appendix to this article, lists all corpora used, their abbreviations, year of publication, and total numbers of texts and words. For each language, the list comprises at least two large reference corpora that guarantee an acceptable variety in terms of the regional origin, social background, profession, gender, and the age of the speaker and in terms of the speech situation, theme and register.

There is no easy automatic method by which an RPC can be identified without knowing its exact form, not even in the few part-of-speech tagged spoken corpora available for French, Italian, and Spanish. Therefore a method was adopted that combined ‘manual’ with automatic research. For each language, I read a considerable number of texts selected from the 22 corpora (totaling approximately 1,350,000 words) and marked all parentheticals. For many parentheticals, at least two examples were found that satisfied the selection criteria below, for others I had to search all the electronic corpora to check if additional examples could be detected. I also ran queries on the electronic corpora if an RPC was found in one language and I suspected that a comparable one might exist in another.

In order to be selected from the corpus texts, an expression had to satisfy the following conditions:

1. The parenthetical is based on a finite verb.
2. Between the parenthetical and the host clause there is no overt syntactic link.
3. The parenthetical occurs at least once in medial and at least once in final position.
4. In medial position, the parenthetical at least once interrupts a close syntactic relationship (phrase or clause nucleus).
5. The host structure (sentence, clause, phrase) is structurally self-sufficient, i.e., it does not depend on the parenthetical.
6. The parenthetical’s verb lacks one of the arguments required by its valency.
7. The missing argument can be semantically recovered from the host.

Conditions 1, 2, 5, 6, and 7 are present explicitly or implicitly in all contributions about RPCs since Urmson (1952), conditions 3 and 4 have been introduced by myself and guarantee that a selected expression is capable of occupying several different positions within a host. Since each example had to fulfill all of these conditions, the order in which they are presented above has no significance.

At the end of the selection procedure, 1,939 RPCs (tokens) in the corpora were found to satisfy the criteria. These were assigned to 23 French, 25 Italian, and 33 Spanish forms (types), listed in Table 2 in the appendix. As can be seen in Table 1,
the dimensions and the text types of the corpora are quite heterogeneous. Although they provide an empirical basis that is large enough for establishing the inventory of the RPCs, they cannot serve as a basis for retrieving reliable information about quantitative distributions. In order to assess the frequency of each form, I had to compile three comparable samples of systematically analyzed texts totaling approximately 250,000 words for each language. They are equal in terms of discourse situations (face to face or not face to face, free or regulated turn-taking), domains of use (educational and informative, business, institutional and public, or leisure), and degree of fragmentation (monologic or dialogic).

The percentages in Table 2 are based on the three samples. Each value indicates, separately for each language, the percentage of a form out of the total of occurrences of the listed forms. A percentage of 0 means that a form occurs only in texts that are not contained in the sample. Except in the imperative, French verbs require a pronominal or nominal subject, Italian and Spanish verbs do not. Those Italian and Spanish RPCs with an additional (facultative) noun or pronoun are listed with NP or PRON. The noun phrase or the pronoun may precede or follow the verb, e.g., It. *Il Corriere della Sera* dice ‘The (newspaper) *Corriere della Sera* says’ or dice Calvino ‘says Calvino’, and Sp. *yo pienso* or *pienso yo* ‘I think’.

4. An initial classification

If we look at the RPCs in Table 2 and take into account their deictic orientation, the mood of the verb and the sentence type (declarative, imperative, interrogative), we are able to recognize several pragmatic functions (cf. also Brown and Levinson 1978, 1987, Holmes 1984, Koch and Österreicher 1990: 51–72, Andersen 1996: 314, 1997: 147): some RPCs downgrade speaker commitment, i.e., they are mitigating RPCs, while others function as phatic or as reporting devices; moreover, these discourse functions may be combined with others, e.g., illocutionary force indication, self-correction, and hesitation.

The analysis of the RPCs in Table 2 also suggests that there are three ways in which the downgrading of speaker commitment can be accomplished: by alleviating responsibility, by removing responsibility, and by sharing responsibility. The RPCs with verbs in the first person singular of the present indicative focus on the speaker. With respect to sentence types, they are all declaratives. With them the speaker directly reduces his or her burden of responsibility, that is, they are responsibility alleviating devices.

With the exception of the forms in the second person, most of the RPCs whose deictic centers lie outside the unmarked *ego, hic, nunc* center have the purpose of shifting the burden of responsibility away from the speaker, that is, they are responsi-
sibility removing devices. This is also true of the verbs in the first person singular of the conditional form (e.g., Fr. je dirais ‘I’d say’) because they make the truth of the utterance (and the responsibility of the speaker) dependent on implicit external circumstances (If q, I’d say p). Some clauses are based on verbs that are in the first person plural of the imperative (e.g., Fr. disons ‘let’s say’). They remove responsibility, since the statement is presented as if it had been requested or called for, and at the same time they explicitly include the addressee and thus divide the responsibility between speaker and addressee, i.e., they are also responsibility sharing devices.

The deictic centers of reporting RPCs also lie outside the unmarked ego, hic, nunc center (e.g., It. ho detto ‘I said’). Reported statements do not reflect the judgment of the speaker and hence should be considered cases of objective modality (see Lyons 1977: 797ff). They are actually outside the realm of speaker commitment. That is why I prefer to treat reporting parentheticals as a separate group not connected to mitigation. I admit, however, that a strict demarcation of reported speech from evidentiality and from mitigation in general can be problematic.

The RPCs with verbs in the second person are directed towards the addressee. They may be either declaratives (e.g., Fr. dites-vous ‘you say’, vous savez ‘you know’), imperatives (e.g., It. figurati, Sp. fíjate ‘imagine’) or interrogatives (e.g., Fr. voyez-vous ‘you see’, Fr. vous savez ‘you know’). The declaratives distribute responsibility to both speaker and addressee. The imperatives and interrogatives mostly have a phatic function, i.e., they are signals by which the speaker invites the addressee to co-operate and controls and maintains the effectiveness of communication (see Koch and Österreicher 1990: 57ff). They do not modify the speaker’s responsibility.

The subdivision is, admittedly, approximative; it permits us, however, to isolate the RPCs with reporting or phatic function from those operating on the responsibility of the speaker, which constitute the main focus of this article.

4. In those corpora with punctuation marks, imperative RPCs are transcribed with or without exclamation marks, depending on the type of the host sentence. Interrogative RPCs are transcribed mostly with question marks. In Table 2 the verbs are without punctuation. This means that according to the actual prosodic patterns, some of them, e.g., Fr. vous savez, actually consist of two forms, a declarative and an interrogative.

5. For the time being, my interpretation of declarative, imperative, and interrogative RPCs relies mainly on their explicit meaning. It could be possible, however, that the explicit meaning is altered by prosody. Further research might throw light on the interplay between the prosody of RPCs and their meaning.
5. Hare (1970) and Caffi (1999, 2001)

In order to understand how mitigators work, we need two further differentiations. Hare (1970) was the first to emphasize a distinction regarding the logical structure of utterances that is extremely valuable for the understanding of statements. One of the few linguists to acknowledge its importance early on was Lyons (1977: 749ff). According to Hare, who refines a binary distinction already introduced into philosophy by Frege (1891) and Russell and Whitehead (1910) and into linguistics by Bally (1932) (cf. dictum versus modus), there are three parts that contribute to the meaning of an utterance. The phrastic conveys the propositional content, that is, the part of an utterance common to corresponding assertive, interrogative, and directive utterances. This term is certainly preferable for focused questions which do not express complete propositions (see Levinson 1983: 242). The tropic classifies a sentence according to the speech act it is characteristically used to perform, that is, it indicates the illocutionary force of an utterance. Hare (1970) also calls it mood sign; in fact, in many languages it is grammaticalized in the category of mood. The neustic is the sign of subscription to the speech act that is being performed and expresses the speaker’s commitment to the factuality, desirability, etc. of the propositional content (cf. also Heger 1976: 277).

Hare’s (1970) tropic and neustic represent two extremes of what is probably a continuum: on the one hand, the plain and simple indication of the type of speech act, on the other hand the variation of its strength in terms of the involvement and commitment of the speaker and hearer. As we will see, in reality, mitigators such as RPCs always contain elements of both: They indicate a certain tropic and mitigate the associated neustic. They do this, however, to different extents, that is, according to their type, they represent different points on the aforementioned continuum.

The second distinction I apply has been proposed by Caffi (1999, 2001) for the function of mitigating devices in statements and in directives. In Caffi’s framework, however, the pragmatic notion mitigation assumes a broad sense. Whereas for Fraser (1980), who introduced the notion into pragmatics, it only means the reduction of the unwelcome effects that a speech act may have on the addressee, for Caffi it covers all macro- and micro-strategies by which the speaker tries to avoid the risks arising from linguistic interaction. One of these risks may be, for example, that the speaker is held responsible for what s/he is stating.

According to the utterance component they focus on, mitigating devices can be grouped into three types. Extending Lakoff’s (1972) felicitous botanic metaphor, Caffi (1999, 2001) calls them bushes, hedges, and shields. Bushes focus on the propositional content: They make less precise, less appropriate or minimize referring terms or predicates. Devices that function as bushes are diminutive suffixes (cf. Dressler and Merlìn Barbaresi 1994) and expressions like English a certain, a
sort of (cf. Aijmer 2002: 175–209), and also RPCs like Fr. disons ‘let’s say’ in Table 2. Bushes operate, in Hare’s (1970) terms, on the phrastic.

Hedges focus on the illocutionary force indication (cf. It. devo dire ‘I must say’ in Table 2) and/or on the speaker’s commitment (cf. Fr. je crois ‘I believe’ in Table 2). Caffi (1999: 893, 2001: 279ff, 311) mentions as examples hedged performatives (see Lakoff 1972: 213, Fraser 1975), modal sentence adverbs, and parentheticals. In Hare’s (1970) terms, the illocutionary-centered hedges operate on the tropic and/or the neustic.

In shields, the mitigation operates in different ways, most typically by shifting one of the deictic components of the utterance (ego, hic, nunc). The deictic displacement may be produced by a lexicalized expression or by operations affecting syntax, as in passive transformations or in the shift from first person singular pronouns to other person pronouns. An actantial shield is based on the ego and is typically represented by utterances ascribed to a source other than the actual speaker (cf. Sp. dicen ‘they say’ in Table 2) or with the author being deleted, as in impersonal or passive constructions. A narrativization shield involves the nunc and describes present events as if they had happened in the past (cf. It. ho detto ‘I said’ in Table 2). Displacements involving another possible world (the ‘as if’) are fictionalization shields (cf. Fr. mettons ‘suppose’ in Table 2), those created by hypothetical sentences are eventualization shields (cf. Fr. je dirais ‘I’d say’ in Table 2).

Hare’s (1970) and Caffi’s (1999, 2001) distinctions partly overlap and partly focus on different aspects. Together, though, they provide a viable framework for the analysis of the function of mitigating RPCs.

6. Four groups of mitigating RPCs

Following the ideas of Hare (1970) and Caffi (1999, 2001), I propose to subdivide the mitigating RPCs I found in the spoken corpora into four major subgroups:

1. Clauses mitigating the phrastic
2. Clauses indicating the tropic and mitigating the phrastic or the neustic
3. Clauses directly mitigating the neustic
4. Clauses indirectly mitigating the neustic

Note that the proposed classification of mitigating RPCs is partly inspired by Caffi (1999, 2001), but does not exactly correspond to it. For example, the shield function can be found in clauses mitigating the phrastic and in clauses indirectly mitigating the neustic. I also want to underline that the classification, although based on spoken corpora, should not be considered as being specific of spoken language. Although detailed corpus-based studies are lacking, it is probable that the pro-
posed typology applies to written texts as well, the only difference being maybe that certain types of RPCs are more frequent in spoken than in written language.

6.1 Mitigating the phrastic

The first subgroup of RPCs consists of clauses operating on the phrastic of the host, i.e., on its propositional content. Its most prominent representatives are the imperative forms Fr. *disons*, It. *diciamo*, and Sp. *digamos* ‘let’s say’. They affect the appropriateness or precision of a referring term or a predicate in their scope. In (1), which I repeat here as example (9), Fr. *disons* ‘let’s say’ indicates that the expression in its scope, i.e., *données culturelles* ‘cultural data’, is not deemed completely appropriate by the speaker:

(9) L1 [...]* ça faisait partie de ces disons données that made part of these say-IMP.1PL data culturelles [...] (CHOIX.19.111)
cultural ‘That was part of these, let’s say, cultural data’

The speaker presents a referring expression as if it were a proposal that is not wholly satisfying neither to him- or herself nor to the interlocutor and as if it could be improved. This is the reason why the speaker often corrects or reformulates such an expression by a more appropriate one that follows immediately afterwards. This can be seen in the following Spanish example, where *adaptadas* ‘adapted’ is corrected by *remozadas* ‘refreshed’:

(10) Inf. – [...] *cuando se trata de obras clásicas,* when 3SG.REFL treats about pieces classic pero adaptadas digamos, remozadas.
but adapted say-IMP.1PL refreshed

[...] (HCM.6.102)

‘When we have to do with classic but adapted, let’s say, refreshed pieces’

These RPCs are primarily bushes, but indirectly also hedges (see Hölker 2003: 150), because the speaker, by using a referring expression that is explicitly inappropriate, reduces his or her commitment. Furthermore, they include the addressee and expand the deictic center of the utterance (actantial shield), i.e., they divide the responsibility between the speaker and the addressee. Fr. *disons* ‘let’s say’ may also serve to indicate that the expression in its scope is intended as a hypothesis or an example. The same is true of Sp. *digamos* ‘let’s say’ (see Hölker 2003: 138 for an Italian example of this use):
una persona, digamos más, más o menos culta
A person say-IMP.1PL more more or less educated
¿eh?, entonces … V … que le guste el arte de la lectura,
well who him.OBL pleases the art of reading
entonces va a, por ejemplo, una traducción de “Archipiélago
well goes to for example a translation of “Archipelago
Gulag” y ve que es muy mala […] (HCM.17.296)
Gulag” and sees that is very bad
‘A, let’s say, more or less educated person, well, who likes reading,
well, he sees, for example, a translation of the “Gulag Archipelago”
and sees that it is very bad’

Fr. disons ‘let’s say’ and its Italian and Spanish equivalents may thus act as phrastic
exemplification markers (cf. Bazzanella 1994: 163). As we will see in section 7, this
function may also be fulfilled by another RPC.

The scope of Fr. disons ‘let’s say’ and its Italian and Spanish equivalents is not
always limited to the adjacent word or phrase. In the, admittedly rare, French ex-
ample below, the parenthetical refers to an entire clause:

(12) HA16 - je laisse couler pour l’instant quoi .
I let flow-INF for the.moment what
disons (CREDIF:HA16.26)
say-IMP.1PL
‘I let it go on for the moment, let’s say’

In the text, speaker HA16 repeatedly underlines that it is too early to care about his
children’s educational career, e.g., by saying On se posera des questions plus tard
‘We’ll wonder about this later’. Hence, the whole clause Je laisse couler pour l’instant
‘I let it go on for the moment’ is marked as an approximative formulation of what the
speaker wants to say.

6.2 Indicating the tropic and mitigating the phrastic or the neustic

The second subgroup consists of clauses indicating the tropic (illocution) and op-
erating on the phrastic (propositional content) or on the neustic (speaker commit-
ment). Very rarely, though, these are plain performatives, as in (13), a Spanish
example, where digo yo ‘I say’ characterizes the utterance as representative or as-
sertive speech act and, at the same time, reduces the speaker’s commitment:

(13) H2 […] cirujano de ovejas o cirujano de... de mujeres.
surgeon for sheep or surgeon for for women
Porque si ha mata<(d)> o a una mujer será
because if has killed to a woman be.FUT.3SG
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cirujano de mujeres, *digo yo.* (COREC.PENT007D)

Surgeon for women say I

'Surgeon for sheep or surgeon for women. Because if he has killed a woman he must be a surgeon for women, I say'

In most cases, the RPCs of this group are *hedged performatives* (see Lakoff 1972: 213, Fraser 1975), that is, verbs whose performative meaning is hidden by a modal verb or an additional suffix. In (14), a French example, *je veux dire* ‘I mean’ intervenes on the phrastic level by marking the term *sur le plan oculaire* ‘regarding your eyes’ as explanation or specification:

(14) À: [...] c’est le seul problème que vous avez, that.is the only problem that you have

*sur le plan oculaire, je veux dire* (HOELK.I.6.267)

on the plan ocular I want say.INF

‘That’s the only problem you have, regarding your eyes, I mean’

6.3 Directly mitigating the neustic

RPCs with belief verbs directly operate on the neustic, that is, on the speaker’s commitment to the truth of the proposition, and directly alleviate the speaker’s burden of responsibility. Since they are limited to assertive tropics, they imply that the utterance is a statement.

The corpus analysis shows that the clauses used for this purpose constitute a relatively closed set of stereotyped forms derived from a few verbs. Fr. *croire* ‘believe’ (see example 2) and its Italian and Spanish equivalents are the basic verbs in this domain, while forms deriving from Fr. *penser*, It. *pensare*, and especially Sp. *pensar* ‘think’, are less common. Two other important belief verbs that have parenthetically used forms are Fr. *supposer* and Sp. *suponer* ‘suppose’, and Fr. *imaginer*, It. *immaginare* and Sp. *imaginar* ‘imagine’. These are the classical parenthetical verbs, whose existence was first underlined by Urmson (1952). In the Italian and French corpora, one may also find some rare examples of parenthetical *spero* and *jespère* ‘I hope’:

(15) D: [...] # la cosa _su cui_ voglio intervenire _su questo_ the thing on which want intervene.INF on this *spero_ primo intervento è questo concetto di democrazia hope.1SG first intervention is this concept of democracy # [...] (CLIP.RC3)

‘The issue I’d like to address in this, I hope, first talk is this concept of democracy’
The last two RPCs are somewhat special insofar as they combine an evaluative with a belief meaning.

Besides using a belief verb, the speaker may employ another device in order to directly mitigate the neustic component and alleviate his or her burden of responsibility: The speaker admits that he or she does not know, as in the following French example with *je sais pas* ‘I don’t know’:

\[(16)\] A: […] Vous devez avoir, *je sais pas*, un petit problème local […] (HOELK.4.2.214)

‘You must have, I don’t know, a small local problem’

### 6.4 Indirectly mitigating the neustic

Finally, there is a subgroup of clauses indirectly mitigating the speaker’s commitment. It comprises evidential clauses and forms of Fr. *savoir*, It. *sapere*, and Sp. *saber* ‘know’ that attribute knowledge to the addressee or to everybody.

Evidential parentheticals derive from verbs expressing sensory perception (e.g., Fr. *voir* ‘see’) or the obtaining of knowledge (e.g., Fr. *je me rappelle* ‘I remember’) and from verbs expressing the semblance or appearance of a state of affairs (e.g., Fr. *sembler* ‘seem’). Those in the first person singular of the present indicative ease the speaker’s responsibility. The other forms can be subsumed under Caffi’s (1999: 896, 2001: 315) *actantial* shields, insofar as they are based on the deictic *ego* and either divide responsibility between speaker and addressee or remove it entirely from the speaker. They specify the evidence the truth of the asserted proposition relies on. Since they do not directly refer to the speaker’s belief or absence of knowledge but to the evidential circumstances of his or her statement, they indirectly mitigate the neustic. A Spanish example of dividing the responsibility between a speaker (who affirms) and an addressee (who sees) can be seen in (17):

\[(17)\] I: […] para mí los tíos, *ya ves*, son todos amigos míos

‘For me the guys, you see, are all my friends’

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6. *Je ne sais pas* ‘I don’t know’ is practically absent in the French corpora. Interestingly, the only occurrences I encountered are contained in the interviewer’s (Kate Beeching herself) questions of BEECH.
The speaker may also attribute to the addressee a certain knowledge, as in the following Spanish utterance:

(18) H1 [...] a mí me tocó una mesa... una mesa de... de cajón grande. Y luego, sabes, me tocó... (COREC.CCON021B)

H1 repeats a preceding utterance almost literally, hence H1 can count on the shared knowledge and use the declarative sabes ‘you know’ to refer to it. We should not forget, though, that sabes may also be an interrogative parenthetical with phatic function, inviting the addressee to co-operate and controlling the effectiveness of communication (for Spanish ¿sabes? cf., e.g., Briz Gómez 1998: 224ff). In that case, it does not modify the speaker’s responsibility. By saying that the addressee also knows, the speaker shares responsibility for what he or she is stating. Instead of referring to his or her belief or absence of knowledge, the speaker refers to external circumstances that might corroborate the statement. As in the case of evidential parentheticals, this is a way to indirectly mitigate the neustic.

7. RPCs operating on more than one utterance component

As in all typologies, there are cases that do not fit neatly into the subgroups I defined following Hare (1970) and Caffi (1999, 2001). It has already been pointed out that plain and hedged performatives operate on two utterance components at the same time. But similar RPCs may also alternate between two components. In the following Italian example, the hedged performative direi ‘I’d say’ directly reduces the commitment of the speaker, while in the French example immediately afterwards, je dirais ‘I’d say’ marks an expression as not completely satisfying:

(19) AA [...] Si puoi buttar via direi 3SG.REFL can throw-INF away say-COND.1SG (PIXI.BOF.130)

‘You can throw it away, I’d say’

(20) L1 [...] - la plupart du temps ils n’arrivent pas à faire le lien entre l’enseignement not to make-INF the connection between the.teaching
In the Italian example (19), the RPC acts on the neustic. In medial position, as in (20), the RPC tends to assume a function limited to the phrastic.

Another typical RPC alternating between two utterance components is It. non so ‘I don’t know’, which can either directly mitigate the neustic, like je sais pas ‘I don’t know’ in the French example (16), or act as a phrastic *exemplification marker*, as in the following utterance:

(21) A: [...] supponete non so il presidente della camera dei deputati eh assegna il progetto di legge a una commissione [...] (CLIP.FD2)

‘Suppose, I don’t know, the president of the chamber of deputies assigns the bill to a commission’

8. Position inside the host and sentence type of the host

A taxonomy is useful if it leads to a more profound appreciation of the studied phenomena. I am convinced that the proposed classification may contribute to a better understanding of some facts. I would like to mention two of them, a syntactic one and a pragmatic one.

In Schneider (2007), I analyze the position of RPCs inside their hosts. For each RPC, the occurrences inside the host nucleus (verb+arguments) and the occurrences in the host periphery (adjuncts) are added up separately. The sum of intra-nuclear occurrences is then related to the sum of extra-nuclear ones. Dividing the former by the latter, one obtains a numerical value that I call *interruption value*. For example, 27 intra-nuclear to 25 extra-nuclear occurrences of Fr. disons ‘let’s say’ give us an interruption value of 1.08, whereas 15 intra-nuclear to 41 extra-nuclear occurrences of Fr. je crois ‘I believe’ result in an interruption value of 0.36. This, admittedly purely quantitative, measurement gives a first overview of the positional mobility of an RPC and of its ‘interruptive force’, that is, of its capability to penetrate into the host structure. The analysis of these values shows that RPCs with phatic function, that is, RPCs that are not used as mitigators, occur predomi-
nately in the periphery of the host and have a low interruption value. Usually, they do not penetrate into the host nucleus. The RPCs that directly mitigate the neustic have higher interruption values, some of the RPCs operating on the phrastic have the highest interruption values. The latter frequently occur even inside noun phrases of the nucleus. Therefore, the pragmatics based taxonomy of RPCs outlined in sections 4–6 is, at least partially, paralleled by a grouping based on the positional mobility.

The second phenomenon explainable in terms of the proposed classification concerns the sentence types of the hosts in which RPCs occur. Since Urmson (1952), there has been the tacit assumption that mitigating RPCs are restricted to declaratives, that is, to sentences by which we make statements, because only in statements is the commitment of the speaker at stake. However, in the course of the analysis, I found several cases of RPCs occurring in other sentence types, mostly in interrogatives, as in the following Italian and Spanish examples:

(22) M2: [...] quindi lei è nato ad Alcamo / e / &mhm / può dire dove ha trascorso / diciamo / la [/] la sua giovinezza / la sua vita [!] / fin a [/] / poco tempo fa //

So, you were born in Alcamo and can you tell us where you've spent, let’s say, your youth, your life until recently'

(23) - ¿Encuentras mucha inquietud, digamos, de tipo social, de tipo humano? (HUS NC.C3H1.288)

‘Do you find much unrest, let’s say, in social matters, in human matters?’

As I explained, It. diciamo and Sp. digamos ‘let’s say’ are RPCs that operate on the phrastic, that is, on single elements of the host proposition. Interrogative sentences, as (22) and (23) above, have a phrastic but not a neustic component. In other words, questions contain a propositional content, whose referring expressions may be deemed more or less appropriate by the speaker, but they do not comprise a commitment regarding the factuality of the propositional content. Hence, the fact that It. diciamo and Sp. digamos ‘let’s say’ occur also in interrogative sentences is perfectly in line with our assumptions about their pragmatic scope.
9. Summary

This paper, based on a corpus study of RPCs in contemporary spoken French, Italian, and Spanish (cf. Schneider 2007), aims to propose a typology of RPCs based on pragmatic criteria. After a short characterization of RPCs, I describe the corpora and the empirical procedure followed. 22 major corpora of spoken French, Italian, and Spanish are analyzed. The parentheticals selected from the corpora are then subdivided into three major groups: phatic, reporting, and mitigating RPCs. With the aid of the pragmatic framework outlined in Hare (1970) and Caffi (1999, 2001), the group of mitigating RPCs is classified in more detail and four subgroups are defined: 1. Clauses mitigating the phrastic; 2. Clauses indicating the tropic and mitigating the phrastic or the neustic; 3. Clauses directly mitigating the neustic; 4. Clauses indirectly mitigating the neustic. Some cases of RPCs that should be assigned to more than one subgroup are then discussed. At the end, the pragmatics based taxonomy of RPCs outlined in sections 4–6 is shown to be supported by two facts: a grouping based on the positional mobility of RPCs and the occurrence of clauses mitigating the phrastic in interrogative sentences.

Corpora

BEECH = Beeching corpus (<http://www.uwe.ac.uk/facults/les/staff/kb/CORPUS.pdf>).
Reduced parenthetical clauses in Romance languages

COREC = Corpus oral de referencia del español contemporáneo (<http://www.lllf.uam.es/~fmarcos/informes/corpus/corpusix.html>).


CRFP = Corpus de référence du français parlé (not published).


References


## Appendix

Table 1. The analyzed corpora

<table>
<thead>
<tr>
<th>Corpora</th>
<th>Abbreviation</th>
<th>Publication</th>
<th>Texts</th>
<th>Words</th>
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<tr>
<td>French</td>
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<tr>
<td>Eschmann</td>
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<td>1984</td>
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<td>Hölker</td>
<td>HOELK</td>
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<td>Ludwig</td>
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<td>1988</td>
<td>11</td>
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<td>Italian</td>
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<td>BER</td>
<td>2002</td>
<td>3</td>
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<td></td>
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<tr>
<td>Encuestas del habla urbana de Sevilla. Nivel popular</td>
<td>HUSNP</td>
<td>1987</td>
<td>24</td>
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<td>Encuestas del habla urbana de Sevilla. Nivel medio</td>
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<td>1992</td>
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<td>Total French</td>
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<tr>
<td>Total Italian</td>
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<td>Total Spanish</td>
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<td>Total French, Italian, and Spanish</td>
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Table 2. French, Italian, and Spanish RPCs

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<thead>
<tr>
<th>French Forms</th>
<th>Italian Forms</th>
<th>Spanish Forms</th>
</tr>
</thead>
<tbody>
<tr>
<td>tu vois ‘you see’</td>
<td>diciamo ‘let’s say’</td>
<td>digamos ‘let’s say’</td>
</tr>
<tr>
<td>je veux dire ‘I mean’</td>
<td>dico ‘I say’</td>
<td>digo ‘I say’</td>
</tr>
<tr>
<td>vous savez ‘you know’</td>
<td>credo ‘I believe’</td>
<td>sabes ‘you know’</td>
</tr>
<tr>
<td>je crois ‘I believe’</td>
<td>dice ‘s/he says’</td>
<td>creo PRON ‘I believe’</td>
</tr>
<tr>
<td>tu sais ‘you know’</td>
<td>voglio dire ‘I mean’</td>
<td>creo PRON ‘I believe’</td>
</tr>
<tr>
<td>je sais pas ‘I don’t know’</td>
<td>non so ‘I don’t know’</td>
<td>no sé ‘I don’t know’</td>
</tr>
<tr>
<td>disons ‘let’s say’</td>
<td>sai ‘you know’</td>
<td>me parece ‘it seems to me’</td>
</tr>
<tr>
<td>voyez-vous ‘you see’</td>
<td>direi ‘I’d say’</td>
<td>quiero decir ‘I mean’</td>
</tr>
<tr>
<td>je dirais ‘I’d say’</td>
<td>mi sembra ‘it seems to me’</td>
<td>creo ‘I believe’</td>
</tr>
<tr>
<td>je pense ‘I think’</td>
<td>devo dire ‘I must say’</td>
<td>ya te digo ‘now I say to you’</td>
</tr>
<tr>
<td>j’imagine ‘I imagine’</td>
<td>pensa ‘I think’</td>
<td>ya digo ‘now I say’</td>
</tr>
<tr>
<td>mettons ‘suppose’</td>
<td>sa ‘s/he knows’</td>
<td>digo PRON ‘I say’</td>
</tr>
<tr>
<td>je trouve ‘I find’</td>
<td>spero ‘I hope’</td>
<td>diríamos ‘we’d say’</td>
</tr>
<tr>
<td>je sais plus ‘I don’t know any more’</td>
<td>dice NP ‘NP says’</td>
<td>me imagino ‘I imagine’</td>
</tr>
<tr>
<td>je suppose ‘I suppose’</td>
<td>vedi ‘you see’</td>
<td>supongo ‘I suppose’</td>
</tr>
<tr>
<td>paraît-il ‘it seems’</td>
<td>ho detto ‘I said’</td>
<td>diria ‘I’d say’</td>
</tr>
<tr>
<td>on va dire ‘we’ll say’</td>
<td>figurati ‘imagine’</td>
<td>insisto ‘I insist’</td>
</tr>
<tr>
<td>j’espère ‘I hope’</td>
<td>mi pare ‘it seems to me’</td>
<td>me parece a mi ‘it seems to me’</td>
</tr>
<tr>
<td>dites-vous ‘you say’</td>
<td>penso PRON ‘I think’</td>
<td>diría PRON ‘I’d say’</td>
</tr>
<tr>
<td>il faut dire ‘I must say’</td>
<td>poni ‘suppose’</td>
<td>ha dicho ‘s/he said’</td>
</tr>
<tr>
<td>on dirait ‘I’d say’</td>
<td>mi sa ‘it seems to me’</td>
<td>me han dicho ‘they said to me’</td>
</tr>
<tr>
<td>je me rappelle ‘I remember’</td>
<td>volevo dire ‘I wanted to say’</td>
<td>podriamos decir ‘we could say’</td>
</tr>
<tr>
<td>me semble-t-il ‘it seems to me’</td>
<td>vede ‘you see’</td>
<td>fíjate ‘imagine’</td>
</tr>
<tr>
<td></td>
<td>immagino ‘I imagine’</td>
<td>parece ‘it seems’</td>
</tr>
<tr>
<td></td>
<td>sembra ‘it seems’</td>
<td>pienso PRON ‘I think’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>repito ‘I repeat’</td>
</tr>
<tr>
<td></td>
<td></td>
<td>me acuerdo ‘I remember’</td>
</tr>
<tr>
<td>French Forms</td>
<td>Italian Forms</td>
<td>Spanish Forms</td>
</tr>
<tr>
<td>--------------</td>
<td>---------------</td>
<td>---------------</td>
</tr>
<tr>
<td>decia NP ‘NP said’</td>
<td>dicen ‘they say’</td>
<td>ha dicho NP ‘NP said’</td>
</tr>
<tr>
<td>imagino ‘I imagine’</td>
<td>imaginate ‘imagine’</td>
<td>ya ves ‘now you see’</td>
</tr>
</tbody>
</table>
Prosody and its interfaces
The relation between syntactic and prosodic parenthesis*

Nicole Dehé
(Freie Universität Berlin)

It is a common assumption in previous research on parentheticals that syntactic and prosodic parentheses coincide such that strings that are parentheticals in the syntax are marked by certain defining prosodic characteristics in speech. Based on the analysis of a set of spontaneous British English speech data this paper shows that a one-to-one relation of this kind does not exist. Rather, there are a number of options for the prosodic realisation of syntactic parenthesis, including prototypical patterns along with various ways of prosodic integration. It follows from the results that the prediction made by prosodic theory that parentheticals form separate intonation domains is too strong in the light of actual spoken language data.

1. Introduction

In the syntactic literature, parenthetical constructions have been defined as expressions that are to some extent external to but linearly represented in the syntactic structure of the sentence in which they are embedded. The definitions in (1), taken from Burton-Roberts (2006) and Bussmann (1996) respectively, are as good as any.

(1) a. A parenthetical (P) is an expression of which it can be argued that, while in some sense ‘hosted’ by another expression (H), P makes no contribution to the structure of H. (Burton-Roberts 2006: 179)

* Like all contributions to this volume, the present article is based on a paper presented at the Annual Conference of the DGfS 2006 in Bielefeld, as part of a workshop on parentheticals. I would like to thank the workshop participants for their questions and comments. I am particularly grateful to Anne Wichmann for stimulating and fruitful discussions prior to the DGfS conference, as well as for helpful comments on an earlier version of this paper and ongoing exchange. Further thanks are due to Jörg Peters, Vieri Samek-Lodovici and Dagmar Barth-Weingarten for valuable comments on an earlier draft, and to Yordanka Kavalova for innumerable discussions concerning parentheticals in general.
b. Parenthetical: Expression (word, phrase, clause) inserted into a sentence from which it is structurally independent: *Her new boy-friend – his name is Jacob – will be coming over tonight.* (Bussmann 1996: 349)

Analogously, a prosodic parenthesis interrupts the prosodic flow of its host utterance. This is achieved by any or all of a number of features, including changes in pitch, tempo, and loudness, and surrounding pauses. Consequently, it has frequently been assumed that parentheticals form their own intonation domain (Bing 1985, Fagyal 2002, Nespor and Vogel 1986, Selkirk 1984, among others).

In previous research on parentheticals, it has often been taken for granted that syntactic and prosodic parentheses coincide such that strings that qualify as parentheticals in the syntax have certain defining prosodic characteristics. For example, Burton-Roberts (2006: 180) claims that “[w]hat all [parentheticals] have in common, observationally, is that they are marked off from their hosts by some form of punctuation in writing or special intonation contour in speech”. Similarly, Hoffmann (1998: 300) notes that a parenthetical interpolation in the syntax is usually marked by a characteristic pitch pattern, a change in tempo and loudness, and by pauses. Safir (1986: 672) implies that syntactic parentheticals are “typically marked by strong intonation breaks”, while Haegeman (1988: 250) claims that “comma intonation” is a “distinct cue” to parentheticals and “a syntactically determined PF property of parentheticals”. D’Avis (2005), assuming parentheticals to be adjoined to the closest phrasal projection, takes their intonational separation as a trigger for their interpretation. In the present volume, Fortmann adopts the assumption that a “parenthetical string is prosodically separated from the surrounding constituents by intonational breaks”.

In accounts like these, there is often a certain risk of circularity in the argumentation. On the one hand, it is assumed that syntactic parentheticals are marked by certain prosodic features, and on the other hand, these prosodic features help to identify a parenthetical interpolation in the syntax.

At the same time, it has been argued that different intonational patterns are possible with certain types of parentheticals and that these patterns can serve specific functions in utterance interpretation. For example, Reinhart (1983: 175ff) distinguishes between parenthetical-subject oriented sentences containing parentheticals (SCP’s) on the one hand, and speaker oriented SCP’s on the other hand. She argues that cases of parenthetical-subject oriented SCP’s come with three characteristic prosodic features (pause before the parenthetical; low, steady pitch on the parenthetical; relatively high pitch before the parenthetical) which all contribute to the fact that “the parenthetical cannot be phonologically assimilated to the main clause”. In the case of the speaker oriented SCP, on the other hand, there
is no pause, and phonological assimilation is possible (Reinhart 1983: 179). A corpus study mentioned by Stenström (1995: 292) reveals that among comment clauses, if they are tone-carrying, you know, you see and I mean, but not I think form a separate tone unit in the majority of cases. However, in both works cited, no hints as to the prosodic/phonetic evidence are given.

As can be seen from the previous paragraph, variation with respect to the mapping of syntactic parenthetical expressions onto prosodic representations has usually been discussed in connection with comment clauses (also known as parenthetical verbs, cf. Urmson 1952, e.g., I think, you know, I believe). Comment clauses have been considered parentheticals at least since Jespersen (1937). In this article, I will address both comment clauses and other types of parentheticals, and I will show that in general, there is no one-to-one relation between syntactic parenthesis and prosodic realisation (cf. also Peters 2006 for the Hamburg dialect of German). What could be argued to be a ‘prototypical’ parenthetical in that it matches both the syntactic and the prosodic criteria, cannot be considered the rule in actual speech. I will show that syntactic parentheticals, i.e., strings that are external to the syntactic structure of their host clause, can surface with a range of prosodic patterns, even if there is no syntactic or interpretational ambiguity. They can be prosodically independent from the host utterance, they can be fully or partly integrated into the surrounding prosodic structure, or they can be joined by some material from the host structure to form a prosodic domain. In this connection, I even go so far as to say that parentheticals may be used by the speaker in order to improve the overall tonal pattern.

The analysis is mainly based on speech data taken from the British component of the International Corpus of English (ICE-GB; cf. Nelson, Wallis and Aarts 2002). In particular, I will look at sentential parentheticals, comment clauses and one-word parentheticals (what, say).

The paper is organized as follows. Section 2 will give some background information, including a brief survey of some of the defining characteristics of syntactic and prosodic parenthesis. In Section 3 a range of empirical data will be provided illustrating the various prosodic patterns possible with strings that are parentheti-

1. Since the present article focuses on prosodic patterns and the relation between syntactic parenthesis and prosodic parenthesis, I will not discuss interpretational differences between parentheticals realised with different prosodic patterns. I will, however, discuss different prosodic realisations of comment clauses.

2. Working with the ICE-GB, clarity of recording clearly has to be one criterion in selecting sound files (cf. also Wichmann 2001: 184). Some otherwise interesting occurrences, especially in casual conversations, could not be used for quality reasons. A key to the text types the examples used in the present study are taken from is given in the Appendix to this article. In addition to the corpus examples, there are two examples taken from the media.
cals in the syntax. Finally, in Section 4, I will address some implications both for the definition of parenthesis and for prosodic theory.

2. Background: syntactic and prosodic parenthesis

2.1 Syntactic parenthesis and phrasing

Basically, there have been two main approaches to the syntax of parentheticals (cf. also the introduction to this volume). While the first one holds that parentheticals are syntactically integrated in the structure of their host (Corver and Thiersch 2002, Emonds 1973, Jackendoff 1977, McCawley 1982, Potts 2002, Ross 1973), and are thus in principal adjuncts to the host structure, the second one maintains that parentheticals are syntactically unrelated to the syntax of the embedding sentence (Espinal 1991, Haegeman 1988, Peterson 1999). While it has been shown that neither of these approaches are entirely satisfactory (Ackema and Neeleman 2004; cf. also Dehé and Kavalova 2006), the general view seems to be that parentheticals are elements that are linearly represented in the syntactic string of the utterance, but are not a part of its hierarchical structure in the same way as other syntactic constituents are. This is because in general, parentheticals do not take part in any syntactic operations applying in the host structure. For example, they cannot undergo movement, be questioned, or become the focus of an _it_-cleft construction (cf. Espinal 1991: 729ff, Haegeman 1988: 233, Quirk, Greenbaum, Leech and Svartvik 1985: 504ff), and they cannot count as first constituents in verb second languages such as German or Dutch (Espinal 1991, Ackema and Neeleman 2004: 97).

The assumption that strings that are parentheticals in the syntax come with certain prosodic features (such as separation from the rest of the utterance by pauses; cf. above) fits in with prosodic theory: following the theory of prosodic phonology (Nespor and Vogel 1986, Selkirk 1986, 1995, Truckenbrodt 1995 and related work), major prosodic boundaries are predicted at major syntactic boundaries. Since parentheticals have at best been considered adjuncts in syntax, we would expect them to be mapped onto separate intonational domains. This has indeed been argued in the relevant literature. Based on the assumption that parentheticals are “external to the root sentence they are associated with”, Nespor and Vogel (1986: 188) assume that they “form intonation domains on their own”.

2.2 A note on intonational domains and nuclear tones

Since in the discussion below we will be concerned with intonational domains and tonal contours, I will briefly outline some of the cues that help to delimit them (cf.,
The relation between syntactic and prosodic parenthesis

e.g., Cruttenden 1997: 29ff). Domain boundaries can be identified based on domain-external and domain-internal criteria. The most frequently mentioned criterion is an external one – that of a pause. Pauses can be silent or they can be filled by, e.g., some hesitational material such as *uh*. Further external criteria include the absence of certain segmental processes such as assimilation, the presence of an anacrusis, syllable lengthening, a change in speech rate, and, crucially in the present context, a “change in pitch level and/or pitch direction among unaccented syllables” which is generally considered “a fairly clear boundary marker” (Cruttenden 1997: 34). As for the internal criteria, an intonational domain minimally contains one stressed syllable, often referred to as the nucleus, and there is pitch movement to or from at least one accented syllable. In the British tradition of intonational analysis, the following major patterns of pitch movement (also referred to as ‘tones’ or ‘nuclear tones’) have been identified: fall (from a high accented syllable), rise (from a low accented syllable), fall-rise, and rise-fall (cf., e.g., Cruttenden 1997, Ladd 1996, or Wichmann 2000: 10–11 for overviews and comparisons with the American autosegmental system). They are illustrated in the tadpole transcriptions in Figure 1 (borrowed from Wichmann 2000: 11). In Cruttenden’s (1997: 50) terminology, nuclear tones are tones “which begin on the nucleus and cover the stretch of utterances up to the end of an intonation group”.

![Figure 1. Nuclear tones (from Wichmann 2000:11)](image)

Within an intonation domain, the nucleus is the only obligatory element. It is optionally preceded by the prehead (any unstressed syllables preceding the head) and head (the first accented syllable preceding the nucleus), and followed by the tail (any unstressed syllables following the nucleus before the end of the intonation domain), yielding the structure in (2) (Crystal 1969: 207f, 1972: 112; optional components in parentheses).

3. What I refer to here as intonational domain has also been called breath group, tone group, tone unit, prosodic phrase, phonological phrase, or intonational phrase in the literature. For the sake of the present argumentation, nothing hinges on terminology, or on the distinction between different phrasal levels in the prosodic hierarchy.
(2) Intonation Domain: (prehead) (head) nucleus (tail)

With this in mind, let us now return to parenthesis.

2.3 Prosodic parenthesis

“By definition”, Bolinger (1989: 185) states, “the parenthesis interrupts the prosodic flow of the frame utterance”. He continues by saying that the “intonation is more than a reflection of the fact that a given segment of discourse is a parenthesis; it is often the main cue differentiating it as such”. According to Bolinger (1989: 186), the “typical parenthesis has three prosodic characteristics: it is lower in pitch than the matrix sentence, it is set off by pause(s), and it has a rising terminal”, complemented by diminished loudness in Crystal (1969: 174). As for pitch, it is also possible that the parenthesis is marked by higher rather than lower pitch (Bolinger 1989: 188, Wichmann 2001: 188). Any one of these features can be suspended depending on the parenthetical’s function, length and position (cf. Wichmann 2000: 96–97 for examples of suspension of these features). It follows that if none of these properties are present, an interpolation otherwise considered a parenthetical may not be a prosodic parenthesis along these lines, because this would deprive the interpolation of the differentiating feature. A string that is to qualify as a parenthesis in intonation will have to be prosodically different from its immediate environment in at least one prosodic parameter. It also follows, however, that none of the defining features, including the intonational break so frequently referred to in the literature, qualifies as a necessary condition for parenthesis.

Under this definition, (prosodically) integrated parentheticals along the lines of Wichmann (2001) and Crystal (1969) do not, strictly speaking, qualify as prosodic parenthesis. Wichmann and Crystal mention three cases of integration: For one, certain cases of verbal parenthetical expressions like I think can be part of the prehead of an intonation domain (Crystal 1969: 235). For another, parenthetical expressions like comment clauses I think, I suppose, you see in utterance-final or medial position may continue a preceding tonal contour, typically a fall-rise contour, and can come without a preceding pause (Crystal 1969: 268, Wichmann 2001: 186). Thirdly, parentheticals may be part of a word-searching, hesitant phase, and need thus not be part of the intonational analysis at all (Wichmann 2001: 186). I will provide examples of these cases in Section 3.2 below.

It has often been noted that certain parentheticals can remain completely unaccented, simply with a stretch of low pitch or a non-nuclear rise. Under the simultaneous view that parentheticals make up a separate intonational domain, this has led to the assumption of a specific kind of tonal contour (class 0 contour, Bing 1985). However, as Wichmann (2001: 185) notes, domains of this nature would be anomalous
since by definition, intonation domains have at least one accent (the obligatory nucleus, cf. (2) above).

Given the class of ‘integrated’ parentheticals, it becomes clear immediately that strings that are parentheticals according to the syntactic criteria of being external to the structure of the host and invisible to syntactic operations applying in the host do not necessarily correspond to prosodic parenthesis. In the next section, I will demonstrate that there are, indeed, a number of ‘prototypical’ parentheticals matching both the prosodic and the syntactic criteria, but I will also provide data that support the integrated approach, along with some examples that do not belong to either of these two groups.

3. Data discussion

3.1 Prototypical parentheticals

For the purpose of the present study, I will refer to expressions which match both the syntactic and the prosodic criteria defining parenthesis as “prototypical parentheticals”. Due to their length and complexity, clausal interpolations may seem to be most likely to qualify as prototypical parentheticals in this sense. For example, it may seem more natural for speakers to pause before interpolating a complex phrase than a shorter string. Bolinger (1989: 187) suggests that “extra processing time” is needed in the case of a long parenthesis and that therefore longer pauses are called for. A longer interpolation also seems more likely to come with its own complete tonal contour than a shorter one. It may even seem natural to speed up when inserting some lengthy additional string before returning to the main utterance. In read speech, as well as in experimental work using written material (e.g., Beckman and Edwards 1990 for English, Fagyal 2002 for French), punctuation marks such as commas or hyphens setting parentheticals off from their host are usually translated into rather strong prosodic boundaries in speech. Two corpus examples from spontaneous speech are given in (3), plotted in Figures 2 and 3, respectively. (Here and below, intonational domains are indicated by round brackets and parenthetical interpolations are italicized.)

(3) a. For those of us who remember nineteen sixty-five one or two of our listen-
ers may Tory party uh leadership contests used to be uh as the cardinals in Rome and leaders would emerge (ICE-GB: s1b-024, #1)

b. C it’s therefore important and this is how the argument runs to do things or or to prevent other things in order to re-establish some of the more important conditions (ICE-GB: s2a-021, #23)
Figure 2. (For those of us who remember nineteen sixty-five) (one or two of our listeners may) (...)

Figure 3. (C it’s therefore important) (and this is how the argument runs) (...)

Syntactically speaking, the parenthetical one or two of our listeners may in (3a), plotted in Figure 2, is a case of elliptical interpolation and represents a prototypical case in that it is external to the syntactic structure of the host utterance, but, due to the elliptical material, at the same time syntactically not completely unrelated. Prosodically speaking, this interpolation is clearly set off by pauses, it has a rising terminal, it is faster in speech rate (parenthetical: 8.4 syll/sec; preceding unit: 6.6

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4. It has been shown that although parentheticals are syntactically independent from the host structure in that they are invisible for certain syntactic operations, there may still be a syntactic relation between the parenthetical and its host. Ackema and Neeleman (2004: 98f) give examples involving parasitic gaps and secondary predication and summarise the results as follows: “[…] a parenthetical cannot affect the syntax of the host clause, but grammatical requirements imposed by material in the parenthetical can be satisfied by elements in the host clause”. Cf. also Hoffmann (1998) for binding between an anaphor in the parenthetical and an antecedent in the host, D’Avis (2005), Haider (2005) and Pittner (1995) for binding and scope relations between parenthetical clause and host utterance, and Dehé and Kavalova (2006) for a syntactic relation between parenthetical what and its frame utterance.
The relation between syntactic and prosodic parenthesis

syll/sec; following unit: 4.5 syll/sec), and it forms a separate intonation domain both according to external criteria (pauses) and according to domain-internal criteria, notably the relevant pitch movement.

The example in (3b) behaves similarly. Syntactically, it is independent from the sentence by which it is hosted. As for the prosodic features (cf. Figure 3), the parenthetical has a rising terminal, and its pitch is clearly lower than on the preceding unit and also, although not plotted here, the following unit. Moreover, the parenthetical is faster (6.3 syll/sec) than the preceding unit (5.6 syll/sec) and also than the following unit (4.1 syll/sec). There is a pause of 1.022s after the parenthetical (not plotted here), and although there is no pause before the parenthetical, we can establish a prosodic boundary before the parenthetical on other grounds, such as a slight step-up in pitch on the unaccented syllable and.

As another prototypical example of a string which is a parenthetical both in syntax and prosody a case of you know is given in (4), plotted in Figure 4. (For expository reasons, the relevant part of the sentence has been split. There is a pause of 1.584s between guy and and.)

(4) And the woman had brought up two kids with this guy and you know lived all her life with him and basically he pissed off (ICE-GB: s1a-080, #147)

The comment clause you know forms its own intonational domain exhibiting a complete fall-rise contour, set off from the preceding domain by a long pause which is partly filled by the connector and, and from the following unit by a clear discontinuation after you know. Moreover, the pitch (peak and range) is lower on you know than in both the preceding and following domain.

As these three examples show, syntactic and prosodic parenthesis may coincide, or to put it differently, syntactic parenthesis may go along with the characteristic prosodic features. However, I will show in the next two sections that it would be wrong to conclude that the relation between syntactic and prosodic parenthesis is as simple and as straightforward as that. We will see that syntactic structure frequently fails to be sig-
nailed by prosodic features and that strings that form an intonational unit do not always correspond to a syntactic constituent, and in particular, to a syntactic parenthetical.

3.2 Integrated parentheticals

Recall from Section 2.3 that there are at least two types of prosodically integrated parentheticals. For one, the relevant expressions may be part of another intonation domain either within the prehead or completing the tonal contour. For another, they may be pause fillers. In this section, I will present some new evidence for this assumption.

To begin, consider the example in (5) and corresponding intonation contour in Figure 5.

(5) The voters *I think* just have an opportunity to stick two fingers up to whoever seems to be on top at the moment (ICE-GB: s1b-029, #92)

![Figure 5](image)

In this example, the comment clause *I think* is not set off by a pause from the preceding material and we have a fall-rise contour on the string *(The voters I think)* with the rise being realized on *I think*. It thus corresponds to the pattern observed by Crystal (1969) and Wichmann (2001). There is also a tonal parallelism between the two adjacent domains *(The voters I think)* and *(just have an opportunity)* such that they both exhibit a fall-rise pattern, the nuclear syllables being *vo-* and *just*, respectively. In addition, the two units are of similar size. Without integrating the comment clause into the first domain, the tonal parallelism and similar size would have been difficult to achieve. In order to further illustrate this, let me address tonal parallelism and size of prosodic constituents in turn. Tonal parallelism can often be observed in “the prosodic realisation of complex utterances” (Wichmann 2000: 85; cf. also Bolinger 1989: 205ff). In the case at hand, tonal parallelism be-
between the voters and just have an opportunity would have been possible to achieve without the prosodic integration of I think. However, due to the intervening parenthetical, the parallelism would have been between non-consecutive tone groups, a pattern which, according to Wichmann (2000: 89) is rather exceptional in prosody. Integrating I think in the preceding domain, resulting in tonal parallelism between adjacent domains, thus helps to achieve a regular prosodic pattern. As for the similar size of the adjacent prosodic domains, it has previously been recognized that size effects play a role in domain formation (e.g., Ghini 1993, Selkirk 2000). It follows from this, then, that the insertion and integration of the comment clause in (5)/ Figure 5 contributes to a regular prosodic pattern, rather than interrupting it. The example in (6), pictured in Figure 6 behaves similarly.

(6) That point has I believe been examined by the MMC as the honourable gentleman will know (ICE-GB: s1b-052, #78)

As in the previous example, there is a tonal parallelism between the domain containing the comment clause (That point has I believe) and the following domain (been examined by the MMC). Whereas in the first unit, the low pitch level reached after the fall on has is continued on I believe, in the second domain by the MMC is realized at low level pitch following the nuclear fall. Without the parenthetical or with a parenthetical causing an interruption of the prosodic flow of the utterance, the two adjacent domains would have been of unequal size and the tonal parallelism between them would have been destroyed. As before, the use and prosodic integration of the parenthetical expression contribute to the regular intonational pattern.

These two examples show that certain parenthetical insertions may not only continue a tonal contour as previously observed by Crystal (1969) and Wichmann (2001), but as a consequence, they often make a substantial contribution to the homogeneity of the overall prosodic pattern.

The case of a final unaccented comment clause is represented in (7), plotted in Figure 7.

Figure 6. (That point has I believe) (been examined by the MMC) (...)

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It’s not recognised *I think* that many poor countries like China are going to have vast numbers of persons as dependent on the second age as the first is dependent on them … (ICE-GB: s2a-038, #76)

Notice once again the tonal parallelism between the two parts of the contour. In the first unit, the fall is completed on *recognized* and *I think* is realized at very low pitch. Similarly, in the second unit, the fall on *poor* is to a very low level, and this low pitch level is continued on the unaccented noun *countries*. I would like to argue that *I think* is part of the first prosodic domain in the same way as *countries* is part of the second one. The boundary between *I think* and *that* can be identified based on the pause separating them (notice also the absence of a pause before *I think*) and the step-up in pitch on the unstressed syllables following *I think* after the low level on the unstressed parenthetical.5

Example (8), plotted in Figure 8, is an example of a parenthetical representing transitional material, i.e., it functions as a word-searching phrase. This analysis is reinforced by the lengthening on the functional element *a*, followed by a relatively long silent pause preceding the parenthetical which is realized without any prominence, and the repetition of the indefinite article after the parenthetical interpolation.6

5. I am not saying that all comment clauses and other types of parenthetical expressions realised with a stretch of low pitch contribute to a tonal parallelism between adjacent domains in this way. There are, of course, a high number of utterance-final comment clauses and reporting verbs that exhibit this pattern and cannot be explained along the lines of tonal parallelism. However, in case of the examples at hand, an analysis along the lines of tonal parallelism appears to me to be straightforward. This suggests, among other things, that the overall prosodic context of an expression must be taken into account.

6. Note that here (as in the cases of utterance-final comment clauses indicated in footnote 6), tonal parallelism does not seem to play a role.
(8) Now I reckon you’re a *what shall I say* a well worn gardener like myself aren’t you (ICE-GB: s1b-025, #162)

Another clear case of prosodic integration of syntactically external material concerns one-word parentheticals like *what* (cf. (9a); Figure 9) and *say* (cf. (9b), Figure 10).

(9) a. You spend *what* 17,000 pounds on one of these (Jeremy Clarkson, *Top Gear*, BBC2, 26 Dec 2004; from Dehé and Kavalova 2006)

b. Certainly in an area like that successful known prosecutions of police officers for racism I think will do more to improve the confidence of the black community in the complaints procedure than *say* a hundred plus programmes uh put on by the Metropolitan Police (ICE-GB: s1b-033, #125)
Dehé and Kavalova (2006) argue that parenthetical *what* always obligatorily joins the preceding prosodic domain. The example at hand is a clear case. The fall from the high target on *You* is continued on *what* without any pause or any other interrupting feature. The example of *say* is equally clear, but here the one-word interpolation is part of the prehead of its domain rather than the tail. This example thus corresponds to Crystal’s (1969: 235) general observation that parenthetical material can be included in the prehead of an intonation domain.

To sum up this section, I have given a number of examples in which strings that are parentheticals in the syntax fail to interrupt the prosodic flow of the utterance as separate intonational domains, but are prosodically integrated in various ways. Clearly, the criteria of prosodic parenthesis are not met. On the contrary, it seems that the insertion of parenthetical material may contribute to an overall homogeneous prosodic pattern. Consequently, syntactic and prosodic parentheses do not coincide in these cases.

### 3.3 Other patterns

In the previous two sections, I have presented two groups of parentheticals. Firstly, I have illustrated strings that match both prosodic and syntactic criteria and can thus be seen as the ‘prototypical parentheticals’ often taken for granted in the literature. Secondly, I have shown a number of cases of ‘integrated parentheticals’ which, although syntactically clearly parenthetical in nature, do not qualify as prosodic parenthesis. In this section, I will show that the distinction between the two groups and the respective membership of a relevant expression is not as clear as it may seem.

Consider the example in (10), a typical *and*-parenthetical (cf. Kavalova, this volume, on sentential parentheticals introduced by the connector *and*), and the corresponding pitch contour in Figure 11.
Figure 11. (on this theory and) (it's very deeply held) (good educational news) (…)
cording to this criterion, then, the first syllable of the syntactic parenthetical must prosodically be counted as part of the tail of the preceding domain and the syntac-
tic and prosodic left boundaries of the parenthetical do therefore not coincide. Recall from Section 2.3 that it follows from Bolinger’s (1989) definition of prosodic parenthesis that an interpolation can qualify as prosodic parenthesis only if it is different from its immediate environment in at least one prosodic parameter. In the example at hand, no such difference can be made out in either pitch, or tempo or separation, and what seems to be a parenthetical syntactically does therefore not correspond to prosodic parenthesis. On the other hand, it is not ‘integrated’ in the sense outlined above, i.e., it is not part of another intonation domain.

Another sentential interpolation which does not seem to qualify as a prosodic parenthesis is given in example (11), Figure 12.

(11) but their the word regret seems to be the most favourite diplomatic word knocking around rather than anger except in one or two Arab countries where the Jordanians as you would expect have called on uh God to protect Iraq and help it repel the aggressor (ICE-GB: s2b-014, #115)

Figure 12. ...) (where the Jordanians) (as you would expect) (have called on God ...)

In this case, the sentential parenthetical does form a separate intonation domain, identified at its left-hand edge by a pitch jump on the unstressed syllable as from the low pitch reached on Jordanians, and on the right-hand side by a pause of 0.382s. However, the respective contour is in no way crucially different from the preceding domain (where the Jordanians). In fact, the two units sound very much alike, and this is visible in the similar contours which start with a stretch of low pitch on where the Jordanians and as you would ex-, respectively, followed by a nuclear fall on -danians in the first domain, and -pect in the second domain. There is no notable difference in pitch height, nor is there any other crucial difference. Therefore, the string forming a parenthesis in the syntax does not qualify as a prosodic parenthesis.

8. Cf. also Wichmann (2000: 95f) for an example where a prosodic parenthetical incorporates the first syllable of the following constituent.
Another example that does not fit either the ‘prototypical’ or the ‘integrated’ class is the comment clause *I believe* given in (12) and plotted in Figure 13.

(12) Your argument *I believe* is that it’s died so to speak more in some realms than in others and crucially that there is something there left which is the basis for renovation (ICE-GB: s1b-028, #19)

There is an accent on *I believe* and the comment clause is followed by two un-stressed syllables (*is that*). I analyse the string *I believe is that* as one intonation domain with a fall-rise contour. The nuclear fall on *believe* is followed by a post-nuclear rise on *is that*, which is then followed by a pause of 0.757s and then a slight step-up in pitch on the unaccented first syllable (*it’s*) of the next intonational domain. This example does not match any of the patterns previously discussed in the literature. The comment clause does not form a separate intonation domain on its own, nor is it integrated in another domain such that it (i) continues a preceding contour, or (ii) is part of the prehead of a domain, or (iii) represents transitional material. On the contrary, here the nucleus of the relevant domain is realized on the parenthetical, and the contour is then continued on some following material from the host clause, ignoring syntactic boundaries.

A similar case is represented by the example in (13), shown in Figure 14.

(13) They’re like the kids that hang out on the end of my road on the estate you *know* they’re loud and they’re annoying and massively confident. (Interview with Joe Wright, Director of *Pride and Prejudice*)
Figure 14. ... estate) (you know they’re) (loud...)

Clearly, according to the syntactic definition, the comment clause you know is a parenthetical interpolation. However, in prosody, you know forms an intonation domain together with the subject and copula verb of the following clause. The left-hand border of this domain can be identified by a step-up in pitch on the unstressed syllable you following the low pitch reached on the fall on estate. There is a fall-rise pattern on you know they’re followed by a pause of 0.474s, serving as a cue to the prosodic boundary. As before, the nucleus of the relevant intonation domain is realized on the comment clause, and the fall-rise pattern is continued on material from the host utterance. Consequently, the prosodic structure fails to match the syntactic structure.

The final example is one where the verb of a comment clause takes the nucleus of an intonation domain which is complemented by some syntactic material from the host clause as the prehead. Consider example (14) and Figure 15.

(14) and it it it occurred to me at least as an argument that’s worth rehearsing uhm that it’s not so much the fundamental ideology of Communism that that has failed it’s simply that nobody found a form of uh organisations and institutions to put the philosophy into practice because I suppose uh in in a way what Marx was uh uh having a go at was uh obviously capitalist institutions [...] (ICE-GB: s2a-049, #82)

Figure 15. (to put the philosophy into practice) (because I suppose) (in a way) (what ...)
The string (because I suppose) forms one intonation domain, with a nuclear fall on the stressed second syllable of suppose. At the left-hand boundary of the domain, there is a discontinuation after practice and a step-up in pitch on the unstressed first syllable of because. The pattern is repeated after suppose: there is a pause, at first silent, then filled by uh, and there is also a step-up in pitch on the initial unstressed syllable from the low level reached on suppose. Like in the previous two examples, the comment clause forms a domain with material from the host clause, but unlike the cases discussed in Section 3.2, it is not integrated into another intonational domain as part of the prehead or tail. Rather, like I believe in example (12) and you know in (13), it takes the nucleus of its domain. However, while in the previous two examples syntactic material from the host utterance complemented the relevant intonation domain as part of the tail, in this example, it is the prehead that is formed by material from outside the parenthetical.

Note that due to the lack of differentiating prosodic features, none of the three examples can be analysed as prosodic parenthesis. In example (12), both the tonal contour (fall-rise) and the pitch height and range (142 Hz maximum on believe as compared to 141 Hz on died) are alike on the string (I believe is that) and the immediately adjacent domain (it’s died so to speak), and following pitch peaks are of almost identical height. Moreover, there is no perceivable change in tempo or loudness. The same is true for example (13). Pitch peaks are 121 Hz on road, 122 Hz on estate, 118 Hz on you of the comment clause you know, and 122 Hz on loud. No notable change in tempo or loudness can be observed. And finally, the unit (because I suppose) in example (14) sounds very much like the immediately following unit (in in a way). Both domains start with a stretch of unaccented syllables realized at low pitch (because I su- and in in a, respectively), followed by the nucleus, a fall from the high peaks on -pose/way. The pitch maxima in the two domains are very similar (113 Hz on -pose, 107 Hz on way) and the falls are to an almost identical level (78 Hz and 82 Hz, respectively). There is no notable difference in speech rate (6.4 and 6.3 syll/s, respectively).

All in all, I have shown in this section, that there are a number of examples that do not fit any of the prosodic patterns described previously in the literature on parenthesis, i.e., they neither qualify as ‘prototypical parentheticals’ nor are they prosodically integrated along the lines of Crystal (1969) and Wichmann (2001). Just like the examples of ‘integrated parentheticals’, the cases discussed in this section do not qualify as prosodic parenthesis, although from a syntactic perspective, they are clearly parenthetical in nature. In the next section, I will discuss some of the implications for a definition of parenthesis, as well as for the theory of prosodic phonology.
4. Conclusion

One straightforward conclusion that can be drawn is that in spontaneous spoken English, there is no one-to-one relation between syntactic and prosodic parenthesis. It is not true that strings that are parentheticals in the syntax are always realized with a specific prosodic pattern. In particular, they are not always set off by intonational breaks. The fact that these strings are external to the syntactic structure of the host does not mean that they necessarily interrupt the prosodic flow of the utterance. As already observed in previous research and illustrated in Section 3.2, we find a high number of syntactic parentheticals that are prosodically integrated into an adjacent domain as part of the prehead or tail, or function as transitional material/ pause fillers. These cases do not qualify as prosodic parenthesis. Moreover, in Section 3.3 it was shown that together with these integrated patterns, a number of other options exist. For one, it is not unusual that longer, more complex interpolations such as sentential parentheticals exhibit one of the following patterns: (i) they represent cases of prosodic parenthesis in that they are different from the surrounding prosodic pattern (e.g., marked by a change in pitch, intonational breaks, speeding-up in tempo), but the boundaries of the prosodic domain do not correspond to the edges of the corresponding syntactic constituent (cf. the discussion of example (10)/ Figure 11); (ii) they form a separate intonation domain, i.e., syntactic and prosodic boundaries coincide, but the relevant domain is not prosodically different at all but simply repeats a previous prosodic pattern and thus does not qualify as prosodic parenthesis (cf. example (11)/ Figure 12). (Remember from Section 2.3 above that a string that is to qualify as a parenthesis in intonation will have to be prosodically different from its immediate environment in at least one prosodic parameter.) For another, shorter syntactic interpolations such as comment clauses may be assigned the nucleus of an intonation domain and may be joined by some material from the host utterance to form one prosodic unit, ignoring syntactic boundaries.

In certain utterances, illustrated by examples (5) and (6) and the corresponding figures in particular, the parenthetical interpolation makes an important contribution to the overall prosodic well-formedness in that it complements a tonal contour and thus allows for tonal parallelism and similar sizes of adjacent prosodic domains. It is generally accepted that adjacent prosodic domains tend to be of roughly the same size and that these size effects play a role in domain formation (Ghini 1993, Selkirk 2000, among others), and that tonal parallelism is common in complex utterances (Bolinger 1989, Wichmann 2000). By inserting a parenthetical interpolation into the utterance and integrating it into the overall pattern, this effect may be achieved.
Given this mismatch between syntactic and prosodic parenthesis, it is clear that a definition of parenthesis which includes both syntactic and intonational criteria is problematic. It is therefore necessary to have both a syntactic definition (the two attempts by Burton-Roberts 2006 and Bussmann 1996 given at the beginning of this article are cases at hand) and a prosodic definition (such as the one given by Bolinger 1989 repeated in Section 2.3 above). Under this assumption, the predictions (and observed consequences) are straightforward. Firstly, there are cases of parenthetical interpolations which match both the syntactic and the prosodic criteria, and which can be referred to as ‘prototypical parentheticals’. Examples have been given in Section 3.1 above. Secondly, we find expressions which match the syntactic definition of being external to the syntax of the host but do not correspond to the prosodic definition of interrupting the prosodic flow of the utterance in any way. These are (i) cases of ‘integrated parentheticals’ as illustrated in Section 3.2, and (ii) cases of syntactic interpolations that are not prosodically integrated but are not ‘prosodically different’, either (e.g., examples (10) and (11) and the respective figures). Thirdly, we expect to find cases of purely prosodic parenthesis which meet the prosodic criteria of interrupting the prosodic flow of an utterance but do not correspond to syntactic constituents wedged into another syntactic structure. Note once again that it is not the case that utterances in which parenthetical interpolations are joined by syntactic material from the host clause to form one prosodic domain necessarily qualify as purely prosodic parenthesis. Only if the prosodic features of parenthesis are met, will such a domain deserve that term (see examples (12)-(14) which, crucially, cannot be analysed as prosodic parenthesis). However, evidence for cases of purely prosodic parenthesis has been provided in previous research. The example in (15a) (example SEC A08 from the Spoken English Corpus) is taken from Wichmann (2000: 90). According to Wichmann, the string and army (in italics below) is prosodically a parenthetical. Syntactically, it is a coordinated structure (cf. (15b)). The two nouns gendarmerie and army are coordinated; the modifier Lebanese has scope over both conjuncts.

(15) a. - about security at Beirut airport -
    The problem is that while there is an airport security staff and the Leba-
    nese gendarmerie (and army) have airport staffs as well it's really under
    the control of the gunmen.

    b. [the [Lebanese [gendarmerie and army]]]

It has been suggested in previous literature that interpretation plays a role for the prosodic realisation of parenthetical expressions (e.g., Reinhart 1983; cf. the Introduction above). I have shown that the homogeneity of the prosodic context along the lines of tonal parallelism and size effects also plays a role. Future research will have
to shed more light on the relation between prosody and pragmatics in this context and will show to which extent prosodic and interpretational factors interact.

Parentheticals, then, are a case in the grammar which clearly demonstrates that edges of syntactic constituents and prosodic boundaries do not always coincide, even if, as with this particular phenomenon, the relevant constituents are not part of the hierarchical syntactic structure. Remember from the discussions of examples (12) and (13) that the formation of prosodic domains may simply ignore syntactic boundaries, and from the discussion of example (10) that even if at first sight a prosodic domain corresponds to a syntactic constituent, the exact position of the relevant boundary may be different. Consequently, the assumption formulated by Nespor and Vogel (1986) that according to prosodic theory, parentheticals “form intonation domains on their own” appears to be too strong in the light of actual spoken language data.

More generally speaking, the results presented here suggest that even strong syntactic boundaries may fail to be mapped onto prosodic boundaries in actual speech if sentence prosody and/or discourse cohesion demand otherwise. In a model that relates syntactic structure to prosodic structure and its actual surface representation, these factors must therefore be taken into account.

References


The relation between syntactic and prosodic parenthesis


Truckenbrodt, H. 1995. Phonological Phrases: Their relation to syntax, focus, and prominence. (Slightly revised version of) PhD dissertation, MIT.


### Appendix: Corpus texts used

<table>
<thead>
<tr>
<th>Corpus Text</th>
<th>Description (participants, date); (from Nelson, Wallis and Aarts 2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ICE-GB: s1a-080</td>
<td>Direct conversation: friends, May 1992</td>
</tr>
<tr>
<td>ICE-GB: s1b-024</td>
<td>Broadcast discussion: Start the Week, BBC Radio 4, 12 Nov 1990</td>
</tr>
<tr>
<td>ICE-GB: s1b-028</td>
<td>Broadcast discussion: The Persistence of Faith, BBC Radio 4, 27 Jan 1991</td>
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<tr>
<td>ICE-GB: s1b-029</td>
<td>Broadcast discussion: Tea Junction, BBC Radio 4, 5 April 1991</td>
</tr>
<tr>
<td>ICE-GB: s1b-052</td>
<td>Parliamentary debate: Public Expenditure Debate, 8 Nov 1990</td>
</tr>
<tr>
<td>ICE-GB: s2a-021</td>
<td>Unscripted speech: Sir Peter Newsam, 'Teaching the Teachers', Frederick Constable Memorial Lecture, RSA, 22 May 1991</td>
</tr>
<tr>
<td>ICE-GB: s2a-038</td>
<td>Unscripted speech: Sir Peter Laslett, 'The Third Age', RSA Lecture, 6 Feb 1991</td>
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<tr>
<td>ICE-GB: s2b-014</td>
<td>News broadcasts: The World this Weekend, BBC Radio 4, 24 Feb 1991</td>
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</table>
Quieter, faster, lower, and set off by pauses?

Reflections on prosodic aspects of parenthetical constructions in modern German*

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Parentheticals are a fascinating way of interrupting spoken and written utterances. This paper focuses on prosodic aspects of the analysis of such constructions in contemporary German. The investigation starts with a discussion of the prosodic features relevant to the study of parentheticals such as discussed in previous literature – intensity, articulation rate, fundamental frequency, pauses, and intonation contours – and, drawing on these features, goes on to discuss data from recent parliamentary debates. The results show that future prosodic studies should focus on the transition zone between the part of the anchor clause preceding the parenthetical construction, and the parenthetical construction itself.

1. Introduction

Parenthetical constructions are more or less complex and more or less independent insertions into utterances their anchor or host clauses.¹ The parenthetical construction “interrupts the prosodic flow of the frame utterance” (Bolinger 1989: 185), and the syntactic structure of its potential anchor clause. Therefore, there are at least two respects in which parenthetical constructions do not really fit into sentence structure: syntactic and prosodic.

---

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¹ Both terms are used in previous literature. For reasons of clarity, I am going to use only one term in this paper, anchor clause.
In this article, I shall focus on prosodic aspects of the phenomenon, which tend to be neglected in work on parenthetical constructions. The investigation concentrates on parenthetical constructions in modern German. Sentential parenthetical constructions, including ellipsis, and non-sentential parenthetical constructions are both taken into consideration.

Wichmann (2001: 177) states that “[l]isteners recognise parentheses, not only by their syntax but by how they sound.” This assertion will be developed much further on the assumption that listeners recognise in the first place parenthetical constructions by how the interruption sounds. In addition, readers tend to interpret typographical symbols framing parenthetical constructions such as brackets, dashes or colons clearly as pauses and set the parenthetical construction aside from the anchor clause.2

As a first step, I will give a brief overview of research on prosodic aspects of parenthetical constructions to date. Despite it being a little studied phenomenon, only a selected outline based on research findings relevant to this article can be presented here (see section 2.1). The findings will be summed up in three hypotheses (section 2.2) on which the investigation will be based (data and methodology in section 3, analysis in section 4). The results of this analysis will be related to the hypotheses (see section 5).

2. Parenthetical constructions

A great deal of terminological uncertainty exists concerning the phenomenon studied in this article. On the one hand, there are very different terminologies for similar phenomena; on the other hand, different phenomena are subsumed under the same term. Thus, we find terms such as parentheses, parenthetical structure/sentence/clause/insertion, comments, etc. In this article, I shall use the term “parenthetical construction” unless specified differently.

Linguistic approaches to parenthetical constructions are either grammatical or pragmatic. For grammatical approaches, four possibilities have been explored: the purely syntactic approach, the purely prosodic approach, and a combination of both (either syntactically or prosodically dominated). The method adopted will partially determine the choice of examples to be considered. The dominant approach in existing research in this field is clearly syntactic. Nevertheless, prosodic features are often mentioned in the relevant literature on parenthetical construc-

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2. As Wichmann (2001: 179) states, “[p]arenthesis in writing is made visible by orthographic devices, such as opening and closing brackets, correlative commas or dashes. In speech, the fact that an utterance is intended as an aside or digression has to be signalled in other ways.”
tions; generally, however, they do not play a significant role in the analysis of parenthetical constructions. Even if it seems relatively difficult to transfer prosodic characteristics from one language to another, I would like to take research on parenthetical constructions in German and English into consideration. Transferring linguistic statements about English parenthetical verbs (e.g., *I think, I suppose, I mean, you know*) and sentence adverbs (e.g., *however*) to German examples is by no means straightforward. Their prosodic behaviour is quite different, and is obviously very dependent on language-internal intonation features. Even if the theoretical reflections are very productive for further research in other language contexts, they can definitely not be applied directly to German. However, general observations throughout the literature can be of benefit to the analysis, even if languages behave very differently from a phonetic-prosodic perspective.

2.1 Research findings

In this section, findings from previous research will be outlined. They will lead to the hypotheses on which the analysis initially will be based. Firstly, observations on intensity, articulation rate, and fundamental frequency will be summed up. Secondly, I will consider the question of pauses before and after parenthetical constructions, and thirdly, the discussion will focus on the intonation contour of parenthetical constructions.

2.1.1 Quieter, faster, lower: intensity, articulation rate, and fundamental frequency

Sound intensity is an objective acoustic property measured in decibels, in contrast to the subjective, perceptive measure of loudness. Among the authors who comment on the intensity of parenthetical constructions, Bolinger (1989: 186), Öhlschlager (1996: 317), and Wichmann (2001: 180f) point out that parenthetical constructions could differ in intensity from their surroundings – either a decrease or an increase in intensity might be found. Jung (1980: 161) and Crystal (1969) refer more precisely and thus more restrictively to a reduction in intensity. For Crystal (1969: 174), “diminished loudness” is a parenthetical construction-characterising feature. However, it is possible that difference in intensity could be relevant, but that it is the difference in loudness which is the most salient factor.

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3. Syntactically, parenthetical verbs may be interpreted as matrix sentences; prosodically, they do not seem to interrupt the prosodic flow of the anchor clause: see Dehé (this volume) on integrated parenthetical constructions in English, and cf., among others, Reis (1995) and Steinbach (1999) on integrated parenthetical constructions in German.
The notion of articulation rate or speech rate refers to the speed of producing the speech sounds of a language, which includes the physiological performance of transforming a stream of air into syllables, and therefore into spoken language. The rate is dependent on individual and contextual features; but, roughly speaking, we can say that “it is quite normal to produce from 250 to 300 syllables in a minute” (Crystal 1997: 125). Among the authors who describe changes in speech rate as increasing in tempo we find Crystal (1969: 174), Jung (1980: 161), and Schwyzer (1939: 31f). Additionally, Brandt (1994: 10) observes that an increase in tempo is likely. This holds especially in cases of longer utterances. Bolinger (1989: 186), Öhlschläger (1996: 317), and Wichmann (2001: 180f) claim that parenthetical constructions may involve a change in the rate of articulation, without, however, limiting it to one possibility (cf. their similar comments on intensity above). This offers the opportunity of increase or decrease in tempo dependent on the articulation rate of the anchor clause in which the parenthetical construction is inserted.

The relation between fundamental frequency and pitch is similar to what we have seen for intensity and loudness. Fundamental frequency and pitch are correlated: F0 is the acoustic and therefore more objective property, while pitch movements are subject to differences in perception. Not all changes in frequency are necessarily perceived as changes in pitch. Just as in the case of intensity and articulation rate, individual and context-related features do matter in perception. Öhlschläger (1996: 317) posits a change in pitch of the parenthetical in comparison to that of its anchor clause. In general, according to Bolinger (1989: 186),4 Schwyzer (1939: 31), and Wichmann (2001: 181) the pitch can be lower, but sometimes the parenthetical construction will be realised with a higher pitch. Crystal (1969: 174) and Jung (1980: 161) suggest that the pitch of the parenthetical construction can only be lower. Interestingly, Brandt (1994: 10) does not refer to a lower pitch as such, but to a narrower pitch range of the parenthetical construction in contrast to its anchor.

2.1.2 Pauses

Pauses are a very important feature of speech and speech perception. Silence can be used at least as a separation of linguistic units, as a structure marker for the speech interaction, and as an indication of cognitive activity for the speaker.5 Silence is not the same as absence of speech, because the pauses within the speech carry weight and therefore they have to be part of the linguistic analysis. Boundaries of phrases are potential places for pauses. Pierrehumbert’s (1987) general prosodic statement on pauses supports statements that parenthetical constructions do not necessarily

4. The parenthetical construction “is lower in pitch than the matrix sentence” (Bolinger 1989: 186).

5. For additional consideration see Crystal (1997: 174).
have to be indicated by pauses. She points out that boundaries are not necessarily marked by pauses. She asserts that “in normal speech, one finds many cases where the boundary is not marked by a pause, but only by lengthening of the last syllable in the phrase” (1987: 7). I shall come back to lengthening in section 4.3 (a).

According to Altmann (1981: 202), parenthetical constructions are clearly framed by pauses. Dehé and Kavalova (2006: 292), Grewendorf (1988: 84), and Helbig and Buscha (1996: 676) refer to pauses as well, but they do not emphasise them as Altmann (1981) does: for them it is only one prosodic feature in the context of a number of prosodic characteristics. Parenthetical constructions are often marked by pauses (Bolinger 1989: 186) but not obligatorily so (Öhlschläger 1996: 317), i.e., pauses are optional (Brandt 1994: 10; Schwyzer 1939: 31). Furthermore, as early as 1939, Schwyzer (1939: 31) specified that these pauses could potentially be very short or even repressed altogether. In addition, Bolinger (1989: 186) states: “the shorter it [parenthetical construction, S.D.] is the more easily the pause can be skipped”.

2.1.3 Intonation contours
Throughout the literature, it has often been stated that parenthetical constructions form their own intonational domain, intonational phrase, intonation contour, tone group, tone unit, breath group, etc. As a starting point, I am going to use “intonational phrase” or IP when referring to the phonological-prosodic side of the argumentation (cf. Nespor and Vogel 1986) and “intonation contour” when addressing the phonetic-prosodic aspect of the argumentation. Phonologically, parenthetical constructions form their own prosodic domain, more precisely an IP, cf. for example Nespor and Vogel (1986: 190).

If a parenthetical construction has its own intonation contour, it forms its own intonational phrase, which is notably different from the anchor clause. This does not necessarily mean that, for example, only a falling pitch pattern can be inserted in a rising pitch pattern or vice versa, but rather that the intonation contour of the parenthetical has to be clearly set off from the intonation contour of the anchor clause. Questions which arise with respect to the development of a distinct intonation contour for parenthetical constructions are: (a) whether the parenthetical construction is detached from its anchor clause, and (b) whether the parenthetical construction is able to develop its own intonation contour and how this is realised. From the phonetic-prosodic perspective, the answers to these questions in prior findings are quite vague.

a. The parenthetical construction is detached from its anchor clause.

According to e.g., Huddleston and Pullum (2002: 66f), Brandt (1994: 10), and Schreiter (1988: 90), parenthetical constructions are prosodically detached from

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6. Given the limits of this paper, I will not discuss the differences in greater detail.
their anchor clauses. Pierrehumbert (1987: 8) describes parenthetical constructions as “ordinarily [...] separate phrases”. In addition, Schreiter (1988: 90) points out that the intonational contour of the parenthetical construction contrasts with the intonational contour of its anchor clause. Bassarak (1984: 5) states that parenthetical constructions in the widest sense contain words, phrases or sentences inserted in another clause. They interrupt its intonation contour and are clearly distinguished from their anchor clause. Furthermore, Öhlschläger (1996: 317) considers this change of intonational contours the only feature common to all parenthetical constructions.

b. The parenthetical construction develops its own intonation contour.

Nespor and Vogel (1986: 188) confirm that “there are certain types of constructions that seem to form intonation domains on their own. These constructions include parenthetical expressions”. Jung’s (1980: 128) different Stimmführung of the parenthetical construction and Grewendorf’s (1988: 84) indication of parenthetical constructions as independent utterances include an intonation structure of their own. Some authors are rather more specific about the realisation of intonation contours of parenthetical constructions. Parenthetical constructions show a certain decrease in all prosodic features in comparison to their anchor clauses (Grewendorf 1988: 84), they contain a pitch accent (Grewendorf 1988: 84, Brandt 1994: 10), end in a rising contour and have “a rising terminal” (Bolinger 1989: 186). Among the authors mentioned above, only Altmann (1981: 202) rejects the idea that parenthetical constructions may develop their own intonation contour.

2.2 Resulting hypotheses

Quieter, faster, lower, and set off by pauses? The research findings presented above lead to hypotheses on which the analysis presented in the remainder of this paper is based. Parenthetical constructions are set off by differences in intensity and articulation rate, and by lower fundamental frequency. Moreover, they are set off by more or less clear pauses. The research findings clearly indicate that parenthetical constructions have their own intonation contour. However, how precisely they develop them is not stated, but only that this contour should be considerably different from that of the anchor clause. It could be identified by single features or by a bundle of features. The following three hypotheses constitute the starting point for the analysis.

1. Parenthetical constructions are quieter, faster, and lower than their surrounding anchor clauses.
2. Parenthetical constructions are clearly set off by pauses.
3. Parenthetical constructions have a clear intonation contour of their own.
3. **Corpus and methodology**

For this study, authentic spoken data were extracted from 35 hours of debates held in the German House of Parliament (*Deutscher Bundestag*) in 2004, 2005 and 2006. The corpus – created from this database – consists of 330 potential parenthetical constructions. These data were saved as *wav* files and as transcriptions. I am fully aware of the fact that debates held in the German House of Parliament constitute a very special text type, in a formal speech context. Speakers (Members of Parliament) vary, for example, in linguistic and educational background, gender, age, and experience of parliamentary speech. Nevertheless, they talk only with the aid of notes, and do not, generally, read from written notes. This guarantees a reasonable amount of spontaneous parenthetical constructions in the corpus. Furthermore, the frequency of parenthetical constructions in a context such as parliamentary debate tends to be much higher than in informal circumstances, which is a clear advantage for this study.

The initial choice of examples was based on auditory impressions only. These examples are phonological or intonational phrases which are perceptibly set off from the matrix sentence or anchor clause by interrupting the prosodic flow of the preceding utterance. Non-restrictive relative clauses and vocatives, also very frequent in this corpus material and behaving prosodically similarly, were then excluded. Finally, sentential and non-sentential phrases were studied separately. Further influences, such as differences in gender, regional linguistic, and educational background, plus period of time of parliament speech experience (up to the time of recording), were also annotated because of their potential influence on the realisation of parenthetical constructions. At this stage of research, however, it is not possible to give more detailed information about their concrete influence on the realisation of parenthetical constructions. Such information might be relevant to future analyses.

4. **Analysis: test of hypotheses resulting from research**

The results of the analysis will be presented by concentrating on five examples from the corpus. Nevertheless, not all observations can be illustrated by these examples. If there is evidence which cannot be presented by one of these representative examples, other examples from the corpus will be added. Furthermore, the figures

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7. For general information see [www.bundestag.de](http://www.bundestag.de). I would like to thank the *Parlamentsarchiv* for the detailed information.

8. The phonetic-prosodic analysis is done with [www.praat.org](http://www.praat.org) (Boersma and Weenink 2005).
and quotations of the examples are “zoomed into” data only. The entire utterances (taken into account for some calculations) are mostly far longer and for expository reasons not pictured.

(1) aber und das darf nicht verschwiegen werden immer
but and this must not kept.secret be always
logistisch unterstützt (Gesine Lötzsch, DIE LINKE)
logistically supported
‘But, and this must not be kept secret, always logistically supported’

(2) für hab ich heute dazu gelernt einen
for have I today additionally learnt a
Fresh-Umzug (Herbert Frankenhauser, CSU)
fresh.relocation
‘for, and this I have learnt today, a new relocation’

(3) durch ein und sei es noch so kleines Türchen zu
to go through a small door, and even a very small one
gehen (Joschka Fischer, Bündnis 90/Die Grünen)
‘to go through a small door, and even a very small one’

(4) Großen Worten das muss man sagen sind bisher zu
Great words that must one say are so far too
wenige Taten gefolgt
few actions followed
(Ulrike Höfken, Bündnis 90/ Die Grünen)
‘So far, it has to be said, great words have been followed by too few actions’

(5) Das mögen manche vielleicht auch jenseits des Atlantik
That would some perhaps also beyond the Atlantic
bisweilen durchaus ganz gerne sehen (Werner Hoyer, FDP)
at.times quite rather like see
‘Some people, also perhaps across the Atlantic, may quite like to see this’.

4.1 Parenthetical constructions are quieter, faster, and lower

Throughout the acoustic analysis, we have to bear in mind that we can measure differences between values more precisely than the listener can actually perceive them. Conclusions should only be derived from results perceptible to the human ear. The human ear is able to hear a difference in intensity of about 1 db between two sounds (Rietveld and van Heuven 2001: 200). For fundamental frequency, the minimal difference between compared F0 values should be 0.3 – 2.5% in order to
be recognisable to the hearer (Rietveld and van Heuven 2001: 201). The three hypotheses formulated in section 2.2 will be addressed in sections 4.1, 4.2, and 4.3, respectively.

4.1.1 Parenthetical constructions are quieter than their anchor clause

The results of the analysis show that parenthetical constructions tend to be quieter than their anchor clauses. We can see in examples (1) and (2) that the average intensity of the parenthetical constructions is lower than the intensity of their surrounding anchor clauses.

(1) 69db (parenthetical construction)/70db (average)
(2) 66db (parenthetical construction)/69db (average)

While in example (4) the intensity of the parenthetical construction is equal to the average of the whole utterance, and in example (5) the parenthetical has higher intensity than the average of the whole utterance, comparing that part of the anchor clause preceding the parenthetical construction (henceforth PAPPC), intensity decreases on the parenthetical:

(4) 74db (PAPPC)/72db (parenthetical construction)
(5) 69db (PAPPC)/68db (parenthetical construction)

In example (3), however, no difference at all in intensity can be confirmed; the intensity of the parenthetical construction, of the utterance and of the part before the parenthetical construction stays at 72db. Throughout the entire analysis, no case of a parenthetical construction was found, in which the parenthetical construction increased in intensity in comparison to the PAPPC. Examples (4) and (5) suggest that focusing on the transition zone might be more rewarding than comparisons to the average. However, in example (1), no difference in intensity between the PAPPC and the parenthetical construction can be confirmed, and in example (5) the difference is very small because it is not between two sounds but between two longer units.

4.1.2 Parenthetical constructions are faster than their anchor clause

In most of the cases in the corpus, an acceleration throughout the parenthetical construction can be detected, especially in comparison to the PAPPC which is quite often reduced in articulation rate compared to the average articulation rate of the whole utterance. This suggests that we should focus on the transition zone

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9. Differences in intensity or frequency which are due to different sounds qualities will not be taken into consideration, because the units relevant in the present context are more complex than this.
for further research. To illustrate the increase in articulation rate, I refer to the examples introduced in (1) to (5), cf. Table 1.

Example (1) has an average articulation rate of 5 syllables per second, the parenthetical construction of about 5.3 syllables per second. But in comparison to the PAPPC with an articulation rate of 4 syllables per second, the parenthetical construction is considerably faster.10

Table 1. Articulation rate (in syl/s)

<table>
<thead>
<tr>
<th>Example</th>
<th>PAPPC (syl/s)</th>
<th>Parenthetical construction (syl/s)</th>
<th>Average of the whole utterance (syl/s) (parenthetical included)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>4.0</td>
<td>5.3</td>
<td>5.0</td>
</tr>
<tr>
<td>(2)</td>
<td>4.6</td>
<td>7.0</td>
<td>4.6</td>
</tr>
<tr>
<td>(3)</td>
<td>4.4</td>
<td>6.4</td>
<td>4.9</td>
</tr>
<tr>
<td>(4)</td>
<td>4.7</td>
<td>6.3</td>
<td>5.6</td>
</tr>
<tr>
<td>(5)</td>
<td>5.3</td>
<td>7.0</td>
<td>5.3</td>
</tr>
</tbody>
</table>

No examples of reduction in articulation rate have been found in the corpus so far.

4.1.3 Parenthetical constructions are lower than their anchor clause
Parenthetical constructions tend to be lower in fundamental frequency than their surrounding anchor clause, especially in comparison to the PAPPC. The results of the analysis of examples (1), (2), (3) and (4) show that the parenthetical construction is lower regarding both parameters; this is in comparison to the average, and, in (1), (2), and (4) in particular, to the PAPPC. Example (5) confirms the hypothesis that the focus should be on the transition zone in particular. Compared to the average of 181 Hz, the parenthetical construction in (5) is higher with 183 Hz, but in contrast to the preceding part with 208 Hz, it is considerably lower in F0. Cf. Table 2.

Table 2. Fundamental frequency (in Hz)

<table>
<thead>
<tr>
<th>Example</th>
<th>PAPPC (Hz)</th>
<th>Parenthetical construction (Hz)</th>
<th>Average of the whole utterance (Hz)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>264 Hz</td>
<td>249 Hz</td>
<td>251 Hz</td>
</tr>
<tr>
<td>(2)</td>
<td>167 Hz</td>
<td>134 Hz</td>
<td>162 Hz</td>
</tr>
<tr>
<td>(3)</td>
<td>182 Hz</td>
<td>181 Hz</td>
<td>185 Hz</td>
</tr>
<tr>
<td>(4)</td>
<td>267 Hz</td>
<td>210 Hz</td>
<td>225 Hz</td>
</tr>
<tr>
<td>(5)</td>
<td>208 Hz</td>
<td>183 Hz</td>
<td>181 Hz</td>
</tr>
<tr>
<td>(6)</td>
<td>185 Hz</td>
<td>195 Hz</td>
<td>187 Hz</td>
</tr>
</tbody>
</table>

10. According to Rietveld and van Heuven (2001: 243), sounds directly preceding pauses tend to be slower.
To this stage of my research, fundamental frequency has been found to be higher in non-sentential parentheticals, such as in (6), than in sentential ones.

(6) wenn man einen nicht konfrontativen sondern konstruktiven Versuch unternehmen würde (Friedbert Pflüger, CDU)

‘If someone would make an attempt – not offensive, but constructive’

4.2 Parenthetical constructions are clearly set off by pauses

Example (1), plotted in Figure 1, shows that parenthetical constructions are clearly set off by pauses. In this particular case, the parenthetical is framed by pauses, the pause preceding the parenthetical being 0.3 seconds in length, the one following it 0.2 seconds.

Example (2)/Figure 2, another sentential parenthetical construction, shows that a parenthetical does not have to be surrounded by pauses, but it may be set off by a preceding pause, only. Here, a noticeable pause before the parenthetical construction (0.8 seconds) can be verified, but there is no pause after the parenthetical construction. The analysis of this speaker’s speech has shown that longer pauses are part of his speech style. However, even if pauses are more common for him than for other speakers’ speech styles, a perceptible pause of 0.8 seconds in the middle of an utterance is prominent.

Figure 1. Example (1)

Figure 2. Example (2)
In example (4)/Figure 3, on the other hand, there are no pauses marking the parenthetical construction either before or after the parenthetical.

The same is true for example (3)/Figure 4; no pauses frame the parenthetical construction.

In contrast to this, we find non-sentential parenthetical constructions which are clearly set off by a pause, as in example (5), plotted in Figure 5.

However, we also find non-sentential examples which are not framed by pauses as in example (7)/Figure 6.

(7) Und unsere Zukunft hängt auch **und im Wesentlichen von**
    and our future depends also and in essential of
Quieter, faster, lower, and set off by pauses?

Mobilität, Bewegung und wirtschaftlichem Austausch

mobility movement and economical exchange

ab (Peter Carstensen, CDU)

[V-Part]

‘Our future depends among others but essentially on mobility, movement and economical exchange.’

Figure 6. Example (7)

Even if sentential parenthetical constructions seem to be more likely to be set off by pauses, this observation can by no means be restricted to sentential parenthetical constructions. Regarding pauses, no clear rule can be established. Sentential and non-sentential parenthetical constructions can be set off by pauses from the anchor clause but this is in no way obligatory. What can be concluded from the analysis of pauses, however, is that the focus for further analysis should be on the transition zone. What happens in the end or after the parenthetical construction is secondary to the recognition of the parenthetical construction as such. Furthermore, long pauses can influence the intensity, articulation rate and fundamental frequency of the following unit (see Rietveld and van Heuven 2001: 243).

4.3 Parenthetical constructions have a clear intonation contour of their own

If parenthetical constructions have their own intonation contours, then they have to be set off from their surrounding anchor clause, or at least – as seen in the above analysis – from the PAPPC. Therefore, we need to study the transition zone, meaning the right boundary of the PAPPC (section 4.3.1), and the potential pause (section 4.3.2). Moreover, an analysis of change in range of pitch and/or intensity instead of a comparison of the average results might be more rewarding (see section 4.3.3). In section 4.3.4, we shall focus on the pitch jump within the transition zone. Additionally, we will have to take phonological aspects into consideration (see section 4.3.5), in particular the fact that an intonation contour of its own implies the phonological domain of an IP. Thus, we have to look into the phonological domains of the parenthetical constructions. This implies studies of the potential
boundary markers. To complete the picture of the transition zone, we will analyse the phonological domains of the PAPPC as well.

4.3.1 **Right boundary of the PAPPC**

The end of the PAPPC is often clearly indicated as such (cf. Döring 2006: 34). The listener’s attention has to be kept over the parenthetical construction and it has to be signalled to him/her that the anchor clause will be completed after the parenthetical construction. Thus, the right tone of the PAPPC tends to be a leading tone. Prepausal lengthening is often considered to be a boundary marker.11 Analysing the tone being considered, we observe very often a clear lengthening of nasals as in example (3), syllables containing a long vowel as in example (2), and fricatives as [s] in example (8)/Figure 7, [χ] in example (7) or [ç] in example (9)/Figure 8.12

(8) Ich sag Ihnen noch etwas *ich komm darauf*  
*I tell you yet something I come to.it*  
*gleich noch zu sprechen was Sie überhaupt nicht*  
*immediately [Part] to speak that you at.all not*  
[*] erwähnt haben (Wolfgang Schäuble, CDU)  
*mentioned have*  
*I’ll tell you something – and *I will come back to it immediately* – that you*  
*haven’t yet mentioned at all’  

Figure 7. Example (8)

(9) Und deshalb *sage ich [ç]* und *ich sag’s ganz ruhig […]*  
*And because.of.that say I and I say.it quite calmly*  
*’And that’s why I say, and *I say it quite calmly, …’*

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11. See following comments on potential pauses in 4.3 (b).
12. Examples (2) and (7) are pictured in section 4.2.
Quieter, faster, lower, and set off by pauses?

However, lengthening is by no means obligatory, even if a fricative is involved, as illustrated in example (10)/Figure 9.

(10) selbstverständlich [ç] ein Kollege hat die Frage
    of course a colleague has the question
    gestellt ist das auf der Tagesordnung
    posed is this on the agenda
    (Joschka Fischer, Bündnis 90/Die Grünen)
    ‘This is of course – a colleague has brought up the question – on the agenda’

Furthermore, the last tone of the PAPPC is often neither a high- nor a low-level tone but rather a mid-level tone. Both criteria, lengthening and tone, are independent and can be combined, but they do not apply – individually or together – to all cases, as seen in example (10). But if they do occur in combination, which is quite often the case, the edge is consequently clearly marked.

4.3.2 Pauses
As we saw in 4.2, no distinctive characteristics can be derived from the analysis of pauses. The focus in 4.2 was on realised silent pauses before (and after) the parenthetical construction. The investigation on pauses should be expanded. Surprisingly, no example within the corpus shows a filled (or voiced) pause between the PAPPC and the parenthetical construction, thus hesitation markers are unlikely to be placed
in the transition zone, and therefore no word-searching or formulation processes are perceptible.\textsuperscript{13}

If we focus on the possibility of pauses in these positions, i.e., between the PAPPCs and the parenthetical constructions, we can infer that in all examples the parenthetical construction is preceded by a position in the anchor clause where pauses may be introduced. This leads us to the conclusion that the transition zone has to provide a potential pause position, which may be realised as a silent pause.\textsuperscript{14} This characteristic might be distinctive for the relation between the anchor clause and the parenthetical construction.

\subsection*{4.3.3 Pitch range and intensity range}
As we have seen, parenthetical constructions can be lower in fundamental frequency and intensity than their surroundings. However, this does not seem to be distinctive. In the following, I shall concentrate on changes in pitch and intensity range instead of focusing on the relation between the average fundamental frequencies and intensity to investigate whether characteristics can be deducted.

Logically, there are two possibilities, illustrated in Figure 10. The PAPPC has a wider range in pitch and/or intensity and the parenthetical construction a narrower (Figure 10a), or the opposite (Figure 10b).

Comparing the different pitch ranges throughout the corpus, we see that the pitch range of the parenthetical construction is considerably narrower than the pitch range of the whole utterance. Regarding the pitch range in comparison to the PAPPC, this observation is not consistent.

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{pitch_intensity_range.png}
\caption{Pitch or intensity range}
\end{figure}

\textsuperscript{13} Note that in parliamentary debates in general, hesitation markers do occur frequently.

\textsuperscript{14} “The formulation of the basic I [Intonational Phrase] formation rule is based on the notions that the intonational phrase is the domain of an intonation contour and that the ends of intonational phrases coincide with the positions in which pauses may be introduced in a sentence” (Nespor and Vogel 1986: 188, emphasis by S.D.).
Clearly, there is a change in pitch range in examples (2), (4), and (5) as demonstrated in Figure 10a, and in example (1) as illustrated in Figure 10b. But in example (3) no change in pitch range between the PAPPC and the parenthetical construction can be confirmed. The change in pitch range is a very common occurrence, but it is not distinctive. The distribution is representative for the examples analysed so far: for the most part, changes in pitch range occur as in Figure 10a, and some as in Figure 10b. There are hardly any examples of minimal (and therefore imperceptible) changes in pitch range, as in example (3).

From the investigation regarding changes in intensity range, no general conclusion can be deduced. As demonstrated by the chosen examples (cf. Table 4), there is a reduction in intensity range in example (3), an increase in examples (1) and (4), and changes in range of 1db, and therefore imperceptible, in examples (2) and (5).

The behaviour throughout the corpus ranging too widely. No general conclusions can be drawn from the examples analysed so far.

4.3.4 Pitch
Recall from 4.2 (c) that parenthetical constructions tend to be lower in fundamental frequency than their surrounding anchor clauses, especially in comparison to the PAPPC. In this section, we shall focus on the pitch(es) within the transition zone, in particular on the realisation of the shift and on the first pitch of the parenthetical
construction. A clear pitch jump downwards (measuring the onset) over the pause can be confirmed in example (1), plotted in Figure 11: 307 Hz to 214 Hz.

Moreover, the parenthetical construction starts frequently on a rise-fall tone as observed e.g., in examples (3), (4) and (5) too (cf. Figures 12 through 14).
Even if in example (2) the parenthetical construction starts on a falling pitch, we still observe a clear pitch jump upwards from 147 Hz to 161 Hz (cf. Figure 15).

Pitch jumps appear to be a current but not obligatory characteristic of the transition zone. They are likely to occur in combination with a silent pause, but not necessarily, and they are not limited in direction, but tend to be downwards. Consequently, the pitch that sets off the parenthetical construction tends to be lower than the pitch that ends the PAPPC. This might help to explain the auditory impression of a lower frequency. Therefore, the left edge of a parenthetical construction often starts after a pitch jump in comparison to the PAPPC. Moreover, the parenthetical construction often starts on a rise-fall pitch, but this too is by no means obligatory.

4.3.5 Phonological domains and boundary marker
1. Parenthetical construction

In previous research findings it has often been stated that parenthetical constructions have an intonational contour of their own. Therefore, they need to form an IP. The IP is hierarchically placed directly under the prosodic domain of an utterance. The IP needs a head, which is the strongest syllable of the phrase, and it has to be marked by two boundary tones “appearing at the right and left extremes of the intonational phrase” (Selkirk 1984: 254). IPs are defined neither by syntactic
boundaries nor by their length.\textsuperscript{15, 16} Nevertheless, it has been stated that the length of speech, the rate of speech and the style of speech play “a role in determining the restructuring of an I into several shorter Is” (Nespor and Vogel 1986: 195).

The parenthetical constructions in all examples analysed so far have their own intonation contour and form an IP of their own. This is true for both sentential and non-sentential parenthetical constructions. In the corpus on which the analysis is based, no example of ‘one-word parenthetical constructions’ appears; perhaps it is rather a written occurrence. In read-aloud examples of ‘one-word parenthetical constructions’, they do, however, form an IP of their own as well.

The characteristic of two boundary tones seems more problematic, especially the fact that the final or right edge tone is obligatory according to Pierrehumbert (1987) and to Rietveld and van Heuven (2001: 287): “for Gussenhoven it is often present but may optionally be absent” (see Grice 2006: 780). Analysing parenthetical constructions within the corpus, we observe that we always establish left boundary tones of the IP of the parenthetical construction but not consistently right boundary tones. Some parenthetical constructions do not have a proper end, meaning that the boundary between the right end of the parenthetical construction and the beginning of the second part of the anchor clause is sometimes fuzzy. This might be caused by the fact that the data is of spoken language, because readers tend to pause and interpret dashes, brackets or even commas in cases of parenthetical constructions as boundary markers. Therefore, they realise two boundary markers of the IP reading out loud. Thus, both boundary markers are theoretically available. The left boundary marker is always realised (cf. comments on potential pause, pitch jump, rise-fall tone), because it plays an indicative role. The right boundary marker, however, is not necessary to detect the parenthetical construction. This observation fits our theory that the transition zone is more important than the end of the parenthetical construction.

\textbf{2. The phonological domain of the PAPPC}

As regards the examples introduced above, we notice that the phonological domain of the PAPPC tends to be hierarchically lower than an IP. In examples (4) and (5), the PAPPCs form a phonological phrase; in examples (1) and (2), however, they form an even lower phonological domain, the domain of a prosodic word.

\textsuperscript{15} “It should be noted that while the I domain often corresponds to a syntactic constituent, this is not always the case” (Nespor and Vogel 1986: 190).

\textsuperscript{16} Cf. as well Nespor and Vogel (1986: 196): “If […] prominence is attributed to a phrase that normally cannot have it, a new intonation contour is created. For example, while pronouns are usually unstressed, under certain circumstances they become semantically prominent and must receive stress. In such cases, the division of I constituents must be modified”.
Nevertheless, we cannot establish the phonological phrase as the maximal phonological domain of the PAPPC, because examples of PAPPCs forming an IP can be found in the corpus (cf. (11)).

(11) Damit wären wir bei dem Punkt % Herr Pflügler, Sie hatten den gerade auch wieder aufgenommen den wir im letzten Jahr diskutiert haben L% (Ludger Volmer, Bündnis 90/Die Grünen) have
‘We thus arrive at a point, Mr Pflügler, you had just taken it up, too, which we discussed last year’

5. Relation between hypotheses and analysis

The investigation started from three hypotheses taken from previous research assuming that parenthetical constructions are quieter, faster, and lower than their anchor clauses, that parenthetical constructions are clearly set off by pauses, and that they have an intonation contour of their own.

The analysis shows that lower intensity is not a classifying feature, because the case studies behave very differently in this respect, regardless of the question of whether the parenthetical construction is sentential or non-sentential. The intensity of parenthetical constructions is higher than, lower than, or equal to the average of their anchor clauses. Concentrating on the difference in intensity between the PAPPC and the parenthetical construction, the intensity of the parenthetical construction is either lower than the PAPPC or equal to it. Therefore, we focused on changes in intensity range in the transition zone which led us to the same result: no decisive feature can be derived from studies on intensity. Studies of the articulation rate have shown that the parenthetical construction is faster, especially in comparison to the PAPPC, which is often reduced in tempo compared to the average articulation rate of the entire utterance. The examination of fundamental frequency suggests that we should focus on the transition zone; in comparison to the PAPPC, the parenthetical construction often has a lower fundamental frequency. Furthermore, we see that studies on pitch range show that a change in pitch range between the PAPPC and the parenthetical construction is very common but not decisive either. Additionally, pitch jumps are a current but by no means an obligatory characteristic. They often occur in combination with silent pauses. Otherwise, the parenthetical construction is often set off by a rise-fall pitch. Concerning pauses, we
have seen that from realising pauses no regularity can be derived, but, concentrating on the transition zone, we have noticed that a potential pause between the PAPPC and the parenthetical construction might be crucial.

In all examples, the parenthetical constructions have their own intonational domain if we accept that the second boundary marker might not be realised. This hypothesis correlates with the phonetic-prosodic results of the analysis. We have seen that the parenthetical construction is set off from its surrounding anchor clause, especially in comparison to the PAPPC, and the parenthetical construction interrupts the prosodic flow of an utterance. The edge tone of the PAPPC tends to be a leading tone and is often lengthened. The transition can be realised by a pause, a pitch jump, a rise-fall tone at the beginning of the parenthetical construction, a change in pitch range, a lower fundamental frequency, and/or a higher articulation rate. The investigation has clearly shown that the focus of prosodic analysis on parenthetical constructions should be on the zone in which the set-off takes place (transition zone), namely on what happens between the edge tone of the PAPPC, the potential pause, and the boundary marker of the parenthetical construction.

**Corpus**

Debates available on [www.bundestag.de](http://www.bundestag.de).

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