Invisible constituents?
Parentheses as B-Merged Adverbial Phrases

Mark de Vries
University of Groningen

Synopsis

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.

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).

Parataxis, which is the class we are interested in here, comprises a wealth of different constructions, including parentheticals such as comment clauses. Directly below, I will present a classification scheme 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.

Schema 1. A classification of paratactic constructions.

PARATAXIS / NONSUBORDINATION

GENERAL COORDINATION

Coordination [2nd conjunct]

clausal coordination — *Jake went to school* and Ian went home. (1)

constituent coordination — *Jake* and Ian are going home. (2)

Juxtaposition — *Jake went to school*; Ian went home. (3)

GENERAL APPOSITION

Apposition

nominal apposition — *Jake*, our boss, told us to stay. (4)

XP apposition — It is *over there*, (i.e.) on the table. (5)

Nonrestrictive relative clause — *Jake*, who is our boss, told us to stay. (6)

GENERAL PARENTHESIS

Interjection — He is oh! so smart. (7)

Hedge — With all respect, I don't believe you. (8)

Parenthetical

unintegrated parenth. — Jake indicated – (and) why am I not surprised? – that he would love to go first. (9)

reporting clause[1] — "I would like some more coffee," said Jake. (10)

comment clause[2] — Paris, I suppose, is the capital of France. (11)

what-clause parenth.[3] — What do you think, who did it? (12)

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.[4]

Table 1. The main tripartition of parataxis.

	coordination	apposition	parenthesis
separate intonation	–	+	+
anchor	+	+	–

The contributions by Döring and Dehé 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.

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[1] The representation of direct speech has interesting properties that cannot be discussed here, but see Banfield (1973), Luif (1990), Collins & Branigan (1997), De Vries (2006b), and the references there.

[2] Reis (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 & Thiersch (2002). A typical example is *He$_i$ would be late, John$_i$ 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.

[3] 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 & Kavalova (2006) for discussion. Note, however, that Reis (2002) uses the term *was*-parentheticals for constructions like (12) in German.

[4] The logical fourth possibility (no anchor, integrated intonation) exists as well: this would simply be an instance of hypotaxis.

(13) a. Ik heb JOOP gezien. [Dutch]
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. [Dutch]
I have Joop our neighbor seen
'I saw Joop, our neighbor.'
b. Ik heb JOOP – hij is onze buurman – gezien.
I have Joop he is our neighbor seen
'I saw Joop – he is our neighbor.'

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 *un*stressed, 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.

	coordination	apposition	parenthesis
fixed position w.r.t. anchor	+	+	–
referentially related to anchor	–	+	–

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):

(15) Joop (X) vertrekt (X) morgen (X) naar Londen (X). X = dacht Anne
Joop leaves tomorrow to London thought Anne

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.[5])

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 predictions, such as the ones listed in (18).[6] 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.

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[5] 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.

[6] 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.

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 pronominal reference to the host does not include parentheses; for comments see, among others, Espinal (1991), Pittner (1995), Hoffmann (1998), Burton-Roberts (1999), and the contribution by d'Avis in this volume.

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 *wh*-movement. Some examples are given in (19), where the original position of the *wh*-phrase is indicated by an underscore:

(19) a. What did Hank steal _ ?
b. What did the commissioner suspect Hank stole _ ?

These examples involve hypotaxis. As expected, parataxis behaves differently. Extraction from a parenthetical or appositional construction is impossible; see (20):

(20) a. * What did the police – the commissioner suspected Hank stole _ – search his house.
b. * What did John greet Hank, who carried _ ?

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:

(21) a. * What did the police arrest Hank because he stole _ ?
b. * What did John greet the man who carried _ ?

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 *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 *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
lit. '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
lit. '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.[7]

[7] 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.

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) a. De verhalen over zichzelf$_i$ die Joop$_i$ gisteren hoorde, waren gelogen. [Dutch]
the stories about SE-self which Joop yesterday heard were lied
'The stories about himself that Joop heard yesterday were lies.'
b. ?* Deze verhalen over zichzelf$_i$, die Joop$_i$ toevallig gisteren hoorde, waren gelogen.
these stories about SE-self which Joop accidentally yesterday heard were lied
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.

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$_i$ claimed that he$_i$ was thinking about Hank.
b. Everybody$_i$ is somebody because he$_i$ is a child of his$_i$ parents.

The following examples, however, show that a bound pronoun cannot be inside a parenthetical:

(30) a. * Every guest$_i$ – he$_i$ just arrived – was talking about Hank.
b. * Nobody$_i$ was, he$_i$ 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$_i$ commented on the book that he$_i$ read last week.
b. * Everybody$_i$ commented on Dostoyevsky's Crime and Punishment, which he$_i$ 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 contributions by Del Gobbo and Nouwen in this volume). A relevant example is given in (32):

(32) Every journalist$_i$ has a laptop, which he$_i$ uses when he$_i$ 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$_i$ has a laptop. He$_i$ uses it when he$_i$ 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.[8]

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) Joop$_i$ hielp zichzelf$_i$. [Dutch]
Joop helped SE-self
'Joop helped himself'

As expected, binding into a parenthetical is unacceptable:[9,10]

(35) a. * Joop$_i$ heeft – wie zal het zichzelf$_i$ kwalijk nemen? – een nieuw huis gekocht. [Dutch]
Joop has who will it SE-self evil take a new house bought
int. 'Joop has – who will blame him for it? – bought a new house.'
b. * Joop$_i$ heeft, zei ik ten overvloede tegen zichzelf$_i$, een nieuw huis gekocht.
Joop has said I needlessly to SE-self a new house bought
int. 'Joop has, I needlessly said to himself, bought a new house.'

However, true anaphors must always be locally bound; compare (34) to (36):

(36) * Joop$_i$ wilde dat ik zichzelf$_i$ hielp. [Dutch]
Joop wanted that I SE-self helped
int. 'Joop wanted me to help him (*lit.* Joop wanted that I helped himself)'

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[8] A reviewer notes another particular kind of (apparent) counterexamples, e.g., *Every man$_i$ – except if he$_i$ is totally amoral – loves his$_i$ 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.

[9] The example in (35a) would be fine if we replace *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'.

[10] Hoffmann (1998:302) argues for the opposite view on the basis of the example in (i):

(i) Hanna$_i$ hat, sich$_i$ nicht schonend, die Arbeit zu Ende gebracht. [German]
Hanna has herself not sparing the work to an end brought
'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.

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$_i$ 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$_i$.
b. John$_i$ – and who will blame him$_i$ for it? – bought a new bicycle.

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):[11]

(39) a. * She$_i$ said that Jane$_i$ was listening to music.
b. * She$_i$ 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$_i$ – dat hij$_i$ nog liever op zijn kop ging staan. [Dutch]
he said that is typically something for Joop 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$_i$ had, zei Joop$_i$, geen behoefte aan gezelschap.
he had said Joop no need to company
'He had, said Joop, no need for company.'
c. Hij$_i$ schreef een brief aan Anna, die op haar beurt beloofde Joop$_i$ terug te schrijven.
he wrote a letter to Anna who in her 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):

[11] 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.

(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} bemiddelaar over berichten –
nobody wanted I will there a NPI some mediator on report
Joop helpen. [Dutch]
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.
never had he, said Joop to a guest, NPI 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.
Nobody was angry on Joop, who little NPI 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, *ook maar enige} moeite zou doen. [Dutch]
nobody had written that Joop little NPI some effort would do
'Nobody had written that Joop would take {little, *any} trouble.'
b. Ik had nog niet vernomen dat Joop {enkele, *ook maar enige} spullen had verkocht.
I had not yet learnt that Joop some NPI 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 ook maar enige moeite zou doen. [Dutch]
I had not expected/thought that Joop NPI 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 ook maar enige moeite had gedaan.
Joop awakened not the impression that he NPI some effort had done
'Joop did not raise the impression that he had taken any trouble (at all).'

These sentences, however, involve NEG-raising; that is, the negation is interpreted in the subordinate clause. For instance, the meaning of (44a) is in fact that the subject *did* expect/think something, namely that Joop would *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.[12] I suppose it needs little explanation that the same can be concluded for the

[12] See Progovac (1998) and Hoeksema (2000) for a discussion of NPIs in coordinate structures.

absense 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.[13] 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) a. Jake said – why am I not surprised? – that he hates bicycles.
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.

In short, assuming that scope is related to c-command, it seems that *no dependent Force* and *no dependent Mood* corroborate Invisibility.[14]

2.6. 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.[15] Of course these facts only provide support for Inivisibility in the

[13] 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*).

[14] 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.

[15] I should mention that this conclusion is challenged by Ackema & 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$_i$, althans volgens zichzelf$_i$, 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

absence of independent explanations, which is not always easy to establish. The results of the above discussion are summarized in table 3.

Table 3. Invisibility tested for clausal parenthesis and apposition.

prediction (see 18)	*observationally correct,* and hence *compatible with Invisibility*	*independently explained*	*evidence for Invisibility*
no movement	yes	partly	partly
no idiom chunks	yes	partly	partly
no Q-binding	yes	no	yes
no A-binding	yes	yes	–
no Condition B effects	yes	yes	–
no Condition C effects	yes	no	yes
no NPIs	yes	yes	–
no PPI effects	yes	yes	–
no dependent Force	yes	no	yes
no dependent Mood	yes	no	yes

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 (2005) 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.]

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 & Neeleman.

How can these properties be represented in the syntactic structure? I will approach this issue from a generative syntactic perspective. (See also Fortmann's contribution in this volume 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.[16]

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 objects.[17] For example, if we merge A and B and call the result C [in notation: Merge (A, B) → C], we obtain a mini-tree $_{A}{}^{C}{}_{B}$ in which C dominates both A and B.[18]

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

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[16] 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.

[17] A consideration of sisterhood, asymmetry, and linear ordering – however interesting – is outside the scope of this article; see De Vries (in prep.) and the references there for ample discussion.

[18] Of course a syntactic tree structure is only an arbitrary (but insightful) way of notating syntactic relations.

hypotaxis (subordination) and parataxis (nonsubordination) as observed by traditional grammarians (see Van Es & 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).[19] 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:

(50) ***Two types of Merge***
d-Merge: the input objects are d-included in the output object. → *syntactic hierarchy*
b-Merge: the input objects are b-included in the output object. → *paratactic hierarchy*

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 $_{A}{}^{C}/\backslash_{B}$. 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 $_{A}{}^{C*}/\backslash_{B}$; see the next sections for more interesting examples).[20]

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).[21]

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*.[22] (Notice

[19] The labels *d-* and *b-* are in principle arbitrary. (They refer to the first letter of the words *d*ominance and '*b*ehindance'. 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 21 and 29 for references and some discussion.)

[20] 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.

[21] 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.

[22] As far as I know, the dynamic view on c-command was initiated by Epstein (1999).

that A and B are sisters.) In the present approach, dominance translates into d-inclusion. Therefore, consider (51):

(51) ***C-command***
If Merge (A, B) then A c-commands B and all the constituents d-included in B.

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.[23] 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 & 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* and *or* may themselves occasionally be used as explicit markers of apposition." If appositions were simply right-hand adjuncts to a noun 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 [Dutch]
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'

[23] Note that it would be an additional assumption to generalize c-command to both types of inclusion. Evidently, such a move would be counterproductive.

As far as I know, the concept of specifying coordination was first introduced by Kraak & Klooster (1968:Ch11); 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.[24] (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).[25]

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:[26]

(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?'
b. Du kennst doch den Jan, meinen Cousin?
you know yet the-ACC Jan my-ACC cousin
'You know Jan, my cousin, don't you?'

As (54) shows, this is correct.[27] 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 & Dougherty (1972), Halitsky (1974), Klein (1977), Sturm (1986), Doron (1994), Canac-Marquis & Tremblay (1997) 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

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[24] 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.

[25] 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*.

[26] That is, apart from some instances of syntactically unbalanced coordination, as reported in Johannessen (1998).

[27] 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.)

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]
Joop and Jaap have I today not seen
'I haven't seen Joop and Jaap today.'
b. Joop, onze voorzitter, *heb* ik _ vandaag niet gezien.
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.
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. [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 schorriemorrie, … [Dutch]
CEOs that capitalist scum that moneygrubbing ragtag
b. Robin Hood, onze held, onze redder in nood, …
Robin Hood our hero our savior in distress

(59) a. Joop, die graag geheimzinnig doet, wiens achtergrond niemand echt kent, …
Joop who gladly mysteriously behaves whose background nobody really knows
'Joop, who likes to behave mysteriously, whose background nobody really knows, ...'

b. de Dam, waar alle toeristen komen, waar het beroemde oorlogsmonument staat, …
the Dam where all tourists come where the famous war.monument stands
'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 XP_1 and XP_2 are the two conjuncts:

(60) $[_{CoP}\ XP_1\ [_{Co'}\ Co\ XP_2]]$

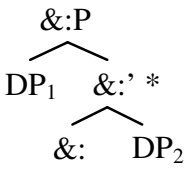
CoP is a coordination phrase, which is a regular X-bar category. This implies that the conjunction is a functional head (for discussion, see Munn 1987, Kayne 1994, Johannessen 1998, Van der Heijden 1999). The CoP creates a structural position for the conjunction and accounts for the coordination-internal 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, $\wedge$ and $\vee$ can be used for conjunction and disjunction, respectively. I will use the symbol &: to represent specifying coordination.[28] 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 DP_1 is the anchor and DP_2 the apposition (or, similarly, an appositive relative clause):

(61) $[_{\&:P}\ DP_1\ [_{\&:'}\ \&:\ DP_2]]$

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:

(62) b-Merge (&:, DP_2) → &:'
d-Merge (DP_1, &:') → &:P



$[_{\&:P}\ DP_1\ [_{\&:'*}\ \&:\ DP_2]]$

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), DP_2 cannot be c-commanded by 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.[29]

[28] 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.

[29] Can this approach can 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

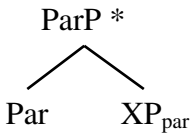
3.3. Parenthesis

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 same intonational break. Therefore, it seems reasonable to assume that b-Merge is involved in this domain, too.

Unlike appositions, but like adverbial 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-Merge 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):

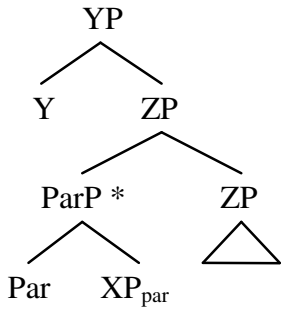
(63)



b-Merge (Par, XP_{par}) → ParP

Consequently, ParP can be adjoined (by normal d-Merge) to some projection ZP in the host, as is shown in (64):

(64)



b-Merge (Par, XP_{par}) → ParP
d-Merge (ParP, ZP) → ZP+
d-Merge (Y, ZP+) → YP

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

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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 and Y*) and subordination (e.g., *X 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 (2005), which includes a discussion of initial coordinators (as in *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.

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.'

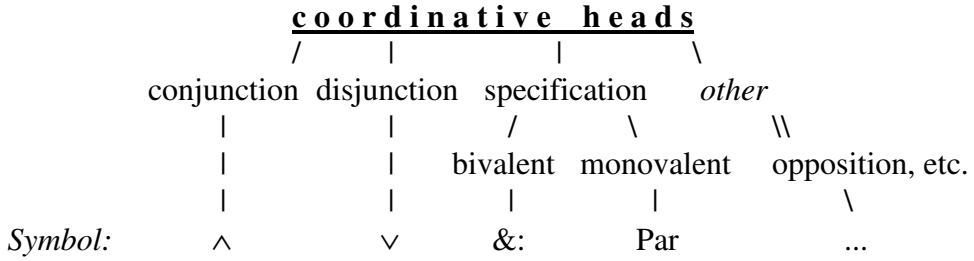
Possibly, the difference in interpretation can be captured structurally by either (right-)adjoining ParP on the constituent level (DP) or on the clausal level (CP), which, in this case, has no effect on the linear order. Further research is necessary to warrant the validity of these suggestions.

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:

Schema 2. A classification of paratactic conjunctions.



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 (2005) 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.*

References

Ackema, Peter & Ad Neeleman (2004). *Beyond Morphology: Interface Conditions on Word Formation*. Oxford: Oxford University Press.

Altmann, Hans (1981). *Formen der "Herausstellung" im Deutschen: Rechtsversetzung, Linksversetzung, Freies Thema und verwandte Konstruktionen.* Tübingen: Niemeyer.

Banfield, Ann (1973). Narrative Style and the Grammar of Direct and Indirect Speech. *Foundations of Language* 10, 1–39.

Bolinger, Dwight (1989). *Intonation and its Uses: Melody in Grammar and Discourse*. Stanford, Calif.: Stanford University Press.

Burton-Roberts, Noël (1999). Language, linear precedence and parentheticals. In *The clause in English: In honour of Rodney Huddleston*, ed. by Peter Collins & David Lee, 33–52. Amsterdam: John Benjamins.

Canac-Marquis, Réjean & Mireille Tremblay (1998). The wh-feature and the syntax of restrictive and non-restrictive relatives in French and English. *Theoretical analyses on Romance languages*, ed. by José Lema and Esthela Treviño, 127–141. Amsterdam: John Benjamins.

Chomsky, Noam (1981). *Lectures on Government and Binding*. Dordrecht: Foris.

Chomsky, Noam (1995). *The Minimalist Program*. MIT Press, Cambridge, Mass.

Collins, Chris & Phil Branigan (1997). Quotative Inversion. *Natural Language and Linguistic Theory* 15, 1–41.
Corver, Norbert & Craigh Thiersch (2002). Remarks on Parentheticals. In *Progress in Grammar*. Articles at the 20th Anniversary of the Comparison of Grammatical Models Group in Tilburg, ed. by Marc van Oostendorp & Elena Anagnostopoulou. URL: http://www.meertens.knaw.nl/books/progressingrammar
Dehé, Nicole & Yordanka Kavalova (2006). The syntax, pragmatics, and prosody of parenthetical *what*. *English Language and Linguistics* 10: 289-320.
Del Gobbo, Francesca (2003). *Appositives at the interface.* Doctoral dissertation, University of California, Irvine.
Delorme, Evelyne & Ray C. Dougherty (1972). Appositive NP constructions. *Foundations of Language* 8, 2–29.
Demirdache, Hamida (1997). Condition C. In *Atomism and Binding*, ed. by Hans Bennis, Pierre Pica & Johan Rooryck, 51-87. Foris: Dordrecht.
De Vos, Mark (2005). *The syntax of pseudo-coordination in English and Afrikaans.* Doctoral dissertation, University of Leiden. Utrecht: LOT.
Doron, Edit (1994). The discourse function of appositives. *Proceedings of IATL* 9, 53–62. Hebrew University, Jerusalem.
Epstein, Samuel D. (1999). Un-principled Syntax and the Derivation of Syntactic Relations. In *Working Minimalism*, ed. by Samuel D. Epstein & Norbert Hornstein. Cambridge, Mass.: MIT Press.
Es, Gustaaf van & Paulus van Caspel (1975). *Samengestelde zin: parataxis I-V*. Archief voor de Nederlandse syntaxis, University of Groningen.
Espinal, M. Teresa (1991). The Representation of Disjunct Constituents. *Language* 67, 726–762.
Evans, Gareth (1980). Pronouns. *Linguistic Inquiry* 11, 337-362.
Fabb, Nigel (1990). The difference between English restrictive and nonrestrictive relative clauses. *Journal of Linguistics* 26, 57–78.
Goldsmith, John (1985). A principled exception to the coordinate structure constraint. CLS 21 Part 1, 133–143. Chicago Linguistic Society, University of Chicago, IL.
Goodall, Grant (1987). *Parallel structures in syntax: coordination, causatives and restructuring*. Cambridge: Cambridge University Press.
Goodman, Nelson (1961). About. *Mind* 70, 1–24.
Grootveld, Marjan (1994). *Parsing coordination generatively.* Doctoral dissertation, Leiden University.
Halitsky, David (1974). Deep Structure appositive and complement NPs. *Language* 50, 446–455.
Heijden, Emmeke van der (1999). *Tussen nevenschikking en onderschikking*. Doctoral dissertation, Catholic University of Nijmegen. Utrecht: LOT.
Heringa, Herman & Mark de Vries (to appear). Een semantische classificatie van apposities. *Nederlandse Taalkunde*.
Hoeksema, Jack (2000). Negative Polarity Items: Triggering, Scope, and C-Command. In *Negation and Polarity*, ed. by Laurence Horn & Yasuhiko Kato, 115–146. Oxford: Oxford University Press.
Haegeman, Liliane (1991). Parenthetical Adverbials: The Radical Orphanage Approach. In: *Aspects of Modern English Linguistics: Papers Presented to Masatomo Ukaji on His 60th Birthday*, ed. by Shuji Chiba et al., 232-254. Tokyo: Kaitakusha.
Hoffmann, Ludger (1998). Parenthesen. *Linguistische Berichte* 175, 299–328.
Johannessen, Janne Bondi (1998). *Coordination.* Oxford: Oxford University Press.
Kayne, Richard (1984). *Connectedness and Binary Branching*. Dordrecht: Foris.
Kayne, Richard (1994). *The antisymmetry of syntax.* Cambridge, Mass.: MIT Press.
Klein, Maarten (1977). Appositionele constructies in het Nederlands. Doctoral dissertation, Catholic University of Nijmegen.
Kraak, A. & Wim Klooster (1968). *Syntaxis.* Culemborg: Stam-Kemperman.
Koster, Jan (2000). Extraposition as Parallel Construal. Ms. University of Groningen. URL: http://www.let.rug.nl/~koster/papers/parallel.pdf
Lasnik, Howard & Joseph Kupin (1977). A restrictive theory of transformational grammar. *Theoretical Linguistics* 4: 173–196.
Link, Godehart (1984). Hydras: On the logic of relative constructions with multiple heads. In *Varieties of formal semantics*. Proceedings of the fourth Amsterdam Colloquium, September 1982, ed. by Fred Landman & Frank Veldman, 245–257. Dordrecht: Foris.

Luif, Jan (1990) Zijn zinnen in de directe rede bijzinnen? In *Vragende wijs: Vragen over tekst, taal en taalgeschiedenis*, Bundel aangeboden aan Leopold Peeters bij zijn afscheid als Hoogleraar Historische Taalkunde van het Nederlands aan de Universiteit van Amsterdam, 114-121. Amsterdam: Rodopi.

Moltmann, Friederike (1992). *Coordination and comparatives*. Doctoral dissertation, MIT.

Mu'adz, Husni (1991). *Coordinate Structures: A Planar Representation.* Doctoral dissertation, University of Arizona.

Munn, Alan (1987). Coordinate structure and X-bar theory. *McGill Working Papers in Linguistics* 4: 121–140.

Peterson, Peter (1999). On the boundaries of syntax. In *The clause in English: In honour of Rodney Huddleston*, ed. by Peter Collins & David Lee, 229–250. Amsterdam: John Benjamins.

Pittner, Karin (1995). Zur Syntax von Parenthesen. *Linguistische Berichte* 156, 85–108.

Potts, Christopher (2005). *The Logic of Conventional Implicatures*. Oxford: Oxford University Press.

Progovac, Ljiljana (1998). Structure for coordination. Part I and II. *Glot International* 3.7: 3–6 and 3.8: 3–9.

Quirk, Randolph et al. (1985). *A comprehensive grammar of the English language*. London: Longman.

Reinhart, Tanya (1983). Point of View in Language – The Use of Parentheticals. In *Essays on Deixis*, ed. by Gisa Rauh, 169–194. Tübingen: Gunter Narr.

Reis, Marga (2000). On the Parenthetical Features of German Was...W-Constructions and How to Account for Them. In *Wh-Scope Marking*, ed. by Uli Lutz, Gereon Müller & Arnim von Stechow. Amsterdam: John Benjamins.

Reis, Marga (2002). *Wh*-movement and integrated parenthetical constructions. In *Studies in Comparative Germanic Syntax*, ed. by C. Jan-Wouter Zwart & Werner Abraham, 3–40. Amsterdam: John Benjamins.

Ross, John R. (1967). *Constraints on variables in syntax*. Doctoral dissertation, MIT. Reprinted as *Infinite syntax!* 1986. Norwood, New Jersey: ABLEX.

Ross, John R. (1973). Slifting. In *The Formal Analysis of Natural Languages*, ed. by Maurice Gross et al., 133–169. The Hague: Mouton.

Safir, Ken (1986). Relative clauses in a theory of binding and levels. *Linguistic Inquiry* 17, 663-689.

Schelfhout, Carla (2006). *Intercalations in Dutch*. Doctoral dissertation, Radboud University Nijmegen.

Sells, Peter (1985). Restrictive and non-restrictive modification. CSLI Report No. 85–28: 1–33. Leland Stanford Junior University.

Smits, Rik (1988). *The Relative and Cleft Constructions of the Germanic and Romance Languages.* Doctoral dissertation, Catholic University of Brabant. Dordrecht: Foris.

Stoltenburg, Benjamin (2003). Parenthesen im gesprochenen Deutsch. *InLiSt – Interaction and Linguistic Structures*, No. 34.

Sturm, Arie (1986). *Primaire syntactische structuren in het Nederlands*. Doctoral dissertation, University of Utrecht. Leiden: Martinus Nijhoff.

Teleman, Ulf et al. (1999). *Svenska Akademiens Grammatik 4: satser och meningar*. Stockholm: Norstedts.

Vergnaud, Jean-Roger (1974). *French Relative Clauses*. Doctoral dissertation, MIT.

Vries, Gertrud de (1992). *On Coordination and Ellipsis*. Doctoral dissertation, Catholic University of Brabant.

Vries, Mark de (2005). Coordination and Syntactic Hierarchy. *Studia Linguistica* 59, 83–105.

Vries, Mark de (2006a). The Syntax of Appositive Relativization: On Specifying Coordination, False Free Relatives and Promotion. *Linguistic Inquiry* 37-2.

Vries, Mark de (2006b). Reported Direct Speech in Dutch. *Linguistics in the Netherlands* 23.

Vries, Mark de (in prep.) Internal and External Remerge: On Movement, Multidominance, and the Linearization of Syntactic Objects. Ms. University of Groningen.

Wagner, Michael (2004) Asymmetries in the Syntax and Prosody of Verb-Initial Interpolated Clauses. In *Proceedings of Console XII (2003)*, University of Patras, Greece, ed. by Sylvia Blaho et al.

Williams, Edwin (1978). Across-The-Board Rule Application. *Linguistic Inquiry* 9: 31–43.