

Marlies Kluck, Dennis Ott, Mark de Vries  
**Parenthesis and Ellipsis**

# Studies in Generative Grammar



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# Volume 121

# Parenthesis and Ellipsis

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Cross-Linguistic and Theoretical Perspectives

Edited by  
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Marlies Kluck, Dennis Ott, and Mark de Vries

# Incomplete parenthesis: An overview

## 1 Introduction

Expressions of natural language are said to be *incomplete* or *elliptical* when parts of their surface form are omitted from the explicit signal (sound or sign) such that the meaning of these omitted parts can be reliably and systematically recovered. Consider the following illustrations:

- (1) a. John kissed Mary, and Peter Susan.  
b. John read three books about ellipsis, and Peter read five.  
c. John likes Mary, and Bill does, too.  
d. John likes someone, but I don't know who.  
e. A: Who does John like?  
B: Mary.

What we find in each case is that more is understood than what is explicitly uttered: the elliptical parts of the expressions are 'heard' by the mind, but not by the ear. The amount of omitted material can range from a single verb (as in (1a), known as Gapping) to missing NPs (1b) and VPs (1c), to an entire clause (as in Sluicing and fragment answers (1d,e)). Conditions on ellipsis in syntactic and discursive environments such as those in (1) have been studied extensively in the literature. The contributions to the present volume focus on instances of ellipsis in lesser-studied configurations.

Natural languages provide various means of explicitly relating internally coherent expressions to one another, both grammatically (e.g., hypotaxis, coordination, etc.) and discursively (e.g., anaphoric pronouns, discourse topics, etc.). Another form of relating expressions is *parenthesis*, manifest in appositive NPs and relative clauses, comment clauses, interruptions, dislocated elements, etc.

- (2) a. John, (who is) a great chess player, likes Mary.  
b. John – we all know this – is a great chess player.  
c. John, as we all know, is a great chess player.

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- d. John, I think, is a great chess player.
- e. John is – I need to say this now! – a great chess player.
- f. Someone – I don't know who – kissed Mary.
- g. I met John last night, a great chess player.
- i. I saw a scary movie last night, Jaws.

What all of the above cases have in common is that they feature a constituent (underlined) that is, in some sense, loosely related to the surrounding or preceding clause (the ‘host clause’). Typically, parenthetical constituents are prosodically demarcated: the written commas or dashes in (2) correspond to prosodic boundaries, such as pitch movements indicating the transition to another intonational phrase. In pragmatic terms, parentheticals express some sort of *secondary information*, sometimes called *non-at-issue content*, relative to the main proposition (see Potts 2005). As emphasized especially in **Schneider**’s contribution to this volume, it would be a mistake to dismiss such ‘interrupting’ expressions as mere slips of the tongue: far from occurring randomly, they are patently an integral part of the speaker’s communicative strategy.

Even a casual glance at parenthetical expressions occurring in natural language suggests that they are often incomplete, sometimes in ways similar to what we saw in (1). This is evident in the parenthetical sluicing case in (2f). But also in cases like (2d), the transitive verb *think* appears to lack an overtly represented object; its understood object is (the proposition denoted by) the surrounding host clause. A similar situation obtains in (2c) for the verb *know*; compare (2b), where an overt object is present. Different types of *as*-parentheticals are discussed in **Bacsikai-Atkari**’s and **LaCara**’s contributions to this volume. Specifically, Bacsikai-Atkari compares regular *as*-parentheticals in Hungarian to superficially similar parenthetical comparative clauses; LaCara investigates the quirky syntax of inverted *as*-parentheticals (*John has kissed a pig, as has Mary*) in English.

More subtle is the case of (2g): *prima facie*, the afterthought appears to be a simple noun phrase; upon closer scrutiny, however, we find that it has a propositional meaning as well as grammatical properties corresponding to the predicational copular clause *John is a great chess player*. Somewhat differently, specificational afterthoughts as in (2i) can be shown to involve clausal ellipsis of the sluicing type. We return to these ideas below.

While customarily considered ‘peripheral’ linguistic phenomena, both parenthesis and ellipsis raise interesting and far-reaching theoretical questions. It is worth bearing in mind that research in theoretical linguistics has frequently been able to derive conclusions of general significance from the study of what appear at first glance to be quirks of the grammar. Following this tradition, the goal of this volume is to present recent research into parenthesis and ellipsis phenomena and



their interactions, in order to advance our understanding of grammar as a whole. We will now briefly highlight the main issues raised by each empirical domain, then show how investigating their intersection can help illuminate them.

## 2 Empirical and theoretical issues

### 2.1 Parenthesis

Beyond the intuitive identification of parenthetical insertions, there is little agreement as to what precisely the defining characteristics of parenthesis are (see Dehé & Kavalova 2007 for an overview). Indeed, **Schneider**'s contribution to this volume develops a prototypical notion of parenthesis, arguing that they are *relevant*, but violate the maxim of manner. Implicitly, Schneider rejects the idea that parentheticals can be exhaustively defined. In spite of this, he suggests a global distinction between propositional parentheticals that act on the information conveyed by their hosts within a single speech act and those that express a speech-act themselves. This is in line with findings by **Truckenbrodt** (see below).

In either case, parentheticals typically express secondary, non-restrictive information of sorts, e.g., by mitigating the speaker's commitment to the truth of the primary proposition (cf. (2d)), or by predicating some property of a referent introduced in the host clause (cf. (2g)). It seems unlikely, however, that there exist any pragmatic properties that *uniquely* apply to parentheticals. Take mitigation as an illustration: predicates such as *think* can occur in comment clauses (2d), but their most salient use is one in which they introduce a regular complement clause. It has been argued that such predicates serve as mitigators in either case, i.e. regardless of their structural position (Benveniste 1966, Simons 2007). Building on this insight, **Gachet**'s contribution to this volume deals with parallels between such parenthetical clauses and sentence adverbs like *presumably*, which both serve as mitigators. In addition, Gachet argues that French initial comment clauses are not subordinating if – and only if – they lack a complementizer. This is interesting because it implies that what seems to be a simple case of complementizer deletion may in fact involve an entirely different syntactic structure.

Even if we take for granted that we can more or less reliably identify parenthetical expressions, crucial questions arise about the nature of parenthesis. From a syntactic point of view, for instance, we can ask whether parenthetical constituents are *structurally* integrated into the clause they are related to, or whether this integration takes place only at some extra-grammatical (discursive) level (see Burton-Roberts 2006). Studies in both syntax and pragmatics have long recog-

nized the need to distinguish between Sentence Grammar (syntax, in a broad sense) and Discourse/Thetical Grammar (see, e.g., Cinque 1983 and Kaltenböck et al. 2011). While it is clear that the *internal syntax* of parentheticals obeys laws of Sentence Grammar, so far no consensus has been reached concerning the locus of their integration into larger expressions – i.e., their *external syntax*. As Dehé & Kavalova (2006:316) put it, “while [parentheticals] are a linear part of the structure of an utterance, they fail to be a constituent in its hierarchical structure.” This characterization must be explicated.

On the one hand, parentheticals undoubtedly exhibit various signs of structural independence, such as a systematic opacity for c-command relations. The following example demonstrates this opacity for variable binding:

- (3) Every professor<sub>i</sub>, I really like him<sub>\*i/j</sub>, has written many books.

The only – and rather incoherent – interpretation available for (3) is one in which *him* is a constant (used to refer to some individual, say Peter), unlike in cases like *Every professor likes his own books*, in which *his* can be interpreted as a variable bound by (or co-varying with) the quantified expression. Assuming variable binding to be parasitic on syntactic c-command, (3) suggests that no c-command relation obtains between the host-internal QP and the pronoun contained in the parenthetical clause. *Mutatis mutandis* for other types of binding dependent on c-command, as highlighted in De Vries 2007 and elsewhere.

In much the same vein, the systematic opacity of parentheticals for subextraction appears to bring out their syntactic disconnectedness (see De Vries 2007:209 for similar examples and discussion):

- (4) a. The professor – assuming that the students only read Harry Potter – spent a lot of time explaining the course materials.  
 b. \*Which book<sub>i</sub> did the professor – assuming that the students only read t<sub>i</sub> – spent a lot of time explaining the course materials?

The opacity of parentheticals as exemplified in cases like (3) and (4) follows naturally if we take the connection between a parenthetical and its host to be outside the domain of syntax, an approach which has come to be known as the *orphan approach* to parenthesis. The idea was pioneered by Haegeman (1991), and has been developed further in Burton-Roberts (1999), Peterson (1999) and Shaer (2009). On this view, parentheticals are not dominated by any node of the syntactic tree underlying the host clause (whence their characterization as syntactic ‘orphans’). The linear insertion of parentheticals into their host clauses is thus a matter of Discourse Grammar.

On the other hand, while the linear placement of most types of parentheticals is fairly free, some appear to be attached at the constituent level. Clear examples of such ‘anchored’ parentheticals are nominal appositions, which cannot be separated from their anchor by means of leftward movement of the latter (data adapted from Heringa 2012:113, see also Potts 2005):<sup>1</sup>

- (5) a. Peter met George, his best friend, in primary school.  
 b. George, his best friend, Peter met in primary school.  
 b' \*George Peter met, his best friend, in primary school.
- (6) a. You met these linguists, people who study language, yesterday.  
 b. Which linguists, people who study language, did you meet yesterday?  
 b' \*Which linguists did you meet, people who study language, yesterday?

Such facts could be taken to suggest that at least anchored parentheticals form a syntactic unit with elements of the host clause, and hence are present in syntax. See Kluck to appear and Griffiths & De Vries 2013 for further arguments and analysis.

This view of parenthetical integration as a matter of Sentence Grammar is defended by Ackema & Neeleman (2004) and De Vries (2007, 2012a/b), among others. They argue, contrary to the orphan approach, that parentheticals *are* syntactically connected to their hosts – but in a special way.<sup>2</sup> It is even possible to do this recursively (reflecting the fact that there are parentheticals within parentheticals; see, e.g., De Vries 2012a). The rationale behind such approaches is that despite their apparent structural *status aparte*, parentheticals are pronounced and understood relative to their hosts: they express something about the proposition of the host, such as the level of speaker commitment (as in (2b–d)), or add more specific information about the anchor constituent, as in appositives. Thus, parentheticals show a janus-faced behavior: they are there and they are not there,

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<sup>1</sup> By contrast, right-extraposition is often acceptable. It can however be argued that (apparently) right-extraposed appositions are to be analyzed as afterthoughts, and do not involve rightward movement (see also below). More generally, it seems that right-extraposition of any kind involves base-generation rather than movement; see, e.g., Kluck & De Vries 2013 for recent discussion and further references.

<sup>2</sup> Some approaches, e.g., those developed by Safir (1986) and Espinal (1991), strike a balance between orphan and integration approaches by localizing parenthetical integration at a separate grammatical level beyond the purview of core grammar. This highlights the fact that the boundaries between Sentence and Discourse Grammar are not sharply defined and certainly not given *a priori*.

depending on the criterion used. Capitalizing on this dilemma, De Vries (2007, 2012b) postulates a functional head *Par*, mediating syntactically between a parenthetical constituent and its host clause. *Par*'s complement is the parenthetical expression; its specifier, if present, is an element of the host clause (the 'anchor'). Importantly, *Par* combines with its complement by means of a special kind of Merge (*par*-Merge), which establishes a paratactic rather than a hypotactic relation. This accounts for the structural opacity of parenthetical expressions relative to their hosts, while ensuring their integration at the interface levels (PF and LF). Pott's (2005) 'COMMA feature', and Giorgi's (2012) 'KP' (for *comma phrase*) can be seen as variants of the syntactic approach to parenthesis, which are complemented by special operations in the semantics.

Put simply, the theoretical challenge is the following. If there is evidence suggesting the syntactic integration of parentheticals, this evidence must be reconciled with their clear non-integratedness for various processes typically recognized to be hallmarks of syntax. If, on the other hand, parenthetical integration is taken to be an extra-grammatical phenomenon, the mechanisms giving rise to it must be specified such that they also account for the partially syntactic behavior of parentheticals. In this volume, the issue is addressed most directly in the contribution by **Griffiths & Güneş**, who argue in favor of the syntactic-integration approach based on morphosyntactic evidence from Turkish. They show that a particular morpheme in Turkish has the distribution of an overt exponent of *Par* on De Vries's approach.

Clearly, much work remains to be done before a consensus can be reached. For further discussion, we refer to Haegeman et al. 2009, Shaer 2009, Griffiths & De Vries 2013, Kluck to appear, and Ott 2014.

Beyond matters of syntax, parentheticals pose no less vexing problems for theories of prosody and semantics/pragmatics. It is a traditional observation that parenthetical material is demarcated by intonational breaks (see Nespor & Vogel 1986, Bolinger 1989, Huddleston & Pullum 2002, among others) – but note that so-called 'comma intonation' is certainly not equivalent with simple pauses in the speech signal, though these may show up in some cases. Interestingly, the intonation seems to be the only noticeable difference between Dutch restrictive and appositive relative clauses<sup>3</sup> as in (7), and between the regular adverbial vs. parenthetical use of *honestly* illustrated in (8).

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<sup>3</sup> Contrary to English, Dutch does not have relative clauses introduced by complementizers: in both the appositive and the restrictive case, the relative pronoun is a *d*-pronoun.

- (7) a. *Ik heb de man die op mijn opa leek gegroet.*  
I have the man REL on my grandpa seemed greeted  
'I greeted the man that looked like my grandfather.'
- b. *Ik heb de man, die op mijn opa leek, gegroet.*  
I have the man REL on my grandpa seemed greeted  
'I greeted the man, who looked like my grandfather.'
- (8) a. I am (honestly) interested (\*honestly) in what you're up to.  
b. I am (, honestly,) interested (, honestly,) in what you're up to.

In (7a), the relative restricts the meaning of the relative head, whereas the appositive in (7b) merely adds more specific, but secondary information. In (8a), the adverb *honestly* can only be adjoined to the VP, where it restricts the meaning of the predicate. By contrast, the parenthetical use of *honestly* in (8b) tells us something about the entire speech act, or more specifically the speaker's attitude towards the proposition denoted by the main clause. In addition, it is not bound to a single position, quite unlike its restrictive counterpart in (8a).

However, a distinctive intonation pattern is not a *necessary* condition for a parenthetical status: there are expressions with straightforwardly parenthetical properties, which are nevertheless integrated in some way at the prosodic level. Consider, for instance, the following comment clause and *what*-parenthetical (examples from Dehé 2007; see also Dehé & Kavalova 2006, Döring 2007, and Güneş & Çöltekin to appear for relevant discussion):

- (9) a. It's not recognized I think that many poor counties...  
(it's not recognized I think) (that many poor countries)
- b. You spend what 17,000 pounds on one of these  
(you spend what) (17,000 pounds) (on one of these)

It appears, then, that not even prosodic properties are necessarily constant across all putative cases of parenthesis.

In his contribution to this volume, **Truckenbrodt** argues that each speech act requires a separate intonation phrase. Many parentheticals, including clausal appositives, for instance, do indeed have a strong degree of prosodic and pragmatic independence: on the prosodic side, they define their own intonation phrases and consequently bear sentence stress; on the pragmatic side, they constitute independent speech acts.

## 2.2 Ellipsis

Research on ellipsis traditionally divides into questions of *identification* (or *recoverability*) and questions of *licensing* (see Van Craenenbroeck & Merchant 2013 for a succinct overview). The question of identification concerns the relationship between an elliptical expression and its antecedent: under what conditions can the meaning of the omitted material be recovered from its (linguistic or extra-linguistic) context?

The general consensus is that omitted material (italicized between angle brackets in the examples below) must be *parallel* to a salient antecedent in some sense. Speakers know that the examples in (1) above have the meanings in (1') and *not* those in (1'') or infinitely many others, despite there being no explicit indication of this in the surface form.

- (1')
- a. John kissed Mary, and Peter <kissed> Susan.
  - b. John read three books about ellipsis, and Peter read five <books about ellipsis>.
  - c. John likes Mary, and Bill does <like> Mary, too.
  - d. John likes someone, but I don't know who <John likes>.
  - e. A: Who does John like? – B: <John likes> Mary.
- (1'')
- a. #John kissed Mary, and Peter <adores> Susan.
  - b. #John read three books about ellipsis, and Peter read five <obituaries>.
  - c. #John likes Mary, and Bill does <play chess>, too.
  - d. #John likes someone, but I don't know who <Peter likes>.
  - e. #A: Who does John like? – B: <Peter kissed> Mary.

The role of parallelism is intuitively obvious, but as usual the devil is in the details. By now there exist a wealth of proposals that attempt to spell out this central notion.

Some researchers have advocated a chiefly *semantic* account of parallelism, which holds that elided material must be truth-conditionally equivalent to a salient antecedent (see Merchant 2001 for detailed discussion). Advocates of this view typically cite instances of ellipsis in which omitted material differs morphosyntactically from its antecedent. The following examples, in which italics indicate omitted material, provide sample illustrations:

- (10) a. John has been biking to school, and soon Mary will <bike to school>, too.

- b. A: What did you see?  
B: <I saw> a bear.
- c. This woman could have been murdered by Hannibal, but he chose not to <murder her>.

What such cases show is that mismatches in verbal inflection, coextensive pronouns, and voice do not seem to impinge on parallelism. Merchant (2001, 2004) shows that many cases of this kind can be accounted for by a recoverability condition that treats traces and foci as variables, and requires mutual entailment between the ellipsis site and the antecedent domain.

An alternative view of parallelism holds that omitted material and antecedent must be *morphosyntactically* equivalent, typically assuming some fairly abstract conception of morphosyntax (see, e.g., Tanaka 2011). Evidence in favor of this view comes from cases in which antecedent and ellipsis are semantically equivalent but ellipsis is nonetheless impossible. One such case is the active/passive alternation in sluicing:

- (11) A: John was kissed by someone.  
B: \*Who <kissed him>? / By whom <was he kissed>?

Despite the fact that corresponding active and passive sentences are truth-conditionally equivalent, sluicing does *not* tolerate voice mismatches; this suggests that the parallelism condition must incorporate some component of morphosyntactic identity, including *inter alia* the voice specification of antecedent and elliptical clause. Note how this differs strikingly from what we saw in (10c) with VP-ellipsis, an illustration of the additional complication that different ellipsis types do not necessarily behave alike (see also Merchant 2013 for discussion).

Not unlike what we saw above with parenthesis, then, we are facing a situation in which different types of evidence variously support conflicting conclusions that are not easily reconcilable. Not surprisingly, non-trivial problems arise for all current approaches to ellipsis identification, whether they choose to assign priority to intolerable mismatches or to those countenanced by ellipsis. In any case, the antecedent-ellipsis relation is central to the study of identification.

In the present volume, **Collins et al.**'s contribution addresses questions of ellipsis identification experimentally, in particular the possibility of recovering the meaning of an ellipsis site (abbreviated as  $\Delta$  below) from a parenthetical antecedent, as required in the following case of sluicing:

- (12) Joe, who once killed a man in cold blood, doesn't even remember who  $\Delta$ .

Contrary to claims in the literature, Collins et al. show that speakers find such cases quite acceptable once certain confounds are controlled for, leading them to conclude that the ‘non-at-issueness’ of parentheticals cannot be as absolute as is often held. Their work is thus a particularly clear example of how investigating the interface of parenthesis and ellipsis can yield insights into the general nature of these phenomena.

Questions of *licensing* concern the syntactic environments in which ellipsis is permissible, independently of its recoverability. For instance, while sluicing is generally permitted in embedded questions (as in (1d)), it cannot apply within relative clauses:

- (13) \*John met a guy who smokes filterless cigarettes, and Peter met a girl who  $\Delta$ .

The question is why ellipsis fails in cases like (13), despite the fact that the syntactic configuration is rather similar to (1d) and that nothing should preclude identification of the relevant antecedent material. Researchers have variously sought to locate the relevant licensing factors in the lexicon (by means of featural stipulations, see, e.g., Merchant 2001, 2004, and Aelbrecht 2010 for a generalization to Agree) or in terms of information structure (e.g., Tancredi 1992, Molnár & Winkler 2010). The former approach would hold that the embedded question in (1d) but not the relative clause in (13) is equipped with an ellipsis-licensing head or feature, hence relegating the issue of licensing largely to contingencies of the lexicon. The latter approach could appeal for instance to the fact that the *wh*-phrase remnant in (1d) is a focused constituent (dividing the clause into a focal and a topical domain), whereas its counterpart in (13) is not (cf. Kim 1997).

**Conner**’s contribution to this volume follows the lexical approach and takes ellipsis to be licensed by functional heads, but with an additional proviso. Her claim is based on differences between elliptical and non-elliptical forms in African American English, as exemplified by the following:

- (14) a. Jenny ain’t cracking jokes, but Cindy {is/ $\emptyset$ } cracking jokes.  
 b. Jenny ain’t cracking jokes, but Cindy {is/\* $\emptyset$ }  $\Delta$ .

Based on such contrasts, Conner argues that not only must an ellipsis-triggering feature – dubbed [E] by Merchant (2001) – be present on the functional head adjacent to the ellipsis site for deletion to be permissible, the [E]-bearing head must also be phonetically non-empty.

According to Thoms (2010) and others, a general problem for the currently dominant ‘lexical’ approaches to licensing is their ‘constructional’ character (that is, ellipsis being licensed in environment *X* is explained by appeal to an *X*-specific



feature). Further inquiry will have to show if such approaches can be insightfully supplemented with a more principled theory of licensing, which relate ellipsis to information-structural or other independent factors.

A further central issue concerns the general nature of ellipsis or incompleteness. One prominent perspective, pioneered by Ross (1969) and revived by Lasnik (2001), Merchant (2001, 2010) and others, holds that from a bird's-eye perspective on the overall organization of grammar, ellipsis is a rather superficial *deletion* operation. That is, the core-grammatical computation of elliptical and non-elliptical expressions is identical, but parts of the generated structure can be 'silenced' in the mapping to phonetic form (PF). Evidence for this approach derives largely from properties of ellipsis remnants suggesting their embeddedness in silent clausal structure, such as idiosyncratic morphological case (Van Craenenbroeck & Merchant 2013). In its most radical form, this view would hold that ellipsis *qua* deletion is nothing more than radical deaccenting. See Tancredi 1992 for the original idea, taken up in Chomsky & Lasnik 1993; some problems for the direct equation of ellipsis and deaccenting are discussed in Merchant 2001.

A different perspective, sometimes characterized as a WYSIWYG ('what you see is what you get') approach, takes ellipsis to be anchored more deeply in syntactic representations (see, e.g., Culicover & Jackendoff 2005). On this view, ellipsis indicates literal incompleteness of the expression in question; consequently, the construction of elliptical and non-elliptical structures proceeds in rather different ways. Unlike the deletion approach, this alternative assumes that syntax generates expressions that are non-sentential at all levels of representation, and hence that their semantico-pragmatic content is inferred by means other than assigning the missing parts an inaudible syntactic structure. An example of such an approach is **Larson's** contribution to the present volume, which argues for a WYSIWYG analysis of Right Node Raising constructions such as (15).

(15) Ivan bought  $\Delta$  and Ivy read, the short stories.

The interpretation of the gap in the first conjunct is based on that of the second conjunct, requiring parallel interpretation. Larson argues that absence of material in Right Node Raising cannot not be analyzed as deletion (or rightward movement), but must instead be taken to indicate literal structural incompleteness of the first conjunct.<sup>4</sup> It is only in semantic form that we arrive at a coherent inter-

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<sup>4</sup> As Larson points out, approaches of this kind cannot assume rigid categorial selection within syntax, in order to countenance the generation of incomplete expressions.

pretation of (15), for which, Larson argues, presence of the shared object in only the second conjunct is sufficient.

Deletion vs. WYSIWYG approaches each require a trade-off. Deletion implies the presence of more structure than meets the ear, hence a syntax that is significantly more abstract than its surface expression; this renders straightforward the interpretation of elliptical expressions at the semantic level. WYSIWYG approaches, by contrast, are forced to assume a much more complicated syntax-semantic mapping that reconstructs propositional meanings from syntactic non-sententials. At the same time, however, no abstract syntactic structure is assumed, permitting syntax to be faithful to its surface realization. One should thus not be surprised to find that researchers' advocacy of one or the other theory of ellipsis is typically in tune with – and heavily influenced by – their general linguistic 'world view'.

It should be mentioned that deletion and incompleteness are not the only analytical options for characterizing ellipsis; they are polar extremes on the theoretical map that permit for much middle ground in between. Williams (1977), Lobeck (1995) and Chung et al. (1995), among others, argue that elliptical constituents are syntactically represented as phonetically empty pro-forms, similar to traces as assumed in classical Trace Theory. On this view, then, ellipsis is theoretically modeled as neither deletion nor literal incompleteness, but in terms of empty categories. See Baltin 2012 for a critical discussion of the respective approaches.

Note, finally, that there is of course no *a priori* reason to assume that *all* kinds of elliptical phenomena should receive a unified theoretical treatment. The intuitive identification of different phenomena as instances of ellipsis does not entail the reality of a monolithic phenomenon 'ellipsis'; it is conceivable that the correct theory makes use of an eclectic model incorporating more than one of the options mentioned above. Van Craenenbroeck (2010) provides an elaborate argument for such a differential treatment of two kinds of ellipsis constructions he considers.

As these brief remarks should make clear, the study of ellipsis phenomena cross-cuts various domains of grammar, including pragmatics, phonology, semantics, and (morpho-)syntax. While significantly complicating the phenomenal landscape, it is not least this multi-faceted nature of ellipsis that makes it a fascinating research topic.

### 2.3 Parenthesis and ellipsis

Generally, it is clear that parenthetical expressions may include familiar types of ellipsis in their internal syntax, such as sluicing in (2f) above, or parenthetical-internal stripping:

(16) John – and Bill  $\Delta$  too – loves Mary Poppins.

However, there are also many cases where the analysis is less straightforward. Parenthetical expressions often appear as fragmentary ‘chunks,’ i.e. as intuitively incomplete expressions; recall, e.g., (2d), where an otherwise obligatory object goes missing. We argue that even where incompleteness is not intuitively obvious, theoretical considerations may lead us to postulate ellipsis. One example mentioned above is the case of clause-final afterthoughts, which according to various researchers contain more than meets the eye: what surfaces as a nominal expression is in fact a clause at some level of representation.

On the analysis developed by Ott & De Vries (2012, in press), (2g) and (2i) have a biclausal representation. Starting with the last one, the derivation is roughly as in (17), where PF-deletion in the second clause takes place after A-bar movement of the remnant (here, the afterthought) in syntax, exactly parallel to the situation in sluicing constructions discussed above.

(17) [I saw a scary movie last night] [I saw Jaws tonight] →  
 [I saw a scary movie last night] [Jaws<sub>i</sub> I saw  $t_i$  tonight] →  
 [I saw a scary movie last night] [Jaws<sub>i</sub> <I saw  $t_i$  tonight>]

In such sentences, the afterthought specifies the referent of the correlate (here, *a scary movie*). Attributive afterthoughts as in (2g) are somewhat different. Still, the construction is arguably biclausal, and we can make use of ‘limited ellipsis’, as indicated in (18), where the copular clause undergoes PF-deletion after fronting of the DP predicate:

(18) [I met John last night] [he is [a great chess player]] →  
 [I met John last night] [[a great chess player] he is  $t_i$ ] →  
 [I met John last night] [[a great chess player] <he is  $t_i$ >]

Ott & De Vries thus espouse the deletion approach to ellipsis, and provide evidence in its support directly analogous to that adduced by Merchant (2001, 2004) for sluicing and fragment answers. In a language like German, for instance, it can be shown that afterthoughts of the type in (2i) systematically co-vary in case with their anchor in the host clause. A non-sentential approach would require stipulation of some kind of case-transmission mechanism (see Culicover & Jackendoff 2005 for suggestions along these lines), while this result follows most naturally on the assumption that the elliptical expression underlyingly replicates the entire syntactic structure of the antecedent clause, including the case-assigning predicate.

An extension of such an analysis to nominal appositions as in (2a) then seems quite plausible, and in fact the issue is taken up more fully in **Döring**'s contribution to this volume. On this view, (2a) can have roughly the following structure:

(19) John [[a great chess player]<sub>i</sub> <he is *t<sub>i</sub>*>] likes Mary.

Döring, who discusses various types of interpolated fragments, argues that the heterogeneity of parentheticals is in fact only apparent, given the availability of deletion, and she claims that *all* of them are clausal at an underlying level of representation.

A clausal status for appositives is also advocated by O'Conner (2008) and Heringa (2012). Heringa, suggesting that the difference between predicational and identificational appositions is mainly semantic, proposes a unified copular clause analysis, implemented somewhat differently from the one above. On his approach, appositives are not derived by PF-deletion but are represented as 'impoverished' copular clauses in which both subject (identified as *pro*) and copula are phonetically null:

(20) [*pro* BE apposition]

The cited analyses all agree on the clausal status of such elements, despite the fact that what surfaces is a mere fragment. However, a general and crucial question arising from a comparison of these is how 'incompleteness' in parenthetical contexts is best defined. That is, can we reduce it to familiar types of ellipsis and hence take it to be governed by general principles, or does the phenomenon call for an altogether different treatment and hence for special grammatical machinery in the worst case?

A potential problem for Heringa's approach is the fact that *pro* subjects are otherwise unattested in many of the languages he considers (such as English and Dutch); hence, they must be licensed by some mechanism that is specifically restricted to parenthetical contexts. No such issue arises for the deletion analysis, which assimilates afterthoughts and appositions to sluicing, fragment answers, and other clausal-ellipsis constructions, although it is clear that further inquiry is still necessary.

Another intriguing set of data in the intersection of parenthesis and ellipsis, are so-called 'amalgams' (Lakoff 1974), which appear to be hybrids of main clauses and some intervening chunk. Kluck (2011, 2013) analyzes such constructions (21)–(22) on a par with regular sluices in a PF-deletion approach, i.e. the internal syntax of the interruptive material (indicated by brackets) involves a full CP:

- (21) a. John has kissed [you'll never guess who] yesterday.  
 b. John has kissed [you'll never guess who<sub>i</sub> <*John kissed yesterday t<sub>i</sub>*>] yesterday.
- (22) a. John has kissed [I think it was the Queen] yesterday.  
 b. John has kissed [I think it was the Queen<sub>i</sub> <*that John has kissed t<sub>i</sub>*>] yesterday.

The parallel with regular sluicing in this analysis indirectly extends to the external syntax of the intervening clause: amalgams are a variant of sluiced parentheticals. The latter resemble other types of anchored parentheticals (such as the aforementioned appositives), i.e. the intervening clause is attached at the constituent level. In sluiced parentheticals, the anchor is the correlate of the *wh*-remnant, which happens to be null in amalgams:

- (23) a. John has kissed [someone/*e* [you'll never guess who]] yesterday.  
 b. John has kissed [someone/*e* [I think it was the Queen]] yesterday.

The (null) anchor and intervening clause thus form a complex constituent in Kluck's approach, accounting for the distributional facts that have been observed in the literature on the topic. For an interesting alternative and more discussion of sluicing in amalgams, see Johnson (2013).

VP-ellipsis, too, has been argued to be implicated in the derivation of parenthetical fragments. We mention just two examples. Kayne (1994) suggests in passing to analyze instances of right-dislocation with an overt copula as in (24a) by means of predicate ellipsis (24b). Sailor (to appear) argues at length that tags appended to questions, as in (25a), likewise ought to be analyzed as remnants of VP-ellipsis (25b).

- (24) a. He's real smart, John is.  
 b. [he's real smart] [John is <*real smart*>]
- (25) a. John can go, can't he?  
 b. [John can go] [can't he <*go*>?]

Given that clausal ellipsis and VP-ellipsis plainly do occur in parenthetical contexts (recall sluicing in (2f) and stripping in (16)), these proposals have the virtue of assimilating the postulated parenthetical fragments to more general and independently attested classes of elliptical expressions.

Questions about whether incompleteness is derived by ellipsis also arise with respect to comment clauses such as (26a) and *as*-parentheticals such as (26b), which display an obligatory ‘gap’ that corresponds to a proposition.

- (26) a. John, so I’m told  $\Delta$ , is a great chess player.  
 b. As was predicted  $\Delta$ , it is colder today than yesterday.

Corver & Thiersch (2001) and Potts (2002) maintain that the seemingly empty object position in these examples is occupied by a propositional variable that unsaturates the clause: hence such insertions are treated by these analyses as predicative structures akin to relative clauses. Other approaches posit a null variable but maintain that the parenthetical insertion is itself a root clause (Reis 1995, Steinbach 2007). Such accounts require that the object variable is licensed by extrasyntactic means. Others equate the missing object with a correlative pronoun (Asher 2000) that is optionally phonologically realized when certain prosodic constraints are met (Fortmann 2007). See also Kluck & De Vries to appear for elaborate discussion.

An approach that explicitly states that comment clauses are derived via ellipsis is absent from the literature until recently. This is not very surprising when one considers the scant attention that propositional ‘gaps’ in non-parenthetical environments have so far received. While their status as a surface anaphora (Hankamer & Sag 1976) is uncontested, opinions on the basic issues differ, such as whether *so* – which can be observed in constructions with propositional gaps in both regular (27) and parenthetical environments (26a) – is a propositional anaphor (Ross 1972) or not.

- (27) A: Is John a great chess player?  
 B: So I’m told.

An attempt to resolve the issue is made by Griffiths (to appear), who crucially distinguishes between sentence-related and constituent-related comment clauses. His account of the last type, illustrated in (28), invokes a PF-deletion approach, and in fact extends Kluck’s theory of declarative amalgams. The same procedure that derives embedded fragment answers like (29a) derives corresponding comment clauses, as sketched in (29b).

- (28) Professor Brown is moving to I think Oxford.

- (29) a. A: Where is Professor Brown moving to?  
 B: [I think [[Oxford]<sub>i</sub> <*he is moving to t<sub>i</sub>*>]].

- b. Professor Brown is moving to [somewhere/e [I think Oxford<sub>i</sub> <he is moving to t<sub>i</sub>>]].

This approach thus accords with the idea that incomplete parenthesis is derived by general mechanisms of ellipsis.

It is quite likely that future detailed studies of these and related cases of incomplete parenthesis will shed light on more general questions concerning ellipsis and parenthesis. To mention one further example, Ott (2014) endorses a deletion analysis of appositive NPs, and observes that this modeling of their *internal* syntax has profound implications for their *external* syntax. If parentheticals can be systematically elliptical such that the relevant antecedent is the domain of the host clause in which they are embedded, syntactic integration of the incomplete parenthetical renders deletion *antecedent-contained*, hence irresolvable according to the traditional perspective on ACD (but see Vanden Wyngaerd & Zwart 1999 for an alternative). On the other hand, Griffiths & De Vries (2013) argue forcefully that certain distributional facts about appositive relative clauses can only be accounted for on the assumption that these are syntactically integrated by means of Par-Merge.

The contradictions emerging in this nascent area of inquiry should, we believe, be embraced as interesting challenges for syntactic theory from which much is to be gleaned. The eventual outcome of this debate will bear directly on fundamental questions concerning the repertoire of operations and restrictions of Universal Grammar.

### 3 Outlook

Parenthesis and ellipsis are central topics for linguistic theory, not least because both touch directly upon fundamental questions concerning the organization, limits and expressive power of the mental grammar. In studying the intersection of these two domains, as the articles in this volume do, we hope to ultimately elucidate the principles of natural language that give rise to these phenomena.

As we hope to have conveyed with the above remarks, the study of incomplete parenthesis is an exciting enterprise that cross-cuts all core areas of linguistics, from syntax, phonology, and semantics to pragmatics and discourse analysis. It is therefore an inherently interdisciplinary effort that brings together researchers from various areas of linguistics. The present volume pays tribute to this collaborative program and will, we hope, inspire much fruitful research in the future.

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Julia Bacskai-Atkari

# Parenthesis and comparative operator deletion

**Abstract:** The aim of this article is to provide a theoretical approach towards the syntax of parenthetical constructions in Hungarian introduced by *mint* ‘as’. I will examine their relation to true comparative subclauses (expressing either equality or inequality) introduced by *mint* ‘as/than’. The main focus will be on the deletion of the comparative operator, which will be shown to be optional in comparatives but – if *mint* is not eliminated – impossible in parenthetical clauses. I will show that this is in connection with the presence of a null operator in parenthetical clauses corresponding to the implied subject or the missing object, which rules out the co-occurrence of another operator.

**Keywords:** comparatives, comparative operator, comparative parenthetical clause, complementiser, CP-layer, degree expression, economy, null operator, operator movement, overtiness requirement

## 1 Introduction

One type of parenthetical constructions (*as*-parentheticals) in Hungarian is introduced by *mint* ‘than/as’, in examples such as (1) below:

- (1) *A teknősök, mint tudjuk, szeretik a rákot.*  
the turtles as know.PRS.1PL like.PRS.3PL the shrimp.ACC  
‘Turtles, as we know, like shrimp.’

As for *mint*, it introduces ordinary comparative subclauses too, such as comparative subclauses expressing equality:<sup>1</sup>

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<sup>1</sup> Note that although *mint* in (2) is followed by a single DP, the complement of *mint* is still clausal but the rest of the clause is elided as it is recoverable from the matrix clause; the same applies to the construction given in (3). I will partially return to this issue later on as far as the full clausal structure is concerned but I will not venture to discuss the ellipsis processes in comparative subclauses, since that would be far beyond the scope of the present investigation; but see for

- (2) *Peti olyan magas, mint az apja.*  
 Peter so tall as the father.3SG.POSS  
 ‘Peter is as tall as his father.’

Also, *mint* is responsible for introducing comparative subclauses expressing inequality:

- (3) *Peti magasabb, mint az apja.*  
 Peter taller than the father.3SG.POSS  
 ‘Peter is taller than his father.’

In addition to *mint*, a comparative operator (e.g. *amilyen* ‘how’) may also appear overtly in the subclause: this is optionally present in ordinary comparative subclauses (following *mint*) but it cannot co-occur with *mint* in parenthetical clauses. The question arises why this should be so, that is, where the difference comes from. In what follows I am going to propose that the sequence of *mint* + an overt comparative operator is ruled out in parentheticals due to the presence of a null operator (standing for the missing object).

Finally, I would also like to briefly address the question of how languages without overt comparative operators (e.g. German) behave: as I will show, in these cases there is no interaction between the comparative and the null parenthetical operator in the way it is attested in Hungarian. However, since degree elements may be present in the parenthetical clause outside the comparative subclause, there is an important theoretical conclusion to be drawn here: the size of a comparative parenthetical subclause is not necessarily identical to the comparative subclause itself but may be larger, that is, a matrix clausal degree expression that takes a comparative subclause as one of its arguments.

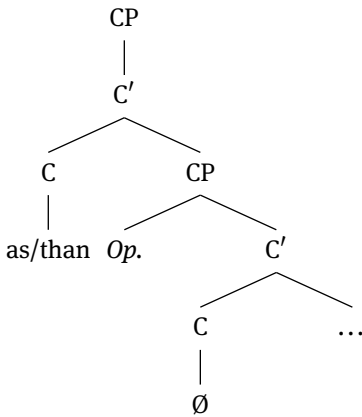
## 2 Operators in comparative subclauses

Following Rizzi (1997, 1999, 2004), I assume that the left periphery of a subordinate clause contains two CP projections – there may of course be other (intermediate)

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instance Bacskai-Atkari and Kántor (2012). What is crucial for us here is that the comparative subclause is clausal, and it contains an operator (the comparative operator) that moves to a left-peripheral – [Spec,CP] – position (see Kennedy 2002; Kennedy and Merchant 2000).

projections too but these will not be important for the present discussion.<sup>2</sup> Consider the following representation:



**Figure 1:** The left periphery of the comparative subclause.

As can be seen, the higher CP in a comparative subclause is headed by the comparative complementiser (*as* or *than* in English) and the lower CP hosts an operator in its specifier position. The operator moves there via ordinary operator movement (cf. Chomsky 1977; Kennedy and Merchant 2000) as the comparative operator is in fact a relative operator.

There are reasons to believe that there is indeed operator movement in the comparative subclause, even if the operator itself is not always visible. One reason is that comparatives obey islands (cf. Kennedy 2002: 557–558, based on Ross 1967; Huddleston 1967; Chomsky 1977; Postal 1998), such as *wh*-islands in (4) below:

- (4) a. \**Frank killed more dragons than  $OP_x$  Margaret wondered [whether to kiss  $t_x$ ].*  
 b. *Frank killed more dragons than  $OP_x$  Margaret wanted to kiss  $t_x$ .*

<sup>2</sup> In the system outlined by Rizzi (1997, 1999, 2004) the two CP projections have distinct functions: the higher one is responsible for Force, while the lower one for Finiteness. I do not wish to examine the question of whether such a stance should be maintained or not; on the other hand, I will not refer to the individual layers as ForceP or FinP for the very reason that I do not think this distinction is necessary at all. What is important for us here is that Force is associated with the higher CP node rather than the lower one, from which it follows that elements responsible for clause-typing are preferably located in the higher CP.

The sentence in (4a) is not grammatical because the bracketed clause *whether to kiss* is a *wh*-island: it is not allowed to extract the comparative operator (*OP*) out of it. By contrast, (4b) is grammatical as there is no island violation there. Similar constraints can be observed regarding complex NP islands:

- (5) a. \**Frank killed more dragons than  $OP_x$  he had outlined [a plan to kill  $t_x$ ].*  
 b. *Frank killed more dragons than  $OP_x$  he planned to kill  $t_x$ .*

Again (5a) is not grammatical because it involves extraction out of an island, the complex NP (DP) *a plan to kill*; by contrast, (5b) is grammatical as there is no island there.

In addition to island violations, overt operators also present evidence for *wh*-movement taking place in the comparative subclause; such operators are realised in the lower [Spec,CP] position. Overt operators are rare in English but in some dialects they are possible, in examples such as (6) below (Chomsky 1977, 87, ex. 51a):

- (6) % *John is taller **than what** Mary is.*

As can be seen, *what* immediately follows *than* in the comparative subclause and is hence located in the lower [Spec,CP] position.<sup>3</sup>

### 3 Comparative subclauses in Hungarian

In Hungarian, the comparative complementiser is *mint* ‘as/than’ (cf. Kenesei 1992). In addition, overt operators can also appear optionally, as in (7):

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**3** The acceptability of *what* as a degree operator shows dialectal and idiolectal variation. Interestingly, English also has the operator *how*, which is clearly a degree operator in interrogatives. On the other hand, *how* is acceptable as a comparative operator only to a limited extent; that is, it is again subject to dialectal and idiolectal variation. Unlike with *what*, however, *how* appears together with a lexical AP in the lower [Spec,CP] position:

- (i) <sup>OK/★</sup> *John is taller **than how tall** Mary is.*  
 (ii) <sup>OK/★</sup> *The table is longer **than how wide** the office is.*

In this case, the operator position is filled not by a single operator but by an operator taking a lexical AP. Though such structures are not widespread in English, they will be shown to be fully grammatical in Hungarian.



- (7) a. *Peti olyan magas, mint (amilyen) az apja.*  
 Peter so tall as how the father.3SG.POSS  
 ‘Peter is as tall as his father.’
- b. *Peti magasabb, mint (amilyen) az apja.*  
 Peter taller than how the father.3SG.POSS  
 ‘Peter is taller than his father.’

As can be seen, the operator *amilyen* ‘how’ can appear after *mint* both in comparatives expressing equality, as in (7a), and in comparatives expressing inequality, as in (7b).<sup>4</sup> Furthermore, *amilyen* may also be combined with a lexical AP, contrary to *what* in English:<sup>5</sup>

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<sup>4</sup> It is worth mentioning that the absence of an overt verb in (7) – as well as in (8) – is not the result of deletion but is merely due to the fact that the 3<sup>rd</sup> person singular copula in the present tense is zero in Hungarian predicative clauses. However, the verb appears overtly if for instance the subclause is in the past tense:

- (i) *Peti olyan magas, mint amilyen az apja volt.*  
 Peter so tall as how the father.3SG.POSS was.3SG  
 ‘Peter is as tall as his father.’

This explicitly shows that such clauses are indeed full clauses.

<sup>5</sup> Note that the same does not apply for *how* as a comparative operator in English, which in fact must take an AP together with it (see the discussion before). On the other hand, there are also other languages that allow similar constructions. Consider the following examples from Dutch:

- (i) <sup>OK/★</sup> *Maria is groter dan hoe groot Jan is.*  
 Mary is taller than how tall John is  
 ‘Mary is taller than John.’
- (ii) <sup>OK/★</sup> *De tafel is langer dan hoe breed het kantoor is.*  
 the table is longer than how wide the.NEUT office is  
 ‘The table is longer than the office is wide.’

As can be seen, the operator *hoe* ‘how’ takes a lexical AP together with it in the [Spec,CP] position. Note that, as indicated, the acceptability of *hoe* in comparatives varies among dialects and speakers, similarly to what was attested for *how* in English. As part of my dissertation project, I conducted a short online survey in August–September 2013 with 70 native participants (many thanks go to Laura Bos and Marlies Kluck for their help in distributing the survey), in which informants were asked to rate sentences on a scale from 1 (bad) to 5 (good). The sentence given in (i) here was accepted as fully grammatical (5) by 16% of the participants, while the sentence given in (ii) by 27%. This shows that even if *hoe* as a comparative operator is not acceptable for all speakers, its acceptability is still significant. Since my aim here is not to investigate comparatives

- (8) a. *Peti olyan magas, mint amilyen (magas) az apja.*  
 Peter so tall as how tall the father.3SG.POSS  
 ‘Peter is as tall as his father.’
- b. *Peti magasabb, mint amilyen (magas) az apja.*  
 Peter taller than how tall the father.3SG.POSS  
 ‘Peter is taller than his father.’

The presence of an overt AP in cases like (8) is optional, but if the AP in the subclause is not e-GIVEN (cf. Merchant 2001), it cannot be eliminated:

- (9) a. *A kutya olyan kövér, mint amilyen \*(széles) a kutyaház.*  
 the dog as fat as how wide the doghouse  
 ‘The dog is as fat as the doghouse is wide.’
- b. *A kutya kövérebb, mint amilyen \*(széles) a kutyaház.*  
 the dog fatter than how wide the doghouse  
 ‘The dog is fatter than the doghouse is wide.’

This means that the quantified expression may remain overt in the [Spec,CP] position in Hungarian irrespectively of whether it is e-GIVEN or not. In (8), the QP *amilyen magas* is e-GIVEN as far it has its logically identical antecedent QP<sup>6</sup> in the matrix clause (cf. Bacskai-Atkari 2010); the same is not true for the QP *amilyen széles* in the subclause, which is not e-GIVEN.<sup>7</sup> However, if the AP is e-GIVEN, then

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in Dutch, I will not venture to analyse and describe the results of the online survey here (for some more details, see Bacskai-Atkari 2014).

<sup>6</sup> The structure of the QP in the matrix clause is the following: [<sub>QP</sub> [<sub>DegP</sub> AP Deg [<sub>CP</sub> *as/than*... ]]]; hence the lexical AP and the comparative subclause are arguments of the Deg head (cf. Lechner 1999, 2004) and there is a QP layer generated above the DegP (cf. Corver 1997; Lechner 1999, 2004).

<sup>7</sup> Note that the same is true for comparatives with *how* in English and ones with *hoe* ‘how’ in Dutch. The pattern is different in Standard English, which does not have overt comparative operators and the higher copy of the degree expression is never realised overtly. In turn, the lower copy is realised only if it is contrastive:

- (i) *Peter is taller than his father is (\*tall).*  
 (ii) *The desk is longer than the office is wide.*

Since it is not my concern to examine the English construction in detail here, I will not venture to go into the details of why this should be so (but cf. Bacskai-Atkari 2010, 2012b). The point is that a lexical AP is licensed to appear overtly in an operator position – that is, in [Spec,CP] – if there is also an overt operator there; languages that do not have this option have to resort to realising lower copies, which has certain restrictions such that only contrastive lower copies are allowed to remain overt, escaping regular deletion of lower copies of a movement chain. The same restriction

the operator is also optional in Hungarian. Note that the presence of an overt AP requires the presence of an overt operator but if the AP is not overt, then the operator is also allowed to be absent. This is essentially an overtness requirement on material appearing in an operator position: if there is overt material realised in an operator position, then it should be introduced by an overt operator.

## 4 Parenthetical clauses and operators

Let us now turn to the investigation of Hungarian comparative parenthetical clauses introduced by the complementiser *mint* ‘as’. On the basis of what has been said about comparative operators, the expectation is that the operator should be optional in parenthetical clauses since there is no matrix clausal antecedent in the form of a QP and there is generally no lexical AP taken by the operator either. This seems to be the case for the element *ahogy* ‘how’, which is normally a VP-modifying adverbial operator and it takes no AP. Consider the following examples:

- (10) a. *A teknősök, mint (ahogy) tudjuk, szeretik a rákot.*  
 the turtles as how know.PRS.1PL like.PRS.3PL the  
 shrimp.ACC  
 ‘Turtles, as we know, like shrimp.’
- b. *Az igazgató, mint (ahogy) elmondta, maga is meglepődött a jó eredményeken.*  
 the headmaster as how said.3SG himself too surprised.3SG  
 the good results.SUPERESSIVE  
 ‘The headmaster, as he said, was surprised by the good results himself.’

As can be seen, the element *ahogy* is indeed optional in comparative parenthetical clauses.<sup>8</sup> However, there is another type of comparative parenthetical clauses,

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does not apply to APs that are introduced by an overt operator since then the highest copy of the movement chain is realised, irrespectively of its information structural status.

<sup>8</sup> This means that both versions of (10a) and (10b) are fully grammatical. Some speakers noted though, especially in connection with (10b), that they prefer the version without *ahogy*: the reason for this is that *ahogy* is redundant since it expresses the same meaning that *mint* does anyway. Nevertheless, its presence was judged to be fully grammatical. Note that since my main concern

which contains the comparative operator *amilyen* ‘how’,<sup>9</sup> which takes a lexical AP and which cannot co-occur with *mint*, as demonstrated by the examples in (11):

- (11) a. *Peti, (\*mint) amilyen magas, be fogja verni a*  
 Peter as how tall PARTICLE AUX.3SG hit.INF the  
*fejét.*  
 head.3SG.POSS.ACC  
 ‘Peter, tall as he is, will hit his head.’
- b. *Peti, (\*mint) amilyen magas ember, be fogja verni a*  
 Peter as how tall person PARTICLE AUX.3SG hit.INF the  
*fejét.*  
 head.3SG.POSS.ACC  
 ‘Peter, tall as he is, will hit his head.’

in the present article is to investigate the internal structure of the comparative parenthetical clause, I am not dealing with the position of the parenthetical clause with respect to the host clause and the examples included in the paper represent the most typical – that is, a clause-internal – position. I also tested examples where the same parenthetical clause either preceded or followed the entire host clause and though these configurations are generally less preferred than the clause-internal ones given in (10), the acceptability of *ahogy* did not show any differences except for the configuration in (10b) with the parenthetical clause fronted. The fronting variants of (10) are shown below:

- (i) *Mint (ahogy) tudjuk, a teknősök, szeretik a rákot.*  
 as how know.PRS.1PL the turtles like.PRS.3PL the shrimp.ACC  
 ‘As we know, turtles like shrimp.’
- (ii) *Mint<sup>2/??</sup> (ahogy) elmondta, az igazgató, maga is meglepődött a jó*  
 as how said.3SG the headmaster himself too surprised.3SG the good  
*eredményeken.*  
 results.SUPERESSIVE  
 ‘The headmaster, as he said, was surprised by the good results himself.’

While in (i) the presence/absence of *ahogy* makes no significant difference, in (ii), the presence of *ahogy* (in addition to *mint*) is actually preferred. I will not venture to examine the reasons for why this should be so but there seems to be a general requirement on the overtiness of otherwise optional complementisers in fronted positions and this phenomenon is not restricted to Hungarian but can be observed in English for *that*-clauses; cf. for instance Poletto (1995) for Italian.

<sup>9</sup> This type is clearly closer to ordinary comparatives than the one containing *ahogy*: as will be shown later on, this also lies in the status of *ahogy*, which will be claimed to be a C head, and *amilyen*, which is a comparative operator essentially in the same way as it appears in ordinary comparatives. However, the two types of parenthetical comparatives are quite similar to each other in several respects, especially as far as the behaviour of the entire parenthetical is concerned: both tend to appear within the host clause in the phonological structure, and the host clause does not contain a matrix pronominal element in either of them.

As should be clear, the lexical AP *magas* (either on its own or modifying a nominal expression) in (11) cannot be deleted, unlike in comparatives, because deletion would affect non-recoverable material. It follows that the operator also has to remain overt, given that an overt AP is located in the [Spec,CP] position, which is an operator position and the presence of an overt operator is required for (other) material to be realised overtly in this position. This explains why *amilyen* is obligatory, unlike *ahogy*, which does not take a lexical AP.

However, the question still remains why *mint* has to be eliminated in structures like (11) since the same phenomenon is not found in comparatives and in parentheticals with *ahogy*: in both cases *mint* is licensed to co-occur with an operator-like element, as shown by the examples in (7)–(10).<sup>10</sup>

## 5 Null operators in parenthetical clauses

In order to provide an answer to this question, let us first briefly review some basic properties of reduced parenthetical clauses (cf. Schneider 2007; De Vries 2007; Ackema and Neeleman 2004; Hoffmann 1998). As is known, in reduced parenthetical clauses (see Reis 1995, Steinbach 2007, Schneider 2007, Griffiths 2013), the verb lacks one of its arguments required by its valency; there is no overt syntactic link to the host they are attached to; the host clause is visible to the parenthetical clause but not vice versa; and finally, one valency requirement of the parenthetical verb is satisfied by the host clause itself. In addition, there are empty operators in parentheticals (Schneider 2007; Heringa 2011), establishing the one-way connection to the host clause. What is important for us here is that in *as*-parentheticals, there is a null operator moving to a [Spec,CP] position and this roughly corresponds to a missing object (Potts 2002: 62). Consider the following example:

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**10** Note that the phenomenon is independent from the relative position of the parenthetical clause; fronting of the parenthetical clause in e.g. (11a) still does not license the overt presence of *mint*:

- (i) (\**Mint*) *amilyen magas, Peti, be fogja verni a fejét.*  
 as how tall Peter PARTICLE AUX.3SG hit.INF the head.3SG.POSS.ACC  
 ‘Peter, tall as he is, will hit his head.’

The importance of this is that while fronting may make an otherwise less preferred (but grammatical) option preferable, as is the case with examples containing *ahogy*, an ungrammatical construction does not converge under fronting either.

- (12) *Cuckoos don't build nests, as Op<sub>1</sub> everybody knows t<sub>1</sub>.*

In this case, there is an operator corresponding to the object argument of the verb and it moves to a left-peripheral position; furthermore, it gets its reference from the entire host clause (*cuckoos don't build nests*).

The presence of this null operator can be well observed in Hungarian parentheticals, where the verb is in the objective paradigm. Consider the following examples:

- (13) a. *A teknősök, mint tudjuk, szeretik a rákot.*  
 the turtles as know.1PL.OBJECTIVE like.3PL the shrimp.ACC  
 'Turtles, as we know, like shrimp.'
- b. *\*A teknősök, mint tudunk, szeretik a rákot.*  
 the turtles as know.1PL.SUBJECTIVE like.3PL the shrimp.ACC  
 'Turtles, as we know, like shrimp.'

The only difference between (13a) and (13b) is in the verb. In (13a), it is in the objective paradigm (*tudjuk*); in (13b), it is in the subjective paradigm (*tudunk*). The fact that the verb must be in the objective paradigm means that there is an object in the clause. Note that some (overt) objects stand with a verb in the subjective paradigms (mostly indefinite nominal expressions), hence the presence of an object does not always require the verb to be in the objective paradigm. However, the entailment is valid vice versa, that is, the objective paradigm occurs only if there is an object. Hence in parentheticals such as (13a) there must be an object that the verb agrees with.

This object is a zero relative pronoun: there is no overt object relative pronoun in Hungarian parentheticals:

- (14) a. *\*A teknősök, mint amit tudjuk, szeretik a*  
 the turtles as what.ACC know.1PL.OBJECTIVE like.3PL the  
*rákot.*  
 shrimp.ACC  
 'Turtles, as we know, like shrimp.'
- b. *\*A teknősök, mint amit tudunk, szeretik a*  
 the turtles as what.ACC know.1PL.SUBJECTIVE like.3PL the  
*rákot.*  
 shrimp.ACC  
 'Turtles, as we know, like shrimp.'

As can be seen, parentheticals containing an overt object relative pronoun (*amit*) are not grammatical, irrespectively of whether the verb is in the subjective or the objective paradigm. This consideration is important also because overt relative pronouns otherwise trigger the subjective paradigm, as shown in (15):

- (15) a. *Ez az, amit tudunk.*  
           this that what.ACC know.1PL.SUBJECTIVE  
           ‘This is what we know.’  
       b. \**Ez az, amit tudjuk.*  
           this that what.ACC know.1PL.OBJECTIVE  
           ‘This is what we know.’

The relative clauses in (15) contain the object relative pronoun *amit* and the grammatical construction is the one in (15a), where the verb is in the subjective paradigm. This shows that overt relative pronouns behave like indefinite nominal expressions and trigger the subjective paradigm. Even though the behaviour of the null parenthetical operator thus may seem to be exceptional, it must be noted that an object can be left unpronounced only if the verb is in the objective paradigm. If not, the referent of the object is not recoverable, while a verb in the objective paradigm associates the unpronounced object with a contextually given antecedent.

The fact that there is no overt object relative pronoun does not exclude the possibility of object resumptive pronouns, which are licensed by the null operator:

- (16) *A teknősök, mint azt tudjuk, szeretik a rákot.*  
       the turtles as that.ACC know.1PL.OBJECTIVE like.3PL the shrimp.ACC  
       ‘Turtles, as we know, like shrimp.’

As can be seen, the pronoun (*azt*) can be present in the parenthetical clause. However, this is not a relative pronoun but a demonstrative and hence is not located in the [Spec,CP] position – accordingly, it does not trigger the subjective paradigm either, as relative operators would.

What is important for us here is that the null operator targets the lower [Spec,CP] position and hence it cannot co-occur with elements that are moving there.

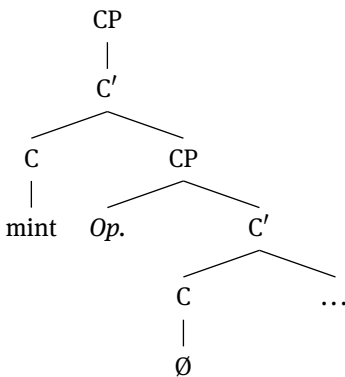
## 6 Multiple operators

Let us now turn to the structure of comparative parenthetical clauses. Recall that comparative operators may appear in parentheticals:

- (17) *Peti, (\*mint) amilyen magas, be fogja verni a*  
 Peter as how tall PARTICLE AUX.3SG hit.INF the  
*fejét.*  
 head.3SG.POSS.ACC  
 ‘Peter, tall as he is, will hit his head.’

As can be seen, an overt comparative operator (*amilyen* ‘how’) can appear in the parenthetical clause. However, it is not allowed to co-occur with the complementiser *mint* ‘as’.

On the other hand, *mint* is a higher C head that can co-occur with the null parenthetical operator located in the lower [Spec,CP] position, in constructions like (13). The left periphery of a parenthetical clause like the one in (13a) is as follows:



**Figure 2:** The left periphery of parenthetical clauses containing *mint*.

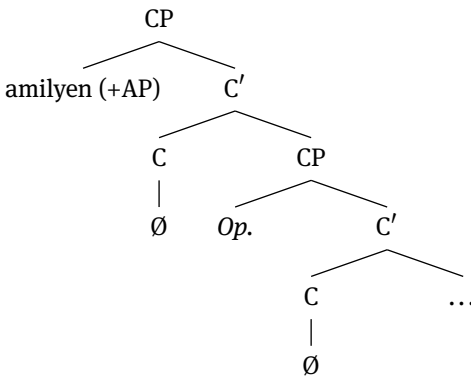
In these cases *mint* is the head of the higher C head and the specifier of the lower CP hosts the zero operator. The representation is parallel to the one for comparative subclauses, as given in Figure 1, where *than* is a higher C head and the comparative operator is located in the lower [Spec,CP] position. Since in Hungarian comparative subclauses *mint* occupies the same higher C head position and an



operator such as *amilyen* is in the lower [Spec,CP], the question arises whether the comparative operator *amilyen* and the null operator are competing for the same position in parenthetical clauses.

Though this may at first seem to be the case, such a claim would be problematic for several reasons. First, *amilyen* may co-occur with the null operator, as shown by (17): it is not the presence of *amilyen* but that of *mint* that is ruled out. Second, *mint* can co-occur with the null operator but not with the comparative operator in parenthetical clauses, as shown by the ungrammaticality of *mint* in (17).

The solution to this paradox lies in the fact that there are two [Spec,CP] positions hence in constructions like (17) there are multiple operators that can be located in the structure in the following way:



**Figure 3:** The left periphery of parenthetical clauses containing two operators.

As can be seen, the higher [Spec,CP] position is filled by the comparative operator *amilyen* (and the lexical AP is also taken there) and the lower [Spec,CP] hosts the null parenthetical operator (standing for the missing object). In this configuration, *mint* is ruled out by economy: the co-presence of an overt head and an overt element in its specifier with similar functions goes against economy. Essentially, *mint* and *amilyen* are both [+compr], and hence they have largely overlapping functions.<sup>11</sup>

<sup>11</sup> This economy principle is traditionally referred to as the Doubly Filled COMP Filter in the CP-domain, even though it can be observed in other projections as well. It has to be mentioned that this should not be viewed as a specific universal rule operating in the same way in all languages: it should rather be understood as a principle that operates in the direction of reducing redundancy,

The question arises why *amilyen* moves up to the higher [Spec,CP] position if it is located in the lower [Spec,CP] in comparatives. The reason behind this is that *amilyen* is equipped with a [+rel] feature that instructs it to move to a [Spec,CP] position and since the lower one is already filled by the null operator, it has to move up to the higher CP node. Note that Hungarian does not allow relative operators to remain in situ (see Bacskai-Atkari 2014); hence movement has to take place overtly before spellout. Moreover, there is also an overtness requirement that holds in the comparative subclause: there has to be an overt element marking [+compr] at the left edge and this overt marker is preferably located at the topmost level, i.e. the higher CP. This overt marker is either the head itself (*mint*) or it can also be an operator (*amilyen*). However, the co-occurrence of *mint* and *amilyen* in parenthetical clauses is ruled out by the economy principles described above.

## 7 Multiple complementisers

The previous section showed that the co-occurrence of *mint* ‘as’ and *amilyen* ‘how’ in a comparative parenthetical clause is ruled out by economy principles. The question arises why *ahogy* ‘how’ may co-occur with *mint* in structures like (10a), repeated here as (18):

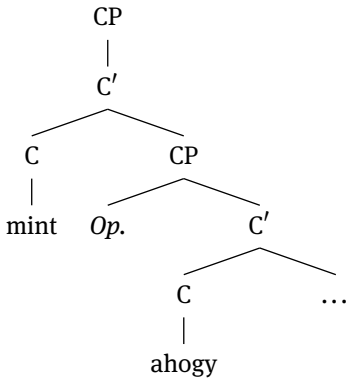
- (18) *A teknősök, mint (ahogy) tudjuk, szeretik a rákot.*  
 the turtles as how know.PRS.1PL like.PRS.3PL the shrimp.ACC  
 ‘Turtles, as we know, like shrimp.’

Unlike *amilyen*, *ahogy* cannot be in the higher [Spec,CP] position since it follows *mint*, which is the higher C head. On the other hand, *ahogy* cannot be in the lower [Spec,CP] either since the null operator is there.

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and as such it interacts with the opposing principle of reinforcement, which favours (multiple) overt marking. On the two principles, see van Gelderen (2004, 2009). As far as Hungarian is concerned, the economy principle mentioned above seems to be strong. For instance, the (suffixal) plural marker and the numeral are mutually exclusive in a similar way, as described by É. Kiss (2002: 152–153). The plural marker (-k ‘-s’) is assumed to be the head of a NumP (Numeral Phrase), which dominates the NP; by contrast, the numeral (e.g., *két* ‘two’, *néhány* ‘some’) appears in [Spec; NumP]. Both of these elements are marked with the feature [+plural] but only one of them may be present in the structure at a time, hence Hungarian has configurations such as *lányok* ‘girls’ and *két lány* ‘two girl’ but not \**két lányok* ‘two girls’.

Instead, I propose that *ahogy* is a grammaticalised (lower) C head and hence the structure is as follows:



**Figure 4:** The left periphery of parenthetical clauses with two complementisers.

As can be seen, in this case both C heads are filled overtly, the higher one by *mint* and the lower one by *ahogy*; the null operator is regularly located in the lower [Spec,CP] position. Let us now turn to the reasons why this should be so.

First, there is no reason to believe that *ahogy* would be an operator: unlike *amilyen*, *ahogy* cannot combine with a lexical AP hence there is no evidence for *ahogy* being phrase-sized. Note that evidence for the phrase-sized nature of a given element implies that the element cannot be a C head, but this is not true vice versa: a phrase can consist of a single head. However, due to reasons of economy, it is preferable for an element to be base-generated as a head instead of undergoing movement (see van Gelderen 2004; on the general preference of Merge over Move, see Chomsky 1995). Based on this, *ahogy* should rather be treated as a C head.

Second, it can be observed that the absence of *mint* results in degraded acceptability, as shown in (19):

- (19) ?/?? *A teknősök, ahogy tudjuk, szeretik a rákot.*  
 the turtles how know.PRS.1PL like.PRS.3PL the shrimp.ACC  
 ‘Turtles, as we know, like shrimp.’

If *ahogy* were an operator, then it would be expected to be able to move up to the higher [Spec,CP] position in the same way *amilyen* does and hence the higher CP would have an overt marker of the [+compr] nature of the clause. However,

this is not so since *ahogy* as a head does not normally move up to the Force-marking higher C head. This leaves two options, both of which result in degraded acceptability: *ahogy* as a lower C head moves up to the higher C in order to satisfy the overtness requirement, which then includes an additional movement step, or *ahogy* stays in the lower C position and hence the higher CP node lacks an overt marker.

Third, the properties of *ahogy* make it possible for it to be a C head since it does not have features that would be incompatible with a C head in Hungarian: this is an instance of grammaticalisation of an original operator into a complementiser, which is, as has already been mentioned, more economical than movement. This kind of grammaticalisation is in fact a standard one and can be observed in earlier stages of the Hungarian language as well, that is, for other complementisers that grammaticalised during Old and Middle Hungarian (cf. Bacskai-Atkari 2012a). The process by and large corresponds to the relative cycle, as described by van Gelderen (2004, 2009) and Roberts and Roussou (2003), among others.

Hence it can be concluded that in parenthetical clauses containing *mint* and *ahogy* there are two overt complementisers.

## 8 German comparatives

Let us now turn to the investigation of German comparative parenthetical clauses, with the aim of showing that languages without overt comparative operators do not show the same interaction effects that Hungarian does. First of all, let us briefly discuss the basic facts about German comparative structures.

In (Standard) German, just like in English, there are two comparative complementisers. One is *wie* ‘as’, which appears in comparatives expressing equality, selected for by the degree element *so* ‘so’ in the matrix clause:

- (20) *Peter ist so groß wie Paul.*  
 Peter is as tall as Paul  
 ‘Peter is as tall as Paul.’

The other complementiser is *als* ‘than’, which introduces comparative subclauses expressing inequality and is selected for by the comparative degree morpheme (*-er*) in the matrix clause:

- (21) *Peter ist größer als Paul.*  
 Peter is taller than Paul  
 ‘Peter is taller than Paul.’

Furthermore, German has no overt comparative operators; historically, *wie* ‘how’ was an operator but it has been reanalysed as a C head and this is so even if it co-occurs with *als* (cf. Jäger 2012) in constructions such as (22):

- (22) %*Peter ist größer als wie Paul.*  
 Peter is taller than how Paul  
 ‘Peter is taller than Paul.’

As indicated, the acceptability of structures like (22) varies, depending on the dialect and the speaker;<sup>12</sup> nevertheless, in such cases there are two overt C heads and there is no overt comparative operator.

That *wie* is a complementiser and not an operator in structures like (22) becomes evident when considering cases where there is an overt AP in the subordinate clause. Consider the following examples:

- (23) a. %*Der Tisch ist länger, als wie das Büro breit war.*  
 the.MASC table is longer than how the.NEUT office wide was.3SG  
 ‘The table is longer than the office was wide.’  
 b. \**Der Tisch ist länger, als wie breit das Büro war.*  
 the.MASC table is longer than how wide the.NEUT office was.3SG  
 ‘The table is longer than the office was wide.’

As can be seen, the sentence in (23a) is acceptable in the same way as (22), that is, speakers who accept (22) also accept (23a) and to the same extent. In this case, the AP *breit* ‘wide’ is in its base position. By contrast, in (23b) *breit* is in a left-peripheral position and the sentence is ungrammatical.<sup>13</sup> If *wie* were an operator then (23b) should be grammatical since if the operator licenses an AP, then it should be able to move together with it. Note that cross-linguistically there are operators that allow the stranding of the AP. However, these also allow the movement of the AP together with the operator – hence (23a) cannot be the result of

<sup>12</sup> This kind of variation is not restricted to present-day German but is well documented for 19th-century language users as well, see Elspaß (2002: 54–61).

<sup>13</sup> Note that while the comparative subclauses in (23) indeed show the full structure, (22) lacks not only the overt adjective but also the copula. Unlike in English, where the overt copula is allowed even in elliptical clauses (e.g. *Ralph is taller than Michael is*), German does not allow the presence of an overt copula after an ellipsis gap (hence the ungrammaticality of \**Ralf ist größer als Michael ist*). However, this is true for German in general and is not related to any special property of comparatives; therefore I do not wish to elaborate on this issue any further, since it has no bearing on the analysis presented here.

*wie* moving out without the lexical AP. On the other hand, *wie* is obviously not an operator like *what* either since then (23a) should again not be grammatical: operators that do not take an overt lexical AP at all do not allow the presence of an AP in any position. All this points to the conclusion that *wie* is indeed a (lower) C head and hence the comparative operator itself is zero – consequently, the higher copy of the degree expression is not allowed to be realised overtly.

What this means for comparative parenthetical clauses is that no interaction is expected between complementisers and (comparative) operators, at least not in the way Hungarian has it.

## 9 German parentheticals

In German *as*-parentheticals are introduced by *wie* ‘as’. Consider (24):

- (24) *Schildkröten mögen, wie man weiß, Schrimps.*  
 turtles like.3PL as PRONOUN knows shrimps  
 ‘Turtles, as we know, like shrimps.’

The structure of the left periphery of the parenthetical clause in (24) should be identical to the one given in Figure 2 for Hungarian *mint*-parentheticals, thus as in Figure 5:

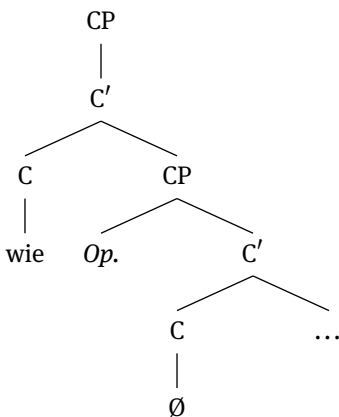


Figure 5: The left periphery of parenthetical clauses containing *wie*.

As shown, *wie* is a higher C head and the null parenthetical operator is located in the lower [Spec,CP] position. The absence of overt comparative operators rules out the presence of overt APs in the [Spec,CP] position.

However, it is possible to have parenthetical clauses introduced by degree items: *soviel* ‘as much’ or *soweit* ‘as far’ can occur in parentheticals, in examples such as (25):

- (25) a. *Schildkröten mögen, **soviel** man weiß, Schrimps.*  
 turtles like.3PL as.much PRONOUN knows shrimps  
 ‘Turtles, as far as we know, like shrimps.’  
 b. *Schildkröten mögen, **soweit** man weiß, Schrimps.*  
 turtles like.3PL as.far PRONOUN knows shrimps  
 ‘Turtles, as far as we know, like shrimps.’

The C head *wie* cannot co-occur with the elements *soviel* and *soweit* in comparative parentheticals:

- (26) a. \**Schildkröten mögen, **soviel wie** man weiß, Schrimps.*  
 turtles like.3PL as.much how PRONOUN knows shrimps  
 ‘Turtles, as far as we know, like shrimps.’  
 b. \**Schildkröten mögen, **soweit wie** man weiß, Schrimps.*  
 turtles like.3PL as.far how PRONOUN knows shrimps  
 ‘Turtles, as far as we know, like shrimps.’

However, the reason why *soviel* and *soweit* cannot co-occur with *wie* is not the same reason for which *amilyen* ‘how’ cannot co-occur with *mint* ‘as’ in Hungarian and this is so because *soviel* and *soweit* are not located on the left periphery of comparative subclauses.

Firstly, *so* ‘as’ in comparatives is a degree element in the matrix clause:<sup>14</sup>

- (27) a. *Hans hat **so** viel Geld [**wie** Peter].*  
 Hans has as much money as Peter  
 ‘Hans has as much money as Peter.’

<sup>14</sup> The analysis here follows general assumptions about the syntactic structure of equatives, see for instance Lechner (1999, 2004), Kennedy (2002), and also Bresnan (1973); for a recent analysis, see Bacskai-Atkari (2014). Again, since this paper is not devoted to the structure of degree expressions in particular, nor do I wish to elaborate on the semantics of structures involving *so*, I will not go into further details concerning these issues.

- b. *Hans ist so fleißig [wie Peter].*  
 Hans is as diligent as Peter  
 ‘Hans is as diligent as Peter.’

In these cases *so* is a degree expression in a matrix clause that takes the comparative subclause (*wie Peter*) as one of its arguments (note that the comparative subclause is regularly dislocated to the right). Similarly, the elements *soviel* and *soweit* are not in the comparative subclause itself but they are nevertheless part of the parenthetical clause, which is hence bigger than a CP. The same can be observed in English:

- (28) *Turtles, as far [as we know], like shrimps.*

In the English example in (28) the first *as* is a degree head in the matrix clause and its clausal complement is the subordinate clause introduced by the C head *as*.

As should be obvious, there are differences in selectional restrictions: in English, *as* selects a CP headed by *as* both in comparatives and in comparative parentheticals; in German, *so* selects a CP headed by *wie* in comparatives while *soviel* and *soweit* select a CP headed by a zero C head in comparative parentheticals.<sup>15</sup>

One important conclusion to be drawn is that a comparative parenthetical clause is not necessarily only a comparative subclause (CP) but it can also be a comparative QP (quantifier phrase) taking a CP complement:

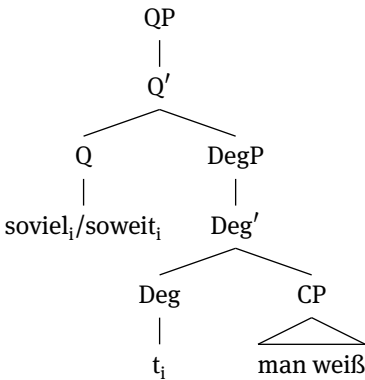


Figure 6: The structure of parenthetical clauses containing *soviel/soweit*.

<sup>15</sup> Note that selectional restrictions hold between the Deg head and the comparative subclause anyway: in English, the Deg head *as* selects for an *as*-CP while a comparative Deg head (*-er*) selects for a *than*-clause, cf. Bhatt and Pancheva (2004: 3), Bresnan (1973).



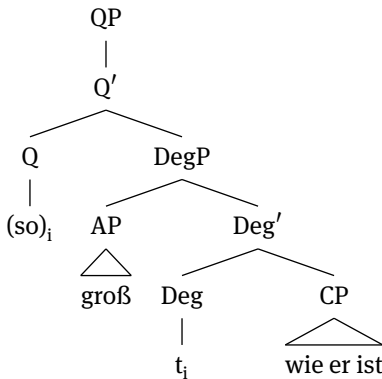
In (28), the QP is actually more complex than just the degree element since it contains *far* as well. The same can be observed in German in constructions like (29), where a lexical AP can also be present:

- (29) *Peter, ( ?so) groß wie er ist, wird sich den Kopf*  
 Peter as tall as he is will.3SG himself the.MASC.ACC head  
*anschlagen.*  
 hit.INF  
 ‘Peter, tall as he is, will hit his head.’

As can be seen, the quantifier expression in the matrix clause may contain both the degree element *so* and the lexical AP (*groß*) though the presence of the degree element in these cases is slightly marked. Nevertheless, the AP is clearly not in the subordinate clause. The same applies to the English counterpart of (29), given in (30):

- (30) *Peter, tall as he is, will hit his head.*

Again, since *tall* in (30) precedes the C head *as*, it cannot be located in the comparative subclause but is nevertheless part of the parenthetical clause:



**Figure 7:** The structure of German parenthetical clauses containing a lexical AP.

This shows that the degree elements in German (and English) comparative parenthetical clauses are not in the CP-domain, unlike in Hungarian. The reasons behind this are that these degree elements are not operators and that the AP is licensed without an overt degree operator, which would not be possible in a [Spec,CP] position.

## Conclusion

The aim of the present article was to investigate the internal structure of comparative parenthetical clauses in Hungarian, with particular attention to the left periphery of the clause and to examine how the presence/absence of overt degree elements and lexical APs relate to similar structures found in other languages, such as German or English. It was shown that comparative parenthetical clauses in Hungarian contain two operators, the comparative operator and the null (parenthetical) operator and that these can co-occur in two distinct [Spec,CP] positions.

There are hence three possible configurations as far as the left periphery of Hungarian comparative parenthetical clauses is concerned. First, a comparative parenthetical clause may contain two operators: an overt comparative operator and the null operator. Second, it is possible to have the overt complementiser *mint* ‘as’ in the structure alongside the null operator. Third, there can be two overt C heads (*mint* and *ahogy* ‘how’) in addition to the null operator. All other configurations are ruled out by economy principles; hence their impossibility follows from general mechanisms and do not have to be treated as exceptional.

Another important conclusion is that a comparative parenthetical clause is not necessarily only a CP but it can also be a QP taking a CP, as in German or English. In these cases the degree element is located outside of the comparative subclause but still within the parenthetical clause; furthermore, an overt functional degree head in itself suffices as the overt marker of the [+compr] nature of the parenthetical clause and hence no overt [+compr] C head or operator is needed.

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# Sluicing and the inquisitive potential of appositives

**Abstract:** This paper investigates experimentally the generalizations made in AnderBois (2010, 2011, 2014) that a sluice may never take an appositive clause as its antecedent. We find that experimental participants rated sentences with sluice-antecedents in appositives as acceptable. We highlight two factors which influence the acceptability of appositive antecedents for sluices: whether the indefinite NP antecedent and the stranded *wh*-item include descriptive content (e.g., *a man*, *which man*), and whether the appositive clause engages with an issue raised in the preceding context. We argue that AnderBois’s claim that appositive clauses are conventionally unable to antecede sluices is too restrictive and suggest that any theory of sluicing must allow appositive clauses to antecede sluices.

**Keywords:** ellipsis, sluicing, appositives, Inquisitive Semantics, experimental pragmatics

## 1 Introduction

On the basis of experimental data, this paper investigates the extent to which non-restrictive relative clauses (or appositive clauses) are able to license sluicing. We find that experimental participants allow sluices to take appositive clauses as antecedents contra the generalizations made by AnderBois (2010, 2011, 2014).

On the basis of these findings, we question AnderBois’s arguments concerning the semantics of appositives. Under AnderBois’s view, framed within the Inquisitive Semantics (IS) framework (Groenendijk and Roelofsen 2009, *inter alia*), a sentence may antecede a sluice only if it denotes a proposition which raises *issues* into the discourse context (in IS terminology: an inquisitive proposition). In IS, a proposition is inquisitive if it presents conversational participants with a choice between multiple alternative updates to their shared information state. As appositives are putatively unable to antecede sluices, AnderBois concludes that they conventionally denote non-inquisitive propositions. As we find that appositives are often able to antecede sluices, we argue that imposing a conventional rule limiting the inquisitive potential of appositive content is unwarranted.

The initial data-point under discussion comes from AnderBois (2010), who states that appositive clauses make bad antecedents for sluiced clauses. AnderBois gives the example and judgement in (1a), contrasted with a putatively acceptable example without an appositive clause in (1b).

- (1) (a) #*Joe, who once killed a man in cold blood, doesn't even remember who.*  
 (b) *Joe once killed a man in cold blood and he doesn't even remember who.*

Under AnderBois's theory of sluicing, the sentential component of an interrogative clause is deleted if its semantic content matches a question currently active in the discourse. The contrast between (1a) and (1b) motivates AnderBois's definition of a conventional rule of interpretation for appositives. His rule has the effect of removing the potential of the appositive clause to raise a question into the discourse context and thereby removes its potential to antecede a sluice.

We ran an experiment testing the judgement in (1a) and found that participants did accept sluices which took an appositive clause as their antecedent. We further show results suggesting that a number of factors influence the acceptability of appositive antecedents to sluices. Firstly, our results suggest that where the indefinite NP antecedent (the correlate) and the stranded *wh*-item (the remnant) are both contentful (both contain lexical NPs), participants are more likely to accept sluices taking appositives as antecedents. Secondly, our results suggest that participants are more likely to accept sluices taking appositives as antecedents if the appositive engages with the preceding context. (2) provides an example which experimental participants rate as acceptable.

- (2) **Context:** *Many confidential documents have gone missing.*  
**Stimulus:** *My assistant, who was accused of losing an important paper, can't figure out which paper.*

We therefore argue that AnderBois's generalization that appositives are conventionally unable to antecede sluices is too strong. We suggest that if we assume that sluicing is a reliable diagnostic for determining whether a linguistic expression raises issues into the discourse context, appositive clauses must have the potential to raise such issues. We also make the general observation that any study concerning the grammaticality judgements of sentences containing sluices must reliably control for the lexical content of the correlate and remnant.

The structure of the paper is as follows. In Section 2, we outline contemporary approaches to sluicing including those which assume that sluices take their antecedent from a currently active issue (or question under discussion) in the discourse. In Section 3, we introduce contemporary theories of appositive content,

specifically noting where they differ in their characterization of the issue-raising potential of appositive clauses. Section 4 describes our experiment and the results, showing that participants were willing to rate sentences where appositives antecede a sluice as acceptable. We discuss these results and how they bear on theories of appositive content. We suggest that the semantics of appositives must not conventionally block the appositive from raising issues into the discourse context. Section 5 concludes.

## 2 Sluicing and issues

Sluicing is a variety of ellipsis in which the sentential component of an interrogative clause is silent, stranding a *wh*-item (Ross 1969).

- (3) (a) *At times it would appear that she is embracing somebody but it is never clear **who**.*  
           (P. Whitehead, *Incomplete Projects: "Dora," Film Treatment*, 2011)
- (b) *Lily could be a snob about a lot of things, but it wouldn't be smart to bet on **what**.*     (A.D. Johnson, *Wicked City: A Zephyr Hollis Novel*, 2012)
- (c) *The question seemed impolite. I can't explain exactly **why**.*  
           (A. Tyler, *The Beginner's Goodbye: A Novel*, 2012)

Each example in (3) is interpreted as if there is a complete interrogative clause corresponding to the non-sluced examples in (4). Throughout this paper, we refer to the interrogative clause which is interpreted at the site of the stranded *wh*-item as the *sluiced clause*. We refer to any linguistic expression from which the semantic content of the sluiced clause is derived as the *antecedent clause*. Any indefinite NP within the antecedent clause which triggers the sluice is the *correlate* while the *wh*-item stranded by the elision is the *remnant*.

- (4) (a) *At times it would appear that she is embracing somebody but it is never clear **who** [it would appear that she is embracing].*
- (b) *Lily could be a snob about a lot of things, but it wouldn't be smart to bet on **what** [Lily could be a snob about].*
- (c) *The question seemed impolite. I can't explain exactly **why** [the question seemed impolite].*

Analyses of sluicing phenomena agree that its occurrence is licensed by some kind of redundancy of the sluiced clause. Analyses differ, however, in terms of

their characterization of this redundancy. Following much work on the licensing of ellipsis (e.g., Sag and Hankamer 1984; Merchant 2001; Culicover and Jackendoff 2005; AnderBois 2011; Sag and Nykiel 2011), we characterize this redundancy in terms of meaning rather than syntactic form. The sentential component of an interrogative may be elided only when its semantic content is recoverable from the previous discourse (Ginzburg and Sag 2000; Culicover and Jackendoff 2005; AnderBois 2011; Ginzburg 2012).

## 2.1 Deletion and symmetric entailment

One particularly influential implementation of this idea comes from Merchant (2001). Like Ross (1969), Merchant characterizes sluicing as a deletion operation, rendering the IP constituent of an interrogative as silent. Merchant proposes that the deletion is licensed so long as particular entailment relations exist between the interrogative and preceding linguistic material.

For Merchant, sluicing may take place if the elided clause and an antecedent clause symmetrically entail each other (modulo existential closure). Illustrating with a simple example, in (5) the antecedent and elided clauses are in square brackets, labelled  $IP_A$  and  $IP_E$  respectively.

- (5) [ $IP_A$  *Kim likes somebody*] *but I don't know who* [ $IP_E$  ~~*Kim likes*~~].

The condition under which the deletion may take place is fundamentally semantic, stated below.

- (6) A clause  $IP_E$  may be elided iff:
- (a)  $IP_E$  has a salient antecedent  $IP_A$ , and modulo  $\exists$ -type shifting,
  - (b) the F-closure of  $IP_E$  is entailed by  $IP_A$ , and
  - (c) the F-closure of  $IP_A$  is entailed by  $IP_E$ .

F-closure is an operation which replaces the focus marked constituents in a clause with existentially bound variables. Assuming that the indefinite correlate *somebody* in (5) is focus marked, and that F-closure serves to existentially bind *wh*-traces, the F-closures of  $IP_A$  and  $IP_E$  are shown in (7). As the F-closures of  $IP_A$  and  $IP_E$  are equivalent, the symmetric entailment condition on ellipsis in (6) is satisfied, and sluicing may take place.

- (7) (a)  $F-CLO(IP_A) = \exists x. \text{Kim likes } x$   
 (b)  $F-CLO(IP_E) = \exists x. \text{Kim likes } x$



AnderBois (2010, 2011) points out that Merchant's theory of truth-conditional entailment wrongly predicts the acceptability of the following data.

- (8) (a) \**[It's not the case that no one left] but I don't know who [~~t~~left]*  
 (b) \**It's not the case that John didn't meet with a student, but Fred still wonders who [~~John met with t~~].*  
 (c) A: *The cake was eaten.*  
 B: \**Who [~~t ate it~~]?*  
 (AnderBois 2010a: 2)

AnderBois claims that Merchant's theory predicts that any antecedent clauses with existential truth conditions should license sluicing. Why then do double negation (8a–b) and passivization (8c) block sluicing? To remedy the symmetric entailment account, AnderBois strengthens the symmetric entailment condition in (6) by stating that the symmetric entailment should not only include truth-conditional entailment, but the two clauses should also raise the same *issues* into the discourse. Under this account, he claims that doubly negated clauses and clauses with passivization raise non-identical issues to the would-be elided clauses.

## 2.2 The Inquisitive account

AnderBois states that sluicing requires mutual truth-conditional entailment between the two clauses, and semantic isomorphy between any *issues* raised by the clauses. This statement adopts central assumptions within Inquisitive Semantics (IS) about the structure of discourse and the semantic types of propositions. The relevant assumptions are briefly enumerated here.

In IS, an *issue* is a request for information made by a speaker to the conversational participants. In making this request, the speaker asks the participants to reduce their mutual knowledge to a smaller space of alternatives. Both declarative and interrogative sentences in IS may raise issues into the discourse context.

The information state shared by the conversational participants is represented by a set of possible worlds. The act of raising and resolving an issue has the effect of enhancing the information state by reducing it to a smaller set of possible worlds. A proposition is represented as a downward closed set of the possible enhancements of the information state that the proposition can make. The semantic type of a proposition is therefore a set of sets of possible worlds.

Given that propositions are a higher type (of type  $\langle st, t \rangle$ ) than in traditional frameworks, the ways in which two propositions may be semantically isomorphic

is expanded. Two propositions  $A$  and  $B$  may be *truth-conditionally* equivalent if they exclude or falsify the same set of worlds, that is,  $\cup[A] = \cup[B]$ . However, despite being truth-conditionally equivalent,  $A$  and  $B$  may or may not raise the same issues into the discourse context.

AnderBois's condition on sluicing is identical to Merchant's in (6), except that AnderBois's definition of entailment is couched within the IS system. As in Merchant (2001), a clause may be elided just in case the F-closure of that clause and the F-closure of a salient antecedent clauses symmetrically entail each other. However, they must entail each other in terms of both their truth-conditional content and the issues they raise into the discourse context. AnderBois proposes the definition of entailment in (9). A proposition  $A$  may only entail a proposition  $B$  if every set of worlds (a classical proposition) in  $A$  is a subset of a possibility in  $B$ . The definition is therefore sensitive to the internal structure of  $A$  and  $B$ . It is also crucial to note that AnderBois assumes that both  $A$  and  $B$  must be expressed linguistically and thus categorizes sluicing as a variety of surface anaphora (as in Hankamer and Sag (1976), but contra Ginzburg and Sag (2000)).

(9) **Entailment** (AnderBois 2010: 7):  $A$  entails  $B$  iff  $\forall p \in [A] : \exists q \in [B] : p \subseteq q$

The proposal relies on a key distinction made in IS concerning their typology of propositions. In IS, a proposition may be *inquisitive* or *non-inquisitive*. An IS proposition is *inquisitive* just in case it does not contain one member possibility which includes all other member possibilities — there is no single maximal possibility.

(10) **Inquisitive** (Ciardelli et al. 2012: 9): A proposition  $A$  is *inquisitive* iff  $\cup[A] \notin [A]$

A proposition with widest scope existential quantification is inherently inquisitive in this system. Existential quantification invites the conversational participants to resolve the identity of the bound variable by raising an alternative proposition for each contextually relevant individual. Consider a simple example below where an existentially quantified sentence is interpreted relative to a model with three relevant individuals.

(11)  $[\exists x.\text{leave}(x)]^M = \{[\text{John leaves}]^M, [\text{Mary leaves}]^M, [\text{Sue leaves}]^M\}$

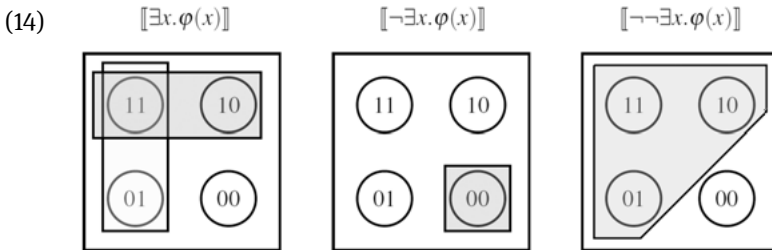
As there is no one possibility which is entailed by all the other possibilities, the proposition is inquisitive. It is helpful to now work through an example of sluicing.

- (12) *Someone<sub>F</sub> leaves but I don't know who* [t leaves].  
 (assume *someone* is F-marked)  
 $[\exists x.leave(x)]$  but I don't know who  $[\exists x.leave(x)]$   
 (replace F-marked constituents and *wh*-traces  
 with existentially bound variables)

As the bracketed clauses entail each other in terms of their truth-conditional and issue-raising content (both being interpreted relative to  $M$  as in (11)), sluicing is licensed. Now consider the case of double negation.

- (13) [*It's not the case that no one leaves*] but I don't know who [t leaves].<sup>1</sup>  
 $[\neg\neg\exists x.leave(x)]$  but I don't know who  $[\exists x.leave(x)]$   
 (replace *wh*-traces with existentially bound variables)

In terms of truth-conditional content, the bracketed clauses are equivalent – they falsify the same set of worlds. However, under the IS framework, the two clauses differ in their inquisitive content. In order to see this, it is helpful to represent the negation operation pictorially (image from AnderBois 2010: 10).



The negation of a proposition  $\phi$  is interpreted as the maximal set of worlds which are falsified by  $\phi$ . Adding a second negation has the effect of creating a single maximal set of all worlds compatible with  $\phi$ . Recall that a proposition is only inquisitive if it does not include a single maximal possibility. As double negation has the effect of adding a single maximal possibility, double negation always has the effect of destroying the inquisitive potential of any proposition. The bracketed clauses in (13) differ in terms of their inquisitive potential and fail to entail each other under the definition in (9) and the sluice therefore does not go through.

<sup>1</sup> AnderBois is unclear about the F-marking in the double negated clause. We assume that he intends there to be no F-marking in the antecedent clause.

AnderBois extends this analysis to passives. The passive version of the verb existentially binds the agent argument with a non-inquisitive existential quantifier. The IS logic provides the doubly negated existential in (14) as a way of formalising the intuition that the implicit agent of a passive is a non-inquisitive indefinite. AnderBois therefore analyses the semantics of the passive as the binding of the agent argument of a transitive with an existential quantifier scoping under double negation. This provides a unified account as to why neither the passive sentences below nor the doubly negated sentences in (13) may antecede a sluice. The passive antecedent clause in (15) is semantically non-identical to the active elided clause and fails the entailment condition in (9).

- (15) *The cake was eaten but I don't know who ate the cake.*  
 [*The cake was eaten*] *but I don't know who* [t *ate the cake*]<sup>2</sup>  
 [ $\neg\neg\exists x.ate.the.cake(x)$ ] *but I don't know who* [ $\exists x.ate.the.cake(x)$ ]  
 (replace *wh*-traces with existentially bound variables)

Expanding the view of semantic isomorphism and stipulating particular semantics for negation and passives, AnderBois provides an analysis of sluicing which accounts for some troubling data for Merchant's analysis. The next section of this paper deals with his generalization that appositive clauses are likewise unable to license sluices and his proposed semantics for appositive clauses.

### 3 Appositive content

Emerging from AnderBois's analysis is the notion that sluicing may provide a diagnostic for whether a clause denotes an inquisitive or non-inquisitive proposition. The proposal states that if an antecedent clause and an elided clause are truth-conditionally equivalent but sluicing fails, the two clauses must raise different issues – for example, if the antecedent clause is non-inquisitive.

Given his intuitions about the contrast in (1), repeated below, AnderBois surmises that appositive clauses are non-inquisitive and therefore are unable to raise issues.

- (16) (a) #*Joe, who once killed a man in cold blood, doesn't even remember who.*  
 (b) *Joe once killed a man in cold blood and he doesn't even remember who.*

---

<sup>2</sup> Again we assume that AnderBois intends there to be no F-marking in the passive antecedent clause.

His formalization of this intuition comes in the form of a conventional rule by which appositives are interpreted. Under this analysis, an appositive clause is interpreted under the scope of an operator (termed *COMMA*). This operator has the function of type lowering a set of sets of worlds, returning a set of worlds (AnderBois 2010: 14). Note that AnderBois’s *COMMA* operator differs from the *COMMA* operator in Potts (2005), which has no type-lowering effect on the appositive meaning.

$$(17) \quad \llbracket \text{COMMA}(\phi) \rrbracket = \{w \mid \exists p \in \llbracket \phi \rrbracket : w \in p\}$$

Sluicing fails due to the non-identical inquisitive structure of the antecedent appositive clause and the elided clause.

- (18) *Joe, who once killed a man<sub>F</sub> in cold blood, doesn’t even remember who [he once killed t in cold blood].* (assume a man is F-marked)  
*Joe<sub>e</sub>, [COMMA(∃x.Joe once killed x in cold blood)], doesn’t even remember who [∃x.Joe once killed x in cold blood].*  
 (replace F-marked constituents and *wh*-traces with existentially bound variables)

The two bracketed sentences have different inquisitive structures. In fact, the semantic types are different. Under the *COMMA* operator, the appositive clause is a classical proposition. It is not a proposition in the sense of Inquisitive Semantics (it is not a downward closed set of enhancements of the information state). The elided clause on the other hand is an inquisitive proposition, raising alternatives into the discourse context. As the single possibility denoted by the appositive clause does not entail any possibility denoted by the would-be elided clause, sluicing is not possible.

AnderBois’s analysis makes a strong claim about the discourse potential of appositive clauses by stating that they are conventionally unable to raise issues into the discourse context. AnderBois, Brasoveanu, and Henderson (2011) (henceforth ABH) expands this point of view. ABH propose a conventional distinction between main clause content and appositive content. Main clause content is a *proposal* to update the common ground, while appositive content is *imposed* on the common ground. Conversational participants are not invited to negotiate the adoption of appositive content into the common ground.

The putative inability of a sluiced clause to take its antecedent across an appositive clause boundary is surprising, considering the wealth of semantic operations which are able to take place between an appositive clause and its main clause syntactic host. Potts (2005), Nouwen (2007) and Amaral et al. (2007) show

that presupposition and anaphora may operate across an appositive boundary. Some examples from ABH illustrate this. In (19), the presupposition triggered by *either* is satisfied by the appositive clause. In (20) and (21), pronominal anaphora and VP-ellipsis respectively, take their antecedents from within an appositive.

(19) **Presupposition:**

*John, who wouldn't talk to Mary, wouldn't talk to Susan **either**.*

(20) **Pronominal Anaphora:**

*John, who had been kissed by Mary, kissed **her** too.*

(21) **VP-Ellipsis:**

*So Lalonde, who was the one person who could deliver Trudeau, **did**.*

It would be surprising then if sluicing were an exception, that is – an operation unable to cross the appositive boundary. The following corpus examples (from COCA) seem to show that sluicing can, in fact, take an appositive clause as an antecedent.

(22) (a) [*If she hadn't married Ivor, her future husband would have been a distantly related Chandler cousin, perhaps Beau Chandler, **who was a cousin twice or three times removed**. She could never remember **which**.* (R. Dean, *Palace Circle*, 2011)

(b) *Now, my mother's uncle being quite the ingenious chap - he buries the trunk again and heads up to the main office, **where he proceeds to purchase a cemetery plot**. Guess **which one**?*

(from the film *Chasing Amy*)

ABH do point out evidence for treating sentence final appositives and sentence medial appositives as semantically distinct. They suggest that sentence final appositives are interpreted more like true conjunction to the main clause and therefore should show the requisite semantic properties of a conjoined clause. If this is correct, we may be able to explain away the examples in (22) by virtue of the fact that they are sentence final appositives and therefore may be interpreted as inquisitive.

In fact, we failed to find corpus evidence of a sluiced clause taking its antecedent from within a sentence-medial appositive. Our central experimental question is whether such cases of sluicing are truly impossible (as opposed to merely hard to find). We ran an experiment, asking participants to judge sentences where sluiced clauses take their antecedents from sentence medial appositive

clauses. The following section introduces our results, showing that participants rated these kinds of sentences as acceptable.

## 4 Experimental evidence

We conducted two experiments testing the validity of AnderBois’s generalization that appositive clauses may not antecede a sluiced clause. In the first experiment, we tested the hypothesis that informativity of the indefinite correlate and the *wh*-remnant influences the acceptability of sluices with appositive antecedents. In the second experiment, we focussed on the impact of the context. Our results suggest that once both factors are controlled for, sluices with appositive antecedents become acceptable, favoring the view that appositives can antecede sluices and can be inquisitive over the hypothesis that they may not antecede a sluiced clause and are conventionally non-inquisitive.

### 4.1 Experiment 1

In the first experiment, we presented complex sentences with embedded interrogatives to participants and varied whether they involved sluicing or not. We compare the results of sentences containing sluices to their minimal counterparts without sluices. Where the sluiced version has a significantly lower acceptability rating than its non-sluiced counterpart, we can reliably interpret the drop in acceptability as induced by the sluice.

Our results show that participants accept sluices with appositive antecedents. Furthermore, they strongly suggest that informativity of the indefinite correlate and the *wh*-remnant affects the acceptability of sluices. In particular, we show that where the *wh*-remnant and indefinite correlate mismatch in terms of their informativity, the sluice is significantly less acceptable than where the *wh*-remnant and correlate match in terms of their informativity.

#### 4.1.1 Materials and method

Participants were asked to rate each sentence they were presented with on a Likert scale from 1 to 7 based on their intuitions about the acceptability of the sentence, 1 being *completely unacceptable* and 7 being *completely acceptable*.

Each participant was presented with 19 sentences. Out of the 19 sentences, 2 sentences contained a passive and an embedded interrogative, 2 sentences contained a double negative and an embedded interrogative, and 6 sentences contained an appositive and an embedded interrogative. The remaining 9 sentences were acceptable and unacceptable fillers.

In the case of the passive sentences, participants randomly saw either a version with a conjoined sluiced clause or a conjoined unelided interrogative clause. For example, participants randomly saw either (23a) or (23b). This between-subject design ensured that no participant saw both members of the minimal pair.

- (23) (a) *One of our windows was broken yesterday but I don't know who broke it.*  
 (b) *One of our windows was broken yesterday but I don't know who.*

A similar scheme was used for the double negatives. Participants randomly saw either a sluiced interrogative clause or an unsluiced interrogative clause, exemplified below. We only tested double negatives where a sentence negated by the *-n't* morpheme is embedded under *it's not the case that*. We kept the informativity of the stranded *wh*-item constant, always of the form *which NP* and always matching the informativity of the indefinite correlate.

- (24) (a) *It's not the case that William won't go to a party tomorrow and I need to find out which party he will go to.*  
 (b) *It's not the case that William won't go to a party tomorrow and I need to find out which party.*

The stimuli containing appositive clauses were a little more complex considering that we varied the informativity of the *wh*-items and indefinite correlates. Our decision to test this variable stems from recent research (Dayal and Schwarzschild (2010), Barros (2013)) which claims that sluicing is degraded when the indefinite correlate and the *wh*-remnant mismatch in terms of their informativity. For example, a sluice is degraded if a contentful indefinite correlate is paired with a non-contentful *wh*-remnant. (25a) and (25b) should rate higher than (25c).<sup>3</sup>

<sup>3</sup> Barros (2013) in fact claims that animate correlate-remnant pairs are exempt from this effect, though in some cases the remnant *wh*-item must be modified by *exactly*. Our results contradict this exemption. We do see a significant degradation induced by mismatching the correlate-remnant pair.



- (25) (a) *I spoke with a police officer but I can't remember which police officer.*  
 (b) *I spoke with someone but I can't remember who.*  
 (c) *I spoke with a police officer but I can't remember who.*

We therefore considered three conditions: correlate and *wh*-remnant match and are contentful (e.g., 25a), correlate and *wh*-remnant match and are non-contentful (e.g., 25b), and correlate and *wh*-remnant mismatch (25c). This condition was cross-tabulated with elision or non-elision of the interrogative clause giving six possible variants of sentences containing an appositive and embedded in-interrogative. The following example illustrates the six experimental conditions. Participants randomly saw one of these six variants.

- (26) (a) *My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle.*  
 (b) *My cousin Joni, who spent the night with someone in 1962, can't remember who.*  
 (c) *My cousin Joni, who spent the night with a Beatle in 1962, can't remember who.*  
 (d) *My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle she spent the night with.*  
 (e) *My cousin Joni, who spent the night with someone in 1962, can't remember who she spent the night with.*  
 (f) *My cousin Joni, who spent the night with a Beatle in 1962, can't remember who she spent the night with.*

Each participant rated six questions containing appositives. Each of the six questions had different lexical content. The entire stimulus set is listed in the appendix.

#### 4.1.2 Participants

142 participants were recruited via Facebook and Mechanical Turk. Mechanical Turk participants were compensated monetarily. All the participants self-identified as native speakers of English.

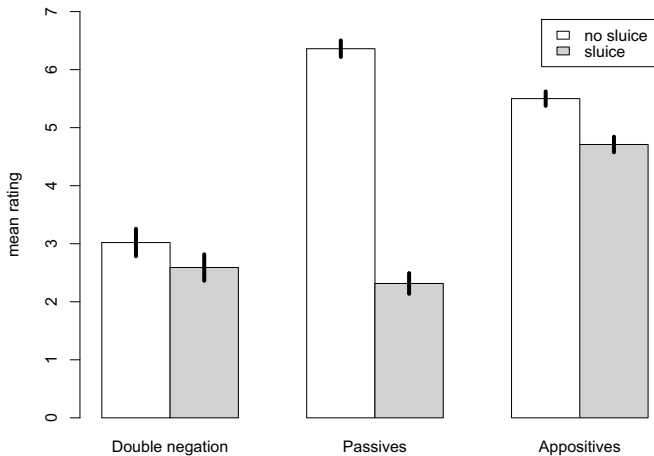
### 4.1.3 Distribution of responses

Participants demonstrated the use of the full judgment scale. Acceptable fillers received an average rating of 5.5 (*somewhat/very acceptable*) and unacceptable fillers received an average rating of 2.2 (*very unacceptable*).

Sentences with double negation rated badly regardless of whether the embedded interrogative was present or not. Both doubly negated sentences with no sluicing and sentences with double negation and sluicing received mean ratings comparable to the ratings of unacceptable fillers.

In contrast, sluicing markedly reduces the acceptability of sentences with passives. Sentences with a passive and no sluicing received a mean rating comparable to the average rating of acceptable fillers, while sentences with a passive and sluicing received a mean rating comparable to the rating of unacceptable fillers.

Crucially, sentences with an appositive clause and no sluicing receive a mean rating comparable to the rating of acceptable fillers, while the rating of sentences with an appositive and sluicing differs categorically from the rating of unacceptable fillers. The findings are summarized in Figure 1.



**Figure 1:** Ratings on the acceptability scale {1 (completely unnatural), 7 (totally natural)} by antecedent type. From left to right, the bars represent 142, 141, 140, 143, 433, and 418 judgments. The error bars stand for 95% confidence intervals.

In the case of double negation, there is no significant difference between the examples with sluices and examples without sluices. Participants tended to rate sentences with double negation low on the acceptability scale regardless of whether the doubly negated clause anteceded a sluice or not. Therefore, we are unable to

make a claim that sluicing significantly degrades acceptability when anaphoric to a doubly negated clause. The unacceptability that AnderBois reports could be attributable to the general unnaturalness of doubly negated clauses.

In the case of passives and appositives, stimuli which involve sluicing score significantly lower (Wilcoxon rank-sum test,  $\alpha = 0.99$ ,  $p < 0.0001$ ) than their counterparts with no sluicing. These results appear to support AnderBois's hypothesis that both passives and appositives are illicit sluicing antecedents.

However, we assert that AnderBois does not predict the large variation in acceptability amongst his putatively unacceptable sentences. Appositive clauses are much better antecedents for sluices (with a mean rating of 4.71) than doubly negated clauses (mean rating of 2.59) or clauses with passives (mean rating of 2.32).

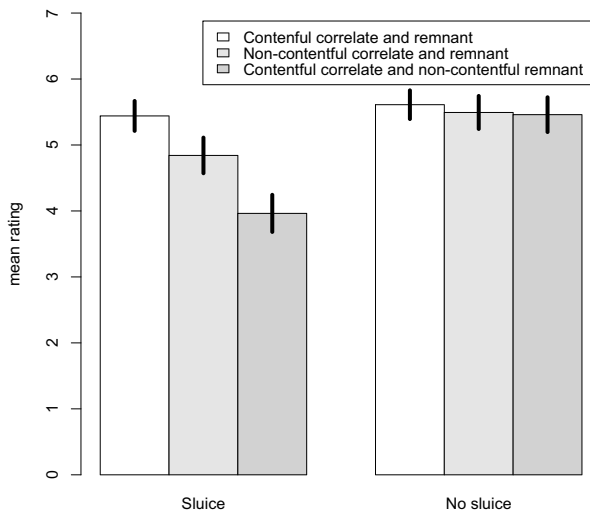
We further assert that once the informativity of the *wh*-item and indefinite correlate are properly controlled, appositive antecedents for sluices become more acceptable and we see the variance between the sluiced and non-sluiced counterparts shrink to become insignificant.

#### 4.1.4 Informativity effects on appositive antecedents for sluices

In Figure 2, we only show the mean ratings of complex sentences with appositive clauses and embedded interrogatives. Sentences with passives and double negation are not included. Each bar in Figure 2 represents a condition exemplified in (26). Harmonic versions with both the correlate and the remnant being contentful or non-contentful are presented adjacent to their disharmonic counterpart. Figure 2 clearly demonstrates that cases where the indefinite correlate and the *wh*-remnant are both contentful are not significantly degraded where the embedded interrogative clause is sluiced. This is a clear contradiction of AnderBois's claim regarding appositive antecedents for sluicing, which predicts that sluicing the embedded interrogative should significantly reduce acceptability.

The difference in ratings of sluiced and non-sluiced versions of examples where both the correlate and the remnant are contentful is insignificant (Wilcoxon rank-sum test,  $\alpha = 0.99$ ,  $p = 0.16$ ). The difference in ratings of the non-contentful correlate-remnant pairs in sluiced and non-sluiced examples is significant (Wilcoxon rank-sum test,  $\alpha = 0.99$ ,  $p = 0.0003$ ). In the cases of correlate-remnant disharmony, the difference between the sluiced and non-sluiced sentences is highly significant (Wilcoxon rank-sum test,  $\alpha = 0.99$ ,  $p < 0.0001$ ).

Furthermore, sluiced sentences where both the correlate and the remnant agree on the level of informativity receive a significantly higher rating than the



**Figure 2:** Informativity (dis)harmony in the correlate–*wh*-remnant pairs. From left to right, the bars represent 143, 139, 136, 167, 142, and 124 judgments. The error bars stand for 95% confidence intervals.

sluiced sentences with mismatching correlates and remnants (Wilcoxon rank-sum test,  $\alpha = 0.99$ ,  $p < 0.0001$ ).

These results show that mismatching the informativity of the correlate and remnant *wh*-item significantly degrades sluicing. Therefore, these results must be controlled if we are to accurately judge whether appositive antecedents for sluices are acceptable or not. In cases where we controlled for the informativity effects, participants did not rate appositive sluice-antecedents as significantly less acceptable than their counterparts without sluices.

## 4.2 Experiment 2

The second experiment was designed to determine whether the acceptability of having an appositive antecedent for a sluice was influenced by a preceding context. The setup was similar to the first experiment except that each stimulus sentence was presented to the participant following a “context-setting” sentence. Again, we compare the results of sentences containing sluices to their minimal counterparts without sluices.

Our results for this experiment are less robust, but do show that participants are more willing to accept an appositive clause as an antecedent for a sluice if the appositive clause engages with the preceding context. We therefore suggest

the contextual relevance of the appositive clause as a possible factor influencing its ability to antecede a sluice, and that controlling for this effect (alongside controlling for the informativity of the *wh*-item) further improves the acceptability of appositive sluice-antecedents.

#### 4.2.1 Materials and method

Each stimulus consisted of two sentences: a context sentence (labelled **CONTEXT**) and a target sentence (labelled **TARGET**). Participants were asked to rate each target sentence on a Likert scale from 1 (*completely unacceptable*) to 7 (*completely acceptable*).

The design of the experiment was inter-subject with counterbalanced lists. Each participant saw 18 stimuli, consisting of 16 acceptable and unacceptable fillers (including stimuli for unrelated experiments) and 2 experimental items. All experimental items contained a sentence-medial appositive clause and an embedded interrogative anaphorically linked with an indefinite inside the appositive clause. We varied whether the preceding context engaged with the appositive clause or not, and we varied whether the embedded interrogative was sluiced or not. The cross-product of these two variables gave us four kinds of stimuli. Participants only saw one of four types of stimuli. The four types are exemplified in (27). Note that we did not vary the informativity of the *wh*-item and correlate.

- (27) (a) **Context:** *My relatives have had occasional brushes with fame.*  
**Target:** *My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle (she spent the night with).*
- (b) **Context:** *My relatives all enjoy live music to some extent.*  
**Target:** *My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle (she spent the night with).*

In (27a) the context sentence engages with the appositive clause in the target sentence. The propositional content of the appositive *my cousin Joni spent the night with a Beatle in 1962* elaborates on the contextual statement that *my relatives have had occasional brushes with fame*. In (27b), the context does not directly engage the content of the appositive clause: the two propositions *My relatives all enjoy live music to some extent* and *My cousin Joni spent the night with a Beatle in 1962* do not address the same issue. However they are not unrelated to the extent that they constitute an incoherent discourse; enjoying live music in some sense facilitates the reference to a Beatle in the appositive clause. As in the first experiment, we

devised six scenarios with distinct lexical items and prepared tables like (27) for each scenario. The full list of stimuli is given in the appendix.

#### 4.2.2 Participants

366 participants were recruited via Mechanical Turk and were compensated monetarily. All the participants self-identified as native speakers of English.

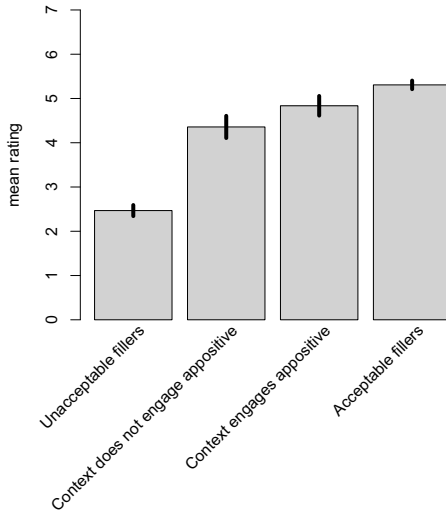
#### 4.2.3 Analysis of results

Participants demonstrated the use of the full judgment scale. The acceptable fillers average at 5.3 *somewhat natural* and the unacceptable fillers average at 2.5 *very/somewhat unnatural*.

Sentences where the appositive clause engages the context and antecedes a sluice (as in 27a) received a mean rating of 4.84. Sentences where the appositive clause does not engage the context, and the interrogative is sluiced (as in 27b) received a mean rating of 4.38. Crucially, both ratings are not comparable to the ratings of the unacceptable fillers and approach the ratings of the acceptable fillers. The findings are summarized in Figure 3.

The results demonstrate that appositive antecedents for sluices which engage with the preceding context are rated as significantly more acceptable than appositive antecedents for sluices which do not engage with the preceding context (Wilcoxon rank-sum test,  $\alpha = 0.99$ ,  $p = 0.01$  for the sluiced cases). As there is a positive influence of a contextually relevant context, we suggest that the potential of an appositive clause to antecede a sluice is not something that is categorically ruled out as AnderBois might suggest. Instead, it seems that numerous factors are at play influencing whether participants rate appositive sluice-antecedents as acceptable or not, one factor being the contextual relevance of the appositive clause. We tentatively suggest that these results generally favor an approach where the contextual salience of a clause is a crucial factor in determining whether the clause is an acceptable sluice-antecedent or not, such as the MAX-QUD approach posited in Ginzburg and Sag (2000) (discussed in Section 4.3).

Overall, the results of the second experiment are less robust than the results of our first experiment. This might be due to the general complexity of the experiments that involve discourse coherence manipulations. Nevertheless, the second experiment provides the crucial data for the evaluation of the claim that appositives are conventionally unable to antecede a sluice, undermining the hypothesis



**Figure 3:** The context influence on the acceptance of sluices with appositive antecedents. The bar for unacceptable fillers represents 757 judgments, the bars for experimental conditions represent 182 judgments each, the bar for acceptable fillers represents 937 judgments. The error bars stand for 95% confidence intervals.

that appositives are conventionally non-inquisitive and cannot raise issues into the discourse context.

### 4.3 Discussion

Our results show that participants rate appositive antecedents to sluices as acceptable. The acceptability is improved if the indefinite correlate and remnant *wh*-item match in terms of their informativity, and if the appositive clause engages with the preceding context. These results are not predicted by the generalization made by AnderBois (2010, 2011, 2014) which states that appositive clauses categorically may not antecede sluices.

This generalization stems from the hypothesis that appositive clauses and main clauses have different semantic types. They update the discourse context in fundamentally different ways. Main clause assertions denote sets of sets of worlds, while appositive clauses denote mere sets of worlds.

Our results show that participants accept appositive clauses as antecedents to sluices. There are multiple ways this finding could bear on the generalizations made by AnderBois. One option is that AnderBois's type distinction between appositive content and main clause content may or may not be justified, but his

characterization of sluicing as a type of surface anaphora is incorrect. In cases where participants accept appositive antecedents for sluices, they are pragmatically inferring the presence of an extant issue in the discourse which licenses the sluice, despite the conventional inability of appositive clauses to raise such an issue.

This kind of characterization of sluicing has much in common with the analysis given in Ginzburg and Sag (2000). Their analysis is framed in terms of a theory of Questions Under Discussion (QUDs) and as such shares with AnderBois the general idea that sluicing is licensed by some kind of anaphoric link to a question previously raised in the discourse context. Ginzburg and Sag posit a constructional rule whereby a sluiced clause is given a semantic value matching the currently extant Maximal-Question-Under-Discussion (MAX-QUD). The semantic content of MAX-QUD is constantly updated as the dialogue progresses by both linguistic and non-linguistic material. They therefore allow for the possibility that a sluice can take its semantic content from the non-linguistic context, as evidenced by the examples below. The Ginzburg and Sag (2000) account therefore places sluicing as a kind of deep anaphora, contra Hankamer and Sag (1976).

- (28) (a) [Milling around on first day of conference, participants ignorant of location of talks go up to harried organizer:] *Hey, could you tell us which room so we can go in and wait for things to start?*  
 (b) [In an elevator] *What floor?*

(Ginzburg and Sag 2000: 298)

Conversational participants constantly make inferences about the content of the MAX-QUD. When a participant encounters a sluice which appears to take its antecedent from an appositive clause, they are able to make an inference that the speaker intends the MAX-QUD to be raised by the appositive clause, thereby licensing the sluice. Given the increased flexibility of a QUD model of sluicing, where participants can infer that a QUD takes its semantic content from an appositive clause, we expect participants to accept appositive antecedents to sluices. Under this view, where all kinds of linguistic and non-linguistic material may update the MAX-QUD, it is inconsequential whether or not an appositive clause is unable to be interpreted as a question-like semantic object.

An alternative interpretation of our experimental results is that we should depart from the view that appositive clauses and main clauses are interpreted as different semantic types. In AnderBois's model, a main clause is able to denote a set of sets of worlds, while an appositive clause simply denotes a set of worlds. This is the root of their supposed differing behavior with respect to sluicing. As our results show that appositives can demonstrate similar behavior to main clauses



with respect to sluicing, we find little evidence to support the view that appositives are conventionally prevented from raising the same kinds of issues as main clauses. We have more flexibility with regards to the kinds of clauses which may enter into anaphoric relations, including sluicing, by assuming that an appositive clause is able to raise issues and does not differ in type from the main clause.

## 5 Conclusion

This paper experimentally evaluates the generalizations made in AnderBois (2010). We find that contra AnderBois, participants are willing to accept a sluice which takes as its antecedent a non-restrictive relative clause (an appositive clause). We found that acceptability of these kinds of sluices improved when we controlled for two factors: the informativity of the remnant *wh*-item and the contextual relevance of the appositive clause. In addition to challenging the general observations in AnderBois (2010), we further emphasize the importance of controlling for extrinsic effects such as the informativity of the *wh*-item and contextual salience when making claims about the acceptability of particular kinds of sluice-antecedents.

We intend this paper to contribute to a larger discussion of factors specific to discourse structure which influence the acceptability of sluices. We contribute to a general class of theories which assume that sluices take their semantic value from an active question in the discourse. The key goal is therefore to determine what class of linguistic expressions is capable of raising such questions. Our experimental results show that appositive clauses fall into that class.

## Acknowledgements

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## Appendix

### Experiment 1 Stimuli

Key: *stimuli\_name*: Stimuli.

1. *filler\_good\_1*: Your butler is close to retirement and he loves to tango.
2. *filler\_good\_2*: The prime minister, who is often very indecisive, decided to pass the bill on Thursday.
3. *filler\_good\_3*: Sue loves to build canoes, so she moved to the beach and loves it there.
4. *filler\_good\_4*: My mother, who often watches game shows in the evening, missed the last episode and she was quite upset.
5. *filler\_good\_5*: The rugby player couldn't find his manager so he decided to call his manager.
6. *filler\_good\_6*: The fastest rowing team, who won the last championship, has decided to pull out of the finals.
7. *filler\_bad\_1*: My professor Harold just found out, in order to a student was cheating.
8. *filler\_bad\_2*: My sister Camilla might have forgotten the scarf and she teaches Chemistry and she left a scarf at my house.
9. *filler\_bad\_3*: Anita is about to since she forgot to leave a tip.
10. *filler\_bad\_4*: Erik herds reindeer but he couldn't possibly guess which one.
11. *neg\_sluice\_scene1*: It's not the case that I didn't meet with a student yesterday, but I've forgotten which student.
12. *neg\_noslucose\_scene1*: It's not the case that I didn't meet with a student yesterday, but I've forgotten which student I met.
13. *neg\_sluice\_scene2*: It's not the case that William won't go to a party tomorrow and I need to find out which party.
14. *neg\_noslucose\_scene2*: It's not the case that William won't go to a party tomorrow and I need to find out which party he will go to.
15. *pass\_sluice\_scene1*: One of our windows was broken yesterday, but I don't know who.
16. *pass\_noslucose\_scene1*: One of our windows was broken yesterday, but I don't know who broke it.
17. *pass\_sluice\_scene1*: I want these results to be calculated tonight, but I haven't decided who.
18. *pass\_noslucose\_scene2*: I want these results to be calculated tonight, but I haven't decided who will calculate them.
19. *app\_match.inf\_sluice\_scene1*: My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle.

20. *app\_match.noninf\_sluice\_scene1*: My cousin Joni, who spent the night with someone in 1962, can't remember who.
21. *app\_mismatch\_sluice\_scene1*: My cousin Joni, who spent the night with a Beatle in 1962, can't remember who.
22. *app\_match.inf\_noslucose\_scene1*: My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle she spent the night with.
23. *app\_match.noninf\_noslucose\_scene1*: My cousin Joni, who spent the night with someone in 1962, can't remember who she spent the night with.
24. *app\_mismatch\_noslucose\_scene1*: My cousin Joni, who spent the night with a Beatle in 1962, can't remember who she spent the night with.
25. *app\_match.inf\_sluice\_scene2*: Joe, who once killed a man in cold blood, doesn't even remember which man.
26. *app\_match.noninf\_sluice\_scene2*: Joe, who once killed someone in cold blood, doesn't even remember who.
27. *app\_mismatch\_sluice\_scene2*: Joe, who once killed a man in cold blood, doesn't even remember who.
28. *app\_match.inf\_noslucose\_scene2*: Joe, who once killed a man in cold blood, doesn't even remember which man he killed.
29. *app\_match.noninf\_noslucose\_scene2*: Joe, who once killed someone in cold blood, doesn't even remember who he killed.
30. *app\_mismatch\_noslucose\_scene2*: Joe, who once killed a man in cold blood, doesn't even remember who he killed.
31. *app\_match.inf\_sluice\_scene3*: My brother Steve, who says he read an interesting book last week, can't remember which book.
32. *app\_match.noninf\_sluice\_scene3*: My brother Steve, who says he read something interesting last week, can't remember what.
33. *app\_mismatch\_sluice\_scene3*: My brother Steve, who says he read an interesting book last week, can't remember what.
34. *app\_match.inf\_noslucose\_scene3*: My brother Steve, who says he read an interesting book last week, can't remember which book he read.
35. *app\_match.noninf\_noslucose\_scene3*: My brother Steve, who says he read something interesting last week, can't remember what he read.
36. *app\_mismatch\_noslucose\_scene3*: My brother Steve, who says he read an interesting book last week, can't remember what he read.
37. *app\_match.inf\_sluice\_scene4*: My assistant, who was accused of losing an important paper, can't figure out which paper.
38. *app\_match.noninf\_sluice\_scene4*: My assistant, who was accused of losing something important, can't figure out what.
39. *app\_mismatch\_sluice\_scene4*: My assistant, who was accused of losing an important paper, can't figure out what.

40. *app\_match.inf\_nosluiice\_scene4*: My assistant, who was accused of losing an important paper, can't figure out which paper she was accused of losing.
41. *app\_match.noninf\_nosluiice\_scene4*: My assistant, who was accused of losing something important, can't figure out what she was accused of losing.
42. *app\_mismatch\_nosluiice\_scene4*: My assistant, who was accused of losing an important paper, can't figure out what she was accused of losing.
43. *app\_match.inf\_sluiice\_scene5*: The president, who needed to approve a clean-energy plan, couldn't decide on which clean-energy plan.
44. *app\_match.noninf\_sluiice\_scene5*: The president, who needed to approve something, couldn't decide on what.
45. *app\_mismatch\_sluiice\_scene5*: The president, who needed to approve a clean-energy plan, couldn't decide on what.
46. *app\_match.inf\_nosluiice\_scene5*: The president, who needed to approve a clean-energy plan, couldn't decide on which clean-energy plan to approve.
47. *app\_match.noninf\_nosluiice\_scene5*: The president, who needed to approve something, couldn't decide on what to approve.
48. *app\_mismatch\_nosluiice\_scene5*: The president, who needed to approve a clean-energy plan, couldn't decide on what to approve.
49. *app\_scene6\_sluiice\_match.inf*: Kobe Bryant, who just donated money to a charity event, isn't sure about which event.
50. *app\_scene6\_sluiice\_match.noninf*: Kobe Bryant, who just donated money to something, isn't sure about what.
51. *app\_scene6\_sluiice\_mismatch*: Kobe Bryant, who just donated money to a charity event, isn't sure about what.
52. *app\_scene6\_nosluiice\_match.inf*: Kobe Bryant, who just donated money to a charity event, isn't sure about which event to donate to.
53. *app\_scene6\_nosluiice\_match.noninf*: Kobe Bryant, who just donated money to something, isn't sure about what to donate to.
54. *app\_scene6\_nosluiice\_mismatch*: Kobe Bryant, who just donated money to a charity event, isn't sure about what to donate to.

## Experiment 2 Stimuli

Key: *stimuli\_name*: Stimuli.

1. *scene1\_cont.match*  
 CONTEXT: My relatives have had occasional brushes with fame.  
 TARGET: My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle.
2. *scene1\_cont.mismatch*  
 CONTEXT: My relatives all enjoy live music to some extent.

TARGET: My cousin Joni, who spent the night with a Beatle in 1962, can't remember which Beatle.

3. *scene2\_cont.match*

CONTEXT: Some people have no conscience whatsoever.

TARGET: Joe, who once killed a man in cold blood, doesn't even remember which man.

4. *scene2\_cont.mismatch*

CONTEXT: Some people are better off behind bars.

TARGET: Joe, who once killed a man in cold blood, doesn't even remember which man.

5. *scene3\_cont.match*

CONTEXT: Some members of my family are experts in literature.

TARGET: My brother Steve, who says he read an interesting book last week, can't remember which book.

6. *scene3\_cont.mismatch*

CONTEXT: Some members of my family are experts in the kitchen.

TARGET: My brother Steve, who says he read an interesting book last week, can't remember which book.

7. *scene4\_cont.match*

CONTEXT: Many confidential documents have gone missing.

TARGET: My assistant, who was accused of losing an important paper, can't figure out which paper.

8. *scene4\_cont.mismatch*

CONTEXT: Many staff members are in danger of being sacked.

TARGET: My assistant, who was accused of losing an important paper, can't figure out which paper.

9. *scene5\_cont.match*

CONTEXT: The company was in the process of overhauling its environmental policy.

TARGET: The president, who needed to approve a clean-energy plan, couldn't decide on which plan.

10. *scene5\_cont.mismatch*

CONTEXT: The company has recently come under close scrutiny from investors.

TARGET: The president, who needed to approve a clean-energy plan, couldn't decide on which plan.

11. *scene6\_cont.match*

CONTEXT: When athletes become celebrities, they are often required to support a lot of good causes.

- TARGET: Kobe Bryant, who just donated money to a charity event, isn't sure about which event.
12. *scene6\_cont.mismatch*  
 CONTEXT: When athletes become celebrities, they are often required to travel frequently.  
 TARGET: Kobe Bryant, who just donated money to a charity event, isn't sure about which event.
13. *filler\_good\_1*  
 CONTEXT: Elderly people often find creative ways to exercise.  
 TARGET: Your butler is close to retirement and he loves to tango.
14. *filler\_good\_2*  
 CONTEXT: It seems like the new laws about censorship are on everyone's mind.  
 TARGET: The prime minister, who is often very indecisive, decided to pass the bill on Thursday.
15. *filler\_good\_3*  
 CONTEXT: My sisters have all made big life changes in the past year.  
 TARGET: Sue loves to build canoes, so she moved to the beach and loves it there.
16. *filler\_good\_4*  
 CONTEXT: Wheel of Fortune has become such an exciting TV show recently.  
 TARGET: My mother, who often watches game shows in the evening, missed the last episode and she was quite upset.
17. *filler\_good\_5*  
 CONTEXT: The Olympic Games this year have been full of surprises.  
 TARGET: The fastest rowing team, who won the last championship, has decided to pull out of the finals.
18. *filler\_bad\_1*  
 CONTEXT: A complaint has just been made to the student affairs officer.  
 TARGET: My professor Harold just found out, in order to a student was cheating.
19. *filler\_bad\_2*  
 CONTEXT: I recently had family over for Christmas.  
 TARGET: My sister Camilla might have forgotten the scarf and she teaches Chemistry and she left a scarf at my house.
20. *filler\_bad\_3*  
 CONTEXT: Sometimes I don't know what my friends are thinking!  
 TARGET: Anita is about to since she forgot to leave a tip.
21. *filler\_bad\_4*  
 CONTEXT: Career mobility is difficult in rural areas.  
 TARGET: Erik herds reindeer but he couldn't possibly guess which one.

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Tracy Conner

# Heads must be heard: Overtness and ellipsis licensing

**Abstract:** Current theories assume that all ellipsis phenomena can be licensed by a feature occupying a preceding functional head (Lobeck 1995, Merchant 1999, 2004). In this paper, however, I show that feature-based treatments cannot account for licensing of verb phrase and noun phrase ellipsis (predicate ellipsis) in American English and African American English (AAE) through evidence that these functional heads *must* be phonologically overt. AAE is particularly important to establish this generalization due to the fact that production of auxiliary *be* and the possessive 's morpheme is typically optional preceding a full predicate, yet experimental evidence from this paper confirms that this optionality disappears in elliptical contexts. The analysis proposed here entails that predicate ellipsis, in which overtness is required, and clausal ellipsis, wherein the head said to license ellipsis is necessarily silent, are subject to different licensing conditions.

**Keywords:** ellipsis licensing, VP-ellipsis, NP-ellipsis, predicate ellipsis, sluicing, fragments, clausal ellipsis, African American English, syntactic variation, constraints on optionality

## Introduction

Verb phrase ellipsis (VPE), noun phrase ellipsis (NPE), sluicing, and fragment answers (shown in (1)–(4) respectively) are all phenomena in which a predicate can be unpronounced if a salient antecedent can be found in the surrounding discourse. For instance, in the examples below, the bracketed predicate need not be pronounced, as the underlined preceding material is available to contribute its meaning.

- (1) Regina is still sucking her thumb, but I don't think Michael ~~is [still sucking his thumb]~~.<sup>1</sup>
- (2) Matthew's sweet tea is comparable to Granny's [~~sweet tea~~].
- (3) I know I'll get some Big Red, but I don't know when [~~I'll get some Big Red~~].
- (4) Question: Where are you going?  
Answer: [~~I'm going to~~] Seguin.<sup>2</sup>

While the antecedent conditions for ellipsis require much further study, this paper focuses on the syntactic licensing conditions for the above phenomena. A common idea put forth in Lobeck's (1995) classic work suggests that ellipsis is licensed by certain heads. Specifically, heads with strong agreement features are said to license complement deletion.<sup>3</sup> Lobeck, and more recently, Merchant (2001), have tried to offer a single characterization of ellipsis licensing across many phenomena, but have not been successful at devising a truly unifying account. In these previous explanations, VPE and NPE are assumed to be licensed by a lexical item on a functional head that has undergone feature matching with a strong agreement feature in the same syntactic position. In sluicing, however, the lexical item and feature needed for licensing do *not* occupy the same node. Furthermore, fragment answers do not seem to involve licensing by a head at all.

In this paper I propose that a unifying characteristic of ellipsis licensors lies in the need for these licensing heads to be phonologically overt, a characteristic that has not been concretely considered in the descriptions by Lobeck and Merchant. Based on experimental evidence from African American English (AAE), I will show that overtness not only plays a crucial role in the licensing of VPE (following Potsdam 1996, 1997), but is integral to licensing of NPE as well. AAE is particularly important to establish the generalization that licensing heads *must* be overt precisely because auxiliary *be*, the copula, as well as the possessive 's morpheme (elements occupying functional heads) are all typically optional in this variety. While optionality is well documented in prenominal contexts, experi-

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<sup>1</sup> Throughout this paper I will represent elided material by striking through the text or replacing the text with  $\Delta$ . I assume along with Sag (1976) that ellipsis is PF deletion, i.e. that there is structure in the ellipsis site that is unspoken unlike some who argue that a silent *pro* instead is present (Lobeck 1995 a.o.).

<sup>2</sup> See Merchant (2004) for evidence that fragment answers contain elided sentential elements.

<sup>3</sup> Aelbrecht (2010) shows that not just complements but also non-adjacent phrases are also available to be elided following licensing heads.

mental evidence from this paper shows that this optionality disappears preceding elliptical environments. In other words, ellipsis does not occur if phonologically spelled out material is not present on the appropriate functional head.

This finding is a clear problem for current feature-based theories that seek to unify licensing of VPE, NPE, sluicing, and fragment answers because crucially, such accounts must ignore the role of overtness for licensing. Drawing on Potsdam's work on overtness and VPE, I formalize an overtness requirement for licensing of both VPE and NPE (henceforth written Predicate Ellipsis) below.

**The Overtness Criterion for Ellipsis (OCE):** *A phonologically overt functional head is required to license complement deletion in Predicate Ellipsis.*

Ultimately, we will see that licensing of Predicate Ellipsis requires licensing by an overt functional head, while phenomena like sluicing, fragment answers, and perhaps comparatives (henceforth written Clausal Ellipsis) crucially do not.<sup>4</sup> In light of compelling evidence in support of the OCE, the conclusion we should reach is that there simply cannot be only one licensing condition for ellipsis.

The paper is organized as follows: In Section 1, I will review arguments describing the need for a phonologically overt preceding head to license VPE (Bresnan 1976, Potsdam 1996, 1997) in Mainstream American English (MAE). In the section that follows, I offer new arguments for the same conclusion for data from AAE. Sections 3 and 4 offer experimental evidence from AAE in favor of the OCE. Section 5 demonstrates that the findings in support of the OCE cannot be captured by current theories that seek to unify the licensing conditions of Predicate and Clausal Ellipsis types. Section 6 draws on work by Thoms (2010) to explore the possibility that licensing of Clausal Ellipsis may be best explained by a movement-based account. Section 7 concludes.

## 1 Previous Accounts of Ellipsis Licensing

In this section an ellipsis licensing account by Potsdam (1996, 1997) is reviewed. This work shows that the overtness of a preceding head is the crucial factor in licensing VPE with clear evidence from subjunctive clauses in Mainstream Amer-

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<sup>4</sup> I group ellipsis types (Predicate vs Clausal) based on the evidence that each pattern together by their licensing conditions. One additional reason to believe that we should group VPE and NPE together, and subsequently sluicing, fragment answers, and perhaps comparatives together stems from possible differences in their antecedent conditions (Ross 1969, Merchant 2001, 2004 a.o.)

ican English (MAE). Potsdam's proposal will be used as a springboard for extending the claim of overttness to NPE.

## 1.1 The Role of Overttness in Licensing of Verb Phrase Ellipsis

Bresnan (1976) notes that VPs can be missing only when to the right of some visible head, as illustrated in the contrast between (5) and (6).<sup>5</sup>

(5) John didn't go, but Bill didn't  $\Delta$ , either.

(6) \*John didn't go, but Bill  $\Delta$ , either.

She concludes that a finite or non-finite auxiliary must precede a deleted VP. Potsdam (1996, 1997) expands this generalization to account for ellipsis licensing by *not*. As example (7) shows, ellipsis is possible following negation.

(7) Mary wants to go to the fashion show, but her husband might **not**  $\Delta$ .

Much like the auxiliaries in (5)–(6), negation precedes an ellipsis site. Arguing that both negation and auxiliaries occupy head positions, Potsdam (1997) formulates the VP-Ellipsis Licensing Condition.

**VP-Ellipsis Licensing Condition:** *An elided VP must be the complement of a morphologically realized head.*

The VP-Ellipsis Licensing Condition explains the grammaticality of ellipsis following auxiliaries and modals in (8)–(11), and negation in (12). It also explains the ungrammaticality of example (13) in which no head precedes the ellipsis site.<sup>6</sup>

(8) I will try the guacamole ice cream if I **must**  $\Delta$ .<sup>7</sup>

(9) Boxer auditioned for the choir and his roommate **did**  $\Delta$ , too.

(10) A baby llama will go anywhere its mother **has**  $\Delta$ .

(11) No one else will support the candidate despite the fact that the mayor **is**  $\Delta$ .

<sup>5</sup> Examples reproduced from Bresnan (1976:17).

<sup>6</sup> Potsdam's observations for this condition appear to come from Mainstream American English.

<sup>7</sup> Examples (5)–(11) and (13)–(18) taken from Potsdam (1997:534).

(12) You think you are a king but you really are **not**  $\Delta$ .

(13) \*John didn't leave, but Mary  $\Delta$ .

The crucial point behind Potsdam's VP-Ellipsis Licensing Condition is that ellipsis is licensed by a preceding head, which need not be an auxiliary. This is an important departure, as much of the ellipsis literature (see Johnson 2001 for a review) suggests that VPE should only be licensed by auxiliaries. (In fact, such work also seeks to describe negation as an auxiliary element, yet, nowhere else in the literature is negation assumed to have auxiliary qualities.)

Crucial to this paper, Potsdam observes that the head that licenses ellipsis must be overt. He does so by showing the impossibility of ellipsis in subjunctive clauses (assumed to contain a morphologically unrealized auxiliary) in the absence of negation. Zanuttini (1991) observes that subjunctive clauses appear to lack an IP projection due to the fact that these clauses cannot contain an auxiliary (14), and main verbs must also be uninflected for tense (15).

(14) The police require that the spectators (\*must) stand behind the barricade.  
'The police require that the spectators stand behind the barricade.'

(15) He demanded that the successful candidate learn(\*ed) German.  
'He demanded that the successful candidate be able to speak German.'

Following previous literature (Roberts 1985, Baltin 1993, Lasnik 1995, and Potsdam 1996), Potsdam (1997) suggests that the IP is present in subjunctive clauses headed by a morphologically unrealized modal. If it is the case that any head can license ellipsis, we would expect that ellipsis would occur following the unrealized head in (16). But, this is not the case.

(16) \*Kim needn't be there but it is imperative that [<sub>IP</sub> [<sub>DP</sub> the other organizers] [<sub>I'</sub> [<sub>I</sub>  $\emptyset$ ]<sub>VP</sub>  $\Delta$ ]].

Instead, ellipsis in the subjunctive clause suddenly becomes available in the presence of a morphologically realized negative element as examples (17) and (18) show.

(17) Kim needs to be there, but it is better that the other organizers **not**  $\Delta$ .

(18) A: Should we wake Dad?  
B: No! It's absolutely imperative that you **not**  $\Delta$ .

Here the data show that ellipsis licensing does not depend on the mere presence of a syntactic head. Instead, the head must be filled. Licensing of VPE only occurs to the right of a morphologically overt head – an overt auxiliary in I or an overt negative element in the head of NegP.

The discussion above illustrates that an overt head is required to license VPE. Potsdam's account sets up this generalization quite nicely based on negation in subjunctive clauses in MAE. However, Potsdam's analysis hinges on the claim that a morphologically unrealized modal exists in the IP head of each subjunctive clause. This claim is not uncontroversial, as Zanuttini (1991) contends that subjunctive clauses lack an IP projection.

In the remainder of the paper, I support Potsdam's appeal to spotlight the role of overtness in licensing VPE, and also extend this observation to NPE by presenting new empirical evidence from ellipsis in AAE – a variety of English in which heads that precede VPs (and NPs) can be phonologically overt or null.

## 2 Optionality and Ellipsis in African American English

In this section I give an overview of optionality in AAE to demonstrate that the alternation between overt and null heads confirms the claims of the OCE. Many processes in AAE display optional phonological realization in surface representations (Labov 1969 a.o.). The optional processes at issue in this paper are grammatical variability in overtly producing copula/auxiliary *be* as in “*Kayla (is) sixteen*” or “*Courtney (is) traveling*”, and overt marking of possessives as in “*Hannah('s) dairy addiction*”, which are the focus of Experiment 1 and Experiment 2 respectively. In these examples, the copula preceding *sixteen* and *traveling* and the possessive morpheme preceding *dairy addiction* are completely optional i.e. subject to zero-marking in AAE. However, preceding a deleted predicate, Labov (1969) reported that zero-marking is extremely rare. Based on Labov's early observation, we can predict that zero-marking preceding an ellipsis site should be disfavored if not ungrammatical in AAE. Thus, given optionality of the copula and possessive 's, AAE provides the perfect test-space to concretely evaluate the OCE, to confirm Potsdam's assertions for VPE, and extend this inquiry to NPE.

## 2.1 Background and Optionality in African American English

AAE is a variety “that has set phonological, morphological, syntactic, semantic, and lexical patterns” (Green 2002:1) and is spoken by many but not all African Americans in the United States. Most of the research done on this variety has focused on its use by those in urban areas (Wolfram 1969, Labov 1972, Baugh 1979, Myhill 1988, Rickford et al. 1991, Fletcher 2002, Weaver 2000 and Charity 2007); however, populations of speakers also live in rural areas, particularly in the south, where this variety has its origin. In this paper, I will report on data from a speech community in the northwest corner of Mississippi called the Mississippi Delta.

For many years, optionality in AAE has been a topic of great interest (Labov 1969, Wolfram 1969, Baugh 1983, Rickford 1991 etc) as many different surface realizations for a specific semantic interpretation are available. What is crucial to this paper, however, is the fact that AAE allows for optional realizations of certain functional heads – heads that are crucial for ellipsis licensing – while MAE does not. Therefore, this variety is an ideal lab for testing the importance of overtness for licensing ellipsis because the elements such as the copula, auxiliary *be*, and possessive *-s* are all functional heads that display optional phonological realization in AAE.

### 2.1.1 Auxiliary and Copula in AAE

Labov (1969) showed that copula and auxiliaries in AAE can be optionally produced without altering the meaning of the utterance. All data presented in Sections 2–4 will be given in AAE unless otherwise specified.

(19) Michelle (is) so fast she (is) gonna get a ticket.

In (19) the copula and the auxiliary can be overtly expressed, or unproduced (zero-marked henceforth). Many sociolinguists have tried to identify particular constraints on this optionality, many times linking optionality to social factors. Cukor-Avila (1999) reported a lower frequency of overt copula in informal settings. Labov (1969) also showed that certain syntactic environments affected the rate of “deletion”, as it occurred most preceding *gonna* and verb phrases, and was less likely before noun phrases. Zero-marking in AAE is confined to 2<sup>nd</sup> and 3<sup>rd</sup> person forms and only in the present tense. This explains the ungrammaticality of (20) and (21).

(20) I \*(am) fine.

(21) Yesterday, he \*(was) running.

Regardless of variation in frequency of optionality, zero-marking of auxiliaries and the copula in AAE in 2<sup>nd</sup> and 3<sup>rd</sup> person forms occurs in the same environments where contraction has been shown to occur in MAE (Labov 1969, 1972). For example, Labov pointed out that in (22) zero-marking in AAE and contraction in MAE are permitted while neither can occur in the example of ellipsis in (23).

(22) a. That\*s not a man. (MAE)  
 b. Dat Ø not no man. (AAE)<sup>8</sup>  
 “That is not a man.”

(23) a. \*Tell it like it\*s. (MAE)  
 b. \*Tell it like it Ø. (AAE)  
 “Tell it like it is.”

Similarly, King (1970) showed that contraction is *blocked* preceding a gap or ellipsis site in MAE as (23) shows.<sup>9</sup> In much the same way, we can see from (23) that the constraints on contraction in MAE correspond exactly to the environments in which zero-marking is prohibited in AAE. This correspondence suggests that AAE and MAE share some structural parallels. Additionally, given such structural parallels between zero forms and contraction, we might expect them to behave similarly with respect to the OCE. Namely, that neither zero-marking nor a contracted auxiliary should precede an ellipsis site. While exploring the bounds of contraction with respect to ellipsis licensing is beyond the scope of this paper, we could presume that further exploration of the role of overtness might lead to insight into the syntactic position of contracted auxiliaries.

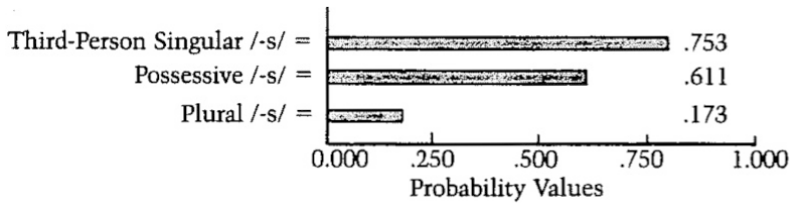
### 2.1.2 Optionality in Possessive Marking in AAE

Along with optional realization of Infl elements, morphosyntactic markers, specifically –s, have been described as being completely optional in AAE. The distribu-

<sup>8</sup> Examples adapted from Torrey (1983:629).

<sup>9</sup> Thank you to Jeroen Van Craenenbroeck for pointing out this literature. Also note that the constraints on contraction in MAE proposed by King (1970) also hold for contraction in AAE.





**Figure 1:** Zero-marking of *-s* morphology reproduced from Baugh (1983).

tion of zero-marking of third person singular *-s*, possessive, and plural morphology are shown below in Figure 1 from Baugh (1983).

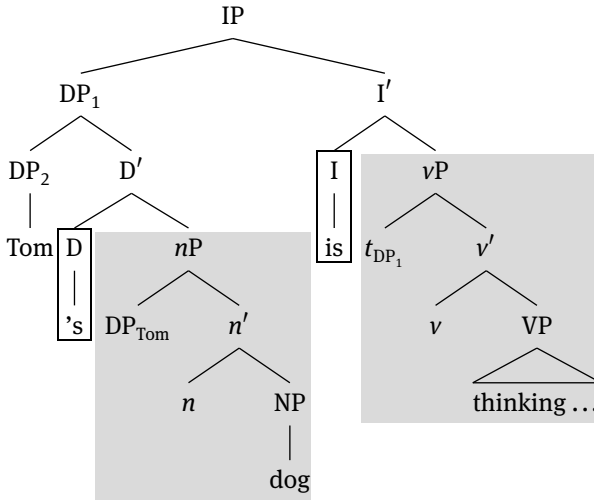
Both possessive and third-person singular *-s* morphology have rates of zero-marking above 50%. This has led some to claim that neither of these morphemes are underlying in AAE. Overt marking in these instances is treated as a borrowing from MAE. Wolfram (1969) made this claim for possessive marking because for some groups of speakers, overt-marking was almost categorically absent as compared to other speakers. Baugh (1983) showed that this marking also varied with interlocutor. More zero-marking occurred when AAE speakers spoke to familiar interlocutors who were also AAE speakers, than to unfamiliar AAE speakers, as well as unfamiliar non-AAE speakers. Furthermore, Smitherman (1977) contended that *-s* marking is variable in AAE because the morpheme is redundant. She proposed that the relative position of the possessor preceding the possessee alone yields possessive meaning in AAE.

Nonetheless, I will assume that possessive marking in AAE has one form, an overt *'s*, that is optionally spelled out at PF. Both surface forms, *-s* and zero, are available in typical possessive phrases, as well as in recursive and phrasal structures represented in (24) and (25) respectively.

(24) I tasted her sister('s) kid('s) puppy('s) food.

(25) I found [the girl in the flowing pink gown]('s) hair-do to be subpar.

I also assume that *-s* morphology is merged in the head of a possessive DP following Abney (1987). In NPE, the *-s* merged in D is much like the auxiliary in the Infl head that licenses ellipsis of its complement.

(26) Hillary('s) dog (is) thinking deep thoughts much less than [Tom's  $\Delta$  is  $\Delta$ ].<sup>10</sup>

In (26), NPE and VPE are both licensed due to morphologically realized material in the head position. The structural similarity makes clear the notion that licensing of both types of ellipsis follows the same pattern. So far we have seen that the D and I heads in AAE can be unpronounced preceding a complement. Less compelling evidence exists for optionality in elliptical environments. Early descriptions of auxiliary and possessive productions in AAE do suggest that zero-marking occurs less frequently if at all preceding an ellipsis site (Labov 1969, Torey 1983), yet this observation is based on a limited set observations. What must now be confirmed is whether zero-marked functional heads remain improper licensors of predicate ellipsis given targeted elicitation of comparable numbers of complete and elliptical constructions.

<sup>10</sup> In (26) the structure of the bracketed fragment is given with rectangles marking the phrasal head, and triangles surrounding the general region available for deletion. I posit that possessive DPs contain a little *n* functional head based on work by Toosarvandani (2010). In observing no possessive morphology in Northern Paiute, Toosarvandani posited that the little *n* head had the function of providing a possessive relation in possessive phrases in absence of overt possessive morphology. We might assume that the same structure exists in AAE as the little *n* head may also allow for possessive interpretation without overt morphological spell-out of *-s* prenominally.

## 2.2 Optionality and Predictions for Ellipsis

In the previous section we have seen the pervasiveness of optionality of syntactic and morphosyntactic elements in AAE. However, the question of concern to this paper is whether the optional realization of these elements affects their ability to license ellipsis. The OCE states that phonologically realized heads license ellipsis. Therefore, it predicts that when producing utterances with VPE and NPE in possessive phrases, we should not see zero-marking by AAE speakers. Thus, the following utterances should be ungrammatical if the OCE is accurate.

- (27) \*Courtney (is) tall and I think Kayla \_\_ Δ.  
‘Courtney (is) tall and I think Kayla is.’
- (28) \*Regina ain’t sitting by the barn with Abbey, but Michael \_\_ Δ.  
‘Regina isn’t sitting by the barn with Abbey, but Michael is.’
- (29) \*Granny(’s) piece of cake is usually bigger than Matthew \_\_ Δ.  
‘Granny’s piece of cake is usually bigger than Matthew’s.’

In Experiment 1, the OCE is tested with ellipsis in auxiliary and copula constructions to lend empirical credence to Labov’s early observation. Experiment 2 uses the same methodology but tests whether zero-marking of possessive phrases is also constrained preceding an ellipsis site. The OCE predicts that an overt functional head should precede every ellipsis site. Thus we will have evidence to support the OCE if zero-marking before ellipsis occurs at a significantly lower rate than zero-marking before an overt complement.

## 3 Experiment 1: Testing The OCE and Verb Phrase Ellipsis

### Procedures

To test the predictions of the OCE, a sentence repetition task modeled after Potter and Lombardi (1990, 1998) was employed to elicit data. Potter & Lombardi’s experiment demonstrated that the surface syntax of a sentence to be recalled is not represented in short term memory, but instead, participants rely most on memory of lexical items and overall sentence meaning from the prompt when reconstructing an utterance. This repetition task was deemed most effective for the purposes

of this experiment because it allowed for elicitation of somewhat rare constructions. Due to the finding that the surface syntax is not simply repeated verbatim but is, in a sense, a novel regeneration by subjects, it is clear that this methodology should lead to the naturalistic elicitation of the surface syntax necessary to test the hypothesis.

## The Task

Potter and Lombardi's 1990 study was initiated to explore the hypothesis that immediate recall of a sentence involved regeneration of the conceptual representation (paraphrase meaning), using words that were recently activated. This experiment was proposed to refute the idea that short-term recall is little influenced by semantic relations, but instead that it shares some properties of long-term recall. In all experiments, participants either saw or heard a sentence like (30) and were asked to repeat it.

(30) The knight rode around the *palace* searching for a place to enter.

Before or after that sentence, they would be presented with a list of words during a distractor task. Half of the items contained unrelated words, while half contained a lure word that was synonymous with a word in the prompt sentence. For example, given the sentence in (30), the word-list might contain the word *castle* as a synonym lure for the target word *palace*, which appears in the sentence to be repeated. Potter and Lombardi predicted that if meaning played no role in short-term recall/verbatim memory, the recent activation of a synonym should not affect how participants repeat the utterance. Results from the experiment revealed that the synonym lure word did in fact appear in productions significantly more when it had been a part of the word list than spontaneously. This finding supports the hypothesis that regeneration of a sentence does not draw on surface syntax of the prompt, but instead relies on recently activated lexical items that are combined in ways that give a meaning approximating the previous utterance without regard to surface syntax. This method was deemed ideal to test the OCE because of the need for participants to produce very specific and sometimes rare constructions without majorly biasing the surface form of their utterances.

The selected task also needed to be difficult enough to bias participants to produce utterances consistent with the zero-marking displayed in AAE. Participants were mostly apt code-switchers. This means that participants also had a command of a more standard variety of English with rules disfavoring zero-marking. Therefore, it was possible that this more standard variety would be used in the

formal speech context of this experiment. Nonetheless, in the pilot phase, this methodology was determined to be effective for diminishing affects of language accommodation. The presence of the community consultant and the difficulty of the task reduced participants' ability to code-switch, which gave rise to the optionality in productions desired for this experiment. Given that the participants in Potter and Lombardi did not produce the syntax of the prompt verbatim suggests that the task would not bias participants toward any given syntactic representation. This task was also necessary due to the fact that the elliptical constructions imperative to this experiment have been shown to be extremely rare in spontaneous speech samples alone (Labov 1969, Torrey 1983). The current study adopted an auditory presentation method to avoid biasing participants with orthographic representations not representative of AAE, which does not have a written system.

In the experiment, subjects were presented with pre-recorded sentences with overt copula and auxiliaries to be repeated like the ones in (31) and (32).

- (31) Sally's husband is not going to stop drinking coffee, but Sally **is** [going to stop drinking coffee] after the new year.
- (32) Perry's organ was old and rusty, and the one at the church **was** [old and rusty] too, but it still sounded good.

In half the prompts, the bracketed material was elided, and no ellipsis occurred in the other half. If it is the case that ellipsis is licensed by overt heads, then zero-marking should occur more frequently in non-elliptical repetitions than in repetitions preceding an ellipsis site. In Experiment 1, past tense auxiliaries and copula, which can never be zero-marked in AAE, were used as a baseline for participant error by which to examine zero-marking in elliptical contexts that do not reflect licit uses of the grammar. Therefore, zero-marking before ellipsis sites should occur as infrequently as zero-marking of past tense auxiliaries and copula in either environment.

## Participants

A convenience sample of 33 Black participants between the ages of 18 and 30 were recruited and paid for participation in this study. Participants selected for the experiment were largely from the Delta region of Mississippi, a homogenous speech community. These subjects were judged to be speakers of African American English as this is the predominant language of individuals from this speech community.

## Materials and Design

Altogether 40 sentences were given. There were 24 experimental items, 16 filler sentences, and 2 initial practice items. Of the 24 experimental items, participants were given 4 of each sentence type indicated in Figure 2 below with both copula and auxiliary targets:

**Figure 2:** Stimuli system for auxiliary and copula *be* items.

Tense Condition	Ellipsis Condition	Example Sentence
+Past	–Ellipsis	<i>I was running, and I also think John <b>was</b> running.</i>
+Past	+Ellipsis	<i>I was running, and I also think John <b>was</b> Δ.</i>
–Present	–Ellipsis	<i>I am running, and I also think John <b>is</b> running.</i>
–Present	+Ellipsis	<i>I am running, and I also think John <b>is</b> Δ.</i>

There were 4 conditions (past +ellipsis, present +ellipsis, past –ellipsis, present –ellipsis) counterbalanced across 8 versions of the experiment.<sup>11</sup> Item order was randomized for each participant, and each participant saw only one version of each sentence.

A distractor task also followed each sentence. The distractor consisted of a presentation of 5 novel words. Participants were then asked to identify whether a word given by the experimenter was a part of the list. The correct answers consisted of an equal number of “no” and “yes” responses.

## Procedure & Apparatus

A consultant from the Mississippi Delta community administered each experiment.<sup>12</sup> After reading the directions to participants, 2 practice prompt/distractor pairs were given. If the participant demonstrated understanding of the task by successfully responding “yes” or “no” to the distractor task then repeating the initial sentence, the participant was allowed to continue on to complete the experimental items.

<sup>11</sup> Experiments 1 and 2 were run together; the items for one experiment served as the fillers for the other.

<sup>12</sup> I owe a huge debt of gratitude to Carmen Christmas for help developing Delta-appropriate stimuli, recording stimuli, recruiting participants and for facilitating each experiment.

Each item was played over a loud speaker. After the five novel words were given, the community consultant asked if a specific word was in that list of words. After the participant responded, they were asked to repeat the initial sentence. An example of a full item is below:

---

**Prompt:**

Item: Nobody is going to sing at the old folks home for Christmas, even though the mayor is [going to sing at the old folks home for Christmas].

Distractor:      Pop                  Soda                  Chicken          Cow                  Region

**Consultant:**      Was “cow” in this list of words?

**Participant:**      Yes/No

**Consultant:**      Please repeat the sentence.

**Participant:**      [Repetition]

---

Both prompts and distractor task were pre-recorded by the community consultant and presented to participants via a large speaker. Participants were recorded using a head-mounted microphone.

## Scoring

Sentences were transcribed and analyzed using Praat. If the presence of overt or zero-marking was questionable, spectrogram analyses in Praat were used. Once transcribed, the data were coded based on the factors listed in Appendix 1.

All 33 Delta participants were included in the analysis. Scorable data consisted of utterances in which the target portion of the utterance (the second aux/cop construction) was produced. Non-scorable items consisted of those in which the participant did not complete any intelligible utterance. All items for this experiment were scorable. Trials in which a participant did not produce a target structure were marked as containing a major distortion and were also excluded from the analysis (27% of the data). These data included productions in which a non-auxiliary or copula construction was produced in the target area, when the target auxiliary or copula contained negation (*he wasn't*), do support, and in *so* constructions or other utterances which may contain an unpronounced predicate that is not in its canonical position after the verb.<sup>13</sup>

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<sup>13</sup> In constructions like example i. and ii. the ellipsis sites are more commensurate with Clausal Ellipsis and thus are not of the ellipsis type being considered in this paper.

Finally, the past tense sentences were initially included as a control variable that would be compared to zero-marking preceding ellipsis sites. Thus, in the event that our comparison of zero-marking preceding ellipsis and zero-marking preceding overt complement yielded statistically significant results, we could further confirm that zero-marking before ellipsis was ungrammatical, not just rare, by comparing it to instances of zero-marking of the past tense auxiliary. However, a post-hoc examination revealed that instances of tense-shifting, which occurred in 6% of the data, could not be controlled for in this task. The presence of tense shifts as in (33) made interpreting the tense of zero-marked elements as in (34) precarious. Because tense is zero-marked in (34), there is no way of knowing whether the unrealized element should be interpreted as past tense (making the construction ungrammatical as in a.), or whether it has been tense-shifted to the present (making the structure grammatical, as in b.).

- (33) Farrah **was** going to the carnival because Gayle **is**.
- (34) The mayor **was** going to sing this Christmas if Samantha \_\_ gonna sing.
- a. \*"The mayor was going to sing this Christmas if Samantha was gonna sing."
  - b. "The mayor was going to sing this Christmas if Samantha is gonna sing."

Because a reliable calculation of the rate of zero-marking of past tense could not be computed, it was determined that a comparison between zero-marking preceding ellipsis to erroneous instances of zero-marking in the past tense could not be assessed. Though the tense measure did not prove to be an effective control, our ability to evaluate zero-marking preceding ellipsis sites versus preceding overt complement was unhindered.<sup>14</sup>

- 
- i. Joe is a fan of football, **so** is his grandmother too but only on Superbowl Sunday.
  - ii. Joe is tall but I don't know **how** tall John is.

Example i. has the structure of a comparative due to the inclusion of degree morpheme *so*. Similarly, ii. is seen to involve *wh*-movement, and thus is ellipsis of the clausal type. Thus, these data were not included in the data to be considered for this experiment.

**14** Future work may benefit from using data from Mainstream American English (MAE) speakers on the same tasks as a control for this experiment. MAE speakers should overtly mark auxiliaries 100% of the time preceding ellipsis and full complements. Thus, any zero-marking preceding an ellipsis site could be used as a baseline for potential error to be compared to the number used by



## Results

556 tokens were evaluated in Experiment 1, and 2% of these utterances contained zero-marking in the target environment (11 total items). Despite the even distribution of prompts with and without ellipsis, participants produced ellipsis in the target utterance more frequently than utterances with overt complement in the target area (348 elliptical vs 208 without).<sup>15</sup> Figure 3 shows the distribution.

**Figure 3:** Frequency of overt marking given VPE context.

	Zero-Marked Aux/Cop	Overt Marked Aux/Cop
-Ellipsis	10	198
+Ellipsis	1	347

Though there were few instances of zero-marked utterances, the results pattern in the same direction as predicted by the OCE. 10 zero-marked auxiliary or copular elements were found in non-elliptical environments like (35) as compared only to 1 instance of zero-marking preceding an ellipsis site (36).

- (35) If your mom is happy, then the rest of the family \_\_ happy.  
 Prompt: If your mom is happy, then the rest of the family is happy, too.
- (36) After every (unintelligible) said Honey Boo Boo Child is obnoxious, and her mother \_\_, too.  
 Prompt: After every pageant win, Honey Boo Boo Child is obnoxious, and some say her mother is, too.

The data show that participants produced overt marking more frequently in elliptical environments than when the target complement was produced. Results of a logistic mixed effects regression show that this finding is statistically significant,  $p < .01$ . The model is summarized in Figure 4.

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AAE speakers. If ungrammatical in AAE, the amount of zero-marking preceding ellipsis for both AAE and MAE speakers should be comparable.

<sup>15</sup> Elliptical utterances outnumbered the instances with full complements in this data set. This is an important finding as it is possible that elliptical elements have not been readily found in previous studies using spontaneous speech because ellipsis is somehow dispreferred by AAE speakers in these contexts. This result suggests that ellipsis is a clear part of the AAE grammar and thus elliptical examples from previous data may just be rare or perhaps they were treated as having the same properties as non-elliptical constructions.

**Figure 4:** Results from the logistic mixed effects regression for marking and ellipsis for auxiliary/copula in AAE.

	Coefficient	Standard Error	Z-score	p-value
Intercept	2.99	0.32	9.34	<2e-16***
+Ellipsis	2.86	1.05	2.72	0.007**

Significance code: \*\*\* equivalent to  $p < 0.001$ , \*\* equivalent to  $p < 0.01$  and \* equivalent to  $p < 0.05$ .

## Discussion

The results of Experiment 1 support the OCE. Instances of zero-marked responses occurred 92% of the time when preceding an overt complement, while zero-marking before ellipsis sites occurred only once, or in 8% of zero-marked targets. These results were statistically significant. The results are even more impressive when we consider that there were more utterances containing ellipsis in the data set, leaving greater opportunity for zero-marking if it were allowed (63% of the data; 348 of 556 items). The results followed our prediction that AAE speaking participants would produce fewer, if any, instances of zero-marking preceding an ellipsis site due to the need for a phonologically overt head in ellipsis environments. Despite the fact that only 2% of data included zero-marking, these data were enough to produce statistically significant results that confirm that the functional head preceding ellipsis sites for auxiliary and copula must be overt.<sup>16</sup> In other words, even in a variety with optionality in copula and auxiliary realization, it is ungrammatical for zero-marking to occur preceding an ellipsis

<sup>16</sup> Lack of zero-marking may be due to certain confounds related to the stimuli as well as factors related to the testing environment. First, the prompts were all given with overt copula and auxiliaries, which may have biased participants toward greater overtness in general. To avoid this, it may have been more appropriate to contract auxiliaries and copula in the present tense to make overtness less salient leaving room for contraction or zero-marking. Aside from the prompts, the experimental environment (largely a university setting), which differed from that of the pilot study (the consultant's residence), may have biased participants toward more MAE repetitions. AAE does not have a written system and thus is not readily associated with academic settings. Therefore, it may be the case that the participants, mainly recruited and tested at a local university, were bias toward using the speech they would reserve for the classroom, a more standard variety closer to what is written, during the experiment. As noted before by studies like Cukor-Avila (1999), being unfamiliar with the interlocutor as well as in a formal setting have both been shown to have higher rates of overt marking for AAE speakers. Therefore the formality of the setting also have played a role in the relative amount of zero-marking compared to other studies of auxiliary and copula optionality.

site as predicted by the OCE. Experiment 2 gives even more robust support for the OCE by evaluating optionality in possessive –s marking given NPE in AAE.

## 4 Experiment 2: Possessive Marking and The OCE

The procedure for Experiment 2 was exactly the same as in Experiment 1. Experiment 2 was implemented to test whether the OCE’s requirement for an overt functional head preceding an ellipsis site could also be seen in instances of NPE. In testing possessive phrases, we predict that zero-marking in possessive constructions should be ungrammatical preceding an ellipsis site in the same way that zero-copula were not permitted in instances of VPE in Experiment 1.

### 4.1 Methods

#### Participants

Data from the same 33 participants was elicited for this experiment.

#### Procedure

The procedure for Experiment 2 was the same as that in Experiment 1. There were 2 conditions (+Ellipsis, –Ellipsis) counterbalanced across 8 versions of the experiment. In this version of the task, participants heard sentences with possessive phrases containing an initial clause to establish a proper NP antecedent. The second clause was the target portion in which the NP is a candidate for ellipsis. There were two conditions, one in which the prompt included a full possessive DP, and one in which the prompt contained ellipsis.

**Figure 5:** Stimuli conditions for Experiment 2, possessive phrases.

Condition A: Pos, –Ellipsis	Rhianna’s cat is mean and feisty, so I’ll keep Mike’s cat anyway.
Condition B: Pos, +Ellipsis	Rhianna’s cat is mean and feisty, so I’ll keep Mike’s $\Delta$ anyway.

Like Experiment 1, each item consisted of a prompt, distractor task, then a request for the participant to repeat the initial utterance. An example of a full item can be seen below:

**Prompt:**

Item: Rhianna’s cat is mean and fiesty, so I’ll keep Mike’s anyway.

Distractor: Yoyo Turtle Mote Kite Rally

**Consultant:** Was “mote” in this list of words?**Participant:** Yes/No**Consultant:** Please repeat the sentence.**Participant:** [Repetition]

All prompts included overt possessive marking in all environments. Therefore, any zero-marking from participants could not be a result of any bias from the prompt. Both prompts and distractor task were pre-recorded and presented to participants via a large speaker. Participants were recorded using a head-mounted microphone.

## Results & Discussion

In Experiment 2, 319 scorable possessive targets were produced. Zero-marking of the possessive occurred in 16% of the data. Of the zero-marked utterances, 75% of items preceded overt complements, while 25% of zero-marked items preceded ellipsis sites (numerical totals in Figure 6).

**Figure 6:** Frequency of overt marking given NPE context.

	Zero-Marked Pos (X)	Overt Marked Pos (–s)
–Ellipsis	39	140
+Ellipsis	13	127

These percentages support the predictions of the OCE in that participants produced zero-marked possessives more frequently when preceding an overt complement than prior to an ellipsis site. Results of a logistic mixed effects regression show that this finding is statistically significant,  $p < .01$ . The model is summarized in Figure 7.

In evaluating the claim that zero-marking preceding an ellipsis site should be ungrammatical, one might raise the question of why 13 items in this data set were zero-marked in that environment. In analyzing the data, I chose a very conservative coding scheme that worked against my hypothesis. If zero-marking of the

**Figure 7:** Results from the logistic mixed effects regression for marking and ellipsis in possessive phrases in AAE.

	Coefficient	Standard Error	Z-value	p-value
Intercept	2.16	0.54	4	7.64e-05***
+Ellipsis	1.42	0.44	3.23	0.00148**

Significance code: \*\*\* equivalent to  $p < 0.001$ , \*\* equivalent to  $p < 0.01$  and \* equivalent to  $p < 0.05$ .

possessive could yield a plausible utterance, then it was coded as zero-marked, even if both a possessive or non-possessive readings were possible as in (37).

(37) The bully \_\_ lunchbox was fine after the fight but **Calvin \_\_ wasn't, wasn't fine.**<sup>17</sup>

For example, the utterance in (37) was coded as zero-marked but ambiguous given the fact that two readings are plausible. First, *Calvin* could be interpreted as a zero-marked possessor meaning *Calvin's lunchbox*. One could also interpret this phrase as a non-possessive DP meaning the boy, *Calvin*, was not fine after the fight. If we do not consider these ambiguous items, only 4 productions out of 13 are clear cases of zero-marking preceding ellipsis where, unlike (37), no ambiguity existed (See Appendix 1 for these utterances).

Overall, in Experiment 2, the OCE was supported as zero-marking of a possessive phrase preceding an ellipsis site occurred much less frequently than in non-elliptical constructions. This result matches that seen in Experiment 1, but may even be more robust due to higher rates of zero-marking in the data set. Both results point to the validity of the OCE in AAE as a morphologically overt functional head was more frequently produced preceding an ellipsis site despite the possibility of optionality elsewhere in the grammar. In the section that follows, I will discuss how the OCE is implemented in the syntax and will give evidence to

<sup>17</sup> Example (37) represents a verbatim transcription of an utterance elicited from a participant, which includes repetition of the negated past tense copula. In this example it was deemed plausible to interpret *Calvin* as either a zero-marked possessor with the meaning “*Calvin's lunchbox*... wasn't fine” or a simple non-possessor with the meaning, “*Calvin*... wasn't fine”. This is in contrast to examples in which including a different final element would lead to no ambiguity, rendering a possessor reading (and thus zero-marking) unlikely. For instance, if “*Calvin*... wasn't **talking**” was produced in the second clause, it is improbable that the speaker was intending to zero-mark in this instance as the verb could only refer to an action of the animate subject, *Calvin*.

show that the OCE extends beyond possessive DPs and VPE in AAE. The need for morphologically overt heads preceding ellipsis sites will also be imperative for capturing MAE data related to ellipsis and possessive pronouns.

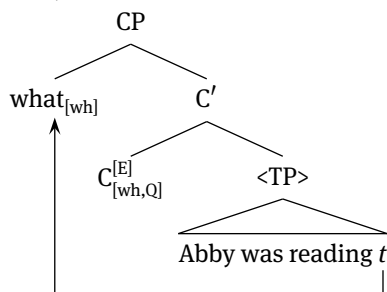
## 5 Overtness: A challenge for the current theory of ellipsis licensing

We have now seen empirical evidence supporting the hypothesis that a phonologically overt head is required to license VPE, confirming the observation put forth by Potsdam (1996, 1997). Data also support the need for an overt licenser in instances of NPE. These data are not compatible with Lobeck's feature-based treatment, which included no requirement for overtness. Similarly, this finding makes it look like the only available current theory of ellipsis licensing proposed by Merchant (2001, 2004) is also incomplete, as it does not, and in fact cannot, include overtness as a criterion for licensing. I will show that providing an account of licensing that unifies licensing for Predicate Ellipsis (VPE and NPE) and Clausal Ellipsis overgenerates.

### 5.1 Feature-based accounts of ellipsis licensing

In the government and binding tradition, Lobeck proposed that ellipsis was licensed when strong agreement features present on functional heads were feature-checked by certain lexical elements. Merchant recasts Lobeck's analysis under the minimalist framework proposing that a feature, the [E] feature occupying a functional head, is responsible for triggering ellipsis at PF. In order for ellipsis to occur, the feature must be activated via feature-feature matching in the local checking domain or valuing of features of [E] that are specific to the head it occupies. For example, for licensing of sluicing, the specific [E] feature on C, [E<sub>S</sub>], can only co-occur with lexical elements carrying {+wh, +Q} features appropriate for checking the unvalued {uwh, uQ} features on [E<sub>S</sub>]. Therefore, in (38), the wh-element imbued with the appropriate features to activate [E<sub>S</sub>] moves to the CP specifier where it is now in the local domain for feature-feature matching. Once feature-matching has occurred, [E<sub>S</sub>] is activated and can then give directions at PF for deletion of the complement to be triggered.

- (38) Abby was reading something, but I don't know what <Abby was reading t>. <sup>18</sup>



In VPE (39) and NPE (40–41), the feature-matched lexical item is merged in the same node as the [E] feature. In contrast, in sluicing (42), the feature-matched lexical item occupies a position distant from [E].

- (39) She is singing, and I also think Larry  $_{I_{[E]}}$  **is**  $_{[VP \Delta]}$ . **VPE**
- (40) Kayla's Violent Lips are cooler than  $_{[DP]}$  Courtney  $_{[D'_{[E]}]}$  **'s**  $_{[NP \Delta]}$ . **NPE**
- (41) I loaned him five figs, and I think I also loaned  $_{[DP]}$  her  $_{[D'_{[D]}]}$   $_{[NUM_{[E]}]}$  **six**  $_{[NP \Delta]}$ . **NumPE**
- (42) Abby was reading something, but I don't know  $_{[CP]}$  **what**  $_{[C'_{[E]}]}$   $_{[IP \Delta]}$ . **Sluicing**

Merchant's theory gives an account of ellipsis licensing that tries to describe data for both sluicing and VPE/NPE phenomena. In Merchant's account, [E] is present on the functional node. This machinery allows Merchant to unify licensing requirements for sluicing, where the functional head is empty, with VPE and NPE, where the head preceding the ellipsis site must be overt. Yet, because of this unification, Merchant cannot support a requirement for overtness, which we have seen is crucial for VPE and NPE in AAE and ellipsis in subjunctive clauses in MAE.

Specifically for Merchant, if we assume that in possessive phrases in AAE –s and –Ø are allomorphs of the possessive morpheme, then both should bear the associated [E] feature,  $_{[E_{NP}]}$ , and should thus trigger ellipsis. However, the findings from Experiment 1 show that –Ø cannot license ellipsis as Merchant's theory would predict. In the next section we see more evidence from possessive

<sup>18</sup> Example and tree structure reproduced from Merchant (2004:670) example (33).

pronouns in both MAE and AAE that shows that overtness is a clear problem for Merchant's theory.

## 5.2 Ellipsis and possessive pronouns

MAE does not have zero-marking in the domain of regular possessive constructions. Nevertheless, the need for an overt functional head can be seen when looking at possessive pronouns in ellipsis contexts in this variety.<sup>19</sup> Consider the following data in MAE. In response to "Whose Kaboodle is that?" both (43) and (44) are grammatical responses, while (45) is not.

(43) That's her Kaboodle.

(44) That's hers Δ.

(45) \*That's her \_\_ Δ.

The OCE correctly excludes (45), while Merchant's analysis incorrectly predicts it to be grammatical. The above data show that the same alternation seen in AAE for all possessives extends to possessive pronouns in MAE. When preceding an ellipsis site, overt *-s* marking is required as in (44). When the possessive pronoun alone precedes a complement, ellipsis is not licensed, which accounts for the ungrammaticality in (45). Thus, for possessive pronouns, the OCE's requirement is met and licensing of ellipsis can only occur with the addition of *-s* morphology in the functional head of the possessive DP.<sup>20</sup> When *-s* is spelled out, ellipsis is triggered. If *-s* is not spelled out, the OCE predicts that the full complement *must* be produced. Without an overt head, ellipsis cannot occur. This analysis correctly rules out (45).

Under Merchant's analysis, on the other hand, an utterance like (45), where ellipsis occurs following a null head, is predicted to be grammatical for the same

<sup>19</sup> The facts related to possessive pronouns and ellipsis are the same for AAE and MAE.

<sup>20</sup> It might be accurate to contend that in these instances, the overt *-s* morpheme that is merged for possessive pronouns may have the sole purpose of ellipsis licensing as genitive case and agreement features are already encoded in the suppletive form. Under this account, the first person possessive pronoun *mine* would be composed of the first person possessive pronoun, *my* plus an [E] bearing ellipsis licensing feature *-n*. This may be counter evidence for an analysis proposed by Deal (2006) which supposes that *-s* marking in possessive pronouns is a display of double genitive marking.





However, the OCE accounts for the overtiness criterion for Predicate Ellipsis at the cost of excluding sluicing phenomena, which Merchant's account was designed to explain. The next section engages with the possibility that Clausal Ellipsis such as sluicing, fragment answers and possibly comparatives require different licensing conditions than has been shown for Predicate Ellipsis.

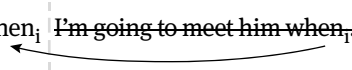
## 6 A possible account of licensing for Clausal Ellipsis

So far, in this paper, the OCE makes the claim that Predicate Ellipsis is licensed by a phonologically overt element in a preceding functional head. This overtiness description accounts for a wide range of data in AAE and MAE, and further work should evaluate its strength in other languages. This has led us to conclude that there must not be one licensing condition for ellipsis. If the overtiness of the licensing head is key in Predicate Ellipsis, it is clear that the opposite is true for Clausal Ellipsis. Namely, the preceding head is typically null in Clausal Ellipsis constructions. To this end, the licensing conditions for these phenomena must account for this difference. While identifying the licensing conditions for Clausal Ellipsis is beyond the scope of this paper, I will briefly lay out a movement-based theory of licensing presented by Thoms (2010) that seems compatible with the facts of Clausal Ellipsis.

### 6.1 A Movement-based Account

Another clear difference between Predicate Ellipsis and Clausal Ellipses like sluicing lies in the fact that all sluices require movement. Thoms (2010) proposes that the movement of a *wh*-element is quintessential to the licensing of sluicing. Therefore, in the example of sluicing in (48), Thoms proposes that the overt A'-movement of *when* licenses the ellipsis of the complement to the right of its landing site.

(48) I'm going to meet him, I just don't know when<sub>i</sub> ~~I'm going to meet him when<sub>i</sub>~~



The diagram shows a curved arrow pointing from the ellipsis site 'I'm going to meet him when<sub>i</sub>' back to the landing site 'when<sub>i</sub>' in the first clause.

In fact, Thoms suggests that sluicing, VPE, and NPE are all licensed by movement, specifically by non-A-movement. His ultimate claim is that ellipsis in general is a repair strategy necessary to avoid the linearity failure that would result at PF if an

element that has been copied and moved c-commands an overt copy. Thoms takes a non-standard approach to the ‘Copy and Delete’ theory and proposes that the base copy of the moved element does not delete upon movement of its copy, but instead, the entire complement that housed the copy must subsequently delete at PF. This analysis seems quite ideal to describe licensing for sluicing. However, many complications arise in trying to extend this proposal to instances of Predicate Ellipsis.

Take VPE licensed by *not* as an example. In its full form, it is not commonly held that negation involves movement. Thoms argues that there might be reason to believe that movement does occur in these constructions. He first contends that the data in (49)–(51) suggest that two syntactic positions for negation are available.<sup>22</sup>

- (49) Ted hoped to vacation in Liberia but his agent recommended that he not.
- (50) Some of the students have been not studying.
- (51) \*Some of the students have been studying but some have been not.

Thoms proposes that negation in the example of ellipsis licensed by *not* in (49) occupies a high syntactic position. In the examples of constituent negation in (50) and (51), however, *not* is assumed to be in a relatively lower position. He then makes the case that because ellipsis fails to occur under constituent negation, we might assume that this negative element is base-generated in the low position. Given this postulation, ellipsis cannot be licensed in (51) because *not* has been merged low, and thus has undergone no movement appropriate for licensing. In contrast, Thoms asserts that because negation in the high position *does* license ellipsis, we could see this as evidence that movement has occurred from the low to high position. (That is, of course, if we assume that the presence of ellipsis is indicative of movement in these instances.)

Unfortunately, while there is evidence that multiple positions for negation exist, there is no relevant independent evidence to suggest that negation, in any configuration, undergoes movement. Additionally, if two syntactic positions for negation exist, these positions should correspond to different semantic interpretations. Therefore, important evidence to support movement would also come from sentences in which negation in the high position could have a similar semantic interpretation in its base position as well.

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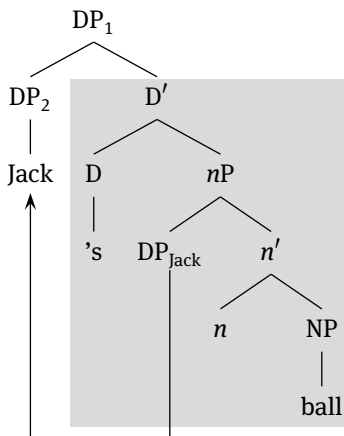
<sup>22</sup> Examples reproduced from Thoms (2010:30), examples (57)–(59).

- (52) Andrea and Tatum **didn't** usually fear the toe-eating monster.
- (53) Andrea and Tatum usually **didn't** fear the toe-eating monster.

However, phrases like (52) with negation in the high position, and its counterpart with negation interpreted in its base-generated position, (53), are not synonymous due to differences in scope. Thus, negation facts do not seem to confirm Thoms' claim that *not* is an element that moves. Without evidence of movement, this movement-based licensing condition cannot explain the ellipsis facts for negation.<sup>23</sup>

Next, Thoms account also cannot be easily extended to ellipsis in DPs as no head or A'-movement occurs in such constructions, only A-movement of the possessor to Spec DP. Even if A-movement of the possessor were enough to license ellipsis, we would then expect that possessive morphology in D would also be elided as he claims that all material to the right of the landing site must not be produced. If his analysis is correct, we would expect to find that the possessor in possessive DPs, having moved leftward to the specifier of the possessive DP, would license deletion of both *-s* morphology and the NP complement. This, of course, does not occur as we see in the structure and representative sentence in (54).

- (54) \*That's Mykah('s) ball and that's Jack Δ.  
 "That's Mykah's ball and that's Jack's."



<sup>23</sup> Many thanks to Kyle Johnson for drawing my attention to this counter evidence.

In the proposed structure of the possessive DP under (54) we see that the possessive structure that is generated given Thoms' general analysis is ungrammatical. To avoid generating the illicit surface form in (54), Thoms must stipulate that suffixation of *-s* to the possessor in the specifier occurs, and does so prior to ellipsis in order for the *'s* to escape deletion. He defines this process of suffixation as non-A movement of *-s* to the possessor in SpecDP. While this generates the proper surface form, this view of genitive case "movement" lacks sufficient independent support.

Finally, Thoms admits that licensing of NPE that does not involve possessives as in (55) poses somewhat of a challenge for his theory, as there is no evidence in MAE that DP-internal movement happens in these cases.

(55) I gave Rachel three cans of Spaghetti-Os, so I had to give Katherine four Δ.

However, Thoms appeals to cross-linguistic work on NPE in an attempt to motivate claims that some movement does occur in these non-possessive instances. For example, cases of non-possessive NPE in Spanish discussed in Eguren (2009) are proposed as data that have been reported to display DP-internal movement related to focus elements. Interestingly, Eguren ultimately argues against previous analyses that equate licensing of the relevant NPE phenomena with overt focus movement in favor of a feature-based lexical insertion analysis. There is little clear evidence of movement in MAE or cross-linguistically, and consequently, weak support for Thoms' approach to licensing for these data.

In sum, Thoms' account, like Merchant's, represents another account of ellipsis licensing that tries to unify Clausal Ellipses like sluicing and Predicate Ellipsis, but to no avail. While Thoms' movement-based licensing requirement seems to work quite well for sluicing,<sup>24</sup> it just cannot quite explain licensing of VPE with *not*, and various forms of NPE. First, stipulating that movement occurs in licensing of ellipsis in negation constructions made the wrong predictions about scope. Second, to explain NPE for possessives, a view of genitive marking that is not strongly supported had to be adopted. Lastly, licensing of NPE that does not require possessive marking cannot definitively be described by a movement-based account.

The elegance of Thoms' proposal for sluicing juxtaposed with the ineffectiveness of this account for other ellipsis types is perhaps more compelling evidence that we should recognize Clausal Ellipsis as being subject to different licensing criteria. Thus we might suspect that Clausal Ellipsis is licensed by elements related

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<sup>24</sup> Also see Thoms (2010) for a movement-based account of fragment answers.

to movement, while evidence across English dialects demonstrates that NPE and VPE pattern the same – both are licensed by a functional head that *must* be overt.

## 7 Conclusions

In this paper, I have argued that an overt functional head is required to license Predicate Ellipsis using original data from African American English as well as previous work on MAE. Specifically, I have shown that in environments where AAE allows optionality in the phonological realization of functional heads, ellipsis only occurs following phonologically overt functional material. The results of two experiments have served to bolster Potsdam's (1996, 1997) early observation regarding the role of overtness for licensing of VPE and were used to extend the generalization to NPE phenomena. The predictions formalized in the OCE correctly account for this cross-linguistic data. Furthermore, the OCE rules out ungrammatical data from MAE that analyses proposing a unified condition for licensing of Predicate and Clausal Ellipsis cannot. The importance of overtness for licensing is not present in the theories of ellipsis licensing proposed by Lobeck (1995) and also Merchant (2001). Ultimately, it is the major contribution of optionality in AAE that makes clear the critical role of overtness of the preceding functional head for licensing of Predicate Ellipsis. In that no unified account of ellipsis licensing is sufficiently explanatory of both Clausal and Predicate Ellipsis, this finding leads us to the conclusion that one licensing account is not enough.

## Acknowledgements

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## Appendix 1

Instances of zero-marking preceding an ellipsis site from Experiment 2.

- a. Make sure you check your burger because last week Keyshia\_ didn't have meat on it.
- b. Make sure you check your burger because last week Keysha\_ didn't have any katsup on it something.
- c. Kevin\_ car is so nice but Mary\_ breaks down almost every work day.
- d. Shantel's hair is always jet black, but Katie always has three colors.

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Sandra Döring

# Parentheticals are – presumably – CPs

**Abstract:** This paper is concerned with the internal syntax of parentheticals in German. I argue that, despite superficial appearance, parentheticals form a categorially homogeneous class with respect to their category, namely they are clausal (i.e. CPs) throughout. To derive the fact that parentheticals show up as various categories at the surface, I adopt a movement plus deletion approach that assimilates parentheticals to other phenomena analysed as ellipsis, such as sluicing, fragment answers, split questions, amalgams, left and right dislocation. Moreover, I propose that appositions and parentheticals are one and the same phenomenon and thus should be captured by the same approach.

**Keywords:** Parenthetical, apposition, multi-argument apposition, recoverability, deletion, ellipsis

## 1 Introduction

One type of parentheticals<sup>1</sup> consists of fully pronounced sentences inserted in an anchor clause as in (1). An example for German (the language under investigation here) corresponding to the English example in (1) is the V2-parenthetical in (2). Such parenthetical sentences are independent from their anchor clause in the sense that they bear no syntactic function in the anchor clause or vice versa.<sup>2</sup>

(1) Usain Bolt is – on this, we certainly agree – the fastest man in the world.

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<sup>1</sup> See <http://ling.uni-konstanz.de/pages/home/dehe/bibl/parentheticals.html> for an overview of literature on parentheticals in general. Also see Dehé and Kavalova (2007), Döring (2010), Schneider et al. (2014), and references therein.

<sup>2</sup> For investigations on syntactic independence of parentheticals see e.g. Haegeman (1988), Espinal (1991), De Vries (2007). For details on V2-parentheticals in German see Döring (2010, 2013) and references therein.

- (2) Usain Bolt ist – da sind wir uns wohl einig – der schnellste Mann  
 Usain Bolt is there are we SELF well agreed the fastest man  
 der Welt.  
 the world  
 ‘Usain Bolt is – on this, we certainly agree – the fastest man in the world.’

Beside V2-parentheticals, German also exhibits parentheticals such as those in (3), which are not full V2-clauses. They are equally independent from their anchor clause as the V2-parenthetical in (2).

- (3) a. Usain Bolt ist – aus verschiedenen Gründen – der schnellste Mann  
 Usain Bolt is for different reasons the fastest man  
 der Welt.  
 the world  
 ‘Usain Bolt is the fastest man in the world, for different reasons.’ [PP]
- b. Usain Bolt hat – sehr zielstrebig – sein Tempo erhöht.  
 Usain Bolt has very purposefully his speed increased  
 ‘Usain Bolt increased his speed, very purposefully.’ [AP]
- c. Ich habe jemanden – vielleicht den Usain Bolt – gesehen.  
 I have somebody.ACC maybe the Usain Bolt.ACC seen  
 ‘I saw somebody, maybe Usain Bolt.’ [NP]

The literature on parentheticals mostly focuses on their external syntax, i.e. the relation between the parenthetical and its anchor clause (for different approaches see McCawley 1982, Haegeman 1988, Espinal 1991, De Vries 2007). The internal syntax of parentheticals, however, got much less attention, probably because of the superficial diversity of the categories they may appear in (CP, PP, AP, VP, NP). On the surface, (almost) every maximal projection can be a parenthetical.<sup>3</sup>

It seems as if there are no syntactic restrictions on the placement of parentheticals within the anchor clause in German<sup>4</sup>, only prosodic, and semantic-pragmatic restrictions. The only criterion concerning the distribution of parentheticals in the paper here is that they are placed within the anchor clause.

Concentrating on the internal syntax of parentheticals, I would like to put forward the following claim in the present paper.

<sup>3</sup> There is one notable exception: TP; see section 3.4.1.

<sup>4</sup> Altmann (1981) does not share this view.

## (4) HYPOTHESIS

The categorial heterogeneity of parentheticals is only superficial. In fact, all parentheticals are underlyingly clauses, i.e. they are CPs.

The argumentation in this article in favour of this hypothesis<sup>5</sup> is structured as follows. In section 2, some evidence for hidden (clausal) structure of parentheticals will be presented before in section 3 a new analysis of parentheticals, based on the analysis of ellipsis as movement plus deletion, will be suggested. In section 4, the analysis will be extended to appositions in 4.1 and to multiple-argument appositions in section 4.2. The results will be summarised in section 5.

This paper argues that the approach to parentheticals and to appositions may be unified, which represents an advantage to approaches that theoretically distinguish them. Under this view, the terms ‘parenthetical’ and ‘apposition’ are just descriptive labels. However, as the prior literature distinguishes and labels differently, I kept to the traditional terminology for expository reasons, slightly modifying it by distinguishing between one-argument and multiple-argument appositions.

To anticipate the discussion that is to follow, note that the empirical arguments that I shall put forward in defence of (4) involve parentheticals that contain sentence adverbs, discourse particles, mood and case marking. In principle, a non-clausal analysis would still be available for parentheticals that do not contain any of the above mentioned material. However, since a clausal analysis is also applicable for those, and since a unified analysis is preferable on conceptual grounds (Ockham’s razor), I conclude that (4) should hold for parentheticals in general.

## 2 Evidence for hidden structure

The first evidence for the clausal hidden structure of parentheticals comes from two observations. To begin with, there are certain elements which are usually assumed to depend on the presence of a C-projection and which can appear within parentheticals. This suggests an underlying clausal structure. The observation will be illustrated by means of sentence adverbs and discourse particles in 2.1.

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<sup>5</sup> Hypothesis (4) is also briefly mentioned in Döring (2010). An approach in terms of movement and deletion was touched upon in Döring (2012). Earlier related discussions can be found in Altmann (1981), Schindler (1990), and Öhlschläger (1996).

Next, parentheticals can express different types of mood, which are also usually associated with the presence of a C-head. This is illustrated in section 2.2.

## 2.1 Sentence adverbs and particles

It is often assumed that certain sentence adverbs (such as *probably*, *possibly*, *maybe*) signal speaker orientation, and therefore suggest the presence of a speech act. Syntactically, speech acts are associated with CPs (cf. Ross 1970, Cinque 1999). Thus, the presence of such sentence adverbs indicates the presence of a clausal structure. The examples in (5) are based on the examples in (3). In each case a sentence adverb has been added, in (5a) *wahrscheinlich* ‘probably’, in (5b) *möglicherweise* ‘possibly’, and *vielleicht* ‘maybe’ in (5c). All examples in (5) are grammatical.

- (5) a. Usain Bolt ist – *wahrscheinlich* aus verschiedenen Gründen – der  
 Usain Bolt is probably for different reasons the  
 schnellste Mann der Welt.  
 fastest man the world  
 ‘Usain Bolt is the fastest man in the world, probably for different reasons.’
- b. Usain Bolt hat – *möglicherweise* sehr zielstrebig – sein Tempo  
 Usain Bolt has possibly very purposefully his speed  
 erhöht.  
 increased  
 ‘Usain Bolt increased his speed, maybe very purposefully.’
- c. Ich habe irgendjemanden – *vielleicht* den Usain Bolt – gesehen.  
 I have somebody.ACC maybe the.ACC Usain Bolt seen  
 ‘I saw somebody, maybe Usain Bolt.’

The presence of discourse particles in parentheticals provides a second clue for hidden (clausal) structure. Again, the background assumption is that certain particles are associated with a speech act (e.g. in German the particles *wohl*, *ja*, *doch*; see Zimmermann 2004 on *wohl*). Therefore, their presence suggests the existence of an underlying clausal structure. The following examples are based on (3) as well, extended by discourse particles.

- (6) a. Usain Bolt ist – *wohl* aus verschiedenen Gründen – der schnellste  
 Usain Bolt is PART for different reasons the fastest  
 Mann der Welt.  
 man the world  
 ‘Usain Bolt is the fastest man in the world, probably for different reasons.’
- b. Usain Bolt hat – *doch* sehr zielstrebig – sein Tempo erhöht.  
 Usain Bolt has PART very purposefully his speed increased  
 ‘Usain Bolt increased his speed, indeed very purposefully.’
- c. Ich habe irgendjemanden – *wohl* den Usain Bolt – gesehen.  
 I have somebody.ACC PART the.ACC Usain Bolt seen  
 ‘I saw somebody, well maybe Usain Bolt.’

To summarise, the addition of sentence adverbs and discourse particles to parentheticals leads to grammatical results. Provided that these elements depend on the presence of a C-projection, this suggests that parentheticals are clausal underlyingly.

## 2.2 Mood

The second type of argument for hidden clausal structure of parentheticals is based on mood. It is often assumed that the locus of mood is C. Based on the examples introduced in (3), the examples in (7) can be formed. Clearly, the parentheticals in these examples show interrogative mood.

- (7) a. Usain Bolt ist – warum wohl? – der schnellste Mann der Welt.  
 Usain Bolt is why PART the fastest man the world  
 ‘Usain Bolt is, I wonder why, the fastest man of the world.’
- b. Usain Bolt ist – etwa aus verschiedenen Gründen? – der schnellste  
 Usain Bolt is PART for different reasons the fastest  
 Mann der Welt.  
 man the world  
 ‘Usain Bolt is the fastest man of the world. Possibly even for different reasons?’
- c. Ich habe jemanden – vielleicht gar den Usain Bolt? –  
 I have somebody.ACC maybe PART the Usain Bolt.ACC  
 gesehen.  
 seen  
 ‘I saw somebody, maybe actually Usain Bolt?’

If interrogativity is located in C (see Katz and Postal 1964 and Baker 1970 on the idea that interrogativity is located at the left edge of the clause), then the interrogative interpretation of the parentheticals in (7) strongly suggests the presence of a C-head within the parenthetical, thus a clausal structure.

The argument is not restricted to interrogativity. Parentheticals may also appear in exclamative mood as illustrated by the *wh*-exclamative in (8).

- (8) Usain Bolt hatte – was für ein Glück für ihn! – diese Saison keine  
 Usain Bolt had what for one luck for him this season no  
 Verletzung.  
 injury  
 ‘Usain Bolt didn’t do himself any injury this season, how fortunate for him.’

To sum up, the presence of interrogative or exclamative mood in parentheticals strongly suggests that they are underlyingly clausal.

### 2.3 Summary

In this section, the evidence for hidden clausal structure of parentheticals was tested positively. The presence of sentence adverbs and discourse particles as well as the possibility of an interrogative or exclamative interpretation of parentheticals suggest that they involve a CP and are thus underlyingly clausal.

## 3 Analysis

Assuming that parentheticals are underlyingly clausal, we need an analysis that accounts for their potential non-clausal appearance at the surface – an analysis in terms of ellipsis. In this section, I present an approach to parentheticals that has been successfully applied to other instances of ellipsis before. After introducing the mechanism in section 3.1, I will address two questions that arise in the context of the particular analysis proposed here, namely the question whether overt multiple SpecCs are possible in German, see section 3.2, and how it is possible that C sometimes seems to survive the deletion process, see section 3.3. Finally, I will give further evidence for the analysis in section 3.4 discussing the non-existence of TP parentheticals and the possibility of reflexivization within parentheticals without antecedents.



### 3.1 Mechanism

The proposal that I would like to put forward here is that parentheticals are full CPs that undergo partial deletion at PF. Only material that has been moved to SpecC survives the deletion. Thus, the proposal assimilates parentheticals to the analysis of other constructions such as sluicing (Ross 1969, Merchant 2001), contrastive left dislocation (Ott 2014), right dislocation (Ott and De Vries 2013), split questions (Arregi 2010), fragment answers (Merchant 2004), and amalgams (Kluck 2011).<sup>6</sup>

As an example for the mechanism consider a case of sluicing in English, as shown in (9).

- (9) Joe bought something, but they don't remember [<sub>CP</sub> what<sub>i</sub> Joe bought <sub>t<sub>i</sub></sub>].

The *but*-clause in (9) is interpreted as if it contained a complete embedded interrogative clause (*what Joe bought*). Yet, on the surface, there is only a *wh*-phrase pronounced. The analysis originally proposed by Ross (1969), and argued for extensively in Merchant (2001), assumes that there is indeed an embedded clause in the syntax, with the *wh*-phrase having moved to SpecC. Since the clause is part of the input to the semantics, the interpretation is one of an embedded interrogative. At PF, however, the whole TP or C'-category of the embedded clause undergoes deletion, leaving only the *wh*-phrase for pronunciation. For the purposes of this paper, it does not matter whether TP (see Merchant 2001) or C' (see Heck and Müller 2003, Thoms 2010) undergoes deletion. The argumentation is compatible with either approach. For expository reasons, I adopt the approach of C'-deletion.

As for parentheticals, the same type of analysis can be applied. The material that shows up as the surface parenthetical moves to SpecC and escapes deletion, the rest of the clause undergoes deletion. This is abstractly depicted in (10).

- (10) MECHANISM ADOPTED FOR PARENTHETICALS  
 [<sub>CP1</sub> anchor clause part 1 – [<sub>CP2</sub> [ parenthetical ]<sub>1</sub> {... t<sub>1</sub> ...}] – anchor clause part 2 ]

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<sup>6</sup> Other approaches to ellipsis are not discussed here. For an overview of ellipsis, see Klein (1993), and more recently Reich (2011), and Merchant (2012). For further discussion of the PF-deletion approach to ellipsis and the pro-theory of ellipsis, see Van Craenenbroeck (2010), for an empty pronoun approach see Lobeck (1995).

I will have nothing to say about the conditions on deletion except that the deleted material must be recoverable in some sense from the anchor clause (see Chomsky 1965 on the notion of recoverability in syntax; cf. Johnson 2012 for certain qualifications).<sup>7</sup> Note that I assume that, technically, it is not recoverability that is the trigger for the movement in (10). In fact, it cannot be if syntax is a module on its own without look-ahead to the semantics. Rather, there must be a feature in (10) that triggers the movement. This feature can be inserted on C if C also bears a feature indicating deletion at PF (see Merchant 2001, Heck and Müller 2003). For the sake of simplicity, I will often sloppily talk of recoverability as being the trigger of movement, ignoring the technicalities; see, however, section 3.4.1 for some relevant discussion.

Returning to the main plot, the mechanism is illustrated by means of the concrete example introduced in (3a), here repeated as (11a). The underlying verb-final<sup>8</sup> clausal structure is given in (11b). The PP-constituent *aus verschiedenen Gründen* ‘for different reasons’ has been fronted to SpecC in (11c) before C’ of the parenthetical clause is deleted, as shown in (11d).<sup>9</sup>

- (11) a. Usain Bolt ist – [ aus verschiedenen Gründen ] – der schnellste Mann  
 Usain Bolt is      for different              reasons              the fastest      man  
 der Welt.  
 the world
- b. Usain Bolt ist – [<sub>CP</sub> parenthetical ] – der schnellste Mann der Welt.  
 Usain Bolt is    the fastest      man      the world  
 [<sub>CP</sub> UB [<sub>PP</sub> aus verschiedenen Gründen ] der schnellste Mann der  
 UB      for different              reasons              the fastest      man      the  
 Welt ist ]  
 world is
- c. [<sub>CP</sub> [<sub>PP</sub> aus verschiedenen Gründen ]<sub>1</sub> UB t<sub>1</sub> der schnellste Mann der  
 for different              reasons              UB      the fastest      man      the  
 Welt ist ]  
 world is

<sup>7</sup> For more information concerning ellipsis licensing see the introduction of this volume.

<sup>8</sup> I assume, as is standard, that German is an SOV language.

<sup>9</sup> For expository reasons, no V2 is represented. Under the assumption that deletion targets C’, V-to-C movement can apply as usual, being marked by subsequent deletion. If deletion targets TP, V-to-C movement leads to the expectation that the fronted V survives deletion, contrary to fact (see Merchant 2001 for possible explanations); see also section 3.3. This is a possible advantage of the assumption that deletion actually targets C’ (instead of TP).

- d. [<sub>CP</sub> [<sub>PP</sub> aus verschiedenen Gründen ]<sub>1</sub> ~~UB-t<sub>T</sub> der schnellste Mann der Welt ist~~ ]

The following examples in (12a–e) represent just the last step of the analysis, as in (11d), but this time movement of PP, AP, VP, and NP is involved. The first line gives the anchor clause and the parenthetical, the second line exemplifies the movement to SpecC plus deletion approach for the elliptical parenthetical (the anchor clause is not repeated as it is not effected by the operation).

- (12) a. Bolt ist – [<sub>CP</sub> mit beeindruckender Zeit ] – der schnellste Mann der Welt.  
 Bolt is with impressive time the fastest man the world.  
 ‘Bolt is the fastest man in the world, with an impressive time.’  
 [<sub>CP</sub> [<sub>PP</sub> mit beeindruckender Zeit ]<sub>1</sub> [ ~~Bolt t<sub>T</sub> der schnellste Mann der Welt ist~~ ] ]
- b. Usain Bolt hat – [<sub>CP</sub> sehr zielstrebig ] – sein Tempo erhöht.  
 Usain Bolt has very purposefully his speed increased  
 ‘Usain Bolt has very purposefully increased his speed.’  
 [<sub>CP</sub> [<sub>AP</sub> sehr zielstrebig]<sub>1</sub> [ ~~Usain Bolt t<sub>T</sub> sein Tempo erhöht hat~~ ] ]
- c. Bolt ist – [<sub>CP</sub> jedenfalls heutzutage ] – der schnellste Mann der Welt.  
 Bolt is at.least nowadays the fastest man the world  
 ‘At least nowadays, Bolt is the fastest man in the world.’  
 [<sub>CP</sub> [<sub>AP</sub> jedenfalls heutzutage ]<sub>1</sub> [ ~~Bolt t<sub>T</sub> der schnellste Mann der Welt ist~~ ] ]
- d. Usain Bolt ist – [<sub>CP</sub> wie erwartet ] – der schnellste Mann der Welt.  
 Usain Bolt is as expected the fastest man the world  
 ‘As expected, Usain Bolt is the fastest man in the world.’  
 [<sub>CP</sub> [<sub>VP</sub> wie erwartet ]<sub>1</sub> [ ~~Usain Bolt t<sub>T</sub> der schnellste Mann der Welt ist~~ ] ]
- e. Usain Bolt – [<sub>CP</sub> ein Jamaikaner ] – ist der schnellste Mann der Welt.  
 Usain Bolt a Jamaican is the fastest man the world  
 ‘Usain Bolt, a Jamaican, is the fastest man in the world.’  
 [<sub>CP</sub> [<sub>NP</sub> ein Jamaikaner ]<sub>1</sub> [ ~~t<sub>T</sub> der schnellste Mann der Welt ist~~ ] ]

So far, parentheticals with one overt constituent at the surface have been addressed. I now turn to parentheticals consisting of more than one constituent.

### 3.2 Multiple specifiers

The analysis of example (3c), repeated in (13a), requires multiple specifiers in CP. The reason is that the sentence adverbial *vielleicht* ‘maybe’ in (13a) arguably does not form a constituent with *Usain Bolt*. Therefore, both constituents have to be moved to SpecC separately, see the steps in (13c) and (13d).

- (13) a. Ich habe jemanden – vielleicht den Bolt – gesehen.  
 I have somebody.ACC maybe the.ACC Bolt seen  
 ‘I saw somebody, maybe Usain Bolt.’
- b. Ich habe jemanden – [CP ich vielleicht den Bolt gesehen habe] –  
 I have somebody I maybe the Bolt seen have seen  
 gesehen.
- c. [CP [ den Bolt ]<sub>1</sub> [ ich [ vielleicht ]<sub>2</sub> t<sub>1</sub> gesehen habe ] ]  
 the Bolt I maybe seen have
- d. [CP [ vielleicht ]<sub>2</sub> [ den Bolt ]<sub>1</sub> [ ich t<sub>2</sub> t<sub>1</sub> gesehen habe ] ]  
 maybe the Bolt I seen have
- e. [CP [ vielleicht]<sub>2</sub> [ den Bolt ]<sub>1</sub> [ ~~ich t<sub>2</sub> t<sub>1</sub> gesehen habe~~ ] ]

It is, at first blush, surprising that the derivation in (13) requires multiply filled SpecC-positions, because it is usually assumed that multiply filled SpecCs are not possible in German, see (14).

- (14) a. \*[ Der Usain Bolt ] [ die Medaille ] hat gestern gewonnen.  
 the Usain Bolt the medal has yesterday won  
 ‘Usain Bolt won the medal yesterday.’
- b. \*[ Dem Publikum ] [ der Usain Bolt ] hat gedankt.  
 the audience the Usain Bolt has thanked  
 ‘Usain Bolt thanked the audience.’

There is, however, a crucial difference between (14a,b) on the one hand and (13a) on the other hand: In (13), there is ellipsis involved while in (14), there is not. Under the assumption that material that has no antecedent cannot undergo deletion (because this would violate the principle of recoverability), the example in (13) forces movement of multiple constituents to SpecC. In other words, multiple overt specifiers in the C-domain are possible after all in German, but only if leaving material in situ would violate recoverability otherwise. No recoverability issue arises in (14a,b), however, and therefore multiple SpecCs are banned.

That this may be on the right track is suggested by the fact that German exceptionally exhibits multiple *wh*-movement (i.e. multiple filling of SpecC by *wh*-phrases) in sluicing/deletion contexts, see (15a), although, generally, there is no multiple *wh*-movement in German, see (15b).

- (15) a. Irgendwer hat irgendwas gewonnen, aber Bolt weiß nicht mehr  
 someone has something won but Bolt knows not anymore  
 wer was.  
 who what  
 ‘Someone won something, but Bolt does not remember who won what.’
- b. \*Wer was hat gewonnen?  
 who what has won  
 ‘Who won what?’

Constructions such as the one in (15a) are analysed as instances of exceptional multiple filling of SpecC by the two *wh*-phrases by Merchant (2001) or Heck and Müller (2003). Again, a possible explanation is that leaving one of the *wh*-phrases in situ would incur a violation of the principle of recoverability.

### 3.3 Can C survive?

In (16), the parenthetical consists of a coordinator *oder* ‘or’ and a subjunction *weil* ‘because’, the latter being a classical C-element.

- (16) Obwohl – oder weil – Usain Bolt eine einzigartige  
 although or because Usain Bolt a unique  
 Lauftechnik hat, ist er der schnellste Mann der Welt.  
 running technique has is he the fastest man the world  
 ‘Usain Bolt is the fastest man in the world, although, or because, he has a  
 unique running technique.’

According to Merchant’s (2001) Sluicing-COMP-generalisation in (17), only material in SpecC survives deletion (see Merchant 2001, 62).

- (17) SLUICING-COMP-GENERALISATION  
 In sluicing, no-non operator material may appear in COMP.

This means, crucially, that even C undergoes deletion in sluicing. This also carries over to other cases of ellipsis that are analysed in terms of TP/C'-deletion. For instance, motivation for (17) comes from cases where the finite verb in a V2-construction in German does not survive deletion in a fragment answer, see (18).

- (18) Q: Gestern hat ein Jamaikaner die 100m gewonnen.  
 yesterday has a Jamaican the 100m won  
 'Yesterday, a Jamaican won the 100 metres.'
- A: Wer (\*hat)?  
 who has

If parentheticals involve the very same mechanism of movement plus deletion as sluicing does, then the question arises as to why the causative C-element *weil* 'because' can survive in (16), given the generalisation in (17).

The explanation that I would like to propose here, has, again, to do with recoverability. Namely, I assume that the causative embedded C *weil* must escape deletion because it cannot be recovered from the concessive matrix C *obwohl* 'although'. Consequently, the C-head must move out of the domain that is subject to deletion. This can be achieved in different ways: C might either escape by head-movement to SpecC (see Matushansky 2006), or it may move out of the CP and undergo reprojection (see Georgi and Müller 2010).

The application of the general mechanism introduced in (10) to the example in (16) is illustrated in (19). The underlying clausal structure of the parenthetical is given in (19a), the movement to SpecC in (19b), and, finally, the deletion in (19c).<sup>10</sup>

- (19) a. Obwohl – oder [<sub>CP</sub> weil Bolt eine einzigartige Lauftechnik  
 although or because Bolt a unique running technique  
 hat ] – Bolt eine einzigartige Lauftechnik hat, ist er ...  
 has Bolt a unique running technique has is he ...
- b. oder [<sub>CP</sub> [ weil ]<sub>1</sub> [ t<sub>1</sub> Bolt eine einzigartige Lauftechnik  
 or because Bolt a unique running technique  
 hat ] ]  
 has
- c. oder [<sub>CP</sub> [ weil ]<sub>1</sub> [ t<sub>1</sub> Bolt eine einzigartige Lauftechnik hat ] ]

<sup>10</sup> Of course, parentheticals that involve a C-head that has its selectional requirements unsatisfied at the surface as in (19) also naturally suggest a clausal analysis.

A reviewer notes that the complementizer *dass* “that” in (20) cannot survive deletion although it cannot be recovered from the antecedent C *obwohl* “although”:

- (20) \*Maria fragte, OB Hans Fisch essen wolle und Hans antwortete,  
 Maria asks whether Hans fish eat wants and Hans answers  
~~DASS er Fisch essen wolle~~  
 that he fish eat wants  
 ‘Maria asked whether Hans wanted to eat Fish, and Hans answered that he indeed wanted to.’

Note that the complementizer *dass* in (20) bears stress, which is interpreted as an assertion of the proposition following it. This is what Höhle (1992) calls VERUM-focus. Thus, *dass* in (20) arguably bears semantic content. If movement in this context were literally driven by recoverability, then one would expect (20) to be grammatical.

Now, I already noted in section 3.1 that I assume that movement is actually feature-driven. Recoverability issues come into play only if movement of some category  $\alpha$  fails to apply, and  $\alpha$  undergoes deletion and its semantic content cannot be recovered. Not surprisingly then, (20) is also ungrammatical if *dass* undergoes deletion, this time for reasons of recoverability, see (21).

- (21) \*Maria fragte, OB Hans Fisch essen wolle und Hans antwortete,  
 Maria asks whether Hans fish eat wants and Hans answers  
~~DASS er Fisch essen wolle~~  
 that he fish eat wants

This still leaves the ungrammaticality of (20) unaccounted for. I would like to tentatively propose that (20) is ill-formed for independent reasons. Apparently, a dangling complementizer must not be at the end of a sentence. This may have prosodic reasons (cf. Merchant 2001, 78f.). This fits with the observation that a *dass* can survive deletion if it is not at the end of the sentence, see (22).

- (22) Peter behauptet zwar, ~~DASS sie das versprochen hat~~, aber Maria fragt  
 Peter claims indeed that she that promised has but Maria wonder  
 sich, OB sie das versprochen hat.  
 herself whether she that promised has  
 ‘Peter claims that she promised it but Maria wonders whether she did.’

Again, deletion of a *dass* bearing VERUM-focus violates recoverability because the information of the VERUM-focus is lost, see (23).

- (23) \*Peter behauptet zwar, ~~DASS sie das versprochen hat~~, aber Maria fragt  
 Peter claims indeed that she that promised has but Maria wonder  
 sich, OB sie das versprochen hat.  
 herself whether she that promised has

To sum up, so far it has been argued that parentheticals can be analysed as elliptical clauses by movement plus deletion. The analysis is also applicable if parentheticals contain more than one phrase or a C-element without complement.

It is clear that for those parentheticals that do not contain any overt element (such as adverbs, discourse particles, etc.) indicating the presence of a CP-projection an analysis of the parenthetical in terms of a non-clausal phrase (PP, AP, VP, NP) linked to the anchor clause is, in principle, available too. Therefore, one could propose that parentheticals may also be non-clausal. However, for conceptual reasons (Ockham's Razor), a unified analysis is preferable. Since I do not know of any compelling argument against a clausal analysis of parentheticals that do not bear any reflex of an underlying clausal structure, I assume that the clausal analysis is the only analysis for parentheticals.

### 3.4 Further evidence

In the following two subsections, further evidence for the movement plus deletion approach, based on the non-existence of TP parentheticals and the possibility of reflexivization within parentheticals without antecedents will be discussed.

#### 3.4.1 TP parentheticals

It appears that in German almost every maximal projection can function as a parenthetical. There is, however, one notable exception: Parentheticals never show up as TPs on the surface. This initially surprising fact straightforwardly receives an explanation under the present account. To see this, consider the example in (24).

- (24) Usain Bolt – [<sub>CP</sub> dieses Schlitzohr hat mal wieder gewonnen ] – ist der  
 Usain Bolt this crafty fox has once again won is the  
 schnellste Mann der Welt.  
 fastest man the world  
 'Usain Bolt – once more, this crafty fox won – is the fastest man in  
 the world.'



(24) does not involve any deletion. The parenthetical involved in (24) consists rather of a full-fledged CP. However, the mechanism of movement plus deletion should, in principle, be also applicable to the CP in (24). For instance, one might try and move the TP to SpecC and then delete the remainder of the CP. The result should be a parenthetical TP on the surface. If this is done with the CP in (24), then, according to the present assumptions, C' will necessarily undergo deletion. Therefore, one cannot really tell whether the finite verb moves out of the TP to C before the TP moves to SpecC or not. Consequently, there are two derivations of the CP in (24) to consider. Their outputs are given in (25).

In (25a), the verb moves to C and undergoes subsequent deletion together with the rest of C'. The remnant TP moves to SpecC, thereby escaping deletion. In (25b) the complete TP, including the finite verb, moves to SpecC. Crucially, both outputs are ungrammatical.

- (25) a.  $*[{}_{CP} [{}_{TP}$  dieses Schlitzohr mal wieder gewonnen  $t_2$   $]_1 [{}_{C'} \overline{hat} \overline{t_1}]$   
           this crafty fox once again won has  
       b.  $*[{}_{CP} [{}_{TP}$  dieses Schlitzohr mal wieder gewonnen hat  $]_1 [{}_{C'} \overline{C} \overline{t_1}]$   
           this crafty fox once again won has

According to Abels (2003, 2012), TP cannot move to SpecC for reasons of anti-locality. Background of his argumentation is an assumption about feature checking. A local configuration is necessary for feature checking between a head and a phrase. The phrase usually moves to the specifier position to come into this local configuration. According to Abels (2012), a local configuration is also present if the phrase is in a complement position to the head. As in this position features may be checked as well, and since movement is necessarily driven by the need to check features, movement to the specifier position from the complement position of the same head is blocked.

Under these conditions, in the configuration  $[{}_{CP} C TP]$ , which is the matter of interest here, TP never moves to SpecC because it has been merged in complement position and feature checking can apply without movement. Thus, TP cannot move to SpecC and, consequently, it cannot escape deletion and show up as parenthetical.

Crucially, both derivations in (25) involve movement of TP to SpecC. Therefore, adopting the proposal of Abels (2003, 2012), the ungrammaticality of (25a,b) is expected. Since (25a,b) are the only two types of derivations I can think of that lead to a TP-parenthetical under the present proposal, I believe that the lack of TP-parentheticals, in general, is explained. Note that under an approach where parentheticals are phrases that are generated in the form in which they appear

on the surface, there is no reason to not expect TP to show up as a parenthetical, too. In order to block the appearance of TP as a parenthetical, an additional assumption is needed. In the present theory, the non-existence of TP-parentheticals follows from independent properties of movement.

### 3.4.2 Reflexivization

According to Chomsky (1981), an anaphor (reflexive pronoun) must be syntactically A-bound by an antecedent within the minimal clause (Principle A of the binding theory). (26a) illustrates this: There is no c-command between *Usain Bolt* and the anaphor *sich*, thus binding is impossible and ungrammaticality results. (26b) confirms that the ungrammaticality of (26a) is due to the unbound reflexive pronoun: with a personal pronoun the example becomes grammatical. Since by assumption the parenthetical is not syntactically part of the anchor clause, *Usain Bolt* in (26c) does not c-command *sich* and thus cannot syntactically bind *sich*. Yet, (26c) is grammatical. This suggests that binding must be able to apply somewhere else. One can achieve this by assuming that more structure is present than meets the eye. Concretely, there must be a local subject antecedent in the parenthetical, i.e. the parenthetical is a full clause.

- (26) a. \* $[_{CP} \text{ Dass Usain Bolt}_i \text{ ein Genie ist } ] \text{ überrascht sich}_i$ .  
           that Usain Bolt a genius is surprises himself  
       b.  $[_{CP} \text{ Dass Usain Bolt}_i \text{ ein Genie ist } ] \text{ überrascht ihn}_i$ .  
           that Usain Bolt a genius is surprises him  
       c.  $\text{Usain Bolt}_i \text{ hat gestern alle – vielleicht sogar sich}_i \text{ (selbst) –}$   
           Usain Bolt has yesterday all maybe even himself (SELF) –  
           übertraffen.  
           surpassed  
           ‘Yesterday, Usain Bolt surpassed everybody, maybe even himself.’

The analysis of the parenthetical CP in (26c) after PF-deletion is given in (27).

- (27)  $[_{CP} [ \text{vielleicht} ]_2 [_{NP} \text{ sogar sich}_i \text{ (selbst) } ]_1 \text{ Usain Bolt}_i \text{ gestern } t_2 t_1$   
       ~~übertraffen hat~~ ]

Note that it is generally assumed that for an anaphor to be bound it is sufficient that it is bound at some point of the derivation, see for instance Barss (1986). That this also holds for German is illustrated by (28).

- (28) [<sub>NP</sub> Sich<sub>i</sub> selbst ]<sub>1</sub> mag jeder<sub>i</sub> t<sub>1</sub>.  
           himself SELF likes everyone  
           ‘Everyone likes himself.’

Since in the derivation of (27), there is a point where the anaphor is bound by its antecedent, namely before the anaphor moves to SpecC, Principle A is arguably satisfied in (27) and the grammaticality of (26c) is explained.

### 3.5 Summary

In this section, I argued for an analysis of parentheticals in terms of ellipsis by movement plus deletion. Furthermore, the questions as to why multiple specifiers are possible and how C can survive have been addressed. Finally, it has been argued that the approach is supported by the non-existence of TP parentheticals and examples that involve reflexivization without (overt) antecedent within the parenthetical.

## 4 Extensions

In this section, I will suggest that appositions might be analysed as elliptical parentheticals. I will discuss instances of appositions in section 4.1, appositions in non-nominative (verb governed) and in nominative case, and appositions with an anchor PP. In section 4.2, I will illustrate how the elliptical approach (movement plus deletion) can be extended to multiple-argument appositions.

### 4.1 One argument appositions

The literature on appositions seems as diverse as the literature on parentheticals. Two recent and detailed studies are O’Connor (2008) and Heringa (2011). Interestingly, both of them put forward the idea that appositions are clausal underlyingly.<sup>11</sup> O’Connor (2008) argues for this in detail on the basis of the co-occurrence

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<sup>11</sup> The idea that appositions (in German) are clausal underlyingly can be found in other work, too. Altmann (1981) analyses them as a special type of (V2)-parentheticals; Raabe (1979) assumes that they are clauses at D-structure; and Schreier (1988) analyses nominative-appositions as elliptical sentences.

of appositions with various CP-oriented adverbs. As far as I can tell, however, O'Connor (2008) does not provide an explicit theory of why appositions are not clausal at the surface. In contrast to this, Heringa (2011) develops a theory according to which appositions are underlyingly copula clauses. The subject of such a copula clause is a lexical null pronoun, the copula undergoes in-situ deletion, and the predicate remains, forming the apposition. This works perfectly for nominative appositions. The analysis also explains why appositions can receive different interpretations because the underlying copula clauses are interpreted differently. However, the approach does not directly cover non-nominative appositions (for the simple reason that the predicate noun of a copula clause does not show up with cases other than nominative). For those, Heringa (2011) must invoke a non-standard theory of case percolation (see Matushansky 2008) that transfers the case assigned by a predicate of the anchor clause into the copula clause. Moreover, as we will see below, Heringa (2011) cannot cover cases of (what I will call) multiple-argument appositions and PP-appositions (see section 4.2).

This section is concerned with the internal syntax of appositions. For descriptive purposes, I distinguish three types: appositions in nominative case, appositions that bear the same case as their anchor NP, and appositions with an anchor of the form P [NP].

The first type of apposition, appositions in nominative case, is exemplified in (29). The characteristic property of this construction is that the apposition always bears nominative case irrespective of whether its anchor NP, the NP that is modified by the apposition, functions as the subject (and therefore bears nominative as well), see (29a), or as another grammatical function (bearing a non-nominative case) see (29b).

- (29) a. Usain Bolt – ein Jamaikaner – hat die 100 m gewonnen.  
 Usain Bolt.NOM a Jamaican.NOM has the 100 m won  
 'Usain Bolt, a Jamaican, won the 100 metres.'
- b. Dem Sprinter – (übrigens) ein Jamaikaner – haben alle  
 the sprinter.DAT (by.the.way) a Jamaican.NOM have all  
 geholfen.  
 helped  
 'Everybody helped the sprinter, a Jamaican by the way.'

The second type of apposition is characterised by the facts that the apposition bears the same case as the anchor NP and that both NPs bear a verb governed case (i.e. not nominative), dative in the example in (30).

- (30) Dem Sprinter – einem Jamaikaner – haben alle geholfen.  
 the sprinter.DAT a Jamaican.DAT have all helped  
 ‘Everybody helped the sprinter, a Jamaican.’

Finally, in the third type of apposition, the anchor is a PP. The apposition can bear either nominative case or the case that is regularly governed by the preposition that shows up with the anchor.

- (31) a. Der Journalist hat mit Usain Bolt – ein Sprinter –  
 the journalist has with Usain Bolt.DAT a sprinter.NOM  
 gesprochen.  
 spoken  
 ‘The journalist spoke with Usain Bolt, a sprinter.’  
 b. Der Journalist hat mit Usain Bolt – einem Sprinter –  
 the journalist has with Usain Bolt.DAT a sprinter.DAT  
 gesprochen.  
 spoken  
 ‘The journalist spoke with Usain Bolt, a sprinter.’

In what follows, I will extend the tests that lead me to argue that parentheticals have an underlying clausal structure to appositions. It will turn out that appositions also pass these tests and therefore can also be analysed as being underlyingly clausal. As shown in section 2.1, the presence of certain elements such as sentence adverbs or discourse particles within parentheticals suggested a hidden structure, as well as the presence of interrogative and exclamative mood, assuming that the locus of mood lies in C. In what follows, the different instances of appositions will be tested with regard to their potential hidden structure. Positive testing suggests an underlying CP, and the elliptical approach, movement plus deletion, will be extended (see section 4.1.1 for appositions bearing governed case, and 4.1.2 for appositions bearing nominative case). Appositions bearing prepositional case will require some additional discussion, see section 4.1.3.

#### 4.1.1 Appositions in non-nominative, verb governed case

I begin the discussion with appositions that bear a case marking that is equal to the case marking of the anchor NP, for dative case see (32a), and for accusative see (32b).

- (32) a. Dem Sprinter – einem Jamaikaner – helfen alle.  
 the sprinter.DAT a Jamaican.DAT help all  
 ‘Everybody helped the sprinter, a Jamaican.’
- b. Den Sprinter – einen Jamaikaner – haben alle gesehen.  
 the sprinter.ACC a Jamaican.ACC have all seen  
 ‘Everybody saw the sprinter, a Jamaican.’

As in the case of parentheticals, a sentence adverb *vermutlich* or a discourse particle *wohl* as in (33a,b) may be added to the apposition.

- (33) a. Dem Sprinter – vermutlich/wohl einem Jamaikaner – helfen  
 the sprinter.DAT presumably/PART a Jamaican.DAT help  
 alle.  
 all  
 ‘Everybody helped the sprinter, presumably a Jamaican.’
- b. Den Sprinter – vermutlich/wohl einen Jamaikaner – haben  
 the sprinter.ACC presumably/PART a Jamaican.ACC have  
 alle gesehen.  
 all seen  
 ‘Everybody saw the sprinter, presumably a Jamaican.’

Again, an elliptical analysis involving movement plus deletion is possible. (34b) illustrates the full CP-structure that, by hypothesis, underlies the apposition. The steps in (34c,d) illustrate movement to SpecC and subsequent PF-deletion of  $C'$ .

- (34) a. Dem Sprinter – einem Jamaikaner – helfen alle.  
 the sprinter.DAT a Jamaican.DAT help all  
 ‘Everybody helped the sprinter, a Jamaican.’
- b. Dem Sprinter – [<sub>CP</sub> alle einem Jamaikaner helfen] – helfen alle.  
 the sprinter.DAT all a Jamaican.DAT help help all
- c. Dem Sprinter – [<sub>CP</sub> [ einem Jamaikaner ]<sub>1</sub> alle t<sub>1</sub> helfen] –  
 the sprinter.DAT a Jamaican.DAT all help  
 helfen alle.  
 help all
- d. Dem Sprinter – [<sub>CP</sub> [ einem Jamaikaner ]<sub>1</sub> alle t<sub>1</sub> ~~helfen~~] – helfen alle.

Finally, the mere fact that the appositional material can bear a non-nominative case (or exhibit a governed PP) speaks in favour of an ellipsis analysis of apposition. The reason for this is that the non-nominative case (or the PP) should be governed by a verbal head (default case in German is the nominative). Thus,

examples such as (35a,b) suggest the presence of an underlying verb, and hence, a CP.

- (35) a. Ich habe irgendjemanden – vielleicht den Usain Bolt – gesehen.  
 I have someone.ACC maybe the.ACC Usain Bolt seen  
 ‘I saw someone, maybe Usain Bolt.’  
 b. Ich habe auf irgendjemanden – nämlich auf Karl – gewartet.  
 I have on someone namely on Karl waited  
 ‘I waited for someone, namely for Karl.’

In (35a) the accusative case receives an explanation if there is an underlying verb like *sehen* ‘see’ present in the apposition, governing accusative case. Similarly, the PP in (35b) can be accounted for if there is an underlying verb that governs the preposition *auf*, like *warten* ‘wait’.

To briefly summarise, the behaviour of appositions parallels the one of parentheticals. This suggests a unified account in terms of a movement plus deletion approach, as suggested above.<sup>12</sup>

#### 4.1.2 Appositions in nominative case

Next, I turn to instances of appositions bearing nominative case. The nominative case is assigned independently from the case marking of the anchor NP, see (36a) for a nominative anchor, (36b) for an accusative anchor, and (36c) for a dative anchor.

- (36) a. Usain Bolt – ein Jamaikaner – hat die 100 m gewonnen.  
 Usain Bolt.NOM a Jamaican.NOM has the 100 m won  
 ‘Usain Bolt, a Jamaican, won the 100 metres.’  
 b. Den Sprinter – ein Jamaikaner – habe ich gesehen.  
 the sprinter.ACC a Jamaican.NOM have I seen  
 ‘I saw the sprinter, a Jamaican.’  
 c. Dem Sprinter – ein Jamaikaner – wurde die Goldmedaille  
 the sprinter.DAT a Jamaican.NOM was the gold.medal  
 überreicht.  
 given  
 ‘The gold medal was given to the sprinter.’

<sup>12</sup> But see Onea and Volodina (2009) for a semantic/pragmatic account of (a certain type of) appositions in German that does without deletion.

The examples in (37) show that sentence adverbs and discourse particles, respectively, may be added to the apposition without changing its grammaticality.

- (37) a. Usain Bolt – vermutlich/wohl ein Jamaikaner – hat die  
 Usain Bolt.NOM presumably/PART a Jamaican.NOM has the  
 100 m gewonnen.  
 100 m won  
 ‘Usain Bolt won the 100 metres, a Jamaican presumably.’
- b. Den Sprinter – vermutlich/wohl ein Jamaikaner – habe ich  
 the sprinter.ACC presumably/PART a Jamaican.NOM have I  
 gesehen.  
 seen  
 ‘I saw the sprinter, a Jamaican presumably.’
- c. Dem Sprinter – vermutlich/wohl ein Jamaikaner – wurde  
 the sprinter.DAT presumably/PART a Jamaican.NOM was  
 gedankt.  
 thanked  
 ‘The sprinter was thanked, a Jamaican presumably.’

Furthermore, interrogative and exclamative mood can appear within the apposition as well. This is illustrated in (38) and (39) respectively.

- (38) a. Usain Bolt – etwa ein Jamaikaner? – hat die 100 m gewonnen.  
 Usain Bolt.NOM PART a Jamaican.NOM has the 100 m won  
 ‘Usain Bolt (a Jamaican, isn’t he?) won the 100 metres.’
- b. Den Sprinter – etwa ein Jamaikaner? – habe ich gesehen.  
 the sprinter.ACC PART a Jamaican.NOM have I seen  
 ‘I saw the sprinter, say, a Jamaican?’
- c. Dem Sprinter – etwa ein Jamaikaner? – wurde Gold überreicht.  
 the sprinter.DAT PART a Jamaican.NOM was gold given  
 ‘The gold medal was given to the sprinter, say, a Jamaican?’
- (39) a. Usain Bolt – was für ein Mann! – hat die 100 m gewonnen.  
 Usain Bolt.NOM what for a man.NOM has the 100 m won  
 ‘Usain Bolt (what a man!) won the 100 metres.’
- b. Den Sprinter – was für ein Mann! – habe ich gesehen.  
 the sprinter.ACC what for a man.NOM have I seen  
 ‘I saw the sprinter, what a man!’
- c. Dem Sprinter – was für ein Mann! – wurde Gold überreicht.  
 the sprinter.DAT what for a man.NOM was gold given  
 ‘The gold medal was given to the sprinter, what a man!’



Thus, the examples (37) to (39) again suggest the presence of an underlying CP. Hence, an elliptical approach involving movement plus deletion suggests itself. The analysis of (36a) is presented in (40a–c). The underlying CP is shown in (40a), movement to SpecC in (40b), and, finally, deletion is shown in (40c). Nominative in these cases is assigned in the same way nominative is usually assigned to the subject (presumably by a functional head T that is part of the clause).

- (40) a. Usain Bolt – [<sub>CP</sub> ein Jamaikaner sie gewann ] – gewann sie.  
           Usain Bolt     a Jamaican it won       won it
- b. Usain Bolt – [<sub>CP</sub> [<sub>NP</sub> ein Jamaikaner ]<sub>1</sub> t<sub>1</sub> sie gewann ] – gewann sie.  
           Usain Bolt         a Jamaican       it won       won it
- c. Usain Bolt – [<sub>CP</sub> [<sub>NP</sub> ein Jamaikaner ]<sub>1</sub> ~~t<sub>1</sub> sie gewann~~ ] – gewann sie.  
           Usain Bolt         a Jamaican       it won       won it

In all the cases in which the apposition appears in the nominative there is yet an alternative analysis for the underlying CP. Namely, the clause underlying the apposition may be a copula clause with the nominative apposition being the subject of the copula. Under this analysis, the appositional NP bears default nominative case. This means that (36a) is structurally ambiguous, while (36b) and (36c) only allow for the copula analysis. Thus, the only analysis of (36b) is the following.

- (41) a. Den Sprinter – [<sub>CP</sub> der Sprinter [<sub>NP</sub> ein Jamaikaner ] ist ] – habe ich  
           the sprinter       the sprinter     a Jamaican     is     have I  
           gesehen.  
           seen
- b. Den Sprinter – [<sub>CP</sub> [<sub>NP</sub> ein Jamaikaner ]<sub>1</sub> der Sprinter t<sub>1</sub> ist ] – habe  
           the sprinter         a Jamaican       the sprinter     is     have  
           ich gesehen.  
           I     seen
- c. Den Sprinter – [<sub>CP</sub> [<sub>NP</sub> ein Jamaikaner ]<sub>1</sub> ~~der Sprinter t<sub>1</sub> ist~~ ] – habe ich  
           gesehen.

This alternative analysis is identical to the one proposed by Heringa (2011), except that the predicative NP undergoes movement to SpecC and the whole C' category (or TP, for that matter) undergoes deletion.

One may wonder why a deletion analysis of (36a) and (36b) that involves a copula construction underlying the apposition is possible in the first place, given that the anchor clause does not involve any copula: If the anchor clause does not contain a copula, then one might expect that deletion of the copula in the apposi-

tion should violate recoverability. Yet, it does not. I would like to suggest that this state of affairs is expected, provided that the copula is semantically empty. In fact, this is a plausible assumption, given that many languages express predication relations without the use of any copula.

#### 4.1.3 Appositions with an anchor P[NP]

If the anchor is a PP, the appositional phrase may be a PP as well, repeating the P introduced by the anchor PP, as in (42a,c), or it may appear as a case-marked NP (bearing the case governed by the preposition of the anchor PP), as in (42b,d).

- (42) a. Peter hat mit jemandem – vermutlich mit einem  
 Peter has with somebody.DAT presumably with a  
 Jamaikaner – gesprochen.  
 Jamaican.DAT spoken  
 ‘Peter spoke to somebody, to a Jamaican, probably.’
- b. ?Peter hat mit jemandem – vermutlich Ø einem Jamaikaner –  
 Peter has with somebody.DAT presumably a Jamaican.DAT  
 gesprochen.  
 spoken
- c. Peter hat auf jemanden – vermutlich auf einen Jamaikaner –  
 Peter has on somebody.ACC presumably on a Jamaican.ACC  
 gewettet.  
 bet  
 ‘Peter bet on somebody, on a Jamaican, presumably.’
- d. ?Peter hat auf jemanden – vermutlich Ø einen Jamaikaner –  
 Peter has on somebody.ACC presumably a Jamaican.ACC  
 gewettet.  
 bet

As preposition stranding is generally not possible in German, the examples (42b,d) are expected to be ungrammatical under the present assumptions. The reason is that the analysis of (42b,d) would involve movement of an NP (namely *einem Jamaikaner* and *einen Jamaikaner*, respectively) out of a PP, thereby stranding the preposition. As (43) illustrates by means of *wh*-movement, P-stranding is usually banned in German.

- (43) \*Wem<sub>1</sub> hat Usain Bolt [<sub>pp</sub> mit t<sub>1</sub>] gesprochen?  
 who has Usain Bolt with talked  
 ‘Who did Usain Bolt talk to?’

That the hypothesised stranding of the preposition in (42b,d) does not lead to ungrammaticality cannot be due to the fact that in these cases the stranded P undergoes PF-deletion while the stranded P in (43) does not. This becomes clear once one considers cases of another instance of deletion, namely sluicing. As has already been noted by Ross (1969), sluicing does not lift the ban on preposition stranding that generally holds in a language. This is shown by means of the following examples from German that involve sluicing (44b) and fragment answers (44d).

- (44) a. Für irgendjemanden war das Finale einfach, aber ich weiß nicht, für  
 for somebody.ACC was the final simple but I know not for  
 wen.  
 who.ACC  
 ‘For somebody, the final was a simple task, but I don’t know for whom.’
- b. \*Für irgendjemanden war das Finale einfach, aber ich weiß nicht, Ø  
 for somebody.ACC was the final simple but I know not  
 wen.  
 who.ACC  
 ‘For somebody, the final was a simple task, but I don’t know who for.’
- c. Mit wem hat der Journalist gesprochen? Mit einem Jamaikaner.  
 with who.DAT has the journalist spoken with a.DAT Jamaican  
 ‘Who did the journalist talk to? To a Jamaican.’
- d. Mit wem hat der Journalist gesprochen? \*Einem Jamaikaner.  
 with who.DAT has the journalist spoken a.DAT Jamaican  
 ‘Who did the journalist talk to? A Jamaican.’

Clearly, (42b) and (42d) are not as bad as (44b,d) although there is no overt preposition in the apposition. Under a movement plus deletion approach to appositions, this seems to imply that the preposition must have been stranded, thereby undergoing deletion as well. This is surprising if P-stranding is generally blocked in German, even under deletion.

In order to reconcile these facts with the present analysis, I tentatively propose that the grammaticality of the examples in (42b) and (42d) is an illusion. The derivations of (42b) and (42d) do involve stranding of a preposition. By hypothesis, this violation can be masked by a performative repair. Of course, this immediately raises the question as to why no such repair can be employed in sluicing or in

fragment answers, recall the examples in (44b,d). To this end, I assume that the repair is only possible if the gap that should host the lacking preposition stands in a sufficiently local relation with the corresponding overt P. This is the case in the examples (42) involving appositions, however, by assumption, no such local relation holds in the case of sluicing and fragment answers in (44).<sup>13,14</sup>

Evidence for such a locality requirement for repair comes from the contrast in (45a,b). Crucially, (45a) is notably worse than (45b).

- (45) a. \*?Mit irgendeinem Sprinter hat Peter – wohl einem Jamaikaner –  
 with some sprinter.DAT has Peter PART a Jamaican.DAT  
 gesprochen.  
 spoken  
 ‘Peter talked to a sprinter, a Jamaican maybe.’

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**13** I will not attempt to give a precise definition of the concept of locality involved here but confine myself to the intuitive idea that the hypothesised empty P is, in terms of linear distance, closer to the overt P in (42) than it is in (44).

**14** The same solution may also apply to a problem that arises in the context of bare left branch parentheticals, as the one in (i).

- (i) Reisende, die auf den – letzten – Zug nach Leipzig warten, ...  
 passengers who on the last.ACC.WEAK – train to Leipzig wait  
 ‘Passengers waiting for the – last – train to Leipzig ...’

In (i), it looks as if the prenominal adjective *letzten* has been extracted from a left branch island (and from a PP-island). That this may be the correct analysis is supported by the fact that the adjective appears in its morphologically weak form. This requires the presence of a determiner in the same NP and thus suggests that, underlyingly, there is such a D-head present within the appositive. As was the case with P-stranding, left branch extractions are impossible in German, even in elliptical contexts (such as sluicing, example omitted). This raises the question as to why (i) seems to be grammatical. Again, one may speculate that, in fact, the alleged grammaticality of (i) is an illusion, the result of a performative repair. Again, the repair is only possible if the local context provides the necessary material. For instance, it is impossible to have the parenthetical AP *after* the NP it is associated with.

- (ii) \*Reisende, die auf den Zug – letzten – nach Leipzig warten, ...  
 passengers who on the train last.ACC.WEAK – to Leipzig wait

The explanation offered here for why (ii), in contrast to (i), is ungrammatical, is that the repair fails because the context for a potential prenominal adjective is not given in (ii), while it is in (i). Admittedly, these remarks are somewhat vague and speculative in nature. I leave the issue to further research.

- b. Irgendeinen Sprinter hat Peter – wohl einen Jamaikaner –  
 some sprinter.ACC has Peter PART a Jamaican.ACC  
 interviewt.  
 interviewed  
 ‘Peter interviewed some sprinter, a Jamaican maybe.’

The point here is that in both (45a,b) the apposition does not stand in a local relationship with its anchor. This is without fatal consequences in (45b) because here the anchor is an NP. However, in (45a) the anchor is a PP; moreover, the apposition does not contain a corresponding P. Consequently, the lack of P in the apposition must be repaired by the hearer. For this to be possible, by hypothesis, the apposition and its referent must stand in a local relation, which they do not in (45a). Therefore, repair fails.

Note in passing that while for the present approach appositions to PP that lack a P are problematic (while appositions to PP that contain a P, such as (42a) and (42c), are analysable as movement of a PP), the opposite problem arises for the theory in Heringa (2011). There, an apposition to PP that lacks a P can be analysed as a copula clauses whose predicate nominal is assigned case by the preposition in the anchor clause (through a particular mechanism of case percolation, see Matushansky 2008).<sup>15</sup> If, however, the apposition is a PP itself, then a problem arises because the predicate of the copula clause is not expected to be a PP.<sup>16</sup>

To sum up briefly, one-argument appositions can be satisfyingly analysed as elliptical clauses. As such, they are theoretically the same phenomenon as parentheticals. Under this view, the label ‘apposition’ (as opposed to ‘parenthetical’) is merely a descriptive one.

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**15** A potential problem for Heringa’s (2011) approach is that the hypothesised case percolation mechanism does not seem to be applicable in case the copula clause is overt:

- (i) \*weil ich jemandem – er ist dem Karl – etwas geben möchte  
 because I somebody.DAT he is the.DAT Karl something.ACC give want

**16** Analysing the preposition as a case marker that gets onto the apposition by percolation from the anchor clause does not seem very plausible because (at least in German) the apposition already bears morphological case, which arguably is assigned by the preposition.

## 4.2 Multiple-argument appositions

Appositions (in German) can resume more than one argument from the anchor clause. This is illustrated in (46) with an apposition that resumes two (case marked) arguments. I will call this phenomenon ‘multiple-argument apposition’.

- (46) Ich habe jemandem etwas – nämlich dem Karl das  
 I have somebody.DAT something.ACC namely the Karl.DAT the  
 Buch – gegeben.  
 book.ACC given  
 ‘I gave something to somebody, namely the book to Karl.’

By a movement plus deletion analysis, examples such as the one in (46) are straightforwardly accounted for. Doing so requires the possibility of forming multiple overt specifiers in CP in German (see section 3.2 for details). The derivation of (46) involves three overt specifiers: *nämlich*, *dem Karl*, and *das Buch*. The derivation that illustrates this for (46) is given in (47).

- (47) a. Ich habe jemandem etwas – [<sub>CP</sub> ich nämlich dem Karl das Buch  
 I have somebody something I namely the Karl the book  
 gegeben habe ] – gegeben.  
 given have given  
 b. [<sub>CP</sub> ich [<sub>AP</sub> nämlich ] [<sub>NP</sub> dem Karl ] [<sub>NP</sub> das Buch ] gegeben habe ]  
 I namely the Karl the book given have  
 c. [<sub>CP</sub> [<sub>AP</sub> nämlich ]<sub>3</sub> [<sub>NP</sub> dem Karl ]<sub>2</sub> [<sub>NP</sub> das Buch ]<sub>1</sub> ich t<sub>3</sub> t<sub>2</sub> t<sub>1</sub> gegeben  
 namely the Karl the book I given  
 habe ]  
 have  
 d. [<sub>CP</sub> [<sub>AP</sub> nämlich ]<sub>3</sub> [<sub>NP</sub> dem Karl ]<sub>2</sub> [<sub>NP</sub> das Buch ]<sub>1</sub> ~~ich t<sub>3</sub> t<sub>2</sub> t<sub>1</sub> gegeben~~  
~~habe ]~~

The analysis of appositions proposed in Heringa (2011) exclusively covers appositions that involve resumption of *one* argument from the anchor clause. It cannot account for appositions that resume multiple arguments for the simple reason that for Heringa (2011) an apposition is a (nominal) predicate of a copula clause that remains after the copula has undergone deletion at PF. Since every copula clause contains one nominal predicate, multiple-argument appositions cannot be derived. One can, in principle, assume multiple copula clauses to be present. But since each copula clause is attached directly to its anchor, the former must

appear adjacent to the latter (see Heringa 2011, 141–142). This is not the case in the example (46) though.

In what follows, further evidence for the movement plus deletion approach to appositions is provided. The evidence is based on the observation that there are several parallelisms between multi-argument appositions and multiple sluicing. The idea behind the argument is that the parallelism in behaviour is a reflex of the parallel derivation of the two types of constructions, both starting from underlyingly clausal structures. To the extent that an analysis of multiple sluicing in terms of movement plus deletion is successful, one can conclude that this type of analysis is also appropriate for appositions.<sup>17</sup>

#### 4.2.1 A clause-mate condition

As already mentioned in section 3.2, German exhibits multiple sluicing: Two or more *wh*-phrases move to SpecC and thereby escape deletion. A relevant example is repeated in (48a). Moreover, there is a condition on multiple sluicing. Namely, the *wh*-phrases that move to escape deletion have to be clause-mates (see Sauerland 1999, Heck and Müller 2003), i.e. they have to originate in the same clause. Otherwise ungrammaticality results as in (48b).

- (48) a. Irgendwer hat irgendwas gesagt, aber ich weiß nicht,  
           somebody.NOM has something.ACC said but I know not  
           wer was.  
           who.NOM what.ACC  
           ‘Somebody said something, but I don’t know who said what.’
- b. \*Irgendwer hat gesagt, dass Maria irgendwas bekommen  
           somebody.NOM has said that Maria something.NOM received  
           hat, aber ich weiß nicht, wer was.  
           has but I know not who.NOM what.ACC  
           Intended: ‘Somebody said that Maria received something, but I don’t  
           know who said that and she received what.’

Now, interestingly, a similar clause-mate condition seems to hold for the arguments of a multiple-argument apposition (49b): All the argument phrases of the parenthetical have to originate in the same clause.

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<sup>17</sup> Parallel arguments have independently be proposed by Ott and De Vries (2013) with respect to an ellipsis account of right-dislocation.

- (49) a. Irgendwer hat irgendwas – nämlich der Karl ein  
 somebody.NOM has something.ACC namely the Karl.NOM a  
 Buch – bekommen.  
 book.ACC received  
 ‘Somebody received something, namely Karl a book.’
- b. \*Irgendwer hat gesagt [<sub>CP</sub> dass Maria irgendwas – nämlich  
 somebody.NOM has said that Maria something.ACC namely  
 der Karl ein Buch – bekommen hat ].  
 the Karl.NOM a book.ACC received has  
 Intended: ‘Somebody said that Maria received something, namely, Karl  
 said that Maria received a book.’

The constraint appears to be the same in multiple sluicing and in multiple-argument appositions. If multiple-argument appositions are instances of ellipsis, as (multiple) sluicing is, then the constraint can be formulated as one, namely as a constraint on ellipsis. This then provides a conceptual argument to treat multiple-argument appositions in terms of ellipsis.

#### 4.2.2 Word order preservation

English exhibits a superiority effect, see (50a,b), i.e. only the highest of several *wh*-phrases in a multiple question undergoes *wh*-movement to SpecC (e.g. Kuno and Robinson 1972, Chomsky 1973). German, however, appears to lack this effect, as illustrated in example (51), see, for instance, Haider (1993).

- (50) a. (I wonder) who kissed whom?  
 b. \*(I wonder) whom kissed who?
- (51) a. Ich weiß nicht, wer wen geküsst hat.  
 I know not who.NOM who.ACC kissed has  
 b. Ich weiß nicht, wen wer geküsst hat.  
 I know not who.ACC who.NOM kissed has

Next, it can be observed that multiple sluicing requires parallel order between the arguments in the antecedent and the sluice (see Heck and Müller 2003, footnote 44). This is illustrated by the contrast between (52a,b). Note that the ungrammaticality of (52b) cannot be due to superiority effects, which German lacks as shown in (51b).



- (52) a. Jemand hat jemanden geküsst, aber ich weiß nicht,  
 somebody.NOM has somebody.ACC kissed but I know not  
 wer wen.  
 who.NOM who.ACC  
 ‘Somebody kissed someone, but I don’t know who kissed whom.’
- b. \*Jemand hat jemanden geküsst, aber ich weiß nicht,  
 somebody.NOM has somebody.ACC kissed but I know not  
 wen wer.  
 who.ACC who.NOM

The same parallelism constraint also holds, by and large, for multiple-argument appositions, see (53).

- (53) a. Irgendwem habe ich irgendwas – nämlich dem Karl das  
 somebody.DAT have I something.ACC namely the Karl.DAT the  
 Buch – gegeben.  
 book.ACC given  
 ‘I gave something to somebody, namely the book to Karl.’
- b. \*Irgendwem habe ich irgendwas – nämlich das Buch dem  
 somebody.DAT have I something.ACC namely the book.ACC the  
 Karl – gegeben.  
 Karl.DAT given

Note that the ungrammaticality of (53b) cannot be due to the fact that an accusative case marked NP precedes a dative case marked NP (dat > acc being the unmarked word order for non-pronominal arguments in German). In (54a,b) the order acc > dat of the sluiced arguments (which matches the word order in the antecedent clause) is the grammatical one.

- (54) a. \*Irgendwas habe ich irgendwem – nämlich dem Karl das  
 something.ACC have I somebody.DAT namely the Karl.DAT the  
 Buch – gegeben.  
 book.ACC given
- b. Irgendwas habe ich irgendwem – nämlich das Buch dem  
 something.ACC have I somebody.DAT namely the book.ACC the  
 Karl – gegeben.  
 Karl.DAT given

Again, the word order constraints that hold for multiple sluicing and multiple-argument appositions, respectively, may be formulated in a uniform manner, namely as a constraint on ellipsis, if multiple-argument appositions are analysed in the same way as multiple sluicing.

### 4.2.3 Possessors

A final instance of parallelism emerges in the realm of possessor structure. First, note that possessors in German may be realised by a prenominal genitive (55a) or a postnominal PP (55b). Within certain limits, there is free alternation between these two ways to realise the possessor.

- (55) a. Karls Buch  
Karl's book  
b. ein Buch [<sub>PP</sub> von Karl ]  
a book of Karl

Now, if in a sluicing construction the antecedent of the sluice employs a prenominal genitive, then so must the sluice. A similar parallelism holds if there is a postnominal possessor in the antecedent. In other words, there is a parallelism constraint with respect to the internal structure of the sluiced argument as well. Examples illustrating these observations are given in (56) and (57), respectively.

- (56) a. Maria hat jemandes Aufgabe gelöst, aber ich weiß nicht, wessen.  
Maria has somebody's task solved but I know not whose  
'Maria solved somebody's task, but I don't know whose.'  
b. \*Maria hat jemandes Aufgabe gelöst, aber ich weiß nicht, von  
Maria has somebody's task solved but I know not of  
wem.  
whom  
'Maria solved somebody's task, but I don't know of whom.'
- (57) a. \*Maria hat die Aufgabe von jemandem gelöst, aber ich weiß nicht  
Maria has the task of somebody solved but I know not  
wessen.  
whose

- b. Maria hat die Aufgabe von jemandem gelöst, aber ich weiß nicht  
 Maria has the task of somebody solved but I know not  
 von wem.  
 of whom

The same constraint on parallel possessors appears, again, to hold for multiple-argument appositions: (58) is similar to (56), and (59) is similar to (57).

- (58) a. Maria hat jemandes Aufgabe – nämlich Karls – gelöst.  
 Maria has somebody's task namely Karl's solved  
 b. \*Maria hat jemandes Aufgabe – nämlich von Karl – gelöst.  
 Maria has somebody's task namely of Karl solved
- (59) a. \*Maria hat die Aufgabe von jemandem – nämlich Karls – gelöst.  
 Maria has the task of somebody namely Karl's solved  
 b. Maria hat die Aufgabe von jemandem – nämlich von Karl – gelöst.  
 Maria has the task of somebody namely of Karl solved

To conclude, as it was the case with the clause-mate condition and the constraint on word order preservation, there is a parallelism constraint on the realisation of possessors in sluicing and multiple-argument appositions. The simplest way to account for this uniform behaviour is to adopt the same analysis for the two constructions. Since for sluicing an analysis in terms of movement plus deletion is well-established, the same analysis suggests itself for multiple-argument appositions.

### 4.3 Summary

In this section, I showed that the elliptical approach involving movement plus deletion is equally applicable to one-argument appositions as to multiple-argument appositions. For multiple-argument appositions, parallels to multiple sluicing such as a clause-mate condition, word order preservation, and parallelism with respect to possessor structure have been discussed.<sup>18</sup>

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<sup>18</sup> Truckenbrodt (this volume) shows that appositions may have their own intonation phrases and form illocutionary acts. As intonation phrases by definition bear sentential stress and since speech acts syntactically require clauses, both are independent arguments for the clausal structure of appositions. For related discussion see Döring (2012).

## 5 Conclusion

In this paper, I argued that the heterogeneity with respect to categories of parentheticals is superficial and that, underlyingly, parentheticals are uniformly clausal. Evidence for the underlying clausal structure comes from sentence adverbs and mood (section 2), from the non-existence of TP parentheticals and the possibility of reflexivization without antecedent within the parenthetical (section 3.4). To derive the non-clausal appearance of parentheticals at the surface, I applied an approach to ellipsis that involves movement plus deletion: movement of material (the parenthetical) to SpecC plus deletion of the rest of the clause, as proposed for various other clausal constructions that, superficially, appear to be non-clausal (section 3). The approach thus assimilates parentheticals to constructions such as sluicing, contrastive left dislocation, right dislocation, split questions, fragment answers, and amalgams. I further argued that the elliptical approach to parentheticals can be extended to appositions, thus making explicit that appositions and parentheticals are the same in a theoretical sense.

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Frédéric Gachet

# Syntactic hypotheses about so-called ‘*que*-deletion’ in French

**Abstract:** This paper deals with the syntax of an unusual (but attested) French structure: the absence of *que* between a parenthetical verb and the following clause, as in *je crois il va pleuvoir* ‘I believe it is going to rain’. The hypothesis supported in the paper is that this structure, so-called *que*-deletion, does not involve a subordinated clause whose initial complementizer is deleted or elliptical: the initial phrase (*je crois* ‘I believe’) is actually a peripheral clause, and the following clause is the main clause. If so, there is no clausal subordination, and no complementizer to delete in the first place. This structure is probably due to analogy with the initial position of mitigating adverbs (*peut-être il va pleuvoir* ‘maybe it is going to rain’). Some peculiar structures placing the parenthetical inversed forms *paraît-il* and *semble-t-il* ‘it seems’ in the initial position give a strong hint in favour of this hypothesis.

**Keywords:** syntax, French linguistics, parentheticals, reduced parenthetical clauses, *that*-deletion, epistemic adverbs.

## 1 Introduction

This article aims to provide a syntactic description of French utterances such as (1):

- (1) *je crois*                    *j’ai*                    *mal lu*                    *la phrase* (o, pfc)<sup>1</sup>  
I believe.1SG.PRS I-have.1SG.PRS badly read.PST.PTCP the sentence  
‘I believe I’ve read the sentence wrong.’

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<sup>1</sup> Spoken examples (marked ‘o’) come either from online corpora (pfc, Durand et al. 2002; cid, Bertrand et al. 2008; cfpp2000, Branca-Rosoff et al. 2009), or from a private corpus collated at the University of Fribourg (unifr). Most written examples come from Frantext database (marked ‘f’), or from the Internet (blogs, forums; examples transcribed with their original spelling); others come from literary works in English. We borrow also some examples from other researchers

The main particularity of this example is the absence of *que* ‘that’ between the parenthetical verb *je crois* ‘I believe’ and the following clause *j’ai mal lu la phrase* ‘I’ve read the sentence wrong’. Such a structure arouses questions about its origin and syntactic analysis. The article attempts to answer these questions. It will argue that, although examples such as (1) seem to involve a subordinated clause whose initial complementizer is deleted or elliptical, this clause is actually the main clause, the initial phrase *je crois* being a peripheral clause that functions like an epistemic adverb. If so, there is no clausal subordination, hence there is no complementizer to delete in the first place.

After this brief introduction, section 2 first sheds light on the tradition of parenthetical verbs in French linguistics, then introduces *que*-deletion, its unclear relationship with English *that*-deletion, and its controversial existence. Section 3 discusses the syntax of parenthetical verbs, and section 4 finally presents my hypotheses about the interpretation and the syntactic analysis of so-called *que*-deletion, before a short conclusion in section 5.

## 2 *Que*-deletion and parenthetical verbs in French

### 2.1 Parenthetical verbs in French

In French linguistics, verbs affected by *que*-deletion are referred to under many different names: *parenthetical verbs* (Recanati 1984), *parenthetical clauses* (Andersen 1997), *weak governors* (*recteurs faibles*: Blanche-Benveniste 1989; Blanche-Benveniste and Willems 2007, 2010), *reduced parenthetical clauses* (Schneider 2007), and others. It is possible to define French parenthetical verbs, just like English ones (see Urmson 1952), by their ability to be used in three positions:

- (2) *Il va*                    *pleuvoir, je crois.*  
 it go.3SG.PRS rain.INF I believe.1SG.PRS  
 ‘It is going to rain, I believe.’
- (3) *Il va,*                    *je crois,*                    *pleuvoir.*  
 it go.3SG.PRS I believe.1SG.PRS rain.INF  
 ‘It is, I believe, going to rain.’

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(Andersen, Larrivé, Thompson and Mulac, etc.); the borrowing is marked ‘<’. Emphasis in the examples is mine.

- (4) **Je crois**                    **qu'il**    *va*                    *pleuvoir*.  
 I believe.1SG.PRS COMP-it go.3SG.PRS rain.INF  
 'I believe that it is going to rain.'

Here is, for instance, the definition given by Blanche-Benveniste (1989:60, emphasis and translation mine):

Je définirai la classe des « verbes recteurs faibles » par la double possibilité de construction qu'ils ont; on peut les trouver *en tête de la construction, suivis d'une « que-phrase »* qui a les apparences d'un complément:

Je crois bien que c'était signalé dans le journal.

*ou en incise, après la séquence à apparence de complément (ou à l'intérieur de cette séquence):*

c'était signalé dans le journal, je crois bien

c'était, je crois bien, signalé dans le journal.

'I will define the class of "weak governors" by the double possibility of construction they have; one can find them in front of the construction, followed by a "que-clause" that looks like a complement clause:

I believe that it was reported in the newspaper.

or after the sequence looking like a complement (or inside this sequence):

it was reported in the newspaper, I believe.

it was, I believe, reported in the newspaper.'

Some parenthetical verbs are considered to have a mitigating function. In other words, they downgrade the speaker's commitment to the utterance (Schneider 2007:109). They do it in all three positions: for instance, *je crois qu'il va pleuvoir* 'I believe that it is going to rain' is a way of asserting cautiously *il va pleuvoir* 'it is going to rain', just as the previous examples *il va*, *je crois*, *pleuvoir* or *il va pleuvoir*, *je crois* are. This idea of a mitigating function dates back to Benveniste ([1958] 1966), who noticed that an utterance like *je crois que le temps va changer* 'I believe that the weather is going to change' is actually not a way to describe the belief of the speaker, but a subjective way for him to assert something about the weather. In such an utterance, the sequence *le temps va changer* is "le véritable énoncé" 'the real utterance', not *je crois*.

Among these mitigating verbs, the most mentioned forms are *je crois* 'I believe', *je pense* 'I think', *je trouve* 'I find', *il me semble* 'it seems to me', *il paraît* 'it seems', *j'ai l'impression* 'I have the impression', *on dirait* 'one would say', and so on<sup>2</sup>.

<sup>2</sup> An important topic within the literature on parenthetical verbs is the problem of the missing complement: in reduced parenthetical clauses, the complement semantically corresponding to the host cannot be expressed (*il va pleuvoir*, \**le crois-je* /\**le dit-il*. 'it is going to rain, I believe it/he said it'). This difficult problem will not be addressed in this paper.

## 2.2 Que-deletion and that-deletion

What will here be called *que*-deletion is actually a fourth way of using parenthetical verbs: in the initial position, and without *que*, as in (1) and in (5):

- (5) **Je crois**            *il va*            *pleuvoir*.  
 I believe.1SG.PRS it go.3SG.PRS rain.INF  
 'I believe it is going to rain.'

*Que*-deletion can thus be defined as the absence of *que* between an initial parenthetical verb and the following clause.

The term "*que*-deletion" makes an obvious reference to English *that*-deletion (see, *inter alios*, Underhill 1988, Thompson & Mulac 1991ab). However, it must be stated that these two constructions are quite different phenomena and have little in common. *Que*-deletion is much less frequent in French than *that*-deletion is in English. Besides, one does not find it in literature, whereas many examples of *that*-deletion can be found in literary texts (novels, plays, and so on). The examples below, which are extracted from Dashiell Hammett's *The Maltese Falcon* (p. 140–143), give an impression of *that*-deletion.

- (6) *You know he didn't.*
- (7) *Think I ought to go around and tell him I hope my chin didn't hurt his fist?*
- (8) *You say you've seen them before: where was all that at?*
- (9) *You mean a couple of high-class sleuths like you and Dundy worked on that lily-of-the-valley all night and couldn't crack him?*

These examples show that the English language can use *that*-deletion to make the dialogue of a novel sound spontaneous and familiar, whereas French *que*-deletion would not be suitable for this purpose. Finding examples of *que*-deletion in French novels is most unlikely. In this respect, it is significant that French translations of Hammet's novel do not use *que*-deletion. *That*-deletion also appears in more formal texts, as attest the next examples, from a literary travel chronicle and from written press:

- (10) *I believe it must have been so for the Cro-Magnon man.*  
 (Henry Miller, *The Colossus of Maroussi*, p. 6)

- (11) *I hope that the few Englishmen I knew in Greece will realize, when they read these lines, what I thought of their behaviour. **I hope they will consider me an enemy of their kind.*** (Henry Miller, *The Colossus of Maroussi*, p. 40)
- (12) *He thought the real Sümbül Aga was probably castrated at the age of nine or ten, so his body would already have started producing testosterone.*  
(*The New Yorker*, Feb. 17 & 24, 2014)

Again, *que*-deletion cannot be found in similar French contexts.

Examples (6) to (12) reveal another difference between French and English: as one can see, *that*-deletion is possible with several verbs, such as *say*, *believe*, *think*, *mean*, *know*, *hope* and so on, in various tenses, whereas French *que*-deletion seems to be used only after mitigating parenthetical verbs, only in the present tense: *je crois* 'I believe', *je pense* 'I think', *je trouve* 'I find', *il semble* 'it seems', and so on<sup>3</sup>.

Utterances such as the following ones are most unlikely in French:

- (13) \***J'espère**      *il va*      *pleuvoir*.  
I-hope.1SG.PRS it go.3SG.PRS rain.INF  
'I hope it is going to rain.'
- (14) \***Je pensais**      *il allait*      *pleuvoir*.  
I think.1SG.PST it go.3SG.PST rain.INF  
'I thought it was going to rain.'

The absence of *que* in the following example is possible only because *il va pleuvoir* 'it is going to rain' can be interpreted as direct reported speech:

- (15) **Je dis**      *il va*      *pleuvoir*.  
I say.1SG.PRS it go.3SG.PRS rain.INF  
'I say: "it is going to rain".'

Example (16), involving *je sais*, requires an explanation:

<sup>3</sup> It could be somewhat different in Canadian French (Quebec and Ontario), according to Martineau (1993), who notices some other cases of absence of *que*, even after verbs governing the subjunctive.

- (16) **Je sais**            *il va*            *pleuvoir.*  
 I know.1SG.PRS it go.3SG.PRS rain.INF  
 ‘I know it. It is going to rain.’

Such an example is possible, as (17) attests:

- (17) – *Je ne sais pas écoute je suis fatiguée.*  
 I NEG know.1SG.PRS NEG listen.2SG.IMP I be.1SG.PRS tired.F  
 ‘I don’t know. Listen, I am tired.’  
 – *Oui je sais tu es fatiguée.*  
 yes I know.1SG.PRS you be.2SG.PRS tired.F  
 ‘Yes, I know (it). You are tired.’

(Christine Angot, *Rendez-vous*, 2006, f)

However, in this kind of examples, *je sais* ‘I know’ cannot be interpreted in the same way as *je crois* ‘I believe’ in example (5). On a prosodic point of view, *je sais* has to bear a conclusive accent, in spite of the missing punctuation (period); it is here an utterance of its own, meaning *I know it*. Symmetrically, when it is occurring in final position, as in *il va pleuvoir, je sais*, the phrase *je sais* is not a reduced parenthetical clause, it cannot be realised with the typical intonation of postfocal segments; it is an independent utterance ( $\approx$  ‘*It is going to rain. I know it.*’). In other words, *je sais* is not a parenthetical verb.

These facts suggest that *que*- and *that*-deletion are two distinct phenomena, subject to different constraints. Therefore, they do not necessarily involve the same grammatical structure<sup>4</sup>.

### 2.3 A controversy about the existence of *que*-deletion

As already mentioned, the French structure called *que*-deletion is not very well known yet. In recent years, there has even been a controversy about its existence. Therefore, before dealing with the main objective of this paper, which is the syntax of so-called *que*-deletion, a few words about the existence of this structure might be useful.

Andersen (1997) claims that when a parenthetical verb is placed at the beginning of a sentence (initial position), *que* is either deleted or phonetically weakened, and when by chance *que* is present, it is only because of a normative

<sup>4</sup> Further information about analysis of *that*-deletion is to follow in §4.3.

pressure. Therefore, for her, the following example, featuring the absence of *que*, represents the regular construction of a “parenthetical clause in an initial position” (Andersen 1997:142):

- (18) *j’pense il y a de la place ici* (o <Andersen [1997])  
 I-think.1SG.PRS it LOC have.3SG.PRS ART room here  
 ‘I think there is room here.’

This point of view seems quite exaggerated, given that, after an initial parenthetical verb, *que* is actually much more often present than not.

Probably as a reaction to this excessive opinion, Blanche-Benveniste and Willems (2007) advocate the opposite one. They claim that most examples of *que*-deletion are misleading. They produce examples showing that what looks like *que*-deletion often proves not to be, considering a broader context. Here is such an example:

- (19) ***je trouve*** *c’est dommage* (o <Blanche-Benveniste  
 I find.1SG.PRS it-be.3SG.PRS a.pity and Willems [2007])  
 ‘I think it’s a pity’

Blanche-Benveniste and Willems (2007:229) show that, even if one might think of (19) as a case of *que*-deletion, a look at a broader context can lead to another interpretation: *je trouve* ‘I find’ could be a parenthetical clause as well, with scope on the preceding clause:

- (20) *ça se perd je trouve c’est dommage*  
 it REFL loose.3SG.PRS I find.1SG.PRS it-be.3SG.PRS a.pity  
 ‘it is disappearing I think it’s a pity.’

In other words, for these authors, it is less probable that *je trouve* could be related to *c’est dommage* ‘it’s a pity’ (*que*-deletion) – as in (21) –

- (21) [*ça se perd*] [***je trouve*** *c’est dommage*]  
 [it is disappearing] [I think it’s a pity]

than to *ça se perd* ‘it is disappearing’ – as in (22):

- (22) [*ça se perd* ***je trouve***] [*c’est dommage*]  
 [it is disappearing I think] [it’s a pity]

This example is indeed ambiguous, and could not be used to prove the existence of *que*-deletion. Only prosodic features could help decide between these two interpretations.

The next example is also a dubious one, if for other reasons:

- (23) S1 *est-ce que vous pensez qu'il y a du danger aussi ou*  
 S2 ***ah je crois à longue échéance il faut faire attention***  
 (o, Beeching<Schneider [2007])

*Est-ce.que vous pensez qu'il y a du danger aussi*  
 Q you think.2PL.PRS COMP-it LOC have.3SG.PRS ART danger too  
*ou ?*

or

'Do you think there is danger, too?'

***Ah je crois à longue échéance il faut faire***  
 ah I believe.1SG.PRS PREP long deadline it need.to.3SG.PRS make.INF  
*attention.*

attention

'I believe in the long run one must pay attention.'

or 'I believe so. In the long run one must pay attention.'

The boldfaced segment is given, by Schneider (2007:174) and later on by Avanzi (2012:276), as an example of *que*-deletion. It is supposed to mean: *I believe in the long run one must pay attention*. However, a verbal phrase like *je crois* can perfectly be an utterance of its own, meaning *I believe so*, as in this example:

- (24) – *Elle l'a aimé ?*  
 she him-have.3SG.PRS love.PST.PTCP  
 'Did she love him?'  
 – ***Je crois.***  
 I believe.1SG.PRS  
 'I believe so.' (Simenon, *Les Vacances de Maigret*, 1948, f)

If so, it is also possible to analyse the second speaker's line in (23) as two successive independent clauses: the first one being *je crois* 'I believe so' and the second one *à longue échéance il faut faire attention* 'in the long run one must pay attention'. In this case, the first segment *je crois* would be the answer to the question asked by S1. For (23) as well as for (20), it is probable that only a recording could supply the prosodic data required to decide which analysis is appropriate. With-



out these prosodic data, it is merely impossible to choose between these interpretations, both being equally likely.

In sum, according to Blanche-Benveniste and Willems, there are not enough convincing examples to establish the real existence of *que*-deletion in French.

## 2.4 Authentic examples of *que*-deletion

It seems neither possible nor relevant to choose between these two opposite and quite excessive opinions, *que*-deletion being the standard construction for an initial parenthetical verb with the first, and non-existent with the second. It seems more reasonable to think that truth lies somewhere in between.

Beside many dubious examples, unquestionable examples of *que*-deletion nevertheless exist in spoken French, even if they are not the most frequent ones. They allowed Avanzi (2012:272–290) to establish the existence of this structure.

- (25) *la côte escarpée du mont Saint-Pierre qui mène au*  
 the slope steep of.ART Mount Saint-Pierre REL.SBJ lead.3SG.PRS to.ART  
*village euh qui même au village connaît des barrages*  
 village er REL.SBJ even in.ART village know.3SG.PRS ART roadblocks  
*chaque fois que des opposants de tous les bords mani – je*  
 each time COMP ART opponents of all ART sides demon – I  
*crois j'ai mal lu la phrase* {laugh}  
 believe.1SG.PRS I-have.1SG.PRS badly read.PST.PTCP the sentence {laugh}  
*manifestent leur colère* (o, pfc <Avanzi [2012])  
 demonstrate.3PL.PRS their anger'  
 'The steep slope of Mount Saint-Pierre that leads to the village er that even  
 in the village has roadblocks each time opponents of every side demon –  
**I believe I've read the sentence wrong** – demonstrate their anger.'

In (25), while reading a text, the speaker cuts herself off with a parenthesis acknowledging a reading mistake: she has first wrongly read *mène* 'leads', instead of *même* 'even'. This parenthesis (*je crois j'ai mal lu la phrase*) is delivered as a single prosodic unit, with prosodic boundaries before and after it. It is therefore obvious that *je crois* is related to *j'ai mal lu la phrase*.

Here is another undisputable example:

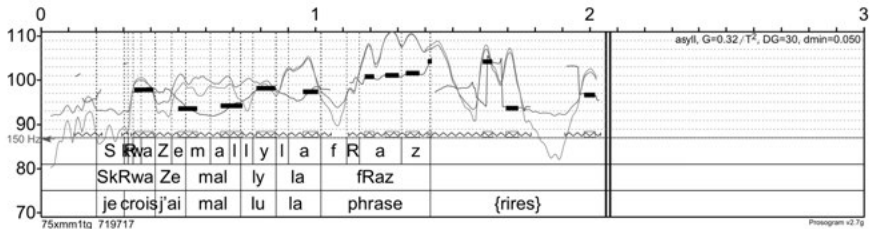


Figure 1: Prosogram (Mertens 2004) of “je crois j’ai mal lu la phrase”, from example (25).

- (26) *maintenant c’est interdit ça a été*  
 now it-be.3SG.PRS forbidden it have.3SG.PRS be.PST.PTCP  
*interdit à Ogéville je sais pas + il me*  
 forbid.PST.PTCP in Ogéville I know.1SG.PRS NEG it me.DAT  
*semble c’était dans les a- dans les années cinquante*  
 seem.3SG.PRS it-be.3SG.PST in the y- in the years fifty  
*quand.même* (o, pfc)  
 though  
 ‘Now it’s forbidden it has been forbidden in Ogéville I don’t know + it seems to me it was in the fifties though.’

From a semantic point of view, the segment *je sais pas* ‘I don’t know’ cannot possibly be mitigated by the parenthetical verb *il me semble* ‘it seems to me’. Besides, there is a major prosodic boundary between them. It is quite obvious – semantically and prosodically – that *il me semble* is mitigating the next segment *c’était dans les années cinquante* ‘it was in the fifties’. Examples (25) and (26) are indisputable occurrences of so-called *que*-deletion, where the scope of the parenthetical verb is on the following clause. Prosodic features confirm this interpretation.

One could still argue, as some do, that *que*-deletion is purely a phonetic phenomenon. In other words, in the two preceding examples, and in the other examples given as *que*-deletion, *que* would not really be deleted, but only weakened phonetically, to such an extent that it becomes inaudible. Sankoff (1980), and later on Martineau (1988) mention some phonetic constraints related to *que*-deletion; according to them, *que* is often omitted when preceded by a sibilant, less often by another consonant, and rarely by a vowel (see Avanzi 2012:278)<sup>5</sup>.

<sup>5</sup> This idea of phonetic reduction seems to be contradicted by examples (23) and (26), for instance. In those examples, the absence of *que* follows no sibilant.

Nevertheless, there are enough written examples proving that *que*-deletion is not a mere phonetic phenomenon. If, as already mentioned, *que*-deletion cannot be found in literary texts, there are nonetheless many examples of it in the casual written language one can find on the Internet (blogs, forums and so on):

- (27) **Je pense elle va se mordre les doigts, plutard c'est**  
 I think she go.3SG.PRS REFL bite-INF ART fingers later it-be.3SG.PRS  
*sur.*  
 sure  
 'I think she is going to bite her fingers, later, for sure.'  
 (<http://pastebin.com/vtVBLbF5> ; beginning of a post)
- (28) **Je pense il n'y a pas un problem de sécurité.**  
 I think it NEG-LOC have.3SG.PRS NEG a problem PREP security  
 'I think there is no security problem'  
 ([http://www.routard.com/forum\\_message/2506131/voyage\\_en\\_famille\\_en\\_turquie\\_de\\_l\\_est.htm](http://www.routard.com/forum_message/2506131/voyage_en_famille_en_turquie_de_l_est.htm); title of an answer to a question on an internet forum)
- (29) **Salut vanessa je trouve c'est trop top ce que tu mets**  
 hi Vanessa I find.1SG.PRS it-be.SG.PRS too top it REL you put.2SG.PRS  
*en place.*  
 in place  
 'Hi Vanessa I think it is really great what you are organising.'  
 ([http://naturaltrip.blog4ever.com/blog/lire-article-98354-1120702-vanessa\\_thivent.html](http://naturaltrip.blog4ever.com/blog/lire-article-98354-1120702-vanessa_thivent.html))

In these examples, punctuation and typography make obvious that the scope of the parenthetical verb is on the following clause, making these utterances indisputable examples of *que*-deletion. They suffice to prove the existence of the phenomenon.

Even if so-called *que*-deletion is not as frequent in French as *that*-deletion in English, and even if it is a quite different phenomenon, it indisputably exists and has to be acknowledged as a possible way of using parenthetical verbs.

### 3 The syntax of parenthetical verbs

Before dealing with the syntactic analysis of *que*-deletion, a few words about syntax of parenthetical verbs in their other positions are necessary. In French, just as in English, much has already been written about syntax of parenthetical verbs. What follows is a quick attempt to summarise the mainstream of analyses.

(30) ***Je crois qu'il va pleuvoir.***

(31) *Il va pleuvoir, je crois.*

(32) *Il va, je crois, pleuvoir.*

As most agree after Benveniste (1966), in each of these three examples, repeating (2) to (4), *il va pleuvoir* 'it is going to rain' conveys the main information and *je crois* 'I believe' just mitigates it. Therefore, all three utterances can be seen as semantically equivalent. In every position, the parenthetical verb *je crois* fulfils a subsidiary mitigating function. However, from a syntactic point of view, there does not seem to be any equivalence between these examples. According to the grammatical tradition, the verbal phrase *je crois* in (30) is a main clause governing the complement clause *il va pleuvoir*, whereas, in (31) and in (32), the main clause is *il va pleuvoir*. This situation is often seen as a mismatch between syntax and semantics. Therefore, many linguists have tried to develop a syntactic analysis that restores an agreement between syntax and semantics. Since *je crois* has the same pragmatic function in all three positions (mitigating the utterance), they consider that it must also have the same syntactic function. They try to give a common syntactic description for all three constructions. Most of the time, the idea is that the verbal phrase *je crois* in (30), being a mere mitigator, cannot be a main clause governing a complement clause. For instance, Blanche-Benveniste (1989) considers it as a "weak governor" (*recteur faible*)<sup>6</sup>, whereas others analyse it as an adverb, or a complement. In order to support these analyses, they

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<sup>6</sup> The notion of *weak governance* dates back to Blanche-Benveniste (1989). According to this author, verbal governance is gradual, and its graduality can be measured by the possibility of replacing the potentially governed element (complement) by pronominal forms. The pronominal forms *le* and *ça*, for instance, are very specific and attest a strong governance; a sentence such as *j'aime le chocolat* 'I like chocolate' can be replaced by *j'aime ça* or *je l'aime* 'I like it', attesting that *le chocolat* is a complement, (strongly) governed by the verb. On the contrary, *ce que* or *qu'est-ce que* are less exclusive and cannot be used to prove a strong governance. According to Blanche-Benveniste and Willems (2007, 2010), in the following utterance *je crois qu'il va pleuvoir*,

offer arguments that aim to prove that *je crois* in initial position cannot govern a complement clause. As Gachet (2009, forthcoming) shows, these arguments are not very convincing; it seems wiser to consider that a mitigating clause *can* take an embedded complement (provided that the subordinated clause starts with an overt complementizer).

Below I discuss two arguments often offered to prove that parenthetical verbs in an initial position cannot govern a complement clause.

### 3.1 Concatenation argument

It has been argued, for instance (e.g. Larrivée 2002), that what comes after a complex sentence has to be connected to the main clause, and not to the subordinate clause.

- (33) – *Je crois que Anne est venue hier.*  
 I believe.1SG.PRS COMP Anne be.2SG.PRS come.PST.PTCP yesterday  
 'I believe that Anne came yesterday.'  
 – *Ce n'est pas vrai.*  
 It NEG-be.3SG.PRS NEG true  
 'It is not true.' (←Larrivée 2002)

In this example, the fact that the second turn (*Ce n'est pas vrai* 'it is not true') responds to *Anne est venue* 'Anne came' and not to *je crois* 'I believe' is used to demonstrate that *je crois* cannot be a main clause. Against this point, it is possible to object that a different turn could respond to *je crois*:

- (34) – *Je crois que Anne est venue hier.*  
 I believe.1SG.PRS COMP Anne be.3SG.PRS come.PST.PTCP yesterday  
 'I believe that Anne came yesterday.'  
 – *Moi aussi.*  
 me too  
 'Me too.'

---

the clause *il va pleuvoir* can be replaced neither by *le* nor *ça* (*je le crois* and *je crois ça* 'I believe it/so' would be only attested for non-parenthetical – i.e. not mitigating – uses of verb *croire*), whereas *qu'est-ce que je crois* 'what do I believe' or *ce que je crois* 'what I believe' are possible with parenthetical uses of *croire*, attesting to a certain degree of governance, if not the strong one. Thus, in this use, the verb *croire* is considered as a weak governor. For a refutation of parenthetical verbs as weak governors, see Gachet (forthcoming and 2009).

7 Meaning either 'So do I' or 'So did I'.

In (34), the second turn can certainly be interpreted as *moi aussi je suis venu* ‘I came too’ but it can as well be interpreted as *moi aussi je crois que Anne est venue* ‘I, too, believe that Anne came’. The next example is interesting in this respect:

- (35) – *Je pense que ce serait drôle...*  
 I think.1SG.PRS COMP it be.COND funny...  
 ‘I think that it would be funny...’  
 – *N'est-ce pas?... Eh bien, moi aussi, mon enfant.*  
 NEG-be.3SG.PRS-it NEG well me too my child  
 ‘Wouldn't it?... Well, so do I, my child.’  
 (Alexandre Dumas père, *Le Capitaine Pamphile*, 1839, f)

In this example, *n'est-ce pas* ‘wouldn't it’ obviously responds to *ce serait drôle* ‘it would be funny’ and not to *je pense* ‘I think’. This would indicate that *ce serait drôle* is not a subordinate clause governed by *je pense*, but is actually the main clause. However, the next segment *moi aussi* ‘me too’ responds to *je pense*. So *je pense* might be the main clause as well. If such concatenation constraints actually indicated where the main clause is, then this example would cause an insolvable problem. It seems more likely that there are no such constraints about concatenation. At least, they cannot give accurate clues to identify a main clause.

### 3.2 NEG-raising argument

Another argument is so-called NEG-raising. It has been observed that in the case of negated parenthetical verbs, the negation can be understood as affecting the following clause.

- (36) *Je ne pense pas qu'il pleuvra.*  
 I NEG think.1SG.PRS NEG COMP-it rain.3SG.FUT  
 ‘I do not think that it is going to rain.’  
 (37) *Je pense qu'il ne pleuvra pas.*  
 I think.1SG.PRS COMP-it NEG rain.3SG.FUT NEG  
 ‘I think that it is not going to rain.’

It is an admitted fact that (36) conveys almost the same meaning as (37). According to some authors, this hints towards the parenthetical verb not being the main clause. Against this argument, it is easy to show that the same phenomenon can

take place with verbs that are indisputably main verbs governing a complement as well, such as in the following example:

(38) *Vous ne devez pas fumer.*  
 you NEG must.2SG.PRS NEG smoke.INF  
 ‘you must not smoke.’

(39) *Vous devez ne pas fumer.*  
 you must.2SG.PRS NEG smoke.INF  
 ‘you must not smoke.’

A sentence such as (38) can convey the meaning *it is forbidden to smoke*, similarly to (39), rather than *you need not smoke*. In that case, the negation affects the infinitive form *fumer*, though this infinitive is obviously not a main clause, and is indisputably governed by *devez*. As one notices, NEG-raising does not provide a sufficient argument to deny that parenthetical verbs can govern a *que*-clause<sup>8</sup>.

### 3.3 Conclusion about the syntax of parenthetical verbs

Generally speaking, it seems reasonable to consider that syntax and semantics are two different levels of analysis. In this respect, it is possible to state that an initial parenthetical verb can be a main clause governing a complement clause, in spite of its pragmatic subsidiary function.

In the other positions (final and internal), parenthetical verbs can be considered to have no governing link whatsoever with the other clause. A parenthetical verb in a parenthetical position is a peripheral element (see Gachet 2009, forthcoming). Even if this analysis goes against the ideas of several researchers after Blanche-Benveniste (1989), for whom a parenthetical verb is a “*recteur faible*” ‘weak governor’ in every position, it agrees with the views of others, like Recanati (1984:347), or like Schneider (2007:166–168) who describes it as an ungoverned adjunct.

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<sup>8</sup> See Gachet (2009, forthcoming) for further details about these arguments and some other ones, such as interrogation raising and so on.

Tab. 1: Syntactic functions of parenthetical verbs.

Position	Syntactic function
<b>Initial position with que</b> Je crois qu'il va pleuvoir.	<b>Main clause governing a comp-clause</b>
<b>Final position</b> Il va pleuvoir, je crois.	<b>Peripheral element (ungoverned adjunct)</b>
<b>Internal position</b> Il va, je crois, pleuvoir.	

## 4 The syntax of so-called *que*-deletion

Given these analyses of the three defining positions of parenthetical verbs, the question is: what is the syntactic analysis of so-called *que*-deletion? Logically, there are two hypotheses. According to the first one, the parenthetical verb in the initial position without *que* has just the same function as with *que* (justifying the term “*que*-deletion”). It governs a complement-clause. That is sometimes called “implicit subordination” (*subordination implicite*) or “subordination through a zero morpheme”, or even “*complétives non introduites*” (Andersen 1993; ‘non introduced complement-clauses’).

Tab. 2: Syntax of *que*-deletion: hypothesis 1.

Position	Syntactic function
<b>Initial position with que</b> Je crois qu'il va pleuvoir.	<b>Main clause governing a comp-clause</b>
<b>Initial position without que</b> Je crois $\emptyset$ il va pleuvoir.	
<b>Internal position</b> Il va, je crois, pleuvoir.	<b>Peripheral element (ungoverned adjunct)</b>
<b>Final position</b> Il va pleuvoir, je crois.	

In a second hypothesis, the initial position of a parenthetical verb without *que* is another case of a peripheral position; the parenthetical verb has the same function as in the final or internal positions: the function of a peripheral element. The second hypothesis will be argued for below.



Tab. 3: Syntax of *que*-deletion: hypothesis 2.

Position	Syntactic function
<b>Initial position with <i>que</i></b> Je crois <b>qu'</b> il va pleuvoir.	<b>Main clause governing a comp-clause</b>
<b>Initial position without <i>que</i></b> Je crois $\emptyset$ il va pleuvoir.	
<b>Internal position</b> Il va, <b>je crois</b> , pleuvoir.	<b>Peripheral element (ungoverned adjunct)</b>
<b>Final position</b> Il va pleuvoir, <b>je crois</b> .	

#### 4.1 *Paraît-il que*

A very particular construction in French provides evidence in favour of the second hypothesis. In order to explain in which manner it does so, it will be necessary to present this particular structure, which is exemplified by the following two examples:

(40) *Paraît-il qu'il le comprend* (o, unifr, 2011-03-08)  
 seem.3SG.PRS-it COMP-he it understand.3SG.PRS  
 ‘It seems ( $\approx$  I’ve heard) that he understands it.’<sup>9</sup>

(41) *Semble-t-il que les couleurs ont un effet psychologique sur vous*  
 seem.3SG.PRS-it COMP ART colours have3PL.PRS a effect psychological  
 on you  
 ‘It seems that colours have a psychological effect on you.’  
 (<http://www.infos-bonheur.fr/article-rouge-jaune-bleu-couleurs-et-bonheur-115759543.html>)

The most interesting particularity of this construction is the inversion of the clitic subject affecting a parenthetical verb in the initial position. This phenomenon seems to be attested to only with the verbs *paraître* and *sembler*.

<sup>9</sup> It is necessary to say a word about *paraît-il* (or *il paraît*), which is very difficult to translate. *Il paraît* is almost a synonym of *il semble* or *semble-t-il*, meaning *it seems*, but with a slightly different semantic value, not dissimilar to *I’ve heard that*, or *rumour has it that*...

This peculiar construction is used in a casual register of the spoken French language, shown in the following three examples:

- (42) *après paraît-il que j'ai euh quand.même une vie*  
 afterwards seem.3SG.PRS-it COMP I-have.1SG.PRS er even.so a life  
*euh* (o, pfc)  
 er  
 'Afterwards it seems ( $\approx$  I've heard) that I have er a life after all.'
- (43) *paraît-il que déjà au bout de deux trois fois ça*  
 seem.3SG.PRS-it COMP already at.ART end PREP two three times it  
*va mieux* (o, pfc)  
 go.3SG.PRS better  
 'It seems ( $\approx$  I've heard) that already after two or three times it gets better.'
- (44) *alors paraît-il qu'elles sont montées sur une*  
 so seem.3SG.PRS-it COMP-they-F be.3PL.PRS ride.PST.PTCP on a  
*bicyclette et puis elles sont parties* (o, cfpp 2000)  
 bicycle and then they.F be.3PL.PRS go.away.PST.PTCP  
 'So it seems ( $\approx$  I've heard) that they got on a bicycle and then they rode away.'

Other examples can be found in literary imitations of spoken language (novels, short stories) and in casual written language (blogs, forums on the internet):

- (45) *Paraît-il qu'il aurait violé une fille!*  
 seem.3SG.PRS-it COMP-he have.3SG.COND rape.PST.PTCP a girl  
 'It seems ( $\approx$  I've heard) that he raped a girl!  
 (Victoria Thérême, *Bastienne*, 1985, f)
- (46) *Paraît-il que lorsqu'on a connu Robert*  
 seem.3SG.PRS-it COMP when-one have.3SG.PRS know.PST.PTCP Robert  
 « avant », il est insupportable de le voir « comme ça ».  
 before it be.3SG.PRS unbearable to him see.INF as that  
 'It seems ( $\approx$  I've heard) that when one knew Robert "before", it is unbearable to see him "so".'  
 (Virginie Linhart, *Le jour où mon père s'est tu*, 2008, f)

- (47) **Paraît-il** **que** *tout* *était* *prévu* *pour* *cette*  
 seem.3SG.PRS-it COMP everything be.3SG.PST plan.PST.PTCP for this  
*vaccination.*  
 inoculation  
 'It seems (≈ I've heard) everything had been planned for this inoculation.'  
 ([http://forum.aufeminin.com/forum/actu1/\\_f77863\\_actu1-Paraît-il-que-tout-etait-prevu-pour-cette-vaccination-fou-fou.html](http://forum.aufeminin.com/forum/actu1/_f77863_actu1-Paraît-il-que-tout-etait-prevu-pour-cette-vaccination-fou-fou.html))
- (48) **Paraît-il** **que** *le* *métro* *de* *St Pétersbourg* *est*  
 seem.3SG.PRS-it COMP the underground PREP St Petersburg be.3SG.PRS  
*le plus profond* *du* *monde...*  
 the most deep of.ART world  
 'It seems (≈ I've heard) that Saint Petersburg Metro is the deepest in the world...'  
 (<http://www2.unil.ch/slav/ling/cours/PARTENAIRES/STAGIAIRES/Dubosson2.htm>)

Before explaining why these structures provide evidence in favour of the second hypothesis (see Table 3), it might be necessary to explain why they are so particular and why they break the usual practice of inversion. For a parenthetical verb in French, the inversion of the clitic subject is only possible in a parenthetical clause, i.e. in the final or internal position. In the initial position, the parenthetical verbs regularly follow the normal order (see Table 4).

**Tab. 4:** Mitigating parenthetical verbs.

Final parenthetical clause	<i>Il va pleuvoir, je crois.</i> <i>Il va pleuvoir, crois-je.</i> 'It is going to rain, I believe.'
Internal parenthetical clause	<i>Il va, je crois, pleuvoir.</i> <i>Il va, crois-je, pleuvoir.</i> 'It is, I believe, going to rain.'
Initial position	<i>Je crois qu'il va pleuvoir.</i> <i>*Crois-je qu'il va pleuvoir.</i> 'I believe that it is going to rain.'

It is possible to verify this by comparing our mitigating verbs with another kind of parenthetical verb: the reporting verb. As one can see in the next table, parenthetical reporting clauses may have the inversion or not; however, in the initial

Tab. 5: Other parenthetical verbs: reporting clauses.

Final parenthetical clause	<i>Il va pleuvoir, ajoute-t-il.</i> <i>Il va pleuvoir, il ajoute.</i> 'It is going to rain, he adds.'
Internal parenthetical clause	<i>Il va, ajoute-t-il, pleuvoir.</i> <i>Il va, il ajoute, pleuvoir.</i> 'It is, he adds, going to rain.'
Initial position	<i>Il ajoute qu'il va pleuvoir.</i> <i>*Ajoute-t-il qu'il va pleuvoir.</i> 'He adds that it is going to rain.'

position, only the normal order is possible, the inversion being clearly ungrammatical (*\*Ajoute-t-il qu'il va pleuvoir*).

In order to explain this particular position of *paraît-il* or *semble-t-il* before *que*, it is useful to resort to an old parallel between parenthetical verbs and adverbs. Similarities between parenthetical verbs and adverbs have been continuously mentioned, since the founding study of Urmson (1952). In French, some adverbs called “assertive adverbs” (Borillo 1976) obviously present similarities with parenthetical verbs. As their name suggests, they can be used to answer a yes/no question.

- (49) – *Est-ce.qu' il va pleuvoir?*  
Q it go.3SG.PRS rain.INF  
'Is it going to rain?'  
– ***Peut-être*** ‘maybe’ / ***probablement*** ‘probably’ / ***sans doute*** ‘without doubt’ / ***naturellement*** ‘naturally’ / ***bien entendu*** ‘of course’ / ***certainement*** ‘certainly’...

These adverbs share some important features with parenthetical verbs. First, they have the same pragmatic function: they are mitigators. Besides, they share some of their positions (as one sees in Table 6). In particular, they can govern a *que*-clause<sup>10</sup>.

These features shared by “assertive” adverbs and parenthetical verbs can explain the structure *paraît-il que* through a process of analogy. It is likely that the

<sup>10</sup> This is at least the most likely hypothesis for the syntactic analysis of these adverbs when followed by *que* (*peut-être qu'il va pleuvoir* ‘perhaps it is going to rain’). This structure has not been much studied until now, and remains puzzling.



There still is another fact that should be taken into account: in parenthetical clauses (final or internal position), parenthetical verbs do not necessarily have the inversion. They may as well follow the normal order, as in these examples:

- (53) *alors tout monde était hyper inquiet il paraît* (o, cid)  
 so all world be.3SG.PST very worried it seem.3SG.PRS  
 ‘So everyone was very worried, it seems (≈ I’ve heard).’
- (54) *C’est fréquent, il paraît.*  
 it-be.3SG.PRS frequent it seem.3SG.PRS  
 ‘It is frequent, it seems (≈ I’ve heard).’  
 (Hélène Castel, *Retour d’exil d’une femme recherchée*, 2009, f)
- (55) *Et puis, vous avez été recommandé, il semble.*  
 and then you have.2PL.PRS be.PST.PTCP recommended it seem.3SG.PRS  
 ‘And then, you have been recommended, it seems.’  
 (Sollers, *Le Coeur absolu*, 1987, f)

Probably, speakers consider that they also function as adverbs, just as the inversed forms. If so, one expects that they also use them in the initial position without *que*. Again, examples attest this:

- (56) *Il paraît ils ont de gros problèmes pour remplir leurs avions.* (http://www.aeroweb-fr.net/forum/aviation-civile/3124/3)  
 it seem.3SG.PRS they have.3PL.PRS ART great problems to fill.INF their planes  
 ‘It seems (≈ I’ve heard) they have great problems filling their planes.’
- (57) *Il semble on a des nids de poule partout à Notre-Dame-de-Grâce!*  
 it seem.3SG.PRS one have.3SG.PRS ART pot.holes everywhere in Notre-Dame-de-Grâce.  
 ‘It seems there are pot-holes everywhere in Notre-Dame-de-Grâce!’  
 (http://montreal.openfile.ca/en/montreal/file/2011/04/dangereux-nids-de-dindons-pour-les-cyclistes-sur-la-rue-fleury)

Logically, what is true for *il paraît* and *il semble* ‘it seems’ should also be true for the other mitigating parenthetical verbs, like *je crois* ‘I believe’, *je pense* ‘I think’, *on dirait* ‘one would say’, *je trouve* ‘I find’, and so on. That seems to be the most likely explanation of the absence of *que* after an initial parenthetical verb in

French, like in examples (25) to (29). What has been called *que*-deletion is actually the adoption of an initial adverbial position by a parenthetical verb, through analogy with “assertive adverbs”<sup>11</sup>. The term “*que*-deletion” is therefore not very accurate, given that this construction is actually not due to the disappearance or the ellipsis of *que*.

If a parenthetical verb adopts the position of an adverb, it seems consistent that it also takes its syntactic function. It is therefore very likely that parenthetical verbs in the initial position without *que* must be analysed as peripheral elements, just like the adverbs in the same position, and just like the parenthetical verbs in the internal or final position. This confirms the second hypothesis mentioned above (see Table 3).

### 4.3 Syntax of *que*- and *that*-deletion

One might have noticed that this analysis looks very similar to the one put forward by Thompson and Mulac (1991a, 1991b) for English *that*-deletion. According to these authors, in the next example, *I think* would be an “epistemic phrase”, functioning like an epistemic adverb:

- (58) ***I think***  $\emptyset$  *exercise is really beneficial, to anybody.*  
 (<Thompson and Mulac [1991])

For them, such parenthetical verbs belong to a “grammatical sub-category of adverbs”. However, in spite of an apparent similarity, the analysis defended in this paper does not accord with Thompson and Mulac’s. First, in my analysis, unlike in theirs, even if the parenthetical verbs in the initial position adopt the same syntactic function as adverbs, they do not change category: they remain verbs and do not become adverbs. There is another reason for my disagreement: their analysis does not seem to be actually suitable for English *that*-deletion. In the next example, it seems quite difficult to consider the occurrences of *think* as “epistemic fragments” functioning like adverbs:

- (59) *What made him think I didn’t do it? What makes you think I didn’t?*  
 (Dashiell Hammett, *The Maltese Falcon*, p. 141)

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<sup>11</sup> Gachet and Avanzi (2011) examined this point from a prosodic perspective, and observed that the prosodic realisation of initial parenthetical verbs without *que* is similar to the realisation of metrically comparable adverbs in the same position.

In this example, both occurrences of *think* are infinitive verbal forms governed by *made* and *makes*, and obviously governing the complement clauses *I didn't do it* and *I didn't*. Besides, it has to be mentioned that *think* is not used as a parenthetical verb here: it could not be placed in the internal or in the final position (*\*I didn't do it, what made you think?*). In French, however, examples syntactically equivalent to (59) seem most unlikely:

- (60) \**Qu'est-ce qui vous fait croire  $\emptyset$  j'ai mal*  
 Q what you.DAT make.3SG.PRS believe.INF I-have.1SG.PRS badly  
*lu la phrase?*  
 read.PST.PTCP the sentence  
 'What makes you think I read the sentence wrong?'

The absence of *que* makes such an example sound very strange. In French, the so-called *que*-deletion seems possible only for a parenthetical verb adopting an adverbial position. In contrast, English *that*-deletion is not limited to parenthetical verbs and can affect verbs that undoubtedly have a governing function. This provides more evidence of the difference between *that*- and *que*-deletion, showing that each construction deserves a specific syntactic description.

## 5 Conclusion

After recalling through the evidence of some written and oral examples that there actually exists, in French, an initial position of parenthetical verbs not followed by the complementizer *que*, this article dealt with the syntax of this unusual structure. The main point is that it could be more plausible, against a widespread opinion, to relate the so-called *que*-deletion to the other peripheral positions of parenthetical verbs, rather than to the position of a governing verb. In their already well-known positions, mitigating parenthetical verbs (*je crois* 'I believe', *je pense* 'I think', and so on) can function either as main clauses followed by *que* and an embedded clause, or as peripheral elements in medial or final position (reduced parenthetical clauses). The hypothesis supported in this paper is that their initial position without *que*, so-called *que*-deletion, is probably due to analogy with the initial position of mitigating adverbs, and has thus nothing to do whatsoever with the removal of *que* from the embedding structure, but is rather a third possible peripheral position. Some peculiar structures placing the parenthetical inversed forms *paraît-il* and *semble-t-il* 'it seems' in the initial position give a strong hint in favour of this hypothesis. Summarising, if an initial position of parenthetical



verbs not followed by *que* does indisputably exist in French, *que*-deletion as such does not.

The article also emphasises that the so-called *que*-deletion is, in several regards, different from English *that*-deletion. It gives evidence that, even with notions such as parenthetical verbs, which have realizations in several languages, it is not always possible to transpose analyses from a language to another (e.g. from English to French). It seems wiser to look in each language for specific clues leading to a specific analysis.

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James Griffiths and Güliz Güneş

# ***Ki* issues in Turkish**

## Parenthetical coordination and adjunction

**Abstract:** De Vries' (2006 et seq.) addition of '*par-Merge*' to the extant Merger operations utilized by the narrow syntax provides a means by which to model parataxis and yet maintain that paratactic constituents (i.e. parentheticals) are concatenated with their host in the narrow syntax in the structural position in which they are observed. A principal ingredient of the *par-Merge* approach to parataxis is the functional head Par, which triggers *par-Merge*. While Par is often morphologically realized as a coordinator in English, in certain parentheticals it is never realized. Its absence lends credence to *par-Merge*'s alternatives, which demand that parataxis be modelled semantically rather than syntactically. In this paper, we provide indirect support for the *par-Merge* approach by demonstrating that, in the Turkish counterparts to those English parentheticals that never realize Par, Par is realized as the lexeme *ki*. If *ki* is indeed Par's realization in Turkish, one may stipulate that Par's morphological absence in certain English constructions does not indicate that *par-Merge* must be discarded or even that its universality for modelling parataxis must be diminished – its absence indicates only that some language-specific constraint prevents Par's realization in certain English parentheticals.

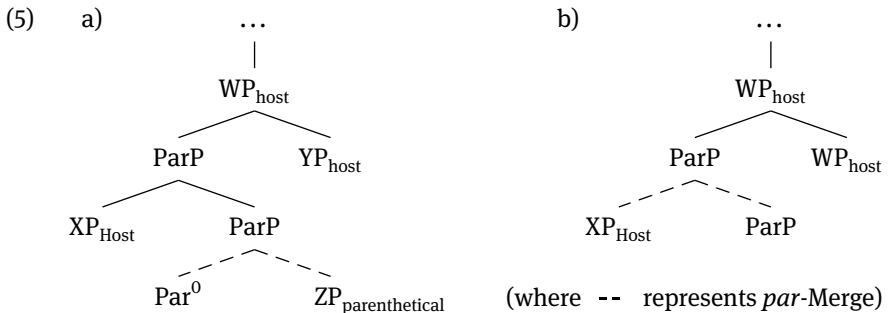
**Keywords:** Turkish, parenthetical coordination, parenthetical adjunction, un-dominance, *par-Merge*, appositive relative clauses, comment clauses, prosody

## 1 Introduction

As (1) to (3) demonstrate, parentheticals escape the scope of linearly preceding operators contained in their hosts. This 'scopelessness' is an issue that must be – and is – addressed by many of the analyses that treat parentheticals as first-Merged to their hosts in the position in which they are observed (Potts 2005, De Vries 2006, 2007, Arnold 2007), as parentheticals are otherwise incorrectly predicted to be bound by host clause operators that c-command them.

- (1) a) John didn't kiss Mary, *who is my sister*.  
 b) John might kiss Mary, *who is my sister*.
- (2) a) John didn't kiss Mary, *my sister*.  
 b) John might kiss Mary, *my sister*.
- (3) a) John isn't here, *I reckon*.  
 b) John might, *I reckon*, be here.
- (4) *Interpretation:*  
 a) (i)  $\text{my-sister}(M) \wedge \neg[\text{kiss}(M, J)]$   
 (ii)  $*\neg[\text{my-sister}(M) \wedge \text{kiss}(M, J)]$  (1a–2a)  
 a') (i)  $\text{reckon}(p, I) \wedge \neg[\text{here}(J)]$   
 (ii)  $*\neg[\text{reckon}(p, I) \wedge \text{here}(J)]$  (3a)  
 b) (i)  $\text{my-sister}(M) \wedge \diamond[\text{kiss}(M, J)]$   
 (ii)  $*\diamond[\text{my-sister}(M) \wedge \text{kiss}(M, J)]$  (1b–2b)  
 b') (i)  $\text{reckon}(p, I) \wedge \diamond[\text{here}(J)]$   
 (ii)  $*\diamond[\text{reckon}(p, I) \wedge \text{here}(J)]$  (3b)

To account for scopelessness and other ‘invisibility effects’, De Vries (2012), building on earlier work, posits that a parenthetical’s attachment to its host is mediated by a Merger operation called ‘*par-Merge*’. Unlike *set-Merge* or *pair-Merge* (Chomsky 2001), the output of *par-Merge* does not dominate its input. *Par-Merge* is permitted only when one of its inputs is the functional head *Par*. Parentheticals first *par-Merge* with *Par*, and then the output of this operation undergoes either *set-Merge* (5a) or *pair-Merge* (5b) with a host clause node (see Kluck 2013 for discussion). Scopelessness – and syntactic isolation in general – is obtained because neither *ParP*, nor any node that dominates *ParP*, dominates the parenthetical.



The success of the *par*-Merge approach rests in part on empirical evidence for the functional head Par. De Vries (2009) argues that parentheticals and their host clauses (or constituents thereof) stand in a *specificational coordination* relation to one another, and, resultantly, Par should be morphologically realized as a ‘linking’ element that can be included in the broader class of coordinators. That certain parentheticals are indeed optionally introduced by linkers that are homonymous with regular Boolean coordinators provides empirical support for the existence of Par (Heringa 2012).

- (6) a) The BBC, (*or*) *the Beeb*, started broadcasting in 1922.  
 b) Paul is interested in all music, (*but*) *especially jazz*.  
 c) Henry, (*and*) *he is the poorest of us all*, bought the first round of drinks.  
 d) Ben was, (*or*) *so Pete tells me*, late for his own wedding.

However, other parentheticals cannot be introduced by an overt coordinator.

- (7) a) My bicycle, (*\*and*) *a racer*, was stolen from the park last week.  
 b) Henry, (*\*and*) *who is the poorest of us all*, bought the first round of drinks.  
 c) Ben was, (*\*or*) *Pete tells me*, late for his own wedding.

An advocate of the *par*-Merge approach might suggest that, while all parentheticals are *par*-Merged to their host, in some constructions – such as those in (7) – Par must remain null for some extraneous and currently unknown reason. A sceptic may suggest however that the absence of coordinators in (7) demonstrates that not all parentheticals are attached to their host via *par*-Merge: an alternative method of attachment is available. It could be that the parentheticals in (7) are regular adjuncts, and scopelessness is triggered by a feature-bundle that is (rather exceptionally) attached to the parenthetical’s maximal projection: a non-terminal, and thus always phonologically covert, syntactic node (Potts 2005).

The parentheticals unable to host overt coordinators in (7) share two commonalities. On the surface they are unary predicates, while underlyingly they are propositions (Partee 1975, Kempson 2003, Heringa 2012, Vicente 2013, Griffiths to appear(a)). Secondly, they display ‘incomplete’ left edges.

- (8) a) My bicycle, ~~it is~~ *a racer*, was stolen from the park last week.  
 b) Henry, ~~he is the one~~ *who is the poorest of us all*, bought the first round of drinks.  
 c) Ben was, ~~so~~ *Pete tells me*, late for his own wedding.

In this paper, we provide indirect support for the idea that the parentheticals in (7) are complements of Par by demonstrating that the null element postulated in (7) on the *par*-Merge approach is morphologically realized in (7)'s Turkish counterparts as the lexeme *ki*. Unlike in English, the incompleteness observed in (7) is irrelevant to the realization of *ki* in Turkish: *ki* may be spelled-out regardless of whether or not its type-*t* complement is 'complete'. Thus, we suggest that 'completeness' is the extraneous and seemingly language-specific constraint that blocks realization of the English coordinators in (7) (see §3.8 for discussion).

We tread a convoluted path in order to demonstrate that *ki* is the realization of a type-*t* complement-taking Par in Turkish. Firstly, we demonstrate that our objects of inquiry (which are delimited in §2) are paratactic constructions. Secondly, we provide for them plausible syntactic analyses. Thirdly, we demonstrate that these analyses, which invoke *par*-Merge and *ki* as Par, extend to the English constructions in (7), which invoke *par*-Merge and  $\emptyset$  as Par. It is only in this final step that *ki* is equated with  $\emptyset$ , and indirect evidence for Par is obtained.

In what follows, we undertake the methodology described above twice: first in §3 to illustrate that what we call 'PK-clauses' are equivalent to the appositive constructions in (7a–b), and second in §4 to illustrate that what we call 'EK-clauses' are equivalent to the *comment clauses* (Quirk et al. 1992) in (7c). §5 concludes.

## 2 Background

Before we begin our investigation of PK- and EK-clauses, we must delimit them. Also, we must provide some background information about Turkish syntax and prosody which we will utilize in our investigations in §3–4.

The lexeme *ki* – a loan from Persian (Erguvanlı 1981) – displays a variety of functions in Turkish, as (9) to (14) demonstrate. *Inter alia*, *ki* may: introduce parenthetical clauses (9) and parenthetical subclausal constituents (10), introduce what appear to be finite subordinate clauses (11), provide emphasis (12), introduce a temporal clause (13), and function as a pronoun (14).

- (9) Abi-m,            [ki iş-i-ni            daima zaman-ı-nda yap-ar], bu sefer  
 brother-POSS ki work-POSS-ACC always time-POSS-LOC do-AOR this time  
 geciktir-miş.  
 delay-EVD  
 'My brother, (he) always does his homework on time, handed it in late.'

- (10) Adem, [**ki** en yakın arkadaş-ım], ben-i parti-ye davet  
 Adem **ki** most close friend-POSS I-ACC party-DAT invitation  
 et-me-di.  
 make-NEG-PST  
 ‘Adem, *my best friend*, did not invite me to the party.’
- (11) [Adem san-ıyor **ki**] Havva elma-yı ye-di.  
 Adem believe-PROG **ki** Havva apple-ACC eat-PST  
 ‘Adem believes that Havva ate the apple.’
- (12) O kadar gül-dü-k **ki**!  
 that much laugh-PST-1PL **ki**  
 ‘We laughed so much!’
- (13) [Güneş bat-mış-tı **ki**] garip ses-ler duy-ma-ya baş-la-dı-k.  
 sun set-PERF-PST **ki** weird noise-PL hear-INF-DAT start-PST-1PL  
 ‘The sun had set when we started to hear weird noises.’
- (14) Kemal-in-**ki**-ni oku-ma-dı-m.  
 Kemal-GEN-**ki**-ACC read-NEG-PST-1SG  
 ‘I didn’t read the one by Kemal.’

We focus on (9), (10) and (11). In (9) and (10), *ki* is pronounced as contained within the prosodic domain of the clause or subclausal constituent that follows it. We call this *ki* ‘proclitic-*ki*’ and dub the bracketed strings in (9) and (10) *PK-clauses* and *PK-XPs* respectively. In (11), *ki* is pronounced as contained within the prosodic domain of the clause that precedes it. We call this *ki* ‘enclitic-*ki*’ and dub the bracketed string in (11) an *EK-clause*.

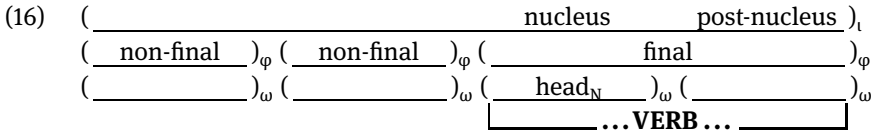
We will argue that proclitic-*ki* in (9) and (10) and enclitic-*ki* in (11) – both of which can be optionally dropped without any consequences for interpretation – are realizations of a Par head that selects for type-*t* complements. Whether or not the *kis* in (12) to (14) are also realizations of Par are beyond this paper’s scope. We hope that the conclusions reached below can be extended to other *ki*-constructions in the future (as such extension would confer parsimony). Of course, one cannot rule out the presence of homonymy in *ki*’s lexical semantics.

Now for some necessary background information about Turkish. Syntactically, Turkish is an agglutinative head-final language that displays canonical SOV word order. Prosodically, Turkish root clauses are parsed as Intonational Phrases (İS), which are right-prominent (Kan 2009). İS are composed of Phonological Phrases (İP), which are left-prominent (ibid.). In Turkish, prominence is conveyed

via *phrasing*. The most prominent element within an  $\iota$  is the *nucleus*, which is obligatory. The nucleus is the prosodic head of the rightmost  $\varphi$ . This rightmost  $\varphi$  is the *final*  $\varphi$ . Any  $\varphi$  that precedes it is a *non-final*  $\varphi$ .<sup>1</sup> Non-final  $\varphi$ s are optional. Certain rules govern  $\iota$ -formation in Turkish (Güneş 2013a, b). These are:

- (15) a) There is one and only one nucleus per  $\iota$ .
- b) The verb of a root clause  $\alpha$  must be parsed as contained within the final  $\varphi$  of  $\iota_\alpha$ .
- c) Any FO excursion observed in the post-nuclear area marks the start of a new  $\iota$ .

Based on (15a–c), the prosodic constituency in a declarative root clause with a single prosodic word ( $\omega$ ) in the non-final  $\varphi$ s and multiple  $\omega$ s in the final  $\varphi$  in Turkish can be diagrammatically represented as in (16).<sup>2</sup>



### 3 PK-clauses and PK-XPs

We now begin our analysis of PK-clauses and PK-XPs. We endeavour to demonstrate in this section that proclitic-*ki* is an instantiation of Par that selects solely for type-*t* complements.

#### 3.1 PK-clauses: the traditional analysis

Canonically, nouns are modified by clauses in Turkish by adjoining a nominalized clause (a *NOM-clause*) to a noun (17) (Kornfilt 2007). The resulting structure is roughly comparable to the English participle attributive adjective construction in (18) (Lewis 1967:260).

<sup>1</sup> For discussion of the prosodic properties listed here, see Kabak and Vogel (2001), Kan (2009), Kamali (2011), and Güneş (2013a,b).

<sup>2</sup> The verb can be in anywhere within the final  $\varphi$ ; it may be the nucleus or (part of) the post-nucleus.



- (17) [İş-i-ni daima zaman-ı-nda yap-an] abi-m bu sefer  
 work-POSS-ACC always time-POSS-LOC do-**NOM** brother-POSS this time  
 geciktir-miş.  
 delay-EVD

- (18) My always-on-time-work<sub>i</sub>-doing brother handed it<sub>i</sub> in late.

Because PK-clause constructions like (19) provide an alternative method by which to achieve the same basic interpretation as (17), constructions like (19) could be assumed to display similar syntax to (17), where the PK-clause adjoins to the modified noun (hereafter, the *anchor*) (compare (20a) and (20b)).<sup>3,4</sup>

- (19) Abi-m, [ki iş-i-ni daima zaman-ı-nda yap-ar], bu sefer  
 brother-POSS **ki** work-POSS-ACC always time-POSS-LOC do-AOR this time  
 geciktir-miş.  
 delay-EVD  
 ‘My brother, (*and he*) always does his work on time, handed it in late.’

- (20) a) [... [<sub>NP</sub> [NOM-clause] [<sub>NP</sub> anchor]] ...]  
 b) [... [<sub>NP</sub> [<sub>NP</sub> anchor] [PK-clause]] ...]

The schematic in (20) represents the ‘traditional’ analysis, which is advanced in various guises in the previous literature by Vaughan (1709), Underhill (1976), Erguvanlı (1981), Lehmann (1984), Bainbridge (1987), and Çağrı (2005), and which is implied in Göksel & Kerslake (2005). It states that PK-clauses are the

<sup>3</sup> We assume an adjunction (or *matching*) approach to the Turkish NOM-clauses in (17). This is because (i) Turkish nominals are NPs and not DPs (Bošković & Şener 2012), and (ii) the raising analysis is plausible only if the relativized clause is topped by a DP projection (see De Vries 2002:85 for details and additional references).

<sup>4</sup> Note that the default interpretation for both (17) and (19) is non-restrictive. Thus, NOM-clauses and PK-clauses are not distinguished by their restrictivity, unlike relative clauses and appositive relative clauses in languages like English (see Kerslake 2007 and Kan 2009 for discussion). Göksel and Kerslake (2005:397) note that *ki*-clauses can be restrictive in certain literary contexts, which are exemplified in (i). Whether or not the account we pursue for *ki*-clauses in this paper can be extended to this variety of *ki*-clauses is an issue for further investigation.

- (i) Bir aşçı, **ki** baklava yap-may-ı bil-me-sin, ben on-a aşçı de-me-m.  
 a cook **ki** baklava make-INF-ACC know-NEG-OPT I s/he-DAT cook call-NEG-1SG  
 ‘A cook who can’t make baklava! I don’t call that a cook.’

Indo-European (i.e. head-initial) counterpart of *NOM*-clauses. On this analysis, *PK*-clauses are adjoined to NPs, and proclitic-*ki* is a relative pronoun.

We suggest that this analysis must be discarded, as evidence suggests that (i) *PK*-clauses, unlike *NOM*-clauses, do not adjoin to their anchor, and (ii) *ki* is not a relative pronoun.

### 3.2 *PK*-clauses are not canonical clausal adjuncts

The obligatory *NOM*-clause → *anchor* word order observed in (17) conforms to the generalization that Turkish adjunction is left-branching (Potts 2005:107) (where  $\alpha \rightarrow \beta = \alpha$  precedes  $\beta$ ). If *PK*-clauses were adjuncts, the *PK*-clause → *anchor* word order observed in (19) would contradict this generalization.

Furthermore, a *NOM*-clause and its anchor must be linearly adjacent (21). Linear adjacency need not be maintained between a *PK*-clause and its anchor, however (22).

- (21) a) Mine-yi [[evli bir adam ol-**an**] Ali Bey] taciz<sub>N</sub> et-ti.  
 Mine-ACC married a man be-**NOM** Ali Mr. harassment make-PST  
 ‘Married-man-being Mr. Ali harassed Mine.’  
 b) \*[Evli bir adam ol-**an**] Mine-yi [Ali Bey] taciz<sub>N</sub> et-ti.
- (22) a) [Ali Bey], [**ki** evli bir adam-**dır**], Mine-yi taciz<sub>N</sub> et-ti.  
 Ali Mr. **ki** married a man-**COP** Mine-ACC harassment make-PST  
 ‘Mr. Ali, (and he) is a married man, harassed Mine.’  
 b) [Ali Bey] Mine-yi, [**ki** evli bir adam-**dır**], taciz<sub>N</sub> et-ti.

Lastly, *NOM*-clauses are treated as regular subclausal constituents (i.e. arguments, central adjuncts, adverbs) with respect to *intonational phrase* (*ι*) formation. This is illustrated by the fact that a constituent of the *NOM*-clause may be utilized as the nucleus of the *ι* that contains the entire utterance (23a). *PK*-clauses (or constituents thereof) cannot be utilized in this manner. (23b) is unacceptable. This is surprising if *PK*-clauses, like *NOM*-clauses, are regular adjuncts. That *PK*-clauses cannot be utilized for *ι*-formation within their host suggests that *PK*-clauses are root clauses that must be mapped to independent *ι*s (Nespor & Vogel 1986, Selkirk 1986 et seq.), and as such cannot be parsed as contained within a hierarchically lower prosodic unit, such as the final  $\varphi$  of their host’s *ι*, without violating the *Layerness Constraint* (ibid.).

- (23) a) [ (Emine)<sub>NF $\phi$</sub>  (Havva-yı)<sub>NF $\phi$</sub>  (yanağ-ın-dan)<sub>N</sub> öp-en  
 a') [ (Emine)<sub>N</sub> Havva-yı yanağ-ın-dan öp-en  
 [<sub>CP1</sub> Emine [<sub>NP</sub> [<sub>CP2</sub> Havva-yı yanağ-ın-dan öp-en] [<sub>NP</sub>  
 Emine Havva-ACC cheek-POSS-ABL kiss-NOM  
 çocuğ-u gör-dü)<sub>F $\phi$</sub> ]<sub>I</sub>  
 çocuğ-u gör-dü)<sub>F $\phi$</sub> ]<sub>I</sub>  
 çocuğ-u]] gör-dü]  
 kid-ACC see-PST
- b) \* [ (Emine)<sub>NF $\phi$</sub>  (çocuğ-u)<sub>NF $\phi$</sub>  (ki Havva-yı)<sub>NF $\phi$</sub>  (yanağ-ın-dan)<sub>N</sub>  
 b') \* [ (Emine)<sub>N</sub> çocuğ-u ki Havva-yı yanağ-ın-dan  
 [<sub>CP1</sub> Emine [<sub>NP</sub> [<sub>NP</sub> çocuğ-u] [<sub>CP2</sub> ki Havva-yı yanağ-ın-dan  
 Emine kid-ACC ki Havva-ACC cheek-POSS-ABL  
 öp-tü gör-dü)<sub>F $\phi$</sub> ]<sub>I</sub>  
 öp-tü gör-dü)<sub>F $\phi$</sub> ]<sub>I</sub>  
 öp-tü]] gör-dü]  
 kiss-PST see-PST  
 ‘Emine saw the kid, (and he/she) kissed Havva on the cheek.’

That they fail the diagnostics of adjunction listed above suggests that PK-clauses are syntactically isolated from their anchor, and hence the clause in which their anchor is contained. This suggests that the PK-clauses in (19) to (23) are independent root clauses, and not clausal adjuncts akin to NOM-clauses.

Additional evidence that PK-clauses are indeed root clauses comes from two observations. Firstly, PK-clauses may display independent illocutionary force (24).

- (24) Parti-de, ki lütfen o zaman bu konu-yu aç-ma!, Ali de ol-acak.  
 Party-LOC ki please that time this topic-ACC open-NEG Ali too be-FUT  
 ‘Ali will be at the party too: *please do not bring this up there!*’

Second, PK-clauses may also contain speaker-oriented adverbs: a perspicuous sign of root clause status according to Cinque (1999).

- (25) Hasan, ki maalesef berbat yemek yap-ar, biz-i yemeğ-e  
 Hasan ki unfortunately terrible food make-AOR we-ACC dinner-DAT  
 davet et-ti.  
 invitation make-PST  
 ‘Hasan, who unfortunately cooks terribly, invited us to dinner.’

Note that neither of these properties is observed with NOM-clauses, which confirms their status as regular subclausal constituents.

- (26) \**[Lütfen o zaman bu konu-yu aç-ma-dığ-ın] parti-de Ali de*  
 please that time this topic-ACC open-NEG-NOM-2SG party-LOC Ali too  
*ol-acak.*  
 be-FUT  
 ‘Ali will be at the party too: *please do not bring this up there.*’
- (27) \**[Maalesef berbat yemek yap-an] Hasan biz-i yemeğ-e*  
 unfortunately terrible food make-NOM Hasan we-ACC dinner-DAT  
*davet et-ti.*  
 invite make-PST  
 ‘Hasan, *who unfortunately cooks terribly*, invited us for dinner.’

### 3.3 Proclitic-*ki* is not a relative pronoun

That PK-clauses distribute like root clauses suggests that they **are** root clauses. If this is true, what then is *ki*? *Ki* cannot be a complementizer, as root clauses do not display complementizers. The traditional analysis claims that *ki* is the relative pronoun of an Indo-European style relative clause. This conclusion cannot be maintained however, as PK-clauses may reduplicate their anchor internal to the PK-clause: something that Indo-European relative clauses are unable to do.<sup>5</sup>

- (28) a) Ahmet, **ki** öğrenci-ler **o salağ-ı** çok sever-ler, okul-dan  
 Ahmet **ki** student-PL that idiot-ACC very love-3PL school-ABL  
*atıl-mış.*  
 fired-EVD  
 ‘Ahmet, *the students love that idiot very much*, has been fired.’  
 b) \*Ahmet, *whom the students loved that idiot*, has been fired.

<sup>5</sup> In languages like English, appositive relative clauses may display an ‘internal restrictor’ (*idiot* in (i) below) if the relative pronoun is *which*. Note that this restrictor is **not** a resumed element, but part of the phrase that contains the relative pronoun.

(i) Ahmet, [*which idiot*]<sub>1</sub> *the students loved t<sub>1</sub>*, has been fired.

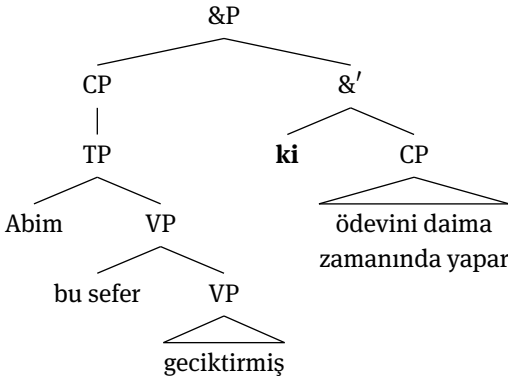
### 3.4 Proclitic-ki as a coordinator

We propose, following Lewis (1967:212) and Schröder (2002), that *ki* in PK-clauses is a *coordinator*. This conclusion is immediately validated by the fact that other coordinators in Turkish are pronounced as part of the  $\varphi$  or  $\iota$  that contains their second conjunct (29a), just as proclitic-*ki* is pronounced with the clause that follows it.

- (29) a) Ahmet ekmek al-dı [ve Ali peynir al-dı]<sub>ι</sub>.  
 b) # [Ahmet ekmek al-dı ve]<sub>ι</sub> Ali peynir al-dı.  
 Ahmet bread buy-PST **and** Ali cheese buy-PST  
 ‘Ahmet bought bread and Ali bought cheese.’

To capture this proposal in more formal terms, we propose that a construction like (19) displays the underlying syntax in (30). We propose that the surface word order in (19) is derived by a reordering operation that has no effect upon interpretation (we remain ambivalent as to the exact nature of this reordering operation here).

(30) **The syntax of PK-clauses (first attempt)**



The syntax in (30) accounts for all the properties of PK-clauses discussed thus far: (i) PK-clauses may exceptionally follow their anchor because they are not adjoined but coordinated, and coordination is left-headed even in languages which are otherwise right-headed (Zwart 2005); (ii) PK-clauses cannot be utilized in the  $\iota$ -formation of their host because they themselves must be mapped as  $\iota$ s; (iii) PK-clauses display root clause properties because they are root clause conjuncts; (iv) PK-clauses escape the scope of sentential negation and attitudinal verbs present in the host clause because they are never c-commanded by them.

In (30), proclitic-*ki* coordinates two root clauses. Plausibly, proclitic-*ki* could coordinate phrases of other semantic types. If this were true, one could straightforwardly apply a coordination analysis to PK-XPs (i.e. the other proclitic-*ki* construction under investigation here, which is repeated from (10) below), and hypothesize that, in these constructions, *ki* coordinates two subclausal constituents.

- (31) Adem, **ki** en yakın arkadaş-ım, ben-i parti-ye davet  
 Adem **ki** most close friend-POSS I-ACC party-DAT invitation  
 et-me-di.  
 make-NEG-PST  
 ‘Adem, *my best friend*, did not invite me to the party.’

We now demonstrate, by comparing PK-XPs to ‘*yani*-XPs’, that such a hypothesis is false, and that proclitic-*ki* is indeed limited to coordinating two root clauses.

### 3.5 Proclitic-*ki* coordinates root clauses: a comparison of PK-XPs and *yani*-XPs

*Yani*-XPs are subclausal constituents preceded by *yani*, where *yani* is pronounced as part of the phonological phrase that contains the XP that follows it. A *yani*-XP provides an *identification* (Heringa 2012) or *reformulation* (Ruhi 2009) of the constituent (the *anchor*) it immediately linearly follows.<sup>6</sup>

- (32) a) Altıgen, **yani** altı kenarlı şekil, Roma tanrı-sı Satürn-ü  
 hexagon **yani** six sided shape Roman god-COMPD Saturn-ACC  
 simgele-r.  
 symbolize-AOR  
 ‘A hexagon, *a shape with six sides*, symbolises the Roman god Saturn.’  
 b) Büyük Elma, **yani** New York, beş ilçe-den oluş-ur.  
 Big Apple **yani** New York five borough-ABL consist.of-AOR  
 ‘The Big Apple, *New York*, consists of five boroughs.’

*Yani*-XPs and their anchors must be of the same semantic category (33), and, if they are arguments, must display the same case (34).

<sup>6</sup> Note that we concentrate only on the identificational form of *yani* here. For other forms of *yani*, see Ruhi (2009).

- (33) a)  $[[_{(e,t)} \text{Ateist}] \text{yani} [_{(e,t)} \text{allahsız}]] \text{insan-lar kilise-ye git-mez.}$   
 Atheist **yani** godless person-PL church-DAT go-NEG.AOR  
 ‘Atheist, *godless*, people don’t go to church.’
- b)  $*[[_{(e)} \text{Adem}], \text{yani} [_{(e,t)} \text{tamamen sarhoş}]], \text{kapı-da uyuyakal-dı.}$   
 Adem **yani** completely drunk door-LOC fall.asleep-PST  
 ‘Adem, *completely drunk*, fell asleep by the door.’
- c)  $*[[_{(e)} \text{Adem}], \text{yani} [_{(t)} \text{komşu-m-dur}], \text{ban-a kek getir-di.}$   
 Adem **yani** neighbour-POSS-COP I-DAT cake bring-PST  
 ‘Adem – (*and he*) is my neighbour – brought me cake.’
- (34) Adem Havva-yı, **yani** karı-sı- $\{n_1/*\emptyset\}$ , düğün-de öp-me-di.  
 Adem Havva-ACC **yani** wife-POSS- $\{\text{ACC}/\text{NOM}\}$  wedding-LOC kiss-NEG-PST  
 ‘Adem did not kiss Havva, *his wife*, at the wedding.’

A *yani*-XP and its anchor must maintain linear adjacency.

- (35) a) Demir Leydi, **yani** Thatcher, bu yıl aramız-dan ayrıl-dı.  
 Iron Lady **yani** Thatcher this year among.us-ABL depart-PST
- b)  $*\text{Demir Leydi bu yıl, yani Thatcher, aramız-dan ayrıl-dı.}$   
 Iron Lady this year **yani** Thatcher among.us-ABL depart-PST  
 ‘The Iron Lady, *Thatcher*, this year departed from among us.’

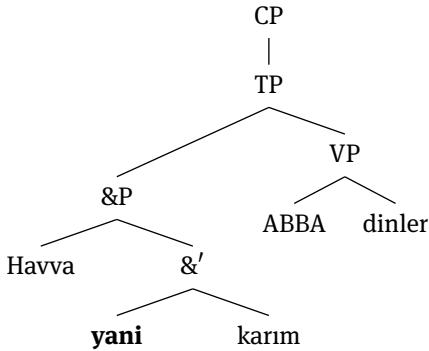
Furthermore, *yani*-XPs cannot host speaker-oriented adverbs.

- (36)  $*\text{Adem Havva-yı, yani maalesef karı-sı-nı, düğün-de}$   
 Adem Havva-ACC **yani** unfortunately wife-POSS-ACC wedding-LOC  
 öp-me-di.  
 kiss-NEG-PST  
 ‘Adem did not kiss Havva, *unfortunately his wife*, at the wedding.’

Considering that *yani* is pronounced as part of the  $\phi$  of the XP that follows it, we assume that *yani*, like proclitic *ki*, is a coordinator, whose syntax can be schematized as in (37). Note that this assumption is immediately validated by (33) to (36), as: (i) only constituents of the same semantic type can be coordinated (this is a version of the *Law of Coordination of Likes*, i.e. the *LCL*); (ii) coordinated arguments are typically assigned the same case; (iii) conjuncts must maintain linear adjacency; and (iv) subclausal constituents cannot display adverbs reserved for root clauses that bear illocutionary force.

(37) **The Syntax of *yani*-XPs (first attempt)**

Havva, **yani** karı-m, ABBA dinle-r.  
 Havva, **yani** wife-POSS ABBA listen-AOR  
 ‘Havva, *my wife*, listens to ABBA.’



If proclitic-*ki* could coordinate subclausal constituents like *yani* can (and hence display the syntax in (37)), one would expect PK-XP constructions like (31) to exhibit the same properties as *yani*-XPs. However, they do not.

Firstly, PK-XPs and their anchors need not be of the same semantic type (38), which violates the LCL. Secondly, PK-XPs and their anchors need not display the same case, unlike the conjuncts of regular coordinated phrases. Indeed, if the PK-XP is not assigned a lexical or inherent case, it must be assigned nominative case (which is null in Turkish) (39).

(38) [[<sub>(e)</sub> Adem], **ki** [<sub>(e,t)</sub> sarhoş]], ev-e gel-me-yecek.  
 Adem **ki** drunk home-DAT come-NEG-FUT  
 ‘Adem – *drunk* – will not come home.’

(39) a) Adem Havva-yı, **ki** karı-sı- $\{\emptyset/*n\}$ , düğün-de  
 Adem Havva-ACC **ki** wife-POSS- $\{\text{NOM}/*\text{ACC}\}$  wedding-LOC  
 öp-me-di.  
 kiss-NEG-PST  
 ‘Adem did not kiss Havva, *his wife*, at the wedding.’  
 b) Adem bu saat-i, **ki** Vakko-dan, karı-sı-na al-dı.  
 Adem this watch-ACC **ki** Vakko-ABL wife-POSS-DAT buy-PST  
 ‘Adem bought this watch, *from Vakko*, for his wife.’



Thirdly, linear adjacency need not be maintained between a PK-XP and its anchor.

- (40) a) [Adem Bey], [**ki** evili bir adam], Havva-yı taciz et-ti.  
 Adem Mr. **ki** married a man Havva-ACC harassment make-PST  
 b) [Adem Bey] Havva-yı, [**ki** evili bir adam], taciz et-ti.  
 Adem Mr. Havva-ACC **ki** married a man harassment make-PST  
 ‘Mr. Adem, *a married man*, harassed Havva.’

Fourthly, PK-XPs may host speaker-oriented adverbs.

- (41) Adem Havva-yı, **ki** maalesef karı-sı, düğün-de öp-me-di.  
 Adem Havva-ACC **ki** unfortunately wife-POSS wedding-LOC kiss-NEG-PST  
 ‘Adem did not kiss Havva, *unfortunately his wife*, at the wedding.’

Prosodic dissimilarities also pertain between *yani*-XPs and PK-XPs. *Yani*-XPs (or constituents thereof) can be utilized within the final  $\varphi$  of the surrounding  $\iota$  both as the nucleus (42a) and the post-nucleus (42b).<sup>7</sup>

- (42) a) [(Adem)<sub>NF $\varphi$</sub>  (pazar-da)<sub>NF $\varphi$</sub>  (Havva-yı)<sub>NF $\varphi$</sub>  (**yani** karı-sı-nı)<sub>N</sub>  
 Adem market-LOC Havva-ACC **yani** wife-POSS-ACC  
 kaybet-ti)<sub>F $\varphi$</sub> ] <sub>$\iota$</sub>   
 lose-PST  
 b) [(Adem)<sub>NF $\varphi$</sub>  (pazar-da<sub>N</sub> kaybet-ti Havva-yı **yani** karı-sı-nı)<sub>F $\varphi$</sub> ] <sub>$\iota$</sub>   
 Adem market-LOC lose-PST Havva-ACC **yani** wife-POSS-ACC  
 ‘In the marketplace, Adem lost Havva, *his wife*.’

PK-XPs (or constituents thereof) cannot be utilized within the final  $\varphi$  of the surrounding  $\iota$  as the nucleus (43a), or as the post-nucleus (43b).

- (43) a) \*[(Adem)<sub>NF $\varphi$</sub>  (pazar-da)<sub>NF $\varphi$</sub>  (Havva-yı)<sub>NF $\varphi$</sub>  (**ki** karı-sı-nı kaybet-ti)<sub>F $\varphi$</sub> ] <sub>$\iota$</sub>   
 Adem market-LOC Havva-ACC **ki** wife-POSS lose-PST  
 b) \*[(Adem)<sub>NF $\varphi$</sub>  (pazar-da<sub>N</sub> kaybet-ti Havva-yı **ki** karı-sı)<sub>F $\varphi$</sub> ] <sub>$\iota$</sub>   
 Adem market-LOC lose-PST Havva-ACC **ki** wife-POSS  
 ‘In the marketplace, Adem lost Havva, *his wife*.’

<sup>7</sup> For experimental confirmation that *yani*-XPs are prosodically integrated (i.e. parsed as  $\varphi$ s) while PK-XPs are not (i.e. they are parsed as  $\iota$ s), see Güneş & Çöltekin (to appear).

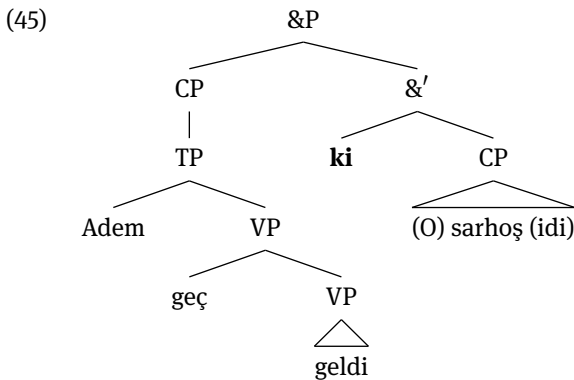
That *yani*-XPs can be displayed within the final  $\phi$  of the surrounding clauses'  $\iota$  is unsurprising if *yani*-XP constructions are derived according to (37), as the *yani*-XP is a subclausal constituent of the host clause. However, that  $\mathfrak{PK}$ -XPs cannot be displayed within the final  $\phi$  of the surrounding clauses'  $\iota$  is unexpected if *yani*-XPs and  $\mathfrak{PK}$ -XPs share the syntax in (37).

In summary, if  $\mathfrak{PK}$ -XPs were an instantiation of subclausal coordination, it would be rather exceptional: it would be able to violate the LCL and the linear adjacency condition operative on coordination, and fail – for some unknown reason – to permit its second conjunct to participate in  $\iota$ -formation.

### 3.6 $\mathfrak{PK}$ -XPs as reduced $\mathfrak{PK}$ -clauses

Rather than stipulate that  $\mathfrak{PK}$ -XPs are indeed an exceptional case of subclausal coordination, we instead propose that  $\mathfrak{PK}$ -XPs are phonologically reduced  $\mathfrak{PK}$ -clauses. Under this analysis, a  $\mathfrak{PK}$ -XP like (44a) displays the underlying syntax in (44b). (44b) is schematically represented in (45).

- (44) a) Adem, **ki** sarhoş, geç gel-di. (Surface string)  
 b) Adem<sub>i</sub>, **ki** (o<sub>i</sub>) sarhoş (i-di), late gel-di. (Underlying)  
 Adem **ki** (he) drunk (COP-PST) late arrive-PST  
 'Adem, (and he was) drunk, arrived late.'

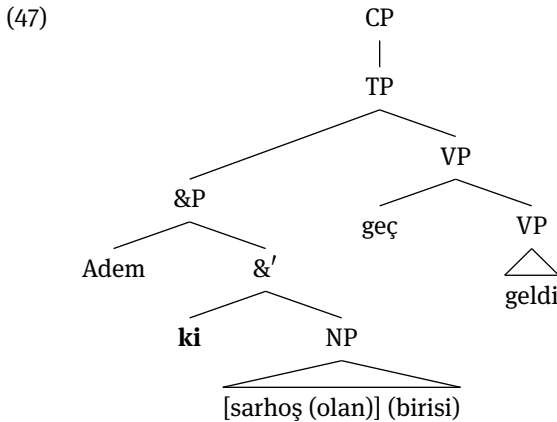


The derivation in (45) is similar to (30) *modulo* subject- and copula-drop inside the  $\mathfrak{PK}$ -clause (both of these ‘dropping’ mechanisms are ubiquitous in Turkish). The structure in (45) immediately accounts for why  $\mathfrak{PK}$ -XPs and their anchors may be of dissimilar semantic types, as, underlyingly, the conjuncts of coordination are both root clauses (which obeys the LCL). That non-structurally case-assigned  $\mathfrak{PK}$ -

XPs always display nominative case is also explained by (45): the PK-XP is actually the predicate of a reduced predicational copula clause, and the predicates of such copula clauses, unless they display a non-structural case, are always assigned nominative case in Turkish. Also, the ability of PK-XPs to host speaker-oriented adverbs is accounted for by (45), as the PK-XP is, underlyingly, a root clause. Lastly, (45) explains why PK-XPs (or constituents thereof) cannot occupy the final  $\varphi$  of the  $\iota$  that surrounds them: PK-XPs are underlyingly root clauses, and as such must be mapped as *is*. To parse them as part of a hierarchically lower prosodic unit (such a final  $\varphi$ ) therefore violates the *Layeriness Constraint*.

At this juncture, one might argue that the data in §3.5 do not necessarily constitute evidence that PK-XPs display the syntax in (45), as PK-XPs could be derived from the reduction of a PK-NOM-clause that, as an entity, can be coordinated directly to its type-*e* anchor, as in (46) and (47).

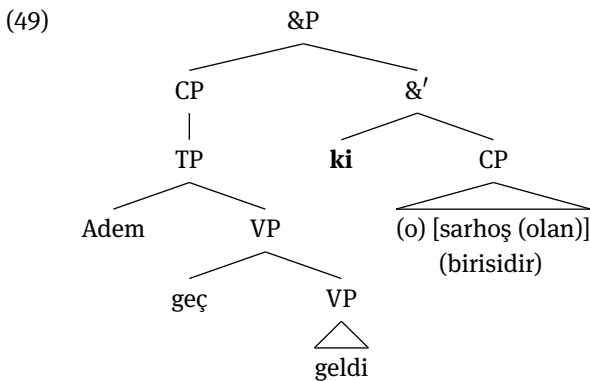
- (46) [[Adem]<sub>i</sub>, **ki** [sarhoş]], geç gel-di. (Surface string)  
 [[Adem<sub>i</sub> **ki** [[sarhoş (ol-an)] (birisi)<sub>i</sub>]], geç gel-di. (Underlying)  
 Adem **ki** drunk COP-NOM someone late arrive-PST  
 ‘Adem, (someone who is) drunk, arrived late.’



While (47) explains why PK-XPs receive nominative case (as the pronounced element *sarhoş* is the predicate of the nominalized copula clause), and why PK-XPs may appear to be of a different semantic type to their anchor, it fails to account for the positional flexibility of PK-XPs that is observed in (40) and their prosodic distribution that is observed in (43). This is because, if (47) underlay PK-XP constructions, then PK-XPs would pattern with *yani*-XPs with respect to these properties, which they do not. Thus, if NOM-clause reduction of the type witnessed in (46)

is even permitted in Turkish, we postulate that it will only occur when the NOM-clause is itself the predicate of a copula clause that is coordinated at the CP level, as in (48) and (49).

- (48) Adem, **ki** sarhoş, geç gel-di. (Surface string)  
 Adem<sub>i</sub>, **ki** (o<sub>i</sub>) sarhoş (ol-an) (birisi<sub>i</sub>-dir), geç gel-di. (Underlying)  
 Adem **ki** he drunk be-NOM someone-COP late arrive-PST  
 ‘Adem, (he is someone who is) drunk, arrived late.’



Evidence for (48) and (49) comes from the fact that PK-NOM-clauses may contain speaker-oriented adverbs (a sign of root clause status), and may optionally display the copula that is posited to be null in (48) and (49).

- (50) Adem, **ki** maalesef sarhoş ol-an birisi-**dir**, geç gel-di  
 Adem **ki** unfortunately drunk COP-NOM someone-**COP** late arrive.PST  
 ‘Adem, *unfortunately* (he) was someone who was drunk, arrived late.’

Thus, regardless of the presence of recursive nominalized clauses (i.e. *he is someone who is someone who is someone who is drunk*), PK-XPs are always underlyingly predicative copula clauses. Resultantly, our analysis provides a unified account of PK-XPs and PK-clauses, by subsuming the former under the latter. PK-XPs differ from their PK-clausal counterparts only in that the former displays (multiple) instances of subject- and copula-drop – elliptical operations that are optionally and freely utilized in Turkish. From this unification, we propose that proclitic-*ki* performs the same function across PK-XP and PK-clause constructions: proclitic-*ki* is a coordinator of type-*t* root clauses. Hereafter we refer to PK-XPs and PK-clauses as the same construction – PK-clauses.

### 3.7 Par-Merge

The analysis advanced in §3.4–3.6 treats PK-clauses and their hosts, and *yani*-XPs and their anchors, as conjuncts coordinated by regular Boolean coordinators. This analysis is problematic for three reasons.

The first concerns the interpretation of PK-clauses and their hosts. The current account predicts that the truth of a PK-clause should be evaluated concurrently with the truth-evaluation of its host, just as regularly coordinated propositions are. In (51), for example, B's *generic opposition* to A's utterance cannot target either conjunct in isolation; rather, it refers to the entire coordination phrase (where *generic opposition* is opposition that can be voiced against *any* assertion).

- (51) A: [[<sub>CONJ1</sub> Ahmet armut sev-er] ve [<sub>CONJ2</sub> Hasan elma sev-er]].  
           Ahmet pear like-AOR and Hasan apple like-AOR  
           ‘Ahmet likes pears and Hasan likes apples’  
   B: Bu doğru değil!  
           this true not  
           ‘That’s not true!’

The abovementioned prediction is incorrect. If a PK-clause fully linearly follows its host, then the PK-clause's truth is interpreted as assessed in the world *w* in which the truth of its host is guaranteed. This is evidenced by the fact that one cannot voice generic opposition towards the host (52). Conversely, if a PK-clause does not fully follow its host, then the host's truth is interpreted as assessed in the world *w* in which the truth of the PK-clause is guaranteed, as (53) shows.

- (52) A: Adem Havva-yı düğün-de öp-me-di, **ki** karı-sı.  
           Adem Havva-ACC wedding-LOC kiss-NEG-PST **ki** wife-POSS  
           ‘Adem did not kiss Havva at the wedding, *his wife*.’  
   B: #Bu doğru değil!  
           this true not  
           ‘That’s not true!’ (where B attempts to deny the truth of the host)
- (53) A: Adem Havva-yı, **ki** karı-sı, düğün-de öp-me-di.  
           Adem Havva-ACC **ki** wife-POSS wedding-LOC kiss-NEG-PST  
           ‘Adem did not kiss Havva, *his wife*, at the wedding.’  
   B: #Bu doğru değil!  
           this true not  
           ‘That’s not true!’ (where B attempts to deny the truth of the PK-clause)

In this respect, PK-clauses and their hosts stand in the same relation to separate utterances in an ordered discourse created by a speaker (i.e. a *monologue*). In the ordered discourse in (54) for example,  $\beta$  is interpreted as assessed in the world  $w$  in which the truth of  $\alpha$  is guaranteed. Here,  $\alpha$  cannot be targeted by generic opposition, just like the PK-clause in (53).

- (54) A: [ $\alpha$  David is a nice guy.] [ $\beta$  He baked Sally a cake.]  
 B: #That's not true! (referring to  $\alpha$ )

Thus, it seems that PK-clauses and their hosts stand in an ordered discourse relation to one another (*cf.* Del Gobbo 2007:180, Griffiths & De Vries, 2014), just like the assertions that comprise the two-utterance monologue in (54). However, unlike with  $\alpha$  in the monologue case, the truth of the PK-clause in (53) is *imposed* upon the discourse. This is because the PK-clause and its host are uttered simultaneously, and hence there is no point in conversational-time at which speaker B can deny the truth of the PK-clause in a generic manner.

The second issue with the approach advanced in §3.4–3.6 is that it predicts that, as with regular coordination, the conjuncts of PK-clauses and *yani*-XPs can be switched without any consequences in the interpretation. This prediction is false.

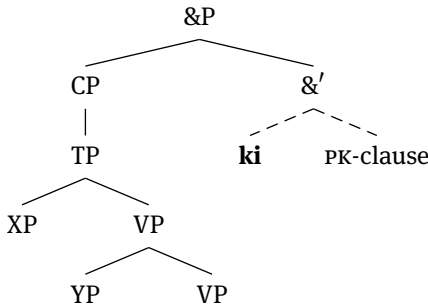
- (55) a) Adem Havva-yı düğün-de öp-me-di, **ki** karı-sı.  
 Adem Havva-ACC wedding-LOC kiss-NEG-PST **ki** wife-POSS  
 'Adem did not kiss Havva at the wedding, *his wife*.'  
 b) Havva Adem-in karı-sı **ki** Adem o-nu düğün-de  
 Havva Adem-GEN wife-POSS **ki** Adem she-ACC wedding-LOC  
 öp-me-di.  
 kiss-NEG-PST  
 'Havva is Adem's wife; *he did not kiss her at the wedding*.'
- (56) a) Ayşe okul-a [kitab-ı-nı, **yani** Beş Şehir-i,] götür-dü.  
 Ayşe school-DAT book-POSS-ACC **yani** five city-ACC take-PST  
 'Ayşe took her book, *Beş Şehir*, to the school.'  
 b) Ayşe okul-a [Beş Şehir-i, **yani** kitab-ı-nı,] götür-dü.  
 Ayşe school-DAT five city-ACC **yani** book-POSS-ACC take-PST  
 'Ayşe took *Beş Şehir*, *her book*, to the school.'
- (57) a) p *ki* q ≠ q *ki* p (for (55))  
 b) x *yani* y ≠ y *yani* x (for (56))

The third issue that arises from the analysis advanced in §3.4–3.6 concerns *suspended affixation* (SA) in *yani*-XPs. SA is the acceptable omission of shared affixes on all conjuncts but the last in a coordination structure, where omission does not affect interpretation. SA is observed in cases of regular coordination in Turkish (58a) (Lewis 1967, Kabak 2007), but is illicit in *yani*-XP structures (58b).<sup>8</sup> This is unexpected if *yani* is a regular coordinator, as (37) suggests.

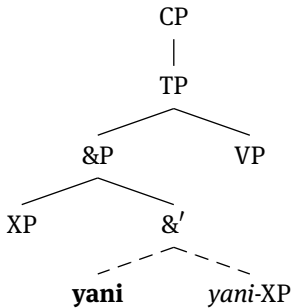
- (58) a) Ayşe okul-a [Ali-(yi) ve Ahmet-i] götür-dü.  
 Ayşe school-DAT Ali-ACC and Ahmet-ACC take-PST  
 ‘Ayşe took Ali and Ahmet to the school.’
- b) Ayşe okul-a [Ali-\*(yi) **yani** abi-m-i] götür-dü.  
 Ayşe school-DAT Ali-(acc) **yani** brother-POSS-ACC take-PST  
 ‘Ayşe took Ali, *my brother*, to the school.’

To resolve these issues, we adopt De Vries’ (2006 et seq.) *par*-Merge approach discussed in §1. We propose that both *yani* and proclitic-*ki* are morphological realizations of the Par functional head. Thus, the final derivations we propose for PK-clauses and *yani*-XPs is provided in (59) and (60) below.

(59) **The syntax of PK-clauses (final version)**



<sup>8</sup> Thanks to Jorge Hankamer (p.c.) for bringing the suspended affixation data to our attention.

(60) **The syntax of *yani*-XPs (final version)**

That the output of *par*-Merge (i.e. &' in (59) and (60) above) does not dominate its input implies that nothing that *c*-commands &' dominates *par*-Merge's input. This leads to scopelessness for *par*-Merge's input, and renders the PK-clause in (59) equivalent to an undominated root. Undominated propositional syntactic elements – which are typically root clauses – are the input for the discourse structure, and are ordered in the discourse with respect to one another. How these units are ordered is dictated by their linear position, as already discussed above.

Resultantly, *par*-Merge provides an explanation for the interpretation of the PK-clauses in (52) and (53). PK-clauses act as independent speech acts in an ordered discourse because they are syntactically undominated maximal projections, which are the atoms of discourse.

The *par*-Merge approach also accounts for the interpretative asymmetries observed when the conjuncts of ParP are swapped. The syntactic isolation that *par*-Merge engenders requires that extraneous mechanisms are invoked to aid interpretation. Such mechanisms are influenced by linear order, just as with assertions in an ordered discourse:

- (61) a) [<sub>α</sub> John pushed Sally.] [<sub>β</sub> She fell over.] (α causes β)  
 b) [<sub>α</sub> Sally fell over.] [<sub>β</sub> John pushed her.] (α is the result of β)

*Par*-Merge also provides an explanation for why affixation cannot be suspended in *yani*-XPs constructions: SA is licensed only in cases of regular coordination.

We have now provided a plausible analysis of PK-clauses and *yani*-XPs. In the next section, we compare PK-clauses and *yani*-XPs to Germanic (mostly English) appositions and illustrate that PK-clauses equate with the class of appositions discussed in §1 whose coordinators are obligatorily null.



### 3.8 Germanic appositions

In their work on Germanic appositions, Heringa & De Vries (2008) motivate a distinction between two types: *identificational* and *attributive*. Identificational appositions provide an alternative and often more informative description of their anchor. They are optionally introduced by *namely* or *that is* (62a). Attributive appositions denote the set of which their anchor is a member (62b). Attributive appositions are the group that were discussed in §1 that in English, Dutch and German cannot be introduced by an overt element of any type (Heringa 2012:56).

- (62) a) Jo drew an icosahedron, { $\emptyset$ /*namely/that is*} *a shape with twenty faces*,  
in her maths class.  
b) Tim's bicycle,  $\emptyset$  *a racer*, was stolen from outside his house last week.

Identificational and attributive appositions display divergent properties. For instance, identificational appositions must be assigned the same case as their anchor, while attributive appositions that are not assigned lexical or inherent case display nominative case. This is illustrated in the German examples in (63) and (64) below.

- (63) Ich habe mit Herrn Müller, {*unserem* / \**unseren*} *Chef*, gesprochen.  
I have with Mr.DAT Müller our.DAT our.ACC manager spoken  
'I just spoke to Mr. Müller, *our manager*.'
- (64) Man pflichtete dem jungen Atomphysiker, {*Student* /  
one agreed the.DAT young nuclear.physicist student.NOM  
\**Studenten*} *an einer renommierten Universität*, begeistert bei.  
student.DAT at a renowned.DAT university enthusiastically with  
'They enthusiastically agreed with the young nuclear physicist, *a student at a renowned university*.'

Furthermore, an identificational apposition and its anchor must be of the same semantic type (65a). This restriction is not observed with attributive appositions and their anchors (65b).

- (65) a) \*<sub>[(e)]</sub> Tim's bicycle], *namely* <sub>[(e,t)]</sub> *a racer*, was stolen yesterday.  
b) <sub>[(e)]</sub> Tim's bicycle],  $\emptyset$  <sub>[(e,t)]</sub> *a racer*, was stolen yesterday.

Also, attributive appositions may host speaker-oriented adverbs (66), while identificational appositions cannot (67).

- (66) \*My guitar instructor, *namely (fortunately) Jimmy Page (fortunately)*, taught me my scales.
- (67) My instructor,  $\emptyset$  *(fortunately) the guitarist from Led Zeppelin (fortunately)*, taught me my scales.

Identificational and attributive appositions do share three important similarities, however. Firstly, both types must maintain linear adjacency.<sup>9</sup>

- (68) a) A planet, *namely Saturn*, has entered the constellation of Libra.  
 a') \*A planet has, *namely Saturn*, entered the constellation of Libra.  
 b) Tim's bike,  $\emptyset$  *a racer*, was stolen from outside his house last week.  
 b') \*Tim's bike was,  $\emptyset$  *a racer*, stolen from outside his house last week.

Secondly, attributive appositions display scopelessness, as was demonstrated in §1 (see also Potts 2005, Arnold 2007, Heringa 2012). Thirdly, attributive appositions function as atoms of the structured discourse (AnderBois et al. 2011).

One observes a non-trivial correlation between Germanic appositions and PK-clauses and *yani*-XPs. Aside from linear adjacency – which must be maintained between Germanic attributive appositions and their anchors but not PK-clauses and their anchors – *yani*-XPs equate with identificational appositions, while PK-clauses equate with attributive appositions with respect to the similar properties they display (as Table 1 illustrates).

Bearing this equivalence in mind, should the derivation provided for PK-clauses in (59) be extended to Germanic attributive appositions, and should the derivation provided for *yani*-XPs in (60) be extended to Germanic identificational appositions? We propose so. Extending (60) to identificational appositions is unproblematic, and endorsed by Cardoso & De Vries (2010).

By extending (59) to attributive appositions, we imply that, like their PK-clause counterparts, attributive appositions are reduced from finite copular clauses (or '*and*-parentheticals', Kavalova 2007).

- (69) John, *(and he is) my friend*, just got fired.

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<sup>9</sup> Due to constraints on space, we must ignore the fact that identificational appositions can appear at the right-edges of clauses (see (i)). See Ott & De Vries (2012) for discussion.

(i) I saw her yesterday, that is to say *my ex-wife*.

**Tab. 1:** Properties of Germanic appositions/ $\rho$ K-clauses and *yani*-XPs.

Construction type	Same case as anchor required?	Same semantic type of anchor required?	Able to host speaker-oriented adverbs?	Linear adjacency required?	Able to swap conjuncts?
<b>Identificational appositions</b>	✓	✓	×	✓	×
<b>Yani-XPs</b>	✓	✓	×	✓	×
<b>Attributive appositions</b>	×	×	✓	✓	×
<b><math>\rho</math>K-clauses</b>	×	×	✓	×	×

In §3.6, we proposed that  $\rho$ K-clauses are reduced to  $\rho$ K-XPs by subject- and copular-drop. The same mechanisms cannot engender reduction in a Germanic language like English, however, as English does not license them (except in a specific register called *diary-drop*, see Weir 2008). Thus, reduction must be engendered by a different means, which we propose is *left-edge deletion* (LED), a form of ellipsis. The constraints on applying LED to a finite parenthetical copular clause  $\alpha$  are as follows:

- (70) a)  $\alpha$  must immediately linearly follow the item with which  $\alpha$ 's subject corefers.
- b) All of the items from  $\alpha$ 's left edge up to the postcopular element must be deleted (excluding parentheticals that might be attached within  $\alpha$ ).

The notion that  $\rho$ K-XPs and attributive appositions are both clausal conjuncts that are reduced down to their postcopular element by dissimilar means provides an explanation of the differences between the two. Like  $\rho$ K-clauses (see §3.2), *and*-parentheticals can occupy any *niche* (Ross 1984) within the host clause.

- (71) a) John<sub>i</sub> has (*and he<sub>i</sub>'s a great snooker player*) made a maximum break.
- b) John<sub>i</sub> (*and he<sub>i</sub>'s a great snooker player*) has made a maximum break.

Unlike  $\rho$ K-clauses, which do not obey (70), *and*-parentheticals can only undergo LED when the parenthetical is linearly adjacent to the host clause constituent with which its subject corefers. This dictates that, unlike  $\rho$ K-clauses, attributive appositions must maintain linear adjacency with their host.

- (72) a) \*John<sub>i</sub> has (~~and he<sub>i</sub>'s a great snooker player~~) made a maximum break.  
 b) John<sub>i</sub> (~~and he<sub>i</sub>'s a great snooker player~~) has made a maximum break.

The rule in (70) also explains why attributive appositions cannot be introduced by an overt element of any type: LED will always render such elements unpronounced. However, because LED does not create PK-XPs, *ki* can be optionally pronounced in such constructions.<sup>10</sup>

To account for the strict linear adjacency observed in Germanic, Cardoso & De Vries (2010) claim that attributive appositions are relativized copula clauses whose head, relative pronoun and copula are elided. As DPs, these relativized constructions are coordinated at the subclausal level using *par*-Merge – just like identificational appositions and *yani*-XPs (73).

- (73) [TP [<sub>&P</sub> [<sub>DP</sub> John] <<sub>&</sub>' ∅ [<sub>DP</sub> ~~he-who is my neighbour~~]>] [<sub>VP</sub> will arrive late]].

Such a suggestion faces problems. Firstly, unless a constraint is invoked that demands it, nothing requires that attributive appositions are always derived from underlying relative constructions. If *my neighbour* in (73) can be derived from the CP ~~he is my neighbour~~ (as Heringa 2012 maintains), then the structure in (59) is needed independently. Secondly, there are acceptable attributive appositions that do not have an acceptable relativized counterpart (compare (74a) and (74b)). Note that such appositions are indeed attributive and not identificational, as they cannot be introduced by an element like *i.e.* or *that is to say* (74c).

---

**10** Our appeal to LED also provides an explanation for a Germanic phenomenon that has gone unmentioned in the main text, which is the distribution of parenthetical circumstantial secondary predicates such as *drunk* in (i). Unlike identificational and attributive appositions, such parentheticals need not maintain linear adjacency with their anchor.

- (i) John has, *drunk*, fallen asleep on his doorstep.

This interpolational freedom arises because *drunk* in (i) is not derived from a finite copular clause that has been reduced by LED. Rather, it is a nonfinite clause with a PRO subject that corefers with its anchor. Because such parentheticals are not created by LED, their interpolational freedom is expected (see (ii) and (iii)).

- (ii) John<sub>i</sub> has, PRO<sub>i</sub> *drunk*, fallen asleep on his doorstep.  
 (iii) Pete<sub>i</sub> has, PRO<sub>i</sub> *being an Englishman*, gone straight to the nearest pub.

- (74) a) A recent winner of the Illinois State Lottery, *Albert Swenson*, has announced that he plans to move to Bermuda.
- b) \*A recent winner of the Illinois State Lottery, *who is Albert Swenson*, has announced that he plans to move to Bermuda.
- c) \*A recent winner of the Illinois State Lottery, that is to say *Albert Swenson*, has announced that he plans move to Bermuda.
- (modified from McCawley 1998:468)

Discarding Cardoso & De Vries' claims about the syntax of attributive appositions, it appears that *yani*-XPs and identificational appositions share the same derivation (i.e. (60)), while PK-clauses and attributive appositions share the same derivation (i.e. (59)). If this is correct, then *yani* and *namely* are coordinators with similar lexical semantics: they coordinate elements of any semantic type – where the second conjunct provides an additional referent for the entity denoted by the first –, and they trigger *par*-Merge. Attributive appositions do not exhibit an overt coordinator, but the fact that their Turkish counterparts display the coordinator proclitic-*ki* provides indirect support for the idea that they do exhibit a coordinator, but it is always reduced by LED. If true, proclitic-*ki* and  $\emptyset$  serve the same function: they coordinate root clauses and trigger *par*-Merge.

### 3.9 Summary of §3

In this section, we examined the syntax and prosody of PK-clauses and PK-XPs and concluded that the latter are a reduced version of the former. We claimed that PK-clauses are not clausal adjuncts (as the previous literature maintains), but conjuncts coordinated by proclitic-*ki*. Along the way we also examined *yani*-XPs, and argued that *yani* may coordinate subclausal constituents, while proclitic-*ki* can only coordinate root clauses.

Unlike regular Boolean coordinators, both proclitic-*ki* and *yani* trigger *par*-Merge. Each *par*-Merges with its complement and set-Merges with its specifier. In this respect, they are *bivalent* Par functional heads.

We have also placed *yani*-XPs and PK-clauses with respect to the wider literature on appositions. *Yani*-XPs equate with Germanic identificational appositions in all respects. PK-clauses and attributive appositions share a number of properties, and also share, we claim, the same syntactic derivation. PK-clauses and attributive appositions differ in that the latter, but not the former, must be linearly adjacent to their anchor. We suggest that dissimilar methods of reduction in Germanic and Turkish derives this difference.

Most importantly, we have shown that proclitic-*ki* is not a relative pronoun, but a coordinator that *par*-Merges with its complement. This conclusion is important because it illustrates that clausal parentheticals that serve a general specificational function are conjuncts of *Par*. Thus, the null functional head that is posited by De Vries (2006 et seq.) to introduce the appositions in (7a–c) in Germanic receives indirect empirical support from Turkish, where it is spelled-out as *ki*.

## 4 EK-clauses

Proclitic-*ki* is a bivalent instantiation of *Par*: its maximal projection (ParP) contains both a root clause complement and specifier (5a). The *par*-Merge approach does not place any restrictions upon *Par*'s valency. Thus, the *par*-Merge approach predicts the existence of a monovalent version of *Par*, whose maximal projection contains a root clause complement but no specifier (5b). In this section, we claim that enclitic-*ki* is indeed a monovalent instantiation of *Par*. If our analysis is on the right track, it not only shows that English comment clauses like (7d) are complements of *Par*, but also demonstrates that in Turkish, *Par* – regardless of its valency – displays the same morphological realization if it selects for a type-*t* complement.

### 4.1 Enclitic-*ki* is not a subordinator: against the traditional analysis

EK-clauses like that which is bracketed in (75b) contain transitive verbs that typically select for a subject and a nominalized clausal complement in Turkish (75a).

- (75) a) Hasan [Ahmet-in okul-a git-tiğ-i]-ni san-ıyor.  
 Hasan Ahmet-GEN school-DAT go-NOM-3SG-ACC believe-PROG  
 'Hasan believes that Ahmet went to school.'
- b) [Hasan san-ıyor **ki**] Ahmet okul-a git-ti  
 Hasan believe-PROG **ki** Ahmet school-DAT go-PAST  
 'Hasan believes Ahmet went to school.'

Constructions like (75b) are traditionally analysed as cases of Indo-European subordination, where *ki* is understood as the complementizer of the finite CP *Ahmet okula gitti* (Kornfilt 1997, Göksel & Kerslake 2005), and the clause to which *ki* is encliticized is analysed as the matrix clause (e.g. *Hasan sanıyor* in (75b)). However,

if EK-clauses were comparable to Indo-European superordinate clauses (we use English as an exemplar), would one expect EK-clauses to display the properties associated with them. They do not. Firstly, quantifiers contained within an EK-clause are unable to bind variables in the finite clause that linearly follows it (76d) (which we call for now, to remain theory neutral, the *succeeding clause*), whereas, binding is licit into both nominalized clauses (76b) and finite subordinate clauses headed by the complementizer *diye* (76c).

- (76) a) Everyone<sub>i</sub> knows that his<sub>i</sub> wife will arrive late.  
 b) Herkes<sub>i</sub> [pro<sub>k/i</sub> karı-sı-nın geç gel-**eceğ-in**]-i  
 everyone *pro* wife-POSS-GEN late come-FUT.NOM-2SG-ACC  
 bil-iyor.<sup>11</sup>  
 know-PROG  
 ‘Everyone knows that his wife will arrive late.’  
 c) Herkes<sub>i</sub> [pro<sub>k/i</sub> karı-sı geç gel-ecek **diye**] bil-iyor.  
 everyone *pro* wife-POSS late come-FUT **COMP** know-PROG  
 ‘Everyone thinks that his wife will arrive late.’  
 d) [Herkes<sub>i</sub> bil-iyor **ki**] pro<sub>k/\*i</sub> karı-sı geç gel-ecek.  
 everyone<sub>i</sub> know-PROG **ki** *pro* wife-POSS late come-FUT  
 ‘Everyone thinks that his wife will arrive late.’

Secondly, *wh*-words displayed within the succeeding clause cannot take wide scope over the entire EK-clause construction (77a). If, in line with traditional assumptions, the succeeding clause is subordinated under the EK-clause, (77d)’s unacceptability is unexpected, as a wide scope interpretation is required in (77a)’s English subordination equivalent, in Turkish constructions that display a nominalized clausal argument (77b), and in those constructions that display a finite subordinate clause that is headed by *diye* (77c).<sup>12</sup>

<sup>11</sup> Only *pro* or the reflexive *kendi* can be bound by quantifiers in Turkish.

<sup>12</sup> Note that a narrow scope interpretation of (77d) is also unacceptable. However, the narrow scope interpretation of EK-clauses is not universally prohibited. Provided that the verb contained within the EK-clause is of that class that usually subordinates indirect questions (such as *ask* or *wonder*), an interrogative interpretation of the succeeding clause is acceptable (i). Note that (i) is interpreted as direct quotation. We return to cases like (i) in §4.4.

- (i) [Sor-du-m **ki**] Ahmet kim-i öp-tü.  
 ask-PST-1SG **ki** Ahmet who-ACC kiss-PST  
 ‘I asked: “who did Ahmet kiss?”’

- (77) a) Whom<sub>1</sub> do you believe Ahmet kissed  $t_1$ ?  
 b) [Ahmet-in kim-i öp-**tüg**-ün]-ü san-ıyor-sun?  
 Ahmet-GEN who-ACC kiss-**NOM**-3SG-ACC believe-PROG-2SG  
 ‘Whom do you believe that Ahmet kissed?’  
 c) [Ahmet kim-i öp-tü **diye**] san-ıyor-sun?  
 Ahmet-GEN who-ACC kiss-PST **COMP** believe-PROG-2SG  
 ‘Whom do you believe that Ahmet kissed?’  
 d) \*[San-ıyor-sun **ki**] Ahmet kim-i öp-tü?  
 believe-PROG-2SG **ki** Ahmet who-ACC kiss-PST  
 ‘Whom do you believe Ahmet kissed?’

Thirdly, the subject of a finite subordinate clause headed by *diye* can receive ‘exceptional’ accusative case from the attitudinal verb in the matrix clause in Turkish (78a). Such case-marking is impossible in the succeeding clause of an EK-clause construction (78b).

- (78) a) Aylin [ben-Ø/i plaj-a git-ti-m **diye**] san-ıyor.  
 Aylin I- NOM/ACC plaj-DAT go-PST-1SG **COMP** believe-PROG  
 ‘Aylin believes that I went to the beach.’  
 b) [Aylin san-ıyor **ki**] ben-Ø/\*i plaj-a git-ti-m  
 Aylin believe-PROG **ki** I-NOM/ACC plaj-DAT go-PST-1S  
 ‘Aylin believes I went to the beach.’

The examples in (76) to (78) display dependencies that rely upon c-command. In (76b–c), the quantifier *herkes* can bind the variable *pro* in the subordinate clause because *herkes* c-commands *pro*. In (77b–c), the *wh*-word *kimi* – which covertly A'-moves to SpecCP of the matrix clause (Cheng 1997) – can bind its trace because *kimi* c-commands its trace. In (78a), the attitudinal verb *saniyor* can assign accusative case to *ben* because *saniyor* locally c-commands *ben* (Şener 2008). That these dependencies are not permitted across the EK-clause/succeeding clause boundary in (76d), (77d) and (78b) suggests that c-command does not pertain between the binder/case-assigner in the EK-clause and the bindee/case-assignee in the succeeding clause.

Further evidence that EK-clause and subordination constructions are dissimilar comes from prosody. Recall from §2 that the verb of root clause  $\alpha$  must be contained within the final  $\varphi$  of  $\iota_\alpha$ , and that any FO excursion following the nucleus and/or the verb marks the start of a separate  $\iota$  in Turkish. If the EK-clauses are matrix clauses and the succeeding clauses are subordinate clauses, then, one expects to observe post-nuclear/verbal levelling of the FO immediately after the nucleus and/or the verb of the EK-clause. As illustrated below, subordinated



nominal clauses (79a) and subordinated finite clauses headed by *diye* (79b) confirm this prediction. However, this expectation is not borne out in the case of EK-clauses (79c).

- (79) a) [(Emir<sub>N</sub> inan-ıyor Meray-ın yürü-**düğ**-ü-ne yalı-ya.)<sub>Fφ</sub>]<sub>t</sub>  
 Emir believe-PROG Meray-GEN walk-**NOM**-3SG-DAT house-DAT  
 ‘Emir believes that Meray walks home.’
- b) [(Emir<sub>N</sub> inan-ıyor Meray yürü-yor yalı-ya **diye**.)<sub>Fφ</sub>]<sub>t</sub>  
 Emir believe-PROG Meray walk-PROG house-DAT **COMP**  
 ‘Emir believes that Meray walks home.’
- c) \*[(Emir<sub>N</sub> inan-ıyor **ki** Meray yürü-yor yalı-ya.)<sub>Fφ</sub>]<sub>t</sub>  
 Emir believe-PROG **ki** Meray walk-PROG house-DAT  
 ‘Emir believes Meray walks home.’

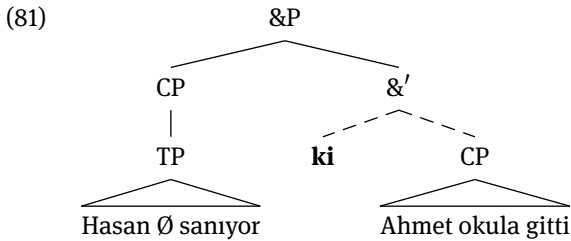
The example in (79c) is licit only when the EK-clause and the succeeding clause are parsed as independent *is* with independent nuclei. This is exemplified in (80c). Note that in the case of nominal and finite subordination, independent *t*-formation of the matrix and the subordinated clauses (pitch excursion over the subordinated post-verbal clause) yields unacceptability (80a–b).

- (80) a) \*[(Emir<sub>N</sub> inan-ıyor)<sub>Fφ</sub>]<sub>t</sub> [(Meray-ın)<sub>NFφ</sub> (yürü-**düğ**-ü-ne<sub>N</sub> yalı-ya.)<sub>Fφ</sub>]<sub>t</sub>  
 Emir believe-PROG Meray-GEN walk-**NOM**-3SG-DAT house-DAT  
 ‘Emir believes that Meray walks home.’
- b) \*[(Emir<sub>N</sub> inan-ıyor)<sub>Fφ</sub>]<sub>t</sub> [(Meray)<sub>NFφ</sub> (yürü-yor<sub>N</sub> yalı-ya **diye**.)<sub>Fφ</sub>]<sub>t</sub>  
 Emir believe-PROG Meray walk-PROG house-DAT **COMP**  
 ‘Emir believes that Meray walks home.’
- c) [(Emir<sub>N</sub> inan-ıyor **ki**)<sub>Fφ</sub>]<sub>t</sub> [(Meray)<sub>NFφ</sub> (yürü-yor<sub>N</sub> yalı-ya.)<sub>Fφ</sub>]<sub>t</sub>  
 Emir believe-PROG **ki** Meray walk-PROG house-DAT  
 ‘Emir believes Meray walks home.’

Coupled with the syntactic data from (76) to (78), the prosodic properties of EK-clauses indicate that EK-clauses and succeeding clauses are clauses that are linearly adjacent to each other, but which are not related hypotactically.

## 4.2 Enclitic-*ki* is not a (parenthetical) coordinator

Bearing in mind the observations in §4.1, and the conclusions reached in §3, one might suggest that EK-clause constructions are another case of *par*-Merge coordination, where – once again – *ki* functions as a coordinator (81).<sup>13</sup>



Taking (81) as our working hypothesis, let us investigate whether EK-clause constructions display the properties that (81) predicts they should.

The schematic in (81) predicts the absence of c-command dependencies observed in (76) to (78), as the TP contained in the first conjunct in (81) does not c-command the second conjunct.

Recall that the clauses coordinated by proclitic-*ki* display root clause properties. If the ‘coordination approach’ to EK-clause constructions is correct, the same root clause properties should be observed in the second conjunct in (81). This prediction is borne out. Rather trivially, root clauses in Turkish are finite, as are succeeding clauses in EK-clause constructions (see (75b) above). Also, these succeeding clauses may display speaker-oriented adverbs: another diagnostic of root clause status (compare (82a–b) to (82c)).

- (82) a) \**[Ahmet-in maalesef okul-a git-tiğ-i-ni]*  
 Ahmet-GEN unfortunately school-DAT go-NOM-3SG-ACC  
 san-iyor-um.  
 believe-PROG-1SG  
 ‘I believe that Ahmet, unfortunately, went to school.’
- b) \*Ben *[Ahmet maalesef okul-a git-ti diye]* san-iyor-um.  
 I Ahmet unfortunately school-DAT go-PST COMP believe-PROG-1SG  
 ‘I believe that Ahmet, unfortunately, went to school.’

<sup>13</sup> Following Kesici (2013), Kluck & De Vries (to appear), and Griffiths (to appear(b)), we assume in (81) that transitive verbs contained within EK-clauses select for a null complement whose content is denoted by the succeeding clause.

- c) [San-ıyor-um **ki**] Ahmet maalesef okul-a git-ti.  
 [believe-PROG-1SG **ki**] Ahmet unfortunately school-DAT go-PST  
 ‘I believe Ahmet, **unfortunately**, went to school.’

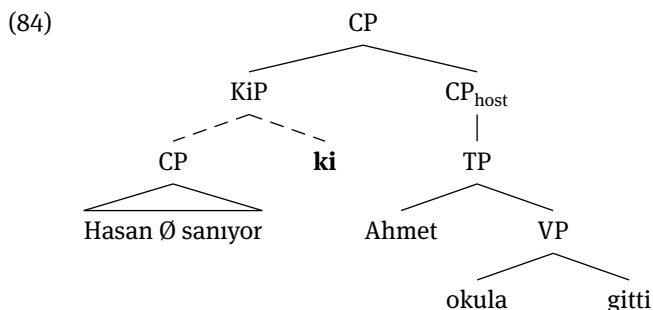
In §3, we observed that certain coordination constructions can be reordered. Such reordering gives the impression that a PK-clause is inserted into the middle of its host. EK-clauses may also appear in the middle of their succeeding clause (83). If the reordering operation that targets coordination is always the source for this interpolation, then (83) provides evidence for the coordination analysis in (81).

- (83) a) Ali [Hasan sanıyor **ki**] Ayşe-yi nazikçe öp-tü.  
 Ali Hasan believes-PROG **ki** Ayşe-ACC gently kiss-PST  
 b) Ali Ayşe-yi [Hasan san-ıyor **ki**] nazikçe öp-tü.  
 Ali Ayşe-ACC Hasan believes-PROG **ki** gently kiss-PST  
 ‘Ali, *Hasan believes*, kissed Ayşe gently.’

However, while (81) is a plausible analysis of EK-clause constructions, it cannot be entirely correct. Firstly, we saw in §3 that proclitic-*ki* is pronounced as part of its second conjunct’s  $\varphi$ . If EK-clauses and their succeeding clauses are coordinated, one expects the same prosodic distribution of enclitic-*ki*. However, the converse is true: in EK-clauses, enclitic-*ki* is pronounced as part of its apparent initial conjunct’s  $\varphi$  (indeed, this is enclitic-*ki*’s defining property).

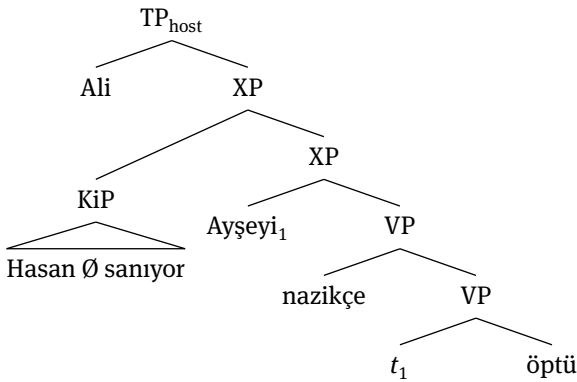
### 4.3 Enclitic-*ki* as monovalent Par

We propose that enclitic-*ki* is the realization of a Par that selects for type-*t* complements. Unlike proclitic-*ki* however, enclitic-*ki* does not take a specifier. Instead, the output of **monovalent** *par*-Merge (call it *KiP*) pair-Merges with any node within the host clause (see (5b) in §1). Concretely, we propose that an utterance like (75) displays the syntax in (84).

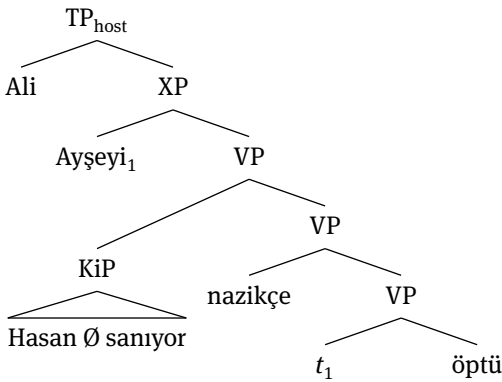


(84) retains the advantages but not the drawbacks of (71). Firstly, (84) accounts for why dependencies based on *c*-command cannot be established across the EK-clause/succeeding clause boundary: *par*-Merge of the EK-clause ensures its syntactic isolation from host clause operators and *vice versa* (though discourse relations, such as coreference, may persist across this boundary). Secondly, word-order variations such as those observed in (85) can be explained without recourse to a reordering operation. In (85a) the EK-clause adjoins to the XP containing *Ayşe*, while in (85b) it adjoins to VP.

(85) a)



b)



Thirdly, (84) provides a natural explanation for enclitic-*ki*'s position and pronunciation. Like heads of other clausal adjuncts in Turkish (86), enclitic-*ki* linearly succeeds its complement (recall that Turkish displays head-final syntax in all but coordination environments) and is parsed as contained within the  $\phi$  formed by its complement (just like proclitic-*ki*).

- (86) a) [(Ali)<sub>φ</sub> (Ayşe-yi)<sub>φ</sub> (nazikçe<sub>N</sub> öp-tü **ise**)<sub>φ</sub>]<sub>1</sub>, [(Ayşe-nin)<sub>φ</sub>  
 Ali Ayşe-ACC gently kiss-PST **CON** Ayşe-GEN  
 (hoş-u-na<sub>N</sub> git-miş-tir)<sub>φ</sub>]<sub>1</sub>.  
 nice-POSS-DAT go-EVD-COP  
 ‘If Ali gently kissed Ayşe, then Ayşe must have liked it.’
- b) [(Ali)<sub>φ</sub> (Ayşe-yi)<sub>φ</sub> (öp-me-den<sub>N</sub> **önce**)<sub>φ</sub>]<sub>1</sub>, [(diş-i-ni)<sub>φ</sub> (iyice<sub>N</sub>  
 Ali Ayşe-ACC kiss-NEG-ABL **before** tooth-POSS-ACC very.well  
 fırçala-dı)<sub>φ</sub>]<sub>1</sub>.  
 brush-PST  
 ‘Ali brushed his teeth very well before he kissed Ayşe.’

At this juncture, one might wonder why we do not adopt the idea that EK-clauses are regularly pair-Merged clausal adjuncts, rather than ones that are derived by *par*-Merge. This is because syntactic dependencies that can pertain across regular adjunct boundaries do not persist across the EK-clause/host boundary.

For instance, regular clausal adjuncts, such as those headed by *için* (‘because’), can contain quantified elements (87a), while EK-clauses cannot (87b).

- (87) a) Herkes-i<sub>i</sub> [pro<sub>k/i</sub> iş-i-ni yap-ma-dığ-1 **için**]  
 everybody-ACC *pro* work-POSS-ACC make-NEG-NOM-3SG **because**  
 cezalandır-dı-m.  
 punish-PST-1SG  
 ‘I punished everybody because he did not do his work.’
- b) Herkes-i<sub>i</sub> [pro<sub>k/\*i</sub> karı-sı san-ıyor **ki** cezalandır-dı-m.  
 everybody-ACC *pro* wife-POSS believe-PROG **ki** punish-PST-1SG  
 ‘I punished everybody, *their wives believe*.’

Also, *wh*-phrases contained within regular adjuncts can be interpreted with wide scope (88a), while *wh*-phrases contained with EK-clauses cannot (88b) (though such EK-clauses can be interpreted as echo questions).

- (88) a) Ali-yi [kim iş-i-ni yap-ma-dığ-1 **için**]  
 Ali-ACC who work-POSS-ACC make-NEG-NOM-3SG **because**  
 cezalandır-dı-n?  
 punish-PST-2SG  
 ‘You punished Ali because WHO did not do his job?’
- b) \*Ali-yi [kim san-ıyor **ki**] cezalandır-dı-n?  
 Ali-ACC who believe-PROG **ki** punish-PST-2SG  
 ‘Who believes that you punished Ali?’

Thus, EK-clauses display a greater degree of syntactic isolation than regular clausal adjuncts. The *par*-merge approach schematized in (84) captures this fact.

#### 4.4 Additional properties of EK-clauses: assertions vs. demonstrations

One observes a prominent distinction between EK-clauses that modify *assertions* and those that modify *demonstrations* (hereafter  $EK_A$ -clauses and  $EK_D$ -clauses, respectively)

Demonstrations are presentations of another person's speech (Clark & Gerrig 1990). While demonstrations are speech acts, they are not assertions, questions, demands, etc. Rather, they *demonstrate* assertions, questions, etc. The degree of accuracy with which demonstrations exemplify their sources varies: in some cases, the demonstrator (i.e. the speaker), may shift deictic elements from the original utterer's perspective to the speaker's own, while in other cases, she may not. If these deictic elements are not shifted, *direct quotation* is engendered.

We claim that  $EK_D$ -clauses are assertoric root clauses, while  $EK_A$ -clauses are non-assertoric clauses.<sup>14</sup> Furthermore, we claim that EK-clauses that contain third person subjects are always  $EK_D$ -clauses. This implies that EK-clauses that contain first person subjects are either  $EK_A$ - or  $EK_D$ -clauses. These claims are summarized in (89) below, where the linear position of the EK-clause relative to the host is irrelevant for the time being.

(89) Possible variations for EK-clause constructions

- |    |  |  |
|----|--|--|
| a) | [[ <sub>NON-ROOT</sub> Subj <sub>1Prs</sub> verb <b>ki</b> ] | [ <sub>ASSERTION</sub> host clause]]     |
| b) | [[ <sub>ROOT</sub> Subj <sub>1Prs</sub> verb <b>ki</b> ]     | [ <sub>DEMONSTRATION</sub> host clause]] |
| c) | [[ <sub>ROOT</sub> Subj <sub>3Prs</sub> verb <b>ki</b> ]     | [ <sub>DEMONSTRATION</sub> host clause]] |

Evidence for the claim that third person EK-clauses are always  $EK_D$ -clauses is provided by application of 'you're right' and 'right?' tests, which distinguishes assertoric from non-assertoric material. The example in (90a–b) shows how these tests work.

<sup>14</sup> Note that, with respect to illocutionary force, "root" equates with Rizzi's (1997) "ForceP".

- (90) a) A: Bill said that John has been fired.  
 B: # You're right. (referring to the embedded clause)  
 b) # Bill said that John has been fired, right?  
 (right? referring to the embedded clause)

Speaker A in (90a) and the speaker in (90b) are committed to the truth of their utterance as a whole, which is their assertion. However, they are not committed to the truth of the embedded clause, which reports an utterance that Bill (but not speaker) previously asserted. Speaker B's response – *you're right* – is sensitive to this distinction, as *you're right* is coherent only as a response to an assertion to whose truth the speaker is committed. Resultantly, *you're right* is incoherent when it targets the non-assertoric embedded clause. Similarly, the generic confirmation tag *right?* in (90b) questions the truth of the asserted content to which the speaker is committed. Therefore, (90b) is only coherent if *right?* is understood as a request of confirmation of the assertion to whose truth the speaker is committed. *Right?* is incoherent if it targets the non-assertoric embedded clause.

When a speaker A *demonstrates* a third party's previously-uttered assertion  $\beta$ , A is not committed to the truth of  $\beta$ . Thus, when a demonstration is targeted with *you're right* or *right?*, incoherence is engendered. Such incoherence is observed in third person EK-clause constructions of all types, regardless of whether the deictic elements contained within host clause represent the perspective of the EK-clause's subject (as in direct quotation) (91–92b) or the speaker's perspective (91–92a).

- (91) a) A: O<sub>i</sub> ve Emine, Hasan<sub>i</sub> di-yor **ki**, sene-ye  
 he and Emine Hasan say-PROG **ki** next.year-DAT  
 evlen-ecek-ler.  
 get.married-FUT-3PL  
 'He<sub>i</sub> and Emine, Hasan<sub>i</sub> says, will get married next year.'  
 b) A: Ben<sub>i</sub> ve Emine, Hasan<sub>i</sub> di-yor **ki**, sene-ye  
 I and Emine Hasan say-PROG **ki** next.year-DAT  
 evlen-eceğ-iz.  
 get.married-FUT-1PL  
 '“Emine and I<sub>i</sub>,” Hasan<sub>i</sub> says, “will get married next year.”'  
 B: # Evet, haklı-sın.  
 Yes right-COP.2SG  
 'Yes, you're right.' (referring to the host clause in (91a–b))

- (92) a) #  $O_i$  ve Emine, Hasan<sub>i</sub> di-yor **ki**, sene-ye  
 he and Emine Hasan say-PROG **ki** next.year-DAT  
 evlen-ecek-ler, di mi?  
 get.married-FUT-3PL NOT Q  
 ‘He<sub>i</sub> and Emine, *Hasan<sub>i</sub>* says, will get married next year, right?’
- b) # Ben<sub>i</sub> ve Emine, Hasan<sub>i</sub> di-yor **ki**, sene-ye  
 I and Emine Hasan say-PROG **ki** next.year-DAT  
 evlen-eceğ-iz, di mi?  
 get.married-FUT-1PL NOT Q  
 ‘“Emine and I<sub>i</sub>,” *Hasan<sub>i</sub>* says, “will get married next year”, right?’  
 (*di mi?* referring to the host clause in (92a–b))

As mentioned above, we claim that first person EK-clauses are either EK<sub>A</sub>- or EK<sub>D</sub>-clauses. The presence of verbs like *fısılda* (‘whisper’) disambiguates EK<sub>D</sub>-clauses from their counterparts, while *verba sentiendi* like *san* (‘believe’) disambiguates EK<sub>A</sub>-clauses from their counterparts. Thus, first person EK<sub>A</sub>-clauses should fail the *you’re right* and *right?* tests, while first person EK<sub>D</sub>-clauses should pass both. This expectation is borne out.

- (93) a) A: [Fısılda-dı-m **ki**] Meryem bir milyon dolar kazan-dı.  
 whisper-PST-1SG **ki** Meryem a million dollar win-PST  
 ‘I whispered: “Meryem won a million dollars.”’  
 B: Evet, haklı-sın.  
 Yes right-COP.2SG  
 ‘Yes, you’re right.’ (referring to the EK<sub>D</sub>-clause)
- b) A: [İnan-ıyor-um **ki**] Meryem bir milyon dolar kazan-dı.  
 believe-PROG-1SG **ki** Meryem a million dollar win-PST  
 ‘I believe Meryem won a million dollars.’  
 B: # Evet, haklı-sın.  
 Yes right-COP.2SG  
 ‘Yes, you’re right.’ (referring to the EK<sub>A</sub>-clause)
- (94) a) [Fısılda-dı-m **ki**] Meryem bir milyon dolar kazan-dı, di mi?  
 whisper-PST-1SG **ki** Meryem a million dollar win-PST NOT Q  
 ‘I whispered: “Meryem won a million dollars”, right?’  
 (*di mi?* referring to the EK<sub>D</sub>-clause)
- b) # [İnan-ıyor-um **ki**] Meryem bir milyon dolar kazan-dı, di mi?  
 believe-PROG-1SG **ki** Meryem a million dollar win-PST NOT Q  
 ‘I believe Meryem won a million dollars, right?’  
 (*di mi?* referring to the EK<sub>A</sub>-clause)



Evidence that  $EK_D$ -clauses are root clauses, while  $EK_A$ -clauses are non-roots, comes from a number of sources. The first concerns their distribution. Recall from §3.6 that  $PK$ -clauses are banned from occupying the final  $\varphi$  of their host clause because, as root clauses that are mapped to  $\iota$ ,  $PK$ -clauses cannot be inserted into a hierarchically lower prosodic unit (as per the *Layerness Constraint*). Thus, if  $EK_D$ -clauses are root clauses, one expects that, like  $PK$ -clauses, they cannot occupy the final  $\varphi$  of  $\iota$  of the demonstration that they modify. This expectation is borne out.

- (95) a) \*[(Ali)<sub>NF $\varphi$</sub>  (gel-di<sub>N</sub>, san-ıy<sup>or</sup> **ki**)<sub>F $\varphi$</sub> ].  
           Ali       come-PST believe-PROG **ki**  
           ‘Ali arrived, *he believes.*’
- b) \*[(Ali)<sub>NF $\varphi$</sub>  (gel-di<sub>N</sub>, fışıld-ıy<sup>or</sup>-um **ki**)<sub>F $\varphi$</sub> ].  
           Ali       come-PST whisper-PROG-1SG **ki**  
           ‘Ali arrived, *I whisper.*’

Conversely, as non-roots,  $EK_A$ -clauses need not be mapped to  $\iota$ . Resultantly, one expects that  $EK_A$ -clauses can occupy the final  $\varphi$  of the  $\iota$  of the assertion that they modify, as no violation of the Layerness Constraint is engendered. Again, this expectation is borne out.

- (96) [(Ali)<sub>NF $\varphi$</sub>  (gel-di<sub>N</sub>, san-ıy<sup>or</sup>-um **ki**)<sub>F $\varphi$</sub> ].  
           Ali       come-PST believe-PROG-1SG **ki**  
           ‘Ali arrived, *I believe.*’

That  $EK_A$ -clauses are non-roots, regardless of their finite morphology, is also evidenced by experimental data from Güneş and Çöltekin (to appear). These authors observe that parentheticals that are root clauses (CPs with a Force projection) are always mapped as  $\iota$  when they occupy the prenuclear position within the  $\iota$  of their host, whereas  $EK_A$ -clauses are always mapped as  $\varphi$ s in the same position in Turkish.

Additionally, in a highly relevant study, Truckenbrodt (this volume) investigates a number of German structures including a variety of parentheticals such as appositives, peripheral adverbial clauses, and comment clauses. He concludes that  $\iota$ -formation is observed only if the these structures bear an independent speech act (i.e. if they are root clauses). In this sense, our observations partly converge with Truckenbrodt’s, and establishes crosslinguistic common ground.

Additional evidence comes from the distribution of speaker-oriented adverbs. If  $EK_D$ -clauses are root clauses, one expects that they can host speaker-oriented adverbs such as *maalesef* (‘unfortunately’) (97a). Conversely, if  $EK_A$ -clauses are

non-roots, one expects that they cannot host such speaker-oriented adverbs (97b). Both expectations are borne out.

- (97) a) Ali [Hasan maalesef san-ıyör **ki**] okul-a git-ti.  
 Ali Hasan unfortunately believe-PROG **ki** school-DAT go-PST  
 ‘Ali, *Hasan unfortunately believes*, went to school.’  
 b) \*Ali [maalesef san-ıyör-um **ki**] okul-a git-ti.  
 Ali unfortunately believe-PROG-1SG **ki** school-DAT go-PST  
 ‘Ali, *I unfortunately believe*, went to school.’

We observed in §3.7 that, from a semantic perspective, PK-clauses and their hosts distribute like assertions that comprise a two-utterance monologue. More specifically, we observed that, if PK-clauses do not linearly succeed their host, the truth of the host is evaluated in a world in which the truth of the PK-clause is guaranteed. Furthermore, we saw that, if PK-clauses do linearly succeed their host, the truth of the PK-clause is evaluated in a world in which the truth of the host is guaranteed. This engenders the prediction that generic opposition (such as *that’s not true!*) may only target a root clause (either the PK-clause or the host) whose truth is not already guaranteed.

Returning to EK-clauses, the current approach predicts that, as non-roots that do not engender assertions, EK<sub>A</sub>-clauses can never be generically opposed (98), while EK<sub>D</sub>-clauses can be generically opposed regardless of their linear position relative to their host (99). This latter prediction is engendered for two reasons: (i) EK<sub>D</sub>-clauses are roots that engender assertions, and (ii) the truth of an EK<sub>D</sub>-clause’s host is never guaranteed (as such hosts are demonstrations, which can neither be true nor false). As the examples below demonstrate, each of these predictions is borne out.

- (98) a) A: Ali [san-ıyör-um **ki**] okul-a git-ti.  
 Ali believe-PROG-1SG **ki** school-DAT go-PST  
 ‘Ali, *I believe*, went to school.’  
 b) A: Ali okul-a git-ti [san-ıyör-um **ki**].  
 Ali school-DAT go-PST believe-PROG-1SG **ki**  
 ‘Ali, *I believe*, went to school.’  
 B: # Bu doğru değil!  
 that true not  
 ‘That’s not true!’ (referring to the EK<sub>A</sub>-clause in (98a–b))
- (99) A: Ali [Hasan san-ıyör **ki**] okul-a git-ti.  
 Ali Hasan believe-PROG **ki** school-DAT go-PST  
 ‘Ali, *Hasan believes*, went to school.’

B: Bu doğru değil!  
 that true not  
 ‘That’s not true!’ (referring to the EK<sub>D</sub>-clause)

To summarize §4.1–4.4: enclitic-*ki* is a postpositional head that *par*-Merges with its complement. The maximal projection of *ki* (KiP in (84)) then pair-Merges to its host, which is a root clause. EK-clauses come in two types, (i) those that adjoin to assertive hosts, and (ii) those that adjoin to demonstrative hosts. We called the former EK<sub>A</sub>-clauses and the latter EK<sub>D</sub>-clauses. We claimed that, while both are undominated adjuncts with respect to their external syntax, EK<sub>A</sub>-clauses are non-roots whereas EK<sub>D</sub>-clauses are roots.

#### 4.5 EK-clauses and Germanic comment clauses

The reader will have noted from the English translations provided in §4.2–4.4 that we associate EK-clauses with Germanic *comment clauses*. Indeed, many similarities pertain between the two. Just like Turkish EK-clauses, comment clauses display scopelessness (see (3)), an inability to establish c-command relations (100a–b), interpolational freedom (100c), and an ability to adjoin to direct quoted demonstrations (100d).

- (100) a) \*Everyone<sub>i</sub> will, *she*<sub>k/\*i</sub> says, find someone to love.  
 b) \*Who<sub>1</sub> did John, *t*<sub>1</sub> reckons, kiss Mary?  
 c) (*I think*) John (*I think*) will (*I think*) kiss Mary (*I think*)  
 d) “I<sub>i</sub> will,” *John*<sub>i</sub> declared, “rule the world one day.”

Considering the correlation between EK-clauses and comment clauses (CCs), it is unsurprising that Griffiths (to appear(b)) proposes a syntax similar to (84) for CCs. We endorse this proposal, and maintain that EK-clauses are the Turkish counterpart of Germanic CCs, and that enclitic-*ki* is the realization of the covert, mono-valent, propositional complement-selecting *Par* for which Griffiths argues. Thus, *ki* once again provides indirect support for the application of the *par*-Merge approach to parenthetical constructions in Germanic that resist introduction by a coordinator.

EK-clauses and comment clauses do display dissimilarities, however. While EK-clauses are constrained only according to the type of host clause that they modify (assertion vs. demonstration), English CCs are also constrained by their linear position: utterance-initial CCs display root properties that their medial and final counterparts do not, regardless of whether their hosts are assertions or demon-

strations. For instance, initial CCs may host speaker-oriented adverbs, while medial and final CCs cannot.

- (101) a) *John (evidently) shouted (this): “I have won the lottery!”*  
 b) “I have,” *John (\*evidently) shouted, “won the lottery!”*  
 c) “I have won the lottery,” *John (\*evidently) shouted.*

For scholars like Banfield (1982), this dissimilarity in between initial and medial/final CCs is indicative of external syntactic variation. Due to space constraints, we can neither evaluate Banfield’s proposal nor provide an explanation for why English CCs are subject to additional constraints that their Turkish counterparts are not. This must be left for future investigation. Important for us is that EK-clauses should be associated with CCs, and not with matrix clauses of finite subordination constructions, or with root clause conjuncts.

## 5 Conclusion

We argued that PK-clauses in Turkish and attributive appositions in Germanic are the second conjuncts of the parenthetical coordination of two root clauses. The coordinator, Par, is realized in Turkish as the lexeme *ki*, but is obligatorily null in Germanic. If *ki* is indeed Par’s realization, one may stipulate that Par’s morphological absence in Germanic does not indicate that *par*-Merge (in other words, syntactic integration of undominated units) must be discarded or even that its universality for modelling parataxis must be diminished. We suggest that an extraneous constraint blocks realization of the coordinator in Germanic clausal parenthetical coordination, which is *left-edge deletion*.

When PK-clauses and attributive appositions surface in a sentence-medial position, a reordering operation occurs, about whose exact nature we remained ambivalent. One may stipulate that the reordering applies at PF (as an instance of PF scrambling) or after spell-out to LF but before spell-out to PF. In any case, this operation must be invisible to the interpretation module.

Furthermore, we argued that *yani*-XPs in Turkish and identificational appositions in Germanic are the second conjuncts of the parenthetical coordination of two subclausal items. In Turkish and Germanic, the coordinator (Par) is realized overtly.

We argued that EK-clauses are parenthetically adjoined via *par*-Merge, which yields undominated adjunction. We showed that EK-clauses are structurally ambiguous in their internal syntax. While EK-clauses that adjoin to assertions lack

root clausal properties, specifically a Force projection, (akin to comment clauses in Germanic), EK-clauses that adjoin to demonstrations are root clauses that display a Force projection. This dichotomy is evidenced by differences in their linear distribution, prosodic realization, and their availability to host speaker oriented adverbs or to be targeted by generic responses and tags. Whether this ambiguity persists in Germanic comment clauses is an issue for future investigation.

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Nicholas LaCara

# Discourse inversion and deletion in *as*-parentheticals

**Abstract:** In this paper, I investigate the syntax of inverting *as*-parentheticals, a subclass of parenthetical *as*-clause that is anaphorically dependent on a previously uttered predicate that, in addition, exhibits properties of certain kinds of discourse inversion identified by Birner (1994). I argue that these constructions contain deletion, following recent work on predicate *as*-parentheticals (Feria, 2010; McCloskey, 2011; LaCara, 2012a). I go on to show that some of the unusual syntactic properties in inverting *as*-parentheticals are shared with other sorts of discourse inversion constructions (Bresnan, 1994; Samko, 2012, 2013), and that these properties can be explained if we provide the constructions similar derivations.

**Keywords:** parenthesis, ellipsis, *as*-parentheticals, discourse inversion, focus

## 1 Introduction

This paper focuses on the syntax of inverting *as*-parentheticals – the emphasized constituents in (1) (Potts, 2002b).

- (1) a. *Harvey will kiss a pig*, as will Mary.  
b. *Harvey has bought a farm*, as has Mary.

Inverting *as*-parentheticals are a variety of parenthetical expression in which some predicate-denoting phrase goes missing. This phrase may be of any category – verbal, adjectival, nominal, or prepositional. The interpretation of the parenthetical is dependent on material in the immediately preceding clause. In example (1), the verb phrases *kiss a pig* and *buy a farm* serve as antecedents to the missing material.

Very little work has been done on this construction (though see Feria, 2010), and much about it is still poorly understood. At first glance, one might think that inverting *as*-parentheticals are the result of subject-auxiliary inversion (SAI), as in English questions, with an application of VP ellipsis:

- (2) *Harvey will buy a farm. Will Mary t buy a farm?*
- 

It turns out that such a straightforward analysis is not possible. Potts (2002*a, b*) argues convincingly that the gaps in *as*-parentheticals must be derived by movement and that they cannot simply be VP-ellipsis gaps. Furthermore, inverting *as*-parentheticals cannot be derived by typical SAI. Fera (2010) shows that they allow multiple auxiliaries to precede the subject of the *as*-parenthetical. SAI cannot derive this order.

- (3) %*The US trade deficit could be an issue, as could be [the fact that much of China's economy is still fueled by exports].*

In fact, inverting *as*-parentheticals have a number of unusual properties that make them different from typical English clauses. Since the subjects may appear after multiple auxiliaries, the subjects do not appear to be in SpecTP. This is intriguing since we will see that subjects must leave SpecvP and move out of VoiceP.

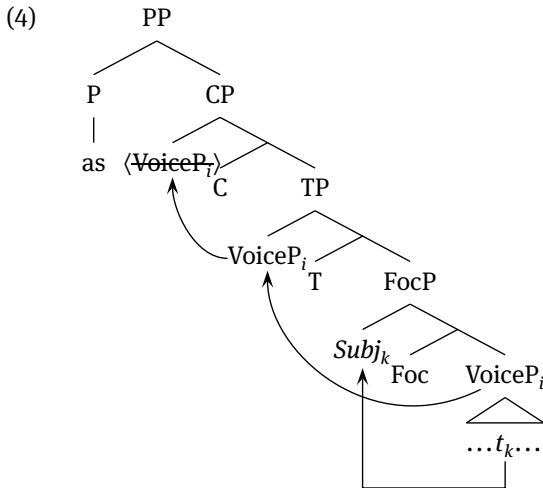
In this paper, I propose that inverting *as*-parentheticals are derived in a manner similar to the class of inversion structures discussed by Birner (1994) and that, *pace* Potts, *as*-parentheticals do contain deletion, just not vPE (LaCara, 2012*a*). I will claim that logical subjects remain in the middle field, potentially in a focus position, and that the verb phrase moves to SpecTP, analogous to other English discourse inversion structures (Birner, 1994; Bresnan, 1994; Rezac, 2006; Samko, 2012, 2013). As in non-inverting *as*-parentheticals, the vP continues on into the CP-layer, where it is deleted by comparative deletion (LaCara, 2012*a*).

This paper is organized as follows. In §1.1, I will continue by summarizing the technical aspects of the analysis and explain how it will account for the properties we will see below. In §2, I provide an overview of *as*-parentheticals and summarize my general account of their syntax (LaCara, 2012*a*), which I will assume throughout the paper. I will then provide a detailed discussion of the properties I want to account for in §3. I will then show that subjects move out of their base positions in *as*-parentheticals in §4, arguing that they must therefore move somewhere else. I then turn to the properties of discourse inversion in §5 and use that as the basis of my analysis in §6. Finally, in §7, I conclude and discuss some outstanding problems for the analysis of inverting *as*-parentheticals.

### 1.1 Overview of the analysis

As we will see in the coming discussion, inverting *as*-parentheticals have a number of unusual properties. Their subjects do not seem to be in SpecTP, appearing instead after modals and auxiliaries. The subjects themselves are apparently focused.

The analysis I propose, sketched in (4), is inspired significantly by Samko’s (2012, 2013) proposals for participle preposing, in which a verb phrase fronts to the beginning of a sentence, stranding the logical subject after auxiliary verbs; see Birner (1994). In particular, I propose that the subjects of inverting *as*-parentheticals move to a clause-medial focus position below auxiliaries, allowing multiple auxiliaries to precede the subject as in (3). This on its own, however, would leave SpecTP empty. Consequently, in order to satisfy the EPP, VoiceP moves to SpecTP instead of the subject. From there, VoiceP moves to SpecCP where it deletes (LaCara, 2012a). As will be discussed, this analysis departs in several ways from Feria’s (2010) while attempting to retain his many insights.



## 2 The syntax of *as*-parentheticals

In this section, I provide an overview of the different kinds of *as*-parentheticals, and I review the evidence for movement and deletion in predicate *as*-parentheticals. Potts (2002a, b) demonstrates in his original proposals for *as*-parentheticals that they must contain some sort of movement dependency. He argues that they cannot be derived by verb phrase ellipsis, but more recent work has shown

that a deletion operation of some sort plays a role in the construction (Feria, 2010; McCloskey, 2011; LaCara, 2012a). Ultimately, following the analysis I propose in LaCara (2012a), I adopt a comparative deletion analysis of *as*-parentheticals.

## 2.1 Kinds of *as*-parentheticals

*As*-parentheticals have only recently been subjected to study in the linguistics literature, and, since much of this work is fairly recent, their properties are only beginning to be understood. They are known to occur in English, Danish, German, Thai (Potts, 2002b), Irish (McCloskey, 2011), Dutch (Kluck and De Vries, To Appear), Portuguese (LaCara, 2012a), and Hungarian (Bácskai-Atkári, this volume).

In English, there are two major classes of *as*-parentheticals and they are distinguished by what kind of antecedent they take. The *as*-parentheticals in (5) take CP antecedents and contain CP-sized gaps (signified by \_\_\_ in the examples). These are propositional *as*-parentheticals. In contrast, the *as*-parentheticals in (6) take verb phrase antecedents, and they contain verb phrase-sized gaps.<sup>1</sup> These are called predicate *as*-parentheticals.

- (5) Propositional *as*-parentheticals
- a. *Americans should get cheap oil*, as the whole world knows \_\_\_.
  - b. *Ames*, as the FBI eventually discovered \_\_\_, *was a spy*.
- (6) Predicate *as*-parentheticals
- a. *John has kissed a pig*, as I knew he would \_\_\_.
  - b. *Sam bought a new car*, as Alex also has \_\_\_.

The inverting *as*-parentheticals that I discuss in the remainder of this paper are a subclass of predicate *as*-parentheticals. Propositional *as*-parentheticals in English do not exhibit the inversion to be discussed here, and so I will leave them aside for the remainder of the paper except when they are useful for comparison.

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<sup>1</sup> As I mentioned earlier, this is a bit of simplification for discussion's sake. In reality, these *as*-parentheticals can take any predicate as an antecedent and will contain an equivalent gap. For instance, (i) takes an adjective phrase as an antecedent, and an adjective phrase is missing from inside the *as*-parenthetical.

(i) *Sam is quite amiable*, as Alex also is \_\_\_.

As a matter of convenience, I will restrict the discussion in this paper to verb phrases; the analysis extends to other cases straightforwardly.

## 2.2 Movement

English *as*-parentheticals come in two different forms: inverting, as in (7) and non-inverting, as in (8):

(7) *Harvey will kiss a pig, as will Mary.* inverting

(8) *Harvey will kiss a pig, as Mary also will.* non-inverting

While Potts (2002*b*, 639–640) acknowledges the existence of inverting *as*-parentheticals and refers to them throughout his work, he focuses mostly on the non-inverting cases. I summarize much of the relevant discussion here.

One of Potts' central claims regarding the syntax of *as*-parentheticals is that the gaps inside of *as*-parentheticals must be derived via movement and not by verb phrase ellipsis (VPE). Although the gaps look like VPE gaps – the same material goes missing, stranding an auxiliary verb – Potts demonstrates that there is a movement dependency from the position of the gap.

For example, he shows that *as*-parentheticals are island-sensitive. Whereas the gap in the *as*-parenthetical in (9a) cannot be contained inside of an island, a VPE gap can appear in a similarly structured sentence with no *as*-parenthetical.

- (9) a. *\*Nina quickly bought two durians, exactly as we met a chef who did \_\_.*  
as-paren.  
 b. *Nina quickly bought two durians, and we met a chef who also did \_\_.*  
VPE

Corroborating Pott's claim is the observation that *as*-parentheticals display overt A'-movement complementizers in languages like Irish, glossed *c* here (McCloskey, 2011):

- (10) *Chuidh se 'un an aonaigh mar a dubhairt sé a rachadh \_\_.*  
 went he to the fair as c said he c go.COND \_\_  
 'He went to the fair as he had said he would.'

In addition to the positive arguments for movement, it can be shown that the gaps in *as*-parentheticals have different locality requirements from VPE. For example, the ellipsis in (11) can identify an antecedent both in the immediately preceding clause or farther away in the subject of the preceding sentence.

- (11) *The fact that Sue read the map carefully probably means that she stayed on the trails. But we aren't sure whether Chuck did*  $\langle VP \rangle$ .
- a.  $\langle VP \rangle$  = stay on the trails
  - b.  $\langle VP \rangle$  = read the map carefully

The locality conditions on *as*-parentheticals are stricter. Like VPE, *as*-parentheticals may find their antecedents in an immediately preceding verb phrase, but as shown in (12), the verb phrase in the complex noun phrase subject is unavailable as an antecedent.

- (12) *The fact that Sue read the map carefully probably means that she stayed on the trails, as did Chuck*  $\langle VP \rangle$ .
- a. *As*-clause gap = stay on the trails
  - b. *As*-clause gap  $\neq$  read the map carefully

Potts takes this locality restriction to be indicative of a movement dependency, similar to relative clauses or comparative deletion. In fact, *as*-parentheticals seem to have the same locality restrictions as comparatives, which are well established as having movement (Kennedy, 1997).<sup>2</sup>

Based on the above evidence, Potts concludes that the gaps in *as*-parentheticals are caused by the movement of a syntactically empty VP *pro*-form and that they cannot be caused by verb phrase ellipsis.<sup>3</sup>

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<sup>2</sup> A problem with this account is that *as*-parentheticals can pick up antecedents across utterances (see section 2.3). A reviewer suggests that the locality restriction may be imposed by *as* itself, noting that the locality restriction bears a similarity to German *d*-pronouns (Wiltschko, 1998), which have a tendency to pick up the last mentioned DP. I think assimilating *as* with cases such as these is a promising alternative to a movement-based locality restriction. It is known that *as*-parentheticals bear a strong resemblance to parenthetical relatives (Potts, 2002a; LaCara, 2012b), and, as Wiltschko (1998) notes, *d*-pronouns double as relative pronouns. Further, as I mentioned above, it is not clear how the purely movement-based account would deal with the cross-utterance cases, since an *as*-parenthetical in a separate utterance could not be syntactically adjoined to its antecedent.

<sup>3</sup> A reviewer asks if *as* could be treated as an extractee. If the analysis of comparative deletion I assume below is correct (Kennedy, 2000, 2002), then *as* cannot be an extractee unless some sort of VP-pronominalization of the sort discussed by Houser et al. (2007) is available. For an analysis of parenthetical relatives that takes this tack, see LaCara 2012b.

## 2.3 Deletion

In ongoing work (LaCara, 2012a, In Prep.), I present a number of challenges for Potts' null-operator analysis of *as*-parentheticals. For example, I show that in languages that exhibit verb stranding VPE, such as British and Irish English (Potsdam, 1997), Irish (McCloskey, 1991, 2011; amongst others), and Brazilian Portuguese (Cyrino and Matos, 2002; Costa and Duarte, 2001), it is possible to strand verbs in *as*-parentheticals. Following Goldberg (2005), this requires there to be a full verb phrase out of which the verbs move:

- (13) *The FAA has a similar duty in the USA, as have equivalent organisations in almost every country throughout the world.* British English (BNC CN2 770)
- (14) *Chuaidh se 'un an aonaigh mar a dubhairt sé a rachadh.*  
 went he to the fair as c said he c go.COND  
 'He went to the fair as he had said he would.' Irish (McCloskey, 2011)
- (15) *Obrigado por entrar em minha vida, como disse que entraria.*  
 thank.you for enter.INF in my life as said that enter.COND  
 'Thank you for entering my life, as you said you would.'  
 Portuguese (LaCara, 2012a)  
<http://www.suaescolha.com/jesus/religioes/divino/>

In addition to this evidence, I also show that *as*-parentheticals pattern with deletion phenomena in other ways. For example, the subjects of *as*-parentheticals are frequently not external arguments. Provided typical assumptions about the syntax of argument structure, the subjects emphasized in (16) should have originated internal to verb phrases that are not pronounced (Schuyler, 2001; Aelbrecht, 2010, 62–63). This indicates that in these cases there is a silent VP out of which the subjects moved.

- (16) a. *The ship sank, as will the barge.* unaccusative  
 b. *The ship was sunk, as was the barge.* passive  
 c. *Mary seems to be happy, as does Bill.* raising

Finally, there are also properties that are specific to deletion dependencies. In particular, predicate *as*-parentheticals require a spoken, linguistic antecedent, like VPE (Hankamer and Sag, 1976; Sag and Hankamer, 1984).<sup>4</sup>

- (17) *Situation: You and your friend walk into a room and all the windows are broken. Your friend says:*
- a. #*I can't believe somebody would \_\_\_!*
  - b. *I can't believe somebody would do this!*

They cannot simply pick up an antecedent from the surrounding context, as shown in (18).<sup>5</sup>

- (18) *Situation: Sam and Leigh are at a farm. They sees Alex in the pigpen with his lips pressed firmly against those of a pig. Leigh exclaims to Sam:*
- a. #*Aha! As did John!*
  - b. #*Aha! As has Mary!*
  - c. #*Aha! As might I!*

Note further that cross-speaker *as*-parentheticals are generally good. This suggests that the problem with (18) is not that the *as*-parentheticals are dependent on being in the same utterance as the antecedent.

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<sup>4</sup> This has been a contentious diagnostic since Hankamer and Sag (1976) proposed it; Schachter (1977) presents numerous apparent counterexamples, but Hankamer (1978) points out that many of these are plausibly fixed forms. More recently, Merchant (2004, 718–723) and Miller and Pullum (2013) argue that ellipsis without spoken antecedents is possible, but the situations under which it occurs are fairly well constrained and it is not generally available. From an empirical point of view, the situations under which antecedentless ellipsis is available are not the same as when deep anaphora are available, and to that end the diagnostic is still useful for distinguishing ellipsis from deep anaphora.

<sup>5</sup> While *as*-parentheticals with verb phrase gaps never allow non-linguistic antecedents, propositional *as*-parentheticals, which contain CP gaps, do (Potts, 2002b, 655). The situation in (18) can be followed up with any of the following:

- (i)
  - a. *Aha! Just as I suspected \_\_\_!*
  - b. *Aha! Exactly as you said \_\_\_!*

The reason for this split remains mysterious. One hypothesis is that instead of deletion, propositional *as*-parentheticals involve some sort of null complement anaphora (see Depiante, 2000), but it is unclear why that should be the case.

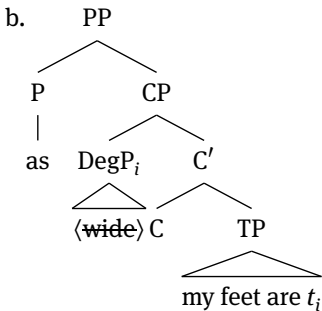


- (19) *Situation = (18)*  
 a. SAM: *Look! Alex is kissing a pig!*  
 b. LEIGH:  
     i. *As did John!*  
     ii. *As has Mary!*  
     iii. *As might I!*

All of this evidence suggests that *as*-parentheticals contain some sort of PF deletion in addition to movement. A null *pro*-form cannot straightforwardly account for any of the extraction facts in (13)–(16), and the data in (18) is expected of deletion anaphora. However, as discussed, this deletion operation cannot be vPE, since this construction has clear evidence of movement.

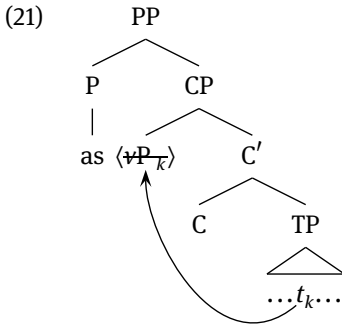
In LaCara (2012a, In Prep.), I argue for a hybrid analysis involving both A'-movement and deletion.<sup>6</sup> The resulting derivation is largely identical to comparative deletion as proposed by Kennedy (2000, 2002). It has long been assumed (since at least Bresnan, 1973) that comparatives and equatives contain some sort of deletion. Kennedy's approach to comparative deletion involves movement of the compared constituent into the left periphery of the standard clause (that is, the *than* or *as* clause), plus deletion under identity with the head of the comparative.

- (20) a. *Michael's hands are as wide as my feet are.*



<sup>6</sup> LaCara (2012a) follows work by Feria (2010) and McCloskey (2011). Feria suggests a deletion analysis for inverting *as*-parentheticals, and McCloskey seems to assume that this is what is happening in Irish *as*-parentheticals, as well. I generalize their assumptions to all cases of *as*-parentheticals.

The analysis I propose follows this derivation very closely. The difference here is that a fully articulated  $\nu P$  moves into the left periphery of the *as*-parenthetical, where it deletes under identity to the  $\nu P$  it is adjoined to.<sup>7</sup>



Assimilating the syntax of *as*-parentheticals with that of comparatives and equatives has some ancillary support as well. For example, the locality restrictions on *as*-parentheticals appears to be the same as those on comparatives (as I noted in section 2.2), and comparatives seem to be host to the same sort of inversion discussed in this paper (Potts, 2002*b*, 640). Also potentially indicative is the fact that many languages use the word for *as* to introduce both equatives (and comparatives) in addition to *as*-parentheticals. In some intuitive sense, predicate *as*-parentheticals compare (or perhaps equate) predicates, as if to indicate that two kinds of eventuality are of the same type. Indeed, Kluck and De Vries (To Appear) comment on this likelihood, and it seems to me too that the *as* of *as*-parentheticals may be serving the same equative function that it does in equatives.<sup>8</sup>

This is the basic analysis of *as*-parentheticals that I will assume in the coming discussion. I now turn to the specific properties of inverting *as*-parentheticals that I will be interested in accounting for.

<sup>7</sup> I treat *as* as a preposition here, following Potts (2002*b*). However, the evidence for this is not particularly strong; it is entirely plausible that *as* is a complementizer, as argued by Kluck and De Vries (To Appear).

<sup>8</sup> Unfortunately I know of no research that actually attempts to assimilate the semantics of comparatives with the semantics of *as*-parentheticals.

### 3 Properties of inverting *as*-parentheticals

Inverting *as*-parentheticals have a number of unusual properties that differentiate them from non-inverting *as*-parentheticals and, for that matter, typical English sentences. In this section, I will discuss a cluster of these properties that appear to be related.

One of the more notable properties of inverting *as*-parentheticals is that their subjects appear after an auxiliary verb, giving them the appearance of having undergone subject-auxiliary inversion (see Potts, 2002*b*, 639). However, there are two other unusual properties that are not easily explained given this assumption. It is possible to strand multiple auxiliaries before the subject in *as*-parentheticals, and it is not possible for there to be expletive subjects (Feria, 2010). I will discuss these properties in more detail below; the main goal of the rest of the paper will be to account for this unusual behavior.

#### 3.1 Subject postposing

The salient difference between inverting and non-inverting *as*-parentheticals is that the subjects in non-inverting *as*-parentheticals appear in a typical subject position with auxiliaries following subjects whereas the subjects of inverting *as*-parentheticals appear after auxiliaries.

(22) *Harvey kissed a pig, as Mary also did.* non-inverting

(23) *Harvey kissed a pig, as did Mary.* inverting

A fairly straightforward account of these data would involve simple  $T^0$ -to- $C^0$  movement – often called subject-auxiliary inversion (SAI) – in inverting *as*-parentheticals. This is the same movement that derives questions in English, and it results in the same word order shown in (23):

(24) *Harvey kissed a pig. Did Mary (kiss a pig)?*

However, as we are about to see, this cannot be the case. If the inversion in *as*-parentheticals were caused by typical subject-auxiliary inversion, then we would expect inverting *as*-parentheticals to exhibit the behavior of SAI all the time. Unfortunately, SAI cannot account for a broader range of data.

### 3.2 Multiple auxiliary stranding and SAI

One of the strange facts about inverting *as*-parentheticals is that they permit multiple auxiliaries to precede their logical subjects. FERIA (2010) adduces a number of naturally occurring examples, including the following:<sup>9</sup>

- (25) %*The US trade deficit could be an issue, as could be the fact that much of China's economy is still fueled by exports.*
- (26) %...*your options have been unconstrained as have been your choices in modifying suites.*
- (27) %*What this means is that the Celts could well have been a tribe of this copper-skinned peoples, as could have been the early Egyptians.*

This is noticeably different from English subject-auxiliary inversion. Since SAI is just head movement, it only permits the movement of one auxiliary above the subject, following from the head movement constraint (Travis, 1984). As shown in (28), it never moves more than one auxiliary at a time.<sup>10</sup> Consequently, SAI cannot produce the orders seen in (25)–(27).

- (28) *Harvey kissed a pig.*  
 a. \**Could have Mary (kissed a pig)?*  
 b. *Could Mary have (kissed a pig)?*

Moreover, when an *as*-parenthetical contains more than one auxiliary verb, the order derived by SAI is not permitted in *as*-parentheticals. The subject may not occur in between auxiliaries as it does in questions.

<sup>9</sup> Some speakers reject some examples of multiple auxiliary stranding, while others find it degraded in some cases. Examples of this sort, however, are well-attested.

<sup>10</sup> Some dialects of the American south that have so-called double modals do permit the movement of multiple modals above the subject; for instance <sup>1</sup>*Might could you go to the store for me?* (Hasty, 2012). This feature is regarded as non-standard, but the judgments above reflect those of English speakers who do not have this construction in their dialects. Furthermore, as far as I am aware, only double *modals* may front; other auxiliaries are not permitted to undergo this movement.

- (29) *Harvey kissed a pig...*
- a. ...*as* could have *Mary*. cf. (28a)
- b. \*...*as* could *Mary* have. cf. (28b)

This means two things for the analysis of inverting *as*-parentheticals. First, inverting *as*-parentheticals cannot be derived by SAI. In contexts with more than one auxiliary, SAI cannot produce the correct word order, and the word order that it would produce is ungrammatical. Consequently, there must be some other mechanism that derives the word order.

The second conclusion is somewhat less obvious than the first, but given the data here we must conclude that we do not know where the subjects in inverting *as*-parentheticals are. Making the fairly standard assumption that the highest auxiliary sits in T<sup>0</sup> in English (unless moved to C<sup>0</sup> by SAI), we can conclude that subjects are not in SpecTP in *as*-parentheticals. If they were, we would expect either only the SAI pattern to exist in inverting *as*-parentheticals (since this would move only one auxiliary to the left of the subject), or else we would expect inversion to be impossible, since all of the auxiliaries would have to occur to the right of the subject – there would be no mechanism for getting multiple auxiliaries to the left of the subject if it were in that position.

### 3.3 Expletives and the position of the subject

Another piece of evidence that would seem to corroborate the conclusion that subjects are not in SpecTP is that expletive subjects, as Feria (2010) notes, seem to be completely banned from inverting *as*-parentheticals. He presents this as evidence that subjects are not in SpecTP. The argument is that expletives must occur in SpecTP and that they do not occur in the position where we see subjects in inverting *as*-parentheticals; therefore, the subject position in inverting *as*-parentheticals is not SpecTP.

- (30) a. \**There might be a show tomorrow, as might (be) there on Friday.*  
 b. \**It will rain tonight, as will it tomorrow.*

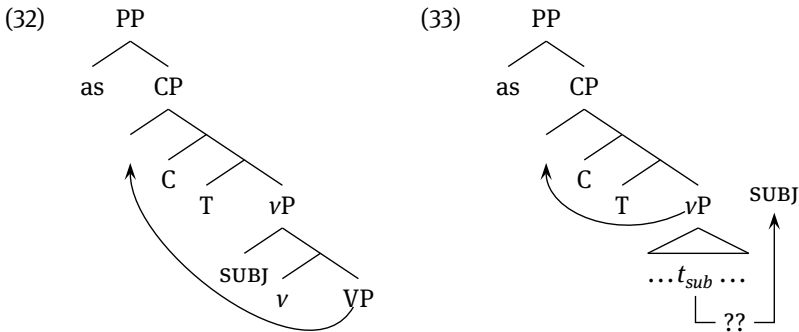
For comparison, while they are not permitted in inverting *as*-parentheticals, expletives are generally good in non-inverted examples:

- (31) a. *There might be a show tomorrow, as there might also be on Friday.*  
 b. *It will rain tonight, as it will tomorrow.*

Feria interprets this as meaning that there is no EPP active on  $T^0$  in inverting *as*-parentheticals. If there is no EPP, then there is no impetus for anything to appear in SpecTP, and this would explain why expletives do not appear and why subjects never make it to SpecTP. This is just a stipulation, however. There are certainly other possible explanations for the pattern we see here, and we should want to know why the EPP is relaxed in this particular place. As I will discuss section 5, the facts here are better tied to the syntax of inversion in English in general.

## 4 Argument structure mismatch and the position of subjects

One possibility is that the subjects of inverting *as*-parentheticals stay low in the structure of the clause, never making it to SpecTP. The question is how low they stay. One possibility, shown in (32), is that subjects simply remain in Spec $v$ P where they are first merged and that the material that deletes in inverting *as*-parentheticals is a VP, stranding the subject. However, it is also possible that the subject moves to some other position, just not as far as SpecTP (33). Feria (2010) proposes this latter option, but he does not consider the first possibility since he eschews the distinction between  $v^0$  and  $V^0$ .



In this section, I will turn to this question, using constraints over anaphor identity as a guide to figuring out where the subjects must lie in the structure. Following Merchant's (2013) approach to voice mismatches, I will argue that subjects must at least escape VoiceP, a functional phrase dominating  $v$ P, meaning that subjects must move out of their first-merge positions. This corroborates Feria's (2010) original proposal.

## 4.1 Voice and ellipsis

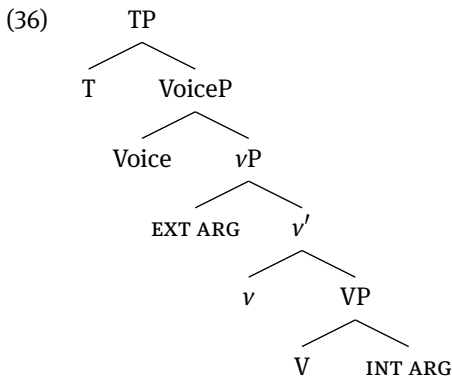
One of the interesting properties of deletion anaphora is that deletion is sensitive to the argument structure and voice of the antecedent. For example, verb phrase ellipsis (VPE) tolerates mismatch in voice. The antecedent may be active while the clause containing the ellipsis is passive, and *vice-versa*:<sup>11</sup>

- (34) a. *The janitor must remove the trash whenever it is apparent that it should be.*  
 b. *The system can be used by anybody who wants to.*

However, VPE is sensitive to mismatch in argument structure (Sag, 1976). Thus, a causative verb cannot serve as the antecedent to an inchoative or *vice versa*:

- (35) a. *\*John closed the door, and the window did too.*  
 (≠ *The window closed.*)  
 b. *\*The water froze. I told you Mary did.*  
 (≠ *Mary froze the water.*)

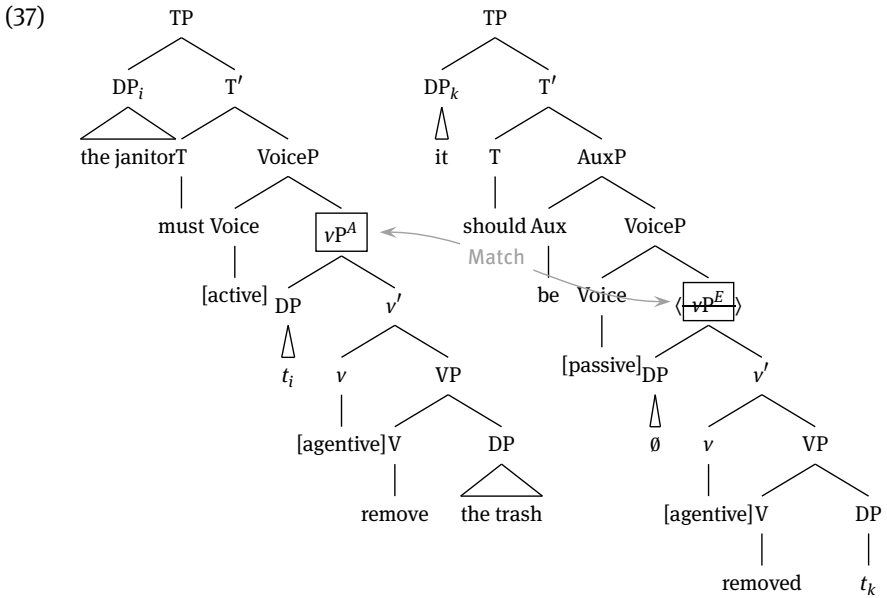
Merchant (2013), following ideas introduced by Collins (2005), uses a split-*vP* in order to explain facts like these.<sup>12</sup> Under this view, the voice and argument structure properties of *v*<sup>0</sup> are separated from each other, as schematized in (36). *vP* is the locus of transitivity, and introduces external arguments. This phrase is dominated by VoiceP, which is responsible for determining the voice of the clause.



<sup>11</sup> This is not the traditional assumption about voice mismatches. For instance, Sag (1976), among others, argued that voice mismatch was not possible in VPE. However, it has become clear in the years since that this is not so. See Merchant (2013) for discussion.

<sup>12</sup> See Frazier (2008) for an alternative approach.

vPE permits voice mismatch, but does not permit argument structure mismatches. Since it is insensitive to voice, but it is sensitive to argument structure, Merchant argues that vPE may delete vP to the exclusion of VoiceP as shown in (37). Although Voice<sup>0</sup> is different in each clause, both vP<sup>A</sup> and vP<sup>E</sup> match, so the ellipsis is permitted to occur.<sup>13</sup> If ellipsis targeted VoiceP, however, we would expect voice mismatch to be categorically ungrammatical.



A central idea of this approach is that ellipsis processes can vary with respect to the smallest constituent they may delete.<sup>14</sup> Thus some operations may target VoiceP, others, vP, and others, VP. For example, Merchant argues that pseudogapping targets VoiceP rather than vP. Pseudogapping is very similar to vPE, with the exception that some vP-internal element appears to the right of the deletion site – in example (38), this is *Harry*. However, as (39) demonstrates, voice mis-

<sup>13</sup> As always, there are some wrinkles in what we mean by *match*. Merchant assumes that a syntactic identity requirement holds over the antecedent and elided constituent. This requires implicit agents to be syntactically represented. The trouble with that is that implicit agents in passives do not have the same properties as overt arguments, behaving more like PRO<sub>arb</sub> (Baker et al., 1989, 228–229). This may, however, be a broader problem for the identity requirement on ellipsis, and not just Merchant’s approach.

<sup>14</sup> See also Aelbrecht (2010) and Baltin (2011) for more recent extensions of this approach.



match is not permitted under pseudogapping, though it is allowed with *vPE*. The conclusion then is that whereas *vPE* targets *vP*, pseudogapping targets *VoiceP*.<sup>15</sup>

(38) *Mary hasn't dated Bill, but she has \_\_ Harry.*

(39) *\*Hundertwasser's ideas are respected by scholars more than most people do \_\_ his actual work.*

We can use these restrictions over voice mismatches to determine what material goes missing in an anaphoric construction. In the coming discussion, I will apply this diagnostic to *as*-parentheticals to show that the phrase in which subjects are introduced gets deleted, meaning that subjects must move out of their first-merge position.

## 4.2 Mismatches in *as*-parentheticals

It turns out that, when it comes to voice mismatch, inverting and non-inverting *as*-parentheticals display different behaviors. Non-inverting *as*-parentheticals seem to permit voice mismatch, much like *vPE* does. Inverting *as*-parentheticals, on the other hand, do not, behaving like cases of pseudogapping.<sup>16</sup>

(40) *Non-inverting as-parentheticals*

- a. *The janitor should remove those bins, as I told you they should be.*
- b. *I haven't implemented the system with a manager, as it will be.*
- c. *It should be noted, as Dennett does, that...*  
(*Sag (1976, 75, fn. 2), cited in Potts (2002b)*)
- d. *The system can be used by anybody, as you clearly have.*

<sup>15</sup> For an operation that plausibly deletes *VP*, stranding *v*<sup>0</sup>, see Toosarvandani (2006) on Farsi.

<sup>16</sup> A reviewer points out that the relevant contrast does not always arise:

- (i) This was pointed out by Peter,
  - a. \*...as John did.
  - b. \*...as did John.

I do not yet know exactly when voice mismatch is permitted in non-inverting *as*-parentheticals. Kehler (2002) claims that certain discourse requirements must hold for mismatch to happen under *vPE*. Similar requirements may hold over *as*-parentheticals as well, but I have not yet investigated this in any detail.

- (41) *Inverting as-parentheticals*
- a. \**The janitor should remove those bins, as should be the others.*
  - b. \**I haven't implemented the system with a manager, as will be it.*
  - c. \**It should be noted, as does Dennett, that freshmen are often foolish.*
  - d. \**The system can be used by anybody, as have you.*

In both cases, the argument structure of the antecedent and the missing verb phrase must be the same; argument structure mismatches are ungrammatical in both conditions.

- (42) *Non-inverting as-parentheticals:*
- a. \**Mary froze the water, as the wine also did.*  
(≠ *The wine froze.*)
  - b. \**The water froze, as Mary also did.*  
(≠ *Mary froze the water.*)
- (43) *Inverting as-parentheticals:*
- a. \**John closed the door, as did the window.*  
(≠ *The window closed.*)
  - b. \**The door closed, as did John.*  
(≠ *John closed the door.*)

Following Merchant (2013), we can conclude that non-inverting *as-parentheticals* target *vP* since they permit voice mismatch. Inverting *as-parentheticals*, on the other hand, must match in Voice; and therefore we conclude inverting *as-parentheticals* target VoiceP, and not just *vP*.

### 4.3 The subject escapes VoiceP

An important conclusion can be drawn from the above data: Subjects must move from the position where they are originally merged. Given the clausal model introduced in (36), external arguments are introduced in *SpecvP*. However, in inverting *as-parentheticals*, a larger piece of the clause moves away, namely VoiceP. If subjects did not move out of their base positions and out of VoiceP, we would expect them to be deleted, too. We have to conclude that the subjects move.

The question is: Where? If subjects are not in *SpecvP* or *SpecTP*, then they must wind up somewhere else. In the following sections, I will try to answer this question in a way that also accounts for the other properties of inverting *as-parentheticals* we have seen so far.

## 5 Discourse inversion

So far, we have seen that inverting *as*-parentheticals display a number of unusual properties.

- Subjects appear after (potentially multiple) auxiliaries (§3.2).
- Subjects do not appear to be in SpecTP (§3.2).
- Expletive subjects are not permitted in inverting *as*-parentheticals (§3.3).
- Subjects must leave SpecvP and move out of VoiceP (§4).

There are other constructions in English that share many of the above properties, namely the various inversion structures discussed by Birner (1994). This includes, for example, participle preposing (44) and locative inversion (45).

(44) [*Standing in the middle of it all*]<sub>VP</sub> is [*Jesse Jackson*]<sub>subject</sub>.

(45) [*Out of the barracks*]<sub>PP</sub> marched [*fifty soldiers*]<sub>subject</sub>.

Although there are some important differences between the constructions (see §7), I want to suggest that providing them with similar derivations explains the properties of inverting *as*-parentheticals that we have seen so far. The main comparison here will be between inverting *as*-parentheticals and participle preposing (Birner, 1994; Samko, 2012, 2013).

### 5.1 Similarities between participle preposing and inverting *as*-parentheticals

There are a few overt similarities that participle preposing and inverting *as*-parentheticals share that makes providing them with similar derivations appealing. First of all, both require the subject to appear after auxiliaries:

(46) *Speaking tonight is the Chancellor.* preposing

(47) *The mayor is speaking tonight, as is the Chancellor.* *as*-parenthetical

Just as in inverting *as*-parentheticals, multiple auxiliaries may precede the subject, as shown in (48a). Again, as shown in (49a), typical SAI cannot and does not generate the correct word order. This mirrors the facts we saw for inverting *as*-parentheticals in §3.2.

- (48) a. *Speaking tonight will be the Chancellor.* preposing  
 b. *The mayor will be speaking tonight, as will be the Chancellor.*  
*as-parenthetical*
- (49) a. *\*Speaking tonight will the Chancellor be.* Preposing  
 b. *\*The mayor will be speaking tonight, as will the Chancellor be.*  
*as-parenthetical*

Furthermore, the postposed subjects of both *as-parentheticals* and participle preposing sentences require focal stress. As shown in (50), focusing other material, such as the auxiliary in (50b), is infelicitous. This is not a requirement on non-inverting *as-parentheticals* as in (50c).

- (50) a. *Mary kissed a pig, as will YOU.* inverting  
 b. *\*Mary wants to kiss a pig, as WILL she.* inverting  
 c. *Mary wants to kiss a pig, as she WILL.* non-inverting

Birner notes that the postposed subjects of participle preposing sentences must be focused. This is in line with her observation that the preposed material tends to be or contain topical (*e.g.*, familiar) information whereas the postposed subject is new, focused information.

- (51) a. *Speaking tonight is THE CHANCELLOR.* part. preposing  
 b. *??Speaking tonight is the Chancellor.* part. preposing

Given these similarities, I would like to suggest that these constructions have similar derivations. Before turning back to *as-parentheticals*, I will first discuss one way to derive participle preposing.

## 5.2 The syntax of participle preposing

The preposed *vPs* behave as though they are in SpecTP (Samko, 2012, 2013).<sup>17</sup> For example, they can undergo raising like normal DP subjects:

<sup>17</sup> Bresnan (1994) makes a number of the following points for preposed PPs in locative inversion. Indeed, as mentioned above, participle preposing and locative inversion are very similar; see also Postal (1977).

- (52) a. [*Speaking tonight*]<sub>vP</sub> happens to be the Chancellor.  
 b. [*Standing in the middle of it all*]<sub>vP</sub> seemed to be Jesse Jackson.

Inversion also bleeds tag questions (Samko, 2012). This is presumably because the material in the tag has to refer back to the material in SpecTP.

- (53) a. \**Speaking tonight is the Chancellor, isn't she?*  
 b. *The Chancellor is speaking tonight, isn't she?*

Finally, the preposed element seems to compete with the same position as the subject. If vP is preposed, the subject must remain to the right of the auxiliaries (Samko, 2012).

- (54) \**Speaking tonight the Chancellor is.*

- (55) \**The Chancellor speaking tonight is.*

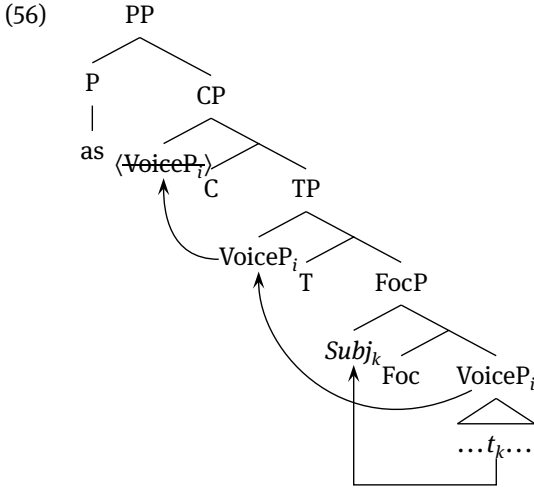
Given this, Samko (2012, 2013) argues that the vP moves through SpecTP, while the subject stays relatively low in a clause-medial position. Given the similarity, I propose to adapt this analysis to explain the facts as they occur in inverting *as*-parentheticals.

## 6 Inversion in *as*-parentheticals

The analysis I give here combines approaches to discourse inversion with the syntax of *as*-parentheticals. Discourse inversion in these parentheticals is, in some sense, independent of the movement of the verb phrase into SpecCP. That is, these are *as*-parentheticals that just happen to contain inversion.

On this account, *as*-parentheticals contain discourse inversion of the regular sort. VoiceP moves through SpecTP in order to satisfy the EPP, following typical analyses of inversion, and the subject remains in some clause-medial position, blocking them from moving to SpecTP (Bresnan, 1994; Samko, 2012).

However, following my analysis of *as*-parentheticals discussed in §2 (LaCara, 2012a), even when this inversion occurs, *as*-parentheticals still require some verbal element to move to SpecCP where it deletes. This movement into the left periphery is a requirement on *as*-parentheticals in general (Potts, 2002b), so once VoiceP moves to SpecTP, it must continue on to SpecCP.



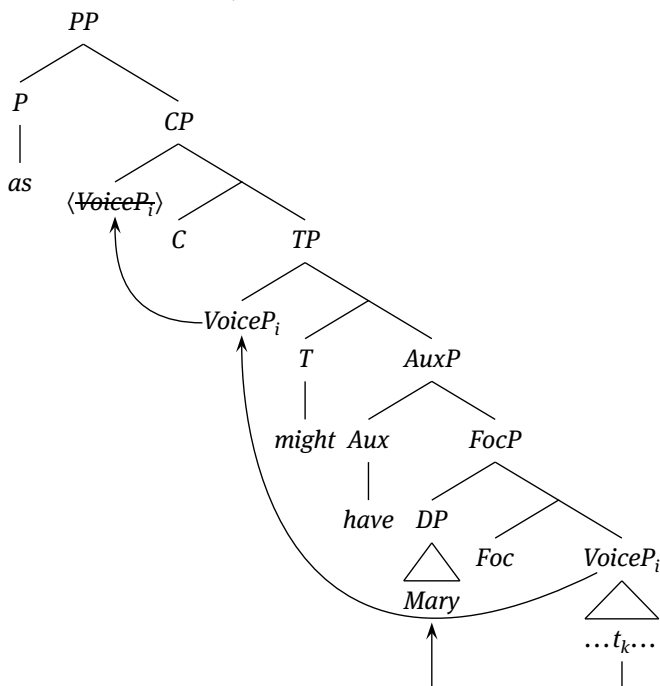
This analysis draws from a few places. I follow Merchant (2013) in assuming that there is an optional clause-medial focus position where elements can land. This FocP occurs below auxiliaries but above VoiceP.<sup>18</sup> For him, this is the where pseudogapping remnants appear.<sup>19</sup> This straightforwardly accounts for the word order of the clause, including the multiple auxiliaries.

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**18** Nothing rides particularly on this projection being a FocP. If we assume that movement of the subject must be leftward, it could move to some other clause medial position between auxiliaries and VoiceP. For example, Samko (2012) argues that the logical subjects of participle preposing clauses are actually sitting in the specifier of a PredP (Bowers, 1993) and that the fronted vPs are moved to SpecTP due to requirements on topical elements. If we admit rightward movement, the subject could also right-adjoin to the tree; indeed, Feria (2010) proposes such an analysis. I follow Merchant (2013) here mainly for concreteness.

**19** This is a bit of a departure from the traditional approach, where some element moves rightward out of the VP before it is deleted (Jayaseelan, 1990; Johnson, 2009).

(57) ...*as might have Mary*



As shown here, based on Samko’s (2012, 2013) account of participle preposing, VoiceP moves through SpecTP to satisfy the EPP on T<sup>0</sup>. This explains the lack of expletives in SpecTP. A trace of VoiceP occupies this position, preventing other material from occurring there. We need not stipulate, as Feria (2010) does, that there is no EPP active on T<sup>0</sup>.<sup>20</sup>

Finally, as discussed in §2, the VoiceP passes into the CP layer, where it deletes, unifying the construction with other *as*-parentheticals. Intriguingly,

**20** A reviewer asks why VoiceP couldn’t simply skip SpecTP, leaving it open for an expletive. As I hinted above, it seems to be a property of inversion that requires VoiceP to move through SpecTP. Expletives are not possible in VP preposing either:

- (i) \*Speaking tonight, it will be the chancellor.

Samko (2012) argues that there is an uninterpretable [TOPIC] feature on T<sup>0</sup> that drives movement of *v*P to SpecTP in participle preposing. Under this account, expletives do not occur in SpecTP because they are not topical elements. A similar analysis may be workable for inversion in *as*-parentheticals, but I have not worked out the full implications of such an approach.

Samko (2013) has recently claimed that this is a necessary part of the derivation of participle preposing. A'-extraction to the left edge in clauses containing participle preposing is impossible:

(58) \**Why is speaking today the Chancellor?*

Samko argues, following Rezac's (2006) analysis of locative inversion, that participle preposing must be derived by at least two movements of  $vP$ . First the  $vP$  moves to SpecTP, deriving the properties seen in §5.2. After that, it moves to SpecCP, explaining why participle preposing blocks A' extraction.

## 7 Conclusion and prospects

In this paper, I have argued that cases of inversion in *as*-parentheticals should be handled in a similar fashion to various kinds of discourse inversion in English, namely participle preposing. The surface word order of these constructions is uncannily similar, and consequently, it seems that they should receive similar analyses. Assimilating inverting *as*-parentheticals to other inversion structures in English gives us a way of understanding various odd properties that the construction has. It permits us to understand why subjects may follow more than one auxiliary and why the construction lacks expletive subjects, as well as giving us insights into the discourse properties that the construction has.

Although the analysis proposed here accounts for the various properties discussed, it is worth noting that this construction is still poorly understood and that more work needs to be done. While providing participle preposing and inverting *as*-parentheticals a similar derivation is, I believe, a step in the right direction, there are numerous problems that prevent a complete assimilation of both constructions. For example, participle preposing only fronts verb phrases containing present and passive participles (Samko, 2012), but any verb phrase is eligible to be deleted in inverting *as*-parentheticals.

- (59) a. \**Examined Mary today has the doctor.* preposing  
 b. \**Examine Mary today will the doctor.* preposing  
 c. *The nurse has examined Mary today, as has the doctor.* *as*-parenthetical  
 d. *The nurse will examine Mary today, as will the doctor.* *as*-parenthetical



Furthermore, although the fronted verb phrases may undergo raising in participle preposing (as discussed in §5.2), raising does not seem to be possible in inverting *as*-parentheticals:

- (60) a. *Speaking tonight happens to be Noam Chomsky.* preposing  
 b. \*?*Morris Halle is speaking tonight, as happens to be Noam Chomsky.*  
*as-parenthetical*

As far as I am aware, there is no explanation for these differences. The hope is that they may be tied to other independent facts about each of these constructions, but since so little is known about their syntaxes it is difficult to say what these might be.

In conclusion, although a lot of work remains to be done on the syntax of inverting *as*-parentheticals, assimilating it to other constructions that share similar syntactic properties appears to be a promising path toward understanding the more unusual properties of this construction.

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Bradley Larson

# The inherent syntactic incompleteness of right node raising

**Abstract:** This paper argues that the intuited semantic relation in Right Node Raising (RNR) between the shared material and the first conjunct is not encoded syntactically. This runs counter to the prevailing approach to the construction over the last few decades which has maintained that this particular relation is mediated via one of a number of syntactic operations: movement, phonological deletion, or simple syntactic composition obscured by non-canonical linearization. This paper argues that these syntax-based accounts are ill-suited to the construction and that a non-syntactic means of achieving the relevant relation is necessary. In particular, I argue that the shared material in RNR constructions serves to restrict an event variable at LF and is thereby interpreted as an argument in the first conjunct as well as the second. This captures the intuited semantic relation without necessitating a syntactic one.

**Keywords:** Right Node Raising, Movement, Ellipsis, Multidominance, Event Quantification

## 1 Introduction

In this paper I address the nature of the interesting interpretive dependency found in Right Node Raising constructions (RNR) and the nature of syntactic dependencies in general. The RNR-specific relation has traditionally been analyzed as one syntactic in nature, but here I argue that this cannot be the case. Each of our traditional syntax-mediated means of capturing interpretive dependencies is insufficient and ill suited to account for RNR. This leaves us with two options: 1) add to the syntactician's toolkit so as to maintain the idea that the RNR dependency is syntactic in nature or 2) conclude that the dependency is not mediated by syntax (or at least not mediated by current by syntactic mechanisms found in current conceptions of syntax). I show that this second option is forced given the facts and I propose a mechanism by which the dependency can be mediated by extra-syntactic concerns. Further, so as to restrict the extra-syntactic dependency

from applying across the board, I posit some restrictions on what can possibly be construed as a syntactic dependency.

## 1.1 Background

The term Right Node Raising was first used in Postal 1974 to describe constructions like that in (1) below. Here there is a sentence involving coordination wherein a string (underlined here) on the right edge of the sentence is interpreted both superficially in-situ as well as in the right edge of the first conjunct (following *bought*).<sup>1</sup>

- (1) *Becky bought and Bruce perused the collection of short stories.*

There is a one-to-many interpretive relation between the underlined string and the rest of the sentence: it is interpreted both as the internal argument of *perused* and the internal argument of *bought*. These dependencies are the ones of interest in studies of RNR – the one between the underlined material and the first conjunct in particular. It is the un-marked case when an internal argument appears adjacent to the verb that it is the object of. The non-canonical case is the one where it does not appear adjacent to the verb. For this reason, this paper concerns itself mostly with this second relation.

### 1.1.1 Categorical promiscuity

It is important to note how relatively free RNR is with respect to the element that enters into this one-to-many relation. This *shared element* seems to be able to be any sort of category as seen below:

- (2) a. *Ivy said, and Becky denied, that Iris had been there.*  
 b. *Ivy said that Becky, and Bruce said that Brit, should read the book.*

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<sup>1</sup> Further, as is to be expected with coordination, it is possible to iterate RNR conjuncts like in (i) below.

- (i) *Becky bought, Bruce perused, and Brit criticized the collection of short stories.*

For ease of exposition I refer to the first and second conjunct of RNR, but these should be read as non-final and final conjunct respectively for more generalizable accuracy.

- c. *Brit should, and Ivy must, attend the class.*
- d. *Brit sold, and Ivy donated, a book to the school.*
- e. *Ivan donated a book, and Ivy donated a chalkboard, to the school.*

Further, it need not be the case that the shared element is a traditional syntactic constituent. This is seen below in (3):

- (3) a. *Bruce thought Becky's, and Jill thought Jane's, father was sick.*
- b. *Bruce doesn't know whether to study micro- or macro-economics.*

Given the facts above, it seems clear that an explanatorily adequate approach to the construction must eschew reference to particular syntactic categories and perhaps even syntactic categories altogether.

### 1.1.2 Typological pervasiveness

An additional background concern of RNR is how typologically mundane it appears to be. It has been documented in a wide variety of languages across many language families. A small collection of examples is presented below:

- (4) German:  
*Hans soll und Ute muss heimfahren*  
 Hans should and Ute must home.go  
 'Hans should, and Ute must, go home.'
- (5) Tagalog:  
*Hindi nagluto' ng bigas at hindi kumain ng isda ang parehong babae*  
 not cooked ERG rice and not ate ERG fish ABS same woman  
 'The same woman did not cook rice and did not eat fish.'

(Sabbagh, 2008):

- (6) Mandarin:  
*John hui dan Mary bu-hui mai na-ben shu*  
 John will but Mary not-will buy that-CL book  
 'John will, but Mary won't, buy that book.'

- (7) Hindi:  
*Shiti-ne seb aur Ivan-ne nashpati khay-ii*  
 Shiti-Erg apple and Ivan-Erg pear ate  
 ‘Shiti [ate] an apple, and Ivan ate a pear.’
- (8) Japanese:  
*John-ni hanao, sosite Bill-ni tyokoreetoo Mary-ga okutta (koto).*  
 John-to flower and Bill-to chocolate Mary sent fact  
 ‘Mary sent flowers to John, and she sent chocolates to Bill.’ (Saito 1987)
- (9) Russian:  
*On ne soxranil, a vybrosil, pechen’e iz poezdki v Angliju.*  
 he not kept, but discarded, cookie from trip to England  
 ‘He did not keep, but rather threw out, cookies from a trip to England.’  
 (Asarina 2011)

Given the above facts, it is perhaps wise for theories of RNR to not hinge upon properties of language that are easily subject to variation. That is, if RNR were the result of nothing but language-specific grammatical properties, its cross-linguistic prevalence would need to be taken to be coincidental.

In short, RNR is very free as to that which can serve as shared element and is common across a typologically diverse set of languages. I take these to help to constrain the plausibility of any RNR analysis. A sufficiently explanatory RNR analysis will have this state of affairs as a predicted outcome.

### 1.1.3 Types of relation

In the RNR example in (1) we find an instance of what I will call *interpretation at a distance*. As opposed to the un-marked state of affairs where an internal argument arises in a position adjacent to its verb, here we find an internal argument appearing at an arbitrarily long linear distance away from the verb and a gap instead adjacent to it. Much like instance of *action at a distance* in physics, it is imperative to make sense of these sorts of long-distance interaction.

Syntacticians have devised a number of means to make interpretation at a distance less mysterious. In effect, they posit that the gap near the verb is not what it seems. Instead there is, or at some point in derivational history was, an instance of the element that is interpreted in the gap actually sitting in the gap site.



This sort of logic defuses the mystery, but there are still various ways this idea can be cashed out. There are two main ways of doing so. In the gap position there is either something that is inherently not-pronounced or something that is inherently pronounced, but made un-pronounced via some operation. Let's look at some examples of these.

There are certain instances of interpretation at a distance that have been more thoroughly studied than RNR. These include *wh*-dependencies, control dependencies, and ellipsis dependencies.

- (10) a. *What did Bruce suggest \_\_\_?*  
 b. *Becky wanted \_\_\_ to leave.*  
 c. *Ivy ate, but I don't know what \_\_\_.*

In (10a) there is a sense in which the *wh*-word *what* is interpreted in the object position of the verb *suggest*. In Chomskyan syntax, this relation has been derived via a movement operation which leaves behind either a co-indexed inherently unpronounced 'trace' or an otherwise pronounceable copy that has been made unpronounced:<sup>2</sup>

- (11) a. *What<sub>i</sub> did Bruce suggest t<sub>i</sub>?*  
 b. *What<sub>i</sub> did Bruce suggest ~~what~~<sub>i</sub>?*

Further, even if one assumes an analysis with inherently unpronounced elements, theories can differ as to the particular type of unpronounceable element. Take (10b) for example. The gap in this construction has been argued to be filled with a particular type of null element, namely a null pronominal anaphor PRO (as in Chomsky 1981). It has also been analyzed as involving the same sort of trace as in (11b) (as in Hornstein 1999). These are shown in (12) below. In (12a) there is a null element dependency but is not derived via movement, in (12b) the dependency is derived via movement.

- (12) a. *Becky<sub>i</sub> wanted PRO<sub>i</sub> to leave.*  
 b. *Becky<sub>i</sub> wanted t<sub>i</sub> to leave.*

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<sup>2</sup> I do not discuss non-Chomskyan long-distance dependencies like those in modern phrase structure grammars (Pollard and Sag 1994) and categorial grammars (Ades and Steedman 1982). The techniques proposed in these formalisms do not relevantly distinguish them from Chomskyan grammars as far as RNR is concerned.

Finally, there are analyses of the example in (10c) that have been argued to involve deletion of otherwise pronounceable elements as seen in (13) (Ross 1969; Merchant 2001) or the use of inherently un-pronounced elements (I use *pro* here) in the sense of Lobeck 1995.

- (13) a. *Ivy ate, but I don't know what ~~Ivy~~ ate.*  
 b. *[Ivy ate]<sub>i</sub>, but I don't know what *pro*<sub>i</sub>*

In short we have three basic syntactic tools for capturing interpretation at a distance. The first involves null elements (both inherent and not) derived via movement as in (11) and (12b). The second involves inherently null elements in non-movement relations like in (12a) and (13b). The third involves inherently pronounceable elements derived via movementless dependencies like in (13a). These effectively exhaust our traditional syntactic means of capturing interpretive dependencies and will in turn be used as potential analyses of RNR.<sup>3</sup> The main question vis a vis RNR can be posed as: which of the above dependencies does RNR pattern like? In the next section we will explore various answers to this question.

## 2 Previous analyses

In this section I will discuss the previous analyses of RNR. These analyses exploit the various means of long-distance dependency formation outlined in the previous subsection. In addition to those, RNR provides the option to straightforwardly capture the relation between the shared element and the second conjunct by means of simple complementation. This sort of local dependency will not play into the discussions much.

### 2.1 Movement dependencies

The earliest analysis of RNR going back to Ross 1967 involves syntactic movement of the shared material in an across-the-board fashion to the right (see also Postal 1974; Williams 1981; and Sabbagh 2007, 2008 as well as Gazdar 1981 for a GPSG

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<sup>3</sup> There is an interesting alternative analysis of RNR found in Peterson (1999) which argues that the second conjunct is parenthetical in nature (that is, not fully syntactically integrated into the structure). The arguments against the multidominance analyses below suffice to argue against this analysis as well.

analysis of the same sort). That is, at some stage of the derivation, the shared material shows up as two separate tokens, one in each conjunct. A movement operation takes these two and moves them derivationally simultaneously to a shared position where they are pronounced as a single element (traces are used here, but they are not crucial. Unpronounced copies would work just as well):

- (14) a. Prior to movement: *Becky bought [the books]<sub>i</sub> and Bruce perused [the books]<sub>i</sub>*  
 b. Post-movement: *[[Becky bought t<sub>i</sub> and Bruce perused t<sub>i</sub>] [the books]<sub>i</sub>]*

This approach captures the interpretation of the shared material in the first conjunct, because in some sense the shared material is *still there* in the first conjunct, albeit in the form of a trace or unpronounced copy of the vacated material.

This approach however runs into various problems (some more fundamental than others) that preclude it from being the correct analysis of RNR. One classic problem with this sort of analysis is that this movement is unlike traditional movement dependencies in that it is impervious to syntactic island violations. First noted in Wexler and Culicover 1980, this sort of asymmetry is seen in the examples in (15).

- (15) a. *\*It's [the collection of short stories]<sub>i</sub> that I met [<sub>island</sub> the man who wrote t<sub>i</sub>]*  
 b. *I met [<sub>island</sub> the man who wrote t<sub>i</sub>], and you met [<sub>island</sub> the woman who published t<sub>i</sub>], [the collection of short stories]<sub>i</sub>.*

Sabbagh 2008 presents a movement theory of RNR that explains away this asymmetry in convincing manner that relies on the rightwardness of the movement. While this approach saves the movement account from the asymmetries with respect to leftward movement, there remain asymmetries with respect to non-RNR rightward movement. In English it is not possible to move the object of a preposition rightwards as seen in (16a). However the object of a preposition may serve as the shared element in a RNR sentence as seen in (16b).

- (16) a. *\*Becky was talking to t<sub>i</sub> yesterday [an old man]<sub>i</sub>.*  
 b. *Becky was talking to t<sub>i</sub>, and Bruce was talking about t<sub>i</sub>, [an old man]<sub>i</sub>.*

The fact that RNR is impervious to not just leftward islands, but *any* islands, forces one to accept that movement cannot be the correct answer for RNR.<sup>4</sup>

<sup>4</sup> Further, Larson 2011 discusses an instance wherein the particular version of a given constituent can serve as the shared material when it otherwise cannot move.

Further, we saw above that a wide variety of elements can serve as the shared element. It is not the case the movement is so free. Non-constituents, as per classical constituency tests, cannot be moved. The sentence in (17a) provides an example of this. However, similar non-constituents can indeed serve as the shared element in RNR (17b).<sup>5</sup>

- (17) a. *\*It was [a package]<sub>i</sub> [out the window]<sub>j</sub> that Joe threw t<sub>i</sub> t<sub>j</sub>*  
 b. *Joe threw t<sub>i</sub> t<sub>j</sub> and Sally nudged t<sub>i</sub> t<sub>j</sub>, [a package]<sub>i</sub> [out the window]<sub>j</sub>*

Again we are compelled to conclude that movement as commonly understood cannot be the correct analysis of RNR. Outside of being a long-distance dependency, it simply shares none of its properties.

## 2.2 Non-movement dependencies

RNR does not show the symptoms of movement, yet there is another type of long-distance dependency that may fit the bill. The lack of movement constraints suggest that the relevant gap in RNR is not derived via something vacating it, but rather something residing there yet not being pronounced. Given the discussion in the previous section, this could possibly be an inherently null *pro*-form or some deleted instance of a sufficiently identical element in the subsequent clause (this latter option being vastly more popular, see Wexler and Culicover 1980; Kayne 1994; Wilder 1997; Hartmann 2000; Ha 2006; An 2007; and Ince 2009 among others). That is the example in (1) could be underlyingly represented as in (18a) or (18b).

- (18) a. *Becky bought pro<sub>i</sub> and Bruce perused [the collection of short stories]<sub>i</sub>.*  
 b. *Becky bought [the collection of short stories]<sub>i</sub> and Bruce perused [the collection of short stories]<sub>i</sub>.*

Each of these accounts would better the movement account. Not only do such accounts capture the fact that the shared element is interpreted in the first conjunct (again it is literally still there in a sense), but these accounts also explain the lack of movement restrictions. But this type of approach also runs into problems.

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<sup>5</sup> A reviewer points out that examples like in (17b) could be analyzed as a type of remnant VP movement à la Müller 1996. Were this the case, the asymmetry of (17a,b) would still need explanation.

First, the pro-form account fails very simply in that if it were true it would require a large array of null elements otherwise unattested in languages with RNR. There would need to be a null pro-form corresponding to every element that can serve as the shared material and as we saw above, that list is rather unconstrained. It is eminently unexplanatory to posit null elements specially for RNR.

Further, positing such elements would make false predictions. English for example does not freely use null internal argument pro-forms even when the overt counterpart is very salient:

(19) *Becky finally bought [the car]<sub>i</sub>. \*Roger inspected pro<sub>i</sub>*

Deletion accounts stand a better chance in being freer with what it can apply to, but they succumb to similar problems. Again, RNR can involve object nominals as the shared material, but ellipsis in English simply cannot. This can be seen by taking the example above in (19) and ‘re-analyzing’ it as an instance of ellipsis:

(20) *Becky finally bought [the car]<sub>i</sub>. \*Roger inspected [~~the car~~]<sub>i</sub>*

Just as we do not want to allow a large array of pro-forms proprietary to RNR, so too is it unenlightening to posit novel forms of ellipsis that are also proprietary to RNR. In addition to object nominals other elements can serve as RNR shared material that cannot be elided. This can be seen in the contrasts below:

(21) a. *\*Lana conversed with Becky and Ivy conferred ~~with Becky~~.*  
 b. *Lana conversed ~~with Becky~~ and Ivy conferred with Becky*

(22) a. *\*Lana sent flowers to Jill and Becky handed ~~flowers to Jill~~.*  
 b. *Lana sent ~~flowers to Jill~~ and Becky handed flowers to Jill.*

There are other arguments against a deletion account of RNR (see Abels 2004 for a good compendium), but this problem is the most severe. Movement accounts of RNR fail because RNR elements can do what moved elements cannot and deletion accounts of RNR fail because RNR elements do what deleted ones cannot.<sup>6</sup> There is no way around this sort of problem outside of dull stipulation.

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<sup>6</sup> Another logical possibility is that RNR is derived via ellipsis when ellipsis is a viable and via movement when movement is possible. The purview of each derivation is thus smaller than a monolithic approach to the construction would require. This sort of God-of-the-gaps strategy has been pursued by Barros and Vicente 2011 for various analyses to RNR. Larson 2012 offers criticism of this approach on empirical grounds.

### 3 Contingency plans

In the previous section I argue that our traditional syntactic means of capturing interpretation at a distance are insufficient to explain the nature of RNR. RNR simply looks different. This leaves us with, to my mind, three options:

- I RNR involves not a syntactic, but a semantic type of relation.
- II RNR involves a non-traditional type of syntactic relation.
- III RNR works in ways that we do not currently have the means to explain.

In this section I explore the first two options and show that we are forced to adopt the third option as a last resort.

#### 3.1 A semantic dependency

In the previous section we saw that our traditional syntactic tools could not capture the relevant RNR dependency. This does not mean however that we have no traditional tools left. It could be the case that while there is no *syntactic* relation between the shared material and, say, the first conjunct, there is indeed a non-syntactic, *semantic* dependency between them. After all, the main motivation in the first place for even looking for an analysis of the dependency was that there is something interpreted in the first conjunct. It could be that all that intuitive interpretation amounts to is a solely semantic dependency.

In semantic theory there is one way to represent long-distance dependencies: scope. For example, in *wh*-question formation, the dependency between the *wh*-word and its thematic position is represented semantically via an operator corresponding to the *wh*-word taking scope over a variable corresponding to the site of the trace:

- (23) a. Syntactic form: *What<sub>i</sub> did you say t<sub>i</sub>?*  
 b. Semantic form: *for what x [you said x]*

This *wh*-operator arrived in its scope-taking position via overt movement in the syntax, but this is not necessary. Scope taking elements can do so without moving overtly as seen in (24). Here, *everyone* takes scope over *someone* though it does this without corresponding overt syntactic movement

- (24) *Someone loves everyone* (with the interpretation that everyone is such that someone loves them)

This is simply to show that it is not impossible that RNR might be derived by means of the shared element taking scope over (and binding) a variable in the semantics. It need not be the case that this semantic variable have an overt syntactic counterpart and perhaps its general applicability it masked by a lack of non-overt movement derived instances where it can be bound.

While not impossible, this account cannot work. For one, it is not the case that the shared elements in RNR be things that can bind variables. They need not be inherently quantificational in the sense of Lasnik and Stowell 1991. Further, the position from where the semantic binding arises overtly is not such that it can bind things in the position where the gap arises. Take the example in (25) for instance. Here the object of the second conjunct is a potential semantic binder and the object of the first clause is a potential semantic bindee. However, the bound reading of the pronoun is not possible:

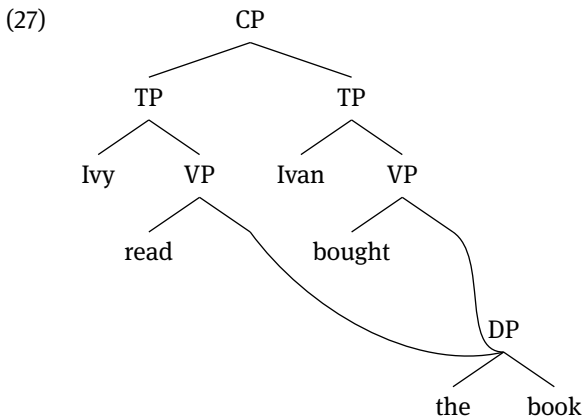
- (25) *Jerry caught him, and Ivy reprimanded every boy.*

Given this restriction on binding, it is quite implausible that such a semantic analysis of RNR is likely to be correct. It would require a means of scope-taking proprietary to RNR.

### 3.2 A new syntactic dependency

Our traditional tools, both syntactic and semantic, are not in a position to represent RNR accurately. One remaining option is to maintain that RNR is derived as a syntactically-mediated dependency, just of a non-traditional sort. In fact, such an approach has been proposed in the literature. First proposed for RNR by McCawley 1982, an analysis in which the shared material of an RNR sentence is immediately dominated by two distinct mother nodes avoids the problems met by movement and deletion accounts. Call this the multidominance approach (MD). An example of this for the sentence in (26) is roughly represented like in (27).

- (26) *Ivy read, and Ivan bought, the book*



In the representation in (27) it is clear that the shared material has neither moved nor undergone any sort of deletion. This allows us to explain why there are no normal movement restrictions on RNR and also that otherwise un-deletable elements can be right node raised. True, this sort of tree transparently violates the classical single mother condition, but Citko 2005 shows that given certain commonly held assumptions, there is no reason to rule out MD structures in principle. As long as some sort of linearization scheme forces the shared material to arise overtly in the second conjunct and not the first, the basic explananda of the construction are accounted for: there is a gap in the first conjunct that bears the same sort of interpretation as a string in the second conjunct.

In light of the problems that movement and deletion accounts face, numerous researchers have followed McCawley's lead in exploring MD as an option for RNR (see Phillips 1996; Wilder 1999; de Vos and Vicente 2005; Gracanin-Yukse 2007; Bachrach and Katzir 2009; Grosz 2009; and Larson 2009 among others). However, there are still problems with this last best option.

The problems with MD approaches to RNR are of a different type than the ones I have presented above for movement and deletion accounts. Deletion and movement are venerable operations/theoretical dependencies and as such have accrued a variety of discernable characteristics (island sensitivity, categorical constraints, etc). In expanding the syntactic toolkit, researchers proposing MD accounts cannot rely on simple diagnostics for when a node is multiply dominated or not. Its properties are not well known or defined. Further, it is not known whether something like MD actually 'exists' as licit or empirically justifiable type of dependency (see Larson 2011 for some criticisms).

The best recourse in this situation is to look for that which is knowable about MD relations: theoretical properties that MD entails and that are better under-



stood. One such property is that of c-command. The representation in (27) clearly indicates that the shared material is c-command both by elements in the first conjunct and elements in the second conjunct. As such, we should expect the overt instantiation of c-command-mediated relations to manifest themselves equally between the shared material and each conjunct. That is, relations that are grammatical or not depending on c-command should be active in both conjuncts equally.

For example, if we take c-command as a proxy for scope, it should be the case that negative polarity items should be able to be licensed by negation in either conjunct. First, it is clearly the case that when both conjunct contain a relevant type of negative element, a negative polarity item in the shared element is licit. This is shown in (28). Further, when neither conjunct contains a negative element, the negative polarity item is not licensed as seen in (29). These facts have been previously discussed by Kayne 1994 (see also Phillips 1996; Hartmann 2000; and Sabbagh 2008).

(28) *Becky didn't buy, and Bruce didn't sell, any books about trees.*

(29) *\*Becky bought, and Bruce sold, any books about trees.*

However, Kayne (1994: 67) notes that there is an asymmetry vis a vis negative polarity item licensing in RNR. When the negative element is found in the first conjunct, the negative polarity item in the shared material is not licensed whereas when the negative element is in the second conjunct it is. This is seen in the pair of sentence in (30).

- (30) a. *\*Becky didn't buy, and Bruce sold, any books about trees.*  
 b. *Becky bought, but Bruce didn't sell, any books about trees.*

This pattern is unexpected under a straightforward interpretation of the MD account. The shared material containing the negative polarity item is in the identical structural relation with respect to the various conjuncts. As such, the sentence in (30) should be predicted to either be equally acceptable (the most plausible expectation) or equally unacceptable (perhaps if this sort of licensing can be ruled out by its lack of applicability in at least one conjunct). This is prima facie evidence against the MD account. It should be the case that these structural concerns are symmetrical between conjuncts, but they are not.

This sort of asymmetry abounds in RNR. For example, in Brazilian Portuguese it is the case that certain verbs require that clauses that they select for be of a certain type. Verbs like 'want' demand that their embedded clauses not be marked as indicative. This is seen in (31) below:

- (31) \**Maria quer que Ana vai viajar*  
 Maria wants that Ana will.INDIC travel  
 ‘Maria wants that Ana will travel’

Other verbs, such as a the factive ‘regret’ allow indicative marking in their embedded clauses:

- (32) *Maria lamenta que Ana vai viajar.*  
 Maria regrets that Ana will.INDIC travel  
 ‘Maria regrets that Ana will travel.’

This constraint on the use of the indicative holds when ‘want’ is the second conjunct verb, but not when it is the first conjunct verb. This is seen in (33) below.

- (33) a. \**Pedro lamenta, mas Maria quer que Ana vai viajar*  
 Pedro regrets but Maria wants that Ana will.INDIC travel  
 ‘Pedro regrets, but Maria wants, that Ana will travel.  
 b. *Pedro quer, mas Maria lamenta que Ana vai viajar*  
 Pedro wants but Maria regrets that Ana will.INDIC travel  
 ‘Pedro wants, but Maria regrets, that Ana will travel.

Again, it should be the case, under an MD account, that these two sentences in (33) should be judged equally acceptable or unacceptable.

One final instance of asymmetry in RNR (though others are easily conceivable) comes from constraints on *wh*-dependencies. Whitman 2002 was the first to notice a distinction in acceptability in what I will called coordinated-*wh* questions like (34) below.

- (34) a. *What and when did Becky eat?*  
 b. \**What and when did Becky devour?*

As seen above, optionally transitive verbs like *eat* are licit in this construction, while obligatorily transitive verbs like *devour* are not. There have been various analyses of this construction in English that attempt to explain this difference (see Gracanin-Yukse 2007, Citko and Gracanin-Yukse 2013, and Larson 2012). Important here is that the basic set-up to this construction is similar to RNR. It is possible to ‘expand’ either side of the coordinator to get an RNR sentence, and when this is done the distinction in verb-type remains:

- (35) a. *Bruce wondered what, and Becky wondered when, Ivy would eat.*  
 b. \**Bruce wondered what, and Becky wondered when, Ivy would devour.*

Under the MD account, the particular order of the conjuncts should not matter. When there is an optionally transitive verb in the shared material, the sentence should be acceptable no matter the conjunct order. When there is an obligatorily transitive verb in the shared material, the sentence should maintain the unacceptability. This is not the case. As seen in (36) below (and echoing results found in Lewis, Larson, and Kush 2012), both verb types are acceptable with the inverted conjunct order:

- (36) a. *Becky wondered when, and Bruce wondered what, Ivy would eat.*  
 b. *Becky wondered when, and Bruce wondered what, Ivy would devour.*

There is an asymmetry between sentence (35b) and sentence (36b) that is not predicted in MD accounts.

The accumulation of these and other asymmetries undermines the attractiveness of MD accounts to RNR. To the extent that MD makes clear predictions (ones concerning selection, c-command, and so forth) it makes the wrong ones. Since these are our only real tools to judge it, left without a solid explanatory account of RNR. That is, even expanding our toolkit so as to include new types of relations, RNR is still puzzling.

### 3.3 Another new syntactic dependency

There is one final novel, non-traditional means of deriving relations that may be applicable to RNR. This is *sideward movement* like that proposed in Nunes 2004. Sideward movement is not subject the same sort of constraints that traditional ‘upward’ movement is. For instance, it can stem from within an island without effecting unacceptability.<sup>7</sup> The parasitic gap example can be analyzed as involving sideward movement of the *wh*-word from  $t_1$  to  $t_2$  even though  $t_2$  is island-internal.

- (37) *What did Ivy read  $t_1$  [<sub>island</sub> before burning  $t_2$ ]?*

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<sup>7</sup> To be precise, sideward movement avoids island constraints by vacating structure before that structure ‘becomes’ an island for movement. See Nunes 2004 for details.

We saw above that RNR is impervious to island restrictions. Perhaps it is because the shared element has undergone sideward movement from the first conjunct as depicted in (38).

(38) *Becky bought  $t_i$  and Bruce sold [the collection of books] $_i$*

This logical possibility has been less studied than the MD approach (see Fetters 2011 for a preliminary investigation), but it captures much of the same data. There are nevertheless clear problems with such an approach given the terms that Nunes lays out for sideward movement.

For the trace within the island ( $t_2$ ) in (37) to be licensed it must be the case that a co-indexed copy of it be in a certain configuration with respect to it. Nunes posits that as long as the relevant *wh*-word *c*-commands that trace at the end of the derivation, the trace is licit. This is quite clearly not the case for RNR in a sideward movement account. The moved element never comes to *c*-command the trace of sideward movement and as such, such an account of RNR fails on its own terms.

### 3.4 Interim conclusion

RNR is not readily captured by the traditional syntactic dependencies of movement and deletion. This leads us to explore other avenues of analysis: semantic relations and non-canonical syntactic ones. We have seen unfortunately that even these less constrained contingency plans are similarly not up to the task to the extent that we can test them. This leaves the study and analysis of RNR in an interesting place with respect to grammatical theory: There is currently no satisfying analysis of the construction and it is essentially linguistically mysterious. Option three stated above seems to be the only assessment left: RNR works in ways that we do not currently have the means to explain.

In the next section I offer a potential alternative avenue of analyzing RNR that accommodates the apparent freedom of its relevant dependency while distinguishing it from traditional syntactic dependencies.

## 4 An extra-syntactic dependency

In the above section we have seen that capturing the interpretive dependency between the shared material and the gap in the first conjunct is not possible with traditional tools such as movement, deletion, and scope. Nor is it the case that

expanding our syntactic means will adequately explain the construction's properties. The gap in the first conjunct cannot be a trace. It cannot be an elided element. It cannot be a null operator. It cannot be there syntactically and pronounced elsewhere. This exhausts our options and we are left saying that the gap in the first conjunct contains literally nothing. That is, the correct syntactic representation for an RNR sentence like (39a) is like in (39b). The verb in (39b) goes without an object in the syntax.

- (39) a. *Becky bought and Bruce read the books*  
 b. [*Becky bought*] and [*Bruce read the books*]

The second conjunct in RNR is a fully complete clause with a verb and its attendant arguments. The first clause is incomplete. Its verb is obligatorily transitive yet there is no internal argument, nor any trace of one.

This type of representation avoids the shortcomings of the previous ones. We do not expect any syntactic relation at all between the gap and the shared material because there isn't one. Not only does it avoid these problems, it is also the case that this analysis is forced upon us as the previous failed approaches exhaust all possible other options.

It must however be the case that when a given element has no complement (as is the case with the verb *bought* above) that this does not necessarily lead to an ungrammatical sentence (as in Chomsky 2004). Subcategorization restrictions must hold only when there is a complement that they can hold of. Since there is no such complement in the first conjunct of (39), the sentence is not possibly ruled out due to subcategorization restrictions. Again, this sort of statement must hold given the fact that it seems that nothing can reside in the object position of the first conjunct's verb.

The main issue left to address is how this emptiness comes to bear the interpretation of the internal argument in the second conjunct.

#### 4.1 Deriving the interpretation

At a glance, it is not entirely apparent how the first conjunct is interpreted as involving the shared material under this account. For the previous accounts, this interpretation assignment works by transparent analogy to any otherwise normal, non-coordinated sentence. The shared material is actually *in* the first conjunct at every stage of the derivation. In this sparse account however, it is never there and it is unclear how any relation is established between, say, a verb in the initial

conjunct and an object in the shared material. There is no direct structural relation between the two.

I posit that sentences with missing arguments (like RNR) can be acceptable so long as the missing argument can be inferred in a certain way. This inference will rely in large part on Herburger's (1997, 2000) study of focus and its effect on event semantics. I suggest that the shared material of an RNR sentence is interpreted as part of the restrictor of an event quantifier, thus causing the shared material to be presupposed. This presupposition will allow the content of the shared material to be inferred into both conjuncts.

This sort of analysis relies on Neo-Davidsonian conception of semantic representation that I will dub Predicate Conjunction (PC) in the vein of Pietroski (2005) as well as Higginbotham 1986, Parsons 1990, and Schein 1993 among others. In this view verbs do not serve as functions nor nouns as arguments. Rather, each is a predicate of an event variable. For example, a sample sentence like (40a) below would have PC logical form like (40b) and an English paraphrase like that in (40c).

- (40) a. *Ivy ate an apple in the park.*  
 b.  $\exists e\{\text{reat}(e) \ \& \ \text{Agent}(\text{Ivy}, e) \ \& \ \text{Theme}(\text{an apple}, e) \ \& \ \text{in-the-park}(e)\}$   
 c. There was an event of eating with Ivy as its agent and an apple as its theme that took place in the park.

In the next subsection I will explore how this sort of semantic representation could be used to capture missing arguments in a test construction before moving on to RNR in a subsequent subsection.

## 4.2 Missing arguments in Edo

A test case of this “missing argument” situation in PC-style semantic composition can be found in Edo double verb constructions. The sentences, like that in (41) and analyzed by Baker (1989) as (42), involve null coordination and a null *pro*.

- (41) *Ozo gha le evbare re*  
 Ozo will cook food eat  
 ‘Ozo will cook food and eat it’

- (42) *Ozo will cook food<sub>i</sub> and eat pro<sub>i</sub>*

The sentence above has some interesting and severe restrictions on its interpretation. For one, sentences in this mould can only have the interpretation in which the cooking was done with an eye towards the eating. As Pietroski (2002) puts it, the sentence must describe a single event that begins with a cooking and ends with an eating. Second, the food that is to be cooked must be the self-same food that is eaten.

Pietroski develops a PC analysis of how this *pro* is interpreted given the fact that the sentence describes only one single event. In short, the *pro* needs to somehow be interpreted as necessarily co-indexed with food. But Pietroski wonders how this is to be done given that there is no c-command relation between the two. Even if there were c-command between the two, it is unclear how this would be guaranteed.

Pietroski suggests that we take it as a premise that an event can only have a single Theme. The sentence has one clear Theme: the complement of cook. That complement is then locked in as the Theme of the sentence and any other argument in a Theme position, say *pro*, must be interpreted as the same thing. And this is the reading we get. Thanks to the fact that there is only one event described in this sentence, the *pro* that is eaten must be the food that is cooked. This captures the meaning of *pro* in a simple syllogistic way.

However, Baker notes that there is no independent evidence for *pro* in Edo. It's a relatively ad hoc entity to posit in this position. Suppose we were to eschew ad hoc entities. We might see what goes wrong by dropping *pro*, like in (43).

(43) *Ozo will cook food eat*

The same mechanism that gives *pro* its interpretation when we had it can save the verb's requirement of a Theme. This sort of inferential mechanism presumably resides outside semantics proper and its underlying logic will serve as a guide through the discussion of RNR in the next subsection.<sup>8</sup>

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<sup>8</sup> Not just any sort of inference is possible. I maintain that the inference here relies on the existence of an LF entity that serves as the basis for the inference. That is, a mentioned or implied object from some previous discourse would not count. If an apple had previously been mentioned or pointed at, it would not exist in the LF of the sentence in question and thus not count a potential basis for the inference. This serves to rule out examples of cross-speaker RNR like in (i) as a reviewer notes:

- (i) \*A: *John bought*  
 B: *and Mary sold a car*

### 4.3 RNR logical forms

Much like in the Edo case, I argue that there is a missing argument in RNR. This time however there is nothing obvious to force the interpretation per se. Unlike the Edo case, the sentence in (44) need not necessarily begin with cooking and end in eating.

(44) *Ivan cooked, and Ivy ate, a lot of food.*

It could be the case that Ivy ate a lot of food on Sunday and Ivan cooked a lot of food on Monday. It follows that the food need not be the self-same food as it was in the Edo case. Ivan could have cooked a lot of food completely unaware that Ivy was concurrently eating a lot of food across town. The interpretations of (44) are much freer than in the Edo case.

Remember that there was a mere single event in the Edo case allowed for syllogistic guidance in determining the missing argument's interpretation: There is one Theme per event, food is the Theme of this event, eat conceptually requires a Theme, food is that Theme. We no longer have that guidance in these cases. This suggests multiple events. In fact, Schein (2012) analyzes what I consider to be a RNR sentence as involving two events. The sentence in (45) must involve two events because, as Schein argues, a clumsy event cannot also be a graceful one.

(45) *Jones gracefully, and Godfrey clumsily, buttered the pastries.*

As a result, sentence (44) would have a LF something like that in (46). That is to say: There was a cooking event with Ivan as its agent and there was an eating event with Ivy as its agent and a lot of food as its theme.

(46)  $\exists e \exists e' \{ \text{Agent}(e, \text{Ivan}) \ \& \ \text{cooking}(e) \ \& \ \text{Agent}(e', \text{Ivy}) \ \& \ \text{eating}(e') \ \& \ \text{Theme}(e', \text{a lot of food}) \}$

The above LF is to be amended in the next section, but for now, it is heartening that there are multiple events in the LF. That there are multiple events correlates with freer interpretation, but it means that we are going to have to determine the

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This holds because, as we will see below, the mechanism by which the shared material is introduced into either conjunct relies on that shared material restricting an event quantifier. Part A of the conversation in (i) qua completed sentence already lacks that event restriction (there is no material to restrict it) and as such cannot bear the RNR interpretation.



missing RNR argument in a different fashion that in the Edo case. There is no longer the syllogistic guidance. In what follows, I propose a means to determine the missing argument in a way that closely mirrors the Edo way.<sup>9</sup>

#### 4.4 RNR presupposition

In the above subsection, we were left with a puzzle. How is the shared material to be interpreted in the first conjunct. The novelty of this approach in general is that the first conjunct is not fully formed in the syntax. Something must be done outside of the syntax then.

A signature aspect of RNR has been ignored in this essay so far. As noted by Hartmann (2000), the shared material in RNR sentences must be somehow presupposed. That is, as a response to the question in (47) a RNR sentence is unacceptable. Compare this with the question-answer pair in (48). Here only the shared material finds antecedence in the question.<sup>10</sup>

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<sup>9</sup> An interesting sidenote, it seems that if the coordination in a potentially RNR sentence is low enough, its interpretation mirrors that of the Edo double verb construction, see (i):

- (i) *Ivan cooked and ate a lot of food.*

Though it could be argued that this is mere verb coordination and not an instance of RNR. A reviewer notes that at least as far as intonation goes, sentences like (i) above do not pattern like RNR sentences. It may be the case that the correlation noted here is spurious.

<sup>10</sup> Note that an object *wh*-question is sufficient to license an RNR response (adapted from Hartmann).

- (i) a. *What did Ivy buy and Iris read?*  
 b. *Ivy bought, and Iris read, Pale Fire*

Erteschik-Shir (1997:105) argues that *wh*-questions introduce discourse referents of sorts. They restrict the set of possible referents presented by the *wh*-word. This is arguably sufficient to license the novel shared material. As a reviewer points out, this undermines the notion that the requirement on strict presupposition of the shared material may not be the whole answer. The truth of the matter may not be so simple-minded, but for lack of space, I must set aside this potential objection.

- (47) a. *What did Ivy and Iris do?*  
 b. *\*Ivy bought, and Iris read, Pale Fire*
- (48) a. *What was done with Pale Fire?*  
 b. *Ivy bought, and Iris read, Pale Fire*

The shared material must then in some way be presupposed, topic material that finds an antecedent in the discourse. Herburger (1997, 2000) handles such material in an interesting way. She argues that non-focused material in the scope of an event quantifier is obligatorily interpreted as part of the restrictor to that quantifier. That is, for a sentence like (49) in which *wrote poetry* is the element unfocused in the sentence, an event-semantic representation of the sentence would be like in (50)

(49) *ROSALIA wrote poetry*

(50)  $[\exists e: \text{write}(e) \ \& \ \text{past}(e) \ \& \ \text{Theme}(e, \text{poetry})] \ \{\text{Agent}(e, \text{Rosalia})\}$

The above can be translated into English as something like: Some event of writing poetry in the past was such that its agent was Rosalia. Rosalia is then entailed as the agent of the poetry-writing. She is the agent of events restricted to those of past poetry-writing. The restrictors can be interpreted in the relevant roles despite this not being directly represented as complements to their respective verbs.

We can capture this inference without necessarily affixing the restrictor material with thematic roles. Take for example (51) and a possible semantic representation like in (52).

(51) *ROSALIA WROTE poetry*

(52)  $[\exists e: \text{poetry}(e)] \ \{\text{Agent}(e, \text{Rosalia}) \ \& \ \text{past}(e) \ \& \ \text{write}(e)\}$

This would be translated as: There is some event involving poetry such that its agent was Rosalia and it was a past writing. Here, the inference that the poetry was the theme of the event is nowhere explicit. I contend that this is nevertheless retrievable via extra-grammatical accommodation (in the sense of Stalnaker 1979) rather easily. If Rosalia was the agent in an event of writing and some poetry was involved, it ought to be the default case that the poetry was the theme of that event. The poetry having any other thematic role would be quite odd, and while not ruled out grammatically, will hardly ever arise.

How to make this work for our RNR cases? First, recall that the shared material in RNR is presupposed and as such under the Herburger approach will be part of the event quantifier restrictor.<sup>11</sup>

Further, to ensure that the shared material is interpreted in both conjuncts, I follow Schein (1993) in invoking the notion of a plural event variable (see also (Gillon 1990; Pietroski 2005; Schein 2006; Schwarzschild 1991, 1996). Otherwise, the shared material would need to be interpreted as predicated of one of the events or the other, but not both. Again, note that it is not strictly necessary to specify thematic roles in the restrictor if they can be accommodated elsewhere. That said, a sentence like (53) could then have a semantic representation like in (54):

(53) *Ivan bought, and Ivy read, Pale Fire.*

(54)  $[\exists E: Ee \ \& \ Ee' \ \& \ \text{Pale Fire}(E)] \{ \text{Agent}(e, \text{Ivan}) \ \& \ \text{past}(e) \ \& \ \text{buy}(e)$   
 $\ \& \ \text{Agent}(e', \text{Ivy}) \ \& \ \text{past}(e') \ \& \ \text{read}(e') \}$

Translated: There are some events of which one is event-A and one is event-B and these events involved Pale Fire such that event-A's agent is Ivan and it is a past buying and event-B's agent is Ivy and it is a past reading.

Given the sort inferential accommodation suggest above, it is possible to reconstruct Pale Fire into the first conjunct despite its never having been there syntactically. The events all involved Pale Fire and one of them was a buying with Ivan as the agent. It is rather intuitive that Pale Fire be the thing that Ivan bought. Pale Fire was necessarily involved in that event and could hardly make sense with any role other than that of Theme.<sup>12</sup>

This then handles one of the trickier problems with the present approach. Under this semantic account, there is no asymmetry in the inference and thus no privilege to being syntactically related to a given conjunct or not. Both conjuncts are supplied an argument via this inference.

Further, it is the case that the shared material can superficially bear an arbitrary amount of different thematic roles (55) and (56), and this approach is well-

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<sup>11</sup> It may be the case that more than just the shared material goes un-focused, but this is not important in the present account.

<sup>12</sup> The analysis as presented here concerns itself solely with shared *arguments*. The same mechanisms should hold for non-arguments and non-constituents. Further, a prediction is made: only to the extent a given element is represented in a sentence's event representation should it have an affect on RNR. Perhaps instances of *of*-insertion would be an instance of this:

(i) *Becky heard, and Bruce saw a picture, of Mary*

suited to accommodating this. The shared material can be divorced from thematic roles and we can avoid requiring a single argument to formally bear multiple thematic roles.

(55) *Ivan saw, Ivy was seen by, and Iris gave a flower to, the large police officer.*

(56) *Iris expected, and soon enough there arrived, a tall dark stranger*

That is, for the above sentence the shared material has no particular thematic role at LF and as such it can be inferred into each conjunct without any contradiction.

## 4.5 Interim conclusion

In this section I have proposed a means to derive the interpretation of RNR sentence without recourse to a syntactically- or semantically-mediated dependency between the shared material and the first conjunct. Instead, the shared material comes to be presupposed in both conjuncts despite only being syntactically there in the second one. This presupposition effects the correct interpretation without any explicit formal dependency.

This is however merely a possible attempt made in light of the deeper failures of the previous accounts. As is generally the case with scientific inquiry, the analysis of the interpretive dependency given here will surely be shown wrong, but the syntactic background for that analysis seems unavoidable. That is, the fact that the first conjunct cannot hold the shared material must be true if we want to maintain our standard conceptions of syntax.

## 5 Constraining the dependency

In the previous section I argued against traditional accounts of RNR in favor of one that was free of their restrictions. This seems necessary for RNR but it introduces a very powerful means of dependency formation into the grammar. This dependency holds irrespective of constraints such as islandhood, deleteability, and scope. This raises the question of how this new type of dependency is to be reined in so as not to apply across the board. In this section I explore how to quarantine it to RNR-like constructions.

## 5.1 C-command

It is clear that the dependency between the shared material and the first conjunct gap can span an island boundary. Why is it not the case that they same sort of dependency can be formed in all instances of cross-island dependency? Why is the sentence in (57) unacceptable?

(57) \**Becky talked to yesterday the old man.*

In (57) the relevant dependency between *the old man* and the complement position of the preposition is blocked for some reason. This is unexpected if all that were required for a dependency to be made was the correct sort of presupposition. Extraposition cases like that one above work similar to RNR in that the rightward element is in some sense presupposed and as such this should work just like RNR. We cannot allow it to be the case that the RNR-relation can apply here.

I posit that syntactic relations enjoy a sort of primacy in grammatical relations and that if a syntactic relation is possible, it must hold. A syntactic relation is possible if the two related elements are in a c-command relation with one another. If we assume that the sole structure building mechanism in syntax is Merge (see Chomsky 1995 and Hornstein 2009) then syntactic dependencies will always necessarily result in c-command. When this c-command relation holds, no other sort of grammatical mediation can supersede it. This means that if a grammatical relation holds across and island boundary, it will lead to an island violation. When there is no c-command relation, no syntactic dependency is forced and as such the dependency cannot possibly fail on syntactic grounds.

This is what is happening in RNR. There is no possible syntactic relation (no c-command) and as such islands are irrelevant. In the example in (57), c-command does hold, a syntactic relation is forced across a movement barrier and the sentence is ruled out. This sort of constraint seems intuitive. C-command in the current state of the theory is THE fundamental long-distance syntactic relation and for it to take precedence over the freer presupposition-based relation in RNR is not too radical.

## 5.2 Deletion

Constraining this RNR-type dependency to just non-c-commanding relations is insufficient. We need a means to rule out the RNR-type dependency for relations that would otherwise be ruled out by constraints on deletion. For example, it must

be possible to rule out sentences like (58) where there has been deletion of an object DP, impossible in English.

(58) *Joey petted the dog. \*Becky fed ~~the dog~~.*

Under the analysis of the meaning of RNR presented here, it is not immediately clear why (58) should be unacceptable given that the dog in the sentence is plausibly presupposed and liable to be interpreted in the gap position following the verb *fed* without any restrictions.

I posit that the reason that the RNR-type relation cannot hold in (58) is that a deletion analysis is forced. When it is forced and not possible, the result is unacceptable like in (58). When it is forced and is possible, the result is something like (59) which is acceptable.

(59) *Joey can swim. Becky can't ~~swim~~.*

That which forces the deletion is 1) the lack of c-command between the two elements (otherwise a syntactic movement relation would be forced) and 2) the fact that the overt antecedent precedes its null correlate. If these two conditions hold, a deletion analysis must hold and can potentially lead to ungrammaticality if the to-be-deleted element is of a type that is not deleteable in that language.<sup>13</sup>

RNR evades these strictures because its directionality differs. The overt element comes after its null counterpart. As such, so deleteability restrictions hold for it. This is seen in (60). When the conjuncts are in opposite orders, deletion must hold and the sentences thus differ in grammaticality in (61).

(60) a. *Joey petted, and Becky fed, the dog.*  
 b. *Joey can, but Becky can't, swim.*

(61) a. *\*Joey petted the dog, and Becky fed.*  
 b. *Joey can swim, but Becky can't.*

This stricture is admittedly less natural than the one concerning c-command (though it finds an ancestor in the literature in the form of the Backward Anaphora

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<sup>13</sup> In order to avoid circularity of reasoning, the class of deleteable elements for any given language should be determined based on uncontroversial cases of the sort that pass criteria such as those laid out in Hankamer and Sag 1976.

Constraint of Langacker 1969 and Ross 1967) but it suffices to adequately quarantine the very free sort of relation necessary for RNR.<sup>14</sup>

In short, the RNR-type relation based in large part on presupposition is essentially a last option when more primary relations are not applicable. Again, it is important to note that inapplicability does not mean ‘runs afoul of strictures’ but rather that the strictures (such as islandhood) cannot possibly apply. The relation in RNR is simply of a particular type that is not within the purview of traditional syntax and semantics. Given this, a freer option can hold. In a sense, the initial failures of syntax and semantics with respect to RNR end up forcing us to posit that they are all the more central. They hold when possible and only when not possible does this other dependency hold.

## 6 Conclusion

In this paper I have argued that RNR poses deep problems for modern syntactic theory. Without recourse to narrowly construction specific mechanisms, our means of capturing the relevant interpretative dependency in RNR fail. It is not the case that they fail on superficial grounds, but rather fundamental ones that cannot easily be explained away. For this reason I posit that there is in fact NO syntactic relation between the shared material and the gap site because there cannot possibly be one.

This leads to a question as to how the meaning of RNR sentences is derived. I have offered a possibility that relies on independent assumptions about the nature of non-focused elements and their role in RNR. Given certain assumptions it is possible to say that the shared material is interpreted as shared in virtue of being restricted in to the event that the first conjunct describes. This sort of restricting in is very free and not subject to locality constraints.

This non-syntactic relation is so free that it must be reined in so as not to rule in every possible dependency that would otherwise be ruled out on syntax-internal grounds. This led me to posit a few conditions under which movement or deletion relations must hold. When these are not applicable, the freer relation can potentially hold.

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<sup>14</sup> The two restrictions on the applicability of the RNR-relation do not crucially rely on coordination and as such we should expect to find RNR-like relations elsewhere. One such candidate can be found in relative clauses like in (i) below from Chaves and Sag 2007:

(i) *The people who hate are in fact not very different from the people who love George W. Bush.*

Whatever the true full account of RNR is, it will play an important role in grammatical theorizing. Either it is the case that we need to re-think our notions of syntactic dependencies or, as I have attempted here, investigate novel means of dependency formation that hold in the absence of traditional ones.

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# Parenthesis: Fundamental features, meanings, discourse functions and ellipsis

**Abstract:** The contribution focuses on spoken language and, initially, reviews fundamental features of parenthesis. Secondly, it deals with the meanings and discourse functions of parenthetical sequences. Thirdly, it analyses parenthesis in the light of current characterisations of ellipsis. Most linguists agree that parenthesis is a communicative strategy whose motivation is connected with an additional piece of information. The introduction of an additional piece of information causes a disruption. By providing information in a position maximally convenient for the speaker but at the cost of processability for the hearer, parenthesis violates the maxim of manner and hence the cooperative principle. A lot of different meanings and discourse functions of parenthetical sequences have been hypothesised. The contribution proposes a distinction between, on the one hand, parentheticals expressing a proposition and a speech act that are separate and outside of the host's speech act and, on the other hand, parentheticals expressing a proposition that acts on the host's proposition and within the host's speech act. The analysis of parenthetical incompleteness phenomena shows that there are at least three types of parenthetical ellipsis, one of which challenges the common understanding of ellipsis.

**Keywords:** communicative strategy, constructional pattern, cooperative principle, discourse marker, ellipsis, hypotaxis, parataxis, parenthesis, parenthetical sequence

## 1 Introduction

Recently, parenthesis and especially parenthetical verbs have seen a considerable surge of interest, and a number of specific volumes have been published on the subject (see Dehé and Kavalova 2007a; Schneider 2007a; Corminboeuf, Heyna and Avanzi 2010; Glikman and Avanzi 2012). Although there is a minimal common understanding of parenthesis, and most linguists would agree with descriptions such as “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) or “Parentheticals are expressions of varying length, complexity, function and syntactic category, which are interpolated into the current string of the utterance” (Dehé 2009: 307), parenthesis remains a problematic notion (see Dehé and Kavalova 2007b: 1–4; Kaltenböck 2007: 25–27; Schneider 2007a: 19–35).

The objectives of the present contribution are threefold. First of all, it reviews fundamental features of parenthesis and delimits it from related phenomena. Secondly, it discusses its meanings and discourse functions. Thirdly, it contrasts parenthesis with ellipsis. The contribution is structured as follows: Sections 2 and 3 discuss fundamental features of parenthesis and the delimitation from related phenomena, section 4 deals with the meanings and discourse functions of parenthetical sequences, section 5 analyses parenthetical sequences in the light of current characterisations of ellipsis and the last section contains a short conclusion.

Although parenthesis also occurs in written language, the present contribution focuses on spoken language. The products of spoken language behaviour are utterances. In most utterances, constructional patterns or constructions such as phrases, clauses or sentences can be identified. In the present contribution, the primary analytic unit will be the utterance, which will occasionally be assigned to one or more constructional patterns.

When I use the word *parenthesis* I refer to a particular type of language behaviour or to a communicative strategy, whereas with *parenthetical sequence* or briefly *parenthetical* I refer to the concrete language item produced, in which a constructional pattern may be identified.

## 2 Fundamental features of parenthesis

In the great majority of cases, parentheticals do not result from performance failures or slips of the tongue. They might not constitute a communicative strategy planned long ahead, but when performed they certainly are intentional. In the classical Greek and Latin literary and non-literary language, parenthesis represented a common stylistic technique (see Hofmann 1926: 114–119; Schwyzer 1939: 14–19). Parenthesis was frequently employed in Greek and Latin as a figure of thought and has thus been thoroughly described in the works of classical rhetoric (see Lausberg 1960: 427f.).

Most people would agree that parenthesis is a communicative strategy whose motivation is connected with an additional piece of information<sup>1</sup>. Basically, the speaker says something and, while doing so, adds a different piece of information. By *saying* I actually mean *uttering*, that is, I am not referring to things merely implied by the speaker's utterance. I will characterise this additional piece of information in more detail in section 4. Ultimately, parenthesis represents a solution to or, more precisely, a compromise concerning a fundamental limitation imposed on human language by the way it is commonly transmitted: With some noteworthy exceptions, linguistic items cannot occur simultaneously. One of the design features of language is to be constrained to linearity or sequentiality. Parenthesis provides a way to partially overcome this limitation. It is an imperfect solution, especially in terms of the cooperative principle: Though parenthesis may provide a piece of information at the point maximally convenient for the speaker, it violates the maxim of manner. Due to our experience with human language in general and our native language in particular, we all have internalised typical prosodic, syntactic and semantic patterns. We are, for example, accustomed to a set of intonational patterns and to particular word order patterns. In the following French example, the interviewer asks for a clarification and interrupts her question with a side note:

- (1a) French (*Corpus de référence du français parlé*, text BOR-PRI003)  
 L2 est-ce que c'est ça correspond je me trompe peut-être à D.J.  
 is.it that it.is this corresponds I me.ACC mislead maybe to D.J.  
 ou D.J. [...]  
 or D.J.  
 'Does this correspond *maybe I am wrong* to D.J. or D.J.?'

Because of her experience with French, the hearer, after hearing *est-ce que c'est ça correspond*, anticipates a continuation of the utterance with *à* and so forth, but not with *peut-être*. Since the parenthesis contradicts some or all of our internalised patterns it constitutes an unforeseen disruption. In short, parenthesis, on the one hand, enables the speaker to overstep the confines of linearity; on the other hand, it makes processing more cumbersome for the hearer. Although never totally predictable, the disruption might be more or less probable in certain positions of the utterance, that is, there might be *parenthesis-relevance places*.

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<sup>1</sup> A parenthetical adds "another conceptual 'dimension' by turning a one-venue utterance into a two-venue utterance" (Kaltenböck, Heine and Kuteva 2011: 853).

The thematic deviation entails, of course, some kind of semantic discontinuity. In fact, if the meaning of the parenthetical sequence were expressible within the semantic structure of the host utterance, there would not be any need for an interpolated sequence. Semantic discontinuity, at least in the eyes of the speaker, is the *raison d'être* of parenthesis. A consequence of the thematic deviation is that parenthetical sequences are produced under time pressure and with limited memory and articulatory resources, i.e., the space they can occupy is restricted. After all, the interlocutor is waiting for the main or initial speech act to be resumed. This simple fact may partly explain the tendency of parenthetical sequences to be shorter than their hosts and to admit incompleteness phenomena.

The speaker has to cope with two pieces of information, one of which, at least initially, is deemed more relevant or more significant than the other one. This corresponds to the expectation of the interlocutor. Hence, we can distinguish between a main piece of information and an additional one. Usually, the speaker starts with a piece of information and later comes up with a second one (see Hoffmann 1998: 314). Therefore, we could also speak of an initial piece of information and a subsequent one. This does not mean that the initial piece of information, from a general viewpoint, has a greater relevance or significance than the other one. It might even be the case that the speaker herself, during or after the speech act, changes opinion or perspective. But, due to the limitation of language mentioned previously, at the start of the utterance, the speaker has to choose, which is why at this stage there is only one piece of information present or active.

Although many utterances of verbal exchanges are no full-fledged sentences, most people would agree that parenthesis is a strategy concerning mainly the utterance level. It is, so to speak, a solution to the problem posed by two different pieces of information within a single utterance. Note, however, that the same phenomenon can be observed on the level of verbal exchange, as an interruption in cohesion and thematic coherence. In everyday speech, we would call this digression, excursus or even divagation. As in the case of parenthesis, a digression can be marked in some way, e.g., by formulaic expressions such as Engl. *by the way* or Fr. *à propos*. And as is the case with parenthesis, speaker and hearer expect from a digression to end as soon as possible so that the part of the utterance containing the main information can be resumed. We can draw a parallel with foot notes in a text: They are writer-friendly but reader-unfriendly.

The disruption, which I consider to be a fundamental feature of parenthesis, can be created by various linguistic means. Typically, a prosodic disruption goes along with a syntactic disruption, which is why most parenthetical sequences are prosodically and syntactically unintegrated. It is possible, however, to achieve a disruption only by prosodic means: an utterance-medial adverb, for instance, can be detached from the host merely by a parenthetical intonation (see, e.g.,

Rossi 1999: 97). Likewise, it is possible to produce a syntactic disruption without necessarily resorting to prosody. Dehé (2007: 270–274) explicitly mentions prosodically integrated parentheticals in English and, as shown by Gachet and Avanzi (2010) and Avanzi (2012a), French parentheticals are not always prosodically detached from the rest of the utterance. Although several parentheticals do not have an overt link to their host, absence of linking is not an essential requisite: Non-restrictive or appositive relative clauses, *and*-parentheticals (see Kavalova 2007) and *as*-parentheticals (see Potts 2002) contain overt links. Summing up, an item may be parenthetical on prosodic grounds, on syntactic grounds or both.

Parenthetical sequences may display the constructional pattern of sentences, but we know, especially from phonological approaches, that parentheticals may display almost any constructional pattern (see Cruttenden 1997: 71; Morel and Danon-Boileau 1998: 60; Simon 2004: 189). Similarly, Espinal (1991: 727ff.) affirms that parentheticals are not characterised by a particular construction; they may be sentences, clauses, phrases or single words (see also Kaltenböck 2007: 29–31).

What is the speaker's motivation for interrupting an utterance with an additional utterance that demands more processing effort from the addressee? Why does the speaker not choose to have two separate utterances? Morel and Danon-Boileau (1998: 60–62) argue that parenthesis is not a convenient device for the insertion of additional details or for the recovery of constituents which have not been placed in the right position. That is, parenthesis is not due to formulation efforts or performance failures. Parenthesis is a rather specialised device that enables speakers to comment on their discourse or to express their views and allows them to put forward some information or an argument without directly submitting it to the hearer's judgement. We find this idea also in Simon (2004: 232) and Potts (2005: 6f.). That is, the reason why certain meanings are expressed by parenthesis is (consciously or unconsciously) strategic. Parenthesis enables the speaker to put an item outside the ongoing speech act and, thus, to distance it from the focus of attention of the addressee.

According to Kavalova (2007: 167, 168), however, parenthesis is a convenient device for the introduction of additional information. The speaker evaluates the hearer's contextual knowledge and processing abilities and chooses her communicative style accordingly. She aims at presenting the utterance in such a way that references can be established as early as possible, thus enabling the hearer to construct anticipatory hypotheses about the overall meaning of the utterance. By inserting additional information exactly at the point in the utterance where it is most useful, the speaker achieves optimal relevance at a minimal cost of processing. This means that the semantic contribution of parentheticals offsets the increased processing costs they entail. In the terms of the cooperative principle, we could say that parentheticals satisfy the maxim of relevance by providing

information in the maximally relevant place, but violate the maxim of manner by inserting information in an unanticipated place.

### 3 Delimitation from related phenomena

In example (1a), the parenthetical utterance *je me trompe peut-être*, a fully developed sentence from a structural viewpoint, is semantically, syntactically and maybe also prosodically detached from the host. We are faced with two separate utterances and speech acts. However, the parenthetical and the host are not unrelated. The sequence *je me trompe peut-être* provides additional information for the main utterance and contributes to its interpretation. So it entertains a loose semantic relation with the host, which is why the host and the parenthetical could also be associated paratactically:

- (1b) Est-ce que c'est ça correspond à D.J. ou D.J.? Je me trompe  
 is.it that it.is this corresponds to D.J. or D.J.? I me.ACC mislead  
 peut-être.  
 maybe  
 'Does this correspond to D.J. or D.J.? Maybe I am wrong.'

Clearly, the host and the parenthetical pertain to the same turn and to the same verbal exchange. The interpolated utterance plays a role in the host utterance.

But what should we say about the following two examples, the first one taken from Burton-Roberts (2006: 180) and the second one from the British part of the *International corpus of English*?

- (2) English (invented example)  
 The main point – *why not have a seat?* – is outlined in the middle paragraph.
- (3) English (*International corpus of English*, British subcorpus, text s2a-047, # 119)  
 And what we found <, > was uhm *could you turn the slide projector off please*  
 uhm very substantial mortality differences within this population

The speakers, talking to their respective audiences, interrupt their presentation and address specific persons asking them to take a seat or to turn the slide projector off. The interrupting utterances are addressed to interlocutors that are distinct



from the initial ones. In (2) and (3), differently from example (1a), there is no semantic relation at all between the host and the interpolated utterance. There is nothing else than spatial and temporal contiguity and the general setting that hold together the host and the interpolated utterance. Even if the host and the interrupting utterance are part of the same turn they are not part of the same verbal exchange. We are confronted with a speech situation in which by coincidence two exchanges are intertwined. If we want to maintain the idea that parenthesis is a communicative strategy in which two utterances pertaining to the same turn and the same exchange are intertwined we have to exclude interpolated utterances due to the accidental interruption of an utterance in order to engage in another exchange, e.g., greeting a friend walking on the other side of the street<sup>2</sup>.

As I will suggest in the next section, at least those parentheticals that I provisionally call *side notes* are speech acts. The speech-act status and the mutual position of the utterances allow us to distinguish between three constructions: paratactic construction, parenthetical construction and hypotactic construction. The scheme in (4) provides an overview. On the left side, we find the concrete pieces of spoken language (CS = clausal sequence, PS = parenthetical sequence, U = utterance) and their meaning types (P = proposition, SA = speech act), on the right side we find the associated constructions:

(4)	Spoken language	Constructions
	Verbal exchange	Text
	↓	↓
	(——)U SA (——)U SA	Paratactic construction
	↓	↓
	(—(——)PS SA—)U SA	Parenthetical construction
	↓	↓
	(—(——)CS P——)U SA	Hypotactic construction
	↓	↓
	(——)U SA	Simple sentence

Different and more elaborate schemes of sentence and/or clause linking have been proposed. Some are dedicated to sentence and/or clause combining in general, but do not include parenthesis (see Lehmann 1988: 189; Matthiessen 2002: 273), some focus on hypotaxis (see Bossong 1979: 40) and therefore exclude parenthe-

<sup>2</sup> I owe the initial idea for this distinction to my colleague Utz Maas.

sis, some focus only on parenthesis (see Hoffmann 1998: 318). None of them deals specifically with spoken language.

At the upper end of the scheme, we find the verbal exchange or the text, where two utterances and two speech acts are related merely by semantic cohesion. In a paratactic construction, the two utterances and speech acts are still independent from another, but one of them may be subject to ellipsis (see Matthiessen 2002: 273). In a parenthetical construction, we have a parenthetical sequence within an utterance: both of them are speech acts. In a hypotactic construction, a clausal sequence occurs within an utterance. The clausal sequence is merely a proposition, not a speech act. The difference between paratactic constructions and parenthetical constructions mainly lies in the mutual position of the involved sequences, as already noted by Bloomfield (1935: 186), whereas the difference between parenthetical constructions and hypotactic constructions lies in the illocutionary status of the involved sequences.

Parenthesis provides a way to partially overcome the limitation of linearity and presupposes, as outlined earlier, a disruption contradicting the hearer's anticipations. Up to now, our general assumption was that parenthesis constitutes the interruption of an ongoing utterance. In other words, the implicit idea was that a first disruption takes place at the point of transition from the host to the parenthetical and another one when the host is resumed. However, many authors have suggested that the notion of parenthesis be extended to sequences at the margin of the host utterance and that a single disruption, either between host and parenthetical or between parenthetical and host, be sufficient for parenthesis (see Kaltenböck 2010: 238; Avanzi 2012b: 181-214). Leaving aside questions of scope, it is true that the mitigation functions of the utterance-medial *credo* 'I believe' and the utterance-final *credo* in the following Italian examples are basically the same:

- (5a) Italian (Corpus of the *Lessico di frequenza dell'italiano parlato*, text MC9)  
 A: senti ti                    devo lasciare perché ho    un collegamento  
     listen you.ACC.SG must leave    because have a    connection  
     *credo* da    Roma [...] *credo*  
     believe from Rome  
     'Listen, I must leave you because I have a connection *I believe* from Rome'
- (6) Italian (Corpus of the *Lessico di frequenza dell'italiano parlato*, text NB49)  
 B: [...] noi partiamo intorno alle    cinque *credo*  
     we leave    around at.the five    believe  
     'We leave at around five o'clock *I believe*'

So, there is some ground for assuming the existence of utterance-final and utterance-initial parentheticals. However, by accepting these sequences as parentheticals, we run into trouble.

To start with, how can we accommodate parentheticals at the margin of the host and the idea of the violation of the cooperative principle? It is true that utterance-final parentheticals involve the unforeseen continuation of an already completed host utterance. So, in a certain sense, they contradict the prosodic and syntactic anticipations of the interlocutor, even if they do not interrupt the host. But utterance-initial sequences, like non-finite clauses similar to the one in the following French example, have also been associated with parenthesis (see Kaltenböck 2007: 30):

- (7) French (*Corpus de référence du français parlé*, text QUI-PRIO01)  
 L1 *en parlant du Beaujolais* euh qu'est-ce qu'ils aiment les  
 in speaking of.the Beaujolais uhm what.is.it that.they like the  
 gens dans la fête du Beaujolais  
 people in the celebration of.the Beaujolais  
 'Speaking about the Beaujolais what do the people like about the Beaujolais celebration?'

On the face of it, utterance-initial parentheticals do correspond even less to the outline of parenthesis presented in section 2, since they involve neither an interruption nor an unforeseen continuation of the host. Actually, the host does not at all contradict the anticipations of the hearer. The unforeseen disruption and violation of the cooperative principle concerns the parenthetical sequence. In (7), at the point of transition to the host, there is a patent syntactic severance after the word *Beaujolais*. Due to the presence of the hesitation marker *euh*, we can suppose that there is also a prosodic interruption.

The second problem is that, in both cases described above, the difference between parenthesis and parataxis becomes very subtle and, in some instances, even impossible to make. The only clues we have at our disposal for a distinction are prosodic and communicative incompleteness. Incomplete sequences at the margin of an utterance are parentheticals, complete and autonomous ones must be paratactic utterances. Consequently, we must consider the French exclamation *merde* 'shit' in the following example to be an instance of parataxis, rather than parenthesis<sup>3</sup>:

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<sup>3</sup> See also the discussion in Ziv (1985: 190).

- (8) French (
- C-Oral-Rom Corpus*
- , text FR.FFAMDLO3)

\*SYL: *merde* /\$ <on est tombé dans le truc> // \$  
 shit one is fallen into the trap  
 ‘Shit I fell into the trap’

Being a complete one-word exclamation, *merde* ‘shit’ must be regarded as a separate utterance. Incidentally, prosodic and communicative completeness are also the only clues enabling us to distinguish host and parenthetical in utterances like (7).

Thirdly, even linguists endorsing the notion of utterance-initial parentheticals are wary of accepting utterance-initial parentheticals with transitive verbs, as in the following French example:

- (9) French (
- Corpus Beeching*
- , text 23)

B: Ah *je crois* à la longue échéance il faut faire attention.  
 I believe in the long period it is.necessary make attention  
 ‘I believe in the long run you have to take care’

One of the reasons for this reluctance is syntax. In SVO languages, the noun phrase immediately to the right of a transitive verb is the object governed by it. Thus, due to word order patterns, initial *je crois* ‘I believe’ in (9) is said to be in a governing position, automatically excluding its parenthetical status. The problem posed by examples as (9) is difficult if not impossible to resolve. If we want to apply the criterion of prosodic and syntactic anticipations, we can say that word order is an aspect of the syntactic anticipations of the hearer. The question whether parenthetical or not can then be reformulated into the questions of whether, according to the internalised syntactic patterns of the average French hearer, *je crois* is complete or incomplete and whether a complement clause without complementiser is appropriate. There are three possible solutions to the problem. If *je crois* is incomplete and a complement clause without complementiser is acceptable, *je crois* is a governing transitive verb. If *je crois* is incomplete and a complement clause without complementiser contradicts the internalised patterns of the hearer, utterance-initial French *je crois* must be a parenthetical. Finally, if *je crois* is complete, then *je crois* must be an independent paratactic utterance followed by another independent utterance. See Gachet (this volume) for more discussion.

As I have said before, in many contexts the discourse function of an initial transitive verb does not change with respect to a medial or final one (see Kaltenböck 2010). In other words, in (9) the speaker starts with *je crois*, but this is not her main communicative intention, the speaker does not want to talk about her beliefs. The default case is that the speaker establishes a sort of epistemic frame

within which her statement is to be evaluated. As in (7), the initial piece of information is not the main one.

As is well-known, the syntactic and semantic status of utterance-initial epistemic complement-taking predicates is the subject of a heated debate. Thompson and Mulac (1991a, 1991b) and even more radically Thompson (2002) defend the idea that the complement clause is central and that the utterance-initial predicate is a mere formulaic stance marker. They do not, though, detail whether these predicates are paratactic sequences or parentheticals. Newmeyer (2010) supports the view that the finite clausal complement (with or without complementiser) is subordinate to the complement-taking predicate. Boye and Harder (2007) and Schneider (2007: 191–197) underline that the status of the epistemic predicate is highly context-dependent, which is to say that the issue can only be resolved on a case-by-case basis. This is confirmed by Dehé and Wichmann's (2010) prosodic study on utterance-initial *I think (that)* and *I believe (that)*<sup>4</sup>.

## 4 Meanings and discourse functions

It seems that there is no theoretical limit regarding the contents of a parenthetical sequence. In fact, a lot of different meanings and different functions have been hypothesised (see Schneider 2007a, 2007b; Dehé 2009; Kaltenböck, Heine and Kuteva 2011: 864; Schneider 2011: 239–244): side notes that remediate inferences (see Berrendonner 2010: 11–14), side notes that inhibit reactions by the addressee (see Berrendonner 2010: 14–20), specification, exemplification, clarification, characterisation or delimitation of a referential unit introduced earlier (see Mazeland 2007), information structuring (see Taglicht 1984: 22–25; Brandt 1996; Ziv 2002; Kaltenböck 2010: 251), mitigation of speaker commitment (see Schneider 2007a), intensification or boosting of speaker commitment (see Kaltenböck 2010: 254–257), speech reporting (see Schneider 2007a: 132–134), evidential information (see Ifantidou 2001; Schneider 2007a: 125–130), illocutionary force indicating (see Schneider 2007a: 115–121; Schneider 2010), self-initiated repair (see Schneider 2007a: 113f.; Berrendonner 2010: 8–11; Schneider 2011: 243), resumption of a word or phrase used in a preceding utterance (see Schneider 2011: 244), focusing (see Schneider 2007a: 116–118), hesitation (see Schneider 2007a: 111, 118, 125), and the conative or phatic function (see Schneider 2007a: 109–111).

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<sup>4</sup> See also Diessel and Tomasello (2001) and Brandt, Lieven and Tomasello (2010) on the acquisition of English and German complement clauses.

Within this variety, there seems to be a divide, or possibly a continuum, between, on the one hand, meanings by which a speech act with its proposition is added to the host's speech act and proposition and, on the other hand, discourse functions by which a proposition acts on the host's proposition within a single ongoing speech act. In other words, I want to suggest that, e.g., the side note *Je me trompe peut-être* 'Maybe I am wrong' in (1a) introduces a new proposition within a new speech act, whereas, e.g., *credo* 'I believe' in (5a) is a functor or operator having some aspect of the speech act within its scope. The time-honoured distinction in French grammar and linguistics between *incidentes* and *incises* (see, e.g., Cornulier 1978) partly has its roots in the distinction between meanings and discourse functions. Interestingly, the discourse functions of parentheticals have attracted considerably more interest than their meanings. Kaltenböck, Heine and Kuteva (2011: 883) affirm that, since the second plane can be inserted spontaneously, it lends itself particularly well to situation-specific, meta-communicative information.

Discourse function is a very general concept. For the sake of the present contribution, I discuss only some exemplary functions and, therefore, I focus on two aspects of the speech act: the relation between the hearer and the utterance and the relation between the speaker and the utterance. In pragmatic literature, the parenthetical sequences concerning these two aspects are usually described as modal particles, pragmatic markers or discourse markers (see Brinton 1996; Aijmer 1997; Company Company 2006; Van Bogaert 2011).

Hearer-centred parentheticals concern the effectiveness of the utterance transmission, the receipt of the utterance, the comprehension of its contents, the hearer's knowledge about its contents and other information concerning the relation between the addressee and the utterance. Most, if not all of these aspects are covered by the notion of *phatics*. In Jakobson's terms (1981 [1960]: 24), phatic signals serve "to establish, to prolong, or to discontinue communication, to check whether the channel works [...], to attract the attention of the interlocutor or to confirm his continued attention". Hearer-centred parentheticals are directed towards the addressee and typically contain second person verbs. In the following examples from corpora of spoken language, we have a Spanish *sabes* 'you know', an Italian *senti* 'you listen' and a French *tu vois* 'you see':

- (10a) Spanish (*Corpus oral de referencia del español contemporáneo*, text CCON021B)  
 <H1> [...] Y había cazuelas, ¿sabes? antes de estas de barro [...]  
 and had saucepans know before of these of clay  
 'And there were saucepans *you know* before these made of clay'

- (11) Italian (Corpus of the *Lessico di frequenza dell'italiano parlato*, text FB5)  
 B: [...] non riesco a collaborare senti con gli insegnanti [...]  
           not am.able to collaborate listen with the teachers  
 'I am not able to collaborate *listen* with the teachers'
- (12a) French (*Corpus de référence du français parlé*, text PSO-PRO001)  
 L1 [...] ils sont plus ou moins tu vois débiles [...]  
           they are more or less you see weak  
 'They are more or less *you see weak*'

They serve to assure that the addressee receives and understands the message, to check her knowledge and to include her as much as possible in the verbal interaction.

Another discourse function concerns the relation between speaker and utterance. I will mention just two aspects of this relation. The scope of speaker commitment parentheticals, as Italian *credo* 'I believe' in (5a), is the responsibility or liability inherent in the utterance's speech act. The scope of the Spanish parenthetical *digamos* 'let's say' in the following example is the wording of the proposition (the locution or, in Hare's 1970 terms, the *phrastic*):

- (13) Spanish (*El habla urbana de Sevilla*, nivel culto, text C3H1.288)  
 ¿Encuentras mucha inquietud, *digamos*, de tipo social, de tipo  
 find much unrest say.IMP.1PL of type social of type  
 humano?  
 human  
 'Do you find much unrest *let's say* in social matters, in human matters?'

Regarding the speech-act character of parentheticals, I suggest that side notes and similar parentheticals are autonomous speech acts (see Kügelgen 2003: 213). Döring (this volume) mentions the possibility for sentence adverbs and discourse particles to appear in parentheticals, which strongly suggests the presence of an illocution. The parenthetical sequence in (1a) contains the sentence adverb *peut-être* 'maybe'. Likewise, the following French parenthetical with *comme* 'as' contains the sentence adverb *sans doute* 'without doubt, doubtlessly':

- (14a) French (*Corpus de référence du français parlé*, text QUI-PRIO02)  
 L1: [...] on (n')avait pas le droit de - *comme ailleurs sans doute*  
           one (not).had not the right of as elsewhere without doubt  
*en France* euh d'accepter des bonbons des Allemands [...]  
 in France uhm to.accept of.the candies from.the Germans

'People didn't have the right to *as doubtlessly elsewhere in France* to accept candies from Germans'

Non-restrictive or appositive relative clauses are usually interpreted as parentheticals (see Kaltenböck 2007: 29; Delais-Roussarie 2010: 38). The speech-act character of non-restrictive relatives has been underlined repeatedly (see Thorne 1972: 552f.; Cornilescu 1996: 215; Holler 2005: 59f.; Truckenbrodt, this volume). As observed by Holler (2005: 59), the insertion of German *vermutlich* 'probably, presumably' is unacceptable in restrictive relative clauses, but perfectly acceptable in non-restrictive relative clauses:

(15a) German (invented example)

\*Derjenige Schüler, der *vermutlich* wieder verschlafen hat, kommt  
that student who probably again overslept has comes  
bestimmt in wenigen Minuten.  
certainly in few minutes  
'That student who probably has overslept again will certainly arrive in a  
few minutes.'

(15b) Klaus, der *vermutlich* wieder verschlafen hat, kommt bestimmt in  
Klaus who probably again overslept has comes certainly in  
wenigen Minuten.  
few minutes  
'Klaus who probably has overslept again will certainly arrive in a few minutes.'

However, the hearer and speaker-centred parentheticals discussed above are more appropriately described as functors or operators within an ongoing speech act and not as separate speech acts. They are never cited as examples to support claims about the speech-act character of parentheticals (see, e.g., Kügelgen 2003: 213). In fact, it is difficult to find convincing arguments in favour of the speech-act character of these parentheticals, although they contain a predicate. In current pragmatic theory, the function of a discourse marker is incompatible with that of an autonomous speech act. In the case of a speaker-centred expression such as *credo* 'I believe' in (5a), already scholars such as Urmson (1952) and Benveniste (1966 [1958]) underlined that an utterance comprising such a parenthetical expresses a single speech act to which the parenthetical is merely attached. In (5a), for instance, the speaker states *Ho un collegamento da Roma* 'I have a connection from Rome' and modifies or mitigates her statement, viz., a part of the statement, with the parenthetical *credo* 'I believe'. This is the reason why a



parenthetical such as *credo* ‘I believe’ is resistant to questioning and negation (see, e.g., Hooper 1975; Boye and Harder 2007: 578–580; Schneider 2007a: 44ff., 145–150). Reis (1995: 70) considers German parentheticals of a similar type to be prosodically integrated and argues against their speech-act character. The hearer and speaker-centred parentheticals discussed above are high-frequency expressions undergoing phonetic and syntactic reduction, semantic bleaching and other grammaticalisation (or pragmaticalisation) processes typical of discourse markers (see Brinton 1996; Aijmer 1997; Company Company 2006; Van Bogaert 2011). Other well-known examples of phonetic reduction are *ya know* or *y’know* in English, *tsé* ‘you know’ in Canadian French and *weisch* ‘you know’ in Southern German.

It is true that the hearer-centred expression in (10a) apparently differs in sentence type from the host, but this impression is induced by the transcription standard of this particular Spanish corpus. In oral speech, due to phonetic reduction, the hearer and speaker-centred parentheticals discussed above usually are not intonationally characterised as autonomous questions, requests or statements. Hence, it is unclear to which illocution they should correspond. Although in some cases a sentence adverb can be added, the results are not the same as in (1a), (14a) and (15b). For instance, the Italian sentence adverb *forse* ‘maybe’ is possible after the parenthetical in (5a):

- (5b) Ti devo lasciare perché ho un collegamento *credo forse*  
 you.ACC.SG must leave because have a connection believe maybe  
 da Roma  
 from Rome  
 ‘Listen, I must leave you because I have a connection *I believe maybe* from Rome’

In this case, however, the sentence adverb behaves like the parenthetical, sharing the same intonation and having the same part of the host in its scope. In (12a), to give a French example, the insertion of the sentence adverb *peut-être* ‘maybe’ alters and upgrades the illocutionary status of the parenthetical:

- (12b) Ils sont plus ou moins *peut-être tu le vois* débiles.  
 they are more or less maybe you it see weak  
 ‘They are more or less *maybe you see it* weak’

Its intonation being characteristic of an autonomous utterance, it is not phonetically reduced. The need for a clitic object pronoun shows that there is no syntactic reduction. In other words, *peut-être tu le vois* is not a discourse marker anymore.

If the assumption regarding the absence of an illocution in the hearer and speaker-centred parentheticals discussed above is correct, in the scheme (4) in section 3, these particular parentheticals must be accommodated within the hypotactic construction. Just like clausal sequences, these parenthetical sequences are propositions without being speech acts.

## 5 Ellipsis

Besides the obvious differences, parenthesis and ellipsis share some aspects. In the first place, ellipsis, like parenthesis, is not a performance failure but an intentional communicative strategy. It also was a common stylistic technique in the classical Greek and Latin literary and non-literary language (see Hofmann 1926: 46–52, 167–172) and it has been described in the works of classical rhetoric (see Lausberg 1960: 269, 346f.). Secondly, as we will see below, the concept of ellipsis is as controversial as parenthesis. The lack of clarity has already been emphasised by Bühler (1934: 155), who remarked that ellipsis is a long-standing crux for language theorists.

Interestingly, whereas both parenthesis and ellipsis have received considerable attention, the relation between the two has been evidenced only lately (e.g., by Potts 2002; Kaltenböck, Heine and Kuteva 2011: 871f–874). Klein (1993) and Winkler (2006) do not mention parenthesis in connection with ellipsis.

We must separate plain or straightforward incompleteness from ellipsis. In the case of incompleteness, a piece of information is missing and cannot readily be reconstructed by the addressee. It is a performance phenomenon typical of verbal interaction which in exceptional circumstances can be employed intentionally as a rhetoric device.

As I explained in the introduction, in many utterances, constructional patterns or constructions such as phrases, clauses or sentences can be observed. However, especially in spoken language, there are numerous utterances that do not completely adhere to these patterns, in which case they are incomplete or elliptical. Every utterance is as explicit as required by the context of the verbal interaction. Information that is clear from the linguistic and extralinguistic context does not need to be expressed. This principle of language economy is especially active in spoken language. The expression of information obvious from the context would make an utterance redundant and inappropriate. Hence, from the point of view of verbal interaction, an utterance is complete as long as the addressee's comprehension is guaranteed.

In contemporary linguistics, ellipsis has been most extensively described from the perspective of formal syntax (e.g. by Johnson 2001; Merchant 2001; Lobeck 2006; Winkler 2006; Aelbrecht 2010). There, ellipsis is usually defined quite narrowly. The context admitted for the interpretation of the silent string is constituted by the same sentence or the sentences in the surroundings of the elliptical sequence. In other words, there has to be a linguistic antecedent<sup>5</sup>. For instance, Aelbrecht (2010: 11) states that “the ellipsis site has to be recoverable by means of a salient linguistic antecedent”. This is one of the reasons why ellipsis is frequently discussed in connection with structures, e.g., coordinated or similar structures, in which an antecedent can be identified unambiguously. In Winkler’s (2006: 109) overview of examples with *gapping*, *verb phrase ellipsis*, *pseudogapping*, *stripping*, *sluicing* and *noun phrase ellipsis*, the unexpressed strings can be recovered from the preceding clauses, mostly with their precise wording.

Klein (1993: 766–768) adopts a different position on explicitness and ellipsis. He distinguishes between ellipsis under partial contextual control and ellipsis under full contextual control<sup>6</sup>, the latter only applying to cases in which the context leaves no interpretative choice. For instance, the ellipses in adjacency pairs, e.g., in question-answer-pairs, are fully controlled by the context. To illustrate this distinction, he uses an example from Bühler (1934: 155–157). If a client in a Viennese café expresses an order like (16a), her utterance is incomplete with respect to the constructional patterns but otherwise unproblematic. The waiter will understand and complement the unexpressed elements, as in (16b) or (16c):

(16a) German (invented example)

\_\_ einen schwarzen \_\_  
 a.ACC black.ACC  
 ‘ \_\_ a black \_\_

(16b) *Bringen Sie mir einen schwarzen Kaffee.*

bring you me a.ACC black.ACC coffee  
 ‘Bring me a black coffee’

(16c) *Ich möchte einen schwarzen Kaffee.*

I would.like a.ACC black.ACC coffee  
 ‘I would like a black coffee’

<sup>5</sup> Merchant (2004), however, takes into account non-linguistic antecedents.

<sup>6</sup> Klein (1993: 766–768) employs the terms “kontextabhängig” ‘context-dependent’ and “kontext-kontrolliert” ‘context-controlled’.

The selection of the verb has an aspect which is under full contextual control and another one which is under partial contextual control. Due to the accusative form of *einen schwarzen*, the verb type, i.e., a verb requiring a direct object, is fully controlled. Hence, the morphosyntactic context permits no alternatives. On the other hand, the lexical realisation of the verb, be it *bringen* ‘bring’, *mögen* ‘like’ or some other verb, and also its form, whether imperative or indicative, are under partial contextual control.

Confronting the parenthetical sequences reviewed in the present contribution with the characterisations of ellipsis above, we can identify four different behaviours. To start with, some parenthetical sequences do not display any incompleteness at all with respect to constructional patterns. The side note in (1a) is a complete sentence, the non-restrictive relative clause in (15b) is a complete dependent clause.

Secondly, the hearer and speaker-centred parentheticals in (5a) and in (10)–(13) are incomplete only if the autonomous, free-standing sentence is the constructional pattern to which to refer. Bearing in mind their frequency in oral speech and their function as discourse markers, we must seriously doubt that this pattern represents them appropriately. Moreover, if these parentheticals are considered in association with their hosts nothing is missing. One of the arguments required by the verb of the parenthetical is semantically represented by or can be recovered from the host (see Reis 1995: 29, 61; Hoffmann 1998: 318; Schneider 2007a: 76–78). The parenthetical ‘sees’ the host (see Marandin 1999: 36). Unlike the cases contemplated in Winkler’s (2006: 109) overview, the parenthetical sequence cannot be completed with the missing element, as we can see from (10b):

- (10a) Spanish (*Corpus oral de referencia del español contemporáneo*, text CCON021B)  
 <H1> [...] Y había cazuelas, ¿sabes? antes de estas de barro [...]  
 and had saucepans know before of these of clay  
 ‘And there were saucepans *you know* before these made of clay’

- (10b) \*Y había cazuelas, ¿sabes que había cazuelas antes de estas de barro? antes de estas de barro.

Hence, one can legitimately ask whether these parentheticals actually represent an instance of ellipsis.

Thirdly, some parenthetical sequences are incomplete, but there is no linguistic antecedent and the main features of the unexpressed elements are only under partial contextual control. The utterance-initial sequence in (7), provided

we accept it as parenthetical, exemplifies this case. We can, of course, imagine various full sentential correspondents to the sequence.

Finally, in the case of the parenthetical sequence in (14a), which is similar to the English *as*-parentheticals described by Potts (2002), it can be argued that, according to constructional patterns, there is a silent string, which is fully controlled by a linguistic antecedent in the host utterance:

- (14a) French (*Corpus de référence du français parlé*, text QUI-PRI002)  
 L1: [...]on (n')avait pas le droit de – *comme ailleurs sans doute*  
           one (not).had not the right of as elsewhere without doubt  
           *en France* euh d'accepter des bonbons des Allemands [...]  
           in France hm to.accept of.the candies from.the Germans  
           'People didn't have the right to *as doubtlessly elsewhere in France* to accept  
           candies from Germans'
- (14b) On n'avait pas le droit *comme on n'avait pas le droit ailleurs sans doute en France* d'accepter des bonbons des Allemands.

As in Winkler's (2006: 109) overview, the parenthetical sequence could be completed by repeating the linguistic antecedent in the host. The examples discussed here are far from exhaustive, but they suggest that the parenthetical sequences may exhibit, besides the ellipsis described in Winkler's (2006: 109) overview, at least two other types of ellipsis.

## 6 Conclusion

Which points may we retain from our review of the fundamental features of parenthesis? Most linguists agree that parenthesis is a communicative strategy whose motivation is connected with an additional piece of information. The introduction of an additional piece of information causes a disruption. I maintain that by providing information in a position maximally convenient for the speaker but at the cost of processability for the hearer, parenthesis violates the maxim of manner and hence the cooperative principle. There is also a general agreement that parentheticals are marked prosodically and/or syntactically and that, from a formal viewpoint, they take any kind of structure, from a single word to a full sentence. Regarding the delimitation of parenthesis from related phenomena such as parataxis, hypotaxis and interpolated utterances due to intertwined verbal exchanges, I indicated the possible options and some solutions. As we have seen,

a lot of different meanings and discourse functions of parenthetical sequences have been hypothesised. I propose a distinction between, on the one hand, parentheticals expressing a proposition and a speech act and, on the other hand, parentheticals expressing a proposition that acts on the host's proposition within a single ongoing speech act. There is indeed evidence suggesting that some parentheticals express an autonomous illocution, whereas others, that is, those often classified as discourse markers, do not. The analysis of parenthetical incompleteness phenomena shows that there are at least three types of parenthetical ellipsis, one of which challenges the common understanding of ellipsis.

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Hubert Truckenbrodt

# Intonation phrases and speech acts

**Abstract:** Selkirk (2011) suggested that clauses that trigger separate intonation phrases (Downing's root sentences; Potts' supplements; see also Reis 1997, Holler 2008, and De Vries 2007) are separate speech acts. The connection between speech acts and intonation phrases is explored here in German, employing modal particles and sentence adverbs to test for separate speaker commitments (speech acts). The discussion includes coordinated sentences, appositive relatives, appositions, right dislocation, afterthought, multiple focus, peripheral adverbial clauses, and parentheticals. The results suggest that (a) Selkirk is right that separate speech acts (or more likely their syntactic pendant) are the triggering elements of separate intonation phrases, but that (b) a range of cases that have been thought, by different authors, to belong to this class, are neither separate speech acts nor separate intonation phrases. This seems to include cases that have been noticed by Dehé (2009b) and Patin and O'Connor (2013).

**Keywords:** speech acts, intonation phrases, supplements, appositive relatives, appositions, multiple focus, parentheticals, peripheral adverbial clauses, right dislocation, afterthought

## 1 Introduction

Coordinated clauses, appositive relatives, appositions, and parentheticals are syntactically and prosodically separated in certain ways. An early suggestion due to Downing (1970) described this separation in terms of a prosodic domain with *obligatory pauses* at its edges. This prosodic domain was identified with the *intonation phrase boundary* by Nespor and Vogel (1986). We know today that the main cues for intonation phrase boundaries are (a) final lengthening (b) various effects of the sentence melody, measurable in the course of F<sub>0</sub> and (c) pauses. Of these, the pauses do not occur regularly at intonation phrase boundaries. For example the evaluation of the Kiel corpus of German spoken language in Peters, Kohler and Wesener (2005) found that only 945 of the 2470 phrase boundaries investigated (37.3%) showed an actual pause. The suggestions of

Downing (1970) might best be understood in terms of intuitions about intonation phrase boundaries reported in terms of intuitions about obligatory pauses.

Downing (1970), building on Emonds (1970), suggested that these prosodic boundaries are triggered by syntactically separate *root sentences*, which are defined as unembedded sentences in a certain sense that amounts to particularly high syntactic attachment to the host clause. In that analysis, root sentences are separated by intonation phrase boundaries at both edges. In the example (1) from Downing (1970), the apposition (or appositive relative) is a separate root sentence, and therefore separated by Downing's obligatory pause, or, in Nespor and Vogel's terms, by intonation phrase boundaries.

- (1) The library, / (which is) a large stone and glass building, / is on the east side of the campus.

In Reis (1997) and Holler (2008) appositive relatives and some further German sentence combinations are likewise treated as syntactically unembedded and dubbed *non-integrated*.

Another syntactic approach to appositive relative clauses has been that they are not syntactically attached to the main clause but *orphaned*, see e.g. Safir (1986).

Yet other approaches treat them as syntactically attached in special ways. De Vries (2007) further substantiated this natural class and its syntactic lack of genuine embedding. He suggests a minimalist syntactic derivation of them in terms of a special merge operation, further developed and named *par(enthetical) merge* in De Vries (2012), which broadly captures paratactic attachment.

Potts (2005) refers to parentheticals, appositions and appositive relatives as *supplements*. He postulates syntactic attachment that involves a syntactic feature [comma]. This feature triggers the comma intonation and leads to a cut-off semantic interpretation that makes them into separate contributions by the speaker. This perspective is adopted by Selkirk (2005, 2011), with the strengthened assumptions that comma phrases are *illocutionary acts* semantically and that the comma intonation corresponds to intonation phrase boundaries prosodically. A similar connection between illocutionary acts and intonation phrases was postulated for Turkish by Kan (2009).

At the same time, there have been assessments that the boundaries surrounding parentheticals and appositions/appositives are not always intonation phrase boundaries. For certain parentheticals, this was observed by Reis (1995). That parentheticals are not always separate intonation phrases is documented for English by Dehé (2009b) with F<sub>0</sub>-tracks, confirming some previous descriptions of English. Patin and O'Connor (2013) argue for Shingazidja that appositions show phonological phrase boundaries but not intonation phrase boundaries.

The current paper explores the connection between speech acts and intonation phrases. Speech acts are tested for with modal particles and sentence adverbs. Intonation phrases are assessed intuitively in terms of intuitions about the presence of sentence stress (the prosodic head of the intonation phrase) and about the presence of boundaries. The current paper arrives at the following conclusions:

- (2) a. Speech acts regularly do seem to require separate intonation phrases, confirming this connection in Selkirk (2005, 2011).
- b. However, not all coordinated sentences and not all supplements are actually separate speech acts. Where they are not, they do not seem to correspond to separate intonation phrases.

(2a) confirms the correlation of Selkirk (2005, 2011) between speech acts and intonation phrases. At the same time (2b) removes some entities, including some supplements, from the domain of speech acts and intonation phrases. This broadly follows the work of Marga Reis, who already took the stand in Reis (1995) that parentheticals are not always separate intonation phrases, and took the stand in Reis (1997) that appositive relatives are prosodically separate. Both conclusions will be adopted here. The results are an encouragement to continue the path taken by Reis (1995), Dehé (2009) and Patin and O'Connor (2013) to re-assess the actual prosodic structure of supplements, and in this connection, their syntactic structure and semantic interpretation.

During most of the paper I ignore the issue how the syntax mediates between speech acts (on the LF-side of grammar) and intonation phrases (on the PF-side of grammar). I return to this issue briefly in section 9 at the end of the paper.

Just before the publication of this paper, I was made aware of related claims that were developed simultaneously to the current paper in Güneş (to appear), Griffiths and Güneş (this volume) and Güneş and Çöltekin (to appear) with evidence from Turkish, that I here want to recommend to the reader. Partly converging with the current results, the core claim there is that clausal supplements (and similar constituents) trigger intonation phrases while phrasal ones do not.

The paper is structured as follows. Section 2 provides background to the discussion. Sections 3–8 address specific cases: coordinated DPs and coordinated V2-clauses (section 3), appositive relatives and appositions (section 4), right dislocation and afterthought (section 5), multiple focus (section 6), peripheral adverbial clauses (section 7), and parentheticals (section 8). Section 9 addresses the possible syntactic underpinnings of the correlation between speech acts and intonation phrases. Section 10 sums up the results.

## 2 Background

### 2.1 Background on intonation phrases in German sentence prosody and intonation

Following Gussenhoven (1983, 1992), Uhmman (1991) and others, a two-level prosodic default analysis of German sentence prosody is assumed. Focus is assumed to be able to change this default. However, within a wide focus, the prosodic default is assigned with reference to syntactic structure. At the lower of the two levels, here symbolized by single underlining, each argument and adjunct (and sometimes the verb) receives phrasal stress (or accent) as shown in (3). The exact rules assigning phrasal stress are not crucial to this paper.<sup>1</sup>

- (3) Die Lena will dem Werner im Januar ein Lama malen.  
 the Lena wants the Werner in.the January a llama paint  
 ‘Lena wants to paint a llama for Werner in January.’

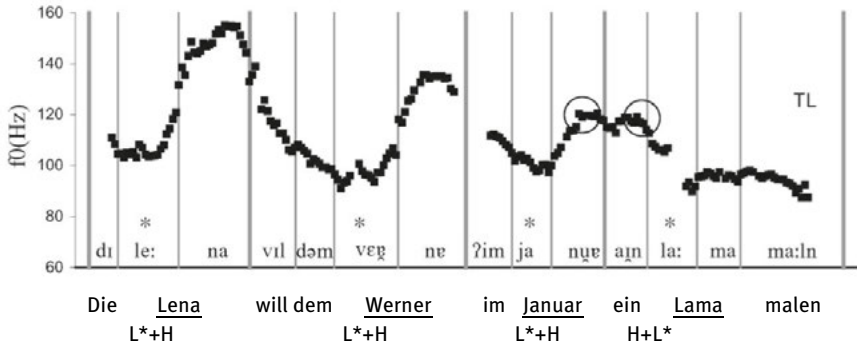
This phrasal stress is associated with pitch accents that give rise to tonal movements around the stressed syllables. Consider the pitch-track of a recording of (3) in Figure 1. For each non-final phrasal stresses, it shows a typical rise (L\*+H) on *Lena*, *Werner* and *Januar*. The final phrasal stress on *Lama* is realized with a fall (H+L\*) in this recording. This intonation pattern is documented extensively for speakers from the South of the German-speaking area in Truckenbrodt (2002, 2004, 2007).

There is a consistent intuition that, if any one of these accents is stronger than the others, it is the last one among them. It is also called the *nuclear stress* in the literature. Uhmman (1991) captures this in terms of a rule of rightmost strengthening as in (4). (For completeness, notice that it is normally this nuclear stress that is shifted by narrow focus. I return to the effect of focus in section 2.2)

- (4) rightmost strengthening (Uhmman 1991)  
 Strengthen the rightmost accent (here: phrasal stress) in the intonation phrase.

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<sup>1</sup> The reader is referred to the Sentence Accent Assignment Rule of Gussenhoven (1983, 1992), extended to German in Uhmman (1991), and to the accounts in terms of XPs in Truckenbrodt (2006, 2012) and in terms of phases in Kratzer and Selkirk (2007).



**Figure 1:** Sequence of three L\*+H rises followed by a nuclear H+L\* fall on the sentence specified ('Lena wants to paint a llama for Werner in January.'). The stressed syllables are marked with stars in the plot. Speaker TL from Baden-Württemberg. The plot is from Truckenbrodt (2004).

The stronger stress is here indicated by double underlining. When we apply rightmost strengthening to the sentence in (3), we thus get (5), which mirrors the intuition about the strongest stress on *Lama*, the last of the phrasal stresses.

- (5) Die Lena will dem Werner im Januar ein Lama malen.  
 the Lena wants the Werner in.the January a llama paint  
 'Lena wants to paint a llama for Werner in January.'

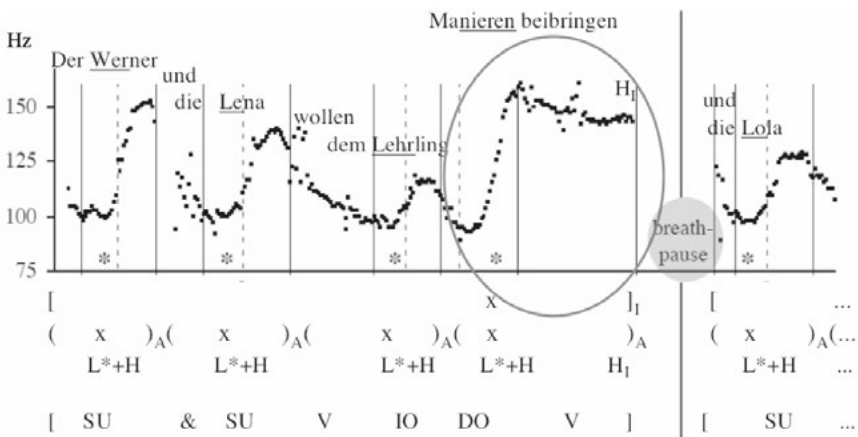
Important for the current paper is that (4) defines the *intonation phrase* as the domain of rightmost strengthening. This conception of Uhmans is in line with the understanding of the nuclear stress in the classical work of Pierrehumbert (1980), it is backed by the understanding of the intonation phrase as a stress domain in Nespor and Vogel (1986), and it is similarly endorsed for English in Selkirk (1995).

Two coordinated unembedded sentences give rise to two intonation phrases, as in (6). *I* stands for intonation phrase.

- (6) [Der Werner und die Lena wollen dem Lehrling Manieren beibringen]<sub>I</sub>  
 the Werner and the Lena want the apprentice manners teach  
 [und die Lola will dem Manuel eine Warnung geben]<sub>I</sub>  
 and the Lola wants the Manuel a warning give  
 'Werner and Lena want to teach manners to the apprentice, and Lola wants to give a warning to Manuel.'

The prosody of such sequences of two intonation phrases (with two coordinated sentences) is investigated in Truckenbrodt (2002, 2004, 2007). The final H+L\* fall

of Figure 1 was only found in utterance-final position, i.e. here at the end of the second intonation phrase. At the end of the medial intonation phrase boundary speakers showed different configurations of upstep. Figure 2 illustrates upstep on the nucleus, which was found with four out of eight speakers. The first printed line of (6) is shown, including the first of the two intonation phrases and the beginning of the second intonation phrase. In Figure 2 the non-final ( $L^*+H$ ) rising accents are present on all words with phrasal stress, including the last one of the first intonation phrase. The tonal height of the peaks is now important. The non-final peaks in the intonation phrase show a pattern of successive lowering (downstep) both in Figure 1 and in Figure 2. In Figure 2, the final (nuclear) rise of the first intonation phrase does not continue this downstepping pattern but shows an upstepped tonal height, comparable to the height of the first peak of the recording. In the analysis of Truckenbrodt (2007) this upstepped scaling is a correlate of being related to the intonation phrase, i.e. upstep occurs because the last ( $L^*+H$ ) rise is the prosodic head (strongest stress) of the intonation phrase.



**Figure 2:** Sequence of three downstepping pre-nuclear ( $L^*+H$ ) rises followed by an upstepped nuclear ( $L^*+H$ ) rise at the end of an intonation phrase that is followed by another intonation phrase. From Truckenbrodt (2007). The entire sentence and its prosody is shown in (6).

These observations provide some indication that the intuition of stronger nuclear stress derived by rightmost strengthening can also have a phonetic correlate: here the upstepped tonal height at the end of the first intonation phrase.

What is important for the rest of this paper is that the intonation phrase is a stress domain, namely the domain for nuclear stress, here marked by double underlining. I here take this nuclear stress that is assigned by (4) to be a linguistic



entity (the prosodic head of an intonation phrase) regardless of whether there are also preceding phrasal stresses that are weaker. To emphasize this conception, I employ the term *sentence stress* instead of nuclear stress in the following.

## 2.2 Background on focus and sentence stress

Focus does not inherently attract sentence stress. If you think that it does, consider (7) and (8). The modifier *manchmal traurig* ‘sometimes sad’ in (7) allows stress on *traurig* ‘sad’ without stress on *manchmal* ‘sometimes’. In (8) the addition of the focus particle *nur* ‘only’ gives rise to a local focus interpretation. In the theory of Rooth (1992) this involves the calculation of alternatives to the domain marked ~[...], the scope of the focus. The focus in (8) is on *manchmal* ‘sometimes’ and this element requires the strongest stress within ~[*manchmal traurig*] for the focusing to work.

- (7) Peter hat seiner manchmal traurigen Nachbarin einen Kuchen gebacken.  
 Peter has his sometimes sad neighbor a cake baked  
 ‘Peter has baked a cake for his sometimes sad neighbor.’
- (8) Peter hat seiner [nur ~[manchmal traurigen] Nachbarin] einen Kuchen  
 Peter has his only sometimes sad neighbor a cake  
 gebacken.  
 baked  
 ‘Peter has baked a cake for his only [sometimes sad] neighbor.’

The argument that focus requires the strongest stress within ~[...], rather than sentence stress, is from Truckenbrodt (1995), revising a suggestion of Jackendoff (1972). In the example at hand, the alternative assumption that focus requires sentence stress would give (9a) as the only possible stress-pattern, or perhaps (9b), since postnuclear stress is normally suppressed. The stress-pattern in (8), with sentence stress on *Kuchen* ‘cake’ would wrongly be ruled out.

- (9) a. Peter hat seiner [nur ~[manchmal traurigen] Nachbarin]  
 b. Peter hat seiner [nur ~[manchmal traurigen] Nachbarin]  
 Peter has his only sometimes sad neighbor  
 einen Kuchen gebacken.  
 einen Kuchen gebacken.  
 a cake baked  
 ‘Peter has baked a cake for his only [sometimes sad] neighbor.’

This is of course not what we want. Therefore the effect of focus on the stress is best described as in (10).

- (10) Prosodic effect of focus  
The strongest stress within  $\sim[\dots[\dots]_F \dots]$  must be within  $[\dots]_F$ .

If focus does not require sentence stress (but only the strongest stress in  $\sim[\dots]$ ), why does it seem to do so in more standard examples like (11)? Here the sentence stress must be on the focus.

- (11) Wem hat Peter einen Kuchen gebacken?  
who has Peter a cake baked  
'For whom die Peter bake a cake?'

$\sim$ [Er hat [seiner Nachbarin]<sub>F</sub> einen Kuchen gebacken]  
he has his neighbor a cake baked  
'He baked a cake for his neighbor.'

The reason is: (a) There is an independent requirement that the sentence carries sentence stress. (b) the  $\sim[\dots]$  is here the entire clause. Now, if the focus requires the strongest stress in  $\sim[\dots]$ , it requires that this independently required sentence stress must go to the focus. There is no other place than the focus any more, to which the independently required sentence stress can legitimately go by (10).

What is the independent requirement that the sentence carries sentence stress? This is the topic of the current paper: It is that certain syntactic (or semantic?) domains require to be intonation phrases, and that the intonation phrase requires a prosodic head, the sentence stress. Downing (1970) suggested that root sentences trigger intonation phrases. I argue, following up on Selkirk (2005, 2011), that speech acts trigger intonation phrases. In (11) both suggestions work. The entire root sentence, or the speech act, must be an intonation phrase and must therefore carry sentence stress. If there is narrow focus, as in (11), the narrow focus restricts by (10) where the sentence stress goes: to the focus.

If there is no narrow focus as in (5), the sentence stress is assigned rightmost by rightmost strengthening in (4). This means that (4) is only a default rule that has effect where focus does not intervene. For the focus effect (10) to be effective, it must be allowed to take precedence over (4).

## 2.3 Background on modal particles

Altmann (1987):54.Fn25 tentatively assumes that German modal particles are determined by the sentence type (“satztypgesteuert”), and thus that they directly interact with a combination of sentence form and a speech-act related function. Thurmair (1989):73 maintains that modal particles can modify the illocution of a clause, and can therefore be employed as evidence for the illocutionary force of a clause. Zimmermann (2004) works out for the modal particle *wohl* that it modifies the sentence type indicator of the clause it is in. Reis (1997, 2006) employs modal particles as evidence for the independence and thus speech-act related nature of clauses. Applying this we can, for example, employ the possibility of different modal particles in the two clauses in (12) and in the two clauses in (13) as evidence that each of these clauses is a separate speech act. The dash ‘—’ indicates the intuition of a pause, here identified with an intonation phrase break. The modal particles are translated by comparable parentheticals, which are italicized.

- (12) Peter ist *wohl* zunächst hier gewesen — und später hat er *ja* die Maria  
 Peter is MP at.first here been and later has he MP the Maria  
 angerufen.  
 called  
 ‘Peter has, *I suppose*, first been here, and later he has, *as we know*, called  
 Maria.’
- (13) Peter, — der *ja* gerade in Berlin ist, — hat *wohl* schon  
 Peter who MP currently in Berlin is has MP already  
 mehrmals angerufen.  
 several.times called  
 ‘Peter, who, *as we know*, is in Berlin, has, *I suppose*, already called several  
 times.’

We must not apply this test blindly. It is known that modal particles are not only compatible with genuine speech acts but also with described speech acts as in (14) (Doherty (1979) and Zimmermann (2004)). Here the modal particle *wohl* (here translated as ‘perhaps’) does not interact with a real speech act but with a described speech act by Peter.

- (14) Peter sagte, dass Maria *wohl* in Berlin ist.  
 Peter said that Maria MP in Berlin is  
 ‘Peter said that Maria is *perhaps* in Berlin.’

Modal particles are argued to be tied to (unembedded or embedded) root clauses (Hooper and Thompson (1973), Heycock (2006)) by Coniglio (2011) und Frey (2011, 2012) and root clauses may either be connected to genuine assertions or to described assertions. It is only in the domain of genuine assertions as in (12) and (13) that they are telling about the speech acts of interest here.

## 2.4 Background on sentence adverbials

Following Bußmann (2002) sentence adverbials (“Satzadverbiale”) and sentence adverbs (“Satzadverbien”) are here taken to specify the subjective estimation of the speaker of the utterance towards the sentential proposition. Examples are *mit Sicherheit* ‘certainly’, *wahrscheinlich* ‘probably’, *angeblich* ‘allegedly’, *hoffentlich* ‘hopefully’. Syntactically these are different from modal particles in German insofar sentence adverbs can occupy Spec,CP, the German Vorfeld, while modal particles cannot. However, they share with modal particles the interaction with the semantic/pragmatic embedding of the proposition, i.e. their relation to the speaker and/or speech act, and with this, their extrapositional nature. According to Frey (2004) the part of the German clause between the C-position and the position of sentence adverbs may be empty or it may be filled by one or more aboutness topics.

The interaction of sentence adverbials with the speech act provides us with another means of testing for the number of speech acts. For example in (15) we have evidence for two separate assertions insofar the first assertion is qualified by *mit Sicherheit* ‘certainly’ while the second assertion is qualified by *angeblich* ‘allegedly’.

- (15) Es war *mit Sicherheit* kalt — und der Mond hat *angeblich* geschienen.  
 it was with certainty cold and the moon has allegedly shone  
 ‘It was *surely* cold, and the moon shone *allegedly*.’

The special status of sentence adverbs can also be seen in the following interaction with afterthought. Afterthought is illustrated in (16a). It can be a separate assertion by the criteria applied here, since it can be separately modified by a sentence adverb as in (16b). Consider then also (16c). This is ruled out, I maintain, because afterthought does not allow for corrections or other changes of mind by the speaker (unless a special clause licensing this, like ‘I mean’ is present, see Ziv and Grosz (1994)). Therefore the change of day in (16c) is not possible.

- (16) a. Maria hat jemanden gesehen, — den Portier.  
 Maria has someone seen the doorman  
 ‘Maria saw someone – the doorman.’
- b. Maria hat *mit Sicherheit* jemanden gesehen, — *angeblich* den  
 Maria has with certainty someone seen allegedly the  
 Portier.  
 doorman  
 ‘Maria has *surely* seen someone – *allegedly* the doorman.’
- c. Maria hat am Dienstag jemanden gesehen, — (\*am Mittwoch) den  
 Maria has on Tuesday someone seen on Wednesday the  
 Portier.  
 doorman  
 ‘Maria has seen someone on Tuesday – (\*on Wednesday) the door-  
 man.’

What is of interest here is the distinction between (16b) and (16c). Though (16b) presents conflicting strength of speaker certainty in a way that parallels the conflicting days of the week in (16c), the case in (16b) is not ruled out in the same way as (16c). This supports the assessment that sentence adverbs are not ‘regular’ constituents contributing to the content. If they were, (16b) would be ruled out in parallel to (16c). Instead the sentence adverb *angeblich* in (16b) qualifies the strength of the second assertion, and in this fashion it does not introduce a correction or other change of mind by the speaker.

In sum, then, modal particles and sentence adverbs, both interacting with speech acts, will be employed to test for, or enforce speech acts in various complex utterances.

What notion of speech act are we working with when we pursue the assumption that modal particles and sentence adverbs, where they do not interact with a described speech act, interact with a real speech act? Assume, for concreteness (as I would be inclined to) for the modal particle *wohl* that [wohl p] presupposes that someone commits to p and that the modal particle adds to this that the strength of the commitment (Searle 1975) is weak, or more specifically a supposition (German “Vermutung”, see Zimmermann 2004). In a described commitment as in (14) this can operate on the strength of the described commitment. However, in (12) and (13), if there is no described commitment, *wohl* needs to find and operate on a commitment by the speaker. The test will normally be applied, as in the preceding examples, with a combination of two conflicting modal particles or sentence adverbs. Where the combination is possible, this seems to show that two combined structures involve, or can at least involve, two separate commitments by the speaker. In this application of the tests, we seem to be testing for sepa-

rate speech acts in the sense of separate speaker commitments. Note that speaker commitments are assertive speech acts in the sense of Searle (1975).

### 3 Coordination

#### 3.1 Coordinated DPs

I first employ a simple case for conveying a feeling of the relation between genuine speech acts and intonation phrases. It employs a surface string of coordinated DPs. Ordinarily coordinated DPs can easily each carry an accent without each being an intonation phrase (see also Grabe (1998)). A single sentence adverb can take scope across all of them, as in (17b), so that it is plausible that we are dealing with a single assertion.

- (17) Wer war auf der Party?  
 ‘Who was at the party?’
- a. Die Maria, die Claudia, der Hans und der Peter.  
 the Maria the Claudia the Hans and the Peter
- b. Angeblich die Maria, die Claudia, der Hans und der Peter.  
 allegedly the Maria the Claudia the Hans and the Peter  
 ‘(Allegedly) Maria, Claudia, Hans, and Peter.’

However, we can also modify the DPs with separate sentence adverbs as in (18). In that case each assertion is separated by a clear pause from the next one, and carries sentence stress.

- (18) Wer war auf der Party?  
 ‘Who was at the party?’
- Mit Sicherheit die Maria, — angeblich die Claudia, — wahrscheinlich der  
 with certainty the Maria allegedly the Claudia probably the  
Hans — und möglicherweise der Peter.  
 Hans and possibly the Peter  
 ‘Surely Maria, allegedly Claudia, probably Hans, and possibly Peter.’

Importantly it is not possible to squeeze these different assertions into a single intonation phrase, with the weaker divisions in (17a,b).

- (19) Wer war auf der Party?  
 ‘Who was at the party?’  
 #\* Mit Sicherheit die Maria, angeblich die Claudia, wahrscheinlich der  
 with certainty the Maria allegedly the Claudia probably the  
Hans und möglicherweise der Peter.  
 Hans and possibly the Peter  
 ‘Surely Maria, allegedly Claudia, probably Hans, and possibly Peter.’

This suggests that speech acts and intonation phrases are related. The connection is descriptively captured in (20), essentially from Selkirk (2005, 2011).

- (20) Each speech act requires a separate intonation phrase and concomitant sentence stress.

(20) allows (18), where each speech act corresponds to a separate intonation phrase. (20) rules out (19) since the separate speech acts do not correspond to separate intonation phrases. I return to the issue of the syntactic connection between speech acts and intonation phrases in section 9 at the end of the paper.

### 3.2 Coordinated sentences

The way Downing (1970:27) describes it, two coordinated unembedded sentences are obligatorily separated by a pause, as in his example (21); when the conjunction of two clauses is embedded as in (22), they are not separated by an obligatory pause. The intuition about an *optional* pause in this position is not relevant to Downing’s rule that predicts intuitions about *obligatory* pauses from the syntax.

- (21) Mary will sing / and Bob will play his banjo.  
 (22) I hope that Mary will sing (/) and Bob will play his banjo.

This picture is now refined for German in terms of speech acts. It was seen in (12) and (15) that coordinated V2-clauses can constitute two separate speech acts. However, it turns out that it is also possible to form a single assertion from coordinated V2-clauses in German. Thus a speech act adverbial in the Vorfeld

(Spec,CP) very naturally has scope over both its own clause and a following coordinated V2-clause, as in (23).<sup>2</sup>

- (23) a. *Angeblich* hat der Mond geschienen und es ist kalt gewesen.  
 allegedly has the moon shone and it is cold been  
 ‘*Allegedly* the moon shone and it was cold.’
- b. *Wahrscheinlich* hat der Mond geschienen und es ist kalt gewesen.  
 probably has the moon shone and it is cold been  
 ‘*Probably* the moon shone and it was cold.’

The test in (24) from Clemens Mayr (personal communication) documents the scope of the initial sentence adverb over the second conjunct. The addition is possible without contradiction because *angeblich* ‘allegedly’ qualifies *es ist kalt gewesen* ‘it was cold’.

- (24) *Angeblich* hat der Mond geschienen und es ist kalt gewesen. Aber *in*  
 allegedly has the moon shone and it is cold been but in  
*Wirklichkeit* ist es nicht kalt gewesen.  
 reality is it not cold been  
 ‘*Allegedly* the moon shone and it was cold. But *in fact* it was not cold.’

The salient wide-scope reading is not or not as readily available when the speech act adverb is not in the Vorfeld as in (25a) or (25b). While judgments may vary a bit, the addition is more marked in (26) than in (24).

- (25) a. Der Mond hat *angeblich* geschienen und es ist kalt gewesen.  
 the moon has allegedly shone and it is cold been  
 ‘The moon *allegedly* shone and it was cold.’
- b. Der Mond hat *wahrscheinlich* geschienen und es ist kalt gewesen.  
 the moon has probably shone and it is cold been  
 ‘The moon *probably* shone and it was cold.’

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<sup>2</sup> These cases are different from the asymmetric coordination investigated by Höhle (1990), who concentrates on cases in which the second conjunct is formally a V1-clause. There may be relations between the two kinds of asymmetric coordination. They are beyond the scope of this paper.



- (26) Der Mond hat *angeblich* geschienen und es ist kalt gewesen. #? Aber *in*  
 the moon has allegedly shone and it is cold been but *in*  
*Wirklichkeit* ist es nicht kalt gewesen.  
 reality is it not cold been  
 ‘The moon *allegedly* shone and it was cold. But *in fact* it was not cold.’

There is no corresponding wide-scope reading of a speech act adverb in the Vorfeld of the second V2-clause. The addition of the testing expression in (27) leads to a clear contradiction.

- (27) Der Mond hat geschienen und *angeblich* ist es kalt gewesen. #\*Aber *in*  
 the moon has shone and allegedly it is cold been but *in*  
*Wirklichkeit* hat der Mond nicht geschienen.  
 reality has the moon not shone  
 ‘The moon shone and allegedly it was cold. But *in fact* the moon didn’t  
 shine.’

These observations suggest that integration into a single assertion is possible, and that it is possible in a particular form. I hypothesize that the second clause can be conjoined with only a part of the first clause, as in (28). The sentence adverb, outside of the coordinate structure, then receives wide scope.

- (28) *Angeblich* [[hat der Mond geschienen] und [es ist kalt gewesen]]  
 allegedly has the moon shone and it is cold been  
 ‘Allegedly the moon shone and it was cold.’

In this analysis obtaining wide scope in (25) requires that the second V2-clause be conjoined with a constituent below the sentence adverb which itself is below the finite verb, as in (29). This may be more marked for some speakers than for others, but it is a sensible consequence of the current analysis that it should generally be more marked because of the greater asymmetry between the two conjuncts.

- (29) ?Der Mond hat *angeblich* [[geschienen] und [es ist kalt gewesen]]  
 the moon has allegedly shone and it is cold been

A wide-scope reading in (27) is ruled out on very general assumptions.

Notice then that single speech-acts of this kind also allow a prosodically integrated stress-pattern with sentence stress on the conjunction *und* ‘and’, in appropriate contexts.

- (30) Hat der Mond geschienen? Ist es kalt gewesen?  
 ‘Did the moon shine? Was it cold?’  
*Angeblich* [hat der Mond geschienen] und [es ist kalt gewesen]  
 allegedly has the moon shone and it is cold been  
 ‘*Allegedly* the moon shone and it was cold.’

This stress-pattern is not contingent on the presence of the initial speech act adverb:

- (31) Hat der Mond geschienen? Ist es kalt gewesen?  
 ‘Did the moon shine? Was it cold?’  
 [<sub>CP</sub> Der Mond hat geschienen] und [<sub>CP</sub> es ist kalt gewesen]  
 the moon has shone and it is cold been  
 ‘The moon shone and it was cold.’

Notice then that the integrated prosodic stress-pattern in (31) does not in fact allow distinct sentence adverbs or modal particles in the two conjuncts. This is shown in (32) and (33).

- (32) Hat der Mond geschienen? Ist es kalt gewesen?  
 ‘Did the moon shine? Was it cold?’  
 \* [<sub>CP</sub> Der Mond hat *sicher* geschienen] und [<sub>CP</sub> es ist *wahrscheinlich* kalt  
 the moon has surely shone and it is probably cold  
 gewesen]  
 been  
 ‘The moon *certainly* shone and it *probably* was cold.’
- (33) Hat der Mond geschienen? Ist es kalt gewesen?  
 ‘Did the moon shine? Was it cold?’  
 \* [<sub>CP</sub> Der Mond hat *doch* geschienen] und [<sub>CP</sub> es ist *wohl* kalt gewesen]  
 the moon has MP shone and it is MP cold been  
 ‘The moon shone, *you may remember*, and it was cold, *I suppose*.’

For comparison, I point out that the focus on the conjunction in (31) is optional, and if is omitted, we find a stress-pattern with two separate intonation phrases as in (34).

- (34) Hat der Mond geschienen? Ist es kalt gewesen?  
 ‘Did the moon shine? Was it cold?’

[<sub>CP</sub> Der Mond hat geschienen] — und [<sub>CP</sub> es ist kalt gewesen]  
 the moon has shone and it is cold been  
 ‘The moon shone and it was cold.’

Crucially, this separate stress pattern is compatible with distinct sentence adverbs or modal particles in each conjunct, as shown in (35) and (36). These, then, minimally contrast with (32) and (33).

(35) Hat der Mond geschienen? Ist es kalt gewesen?

‘Did the moon shine? Was it cold?’

[<sub>CP</sub> Der Mond hat *sicher* geschienen] — und [<sub>CP</sub> es ist *wahrscheinlich* kalt gewesen]  
 the moon has surely shone and it is probably cold  
 been]

been

‘The moon *certainly* shone and it *probably* was cold.’

(36) Hat der Mond geschienen? Ist es kalt gewesen?

‘Did the moon shine? Was it cold?’

[<sub>CP</sub> Der Mond hat *doch* geschienen] — und [<sub>CP</sub> es ist *wohl* kalt gewesen]  
 the moon has MP shone and it is MP cold been

‘The moon shone, *as you may remember*, and it was cold, *I suppose*.’

The observations support (20): (32) and (33) can be ruled out by (20) because the separate speech acts do not correspond to separate intonation phrases. (30) and (31) are allowed by (20) because a single speech act does not need to be parsed into two separate intonation phrases.

### 3.3 Further remarks: Information structure and the integrated stress-pattern

This section and the following one solidify and complete the preceding analysis. Readers interested in reviewing the main points of the current paper are encouraged to skip to section 4.

We have moved into a domain not considered by Downing (1970). We are taking information structure into account and employ two content-given clauses to obtain the special stress-pattern in (30) and (31). I assume that information structure can override default prosody in other cases. For example, both assignment of focus and assignment of givenness (Féry and Samek-Lodovici (2006), Ladd (1983)) are assumed to be able to override the default stress-pattern in (5).

Could it not then be that (20) is similarly overridden by information structure effects on prosody?

(37) formulates the prosodic effect of givenness on sentence stress.

(37) Given constituents reject sentence stress.

Consider now a single sentence of which the content is given, as in (38). It requires sentence stress as in (38a) and cannot simply lack it as in (38b). Verum focus (here focus on the finite verb in C that intuitively highlights that the sentence is presented as true; see Höhle (1992) is also an option, as in (38c), though this is orthogonal to the point at hand. The observation that unembedded content-given sentences still carry sentence stress is from Höhle (1992).

- (38) Ist es kalt gewesen?  
 is it cold been  
 'Was it cold?'  
 a. Es ist kalt gewesen.  
 b. \*Es ist kalt gewesen.  
 c. Es ist kalt gewesen.  
 it is cold been  
 'It was cold.'

In the context of the current discussion, the most reasonable analysis of this stress-effect is in terms of (20). The speech act requires an intonation phrase which in turn requires sentence stress. Importantly, (20) is here up against the prosodic effect of givenness in the same way as in (30) and (31). We seem to see in the simpler case in (38) that (20) overrides the givenness effect (37): Sentence stress is assigned even though the content of the clause is given.

Since (20) is not overridden in (38), we are led to assume that it is also not overridden in (30) and (31). This supports the earlier analysis in which we correlated the special stress pattern in (30) and (31) not with an overriding givenness effect, but with the presence of only a single speech act.

At the same time, focus assignment is arguably involved in (30) and (31), so let us turn to this and to a fuller analysis of these examples. I will present my account top-down so as to simplify the exposition. The examples (31) and (34) are repeated here as (39a) and (39b).

- (39) Hat der Mond geschienen? Ist es kalt gewesen?  
 'Did the moon shine? Was it cold?'

- a. [<sub>CP</sub> Der Mond hat geschienen] und [<sub>CP</sub> es ist kalt gewesen]  
 b. [<sub>CP</sub> Der Mond hat geschienen] — und [<sub>CP</sub> es ist kalt gewesen]  
     the moon has shone           and     it is cold been  
     ‘The moon shone and it was cold.’

First, the coordinated sentence consists only of stress-rejecting elements: the two sentences of which the content is given in the context, and the functional conjunction *und* ‘and’, which we expect to reject stress like other functional elements, e.g. pronouns. Among these, I postulate that the stress-rejecting element of function words is stronger. All else being equal, we will therefore not have stress on the conjunction as in (39a) but elsewhere as in (39b).

Second, the conjunction *und* ‘and’ may carry narrow focus, which accounts for the stress-pattern in (39a). The background to this focus includes the two clauses. The background in a focus must be given in the context (Jacobs 1991), and this is satisfied here insofar the content of each of the two clauses is given in the context. Focus is possible on *und* ‘and’ in a way that broadly resembles *verum focus*. The conjunction *und* ‘and’ encodes the truth-value pair (true, true). Therefore semantic alternatives to this focus (Rooth 1992) are other truth-value pairs, which also represent possible alternative answers in this context: (true, false), (false, true), (false, false). For example, such a semantic alternative is the assertion that the moon shone but that it was not cold.

Can we be sure that *und* is focused in (39a)? While this seems to be intuitively plausible, one might also want to consider an alternative analysis: Assuming a single speech act, the stress-rejecting effect of givenness in (37) might be stronger than the stress-rejecting effect of the function word *und* ‘and’, and so stress might simply be pushed to the conjunction because it is pushed away from the given clauses. The distinction is not crucial for our analysis and for our conclusions. However, I tend to think that the focus analysis is correct for the following reason. Consider (40b). This is a similar example with *oder* ‘or’. It employs different conjunct sentences so as to add plausibility and relevance to the disjunction. Here it appears to be more difficult to end up with sentence stress on *oder* ‘or’.

- (40) A: Hat der Mond geschienen? Hatte Peter eine Taschenlampe dabei?  
       ‘Did the moon shine? Did Peter have a flash light with him?’  
       B: Ich bin nicht sicher.  
       ‘I am not sure.’

- a. [<sub>CP</sub> Der Mond hat geschienen] – oder [<sub>CP</sub> Peter hatte eine  
 b. # [<sub>CP</sub> Der Mond hat geschienen] oder [<sub>CP</sub> Peter hatte eine  
     the moon has shone            or           Peter had a  
     Taschenlampe dabei]  
     Taschenlampe dabei]  
     flashlight       therewith  
     # ‘The moon shone or Peter had a flash-light with him.’

Jedenfalls konnte Peter etwas       sehen.  
 at.any.rate could Peter something see  
 ‘At any rate, Peter was able to see something.’

This is unexpected on the givenness-analysis of (39a): *oder* ‘or’ should be just as good for receiving the sentence stress that is pushed away from the disjuncts. However, the degradation in (40b) is expected on the focus analysis of (39a). *oder* ‘or’ does not contribute a truth-value pair (it is true on any of the truth-value combinations true-false, false-true and true-true). It is therefore reasonable that it should be less of a suitable contrast for focusing it.

### 3.4 Further remarks: Another constraint on the prosody of coordinated sentences

I have argued that coordination of V2-clauses is possible in a single speech act. Even in the domain of a single speech act, however, there is at least a tendency to stress not only one sentential conjunct but both. This is not inherently detrimental to (20), since (20) predicts only the minimum of prosodic boundaries. It places no ban on additional intonation phrase divisions. In this section I address the issue where the additional boundaries, i.e. the tendency to have sentence stress in both conjuncts, even in the presence of a single speech act, comes from.

Consider first (41). In a single speech act in which both sentential conjuncts are new, a natural stress-pattern involves sentence stress on each conjunct.

- (41) [What was it like during that night?]  
 Angeblich hat der Mond geschienen und es ist kalt gewesen.  
 allegedly has the moon shone       and it is cold been  
 ‘Allegedly the moon shone and it was cold.’

I suggest in Truckenbrodt (2005) that German shows the effect of the constraint in (42). This constraint right-aligns any clause, be it a root sentence or not, with

an intonation phrase boundary. Separate sentence-stress is then the consequence of the intonation phrase division.

(42) Align-CP: Each CP is right-aligned with an intonation phrase boundary.

I support this in Truckenbrodt (2005) with the results of a small experiment with a single speaker who consistently showed intonation phrases at right, but not left edges of embedded clauses. The current account follows Selkirk (2011) and Downing (2011) in assuming that two syntactic categories may trigger intonation phrase boundaries: the simple CP as in (42) on the one hand, and a larger one, comparable to the root sentences of Downing (1970) on the other.

Another German example that exemplifies the effect of (42) is shown in (43).

(43) Peter sagt, dass der Mond geschienen hat – und dass es kalt gewesen  
 Peter says that the moon shone has and that it cold been  
 ist.  
 is  
 ‘Peter says that the moon shone – and that it was cold.’

Unlike the effects of (20), however, the effects of (42) can be overridden by prosodic effects of information structure. In (44) for example, where the embedded conjunction is contextually given, it seems that the entire structure is a single intonation phrase with a single sentence stress.

(44) Maria sagt, dass der Mond geschienen hat – und dass es kalt gewesen  
 Maria says that the moon shone has and that it cold been  
 ist.  
 is  
 ‘Maria says that the moon shone and that it was cold.’

Ja, Peter sagt auch, dass der Mond geschienen hat und dass es kalt  
 yes Peter says also that the moon shone has and that it cold  
 gewesen ist.  
 been is  
 ‘Yes, Peter also says that the moon shone and that it was cold.’

It seems reasonable, then, that the single speech-act in (41) requires intonation phrase boundaries at its edges due to (20), but that the internal boundary is not related to a root sentence or speech act, but simply to the additional clause boundary.

It is for this reason, I think, that we normally have two intonation phrases for two coordinated (unembedded) V2-clauses. The cases in (30) and (31)/(39a) are special insofar they require special information structure that overrides (42). Importantly, this refined understanding of these cases is compatible with the argument made in connection with (30)–(33) earlier: This special case also requires a single overarching speech act, for otherwise (20) enforces a division between the two speech acts, as in (32) and (33).

### 3.5 Summary of constraints and ranking

This section provides an overview of the constraints and their postulated strength-relations (rankings). The numbering of the constraints from above is retained in the current section. The effect crucially argued for in this paper is (20).

- (20) Each speech act requires a separate intonation phrase and concomitant sentence stress.

Focus, if it has widest scope in the speech act, will direct the stress that is required by (20) to the focused constituent due to (10):

- (10) Prosodic effect of focus  
The strongest stress within  $\sim[\dots [\dots]_F \dots]$  must be within  $[\dots]_F$ .

Where narrow focus does not put restrictions on the sentence stress, the default in (4) will make itself felt.

- (4) Rightmost strengthening (Uhmann 1991)  
Strengthen the rightmost accent (here: phrasal stress) in the intonation phrase.

The following effect of givenness is subordinate to (20). Therefore (20) will require sentence-stress in an all-given assertion.

- (37) Given constituents reject sentence stress.

However, in addition to (20) there is also a clause-effect on intonation phrases, the one in (42). It is weaker than the givenness-effect (37).

- (42) Align-CP: Each CP is right-aligned with an intonation phrase boundary.



Since (20) is stronger than the givenness-effect (37), and the (37) is stronger than (42), we obtain:

(45) Speech-act-effect (20) >> Givenness-effect (37) >> Clause-effect (42)

In this sense the clause-effect (42) is weaker than the speech-act-effect (20).

## 4 Appositive relatives and appositions

### 4.1 Appositive relatives

Reis (1997) takes appositive relatives to be a standard case of non-integrated constituents. Downing's example (1) is repeated here as (46).

(46) The library, / which is a large stone and glass building, / is on the east side of the campus.

We have seen the point of Reis (1997, 2006) in (13) that they allow modal particles. The same is true for sentence adverbs:

(47) Peter, — der *angeblich* gerade in Berlin ist, — kann dir *mit*  
Peter who allegedly currently in Berlin is can you with  
*Sicherheit* helfen.  
certainty help  
'Peter, who is *allegedy* in Berlin right now, can *surely* help you.'

They seem to be normally separated by pauses and carry obligatory sentence stress.<sup>3</sup> Here, then, different analyses under discussion derive the correct result. This includes Downing's original analysis, in which the appositive is a root sentence. Similarly the generalization (20) predicts the intonation phrase boundary from the separate speech act.

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<sup>3</sup> Frota (2000) argues for European Portuguese that appositives can also enter into recursive intonation phrasing if they form an intonation phrase themselves, which in turn is part of an intonation phrase with preceding material.

## 4.2 Appositions that are intonation phrases

Downing (1970:152f) points out that appositions like (48) are synonymous to appositive relative clauses as in (46), and that the former, like the latter, are separated by obligatory pauses (here with his notation '/').

- (48) The library, / a large stone and glass building, / is on the east side of the campus.

An observation that I know from Werner Frey (personal communication) is that appositions allow sentence adverbs as in (49). Their scope is the apposition. As shown in (49) this is accompanied with the intuition of the sentence breaking apart into three intonation phrases with three instances of sentence stress.

- (49) a. Der Peter, — *angeblich* ein Psychologe, — hielt gestern einen  
the Peter allegedly a psychologist held yesterday a  
Vortrag.  
talk  
'Peter, *allegedly* a psychologist, gave a talk yesterday.'
- b. Der Peter, — *offenbar* der neue Hiwi, — kam  
the Peter apparently the new research.assistant came  
gestern in mein Büro.  
yesterday into my office  
'Peter, *apparently* the new research assistant, came into my office yesterday.'

When they carry sentence adverbs, the intonation phrase boundaries and accompanying sentence stress are particularly clear in German.

However, there are reasons to believe that appositions do not always trigger intonation phrase boundaries or constitute separate speech acts. I discuss two kinds of cases.

## 4.3 Accented appositions

The first case goes back to Patin and O'Connor (2013) who argue for Shingazidja that appositions show phonological phrase boundaries but not intonation phrase boundaries in that language.

In German Molitor (1979) and Zifonun et al. (1997):2038ff distinguish nominative appositions, which allow the presence of an adverb, from case-agreeing

apposition carrying another case, which do not (see also the detailed recent work in O’Conner 2008 and Heringa 2011). This also applies to the speech-act-related sentence adverbs discussed here. In (49) the appositions carry nominative. In (50) the dative argument *dem Peter* can take a case-agreeing dative apposition as in (50a). This case-agreeing dative apposition does not allow a sentence adverb, as shown in (50b). It seems to be clear that this apposition is not a speech act. The best prosodic approximation to (50a) seems to be as in (50c), without intonation phrase breaks. This case seems to me to be similar to the kind of cases discussed by Patin and O’Connor (2013).

- (50) a. Die Maria hat dem Peter, dem Psychologen, einen Brief geschrieben.  
 the Maria has the Peter the psychologist a letter written  
 ‘Maria wrote a letter to Peter, to the psychologist.’
- b. \*Die Maria hat dem Peter, *angeblich* dem Psychologen, einen Brief  
 the Maria has the Peter allegedly the psychologist a letter  
 geschrieben.  
 written  
 ‘Maria wrote a letter to Peter, *allegedly* to the psychologist.’
- c. Die Maria hat dem Peter, dem Psychologen, einen Brief  
 the Maria has the Peter the psychologist a letter  
 geschrieben.  
 written  
 ‘Maria wrote a letter to Peter, to the psychologist.’

Thus, while appositions sometimes can be accompanied by sentence adverbs as in (49), and in that case are intonation phrases, there are other cases that are not speech acts, as in (50), and seem not to be accompanied by intonation phrase boundaries. There is, it seems in German, intuitively more going on than a simple additional accent. There is some additional special prosody. However, it does not seem to be a division at the level of the intonation phrase.

#### 4.4 Unaccented appositions

A second case, new to my knowledge, involves epithets (see Potts 2005:158ff; English examples are *jerk*, *bastard*, or *darling*) that occur as appositions to the right of the noun. Examples are shown in (51). Surprisingly they do not require accent at all, and are not preceded by either an intonation phrase boundary or a phonological phrase boundary. The examples in (51) contrast with those in (49)

and with (50c) in this regard. The stressless version is not possible with regular content, as (52) shows.

- (51) a. Der Peter<sub>1</sub> der Schlawiner<sub>1</sub> hat mir wieder meine Plätzchen stibizt.  
 the Peter the filou has me again my cookies pilfered  
 ‘Peter, that filou, has pilfered my cookies again.’
- b. Der Peter<sub>1</sub> der Gauner<sub>1</sub> hat schon wieder meine Schuhe versteckt.  
 the Peter the crook has again my new shoes hidden  
 ‘Peter, that sly customer, has hidden my shoes again.’
- c. Der Peter<sub>1</sub> die Schlafmütze<sub>1</sub> hat wieder seine Aufgaben vergessen.  
 the Peter the nightcap has again his assignments forgotten  
 ‘Peter, that sleeping pill, has forgotten his assignments again.’
- (52) a. \*Der Peter der neue Mitarbeiter hielt gestern einen Vortrag.  
 the Peter the new employee held yesterday a talk  
 ‘Peter, the new employee, gave a talk yesterday.’
- b. \*Der Peter ein Mitarbeiter hielt gestern einen Vortrag.  
 the Peter an employee held yesterday a talk  
 ‘Peter, an employee, gave a talk yesterday.’

A range of expressions that show the stressless behavior is given in (53).

- (53) der Schlawiner, der arme Kerl, der Idiot, die dumme Kuh, die Schlafmütze  
 ‘the filou, the poor guy, the idiot, the stupid cow, the nightcap (slow person)’

While appositions carry non-at-issue content as a rule, the content of epithets is in addition non-at-issue as a lexical property. The consequences of their different prosodic behavior from other appositions will be left open here.

What is interesting for the purpose at hand is that epithet appositions do not allow speech act adverbs or modal particles, no matter how they are stressed:

- (54) a. Der Peter (\*offenbar) der Schlawiner hat mir wieder meine  
 the Peter apparently the filou has me again my  
 Plätzchen stibizt.  
 cookies pilfered  
 ‘Peter, (apparenty) that filou, has pilfered my cookies again.’

- b. Der Peter (*\*wohl*) *der Schlawiner* hat mir wieder meine Plätzchen  
 the Peter MP the filou has me again my cookies  
 stibizt.  
 pilfered  
 ‘Peter, (*I suppose*) *that filou*, has gotten my cookies again.’

Thus, whatever epithet appositions are, it seems that they are not speech acts in the sense relevant here.

What is of interest in connection with the current paper, then, is that the appositions that are speech acts, like the ones in (49), require intonation phrases as predicted by (20). On the other hand, appositions that are not speech acts in the relevant sense, like the accented ones in (50) and the unaccented ones in (51), do not seem to be intonation phrases. The latter are also admitted by (20).

## 5 The distinction between right dislocation and afterthought

### 5.1 Some properties of RD and AT

I follow the terminology of Ziv and Grosz (1994) and Averintseva-Klisch (2009): Right dislocation (RD) is the term for stressless resumption, typically of a personal pronoun as in (55). Afterthought (AT) is stressed resumption as in (56). Unlike RD, AT involves both an additional sentence stress on the resuming element and an obligatory pause preceding the resuming element. The pause is here correlated with an intonation phrase boundary preceding the stressed constituent.

- (55) Ich habe sie gesehen, die Schauspielerin.  
 I have her seen the actress  
 ‘I have seen her, the actress.’
- (56) Ich habe jemanden gesehen — die Schauspielerin.  
 I have someone seen the actress  
 ‘I have seen someone, — the actress.’

The distinction between RD and AT is interesting in connection with the search for the syntactic trigger of obligatory sentence stress, since RD is without such sentence stress while AT carries sentence stress. I begin with some general properties of the two constructions in the current section before turning to this issue.

RD may be used to disambiguate the referent of the pronoun in the preceding discourse. However, as shown by Averintseva-Klisch (2009), this need not be so. In the example (57) from her (the stress is added by me), the information provided by RD is not required for disambiguating the reference of the pronoun. However, the example is acceptable.

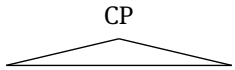
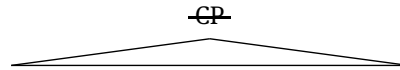
- (57) *Meine Chefin*<sub>1</sub> dreht manchmal völlig durch. *Die*<sub>1</sub> ist halt  
 my boss.FEM turns sometimes completely through that.FEM is MP  
 so, *die Frau*<sub>1</sub>.  
 like.that the woman  
 'My boss sometimes loses her temper. She is like that, that woman.'

AT instead of RD can in certain cases be obligatory. As noted by Zwart (2001), resumption of indefinites requires sentence stress on the resuming element. Example (56) is of this kind.

A number of syntactic differences between RD and AT are pointed out by Ziv and Grosz (1994) for English and Averintseva-Klisch (2009) for German. Despite the differences, Ott and De Vries (to appear) and Truckenbrodt (to appear) argue that both are derived by syntactic deletion.

I will call the clause that precedes the elliptical constituent the *host clause*. (Altmann (1981) and Averintseva-Klisch (2009) call it *matrix clause*.) The deletion account represents the host clause as a separate root sentence in both RD and AT. In (58) and (59) the host clause, crucially without the dislocated constituent, is a root sentence. I argue in Truckenbrodt (to appear) that this correctly derives (a) that the host clause must carry sentence stress on its own and (b) that no focus-background structure may go across host clause and dislocated constituent.

As for the elliptical clause, this is also a root sentence before deletion in (58) and (59). I note in Truckenbrodt (to appear) that the stress facts suggest that this second root clause is retained in AT as in (59), where we find a corresponding sentence stress on the elliptical constituent. On the other hand, the second CP node (and possibly other syntactic structure with it) seems to be deleted in RD as in (58), along with the deletion of overt material. This would be a necessary assumption since we do not find sentence stress on the elided constituent here.

- (58)
- |   |   |
|---|---|
|                |    |
| <p>Ich habe sie <u>gesehen</u><br/>       I have her seen<br/>       'I have <u>seen</u> her,</p> | <p><del>ich habe</del> die Schauspielerin <u>gesehen</u>.<br/>       I have the actress seen<br/>       'I <del>have seen</del> the actress.'</p> |

- (59)
- |   |   |
|---|---|
| <p style="text-align: center;">CP</p> <p style="text-align: center;">└──────────┘</p> <p>Ich habe jemanden <u>gesehen</u> —</p> <p>I have someone seen</p> <p>‘I have <u>seen</u> someone</p> | <p style="text-align: center;">CP</p> <p style="text-align: center;">└──────────┘</p> <p>ich habe die <u>Schauspielerin</u> <u>gesehen</u>.</p> <p>I have the actress seen</p> <p>‘I have seen the <u>actress</u>.’</p> |
|---|---|

In the following I discuss the issue in terms of speech acts. This replaces the account in terms of (58) and (59).

## 5.2 Speech acts and RD/AT

The cases that involve obligatory AT to the exclusion of stressless RD are all and only those in which the resuming element adds new content, i.e. in which the resuming elided clause has content that is different from the content of the first clause. This includes the resumption of indefinites from Zwart (2001), as in (60).

- (60) a. Ich habe jemanden gesehen, ~~ich habe die~~ Schauspielerin gesehen.  
 I have someone seen I have the actress seen  
 ‘I have seen someone, ~~I have seen~~ the actress.’
- b. \*Ich habe jemanden gesehen, die Schauspielerin. (\* without stress  
 I have someone seen the actress on *Schauspielerin*  
 ‘I have seen someone, the actress.’

Obligatory AT to the exclusion of RD is also observed with the resumption of all kind of other elements, so long as the resuming element is not definite itself and does not resume a personal pronoun or other definite constituent. Examples from Truckenbrodt (to appear) include resumption of adverbials as in (61) and resumption of negation as in (62).

- (61) a. Ich habe sie oft gesehen, ~~ich habe sie~~ jeden Tag gesehen.  
 I have her often seen I have her every day seen  
 ‘I have often seen her, ~~I have seen her~~ every day.’
- b. \*Ich habe sie oft gesehen, jeden Tag.  
 I have her often seen every day  
 ‘I have often seen her, every day.’ (\* without stress on *jeden Tag*  
 on the reading in which *jeden Tag*  
 ‘every day’ refines *oft* ‘often’)

- (62) a. Er hat sie nicht gefunden, ~~er hat sie~~ an keinem Ort gefunden.  
 he has her not found he has her in no place found  
 ‘He has not found her, ~~he has not found her~~ in any place.’
- b. \*Er hat sie nicht gefunden, an keinem Ort. (\* without stress  
 he has her not found in no place on *keinem Ort*)  
 ‘He has not found her, not in any place.’

All these cases of obligatory AT allow conflicting speech act adverbials and conflicting modal particles in the main clause and the resuming element:

- (63) a. Ich habe *sicher* jemanden gesehen, ~~ich habe wahrscheinlich~~ die  
 I have surely someone seen I have probably the  
Schauspielerin gesehen.  
 actress seen  
 ‘I have *surely* seen someone, ~~I have probably seen~~ the actress.’
- b. Ich habe *ja* jemanden gesehen, ~~ich habe wohl~~ die Schauspielerin  
 I have MP someone seen I have MP the actress  
gesehen.  
 seen  
 ‘I have, *as we know*, seen someone, ~~I have, I suppose, seen~~ the actress.’
- (64) a. Ich habe sie *sicher* oft gesehen, ~~ich habe sie wahrscheinlich~~ jeden  
 I have her surely often seen I have her probably every  
Tag gesehen.  
 day seen  
 ‘I have *surely* often seen her, ~~I have probably seen her~~ every day.’
- b. Ich habe sie *doch* oft gesehen, ~~ich habe sie wohl~~ jeden Tag  
 I have her MP often seen I have her MP every day  
gesehen.  
 seen  
 ‘I have, *as you may remember*, often seen her, ~~I suppose I have seen her~~  
 every day.’
- (65) a. Er hat sie *offenbar* nicht gefunden, ~~er hat sie angeblich~~ an  
 he has her apparently not found he has her allegedly in  
 keinem Ort gefunden.  
 no place found  
 ‘*Apparently* he has not found her, *allegedly* ~~he has not found her~~ in any  
place.’



- b. Er hat sie *ja* nicht gefunden, ~~er hat sie wohl~~ an keinem Ort  
 he has her MP not found he has her MP in no place  
gefunden.  
 found  
 ‘As we know, he has not found her, ~~he has~~, I suppose, not found her in  
 any place.’

On the other hand, resumption of a personal pronoun or other definite element by a coreferent definite element can be stressless (RD) as in (66a) or stressed as in (66b). Either way, this kind of resumption does not allow a separate speech act adverb or modal particle, as shown in (67).<sup>4</sup>

- (66) a. Maria hat ihn<sub>1</sub> eingeladen, den Schauspieler<sub>1</sub>.  
 b. Maria hat ihn<sub>1</sub> eingeladen, — den Schauspieler<sub>1</sub>.  
 Maria has him invited the actor  
 ‘Maria has invited him, the actor.’
- (67) a. Maria hat ihn<sub>1</sub> eingeladen, (\**angeblich* / \**offenbar* / \**ja* / \**wohl*)  
 Maria has him invited allegedly / apparently / MP / MP  
 den Schauspieler<sub>1</sub>.  
 the actor  
 ‘Maria has invited him, (*allegedly/apparently/as we know/I suppose*)  
 the actor.  
 b. Maria hat den Peter eingeladen, (\**offenbar*) ihren Bruder.  
 Maria has the Peter invited apparently her brother  
 ‘Maria has invited Peter, (*apparently*) her brother.’  
 c. Maria hat ihren Bruder eingeladen, (\**offenbar*) den Schauspieler.  
 Maria has her brother invited apparently the actor  
 ‘Maria has invited her brother, (*apparently*) the actor.’

This is compatible with the current account: In all cases in which speech act adverbs and modal particles testify to a separate speech act (i.e. those in (63)–(65)), there is AT, i.e. a separate intonation phrase with separate sentence stress.

The following analysis of the distribution of sentence adverbs and modal particles is also compatible with the current account. Let us adopt the notion of assertion of Stalnaker (1978), by which an assertion adds content to the common

<sup>4</sup> Note that speech act adverbs here differ from the expressions *ich meine* ‘I mean’, which is possible in (67a).

ground (unless the addressee objects). The two classes of cases are now distinguished by whether content is added to the common ground by the dislocated element. Where it is definite and resumes another definite as in (67), there is no additional content in a formal and directly relevant sense. In that case, the resuming element does not constitute the addition of content to the common ground, i.e. is not an assertion, and consequently no speech act adverbs are possible. In the other cases (60)–(65) new content is added to the common ground by the dislocated element, and therefore a separate assertion is constituted. This separate assertion allows the presence of a sentence adverb or modal particle.

In this account, (20) correctly predicts that new content requires obligatory AT, i.e. a separate intonation phrase and separate sentence stress, as was seen in (60)–(62). Thus, new content requires a separate speech act, and by (20) therefore requires the separate intonation phrase with separate sentence stress.

A further question concerns the distribution of stressless vs. stressed resumption in the domain of coreference, for example in (66a) vs. (66b). Consider the following cases of coreferent full DPs. In (68) only stressless resumption is possible. In (69) stressed resumption is possible.

- (68) Was ist mit Marias Bruder, dem Hans?  
 What is about Maria's brother the Hans  
 'What about Maria's brother, the guy called Hans?'  
 Maria hat ihren Bruder eingeladen, den Hans / #—den Hans.  
 Maria has her brother invited, the Hans  
 'Maria has invited her brother, the guy called Hans.'
- (69) Was ist mit Marias Bruder?  
 'What about Maria's brother?'  
 Maria hat ihren Bruder eingeladen, —den Hans  
 Maria has her brother invited the Hans  
 'Maria has invited her brother, the guy called Hans.'

These cases allow two conceivable directions of analysis. On the one hand, Hans is contextually given in the answer in (68), but not in the answer in (69). It could therefore be that the givenness constraint (37) rejects sentence stress on *Hans* in (68) but not in (69). In (69), the regular stress rules could then assign accent to *Hans* in (69) and, since there is a preceding intonation phrase boundary, build a second intonation phrase with a second sentence stress on the dislocated constituent.

However, another conceivable interpretation of the distinction is that there is an additional speech act for the dislocated constituent in (69) after all. Before

the additional speech act, the identity of Maria's brother and Hans would not be taken as established – this is what would allow a second speech act. After the second speech act, the identity of Maria's brother and Hans could be made to follow from an assumption about the identity of the two events in RD/AT. The overall intention of the speaker would then conceivably be to make two speech acts with, by inference, identical content, which might still provide for a reason why there could not be a speech act adverb that modifies one part but not the other. In this account, the impossibility of stressed resumption in (68) would also correctly follow. Since the context question unambiguously identifies Maria's brother and Hans, a second speech act for the dislocated constituent in the answer would not be possible. The second part would in all cases, including the reference of the dislocated constituent, be identical to the first part.

I leave this issue of the correct account unresolved here. I note that on either account, the facts reviewed here about RD and AT are compatible with (20). However, the choice among the two preceding possibilities bears on the strength of the role played by (20) in this domain. If the account in terms of prosodic constraints and givenness of (68) vs. (69) is correct, then this analysis could also be maintained to account for the stress-facts in (60)–(62) above: Stress might here be assigned by the prosodic constraints, where givenness does not prevent them from assigning stress. The account would still be compatible with (20), but an opponent of (20) could then also maintain that the stress-facts of RD and AT can also more generally be derived in a different fashion. On the other hand, if the speech-act account of (68) and (69) can be substantiated, then the distinction between stressless RD and stressed AT would in its entirety be a distinction between one and two speech acts, and (20) would carry the burden of relating the speech-act distinction to the stress distinction.

In summary, the observations about speech acts and sentence stress in RD and AT are compatible with (20). They open up interesting possibilities concerning a strong role of (20) in this domain, but we cannot be empirically sure at the moment that this is the way to go.

## 6 Multiple focus

Additional evidence for the role of speech acts comes from observations in connection with multiple focus. I will first present a discussion from the literature, in order to then show how (35) is relevant to it.

Selkirk (2005) suggested that each focus in a multiple-focus construction requires sentence stress in a separate intonation phrase. She supported this with

examples from the board game Clue. For the murder to be solved, the game defines a set of possible perpetrators, a set of possible locations, and a set of possible weapons. Players make statements like (70). These require sentence stress on each of the foci.

- (70) I suggest that the crime was committed [in the lounge]<sub>F</sub> – [by Mr. Green]<sub>F</sub> – [with a wrench]<sub>F</sub>.

It seems at first reasonable to analyze these as examples of multiple focus in answer to a silent question like ‘Who did it where with what?’. However, it is pointed out in Kabagema-Bilan et al. (2011) that the stress-facts in such a setting are comparable in German, as shown in (71), while simple cases of multiple focus with a context question as in (72) seem to show a different stress-pattern. In (72) one sentence stress suffices for each set of foci. Nevertheless each focus requires accent.

- (71) Ich schlage vor, dass das Verbrechen im Salon begangen wurde, – von Mr. Green, – mit einer Rohrzange.

- (72) [Who called whom?]  
 [Hans]<sub>F</sub> hat [Maria]<sub>F</sub> angerufen, — [ich]<sub>F</sub> habe [dich]<sub>F</sub> angerufen, — und  
 Hans has Maria called I have you called and  
 [Jane]<sub>F</sub> hat [Bill]<sub>F</sub> angerufen.  
 Jane has Bill called  
 ‘[Hans]<sub>F</sub> called [Maria]<sub>F</sub>, — [I]<sub>F</sub> called [you]<sub>F</sub>, and [Jane]<sub>F</sub> called [Bill]<sub>F</sub>.’

This observation converges with Schwarzschild (1999) who also observed that each focus is accented when multiple foci are assigned. His example is shown in (73).

- (73) John cited Mary but he DISSED<sub>F1</sub> SUE<sub>F2</sub>.

In the German translation (74) a single sentence stress in the second clause is likewise enough, if both foci are accented.

- (74) Hans hat Maria zitiert aber er hat Sue ignoriert.  
 Hans has Maria cited but he has Sue ignored  
 ‘Hans cited Mary but he ignored Sue.’

Thus, building on Schwarzschild (1999), the correct rule that defines the minimum of stress in multiple-focus constructions seems to be (75a). This is endorsed in

Kabagema-Bilan et al. (2011) and employed in Truckenbrodt (2012, 2013). It seems to hold in addition to (10), which is updated to include multiple foci in (75b).

- (75) Prosodic effects of focus:
- a. Each focus requires accent.
  - b. The strongest stress within ~[...] must be within some [...]F.

In (72)–(74), then, (75a) correctly requires accent on each focus. The effect of this is noticeable in (72) insofar the normally unstressed pronouns carry accent under focus. In (73) the otherwise only optionally accented verb requires accent when focused. In addition, each clause in (72)–(74) is an assertion and therefore an intonation phrase that requires sentence stress in the current analysis. As in other cases of multiple accents in the intonation phrase, this sentence stress is assigned on the rightmost accent of the intonation phrase by (4). It seems, then, that focus does not inherently lead to intonation phrase divisions or sentence stress.

We now come to the question that is of interest in connection with the current paper: Why did it seem so plausible initially that each focus requires sentence stress? Why does that seem to be the correct observation in (70) and (71)? Notice that (75) does not predict the sentence stress on each of the foci in (70) and (71). Instead, only accent would be assigned to each of the non-final foci.

The answer I offer is that each focus in (70) and (71) is a separate claim, and therefore a separate assertive speech act. This can again be made visible in terms of sentence adverbs as in (76).

- (76) Ich glaube, dass das Verbrechen *wahrscheinlich* im Salon begangen  
 I think that the crime probably in.the salon committed  
 wurde, – *sicher* von Mr. Green, – *möglicherweise* mit einer Rohrzange.  
 was surely by Mr. Green possibly with a wrench  
 ‘I think that the crime was *probably* committed in the lounge, *surely* by  
 Mr. Green, *possibly* with a wrench.’

It seems that the context of the board game leads us listeners to understand each of the foci in these examples as a separate claim. They are claims about where the crime was committed, or by whom it was committed, or what weapon was used. Each of the foci will be evaluated on their own as right or wrong. This distinguishes the Clue examples from cases like (72a). There we would not be inclined to maintain that the speaker is making one claim about who called Mary (John) and another claim about who John called (Mary), for example. Rather, there is a single claim about who called who (John, Mary), then another one (me, you), etc.

It is reasonable that the distinction between the two classes of cases is also a syntactic distinction. For example, it is easily possible to insert a coordinating *and* before the final adjunct in (70) (or a German corresponding *und* in (71)). Also, we would not a priori want to rule out a deletion analysis in (70), but we would want to rule out a deletion analysis of (72) in which each focus comes from a separate clause.

In sum, it seems that focus does not require sentence stress, while speech acts do require sentence stress. We saw two kinds of cases in which sentences contained multiple foci. In the Clue examples, each focus represents a separate claim, hence a separate speech act, and it receives its own sentence stress. In (72) two foci together enter into one claim, and here we find that only one instance of sentence stress is required. The number of required sentence stresses thus mirrors the number of speech acts that are present, regardless of the number of foci. The observations are correctly predicted by (20), which connects obligatory sentence stress to speech acts.

## 7 Peripheral adverbial clauses

Haegeman (2004, 2006) distinguishes central and peripheral adverbial clauses. The distinction is worked out for German in Frey (2011, 2012), with some further comments in Frey and Truckenbrodt (in press). Of interest here are peripheral adverbial clauses, like the bracketed adversative clause in (77).

- (77) Es ist dunkel, [obwohl der Mond am Himmel steht].  
 it is dark although the moon on.the sky stands  
 'It is dark, even though the moon is in the sky.'

Haegeman (2004) suggested that these peripheral adverbial clauses are right-adjoined to their CP host clause. Frey (2011, 2012) observed that they can also occur in the German Vorfeld Spec,CP, as in (78).

- (78) [Obwohl der Mond am Himmel steht], ist es dunkel.  
 although the moon on.the sky stands is it dark  
 'Even though the moon is in the sky, it is dark.'

According to both authors, peripheral adverbial clauses are root clauses, and this is related to their high position. Coniglio (2011) and Frey (2011, 2012) observed that evidence for their root clause status is that they can carry modal particles in German.

- (79) Wie warm ist es wohl draußen?  
 ‘How warm is it, *do you suppose*, outside?’  
 Es ist *wohl kühl*, — obwohl *ja* den ganzen Tag die Sonne geschienen  
 it is MP cool although MP the whole day the sun shone  
 hat.  
 has  
 ‘It is, *I suppose*, cool, even though, *as we know*, the sun has shone all day.’

This is also true of sentence adverbs.

- (80) Konnte man etwas sehen in jener Nacht?  
 ‘Was it possible to see something during that night?’  
 Nein. Obwohl *mit Sicherheit* der Mond am Himmel stand — war es  
 no although with certainty the moon on.the sky stood was it  
*angeblich dunkel*.  
 allegedly dark  
 ‘No, even though the moon was *surely* in the sky, it was *allegedly* dark.’

According to Haegeman (2006) and Coniglio (2011) peripheral adverbial clauses are separate speech acts. According to Frey (2011, 2012) they are potential but not real speech acts, though still distinguished from clauses that are not speech acts.

Here two issues are discussed in connection with peripheral adverbial clauses. First, as discussed in Frey (2011, 2012) and Frey and Truckenbrodt (in press) some amount of integration of peripheral adverbial clauses into the host clause is also possible; this is not explored in detail here, but some remarks are made about parallels and a difference to coordinated sentences. Second, the more integrated cases allow for the observation of an interesting additional interaction between speech acts and sentence stress.

A consequence of the more integrated options is that sentence stress on the complementizer of the peripheral adverbial clause is possible, with a single all-embracing intonation phrase, in parallel to focus on the conjunction in coordinated V2-clauses. The examples in (81) are from Frey and Truckenbrodt (in press).

- (81) Peter meinte, dass es dunkel war und dass der Mond am Himmel stand.  
 ‘Peter thought that it was dark and that the moon was in the sky.’  
 a. Ja, es war dunkel trotzdem der Mond am Himmel stand.  
 b. Ja, es war dunkel obwohl der Mond am Himmel stand.  
 c. Ja, es war dunkel gleichwohl der Mond am Himmel stand.  
 yes it was dark although the moon on.the sky stood  
 ‘Yes, it was dark although the moon was in the sky.’ (*trotzdem, obwohl, gleichwohl*: although)

As expected in the current paper, this is compatible with the presence of a single speech act adverb that has scope over both the host clause and the peripheral adverbial clause. This is true if the speech act adverb is in the Vorfeld as in (82). The case is parallel to the coordinated structures in (30).

- (82) War sie denn traurig weil der Mond am Himmel stand?  
 ‘Was she sad because the moon was in the sky?’  
*Angeblich* war sie traurig obwohl der Mond am Himmel stand.  
 allegedly was she said although the moon on.the sky stood  
 ‘Allegedly she was sad even though the moon was in the sky.’

In difference to coordinated structures, this wide scope reading is also unmarked when the speech act adverb follows the finite verb in the host clause:

- (83) War sie denn traurig weil der Mond am Himmel stand?  
 ‘Was she sad because the moon was in the sky?’  
 Sie war *angeblich* traurig obwohl der Mond am Himmel stand.  
 she was allegedly sad although the moon on.the sky stood  
 ‘She was allegedly sad even though the moon was in the sky.’

Confirmation for the current account is that two distinct speech act adverbials are not compatible with the integrated stress pattern, as shown in (84a). The example (84b) is added for comparison.

- (84) a. \*Sie war *angeblich* traurig obwohl *meines Wissens* der  
 she was allegedly sad although my.GEN knowledge.GEN the  
 Mond am Himmel stand.  
 moon on.the sky stood  
 ‘She was *allegedly* sad even though, *as far as I know*, the moon was in  
 the sky.’



- b. Sie war *angeblich* traurig — obwohl *meines Wissens* der  
 she was allegedly sad although my.GEN knowledge.GEN the  
Mond am Himmel stand.  
 moon on.the sky stood  
 ‘She was *allegedly* sad, even though, *as far as I know*, the moon was in  
 the sky.’

Here (20) requires an intonation phrase and sentence stress for each speech act, deriving (84b) and ruling out (84a).

I turn to the second observation to be discussed. The structural and semantic asymmetry between host clause and peripheral adverbial clause allows us to see a new speech-act related contrast. (85) and (86) differ minimally in the context, the utterance by speaker A. In (85) this context provides both the content of the following host clause and its having been asserted by speaker A. In (86) the context provides the content of the following host clause, but its truth is here put up for question. In the intonation (85) allows a matrix clause without sentence stress while (86) requires a separate intonation phrase.

- (85) A: Es ist dunkel gewesen.  
 it is dark been  
 ‘It was dark.’
- B: a. Es ist dunkel gewesen obwohl der Mond geschienen hat.  
 b. Es ist dunkel gewesen — obwohl der Mond geschienen hat.  
 it is dark been although the moon shone has  
 a. ‘It was dark although the moon shone.’  
 b. ‘It was dark although the moon shone.’
- (86) A: Ist es dunkel gewesen?  
 is it dark been  
 ‘Was it dark?’
- B: a. # Es ist dunkel gewesen obwohl der Mond geschienen hat.  
 b. Es ist dunkel gewesen — obwohl der Mond geschienen hat.  
 it is dark been although the moon shone has  
 a. # ‘It was dark although the moon shone.’  
 b. ‘It was dark although the moon shone.’

These observations are interpreted as follows. Since the content of the host clause is given in both cases, the host-clause will be stressless as in (85a) unless it is also an assertion as in (85b) and (86b). In the latter case its being an assertion overrides the stress-rejecting effect of givenness (37) as in earlier cases in this paper. In

(85b) this is a re-assertion by speaker B of the previous assertion by A. In (86b) this is an assertion by speaker B that answers the question by speaker A. Why is (86a) infelicitous? In the current account the entire utterance is an assertion here, which includes both host clause and peripheral adverbial clause. It seems to be reasonable to maintain that a closer match to the preceding question needs to be asserted, i.e. only the host clause, since this is the information that is asked for in the question. Such a requirement will furthermore not come into play in (85a), where the information in the host clause is not asked for in the question.

This is a new kind of confirmation for the current account. Without the grammatical link between speech acts and intonation phrases, it would be difficult to account for the distinction between (85a) and (86a). The link between speech acts and intonation phrases, however, connects the reasonable speech act distinction (the host clause needs to be separately asserted in (86a) but not in (85a)) directly to the prosodic distinction.

## 8 Parentheticals

Downing (1970:87) postulates, in his terms, obligatory pauses at the edges of parentheticals, as in (87).

(87) The girls, / I suppose, / will make some sandwiches.

Potts (2005) treats parentheticals as supplements that are marked with the feature [comma] that triggers comma intonation.

However, Dehé (2009a) shows with F<sub>0</sub>-tracks of English recordings that parentheticals are not regularly separated by the intonation phrase boundaries that we might expect given such earlier descriptions. This case is quite convincing.

I adopt a distinction by Reis (1995). She separates two kinds of parentheticals in their prosodic behavior. She casts the distinction primarily in terms of focus-background structures (p. 30f) and additionally postulates a speech act correlation (p. 70). I here present the speech act distinction as primary. It is quite plausible but, as we will see, not easy to substantiate.

There are, on the one hand, sentences that are separate speech acts inserted into other sentences. The following examples are from Reis (p. 31) with her prosodic annotations and her observation about the deviation of the b.-examples. These inserted speech acts are prosodically disintegrated by the description of Reis, by which she means they carry separate stress and they are separated by

obligatory pauses. In the current terms these inserted speech acts are separate intonation phrases due to (20).

- (88) a. In BONN wohnt sie – wen WUNdert’s – seit der Trennung.  
 b. \*In BONN wohnt sie (–) wen wundert’s (–) seit der Trennung.  
 in Bonn lives she who surprised is since the separation  
 ‘Bonn is, who would be surprised, where she lives since the separation.’
- (89) a. In BONN wohnt sie – das sagt jedenfalls der FRANZ –  
 b. \*In BONN wohnt sie (–) das sagt jedenfalls der Franz (–)  
 in Bonn lives she that says at.any.rate the Franz  
 seit der Trennung.  
 seit der Trennung.  
 since the separation  
 ‘Bonn is, that’s what Franz says, where she lives since the separation’

Reis (p. 70) points out that (90), another case of this kind, involves a genuine assertion of the parenthetical. The speaker asserts the infixed sentence.

- (90) Hans – das glaubt/ sagte jedenfalls der Paul – wird morgen zum  
 Hans that believes/ says at.any.rate the Paul is tomorrow as.the  
 Direktor gewählt.  
 director voted  
 ‘Hans, that’s what Paul thinks/said at any rate, will be voted director tomorrow.’

By contrast, there is a more specific class of parentheticals (the topic of her paper) that correspond to English parentheticals like *I suppose*, *Mary believes*, and that in German are realized in V1-form as in Reis’ examples (91) (my punctuation).

- (91) a. Hans, *glaubt/ sagte Peter*, wird morgen zum Direktor gewählt.  
 Hans believes/ says Peter is tomorrow to.the director voted  
 ‘Hans, *Peter believes/said*, will be voted director tomorrow.’  
 b. Hans wird morgen, *glaubt/ sagte Peter*, zum Direktor gewählt.  
 Hans is tomorrow believes/ says Peter to.the director voted  
 ‘Hans will be, *Peter believes/said*, voted director tomorrow.’

Of these, she notes that they are prosodically integrated: They are unstressed and not separated by obligatory pauses. This assessment is endorsed by Steinbach

(2007), where the account of Reis (1995) is further developed and the point is made that these parentheticals are embedded root phenomena.

As for the speech act, Reis observes that in (90) it is “strictly asserted that Paul believes that p”, while the inserted clauses in (91) merely “express it (...) i.e. they just identify the source for the assertability of p”, the main clause (p. 70). I think that these remarks are compatible with the classification of such parentheticals as evidential in nature in Rooryck (2001), and with their treatment as parallel to presupposed information in the account of parentheticals of Asher (2000) in Segmented Discourse Representation Theory (SDRT). The distinction allows me to fit parentheticals into the current account: Inserted sentences as in (88)–(90) are genuine speech acts and hence intonation phrases by (20). Those in (91) are not genuine speech acts and therefore need not be intonation phrases by (20). The distinction is endorsed here.

Reis does not give any support for her plausible position in terms of independently established tests, and it does not seem to be easy to do so. Notice in particular that our test in terms of speech act adverbs seems not to work here. Speech act adverbs are possible inside of parenthetical speech acts as in (92), but they are also possible inside of unstressed V1-parentheticals as in (93).

(92) Hans wurde — das glaubst du mir *hoffentlich* — zum Direktor  
 Hans was that believe you me hopefully as.the director  
 gewählt.  
 voted  
 ‘Hans was, this you *hopefully* believe me, voted director.’

(93) Hans wurde, sagte Maria *angeblich*, zum Direktor gewählt.  
 Hans was says Maria allegedly as.the director voted  
 ‘Hans was, Mary says *allegedly*, voted director.’

We have seen initially that we must not apply our tests blindly, and we seem to have encountered another case where blind application would lead to the wrong result. This is a bit troubling. Here I offer support for the position of Reis by the following argument.

The examples in (94) are to be judged as possible responses to the initial question. This controls for their status as assertions: If they can be responses to the question (and nothing else is wrong) they are assertions. (94a) is an assertion. The matrix clause is a V2-clause, the German standard form of assertions. The complementizer-initial *dass*-clause is a subordinate clause. A complementizer-initial clause can stand on its own in German, as in (95). However, it never constitutes an assertion, as illustrated in (94b). Crucially, this does not change

when the main clause of (94a) is added in parenthetical form to (94b), as in (94c). If the parenthetical were asserted like the main clause in (94a), we might expect that (94c) is just as good an assertion and an answer to the question as (94a). However, it seems that the parenthetical can only be a modification of an independently established assertion. In (94d), where the host clause is a V2-clause with assertive content of its own, the parenthetical can operate on that independently established assertion.

- (94) Wie wird das Wetter?  
 ‘What will the weather be like?’
- a. Maria sagt, dass morgen die Sonne scheint.  
 Maria says that tomorrow the sun shines.  
 ‘Maria says that the sun will shine tomorrow.’
- b. # Dass morgen die Sonne scheint.  
 that tomorrow the sun shines.  
 ‘that the sun will shine tomorrow’
- c. # Dass morgen, sagt Maria, die Sonne scheint.  
 that tomorrow, says Maria, the sun shines  
 ‘that the sun will shine tomorrow, says Maria’
- d. Morgen, sagt Maria, scheint die Sonne.  
 tomorrow says Maria shines the sun  
 ‘The sun will shine tomorrow, says Maria.’
- (95) Dass sie so schön singen kann!  
 that she so well sing can  
 ‘I am amazed that she can sing so well!’

This suggests that the parenthetical in (94c) is not asserted in the way in which the matrix clause in (94a) is asserted. It thus supports the assessment of Reis that parentheticals of this kind are not asserted.

In summary, adopting a position of Reis (1995) allows me to tentatively fit parentheticals into the perspective argued for in other sections of this paper: Where parentheticals are speech acts infixed into other speech acts, they are separate intonation phrases. However, the special class of parentheticals that have the form of infixed matrix clauses are not speech acts and not separate intonation phrases.

## 9 Remarks on the syntax of intonation-phrase triggering

I have made a case at a descriptive level that speech acts trigger intonation phrases. However, speech acts are on the LF-side of grammar while intonation phrases are on the PF-side of grammar. We expect that there are no grammatical principles directly connecting them. Instead, there must be syntactic entities that mediate between them. In the case at hand, there must be a syntactic entity that is mapped to speech acts on the one hand and to intonation phrases on the other hand. What syntactic entity might this be?

I think that this may not be the [comma] feature of Potts. What seems to me to be right about the [comma] feature is that elements with non-at-issue content typically also have special intonational properties. However, we saw with specific appositions and specific parentheticals that the special intonation is not always that they form separate intonation phrases. It was also argued that the relevant supplements are not speech acts in the relevant sense.

However, it seems to me as though a revision of the suggestion of Downing (1970) in terms of unembedded sentences might work. This would also be in the spirit of Reis (1997) and Holler (2008), where non-integrated clauses are identified with unembedded clauses, and in the spirit of a structural rather than a featural separation in De Vries (2007). The idea is that unembedded clauses in a certain sense constitute speech acts on the one hand, and are mapped to intonation phrases on the other hand.

This would be compatible with a special categorial status of the relevant clauses. Selkirk (2011) suggests that they are ForcePs. ForcePs are projections anchored to a (described or real) speaker in Haegeman (2004) and Frey (2011, 2012). Only unembedded ForcePs (root sentences but not all root clauses) would be speech acts from that perspectives.

For the coordinated DP constituents, this would mean that the single-speech-act case derives from a single clause as in (96a), while the separate speech acts are derived by deletion from multiple unembedded ForcePs as in (96b).

- (96) Who was at the party?
- a. [~~Allegedly Mary and John and Bill were at the party~~].
  - b. [~~Surely Mary was at the party~~] and [~~allegedly John was at the party~~] ...

For the coordinated V2-clauses a syntactic suggestion was outlined above as to how the integrated case involve a second clause that is syntactically embedded in the first clause.

For appositions, RD and AT, this raises issues beyond the scope of the current paper.

In the domain of parentheticals, the integrated parentheticals would then also need a syntactically integrated analysis. Reis (1995) suggests that they form a constituent with the constituent preceding them. This would have the desired consequences.

In sum, it seems to be possible that the correlation between speech acts and intonation phrases is mediated by a syntactic notion of unembedded constituents similar to the original definition of Downing (1970), though revised for specific cases that are perhaps part of their root sentence after all. In addition, these root sentences are mapped to speech acts.

## 10 Conclusion

This paper explored the claim that Selkirk (2005, 2011) formulated in an extension of Potts (2005), namely the claim that each speech act requires an intonation phrase. In the current paper this was tested with modal particles and sentence adverbs. A good amount of support for Selkirk's claim was found. At the same time, it turned out that the domain of application of this claim is different from what we may have expected: Not all coordinated sentences, and not all supplements actually are separate speech acts. If they are not, they also don't seem to have to be separate intonation phrases. The following cases were discussed.

Coordinated surface-DPs are normally joined in a single speech act, but can be forced by sentence adverbs to constitute multiple speech acts. As multiple speech acts they require multiple intonation phrases, as a single speech acts they are fine in a single intonation phrase.

Coordinated clauses can join into a single speech act or constitute two separate speech acts. Two separate speech acts require two separate intonation phrases, while a single speech act also allows a rendition as a single intonation phrase under appropriate conditions.

Appositive relatives form a separate speech act and a separate intonation phrase.

Appositions may constitute a speech act, in which case they are a separate intonation phrase. There are two classes of appositions that seem not to constitute a speech act or an intonation phrase, accented appositions and epithets as appositions that do not require accent.

Resumption (AT/RD) containing semantically new content constitutes a separate speech act, and a separate intonation phrase, i.e. AT. Where no new content

is involved, the current claim is not affected; some issues were left open in regard to these cases.

In cases of multiple focus, we found separate intonation phrases where each focus expresses a separate claim, but a single intonation phrase where two foci together express a single claim.

Peripheral adverbial clauses also show variation between integration and non-integration. Where they are a separate speech act, they require a separate intonation phrase. Further support for the analysis was seen in a requirement on sentence stress on the main clause just in case it is arguably an assertion.

For parentheticals a distinction by Reis (1995) was adopted. If a speech act is simply infixed into another one, it will need to be an intonation phrase. A special class of parentheticals discussed as evidentials by Rooryck (2001) is also classified by Reis as not being a genuine assertion. This case does not constitute a separate intonation phrase.

If speech acts have a prosodic correlate, it follows from the architecture of grammar that they also have a syntactic correlate. A plausible candidate for this is unembedded constituents in the sense of Downing (1970), Reis (1997), Holler (2008) and De Vries (2007), with revisions that allow certain coordinated clauses, certain appositions, certain parentheticals, and right-dislocated constituents to be syntactically integrated in the relevant sense. The relevant constituents could be unembedded ForcePs.

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