

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.

Marlies Kluck, University of Groningen

Dennis Ott, Humboldt University of Berlin

Mark de Vries, University of Groningen

- 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 **Bacskai-Atkari**'s and **LaCara**'s contributions to this volume. Specifically, Bacskai-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 predication 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_i, I really like him_{*i/j}, 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_i did the professor – assuming that the students only read *t_i* – 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):¹

- (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.² 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,

¹ 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.

² 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 clauses³ as in (7), and between the regular adverbial vs. parenthetical use of *honestly* illustrated in (8).

³ 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 Δ 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 Δ .

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 Δ .

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 } Δ .

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 Δ 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.⁴ It is only in semantic form that we arrive at a coherent inter-

⁴ 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-semantics 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 Δ 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] \rightarrow
 [I saw a scary movie last night] [Jaws_i I saw t_i tonight] \rightarrow
 [I saw a scary movie last night] [Jaws_i <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]] \rightarrow
 [I met John last night] [[a great chess player] he is t_i] \rightarrow
 [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]_i <he is *t_i*>] 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_i <*John kissed yesterday t_i*>] yesterday.
- (22) a. John has kissed [I think it was the Queen] yesterday.
 b. John has kissed [I think it was the Queen_i <*that John has kissed t_i*>] 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 Δ , is a great chess player.
 b. As was predicted Δ , 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]_i <*he is moving to* t_i >]].

- b. Professor Brown is moving to [somewhere/e [I think Oxford_i
<he is moving to t_i >]].

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.

References

- Ackema, Peter & Ad Neeleman. 2004. *Beyond morphology: Interface conditions on word formation*. New York: Oxford University Press.
- Aelbrecht, Lobke. 2010. The syntactic licensing of ellipsis. Amsterdam: John Benjamins.
- Asher, Nicholas. 2000. Truth Conditional Discourse Semantics for Parentheticals. *Journal of Semantics* 17: 31–50.
- Baltin, Mark. 2012. Deletion versus pro-forms: an overly simple dichotomy? *Natural Language & Linguistic Theory* 30: 381–423.
- Benveniste, Émile. 1966. *Problèmes de linguistique générale*. Paris: Gallimard.
- Bolinger, Dwight. 1989. *Intonation and Its Uses: Melody in Grammar and Discourse*. Stanford, CA: Stanford University Press.
- Burton-Roberts, Noel. 1999. Language, linear precedence and parentheticals. In Peter Collins and David Lee (eds.), *The clause in English: In honour of Rodney Huddleston*, 33–52. Amsterdam: John Benjamins.
- Burton-Roberts, Noel. 2006. Parentheticals. In Keith Brown (ed.), *Encyclopedia of Language & Linguistics*, 179–182. Amsterdam: Elsevier Science.
- Cinque, Guglielmo. 1983. “Topic” constructions in some European languages and “connectedness”. In Konrad Ehlich & Henk van Riemsdijk (eds.), *Connectedness in Sentence, Discourse and Text: Proceedings of the Tilburg Conference Held on 25 and 26 January 1982*, Tilburg: Katholieke Hogeschool. Reprinted in Elena Anagnostopoulou, Henk van Riemsdijk & Frans Zwarts (eds.), *Materials on Left Dislocation*, 93–118. Amsterdam: John Benjamins.
- Chomsky, Noam. 1980. *Rules and representations*. New York: Columbia University Press.
- Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, MA: MIT Press.
- Chomsky, Noam & Howard Lasnik. 1993. The theory of principles and parameters. In Syntax: an international handbook of contemporary research. In Arnim von Stechow, Joachim Jacobs, Wolfgang Sternefeld & Theo Venneman (eds.). Berlin: De Gruyter.
- Chung, Sandra, William Ladusaw and James McCloskey. 1995. Sluicing and logical form. *Natural Language Semantics* 3: 239–282.
- Corver, N. & Thiersch, C. 2001. Remarks on parentheticals. In Marc van Oostendorp & Elena Anagnostopoulou (eds.), *Progress in grammar: Articles at the 20th anniversary of the comparison of grammatical models group in Tilburg*. Utrecht: Roquade.
- Craenenbroeck, Jeroen van. 2010. The Syntax of Ellipsis: Evidence from Dutch Dialects. New York, NY: Oxford University Press.
- Craenenbroeck, Jeroen van & Jason Merchant. 2013. Ellipsis Phenomena. In Marcel den Dikken (ed.), *The Cambridge Handbook of Generative Syntax*, 701–745. Cambridge: Cambridge University Press.
- Culicover, Peter & Ray Jackendoff. 2005. *Simpler Syntax*. New York: Oxford University Press.
- Döring, Sandra. 2007. Quieter, faster, lower and set off by pauses? In Nicole Dehé and Yordanka Kavalova (eds.), *Parentheticals*, 285–307. Amsterdam: John Benjamins.
- Dehé, Nicole & Yordanka Kavalova. 2006. The syntax, pragmatics and prosody of parenthetical *what*. *English Language and Linguistics* 10: 289–320.
- Dehé, Nicole & Yordanka Kavalova. 2007. Parentheticals: An introduction. In Nicole Dehé & Yordanka Kavalova (eds.), *Parentheticals*, 1–22. Amsterdam: John Benjamins.
- Espinal, M. Theresa. 1991. The representation of disjunct constituents. *Language* 67: 726–762.

- Fortmann, Christian. 2007. The complement of reduced parenthetical clauses. In Nicole Dehé and Yordanka Kavalova (eds.), *Parentheticals*, 89–119. Amsterdam: John Benjamins.
- Giorgi, Alessandra. 2012. Prosodic signals as syntactic formatives in the left periphery. Manuscript, Università Ca'Foscari Venezia.
- Griffiths, James. to appear. Parenthetical verb constructions, fragment answers, and constituent modification. *Natural Language and Linguistic Theory*.
- Griffiths, James & Mark de Vries. 2013. The syntactic integration of appositives: evidence from fragments and ellipsis. *Linguistic Inquiry* 44, 332–344.
- Güneş, Güliz & Çağrı Çöltekin. to appear. Prosody of Parentheticals in Turkish. In: Stefan Schneider, Julie Glikman & Matthieu Avanzi (eds.), *Parenthetical Verbs*. Berlin: Mouton de Gruyter.
- Haegeman, Liliane. 1991. Parenthetical adverbials: The radical orphanage approach. In Shuki Chiba, Akira Ogawa, Yasuaki Fuiwara, Norio Yamada, Osamu Koma & Takao Yagi (eds.) *Aspects of Modern English: Papers Presented to Masatomo Ukaji on his 60th birthday*, 232–254. Tokyo: Kaitakushi.
- Haegeman, Liliane, Benjamin Shaer and Werner Frey. 2009. Postscript: Problems and Solutions for Orphan Analyses. In Benjamin Shaer, Philippa Cook, Werner Frey & Claudia Maienborn (eds.), *Dislocated Elements in Discourse*, 348–365. New York: Routledge.
- Hankamer, Jorge & Ivan Sag 1976. Deep and Surface Anaphora. *Linguistic Inquiry* 7: 391–428.
- Heringa, Herman. 2012. Appositional constructions. PhD dissertation, University of Groningen.
- Huddleston, Rodney & Geoffrey Pullum. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.
- Johnson, Kyle. 2013. Licensing Ellipsis. Manuscript, University of Massachusetts at Amherst.
- Kaltenböck, Gunther, Bernd Heine & Tania Kuteva. 2011. On thetical grammar. *Studies in Language* 35(4): 848–893.
- Kayne, Richard. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: MIT Press.
- Kim, Jeong-Seok. 1997. *Syntactic focus movement and ellipsis*. PhD dissertation, University of Connecticut.
- Kluck, Marlies. 2011. *Sentence amalgamation*. PhD dissertation, University of Groningen.
- Kluck, Marlies. 2013. *A sluicing account of amalgams*. Manuscript, University of Groningen.
- Kluck. to appear. On representing anchored parentheses in syntax. In Andreas Trotzke and Josef Bayer (eds.), *Syntactic Complexity across Interfaces*. Berlin: Mouton de Gruyter.
- Kluck, Marlies & Mark de Vries 2013. Cumulative rightward processes. In: *Rightward Movement in a Comparative Perspective*, ed. by Gert Webelhuth, Manfred Sailer & Heike Walker, 281–317. Amsterdam: John Benjamins.
- Kluck, Marlies & Mark de Vries. to appear. On V2, gaps, and operators in comment and reporting parentheticals. In Stefan Schneider, Julie Glikman & Matthieu Avanzi (eds.), *Parenthetical Verbs*. Berlin: Mouton de Gruyter.
- Lakoff, George. 1974. Syntactic amalgams. In Michael Galy, Robert Fox & Anthony Bruck (eds.), *Papers from the 10th regional meeting of the Chicago Linguistic Society*, 321–344. Chicago: University of Chicago.
- Lasnik, Howard. 2001. Can you save a structure by destroying it? In Min-Joo Kim and Uri Strauss (eds.), *Proceedings of NELS 31*, 301–320. Amherst, MA: GLSA.
- Lobeck, Anne. 1995. *Ellipsis: Functional Heads, Licensing and Identification*. New York: Oxford University Press.
- Merchant, Jason. 2001. *The Syntax of Silence: Sluicing, Islands and the Theory of Ellipsis*. New York: Oxford University Press.

- Merchant, Jason. 2004. Fragments and ellipsis. *Linguistics and Philosophy* 27: 661–738.
- Merchant, Jason. 2010. Three kinds of ellipsis. In François Recanatì, Isidora Stojanovic and Neftali Villanueva (eds.), *Context-Dependence, Perspective, and Relativity*, 141–192. Berlin: Mouton de Gruyter.
- Merchant, Jason. 2013. Voice and ellipsis. *Linguistic Inquiry* 44: 77–108.
- Molnár, Valeria & Susanne Winkler. 2010. Edges and Gaps: Contrast at the Interfaces. *Lingua* 120: 1392–1415.
- Nespor, Marina & Irene Vogel. 1986. *Prosodic Phonology*. Dordrecht: Foris.
- O'Connor, Kathleen. 2008. *Aspects de la syntaxe et de l'interprétation de l'apposition à antécédent nominal*. PhD dissertation, Université Charles de Gaulle, Lille 3.
- Ott, Dennis. 2014. Ellipsis in appositives and the syntax of parenthesis. Paper presented at GLOW 37, U Leuven HUBrussel.
- Ott, Dennis & Mark de Vries. 2012. Thinking in the right direction: an ellipsis analysis of right-dislocation. *Linguistics in the Netherlands* 29: 123–133.
- Ott, Dennis & Mark de Vries. 2014. A biclausal analysis of right-dislocation. *Proceedings of NELS 43*, Vol. 2, 41–45.
- Peterson, Peter. 1999. On the boundaries of syntax: Non-syntagmatic relations. In Peter Collins and David Lee (eds.), *The clause in English: In honour of Rodney Huddleston*, 229–250. Amsterdam: John Benjamins.
- Potts, Christopher. 2002. The syntax and semantics of *as*-parentheticals. *Natural Language & Linguistic Theory* 20: 623–689.
- Potts, Christopher. 2005. *The Logic of Conventional Implicatures*. New York: Oxford University Press.
- Reis, Marga. 1995. Wer glaubt du hat recht? On so-called extractions from verb-second clauses and verb-first parenthetical construction in German. *Sprache & Pragmatik* 36: 27–83.
- Ross, John Robert. 1969. Guess who? In Robert Binnick, Alice Davidson, Georgia Green & Jerry Morgan (eds.), *Papers from the 5th regional meeting of the Chicago Linguistic Society*, 252–286. Chicago: University of Chicago.
- Ross, John Robert. 1972. Act. In Gilbert Harman and Donald Davidson (eds.), *Semantics of Natural Language*. Dordrecht: Reidel.
- Safir, Ken. 1986. Relative Clauses in a Theory of Binding and Levels. *Linguistic Inquiry* 17: 663–689.
- Sailor, Craig. to appear. VP Ellipsis in Tag Questions: A Typological Approach. In *Proceedings of The 46th Annual Meeting of the Chicago Linguistic Society*.
- Shaer, Benjamin. 2009. German and English Left-Peripheral Elements and the 'Orphan' Analysis of Non-Integration. In Benjamin Shaer, Philippa Cook, Werner Frey & Claudia Maienborn (eds.), *Dislocated Elements in Discourse*, 366–397. New York: Routledge.
- Simons, Mandy. 2007. Observations on embedding verbs, evidentiality, and presupposition. *Lingua* 117: 1034–1056.
- Steinbach, Marcus. 2007. Integrated parentheticals and assertional complements. In Nicole Dehé & Yordanka Kavalova (eds.), *Parentheticals*, 53–87. Amsterdam: John Benjamins.
- Tanaka, Hidekazu. 2011. Syntactic identity and ellipsis. *The Linguistic Review* 28: 79–110.
- Tancredi, Chris. 1992. Deletion, Deaccenting, and Presupposition. PhD Dissertation, MIT.
- Thoms, Gary. 2010. 'Verb-floating' and VP-ellipsis: towards a movement account of ellipsis licensing. *Linguistic Variation Yearbook* 10, 252–297.
- Vanden Wyngaerd, Guido & Jan-Wouter Zwart. 1999. Antecedent-contained deletion as deletion. *Linguistics in the Netherlands* 29: 203–216.

- Vries, Mark de. 2007. Invisible Constituents? Parentheses as B-Merged Adverbial Phrases. In: *Parentheticals*, ed. by Nicole Dehé & Yordanka Kavalova, 203–234. Amsterdam: John Benjamins.
- Vries, Mark de. 2012a. Parenthetical main clauses – or not? On appositives and quasi-relatives. In Lobke Aelbrecht, Lilliane Haegeman & Rachel Nye (eds.), *Main Clause Phenomena: New Horizons*, 177–201. Amsterdam: John Benjamins.
- Vries, Mark de. 2012b. Unconventional Mergers. In Myriam Uribe-Etxebarria & Vidal Valmala (eds.), *Ways of Structure Building*, 143–166. New York: Oxford University Press.
- Williams, Edwin. 1977. Discourse and Logical Form. *Linguistic Inquiry* 8: 103–139.