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Sonderdruck aus: Wiener Linguistische Gazette (WLG) 82 (2017): 289–295

Themenheft 11-11-17. Festschrift für Martin Prinzhorn Hg. v. Clemens Mayr und Edwin Williams

Universität Wien · Institut für Sprachwissenschaft · 2017

Eigentümer, Herausgeber und Verleger:

Universität Wien, Institut für Sprachwissenschaft Sensengase 3a 1090 Wien Österreich

Redaktion:	Christian Bendl, Mi-Cha Flubacher (Angewandte Sprachwissenschaft), Stefan Schumacher (Allgemeine und Historische Sprachwissenschaft)
Kontakt:	wlg@univie.ac.at
Homepage:	http://wlg.univie.ac.at

ISSN: 2224-1876 **NBN:** BI,078,1063

Die *Wiener Linguistische Gazette* erscheint in loser Folge im Open-Access-Format. Alle Ausgaben ab Nr. 72 (2005) sind online verfügbar.

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1. Integrated and parenthetical adjuncts

In this article I will argue for an ellipsis derivation for parenthetical adjuncts. Adjuncts include adverbs, prepositional phrases, and infinitival clauses, among other types of constituents. All adjuncts can be parenthetical, but they need not be. In (1) to (3), the adjuncts in the (a) examples are integrated into their host clauses, whereas the same adjuncts in the (b) examples are parenthetical.

- (1) a. Max drank two bottles of gin last night on an empty stómach.
 - b. Max drank two bottles of gin last night, on an empty stomach.
- (2) a. The rebels have been defeated decisively.
 - b. The rebels have been deféated, *decisively*.
- (3) a. Napoleon attacked the city to prove his invincibility.
 - b. Napoleon attacked the cíty, *to prove his invincibility*.

Each of the integrated adjuncts in the (a) examples is phonologically incorporated into the main intonational phrase of its declarative host sentence, and these integrated adjuncts may bear the primary nuclear stress of that sentence, as indicated by the accent marks in (1) to (3). In contrast, each of the parenthetical adjuncts in the (b) examples is separated from the rest of its host sentence by a pause. The primary nuclear stress of the host sentence falls elsewhere within its verb phrase. The parenthetical adverb forms an independent intonational phrase, containing its own nuclear stress (not marked in the examples above). In this respect, it behaves like an independent sentence.

Although the phonological (prosodic) contrast between integrated and parenthetical adjuncts is clear, the semantic distinction between them is not. Bonami et al. (2004, 146) describe parenthetical semantics for adverbs as follows: "the semantic contribution of the adverb is not integrated into the proposition the sentence asserts; rather, it has the status of a comment on that assertion." They go on to argue that there is no principled relation between parenthetical semantics and what is usually called parenthetical intonation, at

least for adverbs. They point out that some adverbs, like *unfortunately*, are intrinsically parenthetical semantically, whereas other adverbs, like *probably*, are intrinsically integrated; in both cases, the semantics is unaffected by whether or not the adverbs have a 'parenthetical' prosody. (In Section 2, I will discuss some exceptions to the claim that adverbs like probably are always integrated.)

Returning to the 'parenthetical' adjuncts in the (b) sentences of (1) to (3), their semantic status is far from obvious. On the one hand, they have the flavor of afterthoughts, or follow-ups to the main clause. On the other hand, this doesn't seem to have any effect on the truth conditions of the sentences in which they occur.

The crux of the matter hinges on whether the (b) sentences convey a single assertion, like the (a) sentences, or whether they convey two independent assertions, one provided by the host sentence (excluding the parenthetical adjunct), and the other provided by the adjunct. If there is just one assertion in the (b) sentences, perhaps there is no need for a fundamental distinction between the parenthetical and integrated adjuncts in terms of their syntactic status. One might assume, for example, that parenthetical adjuncts are simply normal adjuncts that have undergone movement to a peripheral syntactic position; the distinctive prosodic contour of the parenthetical could be a side effect of this displacement.

But if the (b) sentences convey two assertions, one of which is contributed by the adjunct, the relation between the host sentence and the parenthetical adjunct should be paratactic, analogous to the relation between the sentence pairs in (4), where each declarative sentence contributes its own assertion.

- (4) a. Max drank two bottles of gin last night; this was on an empty stomach.
 - b. The rebels have been defeated; their defeat was decisive.
 - c. Napoleon attacked the city; he did it to prove his invincibility.

In each example in (4a-c), the first sentence asserts that a particular event occurred, while the second sentence asserts an additional claim about that event. The information conveyed by these two-sentence pairs could have been conveyed by a single, more complex sentence like the (a) sentences in (1) to (3), but the speaker/writer chose to convey the information in two smaller packages.

If parenthetical adjuncts make independent assertions, it is plausible to assume that they function more or less like the second sentences in (4a-c). This would immediately explain why they contribute an independent assertion, and it would also explain why their internal prosodic contour resembles that of an independent declarative sentence.

But how can these adjuncts be functioning like independent declarative sentences? The simplest answer is surely that they *are* independent declarative sentences, or at least the remnants of sentences that have undergone ellipsis. This would allow us to maintain the simplifying assumption that every asserted proposition is conveyed by an independent declarative sentence. I propose that the (b) examples of (1) to (3) would each originate as two conjoined sentences bearing a paratactic relation to each other, more or less as in (4). The adjunct is extracted from the TP of the second sentence, moving to a position in that sentence's left periphery, presumably to the Specifier of FocusP. The remnant of the TP is then elided under identity with the first sentence (the "host" clause).

This proposed derivation is based on Merchant's (2001, 2005) analysis of sluicing constructions and sentence fragments. Similar analyses have been proposed for contrastive left dislocation by Ott (2014), for right dislocation by Ott & de Vries (2016), and for appositive nominals by Ott (2016). One might object that the elided TP contains the trace of the extracted adjunct, which is not present in the antecedent host clause, but precisely the same problem arises in ellipsis-based accounts of sluicing, fragments, and dislocation involving adjunct extraction; Merchant's (2001) solution is to posit a null indefinite adjunct in the antecedent clause that undergoes QR.

I will suggest below that critical evidence bearing on the correct approach to these parenthetical adjuncts is provided by parenthetical adjuncts exhibiting greater internal complexity than those discussed so far. These turn out to strongly favor the view that parenthetical adjuncts contribute independent assertions, and that they are the remnants of ellipsis. But first, I want to discuss higher adverbs, which play a role in these more complex structures.

2. Evaluative and qualifying adverbs

Other classes of adjuncts behave rather differently from those in (1) to (3). In particular, all of the higher adverbs, including evaluative adverbs, evidential adverbs, epistemic adverbs, modal adverbs, and adverbs of habituality and quantification, tend to occur closer to the beginning of the sentence. With the exception of the evaluative adverbs, these higher adverb classes tend to amend the assertion of the host clause, or scale back the speaker's commitment to its truth. I refer to these collectively as *qualifying adverbs*.

Higher adverbs, including evaluative and qualifying adverbs, typically occur either sentence-initially, or after the subject or an auxiliary verb, as in (5).

(5)	a.	Probably Napoleon attacked the city.	(modal)
	b.	The rebels have reportedly been defeated.	(evidential)
	c.	Max unfortunately drank two bottles of gin last night.	(evaluative)

In the spirit of Cinque (1999), I will assume that the adverbs in (5) all originate in a high position at the left edge of the clause, and that the subject, and also certain auxiliary verbs, may move to positions above them, deriving the orders in (5b,c).

But higher adverbs can also occur in sentence-final position, as illustrated in (6).

- (6) a. Napoleon attacked the city, probably.
 - b. The rebels have been defeated, reportedly.
 - c. Max drank two bottles of gin last night, unfortunately.

The orthographic convention for these sentence-final adverbs resembles that of the parenthetical adjuncts in the (b) sentences of (1) to (3): they are preceded by a comma. But the orthography suggests a false equivalence; these sentence-final adverbs are normally pronounced differently from any of the adjuncts in (1) to (3).

Unlike the parenthetical adjuncts in the (b) examples of (1) to (3), these adverbs don't have to be separated from the rest of the sentence by a pause; and if there is no pause, they do not form an independent intonational phrase. But this does not mean they are

integrated in precisely the same way that the adjuncts in (1) to (3) can be. In particular, sentence-final higher adverbs can never bear the primary nuclear stress of the host sentence; that is, these sentences cannot be pronounced exactly like (1a), (2a), or (3a):

- (7) a. *Napoleon attacked the city próbably.
 - b. *The rebels have been defeated repórtedly.
 - c. *Max drank two bottles of gin last night unfórtunately.

We can explain the exclusion of (7a-c) simply by assuming that, because of the normal order of merge, only relatively low adverbs can be integrated into a VP-internal position that is eligible to bear nuclear stress.

Let's return to the examples in (6). The sentence-final higher adverbs can be preceded by a pause, but need not be. If there is no pause, the adverbs must be pronounced with a distinctive low-pitch flat contour, as noted by Jackendoff (1972). They cannot bear nuclear stress of any kind. Thus, their prosody is different from both the integrated and the parenthetical adverbs in (1) to (3), and presumably their structure and derivation is too. I propose that the higher adverbs in (6), like those in (5), originate above (to the left of) the main TP of their host sentences. The TP can move to a position above these adverbs, deriving (6); I refer to this as *Higher Adverb Inversion*. These adverbs are not parenthetical. Indeed, Bonomi et al. (2014) describe them as intrinsically integrated, in the sense that they "make a contribution to the asserted proposition" of the host clause, regardless of whether they are phonologically integrated or not.

On the other hand, if the sentence-final higher adverb *is* preceded by a (parenthetical-type) pause, it seems to bear contrastive stress, rather than nuclear stress.

- (8) a. Napoleon attacked the cíty. ... próbably.
 - b. The rebels have been deféated. ... repórtedly.
 - c. Max drank two bottles of gin last night. ... unfórtunately.

These are presumably derived from two-sentence sequences resembling (9a-c), where the higher adverbs also bear contrastive stress (at least in (9a,b)).

- (9) a. Napoleon attacked the city. ...(Well,) próbably he attacked the city.
 - b. The rebels have been deféated. ...(At least,) repórtedly they have been defeated.
 - c. Max drank two bottles of gin last night. ... Unfórtunately, Max drank two bottles of gin last night.

Since these higher adverbs originate above TP, the sentences in (8) have a simpler derivation than the (b) sentences in (1) to (3); the adverbs do not have to be extracted from the TP of the parenthetical clause before it is elided. The qualifying adverbs in (8a,b), like their full clause counterparts in (9a,b), function conversationally as revisions or corrections of the assertion in the host sentence, partially scaling back the speaker's commitment to the truth of that assertion. In contrast, the evaluative adverb in (8c) is merely additive in terms of its dynamic semantic contribution. I suggest that this difference is responsible for awkwardness of the full clausal continuation in (9c).

Summing up, evaluative and qualifying adverbs originate in a high structural position above TP, as in (5a). The subject DP may raise above them, as in (5c), and certain auxiliary verbs can as well, as in (5b). Alternatively, order of the adverb relative to the entire clause can be reshaped by higher adverb inversion, where the TP raises above the adverb, as in (6a-c). Finally, these adverbs can originate above TP within a true parenthetical clause that contributes an independent assertion that either revises or adds to the assertion of the host clause; in this case, the adverb typically bears contrastive stress, and the TP can be elided, as in (8a-c).

3. Qualified parenthetical adjuncts

Building on a long analytical tradition going back to Jackendoff (1972), Cinque (1999) famously argued for the existence of a universal hierarchy of around forty functional categories, associated with various semantic classes of adverbs, as well as modal and aspectual categories. In distinguishing various semantic classes of adverbs and assigning them to different syntactic positions, Cinque drew more fine-grained distinctions among semantic classes of adverbs, and established ordering restrictions on them, relative to each other. He did this by combining two assumptions. First, the functional categories are arranged in a universal structural hierarchy. This hierarchy is spelled out structurally along the central spine of the clause. Second, adverbs occupy specifier positions of the functional category associated with their semantic class. Since the hierarchy is fixed, the linear order of sequences of adverbs is also fixed. Unless other movements distort this structure, adverbs whose functional categories are near the top of the hierarchy will be merged late, and will be pronounced before adverbs whose functional categories are lower in the hierarchy. Although many aspects of Cinque's theory have been challenged, there is substantial agreement on many of the theory's empirical claims concerning the preferred hierarchical ordering relations among the various semantic classes of adverbs and related adjuncts.

In terms of Cinque's theory, the evaluative and qualifying higher adverbs discussed in Section 2 all belong to functional categories that are located near the top of the hierarchy. In contrast, the adjuncts in (1) to (3) are all either manner adverbs or other types of subconstituents of the verb phrase; they are comparatively low on Cinque's hierarchy. This explains why evaluative and qualifying adverbs normally precede the lower adjuncts when they both occur in the same sentence:

- (10) a. Max unfortunately drank two bottles of gin last night on an empty stomach.
 - b. The rebels have reportedly been defeated decisively.
 - c. Probably Napoleon attacked the city to prove his invincibility.

Nevertheless, the higher adverbs can also occur in sentence-final position, as a reflex of higher adverb inversion, as in (11).

- (11) a. Max drank two bottles of gin last night on an empty stomach, unfortunately.
 - b. The rebels have been defeated decisively, reportedly.
 - c. Napoleon attacked the city to prove his invincibility, probably.

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Strikingly, these evaluative and qualifying adverbs can also occur within parenthetical adjuncts, preceding the lower parenthetical adjunct:

- (12) a. Max drank two bottles of gin last night, unfortunately on an empty stomach,
 - b. The rebels have been defeated, reportedly decisively.
 - c. Napoleon attacked the city, probably to prove his invincibility.

The occurrence of higher evaluative and qualifying adverbs within these parenthetical adjuncts clarifies the semantic intuition that the adjuncts contribute independent assertions. The higher adverbs in (12a-c) take scope over the parenthetical clause, but not the host clause. This is most easily explained by assuming that the parenthetical adjunct originates as a full clause, with the higher adverbs originating above the TP of that clause, exactly analogous to the position of the higher adverb in (5a). For example, (12c) would originate as something like (13a). The lower adverb is extracted to a position above TP but below the higher adverb, as in (13b), followed by ellipsis in (13c).

(13)	a.	Napoleon attacked the city. [Probably [he attacked it to prove his invincibility]]	
	b.	[probably [[to prove his invincibility] [he attacked it t]]]	
	c.	[probably [[to prove his invincibility] <he attacked="" it-="">]]</he>	
Moreover, higher adverb inversion can apply within the parenthetical adjunct, reversing the order of the higher adverb and the lower adjunct:			

- (14) a. Max drank two bottles of gin last night—on an empty stomach, unfortunately.
 - b. The rebels have been defeated—decisively, reportedly.
 - c. Napoleon attacked the city—to prove his invincibility, probably.

In (14), the sentence-final evaluative and qualifying adverbs can scope just over the parenthetical adjunct, as in (12), indicating that the higher adverb inversion must be internal to the parenthetical. The clause-final higher adjuncts within these parentheticals have the same low-pitch prosodic contour that is found with higher adverb inversion in a main clause. As in (13), the lower adjunct must be extracted from the TP prior to ellipsis. This leaves open various other questions about the interaction of higher adverb inversion with adjunct extraction and TP ellipsis, including their relative order of application.

4. More complex cases

It turns out that the qualified parenthetical adjuncts in (12) and (14) represent just the tip of the iceberg. Though space considerations preclude a full discussion here, the following examples provide evidence of even richer clausal structure within the parenthetical adjunct, above the domain to which TP ellipsis applies.

In particular, a sequence of two or even three evaluative and/or qualifying adverbs within the parenthetical are possible, with one triggering inversion, and the others not:

- (15) a. Max drank two bottles of gin last night—reportedly on an empty stomach, unfortunately.
 - b. reportedly on an empty stomach, <he did it> unfortunately.
- (16) a. The rebels have been defeated—I think probably decisively.
 - b. I think probably decisively <they have been defeated>.
- (17) a. Napoleon attacked the city—though reportedly possibly with insufficient firepower, I believe.
 - b. though reportedly possibly with insufficient firepower <he attacked it> I believe.

It is hard to see how all these adverbs and adjuncts could be accommodated within these parenthetical adjuncts without a clausal source structure.

5. Conclusion

To sum up: I have argued for the existence of several types of sentence-final adjuncts. Parenthetical adjuncts are normally derived from a clausal source by ellipsis, whereas non-parenthetical higher adverbs in sentence-final position arrive there as a result of an inversion process. I have drawn attention to internally complex parenthetical adjuncts containing qualifying and evaluative adverbs, which provide supporting evidence for a clausal structure within the parenthetical. This in turn motivates an ellipsis account of their reduced structure.

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