

# [WLG]

WIENER LINGUISTISCHE GAZETTE

## **On antecedent contained ellipsis in Continental West Germanic: Explaining the subject coreference constraint**

*Uli Sauerland*

Sonderdruck aus: *Wiener Linguistische Gazette* (WLG) 82 (2017): 263–270

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  
Sensengasse 3a  
1090 Wien  
Österreich

**Redaktion:** Christian Bendl, Mi-Cha Flubacher (Angewandte Sprachwissenschaft),  
Stefan Schumacher (Allgemeine und Historische Sprachwissenschaft)

**Kontakt:** [wlg@univie.ac.at](mailto:wlg@univie.ac.at)

**Homepage:** <http://wlg.univie.ac.at>

**ISSN:** 2224-1876

**NBN:** [BL078,1063](https://nbn-resolving.org/urn:nbn:de:hbz:5:1-63864-p0078-1063)

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

**On antecedent contained ellipsis in Continental West Germanic:  
Explaining the subject coreference constraint\***

Uli Sauerland

Leibniz-Zentrum Allgemeine Sprachwissenschaft (ZAS)

This squib discusses Modal Complement Ellipsis (MCE in the following), and more specifically Antecedent Contained Deletion (ACD in the following) in this type of ellipsis. While in English ACD is widely studied and quite well understood (e.g. Sag 1976, Williams 1977, and much subsequent work), ACD has not been observed in Standard German.<sup>1</sup> However, Upper Austrian differs from Standard German in this respect (Bettina Gruber, p.c., Zobel 2007). For example, (1) is acceptable with the interpretation indicated, which requires an ACD analysis. I assume here that root modals are raising verbs, following Wurmbrand 1999.

- (1) *Upper-Austrian German*  
Da Jim<sub>j</sub> hot jed<sub>s</sub> Buach glesn, des<sub>i</sub> a<sub>j</sub> t<sub>j</sub>-t<sub>i</sub>-lesn miassn hot.  
the Jim has every book read that he read must had  
'Jim read every book that he had to.'

Example (1) should be analyzed as ACD for the following reason: The interpretation of the elided VP that is the complement of the modal *miassn* ('must') is parallel to that of the matrix VP *jeds Buach glesn* ('read every book') except that a trace bound by the relative pronoun corresponds to the overt DP *jeds Buach*. A further parallel between (1) and ACD in English concerns extraposition (Winfried Lechner and Clemens Mayr, personal com-

---

\*The intellectual stimulation of the winter semester 2006/07 in Vienna directly led to this squib, though through a long gestation process. I thank Bettina Gruber, Thomas Graf, Sarah Zobel, and other students of my *Introduction to Semantics* class, who provided initial data and interesting discussion. Some of the work reported here is based on a collaboration with Lobke Aelbrecht that we could unfortunately never complete. For helpful comments, I am grateful to the comments from the audience of the GGS 2010 workshop at the Freie Universität Berlin and to Winfried Lechner and Clemens Mayr. Last but not least, I thank Martin Prinzhorn for inviting me to Vienna, for his comments on this and many other topics and for the creative, curious atmosphere he embodies and rubbed off on his students to my benefit.

<sup>1</sup>I am not aware of a discussion of ellipsis in German that explicitly discusses VP-ellipsis and ACD. But existing discussion of deletion and/or ellipsis phenomena in German or by German-speaking linguists such as Hartmann (2000), Lechner (2004), and Gengel (2007) have generally not addressed VP-ellipsis.

munication): Fox & Nissenbaum (1999) argue that extraposition of the relative is required for ACD in English, and this holds for Austrian German too. As (2) shows, a version of (1) where the relative clause isn't extraposed is ungrammatical, while otherwise relative clauses in Austrian and Standard German can also occur in situ.

(2) *Upper-Austrian German*

\*Da Jim<sub>j</sub> hot jed<sub>s</sub> Buach, des<sub>i</sub> a<sub>j</sub> t<sub>j</sub>-t<sub>i</sub>-lesn miassn hot, glesn.  
 the Jim has every book that he read must had read

The example in Standard German corresponding to (1) is shown in (3) and it is not fully acceptable in my personal dialect. There is a clear sense that the meaning of (3) is that of (1), but to elide the verb *lesen* ('read') in the relative clause feels unnatural. (3) is fully acceptable only if *lesen* is pronounced in the relative clause. Furthermore in my judgement, the status of (3) is unchanged in a non-extraposed word order (i.e. a Standard German example matching (2)).

(3) *Standard German*

\*?Jim hat jedes Buch gelesen, dass er ~~lesen~~ musste.  
 Jim has every book read that he ~~read~~ must

The factor determining the acceptability of (1) vs (3) is most likely whether deletion of the complement of a modal verb is permitted in the language:<sup>2</sup> while Upper-Austrian German allows this, Standard German doesn't. Aelbrecht (2010) investigated MCE in detail in Dutch, which is closely related to both Standard and Upper-Austrian German. Like Upper-Austrian German, Dutch generally allows ellipsis of the complements of non-epistemic modals. (4) shows the parallel between Dutch and German in this respect with an existential modal.

(4) a. *Dutch* (Aelbrecht 2010, p. 65)

Ik wil je wel helpen, maar ik<sub>i</sub> kan niet t<sub>i</sub>-helpen.  
 I want you PRT help, but I can not help  
 'I want to help you, but I can't help you.'

b. *Upper-Austrian German* (Bettina Gruber, p.c.)

I wue schau hoefn, oba i<sub>i</sub> kau net t<sub>i</sub>-hoefn.  
 I want PRT help, but I can not help  
 'I want to help you, but I can't help you.'

<sup>2</sup>Zobel (2007) reports that in Upper-Austrian German the auxiliary *haben* ('have') licenses complement ellipsis. For example her (i) illustrates this (Zobel reports Upper-Austrian German data in Standard German orthography):

(i) *Upper-Austrian German* (presented in Standard German orthography)

Ich weiß, welchen Kuchen dass der Peter gegessen haben soll, und, welchen dass er hat.  
 I know which cake that the Peter eat have should, and, which that he has  
 'I know which cake Peter should have eaten and which he has (eaten).'

For the data reported in (4), the availability of the interpretation indicated is crucial, since even in Standard German (4) is an acceptable sentence. However, the phrase *nicht können* in Standard German can only have the interpretation *not have time*. This therefore doesn't seem to involve a modal use of *können* at all. In Dutch and Upper-Austrian German and possibly Austrian German more generally, (4) allows a modal interpretation with the elided complement, as indicated by the translation in (4).<sup>3</sup> Unfortunately I presently lack the resources to investigate further the interaction of the type of modal and ellipsis across German dialects, though this seems to be an interesting area for future investigation.

For the present, I focus on a different issue – a subject coreference requirement in the ACD structures. In the following two sections, I first introduce the evidence for this puzzling requirement, and then make a proposal for how to derive the requirement.

### 1. The subject coreference puzzle with ACD

The puzzle I want to address in this squib relates directly to the ACD uses of MCE such as (1) in Upper-Austrian German. The puzzle also exists in Dutch, as Aelbrecht (2010, p. 137–142) discusses. Namely, ACD in both languages is more restricted than in English.

Since the data I have from Upper-Austrian German is at present less complete than Aelbrecht's Dutch data, consider the Dutch data first. Aelbrecht reports that MCE in Dutch generally allows only subject extraction, as in (5a), and blocks object extraction, as in (5b).

(5) *Dutch* (Aelbrecht 2010, p. 55 & p. 69)<sup>4</sup>

- a. [Die broek]<sub>i</sub> moet nog niet t<sub>i</sub> gewassen worden, maar hij mag wel al  
the pant must still not washed become, but 3S can well already  
~~t<sub>i</sub> gewassen worden~~  
washed become  
'Those pants don't have to be washed, but they can be.'
- b. \*<sup>2</sup>Ik weet niet [welke boeken]<sub>i</sub> Mina wel wil t<sub>i</sub> lezen, en [welke]<sub>j</sub> ze niet  
I know not which books Mina AFF wants read and which she not  
wil ~~t<sub>i</sub> lezen~~  
wants read

The only acceptable cases of extraction from MCE in Dutch that Aelbrecht reports are cases of ACD. However, not all cases of ACD are acceptable; the subjects are required to

<sup>3</sup>Winfried Lechner (p.c.) points out that some cases of MCE are also grammatical in Northern varieties of German. Specifically, he mentions the case of comparatives such as (i).

(i) Peter hat mehr getrunken als<sub>i</sub> er<sub>j</sub> t<sub>j</sub> t<sub>j</sub> trinken darf.  
Peter has more drunk than he drink may  
'Peter drank more than he is allowed to.'

<sup>4</sup>I added the traces and elided material for clarity. The linear position of both types of silent elements is dependent on the analysis of OV word order, where for concreteness I assume that OV is the underlying order. As far as I can see nothing in the following depends on this assumption.

be coreferent. Specifically Aelbrecht reports a contrast between the acceptable (6a), if the pronoun *hij* is coreferent with the matrix subject as indicated, and the ungrammatical (6b).

- (6) *Dutch* (Aelbrecht 2010, p. 139)
- a. Olaf<sub>j</sub> heeft elk boek gelezen dat hij<sub>j</sub> moest.  
Olaf has every book read that he had to  
'Olaf read every book he had to.'
  - b. \*Olaf heeft elk boek gelezen dat David moest  
Olaf has every book read that David had to

The same constraint on ACD is attested in Upper-Austrian German too: in contrast to (1) above, (7) is judged ungrammatical:

- (7) *Upper-Austrian German*
- \*Da Jim hot jeds Buach glesn, des<sub>i</sub> de Jana miassn hot.  
the Jim has every book read that the Jana must had

I should note though that much more detailed discussion of the Upper-Austrian German data is required. In particular, some of the data presented by Zobel (2007) are not fully parallel to the Dutch data of Aelbrecht (2010). In particular, Zobel (2007) reports some cases of acceptable extraction from object position and also some cases of acceptable ACD with non-coreferential subjects. Nevertheless the subject coreference requirement may be one general factor contributing to the acceptability of ACD in German and Dutch more generally,<sup>5</sup> but the boundary between acceptable and unacceptable may vary across speakers and dialects.

This general picture is corroborated by some research I began on Standard German: a similar though less clear contrast may hold also for Standard German. In 2010, I conducted a pilot questionnaire study with four speakers from Berlin. The questionnaire used the magnitude estimation technique and contained 8 items each of three relevant conditions, as shown in (8):

- (8) a. *Condition 1: ACD in a headed relative with subject coreference*  
Connie hat eine Schulkameradin eingeladen, die sie durfte.  
Connie has a schoolmate-FEM invited who she was allowed  
'Connie invited a class-mate who she was allowed to.'
- b. *Condition 2: ACD in a free relative with subject coreference*  
Toby hat schon getroffen, wen<sub>j</sub> er<sub>i</sub> musste.  
Toby has already met, who he must  
'Toby has already met who he has to.'

---

<sup>5</sup>Aelbrecht (2010, p. 139) also discusses some English data supporting a subject coreference requirement for English, but much data in the literature argues against such a general claim. At present, I believe that English ACD is different from Dutch and German ACD in that only the latter are subject to a subject coreference requirement.

- c. *Condition 3: ACD in a free relative with disjoint subject reference*  
 Pascal hat schon erledigt, was Martin noch muss.  
 Pascal has already finished, what Martin still must  
 ‘Pascal has already finished what Martin still has to.’

In addition, the study contained 26 other items. Subjects were instructed to compare the comprehensibility of the sentences to the reference sentence (9), which is understandable but not fully grammatical in German:

- (9) #Jedes Kind, das schon mal geschaukelt hat, hat auf der gesessen.  
 every child that already once swung has has on the sat  
 (‘Every child that has swung at some point, has sat on it.’)

German generally allows NP-ellipsis with definite determiners (so called ‘d-pronouns’ in German grammar), and the occurrence of *der* (‘the’) in (9) requires NP-ellipsis. However, (9) is awkward since the antecedent noun *Schaukel* (‘swing’) is inaccessible because it occurs only in a verbalized derived form. Since none of the three experimental conditions in (8) is fully grammatical in Standard German, the judgement relative to another marginal sentence had a greater chance of revealing a contrast between the conditions than a comparison with a fully grammatical sentence would have had. The preliminary result from 4 subjects shows that the technique has the potential to uncover an effect of coreference, but the results are at this point not statistically significant. (10) shows comparative scores for the three conditions. These scores were derived by transforming each subject’s judgement to z-scores and then computing the mean across subjects per condition.

	Condition	Mean normalized judgment
(10)	Condition 1	0.1245
	Condition 2	-0.1866
	Condition 3	-0.5178

These preliminary results indicate that coreference might affect the judgments of Standard German speakers on ACD structures, even though ACD structures overall are not found to be very acceptable in Standard German.

In sum then, we have seen in this section that for ACD to be acceptable in Dutch and at least the Upper-Austrian dialect of German, the subjects of the matrix and embedded clause must be coreferent. In the following section, we argue that the subject coreference constraint on ACD follows from Aelbrecht’s analysis of Dutch MCE if amended with one additional, independently motivated assumption, namely the copy-identity condition of Sauerland 2004.

## 2. An account of the puzzle

Consider again the core contrast to be explained, as shown in (11). As already mentioned above, I assume that both subject and object traces occur in the elided vP, following Wurmbrand (1999).

(11) *Upper-Austrian German*

- a. Da Jim<sub>j</sub> hot jed<sub>s</sub> Buach glesn, des<sub>i</sub> a<sub>j</sub> t<sub>j</sub> ~~lesn~~ t<sub>i</sub> miassn hot.  
 the Jim has every book read that he read must had  
 ‘Jim read every book that he had to.’
- b. \*Da Jim<sub>j</sub> hot jed<sub>s</sub> Buach glesn, des<sub>i</sub> de Jana<sub>k</sub> t<sub>k</sub> ~~lesn~~ t<sub>i</sub> miassn hot.  
 the Jim has every book read that the Jana read must had  
 (‘Jim read every book that Jana had to.’)

Aelbrecht (2010, 101–104) proposes that MCE in Dutch must be licensed by Agree with a non-epistemic modal, which need not be adjacent to the ellipsis site as long as an Agree-relation is possible. She furthermore argues that ellipsis must take place as soon as the Agree-relation is established – i.e. when the licensing modal is encountered. Aelbrecht derives from this assumption that extraction from the ellipsis site is generally blocked. I adopt Aelbrecht’s assumptions for Austrian German, but with one difference regarding how extraction can take place from MCE. Namely, Aelbrecht proposes that only phrases that have vacated the ellipsis site prior to agreement can escape and that only subjects have access to this escape hatch, while objects don’t. While I adopt Aelbrecht’s general assumptions, I don’t adopt her assumption that subjects have access to an escape hatch for extraction. One motivation for this is that while Aelbrecht predicts subject extraction to always be possible and object extraction to never be possible, she already notes that ACD data like (11) indicate that object extraction from MCE must sometimes be possible. I propose a general identity condition that applies to both subjects and objects to replace Aelbrecht’s escape hatch proposal. Consider first how my proposal applies to the ACD cases like (11).

I claim that ACD can only be licensed in the configuration in (12) in Dutch and Austrian German. Unlike English,<sup>6</sup> Austrian German and Dutch don’t allow for object-subject scope, and therefore quantifier raising (QR) must be restricted to target positions lower than the overt subject. (QR is shown as rightward movement in (12), elided material is enclosed in  $\langle \dots \rangle$ .)

$$(12) \quad \text{Jim}_j \left[ \lambda_k \underbrace{t_j t_k \text{ read}}_{\text{antecedent}} \left[ \text{every book } Op_i \text{ he}_j \text{ must } \underbrace{\langle t_j t_i \text{ read} \rangle}_{\text{licensing}} \right]_k \right]$$

QR

The maximal antecedent for ellipsis is the complement of T as indicated in (12) (see also Aelbrecht for evidence that MCE ellipsis targets the complement of T). The corresponding domain in the ACD-relative clause therefore cannot include the overt subject. Since non-identity in parallelism requires an overt focused phrase, ellipsis licensing requires subject coreference in (12).

Why do the two object traces  $t_j$  and  $t_k$  satisfy parallelism? In general, it is difficult to justify that they should bear the same index (Heim 1997, Kennedy 2014). However,

<sup>6</sup>Winfried Lechner (p.c.) points out that the English data may actually be more restrictive than is commonly assumed, in a similar way to Dutch and Austrian German.





supports the view that object coreference is trivially satisfied in ACD structures, as for instance the analysis I developed in Sauerland 2004, 2007 predicts.

### References

- Aelbrecht, Lobke. 2010. *The syntactic licensing of ellipsis*. Amsterdam: John Benjamins.
- Fox, Danny, & Jon Nissenbaum. 1999. Extraposition and scope: A case for overt QR. In *WCCFL 18: Proceedings of the 18th West Coast Conference on Formal Linguistics*, ed. Sonya Bird, Andrew Carnie, Jason D. Haugen, & Peter Norquest, 132–144. Somerville, MA: Cascadilla Press.
- Gengel, Kirsten. 2007. Focus and ellipsis: A generative analysis of pseudogapping and other elliptical structures. Doctoral dissertation, University of Stuttgart.
- Hartmann, Katharina. 2000. *Right node raising and gapping*. Philadelphia, PA: John Benjamins.
- Heim, Irene. 1997. Predicates or formulas? Evidence from ellipsis. In *Proceedings of SALT VII*, ed. Aaron Lawson & Eun Cho, 197–221. Ithaca, NY: CLC Publications.
- Kennedy, Christopher. 2014. Predicates and formulas: Evidence from ellipsis. In *The art and craft of semantics: A festschrift for Irene Heim*, ed. Luka Crnić & Uli Sauerland, volume 1 (MITWPL 70), 253–277. Cambridge, MA: MIT Working Papers in Linguistics.
- Lechner, Winfried. 2004. *Ellipsis in comparatives*. Berlin, New York NY: Walter de Gruyter.
- Sag, Ivan. 1976. Deletion and logical form. Doctoral dissertation, MIT, Cambridge, MA.
- Sauerland, Uli. 2004. The interpretation of traces. *Natural Language Semantics* 12:63–127.
- Sauerland, Uli. 2007. Flat binding: Binding without sequences. In *Interfaces + recursion = grammar? Chomsky's minimalism and the view from syntax-semantics*, ed. Uli Sauerland & Hans-Martin Gärtner, 197–254. Berlin: Mouton de Gruyter.
- Williams, Edwin. 1977. Discourse and logical form. *Linguistic Inquiry* 8:101–139.
- Wurmbrand, Susi. 1999. Modal verbs must be raising verbs. In *WCCFL 18: Proceedings of the 18th West Coast Conference on Formal Linguistics*, ed. Sonya Bird, Andrew Carnie, Jason D. Haugen, & Peter Norquest, 599–612.
- Zobel, Sarah. 2007. Grundlagen der VP-Ellipse und VP-Ellipse im oberösterreichischen Deutsch. University of Vienna.

Uli Sauerland  
uli@alum.mit.edu