

# Contributing to the extraction/parenthesis debate: judgement studies and historical data

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## Introduction

For the German construction in (1) two analyses have been discussed in the theoretical literature:

- (1)    *Wen    sagt    der    Rektor hat    der    Lehrer    ausgeschimpft?*  
      Whom says the head has the teacher scolded  
      ‘Whom does the head say the teacher has scolded?’

Some linguists have analysed constructions as in (1) as long *wh*-extractions from embedded verb-second-clauses (e.g. Grewendorf 1988, Haider 1993). Others have proposed that they are monoclausal extractions with verb-first parenthetical inserts (e.g. Reis 2002).

- (2)    Extraction analysis  
      *Wen<sub>i</sub>    sagt    der Rektor [t<sub>i</sub> hat    der    Lehrer t<sub>i</sub>    ausgeschimpft]?*  
      Whom says the head has the teacher scolded
- (3)    Parenthetical analysis  
      *Wen [    sagt    der Rektor] hat    der    Lehrer    ausgeschimpft?*  
      Whom says the head has the teacher scolded

This disagreement has remained unresolved because it is difficult to find any clear evidence which distinguishes between the two accounts. It would be of great interest to resolve this point because of the theoretical importance of extraction and its implications for the structure of the German clause. We will present two types of data to contribute to the on-going debate: data from judgement studies of present-day German and historical corpus data from Old High German.

## The magnitude estimation studies

In the experimental studies, we used the magnitude estimation methodology (Bard et al 1996) to elicit strictly controlled judgements. The basic idea was to compare the controversial construction in (1) with clear parenthetical constructions on the one hand and uncontroversial long extractions from clauses with complementizers (*dass*-clauses) on the other. According to Reis (2002), there are a number of predicates which can appear as matrix predicates in long extraction constructions as in (4a), but which do not occur in prosodically integrated parentheticals as for example in the post-finite parentheticals in (4b). For the extraction/parenthesis debate it is decisive how the controversial case in (4c) behaves in this respect. We tested a range of predicates with these three structures:

- (4) a. *Welchen Bewerber glaubst/hoffst/bevorzugst du, dass*  
 Which applicant believe/hope/prefer you that  
*wir im Juni einstellen?*  
 we in June employ  
 ‘Which applicant do you believe/hope/prefer that we will employ in June?’
- b. *Welchen Bewerber stellen wir, glaubst/hoffst/bevorzugst*  
 Which applicant employ we  
 believe/hope/prefer  
*du, im Juni ein?*  
 you in June verbal particle  
 ‘Which applicant will we employ in June, do you think?’
- c. *Welchen Bewerber glaubst/hoffst/bevorzugst du, stellen*  
 Which applicant believe/hope/prefer you employ  
*wir im Juni ein?*  
 we in June verbal particle  
 ‘Which applicant do you believe/hope/prefer we will employ in June?’

The results from our studies show that the controversial constructions and the extractions from *dass* clauses (*dass*-extractions) were judged differently (figure 1). Judgements on the latter decline fairly evenly, as the predicates become worse bridge predicates. The controversial constructions on the other hand start off better than the clear extractions, but decline more steeply, plunging past the *dass*-extractions to become worse than them. In contrast to this, comparing the controversial construction to clear parentheticals does not produce any significant differences. Taken together, the evidence from our series of judgement studies weighs in favour of the parenthetical analysis, but we will also consider possible alternative accounts.

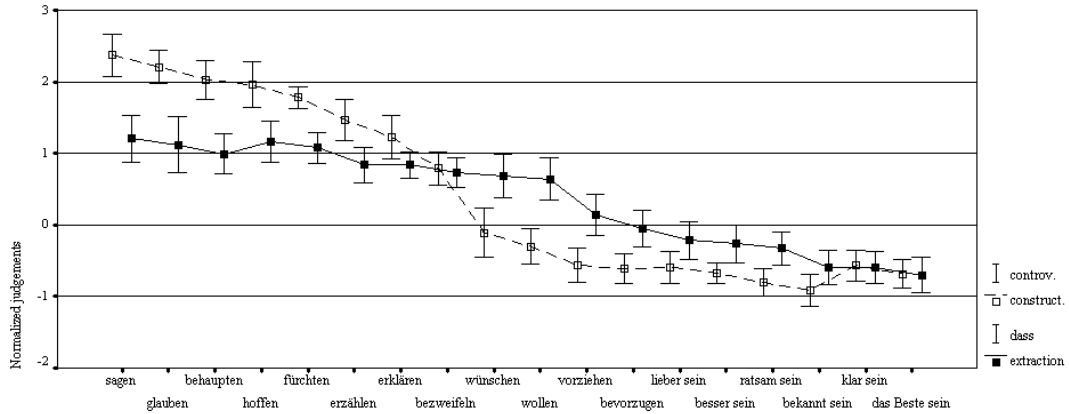


Figure 1: The contrast of judgements of the *dass*-extraction and the controversial construction. The tested predicates are on the horizontal axis. Higher scores indicate ‘better’ judgements

## Historical study

Interestingly, our data from Old High German (OHG) also suggest that the parenthetical analysis is better motivated than the extraction analysis. We collected data from several 8<sup>th</sup> and 9<sup>th</sup> century texts. In Otfrid’s book of the gospel, for example, the historical equivalent to the construction in (1) above can already be found:

- (5) *Was wānet werde thānne themo úmbitherben wálde*  
 what believe<sub>2.pl</sub> become<sub>subj.</sub> then the unfit forest  
 ‘What do you believe then becomes of the unfit forest?’ (O IV 26,51)

The extraction analysis for examples as in (5) is only convincing if it can be shown that in 9<sup>th</sup> century OHG (i) long *wh*-extraction from complement clauses is already attested and (ii) that the verb *wānen* ‘believe, imagine, think’ can take a verb-second complement clause without a complementizer. Regarding (i), there is indeed clear evidence for long *wh*-extraction in OHG (e.g. Behaghel 1928:547ff.). In (6) the *wh*-phrase *waz* has been extracted from the *thaz*-complement clauses selected by the verb *wānen*.

- (6) *waz<sub>i</sub> wānist [thaz er t<sub>i</sub> wérde]* (O I 9,29)  
 what believe<sub>2.sg</sub> that he becomes<sub>subj.</sub>  
 ‘What do you believe he becomes?’

As far as (ii) the selectional properties of *wānen* is concerned, it can be shown to take complement clauses without overt complementizers in 9<sup>th</sup> century OHG. These ‘asyndetic’ clauses, however, exhibit verb-final and not verb-second order, (7a) (see also Lenerz 1985). Such complement clauses – which can be argued to have a silent complementizer (so-called Comp-drop) – are also attested with *wh*-extraction, (7b).

- (7) a. *wánu* [sie ouh thaz rúzin] ... (O IV 26,6)  
 believe<sub>1.sg</sub> they also that wept<sub>subj.</sub>  
 ‘I believe that they also wept for that ...’
- b. *was<sub>i</sub> wanist [thémo t<sub>i</sub> irgange] [ther anderan róubot]...*  
 what believe<sub>2.sg</sub> the-one<sub>dat</sub> happen<sub>subj.</sub> who other robs  
 ‘What do you believe happens to somebody who robs somebody else?’  
 (O V 21,10)

Since there is no compelling evidence that *wânen* could select asyndetic verb-second clauses alongside asyndetic verb-final clauses, an extraction analysis for constructions as in (5) is not very plausible.

According to the parenthetical hypothesis, on the other hand, the OHG example in (5) contains a parenthetical insert (*wânet*) with an empty subject pronoun. This analysis is well supported since forms of the OHG verb *wânen* are frequently attested in expressions that are undoubted verb-first parentheticals, (8). As we will show, the frequent use of so-called *inquit formulae* with verbs of saying, thinking and believing is considered a typical property of historical German.

- (8) *Gistant géner (wan ih) thénken, tház ...* (O IV 17,5)  
 stood the-one believeI to-think that  
 ‘The one stood still (I believe) in order to make us believe that ...’

A similar line of argumentation can be established for further predicates.

In conclusion, both data types provide new insights in themselves, and taken together they allow for even stronger conclusions, as they both point in the same direction, towards the parenthetical analysis.

## References

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