

# CASE COMPETITION IN HEADLESS RELATIVES

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# List of abbreviations

<b>ACC</b>	accusative
<b>AN</b>	animate
<b>COMP</b>	complementizer
<b>CONN</b>	connective
<b>DAT</b>	dative
<b>DEM</b>	demonstrative
<b>DUR</b>	durative
<b>GEN</b>	genitive
<b>INF</b>	infinitive
<b>M</b>	masculine
<b>NF</b>	non-future
<b>NOM</b>	nominative
<b>N</b>	neuter
<b>PL</b>	plural
<b>PRED</b>	predicative
<b>PRES</b>	present tense
<b>PST</b>	past tense
<b>PTCP</b>	participle
<b>REL</b>	relative
<b>SG</b>	singular

<b>SS</b>	same subject
<b>TOP</b>	topic
<b>TR</b>	transitional sound

# Chapter 1

## Introduction

This dissertation is about case competition, a situation in which two cases are assigned but only one of them surfaces. One of the constructions in which case competition appears is relative clauses that lack a head, i.e. headless relatives.

In this introduction I first introduce what I mean exactly with case competition in headless relatives. Then I introduce the topics I discuss in this dissertation.

### 1.1 Decomposing the title

Languages can use case to mark the grammatical role of a noun phrase in a clause (cf. Moravcsik, 2009). Consider the two Modern German sentences in (1). What can descriptively be called the subject of the predicate *mögen* ‘to like’ is marked as nominative. What can be described as the object of *mögen* ‘to like’ is marked as accusative. The case marking of the noun phrases is reflected on the determiner in the noun phrase. In (1a), *der* in *der Lehrer* ‘the teacher’ appears in nominative case, because it is the descriptive subject in the clause. *Den* in *den Schüler* ‘the pupil’ appears in accusative case, because it is a descriptive object of *mögen* ‘to like’. In (1b), the grammatical roles are reversed: *der* in *der Schüler* ‘the pupil’ appears in nominative case, because it is the descriptive subject in the clause. *Den* in *den Lehrer* ‘the teacher’ appears in accusative case, because it is the descriptive object of *mögen* ‘to like’.

- (1) a. Der Lehrer mag den Schüler.  
           the.NOM teacher likes the.ACC student  
           ‘The teacher likes the pupil.’  
       b. Der Schüler mag den Lehrer.  
           the.NOM student likes the.ACC teacher  
           ‘The pupil likes the teacher.’

Not only full noun phrases, but also other elements can be marked for case, such as relative pronouns. Modern German marks relative pronouns, just like full noun phrases, for the grammatical role they have in the clause. Consider the two sentences in (2). These two sentences both contain a main clause that is modified by a relative clause. In (2a), the relative clause *der nach draußen guckt* ‘that looks outside’ modifies *den Schüler* ‘the pupil’. *Schüler* ‘pupil’ is called the head (noun) or the antecedent of the relative clause. *Den* in *den Schüler* ‘the pupil’ appears in accusative case, because it is the descriptive object of *mögen* ‘to like’ in the main clause. The relative pronoun *der* ‘REL.SG.M.NOM’ appears in nominative case, because it is the descriptive subject of *mögen* ‘to like’ in the relative clause.

In (2b), the relative clause *den er beim Verstecktspiel sucht* ‘that he is searching for playing hide-and-seek’ modifies *den Schüler* ‘the pupil’. *Den* in *den Schüler* ‘the pupil’ appears again in accusative, because it is the descriptive object of *mögen* ‘to like’ in the main clause. The relative pronoun *den* ‘REL.SG.M.ACC’ appears in accusative case, because it is the descriptive object of *suchen* ‘to search’ in the relative clause.

- (2) a. Der Lehrer mag den Schüler, der nach draußen  
           the.NOM teacher likes the.ACC student REL.SG.M.NOM to outside  
           guckt.  
           looks  
           ‘The teacher likes the pupil that is looking outside.’  
       b. Der Lehrer mag den Schüler, den er beim  
           the.NOM teacher likes the.ACC student REL.SG.M.ACC he at the

Versteckspiel            sucht.  
 hide-and-seek game searches  
 ‘The teacher likes the pupil that he is searching for playing hide-and-seek.’

Compare the two sentences in (2). In both sentences the head is marked as accusative because it is the descriptive object in the main clause. The case of the relative pronoun in (2b) is also accusative, because it is the descriptive object in the relative clause. The case of the relative pronoun in (2a) is nominative, because it is the descriptive subject in the relative clause. So, the case of the relative pronoun in (2a) differs from the case of the head.

The focus of this dissertation lies on headless relatives. As the name suggests, this type of relative clause lacks a head.<sup>1</sup> Even though Modern German also has case competition in headless relatives, I turn to Gothic now. The patterns among the two languages differ slightly, and the first part of the dissertation can be illustrated best with Gothic.

I give an example of a headless relative in Gothic in (3). There is no head that this relative clause modifies, because it is a headless relative. This is different from the examples from German I gave above, which each had a head. The predicate *arman* ‘to pity’ takes accusative objects, as indicated by the subscript on the gloss of the verb. The predicate *gaarman* ‘to pity’ also takes accusative objects, indicated again by the subscript. The relative pronoun *þan(a)* ‘REL.SG.M.ACC’ appears in accusative case.<sup>2</sup>

- (3)    gaarma            þan            -ei    arma  
          pity.PRES.1SG<sub>[ACC]</sub> REL.SG.M.ACC -COMP pity.PRES.1SG<sub>[ACC]</sub>  
          ‘I pity him whom I pity’

---

<sup>1</sup>This ‘missing noun’ has been interpreted in two different ways. Some researchers argue that the noun is truly missing, it is absent, cf. Citko 2005; Van Riemsdijk 2006. Others claim that there is actually a head, but it is phonologically zero, Bresnan and Grimshaw 1978; Groos and van Riemsdijk 1981; Grosu 2003. At this point in the discussion this distinction is not relevant. I return to the issue in Chapter 2.

<sup>2</sup>The relative pronoun without the complementizer *-ei* is *þana*. Therefore, I refer to the relative pronoun as *þan(a)*.

(Gothic, Rom. 9:15, adapted from Harbert 1978: 339)

Where does this accusative case come from? Logically speaking, there are two possible sources: the predicate in the main clause *gaarman* ‘to pity’, the predicate in the relative clause *arman* ‘to pity’. From now on, I use the terms internal and external case to refer to these two possible case sources. Now there are three logical possibilities for the source of the accusative case on *þan(a)* ‘REL.SG.M.ACC’ in (3): the internal case, the external case, or both.

Internal case refers to the case associated with the relative pronoun internal to the relative clause. More precisely, it is the case, which is associated with the grammatical role that the relative pronoun has internal to the relative clause. In (3), the relative pronoun is the descriptive object of *arman* ‘to pity’. The predicate *arman* ‘to pity’ takes accusative objects. So, the internal case is accusative.

External case refers to the case associated with the missing head in the main clause, which is external to the relative clause. Concretely, it is the case which is associated with the grammatical role that the missing head has external to the relative clause. In (3), the missing head is the descriptive object of *gaarman* ‘to pity’. The predicate *gaarman* ‘to pity’ takes accusative objects. In (3), the external case is accusative.

Now I return to the question where *þan(a)* ‘REL.SG.M.ACC’ in (3) got its case from. In the remainder of this section I show evidence for the claim that the relative pronoun is sensitive to both the internal and the external case. This is easy to imagine for the internal case: the internal case reflects the grammatical role of the relative clause. It is a bit more complicated for the external case. The external case is associated with the grammatical role of the missing head in the main clause. The idea is going to be that the external case cannot be reflected on a non-existing head. Indirectly, it appears on the relative pronoun.<sup>3</sup> This means that the internal and external case come together on the relative pronoun. In other words, there is case competition going on in headless relatives. (3) is indeed the first example I gave of case competition in a headless relative. It is an uninteresting one, because the two competing cases are identical.

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<sup>3</sup>Later on I will argue that this indirect process is actually a deletion operation.

Consider the example in (4), in which the internal case is accusative and the external case is nominative. The internal case is accusative. The predicate *frijon* ‘to love’ takes accusative objects, as indicated by the subscript on the predicate. The external case is accusative. The predicate *wisan* ‘to be’ takes nominative subjects, indicated by the subscript on the predicate. The relative pronoun *þan(a)* ‘REL.SG.M.ACC’ appears in accusative. This accusative can only come from the predicate *frijon* ‘to love’, which is the internal case here. The relative pronoun is marked in bold, just as the relative clause, showing that the relative pronoun patterns with the relative clause.

- (4) **þan**            -ei    **frijos**                    siuks ist  
 REL.SG.M.ACC -COMP love.PRES.2SG<sub>[ACC]</sub> sick    be.PRES.3SG<sub>[NOM]</sub>  
 ‘the one whom you love is sick’  
 (Gothic, John 11:3, adapted from Harbert 1978: 342)

The conclusion that follows is that the relative pronoun can take the internal case. At this point it remains unclear what happened to the external nominative case.

Now consider the example in (5), in which the internal case is nominative and the external case is accusative. The internal case is nominative. The predicate *wisan* ‘to be’ takes nominative subjects, as indicated by the subscript on the predicate. The external case is accusative. The predicate *ussiggwan* ‘to read’ takes accusative objects, as indicated by the subscript on the predicate. The relative pronoun *þo* ‘REL.SG.N.ACC’ appears in the accusative case. This accusative can only come from the predicate *ussiggwan* ‘to read’, which is the external case here. The relative pronoun is not marked in bold, just like as the main clause, showing that the relative pronoun patterns with the main clause.

- (5) jah þo                    -ei    **ist**                    **us**    **Laudeikaion** jus  
 and REL.SG.N.ACC -COMP be.PRES.3SG<sub>[NOM]</sub> from Laodicea    2PL.NOM  
 ussiggwaid  
 read.<sub>[ACC]</sub>  
 ‘and you read the one which is from Laodicea’  
 (Gothic, Col. 4:16, adapted from Harbert 1978: 357)

The conclusion that follows is that the relative pronoun can take the external case. At this point it remains unclear what happened to the internal nominative case.

The examples in (4) and (5) have shown that the relative pronoun in headless relatives can take either the internal or the external case. In the examples, the predicates take nominative and accusative, and in both cases, the relative pronoun appeared in accusative case. In other words, there was a competition between nominative and accusative, and accusative won.

In the next section, I discuss the content of this dissertation. Before that, I comment on two notational conventions I use throughout this dissertation. First, I place subscripts on the glosses of the predicates. They indicate what the internal or external case is. The subscript on the predicate in the relative clause indicates the internal case. The subscript on the predicate in the main clause indicates the external case. This subscript can mean different things. For *frijon* ‘to love’ in (4) the subscript indicates which case the complement of the verb appears in. The subscript on *wisan* ‘to be’ in (4) refers to the case the descriptive subject appears in. A subscript can also refer to the case of the indirect object of a predicate, a possibility that arises in the next chapter. In other words, the subscript can refer several elements: a subject, direct object or indirect object of a predicate. There is no overarching theoretical notion that the subscript makes reference to. The subscript simply indicates which case is required within the (main or relative) clause.

Second, I write the relative clause in bold. When the relative pronoun takes the internal case, I mark it in bold as well, as shown in (4). When the relative pronoun takes the external case, I leave it black, indicating it patterns with the main clause. An example of that is (5).

## 1.2 The content of this dissertation

In the previous section I introduced the notion of case competition, and I illustrated how it appears in headless relatives. This dissertation discusses two questions regarding this phenomenon. The first one is which case is going to win the case competition, i.e. which case surfaces. I discuss this in Part I. The second question is whether both competitors are able to compete in the competition, i.e. whether one of the cases is surfacing or both are ungrammatical. I discuss this in Part II. For



both I will show that morphology is leading. What we observe in syntax is a reflex of the morphology.

### 1.3 The scope of this dissertation

#### 1.3.1 Case attraction

Case attraction in headed relatives seems related, but I will not account for it.

- (6) unde ne wolden níet besên den mort den dô was geschên  
 and not wanted not see the murder.ACC that.ACC there had happened  
 ‘and they didn’t want to see the murder that had happened.’  
 (MHG, Nib. 1391,14, Behaghel 1923-1932: 756, after Pittner 1995: 198)
- (7) Den schilt den er vür bôt der wart schiere  
 the.ACC shield.ACC which.ACC he held<sub>ACC</sub>, that.NOM was quickly  
 zeslagen  
 shattered<sub>NOM</sub>  
 ‘The shield he held was quickly shattered’ Iwein 6722f., Lernerz 1984: 116)

OHG has case attraction in headed relatives, Gothic does not, but both show case competition in headless relatives. So, there does not seem to be a one-to-one connection there. I leave it for further research.

#### 1.3.2 Syncretism

For a long time it has been noted that syncretism seems to resolve case conflicts.  
 –references–

A language like Polish, that normally doesn’t allow for any case mismatches, even allows for it. In this dissertation I do not offer a detailed account for what a derivation looks like.

- (8) Jan unika kogokolwiek wczoraj obrazil.  
 Jan avoid.3SG<sub>[GEN]</sub> REL.SG.M.ACC/GEN yesterday offend.3SG.PST<sub>[ACC]</sub>.  
 ‘Jan avoided whoever he offended yesterday.’

I won't talk about the details.

### 1.3.3 The genitive

In Gothic headless relatives, there is data available of the genitive in case competition with the accusative. The genitive wins in this competition. I give an example in which the internal case is accusative and the external case is genitive in (9). The relative clause is marked in bold, the relative pronoun is not. The internal case is accusative. The predicate *gasehvun* 'saw' takes accusative objects. The external case is genitive. The noun *waiht* 'thing' combines with a genitive. The relative pronoun *þiz(e)* 'what.GEN' appears in the external case: the genitive.

- (9)    ni    waiht    þiz        -ei    **gasehvun**  
          not thing<sub>[GEN]</sub> what.GEN -COMP saw<sub>[ACC]</sub>  
          'not any of (that) which they saw'

(Gothic, Luke 9:36, adapted from Harbert 1978: 340)

If the internal case is genitive and the external case is accusative, the genitive wins as well. Crucially, there are no attested examples in Gothic of genitives in case competition with nominatives or datives.

The same holds for the two other main languages discussed in this thesis: Modern German and Old High German. In Modern German, case competitions have been reported between all possible case combinations, so also between genitives and nominatives, between genitives and accusatives, and between genitives and datives (cf. Vogel, 2001). The genitive wins over the nominative and the accusative. In a competition between the genitive and the dative neither of them gives a grammatical result. Old High German might show some examples of case competition between genitives and accusatives and genitives and nominative. In these cases, the genitive always wins. No examples of datives against genitives are attested (Behaghel, 1923-1932). In sum, the genitive does not appear in all possible case competition combinations in all three languages, and is therefore excluded.

What do I predict for the genitive? Starke: S-acc — S-dat — gen — B-acc — B-dat hierarchies for each language individually. Gothic syncretisms: acc-dat, acc-nom, nom-gen(!). Modern German: nom-acc-dat-gen? Old High German: ?

then the predictions would be..

The genitive differs from the other cases in a particular way. That is, nominative, accusative and dative are dependents of the verb (or prepositions). Genitives can be dependents of verbs, or they can be dependents of nouns, as possessors or partitives. Consider the example in (9). The genitive relative pronoun *þiz(e)* ‘what.GEN’ is a dependent of the noun *waiht* ‘thing’. Most of the examples in headless relatives contain genitives that depend on nouns and not those that depend on verbs. The (genitive) possessor is also placed far away from the other three cases in Keenan and Comrie’s (1977) relativization hierarchy.

more: in middle high german only the genitive shows case attraction in headed relatives. again, it is different from the others.

I leave it for future research..



## **Part I**

### **The case**



## **Part II**

# **The base**





## Chapter 2

# Base comparison

In Chapter ?? I introduced two descriptive parameters that generate the attested languages, as shown in Figure 2.1. The first parameter concerns whether the external case is allowed to surface when it wins the case competition (allow EXT?). This parameter distinguishes between non-matching languages (e.g. Old High German) on the one hand and internal-only languages (e.g. Modern German) and matching languages (e.g. Polish) on the other hand. The second parameter concerns whether the internal case is allowed to surface when it wins the case competition (allow INT?). This parameter distinguishes between internal-only languages (e.g. as Modern German) on the one hand and non-matching languages (e.g. Polish) on the other hand.

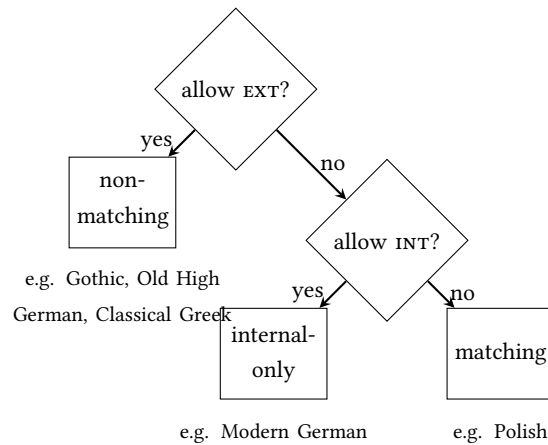


Figure 2.1: Two descriptive parameters generate three language types

The goal of this chapter is to give the theoretical counterparts of these descriptive parameters. Goal, not language-specific, but something that can be observed independently.

This chapter is structured as follows.

## 2.1 The basic idea

The goal of this chapter is to explain why languages differ in whether they allow the internal case and the external case to surface when either of them wins the case competition. In other words, the chapter gives the theoretical counterparts of the descriptive parameters given in Figure 2.1. Before I can describe these theoretical counterparts, I need to introduce some concepts: the internal element, the external element and the base of these elements.

I start with the internal and external element. In the thesis so far, I stated that the relative pronoun appears in the case that wins the case competition. I have not been explicit about where the case competition takes place. In order to avoid introducing theoretical machinery just for case competition situations, I assume it takes place in syntax. I propose that at some point in the derivation headless relatives have

an internal and an external element.<sup>1</sup> The internal element bears the internal case, and the external element bears the external case. At the end of the derivation, the element bearing the more complex case surfaces as the relative pronoun, if it is allowed to.

Now I turn to the so-called base of the internal and external element. The internal and the external element do not only consist of case features. They also contain other features. These other features have to do with referentiality, number, gender, uniqueness and definiteness. I call the part of the internal and external element that corresponds to these features the base part. I refer to the part that corresponds to the case features as the case part.

Table 2.1 summarizes what I just laid out. At some point in the derivation, headless relatives contain an internal and an external element. The internal element consists of an internal base part and an internal case part. The external element also consists of an external base part and an external case part. The internal and the external base are the main focus of this chapter.

Table 2.1: Components of the internal and external element

INT element		EXT element	
base <sub>INT</sub>	case <sub>INT</sub>	base <sub>EXT</sub>	case <sub>EXT</sub>

To make this concrete, consider the example in (1), repeated from Chapter ??.

In this example, the internal nominative case competes against the external nominative case. The relative pronoun surfaces in the nominative case.

- (1) quham                      dher                      chisendit                      scolda  
       come.PST.3SG<sub>[NOM]</sub> REL.SG.M.NOM send.PST.PTCP<sub>[NOM]</sub> should.PST.3SG  
       uuerdhan  
       become.INF  
       ‘the one, who should have been sent, came’ (Old High German, Isid. 35:5)

<sup>1</sup>I am far from the only one that assumes this. Himmelreich, Hanink, but also Bresnan/Grimshaw, Groos/Riemsdijk, Harbert..

The relative pronoun in this sentence is *dher* ‘REL.SG.M.NOM’. In my proposal, the internal element for this sentence is *dher* and the external element is *dher* too. The base part of *dher* is the morpheme *dhe*, and the case part of *dher* is the morpheme *r*. This is schematically shown in Table 2.3. In Section ?? I motivate the featural content and phonological form of the internal and external element.<sup>2</sup>

Table 2.2: The internal and external element of (1)

INT element		EXT element	
base <sub>INT</sub>	case <sub>INT</sub>	base <sub>EXT</sub>	case <sub>EXT</sub>
dhe	r	dhe	r

Now I have introduced the concepts internal and external element and their bases, I turn to the basic idea behind my proposal. The goal is to give a theoretical explanation for why a language allows the internal or external case to surface when it wins the case competition or why it does not. I propose that this follows from the comparison between the internal and external base within a language. In the comparison, I rely on containment, just as I did in Chapter ?? when comparing cases. I went with the following reasoning. A more complex case wins over a less complex case because the former contains all features that the latter contains. Concretely, the dative wins over the accusative because the dative contains all features that the accusative contains, the dative wins over the nominative because the dative contains all features that the nominative contains, and the accusative wins over the nominative because the accusative contains all features that the nominative contains. I apply the same reasoning in comparing the internal and external base. When the internal base contains the features that the external base contains, the internal element is allowed to surface. When the external base contains the features that the internal base contains, the external element is allowed to surface.

Consider Old High German. First there is a tie, INT = EXT, and everything is

<sup>2</sup>This is a simplification of the reality. The morpheme *r* realizes besides case features also non-case features, such as gender and number. This simplification can be made, because the non-case features that are present in the internal element are also present in the external element.

grammatical. If  $\text{INT} > \text{EXT}$ , we have a competition and a winner: internal ACC. The bases are compared. (How to get from forms to features?) They are identical, so the internal base contains all features the external base contains. If  $\text{INT} < \text{EXT}$ , we have a competition and a winner: external ACC. The bases are compared. They are identical, so the external base contains all features the internal base contains.

Table 2.3: Base comparison in Old High German

	INT element		EXT element	
	$\text{base}_{\text{INT}}$	$\text{case}_{\text{INT}}$	$\text{base}_{\text{EXT}}$	$\text{case}_{\text{EXT}}$
$\text{INT} = \text{EXT}$	dhe	r	dhe	r
$\text{INT} > \text{EXT}$	dhe	n	dhe	r
$\text{INT} < \text{EXT}$	dhe	r	dhe	n

Table 2.4: Modern German

	INT	EXT	✓/*
$\text{INT} = \text{EXT}$	<b>w-e-r</b>	r	✓
$\text{INT} > \text{EXT}$	<b>w-e-n</b>	r	✓
$\text{INT} < \text{EXT}$	<b>w-e-r</b>	n	*

Table 2.5: Polish

	INT	EXT	✓/*
$\text{INT} = \text{EXT}$	<b>ko-go</b>	<b>te-go</b>	✓
$\text{INT} > \text{EXT}$	<b>ko-mu</b>	<b>te-go</b>	*
$\text{INT} < \text{EXT}$	<b>ko-go</b>	<b>te-mo</b>	*

Case differs from sentence to sentence: in one sentence the internal case is the dative, in the other it is the accusative or the nominative. The base table is not like

that: only a single cell in the table corresponds to a particular language.

Taking this all together, there are two competitions taking place in headless relatives: case competition and base competition. Case competition decides which case wins the sentence and base competition decides whether the result can go through. Let me put this in the metaphor with the committee I introduced in Section ?? . The committee learns who wins the case competition. It can either approve this case or not approve it. The information that the committee uses for their decision is the comparison between the internal and the external element. More specifically, it compares the base parts of the internal and external element. The committee approves the winning case if the base part of its element contains the base part of the element of the losing case.

In sum, a relative pronoun can surface in the internal case if both the base and the case part of the internal element contain base and case part of the external element. It works the same way the other way around: a relative pronoun can surface in the external case if both the base and the case part of the external element contain the base and case part of the internal element.

The linguistic counterpart of ‘allow<sub>EXT</sub>?’ is whether the internal base and the external base are syncretic ( $\text{base}_{\text{INT}} = \text{base}_{\text{EXT}}$ ). The linguistic counterpart of ‘allow<sub>INT</sub>?’ is whether the external base is a clitic ( $\text{base}_{\text{EXT}} = \text{clitic?}$ ).

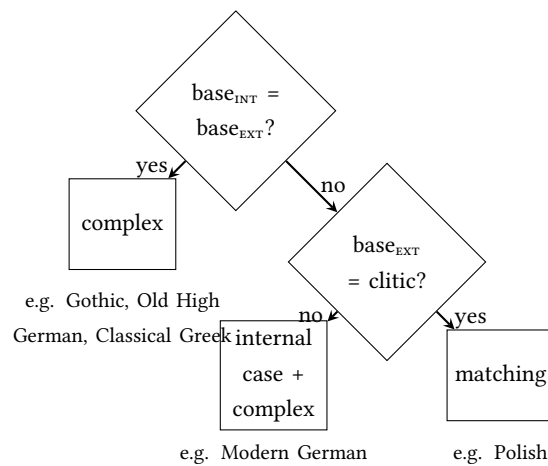


Figure 2.2: Two theoretical parameters generate three language types

## 2.2 Deriving ‘non-matching’

I am not going to give a whole sentence. I only talk about the internal and external element in there. I also do not talk about the nature of the deletion process.

Old High German allows both internal and external to win. I propose headless relatives are derived from light-headed relatives. Internal element is relative pronoun, external element is demonstrative.

- (2) eno nist          thiz          thér          then          ir  
 now not be.3SG DEM.SG.N.NOM DEM.SG.M.NOM DEM.SG.M.ACC 2PL.NOM  
 suochet zi arslahanne?  
 seek.2PL to kill.INF.SG.DAT  
 ‘Isn’t this now the one, who you seek to kill?’

- (3) a. Thiz                  ist                  **then**                  **sie**  
 DEM.SG.N.NOM be.PRES.3SG<sub>[NOM]</sub> REL.SG.M.ACC 3PL.M.NOM  
**zéllent**  
 tell.PRES.3PL<sub>[ACC]</sub>  
 ‘this is the one whom they talk about’  
 (Old High German, Otfrid III 16:50)
- b. ih                  bibringu                  fona iacobes          samin          endi fona  
 1SG.NOM create.PRES.1SG<sub>[ACC]</sub> of Jakob.GEN seed.SG.DAT and of  
 iuda                  dhen                  **mina**                  **berga**  
 Judah.DAT REL.SG.M.ACC my.ACC.M.PL mountain.ACC.PL  
**chisitzit**  
 possess.PRES.3SG<sub>[NOM]</sub>  
 ‘I create of the seed of Jacob and of Judah the one, who possess my mountains’  
 (Old High German, Isid. 34:3)

### 2.2.1 Relative pronoun

I give an overview of Old High German relative pronouns. I only give the neuter and masculine gender, because I do not have any examples with the feminine. Relative pronouns consist of three morphemes: a *d*, a vowel (*a*, *e* or *i*) and suffix that differs

per number, gender and case.<sup>3</sup>

Table 2.6: Relative pronouns in headless relatives in Old High German Braune 2018: 339

	N.SG	M.SG
NOM	d-a-z	d-ë-r
ACC	d-a-z	d-ë-n
DAT	d-ë-mo	d-ë-mo

The *d* morpheme corresponds to DEF.

The ending corresponds to number, gender and case: REF, CLASS, MASC, IND, GROUP and F1, F2, F3. Illustrate this with nouns and adjectives.

The vowel corresponds to anaphoricity. Do they also not appear in adjectives? Is there any anaphoricity?

Now I can specify the lexical entries.

The case etc. morpheme has a binary bottom, because it does not always surface as a suffix (at least in Modern German).

- (4)
- Ich habe 's

Fahrrad vergessen.

I have the<sub>WEAK</sub> bike forgotten

'I forgot the bike.'

give nominative singular masculine r give nominative singular masculine n

give anaphoricity e

give definiteness D How does this relate to being a relative pronoun?

I illustrate how this relative pronoun is built, using the spellout algorithm.

- (5)
- Spellout Algorithm:**

Merge F and

a. Spell out FP.

<sup>3</sup>*d* can also be *dh* and *th*, *ë* and *ē* can also be *e* and *é*.



- b. If (a) fails, attempt movement of the spec of the complement of F, and retry (a).
- c. If (b) fails, move the complement of F, and retry (a).

When a new match is found, it overrides previous spellouts.

(6) **Cyclic Override** (Starke, 2018):

Lexicalisation at a node XP overrides any previous match at a phrase contained in XP.

build build, until we reach anaphoricity

A specifier is constructed.

(7) **Spec Formation** (Starke, 2018):

If Merge F has failed to spell out (even after backtracking), try to spawn a new derivation providing the feature F and merge that with the current derivation, projecting the feature F at the top node.

(8) Merge F, Move XP, Merge XP

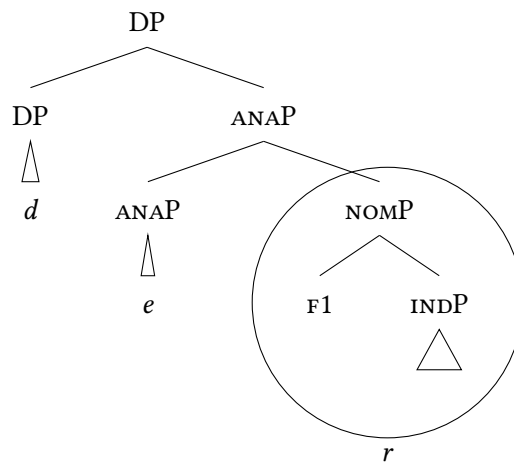
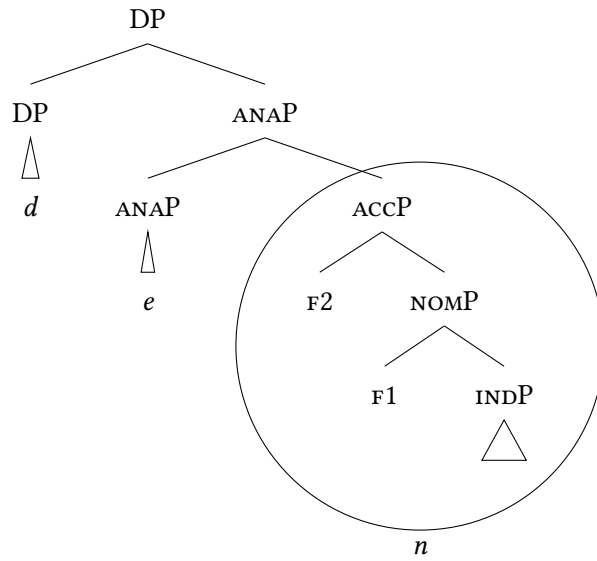
how do I get case features onto the portmanteau? backtracking, open the three things, and see where I can spell it out

If the spellout procedure in (5) fails, backtracking takes place.

(9) **Backtracking** (Starke, 2018):

When spellout fails, go back to the previous cycle, and try the next option for that cycle.

give relative pronoun here



### 2.2.2 External element

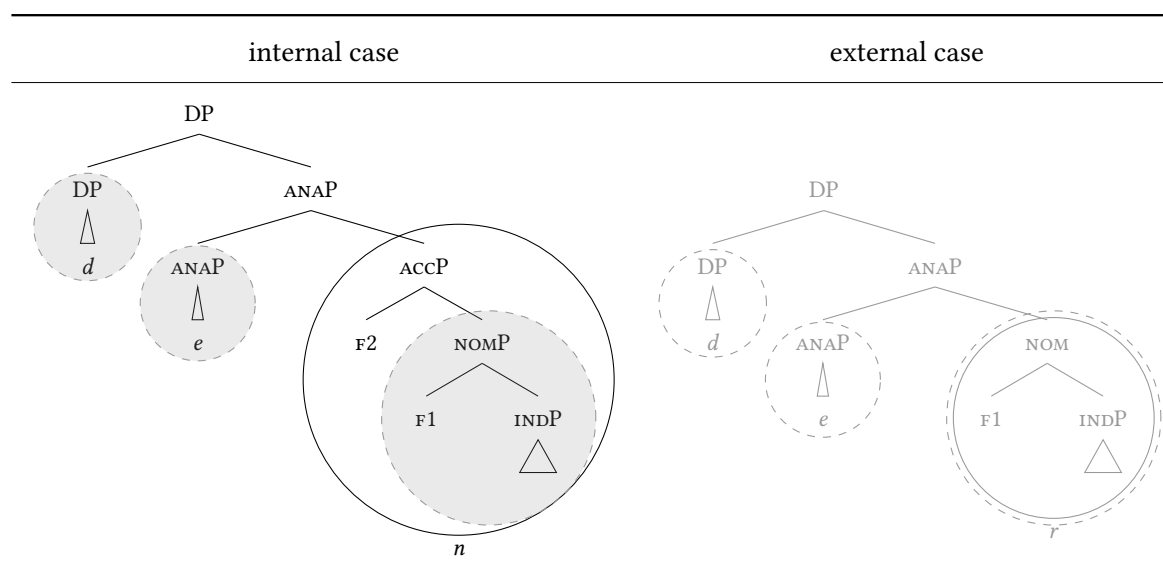
I copy the INDP, and then I merge the external ANA, D and cases.

#### 2.2.2.1 Comparison

- (10) Thíz            ist            then            sie            zéllent  
 DEM.SG.N.NOM be.PRES.3SG<sub>[NOM]</sub> REL.SG.M.ACC 3PL.M.NOM tell.PRES.3PL<sub>[ACC]</sub>  
 ‘this is the one whom they talk about’ (Old High German, Otfrid III 16:50)

There are three independent containment relations. Problem?

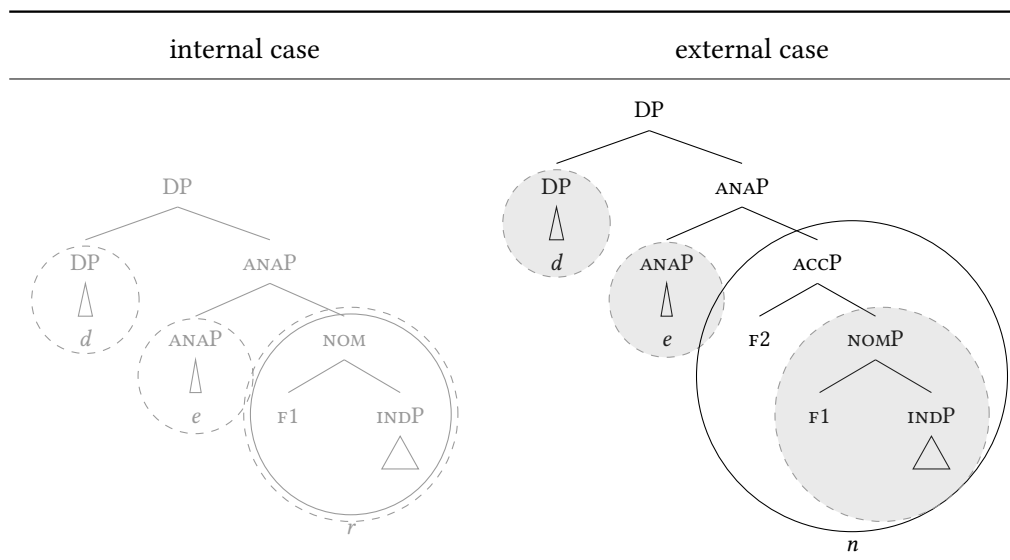
Table 2.7: Old High German: internal case > external case



- (11) ih        bibringu            fona iacobes    samin        endi fona  
          1SG.NOM create.PRES.1SG<sub>[ACC]</sub> of    Jakob.GEN seed.SG.DAT and of  
          iuda        dhen            **mina**        **berga**  
          Judah.DAT REL.SG.M.ACC my.ACC.M.PL mountain.ACC.PL  
          **chisitzit**  
          possess.PRES.3SG<sub>[NOM]</sub>  
          ‘I create of the seed of Jacob and of Judah the one, who possess my moun-  
          tains’

(Old High German, Isid. 34:3)

Table 2.8: Old High German: internal case &lt; external case



### 2.3 Deriving ‘non-matching – only internal’

Only internal wins, external cannot. I illustrate this with nominative and accusative.

- (12) a. Uns besucht, **wen** **Maria** **mag**.  
 2PL.ACC visit.PRES.3SG<sub>[NOM]</sub> REL.AN.ACC Maria.NOM like.PRES.3SG<sub>[ACC]</sub>  
 ‘Who visits us, Maria likes.’  
 (Modern German, adapted from Vogel 2001: 343)
- b. \*Ich lade ein, **wen** **mir** **sympathisch**  
 1SG.NOM invite.PRES.1SG<sub>[ACC]</sub> REL.AN.ACC 1SG.DAT nice  
**ist**.  
 be.PRES.3SG<sub>[NOM]</sub>  
 ‘I invite who I like.’ (Modern German, adapted from Vogel 2001: 344)

### 2.3.1 The relative pronoun = internal

In headless relative constructions, there is a single element that surfaces: the relative pronoun. In this section, I show that the relative pronoun is syntactically part of the relative clause. The evidence comes from extraposition data in Modern German. In Modern German, it is possible to extrapose a CP (a clause), but not a DP (a noun phrase). In this section I first show that Modern German CPs can be extraposed and DPs cannot. Then I illustrate how relative clauses including the relative pronoun in headless relatives pattern with CPs: they can be extraposed as well. I conclude that the relative pronoun is the internal element in the headless relative.

The sentences in (13) show that it is possible to extrapose a CP. In (13a), the clausal object *wie es dir geht* ‘how you are doing’, marked here in bold, appears in its base position. It can be extraposed to the right edge of the clause, shown in (13b).

- (13) a. Mir ist **wie es dir geht** egal.  
 1SG.DAT is how it 2SG.DAT goes the same  
 ‘I don’t care how you are doing.’  
 b. Mir ist egal **wie es dir geht**.  
 1SG.DAT is the same how it 2SG.DAT goes  
 ‘I don’t care how you are doing.’ (Modern German)

(14) illustrates that it is impossible to extrapose a DP. The clausal object of (13) is replaced by the simplex noun phrase *die Sache* ‘that matter’. In (14a) the object, marked in bold, appears in its base position. In (14b) it is extraposed, and the sentence is no longer grammatical.

- (14) a. Mir ist **die Sache** egal.  
 1SG.DAT is that matter the same  
 ‘I don’t care about that matter.’  
 b. \*Mir ist egal **die Sache**.  
 1SG.DAT is the same that matter  
 ‘I don’t care about that matter.’ (Modern German)

The same asymmetry between CPs and DPs can be observed with relative clauses. A relative clause is a CP, and the head of a relative clause is a DP. The sentences

in (15) contain the relative clause *was er gekocht hat* ‘what he has stolen’. This is marked in bold in the examples. The (light) head of the relative clause is *das*. In (15a), the relative clause and its head appear in base position. In (15b), the relative clause is extraposed. This is grammatical, because it is possible to extrapose CPs in Modern German. In (15c), the relative clause and the head are extraposed. This is ungrammatical, because it is possible to extrapose DPs.

- (15) a. Jan hat **das, was er gekocht hat**, aufgegessen.  
 Jan has that what he cooked has eaten  
 ‘Jan has eaten what he cooked.’
- b. Jan hat **das** aufgegessen, **was er gekocht hat**.  
 Jan has that eaten what he cooked has  
 ‘Jan has eaten what he cooked.’
- c. \*Jan hat aufgegessen, **das, was er gekocht hat**.  
 Jan has eaten that what he cooked has  
 ‘Jan has eaten what he cooked.’ (Modern German)

The same can be observed in relative clauses without a head. (16) is the same sentence as in (15) only without the overt head. The relative clause is marked in bold again. In (16a), the relative clause appears in base position. In (16b), the relative clause is extraposed. This is grammatical, because it is possible to extrapose CPs in Modern German. In (16c), the relative clause is extraposed without the relative pronouns. This is ungrammatical, because the relative pronoun is part of the CP. This shows that the relative pronoun in headless relatives in Modern German are necessarily part of a CP, which is here a relative clause.

- (16) a. Jan hat **was er gekocht hat** aufgegessen.  
 Jan has what he cooked has eaten  
 ‘Jan has eaten what he cooked.’
- b. Jan hat aufgegessen **was er gekocht hat**.  
 Jan has eaten what he cooked has  
 ‘Jan has eaten what he cooked.’

- c. \*Jan hat **was** aufgegessen **er gekocht hat**.  
 Jan has what eaten he cooked has  
 ‘Jan has eaten what he cooked.’ (Modern German)

In conclusion, extraposition facts show that the relative pronoun in Modern German is syntactically part of the relative clause. Therefore, the relative pronoun is the internal element in headless relative construction.

### 2.3.2 The other element = external

In the previous section I introduced the relative pronoun as the internal element. This means that the other element is the external element. This section starts with the observation that there actually are languages in which two elements surface in so-called double-headed relative clauses. In these languages, the external head is a subset of the internal head, and that some features like *D* and case are necessarily excluded in the external head. I adopt this insight, and I apply it to the headless relative situation. I propose that the external head in headless relatives is a copy of a specific part of the relative pronoun.

As I said earlier, I need two elements to do case competition with. In headless relatives, I only see a single one surfacing. However, some languages actually show two elements surfacing. Here there are two copies of the element, one inside the relative clause, one outside of the relative clause.

- (17) [doü adiyān-o-no] doü deyalukhe  
 sago give.3PL.NONFUT-tr-CONN sago finished.ADJ  
 ‘The sago that they gave is finished.’ (Kombai, Vries 1993: 78)

The external element is not always an exact copy of the element inside of the relative clause. An example from Kombai shows that the element outside of the relative clause can also be a subset of what the element inside of the relative clause is. Here I give two examples, there is an *old man* and a *person*, and there is *pig* and a *thing*.

- (18) a. [yare gamo khereja bogi-n-o] rumu  
 old man join.ss work do.DUR.3SG.NF-TR-CONN person

na-momof-a

my-uncle-PRED

‘The old man, who is joining the work, is my uncle.’ 77

- b. [ai fali-khano]      **ro**      nagu-n-ay-a.

pig carry-go.3PL.NF thing our-TR-pig-PRED

‘The pig they took away, is ours.’

(Kombai, Vries 1993: 77)

Let me now apply what we have seen so far to headless relatives. Headless relatives do not have an overt NP, so this cannot be copied. However, there is the relative pronoun which is specified for number, gender, case, etc. Are all of these features copied onto the external element? The copy is the portion of the nominal extended projection c-commanded by the relative clause. A headless relative is a restrictive relative clause. Therefore, there is no D and no case.

Is it possible to add features onto the external head after it has been copied? Yes, for example D, as the example shows, but also case.

- (19) Junya-wa [Ayaka-ga **ringo-o** mui-ta] sono **ringo-o** tabe-ta.

Junya-TOP Ayaka-NOM apple-ACC peel-PST that apple-ACC eat-PST

‘Junya ate the apples that Ayaka peeled.’

(Japanese, Erlewine and Gould 2016: 2)

In sum, the external element is a copy of a subset of the features of the relative pronoun. Definiteness and case are not copied. New features can be merged onto the external element.

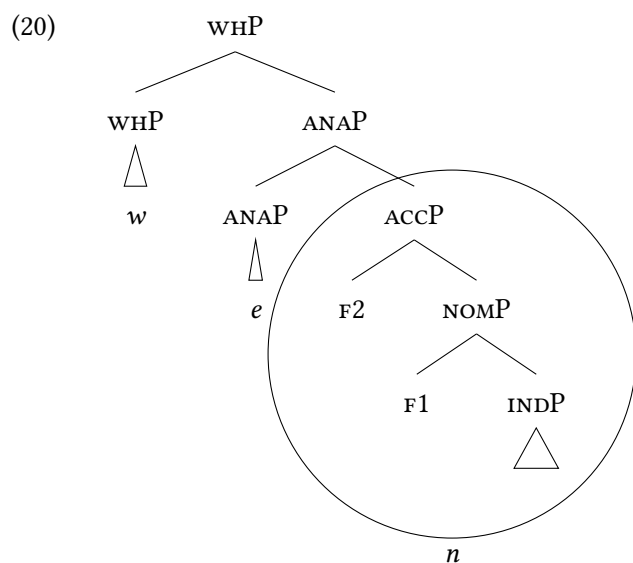
### 2.3.3 Relative pronoun

Table 2.9: Relative pronouns in headless relatives in Modern German

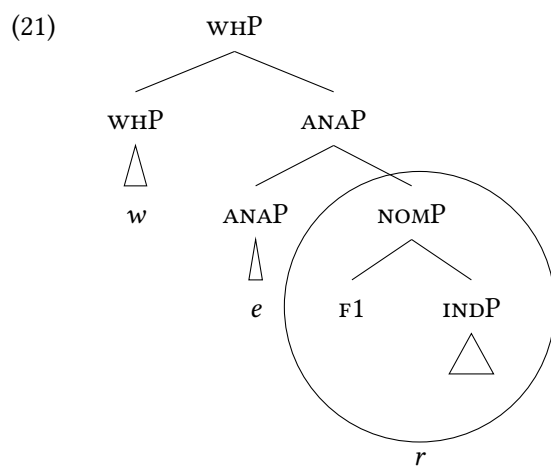
AN	
NOM	w-e-r
ACC	w-e-n
DAT	w-e-m



three morphemes: WH, ANA, number+gender+case  
accusative relative pronoun



nominative relative pronoun



#### 2.3.4 External element

I copy the IND and I only merge the cases.

Modern German has two types of demonstratives: the strong one and the weak one.

The strong article is used when there is an anaphoric relation. Often there is a linguistic antecedent that is referred back to.

- (22) Hans hat heute **einen Freund** zum Essen mit nach Hause gebracht.  
 Hans has today a friend to the dinner with to home brought  
 Er hat uns vorher ein Foto **vom/ von dem Freund**  
 he has us beforehand a photo of the<sub>WEAK</sub> of the<sub>STRONG</sub> friend  
 gezeigt.  
 shown  
 ‘Hans brought a friend home for dinner today. He had shown us a photo of the friend beforehand.’

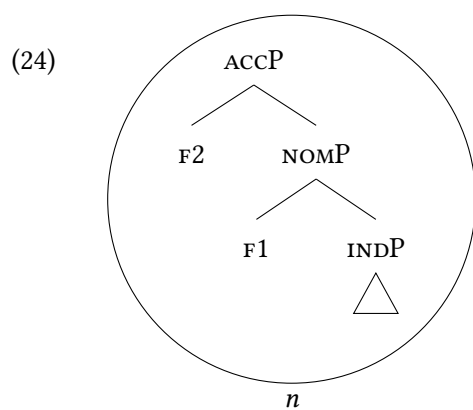
Weak articles are used when situational uniqueness is involved. Uniqueness can be global or within a restricted domain. The discourse participants mutually shared knowledge that uniqueness holds.

- (23) a. Der Einbrecher ist zum Glück vom /von dem Hund  
 the burglar is luckily by the<sub>WEAK</sub> by the<sub>STRONG</sub> dog  
 verjagt worden.  
 chased away been  
 ‘Luckily, the burglar was chased away by the dog.’  
 b. Armstrong flog als erster zum Mond.  
 Armstrong flew as first one to the<sub>WEAK</sub> moon  
 ‘Armstrong was the first one to fly to the moon.’  
 (Modern German, Schwarz 2009: 40)

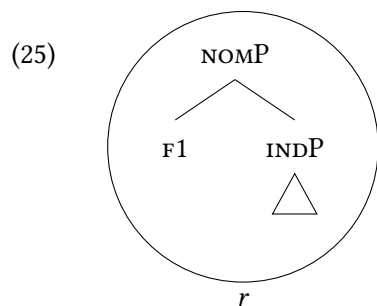
In the headless relatives, there is uniqueness. Show?

The strong article cannot be used because it does not go together with the free choice interpretation of WH-relatives (say something about Hanink).

The weak article is used. accusative:



nominative:

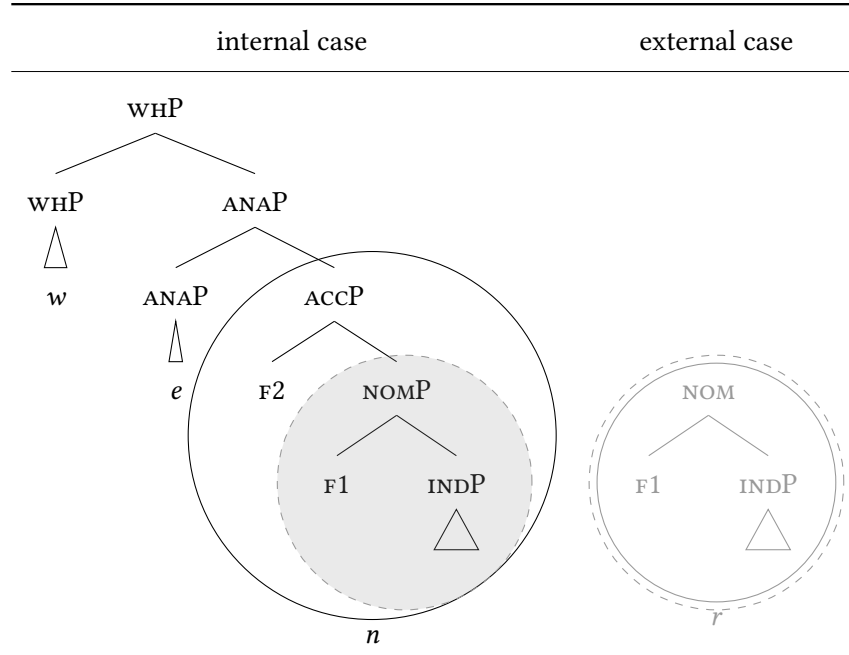


### 2.3.5 Comparison

- (26) Uns besucht **wen** **Maria** mag.  
 we.ACC visit.3SG<sub>[NOM]</sub> REL.ACC.AN Maria.NOM like.3SG<sub>[ACC]</sub>  
 ‘Who visits us, Maria likes.’ (adapted from Vogel 2001: 343)

the internal case is more complex than the external case, and the internal base part is more complex than the external non-cas part

Table 2.10: Modern German: internal case &gt; external case



- (27) \*Ich lade ein, wen **mir** sympathisch  
 1SG.NOM invite.PRES.1SG<sub>[ACC]</sub> REL.AN.ACC 1SG.DAT nice  
**ist.**  
 be.PRES.3SG<sub>[NOM]</sub>  
 'I invite who I like.' (Modern German, adapted from Vogel 2001: 344)

the external case is more complex than the internal case, but the external base part is not more complex than the internal base part

Table 2.11: Modern German: internal case &gt; external case

internal case

external case

## 2.4 Deriving ‘matching’

Radek: Czech distinguishes between accidental uniqueness and inherent uniqueness. Accidental uniqueness: with DEM, inherent uniqueness: without DEM.

Radek's situation:

Two student assistants A and B are at their shared workdesk, which they share with other student assistants and where there's a computer and a couple of other things, including a book (it doesn't really matter to whom the book belongs). A is looking for a pencil, B says

- (28) Nějaká tužka je vedle počítače /#toho počítače.  
 some pencil is next to computer DEM computer  
 ‘There’s a pencil next to the computer.’

All situations like the topic situation – A and B’s shared office (desk)– have exactly one computer in it.

- (29) Nějaká tužka je vedle té knížky /#knížky  
 some pencil is next to DEM book book  
 ‘There’s a pencil next to the book.’

There is exactly one book in the topic situation – A and B’s shared office (desk) – and it does not hold that all situation like the topic situation have exactly one book in it

Florian showed that this is different for Modern German:

	anaphoric	situational uniqueness	inherent uniqueness
Polish	DEM	DEM	∅
German	DEM <sub>STRONG</sub>	DEM <sub>WEAK</sub>	DEM <sub>WEAK</sub>

*to* is incompatible with *ever*, because *to* makes it accidentally uniqueness and *ever* requires inherent uniqueness

#### 2.4.1 Excluding ‘non-matching – external-only’

### 2.5 Alternative analyses

#### 2.5.1 Himmelreich

She specific languages for having different types of agree (up, down) and different types of probes (active, non-active). Doing that, she successfully derived free relatives and parasitic gaps in different languages.

#### 2.5.2 Grosu

Grosu 1994 linked richness of inflection to liberality. He actually talked about the richness of pro.

#### 2.5.3 Grafting story

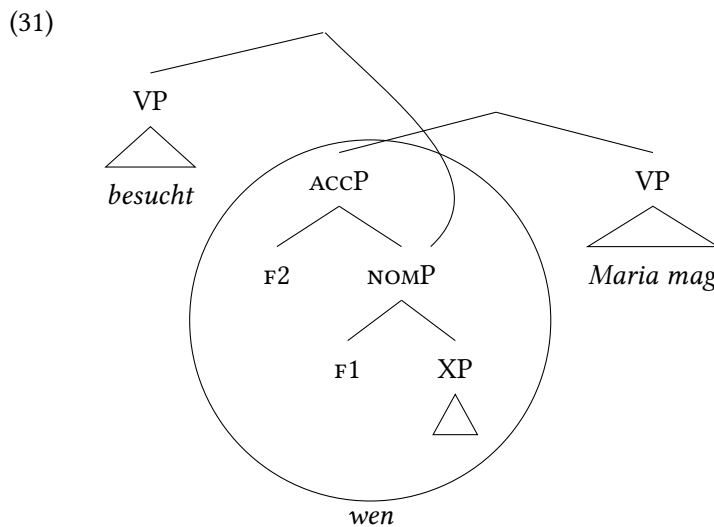
For this pattern a single element analysis seems intuitive, if you assume that case is complex and that syntax works bottom-up. First you built the relative clause, with

the big case in there. Then you build the main clause and you let the more complex case in the embedded clause license the main clause predicate.

Consider the example in (30). Here the internal case is accusative and the external one nominative.

- (30) Uns besucht **wen** **Maria** mag.  
 we.ACC visit.3SG<sub>[NOM]</sub> REL.ACC.AN Maria.NOM like.3SG<sub>[ACC]</sub>  
 ‘Who visits us, Maria likes.’ (adapted from Vogel 2001: 343)

The relative clause is built, including the accusative relative pronoun. Now the main clause predicate can merge with the nominative that is contained within the accusative.



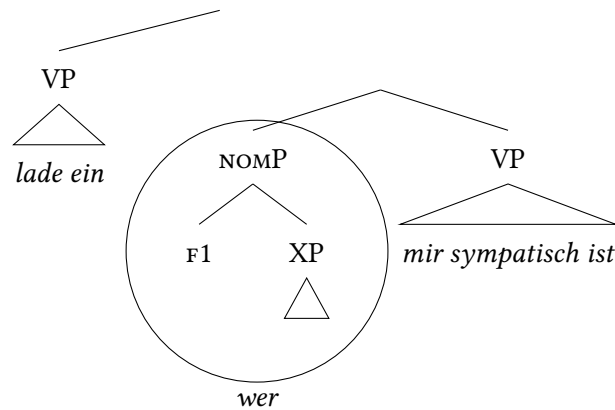
The other way around does not work. Consider (32). This is an example with nominative as internal case and accusative as external case.

- (32) \*Ich lade ein, **wen** **mir** sympathisch ist.  
 I.NOM invite.1SG<sub>[ACC]</sub> REL.ACC.AN I.DAT nice be.3SG<sub>[NOM]</sub>  
 ‘I invite who I like.’ (adapted from Vogel 2001: 344)

Now the relative clause is built first again, this time only including the nominative case. There is no accusative node to merge with for the external predicate. Instead,

the relative pronoun would need to grow to accusative somehow and then the merge could take place. This is the desired result, because the sentence is ungrammatical.

(33)



So, this seems to work fine. The assumptions you have to do in order to make this are the following. First, case is complex. Second, you can remerge an embedded node (grafting). For the first one I have argued in Chapter ???. The second one could use some additional argumentation. It is a mix between internal remerge (move) and external merge, namely external remerge. Other literature on multidominance and grafting, other phenomena. Problems: linearization, .. But even if fix all these theoretical problems, there is an empirical one.

That is, I want to connect this behavior of Modern German headless relatives to the shape of its relative pronouns. These pronouns are *wh*-elements. The OHG and Gothic ones are not *wh*, they are *D*. Their relative pronouns look different, and so their headless relatives can also behave differently.

## 2.6 Summary

here



# Discussion

## 39

- (3) Sie ist vom Mann, mit dem sie gestern ausgegangen ist, versetzt worden.

Polish only allows the deletion of the light head in the matching situation. It is not obligatory there, you can just as well have a light-headed relative. The deletion is possible, because you have two elements that are pretty similar?

- (4) Jan czyta to, co Maria czyta.  
 Jan read this what Maria reads  
 ‘Jan reads what Maria reads.’ (Polish, Citko 2004: 96)

### 3.2 Diachronic part

First, German only had the d-pronoun and attraction. The pattern of attraction that came with that pronoun is ext only. At some point, German invented the wh-pronoun. Helmut showed how it emerged. With that came the other pattern: int only. Some people lost the attraction (but everybody kept the d-pronoun) and with that the pattern disappeared. So the patterns in headless relatives follow from the relative pronouns in the language.

Why are all languages of the ‘matching’ type dead languages? Was it a common thing that wh-pronouns were not used as relative pronouns?

Wouldn’t we now not expect that Modern German patterns with Old High German wrt attraction in headed constructions. Yes, we would. And yes, this is exactly what we see. Paper by Bader on case attraction.

First there was only the relative pronoun with a D. Then we did case competition with this one, in both directions. Later, we only did it with the wh, and we only had internal left. Because this competitor was introduced, the case competition with D disappeared.

Eric Fuß with definite readings of d-relatives etc.

### 3.3 Why FEM does not have WH-pronouns

Another language that only allows the internal case to surface after it wins the case competition.

*valita* ‘choose’ takes a partitive object

- (5) Valitsen mista sina piddt. choose-I.el what-el you like-you.part 'I choose what you like.'

*pitää* 'like' takes relative objects

- (6) \*Pidan mista sind valitset.  
like-I.part what-el you choose-you.el  
'I like what you choose.'
- (7) \*Pidan mita sind valitset.  
like-I.part what-el you choose-you.el  
'I like what you choose.'

x



# Primary texts

<b>Col.</b>	Colossians, New Testament
<b>Isid.</b>	Der althochdeutsche Isidor
<b>John</b>	John, New Testament
<b>Luke</b>	Luke, New Testament
<b>Nib.</b>	Das Nibelungenlied
<b>Otfrid</b>	Otfrid's Evangelienbuch
<b>Rom.</b>	Romans, New Testament



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