

# 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 2003a. 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.

- (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 nîet 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., Lenerz 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.’

### 1.3.3 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)

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 *piz(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**





schwa r is really the proximal and medial. dieser and der so the proximal and medial just never appears without the emphazier



## Chapter 2

# Constituent containment

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.

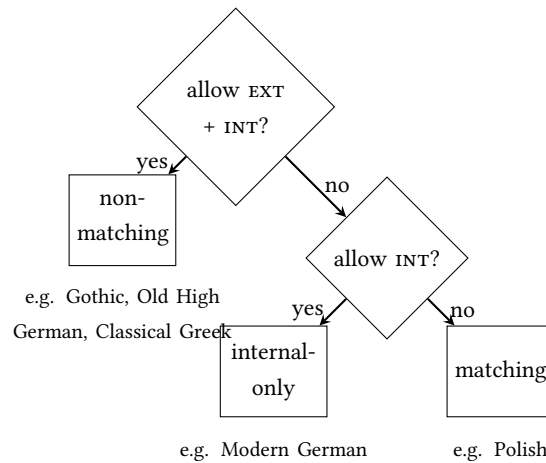


Figure 2.1: Two descriptive parameters generate three language types

“A natural question at this point is whether this typology needs to be fully stipulative, or is to some extent derivable from independent properties of individual languages” Grosu (2003b)147

The goal of this chapter is to give the theoretical counterparts of these descriptive parameters. Goal: something that can be observed independently.

This chapter is structured as follows.

## 2.1 The basic idea

In terms of the committee I introduced in Section X, what criteria does the committee use to decide whether the internal or external case is allowed to surface in a particular language?

This section gives the basic idea behind my proposal. Throughout the rest of the chapter I motivate my proposal, and I illustrate it with examples. First I discuss my assumption that headless relatives are derived from light-headed relatives. The light head bears the external case, and the relative pronoun bears the internal case. Then I introduce the internal structure of the light head and the relative pronoun. An element is allowed to surface when it contains all constituents that of the other

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. Specifically, I propose that headless relatives are derived from light-headed relative clauses.<sup>1</sup> In a light-headed relative clause, the head of a relative is not a full noun phrase, but it is a bit ‘lighter’: the noun itself is absent.

Consider the light-headed relative in (41). *Thér* ‘DEM.SG.M.NOM’ is the light head of the relative clause. This is the element that appears in the external case, the case that reflects the grammatical role in the main clause. *Then* ‘REL.SG.M.ACC’ is the relative pronoun of the relative clause. This is the element that appears in the internal case, the case that reflects the grammatical role within the relative clause.

- (1)    eno   nist            thiz            thér            then            ir  
          now not be.3SG DEM.SG.N.NOM DEM.SG.M.NOM REL.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?’

In my proposal, the difference between a light headed relative and a headless relative is that in a headless relative either the light head or the relative pronoun does not surface. The surfacing element is the one that bears the winning case, and the absent element is the one that bears the losing case. This means that what I have been glossing as and calling the relative pronoun, so far, is sometimes actually the light head. To reflect that, I call the surfacing element from now on the surface pronoun.

This is more or less what is going on in a non-matching type language as Old High German. However, more needs to be said about other types of languages. As I showed in Chapter ??, other languages types do not allow the internal or external case to surface when either of them wins the case competition. In an internal-only type language as Modern German, the more complex case is only allowed to surface when it is the internal case, and it is not allowed to surface when it is the external

---

<sup>1</sup>I am far from the only one that does that cf.

case. In a matching type language as Polish allows neither the internal nor the external case to surface. In these cases, it is neither the light head nor the relative pronoun that surfaces, but the construction is simply ungrammatical.

Table 2.1 summarizes what I just laid out. There are three options for the surface pronoun. First, the surface pronoun can appear as the relative pronoun and bear the internal case. Second, the surface pronoun can appear as the light head and bear external case. Third, there is no grammatical form for the surface pronoun.

Table 2.1: Options for the surface pronoun

surface pronoun
relative pronoun <sub>INT</sub>
light head <sub>EXT</sub>
*

Table 2.2 shows per language type whether it allows the relative pronoun and light head to surface. The first column lists the types of language and an example of language. The second column shows the situation in which the internal case is the most complex. The surface pronoun is the relative pronoun that bears the internal case. The third column shows the situation in which the external case is the most complex. The surface pronoun is the light head that bears the external case. The checkmark (✓) and asterix (\*) indicate whether this is grammatical in the language. The non-matching type of language, as Old High German, allows both the internal case and the external case to surface when either of them wins the case competition. The surface pronoun can be either the relative pronoun or the light head. The internal-only type of language, as Modern German, allows only the internal case to surface when it wins the case competition, and it does not allow the external case to do so. The surface pronoun can only be the relative pronoun and not the light head. The matching type of language, as Polish, allows neither the internal nor the external case to surface when either of them wins the case competition. The surface pronoun can neither be the relative pronoun nor the light head. The language type that is not attested is the external-only type. That means that there

is no language that allows only the external case to surface when it wins the case competition, and it does not allow the internal case to do so. In other words, there exist no language, in which the surface pronoun can only be the light head and not the relative pronoun.

Table 2.2: Relative pronoun and light head per language

	INT > EXT	INT < EXT
	relative pronoun <sub>INT</sub>	light head <sub>EXT</sub>
Non-matching (Old High German)	✓	✓
Internal-only (Modern German)	✓	*
Matching (Polish)	*	*
External-only (not attested)	*	✓

What I have done so far is reformulate the two descriptive parameters from Figure 2.1 into two different descriptive parameters. Whether the internal and external case are allowed to surface corresponds to whether the relative and light head are allowed to surface. Whether the the internal case is allowed to surface corresponds to whether the relative pronoun is allowed to surface. I show this in Figure 2.2.

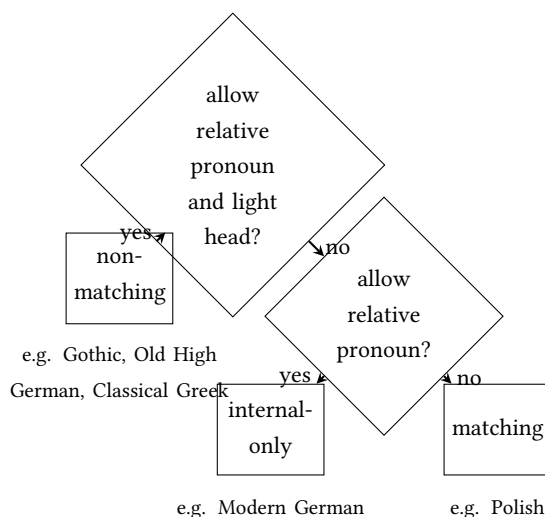


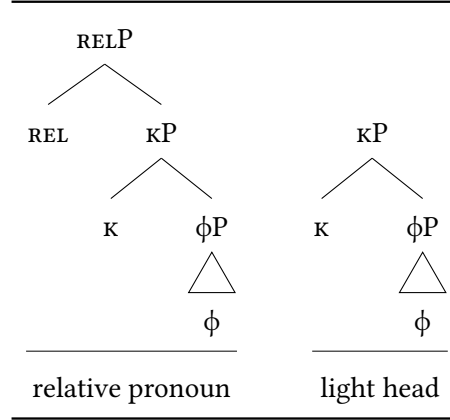
Figure 2.2: Two descriptive parameters generate three language types (light head/relative)

Reformulating these parameters is not just restating the generalization in different terms. I identified the hosts for the cases, and not just whether they come from inside or outside of the relative clause. These hosts do not only correspond to case features, but also to other features that have to do with referentiality, number, gender, definiteness, etc. I propose that the difference between languages come from the comparison between the relative pronoun and the light head. For that reason, I need to look into the syntactic structure of the relative pronouns and light heads.

Table 2.3 gives a simplified representation of a relative pronoun and a light head. I start from the assumption that the relative pronoun and the light head partly contain the same syntactic features. In this simplified representation, the features they have in common are phi-features ( $\phi$ ) and case features ( $\kappa$ ). The relative pronoun and the light head differ from each other in that the relative pronoun in addition contains a relative feature (REL).



Table 2.3: Relative pronoun and light head



Now the time has come that I can introduce my proposal.

- (2) An element (i.e. the relative pronoun or the light head) is able to surface when it contains all features the other element (i.e. the relative pronoun or the light head) contains. (to be revised)

From Table 2.3 it is immediately clear that the relative pronoun contains the light head, but not the other way around. The relative pronoun contains  $\phi$  and  $\kappa$  that the light head also contains. The light head does not contain  $\text{REL}$ . The pattern that I describe here is the internal-only pattern, the one that Modern German shows. However, not all language are of the internal-only pattern.

I do not derive the difference between the languages from changing the feature content of the relative pronoun and light head per language.<sup>2</sup> Instead, the difference comes from how the relative pronouns and light heads are spelled out. In Sections 2.2 to Section 2.4, I show how I implement this idea. In a nutshell, the idea is that matching languages like Polish package their features together differently in such a way that the constituents of the relative pronoun do not contain the constituents of the light head. Non-matching languages like Old High German have a syncretism

<sup>2</sup>The feature content of the non-matching languages differs slightly from that of the internal-only and matching languages. This is due to the fact that this language type uses a different type of relative pronoun. The basic idea of the relative pronoun having at least one more feature than the light head remains the same.

between relative pronouns and light heads, and therefore allow also allow the light head to surface. What is clear, however, is that there is no way that all constituents of the light head contains the constituents of the relative pronoun.

- (3) An element (i.e. the relative pronoun or the light head) is able to surface when it contains all constituent the other element (i.e. the relative pronoun or the light head) contains.

Let me now show how different cases play a role in this picture.

Table 2.4: Relative pronoun with most complex case

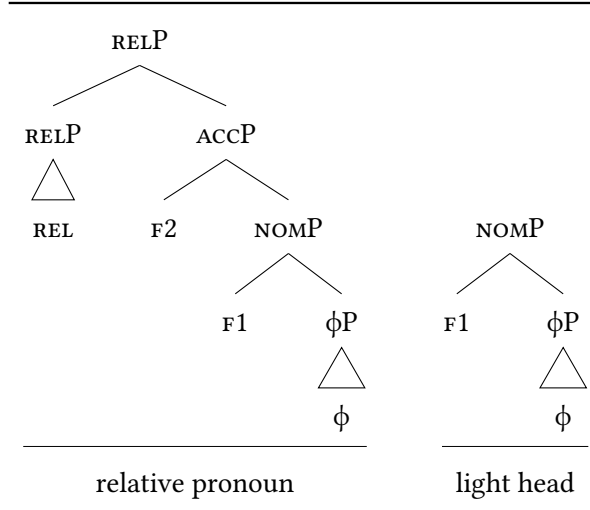
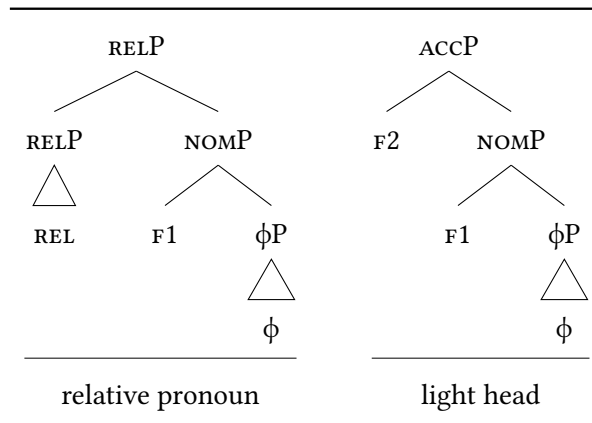


Table 2.5: Light head with most complex case



Actually, case comparison is not necessary anymore..

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 of the external base, the internal element is allowed to surface. When the external base contains the features of the internal base, the external element is allowed to surface.

Taking this all together, there are two things going on headless relatives: case competition and constituent comparison. Case competition determines which case wins and constituent comparison determines whether this case is allowed to surface. I put this in the metaphor with the committee that I introduced in Section ?. The committee learns who wins the case competition, and it can either approve this case or not approve it. The information that the committee uses for its decision is the comparison of the constituents within the relative pronoun and the light head. The committee approves the winning case if all constituents of the element associated

with the winning case contains all constituents associated with the losing case.

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.

- (4)    [**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*.

- (5)    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.

- (6) 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.

## 2.2 Deriving the internal-only type

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

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

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 (8) show that it is possible to extrapose a CP. In (8a), 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 (8b).

- (8) 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)

(9) illustrates that it is impossible to extrapose a DP. The clausal object of (8) is replaced by the simplex noun phrase *die Sache* ‘that matter’. In (9a) the object, marked in bold, appears in its base position. In (9b) it is extraposed, and the sentence is no longer grammatical.

- (9) 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 (10) 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 (10a), the relative clause and its head appear in base position. In (10b), the relative clause is extraposed. This is grammatical, because it is possible to extrapose CPs in Modern German. In (10c), the relative clause and the head are extraposed. This is ungrammatical, because it is possible to extrapose DPs.

- (10) 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. (11) is the same sentence as in (10) only without the overt head. The relative clause is marked in bold again. In (11a), the relative clause appears in base position. In (11b), the relative clause is extraposed. This is grammatical, because it is possible to extrapose CPs in Modern German. In (11c), 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.

- (11) 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.

The deletion in Modern German is not optional, but obligatory. The reason for that is that the weak demonstrative is phonologically(?) not heavy enough to be the head of a relative clause. Maybe not only phonologically, because *vom* also does not work..

are free relatives restrictive or non-restrictive? > restrictive, and restrictive and weak are incompatible :) » this is why we have deletion!

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

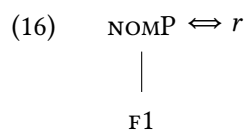
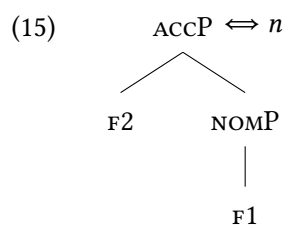
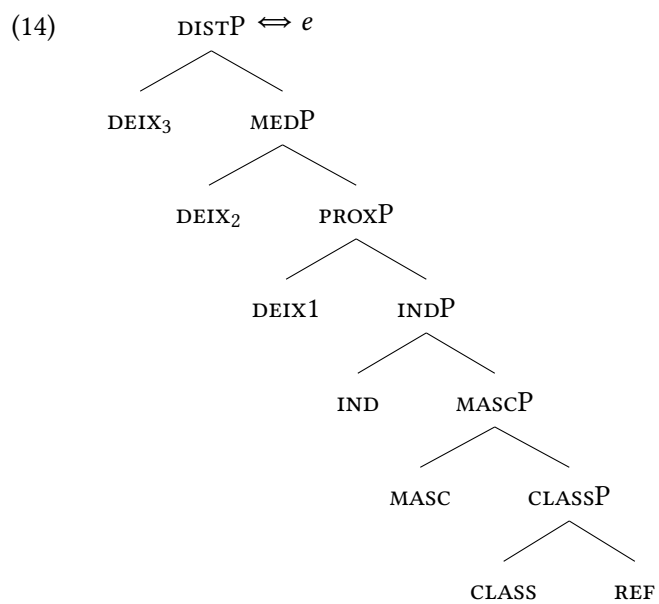
Table 2.6: Relative pronouns in headless relatives in Modern German

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

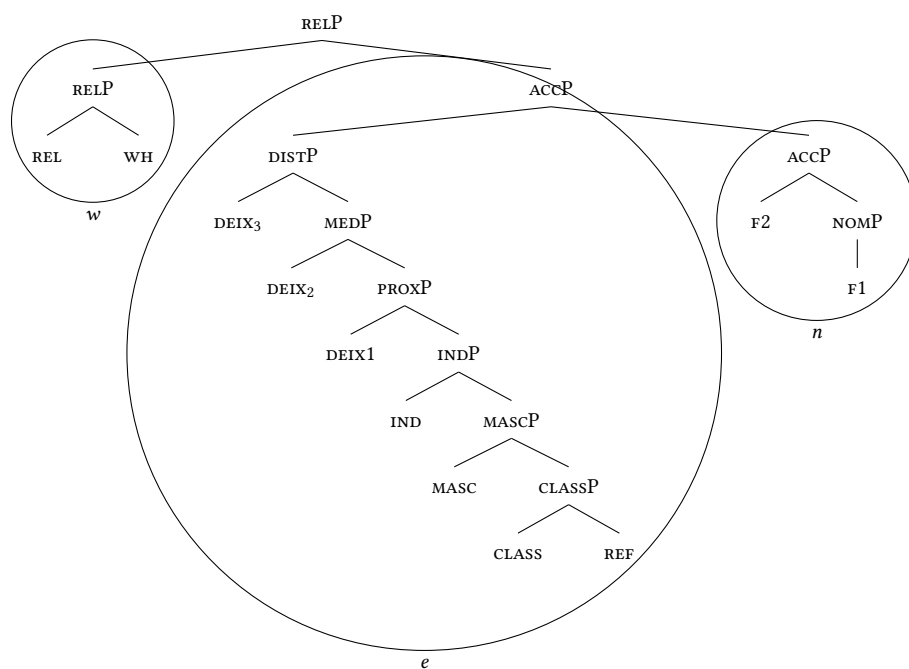
Modern German relative pronoun in accusative case

- (13)
- $$\begin{array}{c}
 \text{REL P} \Leftrightarrow w \\
 \swarrow \quad \searrow \\
 \text{REL} \quad \text{WH}
 \end{array}$$



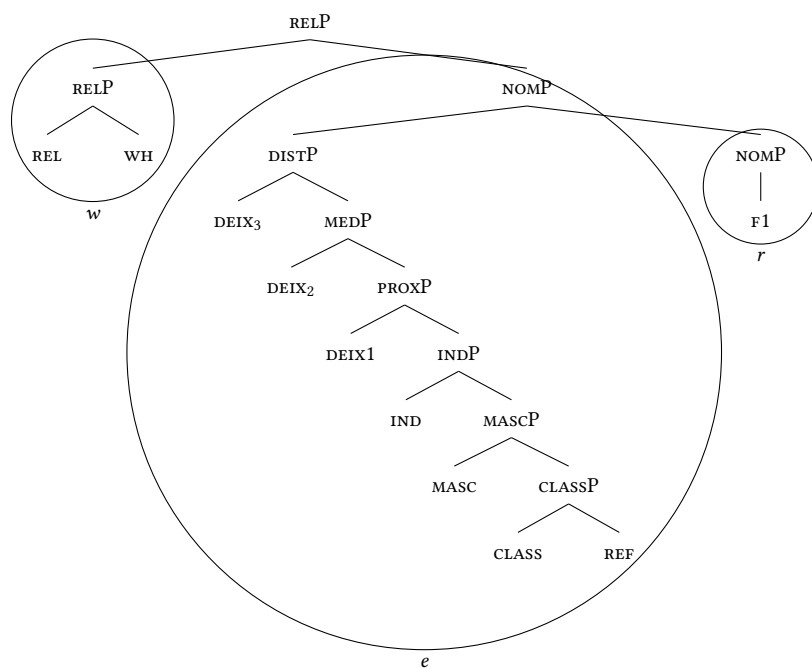


(17)



Modern German relative pronoun in nominative case

(18)



Ich habe n gesehen.

Ich habe m geholfen.

Hat r nen Motorrad?

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.

- (19) 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.'

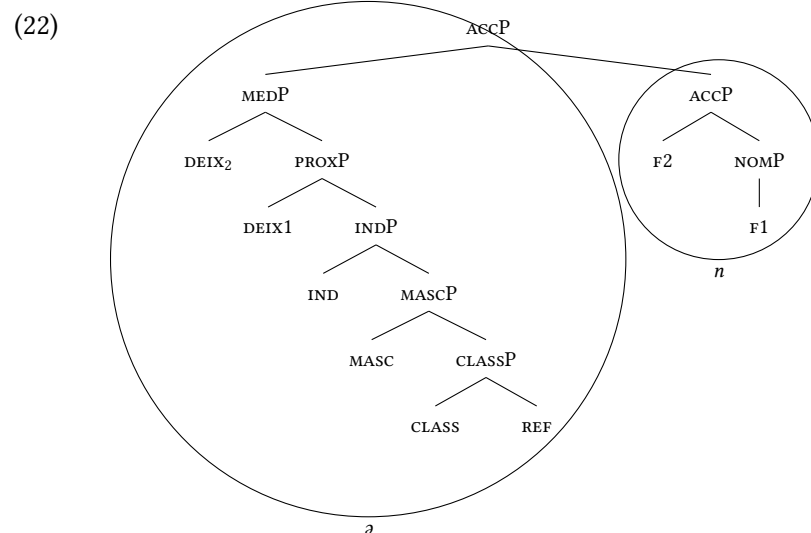
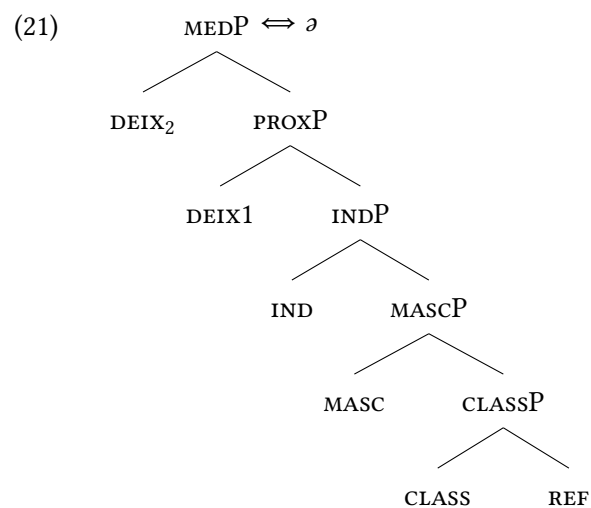
Weak articles are used when situational uniqueness is involved. Uniqueness can be global or within a restricted domain. The discourse participants mutually shared knowledge that uniqueness holds.

- (20) 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)

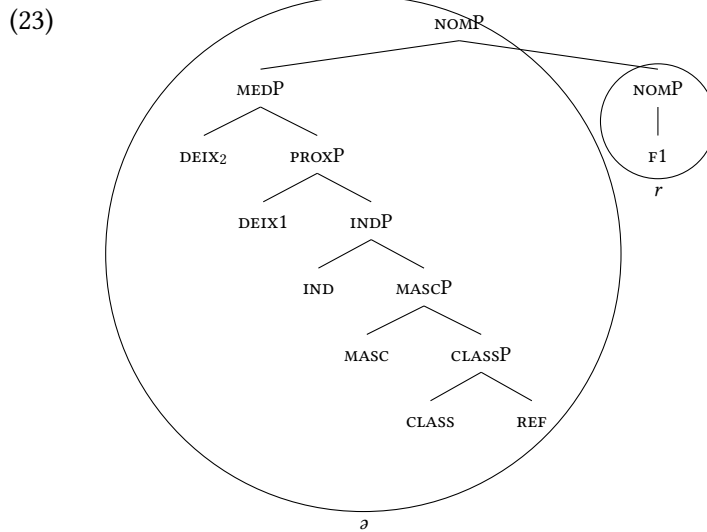
In the headless relatives, there is uniqueness. Show?

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

Modern German light head in accusative case



Modern German light head in nominative case



Consider the example in (24), in which the internal nominative case competes against the external nominative case. The relative clause is marked in bold, and the light head and the relative pronoun are underlined. The internal case is nominative, as the predicate *mögen* ‘to like’ takes nominative subjects. The relative pronoun *wer* ‘REL.AN.NOM’ appears in the nominative case. This is the element that surfaces. The external case is nominative as well, as the predicate *besuchen* ‘to visit’ also takes nominative subjects. The light head *er* ‘DEM.AN.NOM’ appears in the nominative case. It is placed between square brackets because it does not surface.

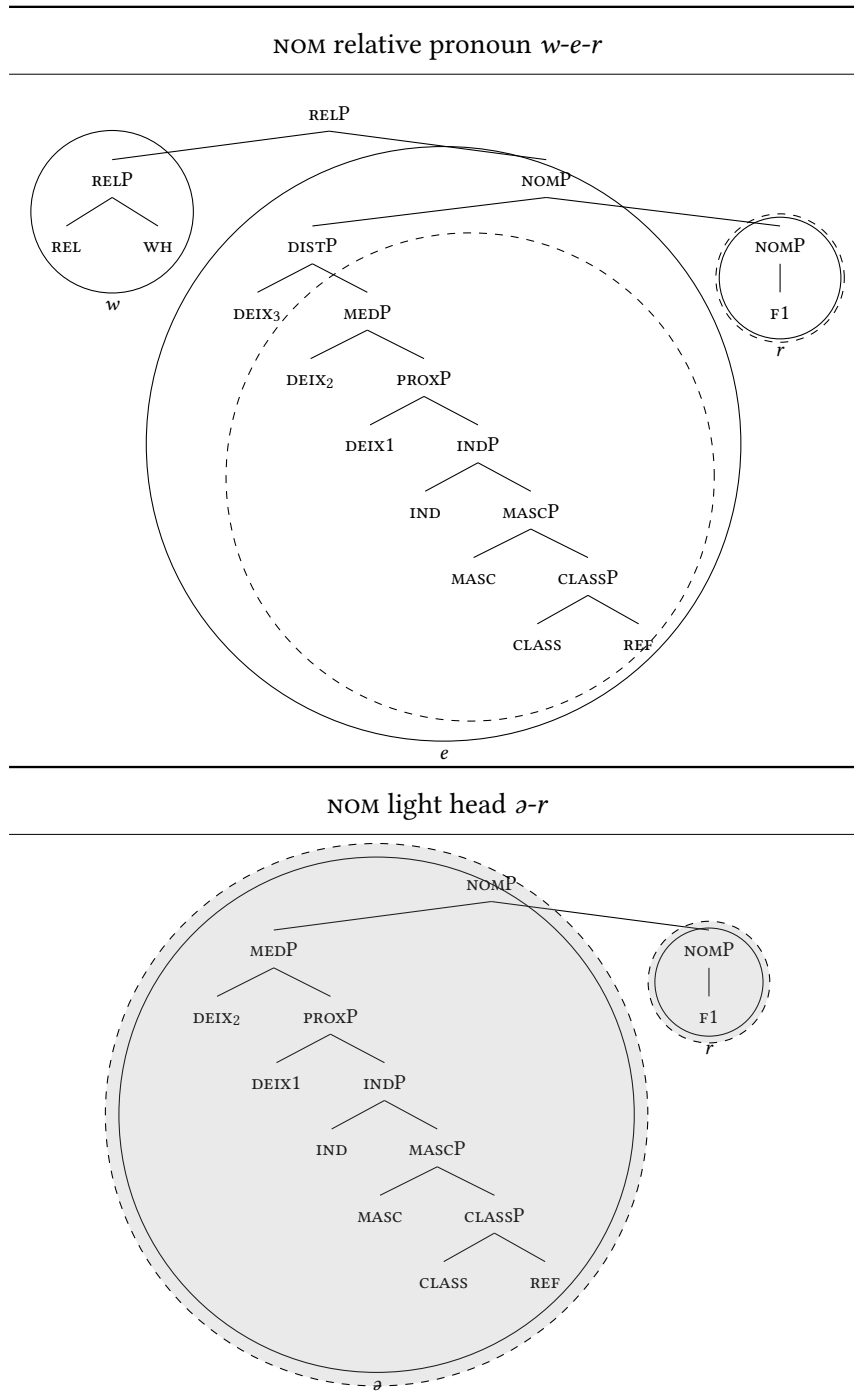
- (24) Uns besucht [er], wer Maria  
 2PL.ACC visit.PRES.3SG<sub>[NOM]</sub> DEM.AN.NOM REL.AN.NOM Maria.ACC  
**mag.**  
 like.PRES.3SG<sub>[NOM]</sub>  
 ‘Who visits us likes Maria.’

(Modern German, adapted from Vogel 2001: 343)

In Figure 2.3, I give the syntactic structure of the relative pronoun at the top and the syntactic structure of the light head at the bottom. The relative pronoun consists of three morphemes: *w*, *e* and *r*. The light head consists of two morphemes: *a* and *r*. As usual, I circle the part of the structure that corresponds to a particular lexical entry,

and I place the corresponding phonology under it. I draw a dashed circle around each constituent that is both a constituent in the relative pronoun and in the light head. As each constituent of the light head is also a constituent within the relative pronoun, the light head can be absent. I illustrate this by marking the content of the dashed circles in the light head gray.

I explain this constituent by constituent. I start with the right-most constituent of the light head that spells out as *r* (NOMP). This constituent is also a constituent in the relative pronoun. I continue with the left-most constituent of the light head that spells out as *ə* (MEDP). This constituent is also a constituent in the relative pronoun, contained in DISTP. Both constituent of the light head is also a constituent within the relative pronoun, and the light head can be absent.

Figure 2.3: Modern German INT<sub>NOM</sub> vs. EXT<sub>NOM</sub> = *wer*

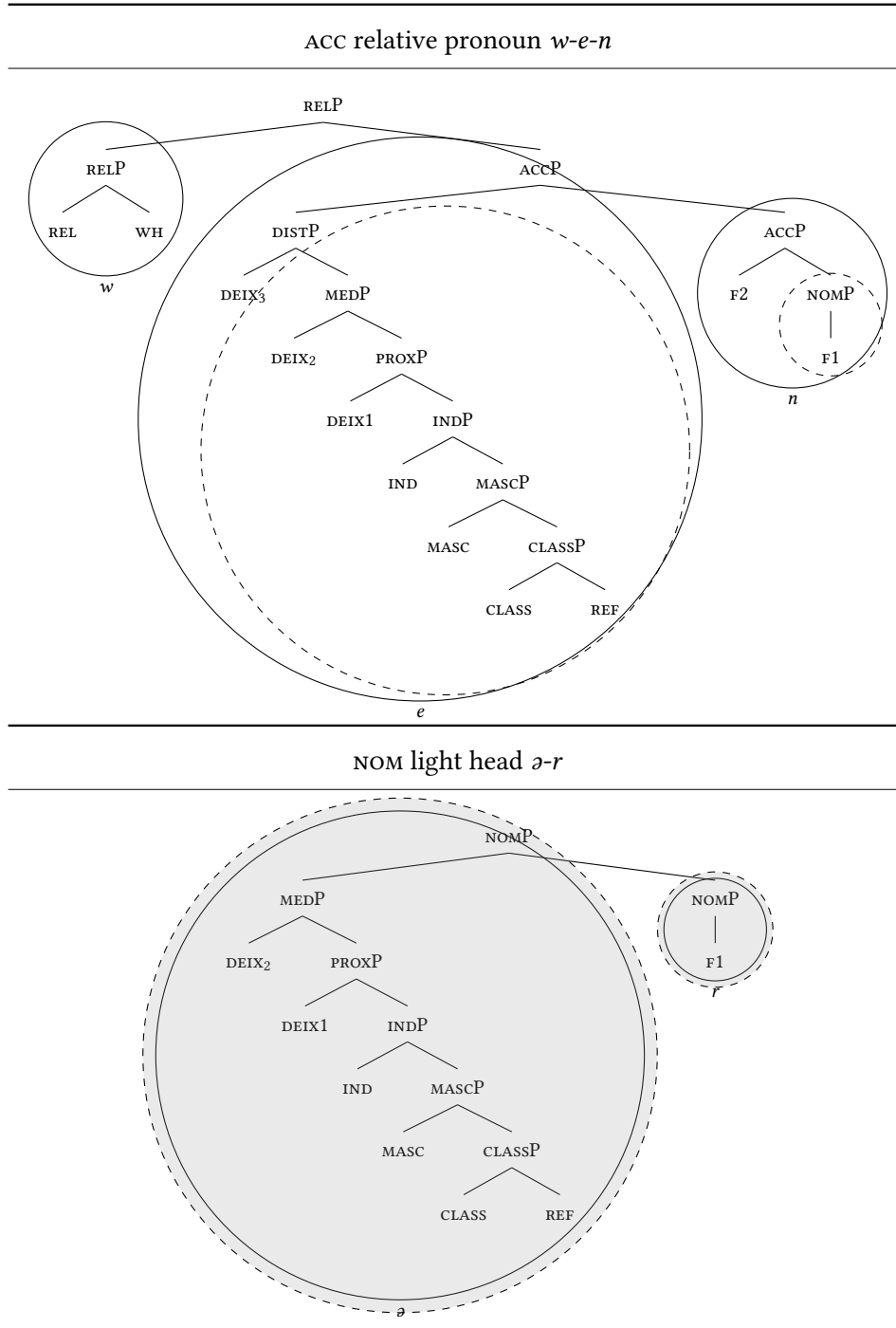
Consider the example in (25), in which the internal accusative case competes against the external nominative case. The relative clause is marked in bold, and the light head and the relative pronoun are underlined. The internal case is accusative, as the predicate *mögen* ‘to like’ takes accusative objects. The relative pronoun *wen* ‘REL.AN.ACC’ appears in the accusative case. This is the element that surfaces. The external case is nominative, as the predicate *besuchen* ‘to visit’ takes nominative subjects. The light head *ər* ‘DEM.AN.NOM’ appears in the nominative case. It is placed between square brackets because it does not surface.

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

In Figure ??, I give the syntactic structure of the relative pronoun at the top and the syntactic structure of the light head at the bottom. The relative pronoun consists of three morphemes: *w*, *e* and *n*. The light head consists of two morphemes: *ə* and *r*. Again, I circle the part of the structure that corresponds to a particular lexical entry, and I place the corresponding phonology under it. I draw a dashed circle around each constituent that is both a constituent in the relative pronoun and in the light head. As each constituent of the light head is also a constituent within the relative pronoun, the light head can be absent. I illustrate this by marking the content of the dashed circles in the light head gray.

I explain this constituent by constituent. I start with the right-most constituent of the light head that spells out as *r* (NOMP). This constituent is also a constituent in the relative pronoun, contained in ACCP. I continue with the left-most constituent of the light head that spells out as *ə* (MEDP). This constituent is also a constituent in the relative pronoun, contained in DISTP. Both constituent of the light head is also a constituent within the relative pronoun, and the light head can be absent.



Figure 2.4: Modern German  $\text{INT}_{\text{ACC}}$  vs.  $\text{EXT}_{\text{NOM}} = \text{wen}$ 

Consider the examples in (26), in which the internal nominative case competes against the external accusative case. The relative clause is marked in bold, and the light head and the relative pronoun are underlined. It is not possible to make a grammatical headless relative in this situation. The internal case is nominative, as the predicate *sein* ‘to be’ takes nominative subjects. The relative pronoun *wer* ‘REL.AN.NOM’ appears in the nominative case. The external case is accusative, as the predicate *einladen* ‘to invite’ takes accusative objects. The light head *an* ‘DEM.AN.ACC’ appears in the accusative case. (26a) is the variant of the sentence in which the light head is absent and the relative pronoun surfaces, and it is ungrammatical. (26b) is the variant of the sentence in which the relative pronoun is absent and the light head surfaces, and it is ungrammatical too.

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

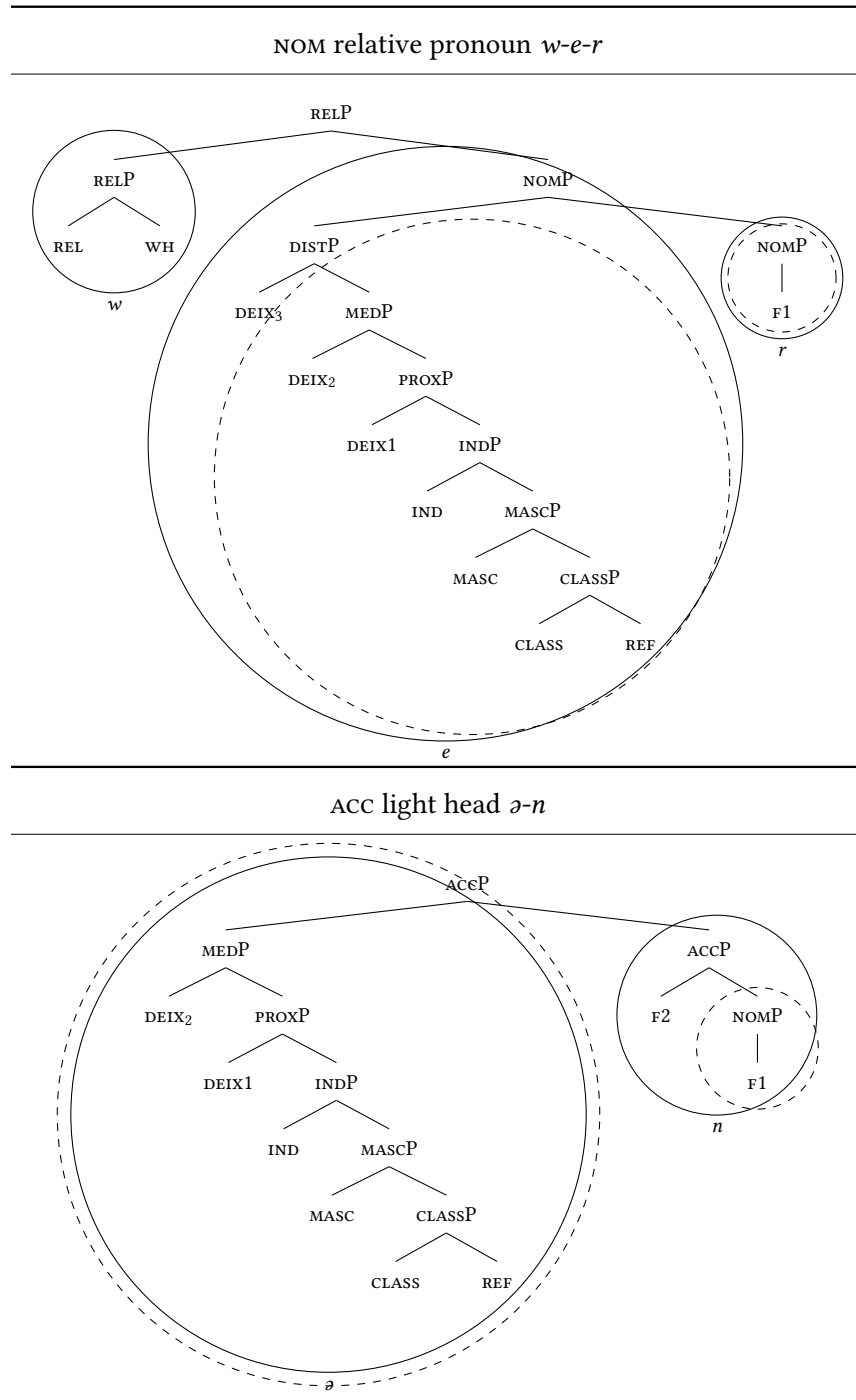
In Figure ??, I give the syntactic structure of the relative pronoun at the top and the syntactic structure of the light head at the bottom. The relative pronoun consists of three morphemes: *w*, *e* and *r*. The light head consists of two morphemes: *ə* and *n*. Again, I circle the part of the structure that corresponds to a particular lexical entry, and I place the corresponding phonology under it. I draw a dashed circle around each constituent that is both a constituent in the relative pronoun and in the light head. Neither of the elements contains all constituents that the other contains. The relative pronoun does not contain all constituents that the light head contains, and the light head does not contain all constituents that the relative pronoun contains.

As a result, none of the elements can be absent.<sup>3</sup>

I explain this constituent by constituent. I start by showing that the light head cannot be absent. Consider the right-most constituent of the light head that spells out as *n* (ACCP). This constituent is not a constituent in the relative pronoun: the relative pronoun has a constituent NOMP, but it does not contain F2 to make it an ACCP. The light head has a constituent that is not a constituent in the relative pronoun, so the light head cannot be absent. However, the relative pronoun can also not be absent. Consider the middle constituent of the relative pronoun that spells out as *e* (DISTP). This constituent is not a constituent in the light head: the light head has a constituent MEDP, but it does not contain DEIX<sub>3</sub> to make it an DISTP. The same hold for the right-most constituent of the relative pronoun that spells out as *w* (RELP). The light head lacks the features WH and REL that form the RELP. The relative pronoun has constituents that are not constituents in the light head, so the relative pronoun cannot be absent. In sum, neither of the elements contains all constituents that the other contains, none of the elements can be absent.

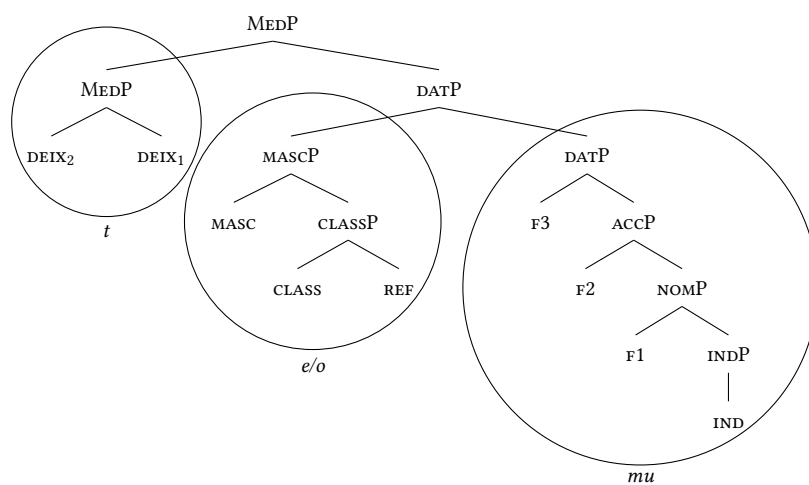
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<sup>3</sup>Why do we not see this result surface? Very good question.

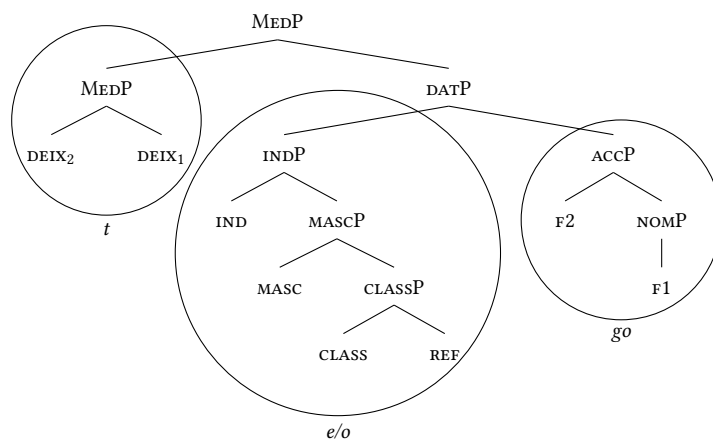
Figure 2.5: Modern German  $\text{INT}_{\text{NOM}}$  vs.  $\text{EXT}_{\text{ACC}} \neq \text{wer}/\text{an}$ 

## 2.3 Deriving the matching type

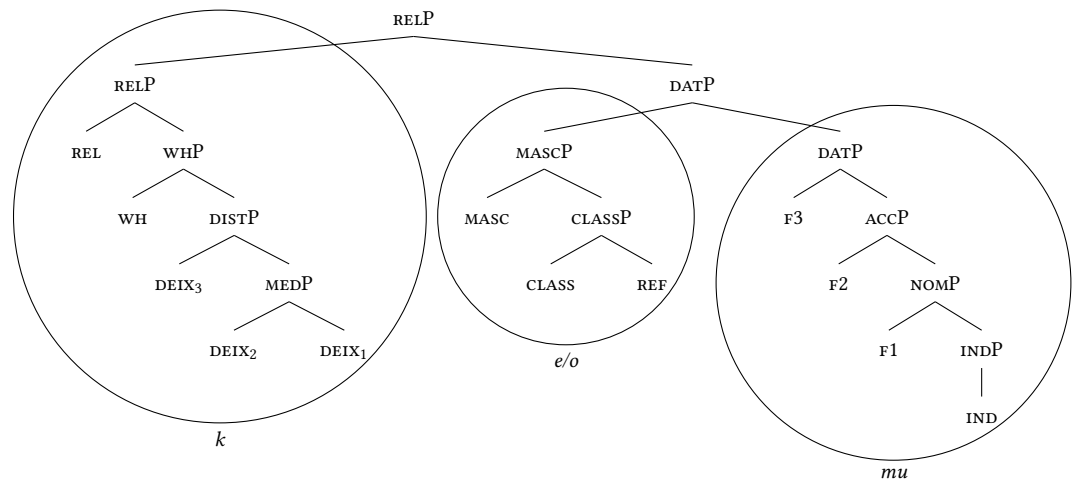
(27) Polish: EXT DAT



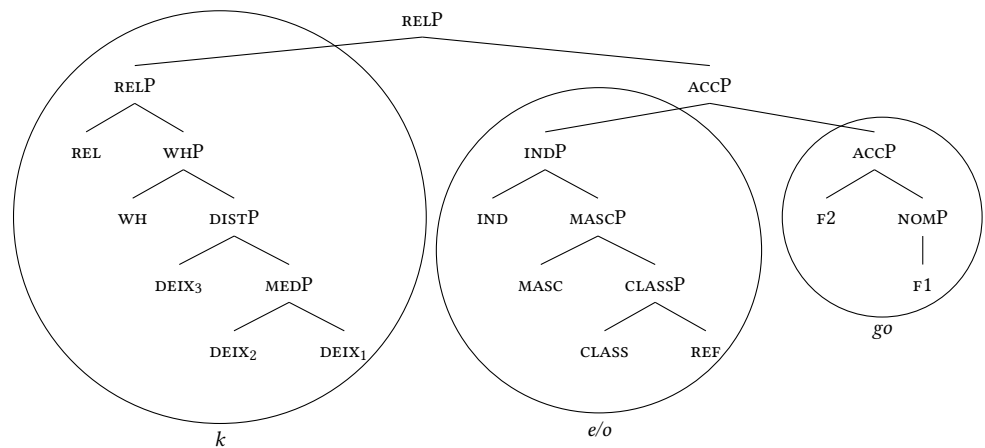
(28) Polish: EXT ACC



(29) Polish: INT DAT



(30) Polish: INT ACC



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?

(31) Jan czyta to, co Maria czyta.

Jan read this what Maria reads

‘Jan reads what Maria reads.’

(Polish, Citko 2004: 96)

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

- (32) Někáká 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.

- (33) Někáká 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 Deriving the non-matching type

- (34) 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)

- (35) 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)

- (36) 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

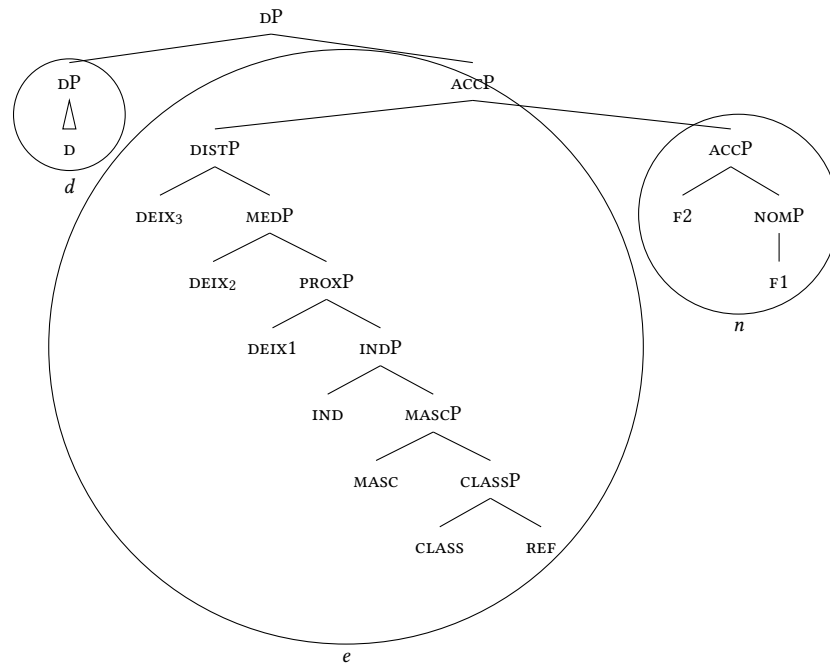
**chisitzit**

possess.PRES.3SG<sub>[NOM]</sub>

‘I create of the seed of Jacob and of Judah the one, who possess my mountains’

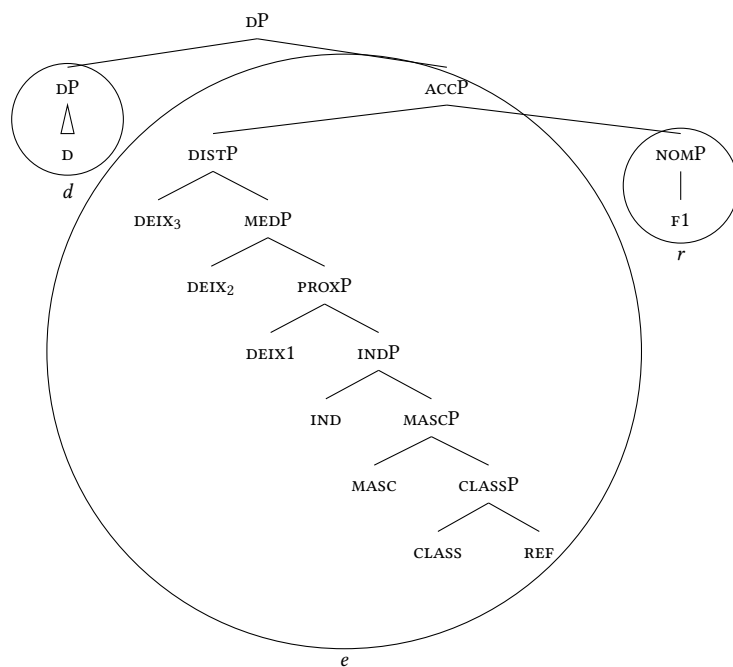
(Old High German, Isid. 34:3)

- (37) Old High German: EXT ACC

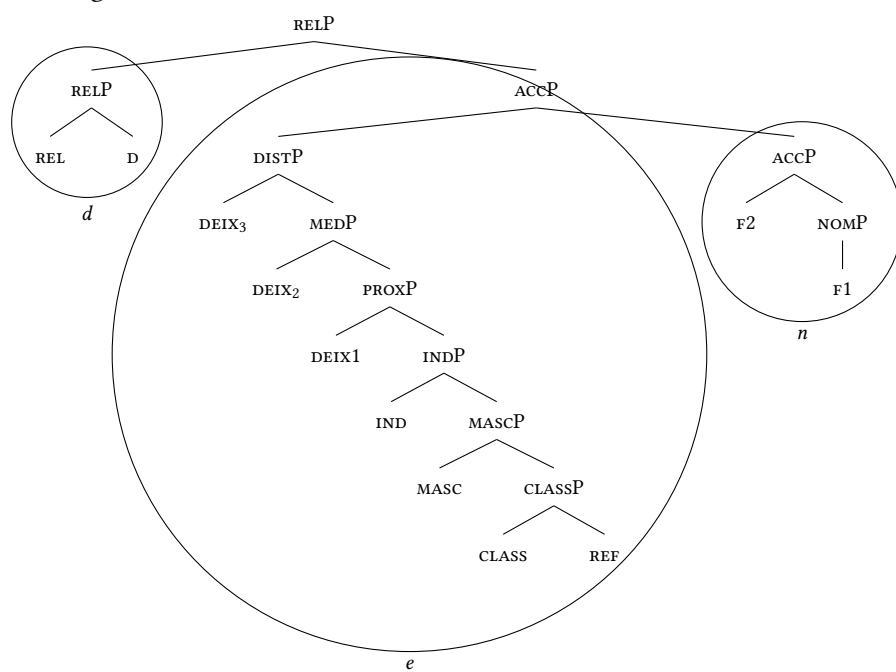




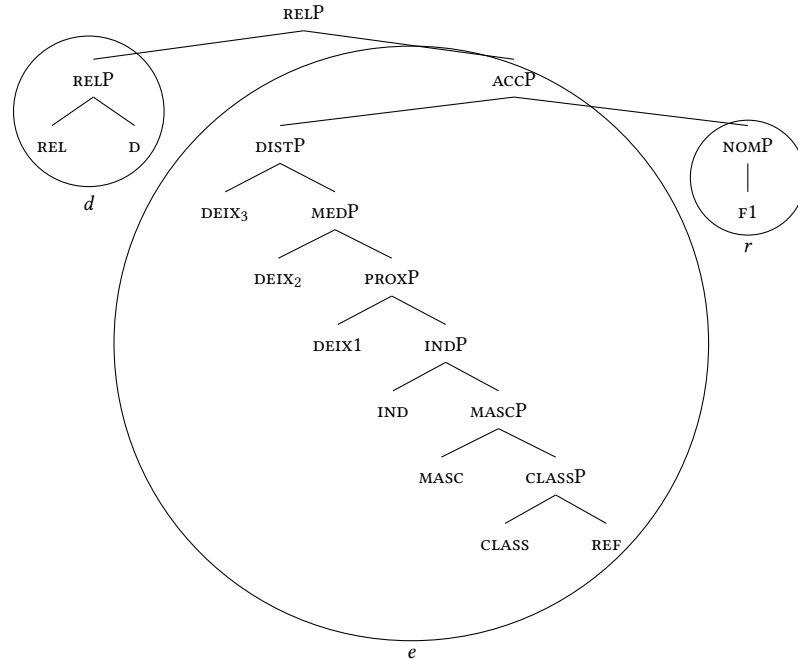
(38) Old High German: EXT NOM



(39) Old High German: INT ACC



(40) Old High German: INT ACC



The non-matching type of language allows for matching cases, it allows the internal case to win, and it allows the external case to win. I have been describing Old High German as an example of this type. In this section, I show what it is about Old High German that causes the language to be of the non-matching type. I propose that the crucial factor is that Old High German has a syncretic internal and external base. Since they are syncretic, the features in the internal base contain the features in the external base, and the features in the external base contain just as well the features in the internal base. The internal base containing the external base causes the internal case to be allowed to surface when it wins the case competition. The external base containing the internal base causes the external case to be allowed to surface when it wins the case competition.

This section is structured as follows. First, I argue that Old High German head-less relatives are derived from relative clauses headed by a light head, i.e. light-headed relatives. In this analysis, the internal element is what can descriptively be called the relative pronoun, and the external element is what can descriptively be called the light head. The internal element surfaces as the relative pronoun when

the internal case is more complex, and the external element surfaces as the relative pronoun when the external case is more complex. In this section, I decompose the internal and external element, and I show which morpheme corresponds to which features. Both elements consist of two morphemes: a base part and a case part. I go through the examples in Table 2.7, showing per situation how the base and case parts syntactically contain the other base and case parts. This containment is crucial. When the internal base contains the external base, the internal case is allowed to surface when it is more complex, and when the external base contains the internal base, the external case is allowed to surface when it is more complex.

Table 2.7: Base comparison in Old High German

	INT element		EXT element		REL pronoun	
	base <sub>INT</sub>	case <sub>INT</sub>	base <sub>EXT</sub>	case <sub>EXT</sub>	base <sub>REL</sub>	case <sub>REL</sub>
INT = EXT	dhe	r	dhe	r	dhe	r
INT > EXT	dhe	n	dhe	r	dhe	n
INT < EXT	dhe	r	dhe	n	dhe	n

I propose headless relatives are derived from light-headed relatives (Fuß and Grewendorf 2014; Hanink 2018 argue the same but for Modern German<sup>4</sup>). In a light-headed relative, the head of a relative is not a full noun phrase, but it is a bit ‘lighter’: it only consists of a demonstrative. Consider the light-headed relative in (41). *Thér* ‘DEM.SG.M.NOM’ is the head of the relative clause, which is the external element. *Then* ‘REL.SG.M.ACC’ is the relative pronoun of the relative clause, which is the internal element.

- (41) eno nist      thiz      thér      then      ir  
 now not be.3SG DEM.SG.N.NOM DEM.SG.M.NOM REL.SG.M.ACC 2PL.NOM

<sup>4</sup>A difference with Modern German is that one of the elements can only be absent when the cases match. In Section 3 I return to the point why Modern German does not have non-matching headless relatives that look like Old High German, although it still has syncretic relative pronouns and light heads.

suochet zi arslahanne?  
 seek.2PL to kill.INF.SG.DAT  
 ‘Isn’t this now the one, who you seek to kill?’

The difference between a light-headed relative and a headless relative is that in headless relatives, either the internal or the external is absent. The absent element is the one that has the least complex case. This shows the presence of two elements in Old High German is optional.<sup>5</sup> In Old High German, there are three possible constructions: the internal and external element can both surface, only the internal element can surface and only the external element can surface. If only one of the two elements surfaces, this is the element that bears the most complex case, which is either the internal or the external one, as I have shown in Chapter ???. I assume that whether both or only one of the elements surfaces is determined by information structure. In (41), the external element *thér* ‘DEM.SG.M.NOM’ is the candidate to be absent. However, it seems plausible that this is emphasized in this sentence and that it, therefore, cannot be absent.

Support for the idea that Old High German headless relatives are derived from light-headed ones comes from their interpretation. Headless relatives in which the relative pronoun starts with a *d*, such as in Old High German, seem to be linked to individuating or definite readings and not to generalizing or indefinite readings (cf. Fuß, n.d.). I illustrate this with the two examples I repeat from Chapter ??.

Consider the example in (42), repeated from Chapter ???. In this example, the author refers to the specific person which was talked about, and not to any or every person that was talked about.

- (42) Thíz            ist                    **then**            **sie**            **zëllent**  
 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’  
 not: ‘this is whoever they talk about’ (Old High German, Otfrid III 16:50)

Consider also the example in (42), repeated from Chapter ???. In this example, the author refers to the specific person who spoke to someone, and not to any or every

<sup>5</sup>This sharply contrasts with headless relatives in Modern German, which are always ungrammatical when both the internal and external elements surface. I come back to this in Section 2.2.

person who spoke to someone.

- (43)    enti aer            ant uurta            demo            **zaimo**  
          and 3SG.M.NOM reply.PST.3SG<sub>[DAT]</sub> REL.SG.M.DAT to 3SG.M.DAT  
          **sprah**  
          speak.PST.3SG<sub>[NOM]</sub>  
          ‘and he replied to the one who spoke to him’  
          not: ‘and he replied to whoever spoke to him’  
    (Old High German, Mons. 7:24, adapted from Pittner 1995: 199)

I conclude that the internal element in Old High German is the descriptive relative pronoun, and the external element in Old High German is the descriptive light head. In what follows I closely examine the internal structure of the internal and external element. I illustrate how the internal base and the external base are identical, so they contain each other.

The light head in a light-headed relative is a demonstrative pronoun. Relative and demonstrative pronouns are syncretic in Old High German (Braune 2018: 338). Table 2.8 gives an overview of the forms in singular and plural, neuter, masculine and feminine and nominative, accusative and dative. The pronouns consist of two morphemes: a *d* and suffix that differs per number, gender and case.<sup>6,7</sup>

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<sup>6</sup>*d* can also be written as *dh* and *th*, *ē* and *ē* can also be *e* and *é* (Braune 2018: 339).

<sup>7</sup>The suffix could also be further divided into a vowel and a suffix. As this is not relevant for the discussion here, I refrain from doing that.

Table 2.8: Relative/demonstrative pronouns in Old High German (Braune 2018: 339)

	N.SG	M.SG	feminine.SG
NOM	d-az	d-ēr	d-iu
ACC	d-az	d-ēn	d-ea/d-ia
DAT	d-ēmu/d-ēmo	d-ēmu/d-ēmo	d-ēru/d-ēro
	N.PL	M.PL	feminine.PL
NOM	d-iu	d-ē/d-ea/d-ia/d-ie	d-eo/-io
ACC	d-iu	d-ē/d-ea/d-ia/d-ie	d-eo/-io
DAT	d-ēm/d-ēn	d-ēm/d-ēn	d-ēm/d-ēn

The suffixes that combine with the *d* in demonstrative and relative pronouns also appear on adjectives. This is illustrated in Table 2.9.

Table 2.9: Adjectives on *-a/-ō-* in Old High German Braune 2018: 300

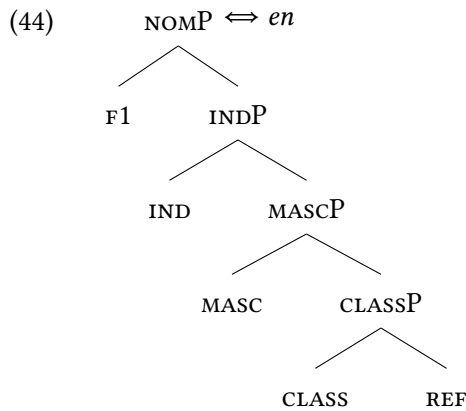
	N.SG	M.SG	feminine.SG
NOM	jung, jung-az	jung, jung-ēr	jung, jung-iu
ACC	jung, jung-az	jung-an	jung-a
DAT	jung-emu/jung-emo	jung-emu/jung-emo	jung-eru/jung-ero
	N.PL	M.PL	feminine.PL
NOM	jung-iu	jung-e	jung-o
ACC	jung-iu	jung-e	jung-o
DAT	jung-ēm/jung-ēn	jung-ēm/jung-ēn	jung-ēm/jung-ēn

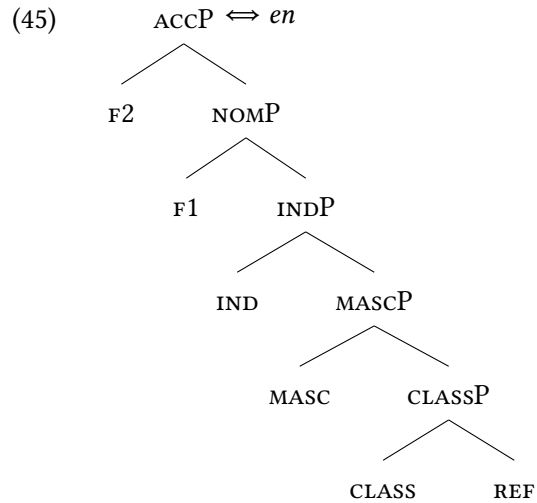
I conclude from this that the suffix expresses features that are specific to being nominal, like number, gender and case. Not part of the suffix are features that are specific to being a demonstrative or relative pronoun, like anaphoricity and definiteness. I assume that these are expressed by the morpheme *d*.

In this section, I only discuss two forms: the nominative and accusative masculine singular relative and demonstrative pronoun. The nominative is *dër* and the accusative is *dën*. In what follows, I discuss the featural content of the morphemes *d*, *ër* and *ën*. I start with the features that are expressed by the suffixes *ër* and *ën*.

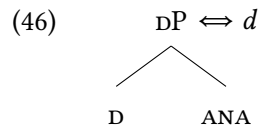
For the suffixes, I use pronominal features that are distinguished by Harley and Ritter (2002): REF, CLASS, MASC and IND. REF refers to a referring expression, which all pronouns contain. The feature CLASS refers to gender features, which is neuter if it is not combined with any other features. Combining CLASS with the feature MASC gives a masculine gender. IND refer to number, which is singular if it is not combined with any other features. In addition, I use the case features introduced by Caha (2009), which I already discussed in Chapter ?? . F1 refers to a nominative, and F1 and F2 refers to an accusative.

This allows me to propose the following lexical entries for the two suffixes.





The *d* morpheme corresponds to definiteness and anaphoricity. Anaphoricity establishes a relation with another element in the (linguistic) discourse. Definiteness encodes that the referent is specific.

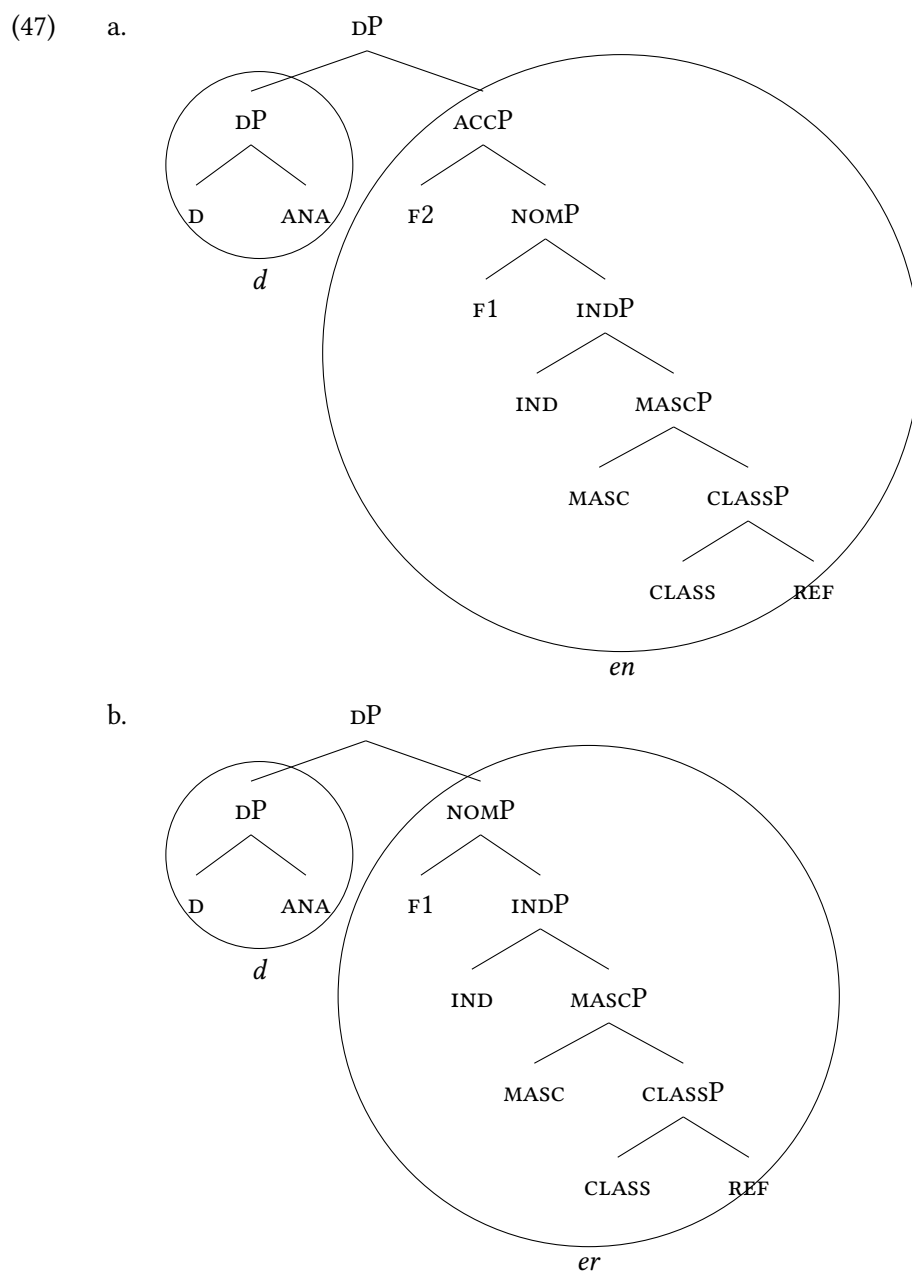


So, the two relative pronouns look like this.<sup>8</sup>

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<sup>8</sup>A question that arises here is how the case features can form a constituent to the exclusion of definiteness and anaphoricity. I come back to this issue in Chapter 3.





To sum up, Old High German allows the internal and the external case to surface when either of them wins the case competition. This is due to the fact that the bases of the internal and the external element are syncretic. Because of that, the internal

base contains the external base, which allows the internal case to surface, and the external base contains the internal base, which allows the external case to surface.

## 2.5 Technical details

(48) **Spellout Algorithm:**

Merge  $F$  and

- a. Spell out  $FP$ .
- 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.

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

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

(50) **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.

If the spellout procedure in (48) fails, backtracking takes place.

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

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

## 2.6 Summary

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

INT?’ is whether the external base is a clitic ( $\text{base}_{\text{EXT}} = \text{clitic?}$ ).

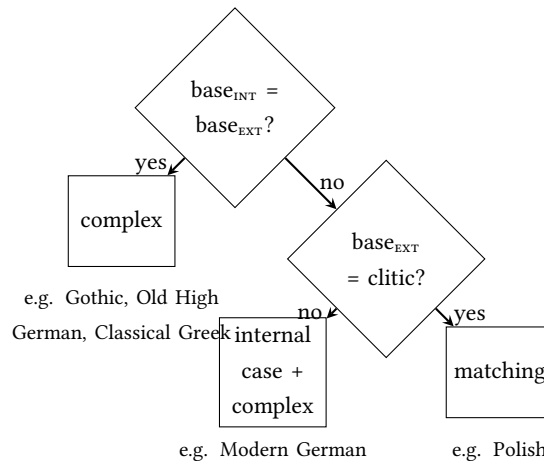


Figure 2.6: Two theoretical parameters generate three language types

## 2.7 **Aside: a larger syntactic context**

If you talk about different patterns, there can be different locations to put your parameters. Himmelreich put her parameters in the structure. I put my parameters in the elements themselves. I show what an analysis like Himmelreich looks like, and I show then that it is difficult to reduce that then to differences in the lexicon (because it has to do with agree?).

So what I do is keep the parameters that she was differing stable. I change the things that she kept constant, the internal and external element. Does her structure then work with what I want? Not entirely, because I have to do a c-command that is going in the wrong direction. Then I show a syntactic structure that could be compatible with mine, and I show why a grafting one is not.

In this dissertation I focus on when languages allow the internal and external case to win the case competition. In my proposal, this depends on the comparison between the internal and external base. The larger syntactic context in which this takes place should be kept stable. For concreteness, I show a possible implementa-

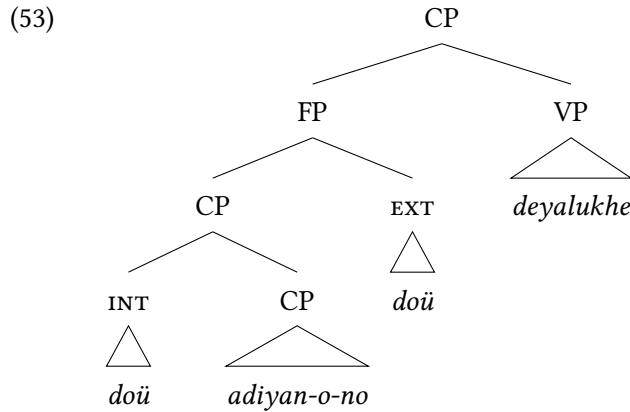
tion in Cinque's double-headed analysis of relative clause. I do by no means claim that claim this is the only or even correct implementation.

According to Cinque, every type of relative clause in every language is underlyingly double-headed. Evidence for this claim comes from languages that show this morphologically. An example from Kombai is given in (52). The head of the relative clause is *doü* 'sago', and it appears inside the relative clause and outside.

- (52)    [**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 internal and external instances of *doü* correspond to the internal and external element I assume to be there in the headless relatives.

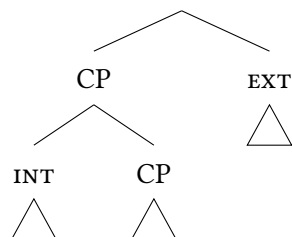
(53) shows the syntactic structure of the sentence in (52).



In most languages one of the two heads is deleted throughout the derivation.

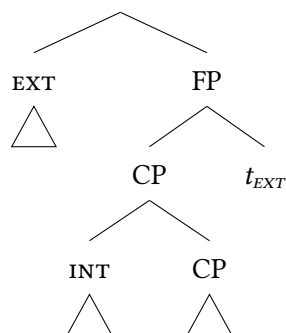
According to Cinque 2020, the internal element can delete the external element, because the internal element c-commands the external element. This is c-command according to Kayne's definition of it: the internal element is in the specifier of the specifier of the FP.

(54)



In order for the internal element to be able to delete the external element, a movement needs to take place. The external element moves over the relative clause.<sup>9</sup> From this position, the external element can delete the internal one, because the external element c-commands the internal one.

(55)



Also talk about  $\bar{D}$  here, and that maybe Old High German deletes a thing without a  $\bar{D}$  when the internal thing wins. does that also have a not so definite interpretation?

What does not work:

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 (56). Here the internal case is accusative and the ex-

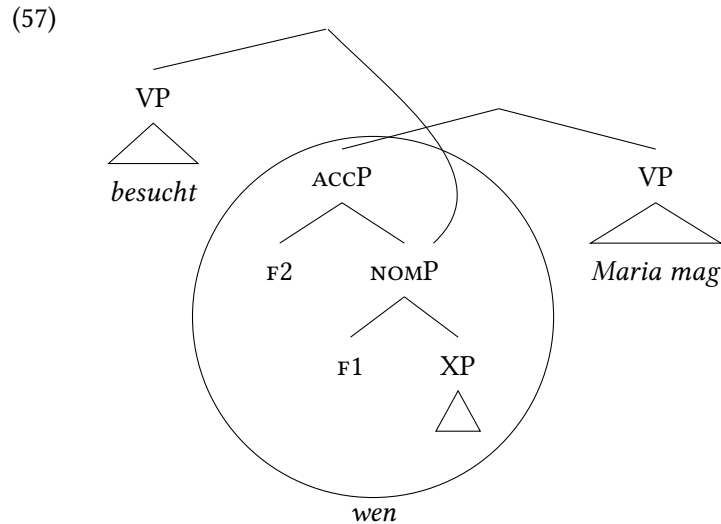
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<sup>9</sup>What remains unclear is what the trigger is for the movement of the external element over relative clause is.

ternal one nominative.

- (56) 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.

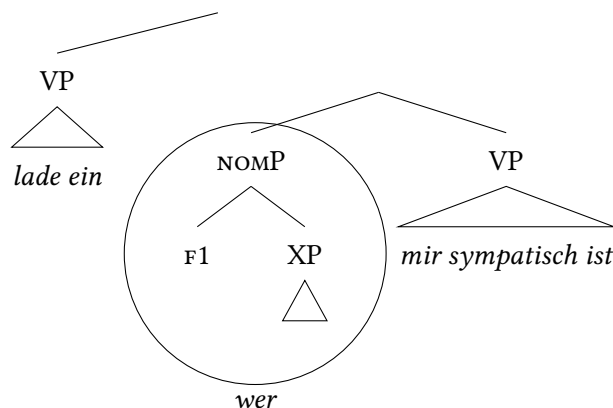


The other way around does not work. Consider (58). This is an example with nominative as internal case and accusative as external case.

- (58) \*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.

(59)



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.

Himmelreich

there are agree relations between -  $V_{EXT}$  and  $EXT - V_{INT}$  and  $INT - INT$  and  $EXT$

three parameters: 1 relation between  $V_{EXT}$  and  $EXT + V_{INT}$  and  $INT$  are symmetric or asymmetric 2 relation between  $EXT$  and  $INT$  are symmetric or asymmetric 3 if  $EXT - INT$  is asymmetric,  $EXT$  or  $INT$  probes

I keep the parameters she has stable, the bigger syntactic context is the same everywhere. I vary the content of  $EXT$





## Chapter 3

# Discussion

### 3.1 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.

## 3.2 Suppletive nominatives in Gothic

## 3.3 Towards deriving the always-external pattern

grosu: morphological distinctions correlate with ‘freedom’

Why FEM does not have WH-pronouns?

## 3.4 More languages

*valita* ‘choose’ takes a partitive object

- (1) Valitsen mista sina piddt. choose-I.el what-el you like-you.part ‘I choose what you like.’

*pitää* ‘like’ takes elative objects

- (2) \*Pidan mista sind valitset.  
like-I.part what-el you choose-you.el  
‘I like what you choose.’
- (3) \*Pidan mita sind valitset.  
like-I.part what-el you choose-you.el  
‘I like what you choose.’

# 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>Mons.</b>	The Monsee fragments
<b>Nib.</b>	Das Nibelungenlied
<b>Otfrid</b>	Otfrid's Evangelienbuch
<b>Rom.</b>	Romans, New Testament



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