Case competition in headless relatives

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List of abbreviations

ACC	accusative
COMP	complementizer
DAT	dative
EXT	external case
GEN	genitive
INT	internal case
M	masculine
NOM	nominative
N	neuter
PL	plural
PRES	present tense
PST	past tense
REL	relative
SG	singular

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 Versteckspiel 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.[1] 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.[2]

(3) gaarma þan -ei arma
pity.PRES.1SG$_{[ACC]}$ REL.SG.M.ACC -COMP pity.PRES.1SG$_{[ACC]}$
'I pity him whom I pity'

[1]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.

[2]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.[3] 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.

[3]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.$_{[ACC]}$ sick be.PRES.3SG$_{[NOM]}$
'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$_{[NOM]}$ from Laodicea 2PL.NOM
ussiggwaid
read.$_{[ACC]}$
'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 question 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$_{\text{ACC}}$, that.NOM was quickly
zeslagen
shattered$_{\text{NOM}}$
'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 obraził.
Jan avoid.3SG$_{[\text{GEN}]}$ REL.SG.M.ACC/GEN yesterday offend.3SG.PST$_{[\text{ACC}]}$.
'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$_{[GEN]}$ what.GEN -COMP saw$_{[ACC]}$
'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 hiearchy.

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 facts

Part II

Internal and external

Chapter 2

The committee

In Chapter **??** I introduced two parameters. In this chapter I identify linguistic counterparts of these parameters.

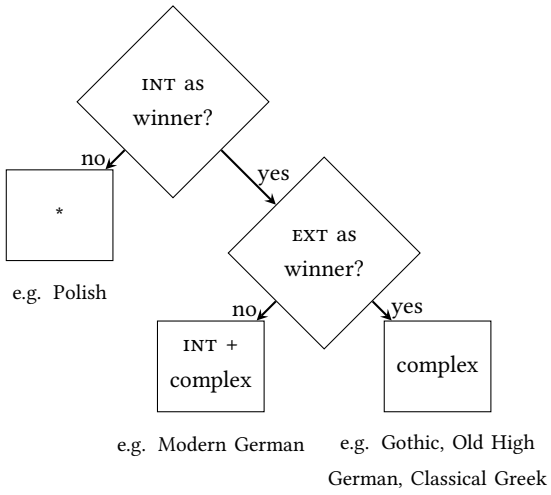


Figure 2.1: Attested patterns in headless relatives with case competition

Let me now turn to the matter of crosslinguistic differences. Every speaker of a language needs to learn what the pattern for its language is. Headless relatives are infrequent, is what can be said about at least Modern German. Even though not everybody likes the construction to begin with (they prefer (light-)headed relatives),

people seem to have the clear intuition that INT>EXT is much better than the other way around. It seems implausible that learners of German learn this pattern from the few examples they got (there are just too few to make a generalization). Still, the intuition exist. And it is very particular: more complex case wins over less complex case, but only if the internal case is more complex than the external case. This already sounds hard to learn from the input as a generalization. People have also been describing it like this: formulation from Cinque in his book. If it does not come from the input, where does it come from? I claim that it comes from other properties of the language. In Grosu's terminology: is it derived or basic? Ideally, we would want it to be derived.

A similar avenue was pursued by Himmelreich 2017. 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. Grosu 1994 linked richness of inflection to liberality. He actually talked about the richness of pro.

The crucial difference with I'm doing is that I'm not relying on an arbitrary value I assigned to a language (say null head is active probe, probing only happens upwards). Like I briefly mentioned in Chapter **??**, Nanosyntax models crosslinguistic variation as differences in the lexicon, how the features are packaged together differently. That means that I look for patterns within the languages themselves, and let the facts of the headless relatives follow from those. Specifically, I derive the different behaviors from relative pronouns and the external head that I introduce in this chapter.

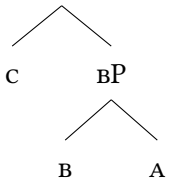
2.1 The idea

For 'allowed to surface', I make use of the same principle as I did for the case competition: refer to containment. The dative wins over the accusative, because the dative contains all features the accusative contains. The internal wins over the external, when the internal contains all features the external contains. The next section discusses what these internal and external elements actually look like.

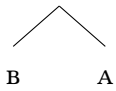
Case differs per sentence, internal external is fixed per language.

(1) int contains ext

a. INT CP

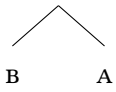


b. EXT BP

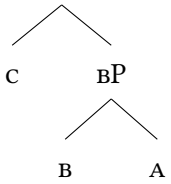


(2) ext contains int

a. INT BP

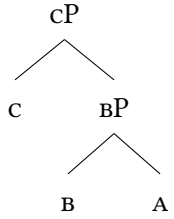


b. INT CP

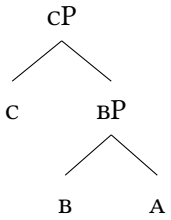


(3) ext contains int and int contains ext

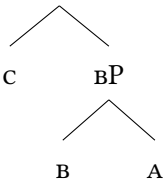
a. EXT CP



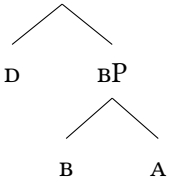
b. INT CP



(4) a. EXT CP



b. INT DP



In the following section, I show that only 1 and 2 are actually attested, and 3 and 4 are not. This is a logical consequence of the fact that the external element is a subset of the internal element. I discuss this into depth in Section 2.2.2. This excludes the third pattern, which is what we want, but it also excludes the fourth pattern, which is not what we want. I will introduce a different way to generate the fourth pattern.

2.2 The internal and external element

what are they? we see only one: the relative pronoun. however, we really need to elements! because we need to compare internal and external

you can see this very very well in modern german: it does not suffice to let the relative pronoun surfaces in the internal case. we always need a way to refer to the more complex case.

The relative pronoun in Modern German headless relatives is sensitive to both the internal and the external case. Consider the examples in (5). In both sentences, the internal case is accusative, because the predicate in the relative clause *mögen* 'to like' takes accusative objects. The external case differs between the two sentences. In (5a) the external case is dative, because the predicate *vertrauen* 'to trust' takes dative objects. In xx the external case is nominative, because *besuchen* 'to visit' takes nominative subjects.

(5) a. *Ich vertraue wen **auch Maria mag**.
I.NOM trust.1SG$_{[DAT]}$ REL.ACC.AN also Maria.NOM like.3SG$_{[ACC]}$.
'I trust whoever Maria also likes.' (adapted from Vogel 2001: 345)

b. Uns besucht **wen Maria mag**.
we.ACC visit.3SG$_{[NOM]}$ REL.ACC.AN Maria.NOM like.3SG$_{[ACC]}$
'Who visits us, Maria likes.' (adapted from Vogel 2001: 343)

The sentence in (5a) is ungrammatical, and the one in xxx is not. The internal case cannot be the source of ungrammaticality, because the relative clauses are identical regarding case, i.e. they both take accusative. The external case differs, however. In Chapter X I showed that headless relatives in Modern German are (just like e.g. Gothic) sensitive to the case scale: NOM < ACC < DAT.

(5a) is grammatical, because the internal accusative case wins over the external nominative. xx is ungrammatical, because the internal accusative case cannot win the case competition over the external dative. It can be concluded that the relative pronoun in Modern German headless relatives cares about both the internal and the external case.

In sum, even though the relative pronoun in Modern German headless relatives is always part of the relative clause, the relative pronoun also takes the external case into account. That means that the relative pronoun needs to have access to the main clause case. I propose that this can be achieved by introducing an external head to the relative clause. In Section X I show how this solves the issue.

I introduce two elements: the relative pronoun, which is always the internal element, and the external element, which contains a subset of the features of the internal element

2.2.1 The relative pronoun = internal

The sentences in (6) show that it is possible to extrapose a CP. In (6a), 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 (6b).

(6) 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 is 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)

(7) illustrates that it is impossible to extrapose a DP. The clausal object of (6) is replaced by the simplex noun phrase *die Sache* 'that matter'. In (7a) the object, marked in bold, appears in its base position. In (7b) it is extraposed, and the sentence is no longer grammatical.

(7) 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 (8) 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 (8a), the relative clause and its head appear in base position. In (8b), the relative clause is extraposed. This is grammatical, because it is possible to extrapose CPs in Modern German. In (8c), the relative clause and the head are extraposed. This is ungrammatical, because it is possible to extrapose DPs.

(8) 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.'

The same can be observed in relative clauses without a head. (9) is the same sentence as in (8) only without the overt head. The relative clause is marked in bold again. In (9a), the relative clause appears in base position. In (9b), the relative clause is extraposed. This is grammatical, because it is possible to extrapose CPs in Modern German. In (9c), 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.

(9) 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.'

In conclusion, extraposition facts show, that the relative pronoun in Modern German is syntactically part of the relative clause.

2.2.2 The other element = external

Like I said, we need an element here. But where and how? Well, there are actually languages that show we have it! The existence of this element is independently motivated by languages that overtly show it. I show that this element contains a subset of the features that the relative pronoun contains. I placee the external head in a syntactic position from which it is c-commanded by the relative pronoun and it can receive case from the main clause predicate.

There is independent evidence for this head, namely from languages that actually let the head surface. Here there are two identical copies of the head, one inside the relative clause, one outside of the relative clause.

(10) [**doü** adiyano-no] **doü** deyalukhe
sago give.3PL.NONFUT-CONN sago finished.AJD
'The sago that they gave is finished.' (Kombai, Dryer 2005)

I give an example of a language in which the external head follows the relative clause. There are also languages in which the head precedes the relative clause, e.g. xx

The external head is not always an exact copy of the head inside of the relative clause. An example from xx here shows that the head outside of the relative clause can also be a subset of what the element inside of the relative clause is. In this case, there is an *old man* and a *person*.

(11) [**yare** gamo khereja bogi-n-o] **rumu** na-momof-a
old man join.SS work DUR.do.3SG.NF-TR-CONN person my-uncle-PRED
'The old man who is joining the work is my uncle.'

So, we have the head. Translating this to relative pronouns, there is the relative pronoun, and something identical or smaller than a relative pronoun outside of the relative clause. In Chapter X I show what the feature content of the head exactly is.

Let me now show how this solves the external case problems and how it helps exclude some languages.

indefinite noun, as cinque and the content of the external head visible in some languages

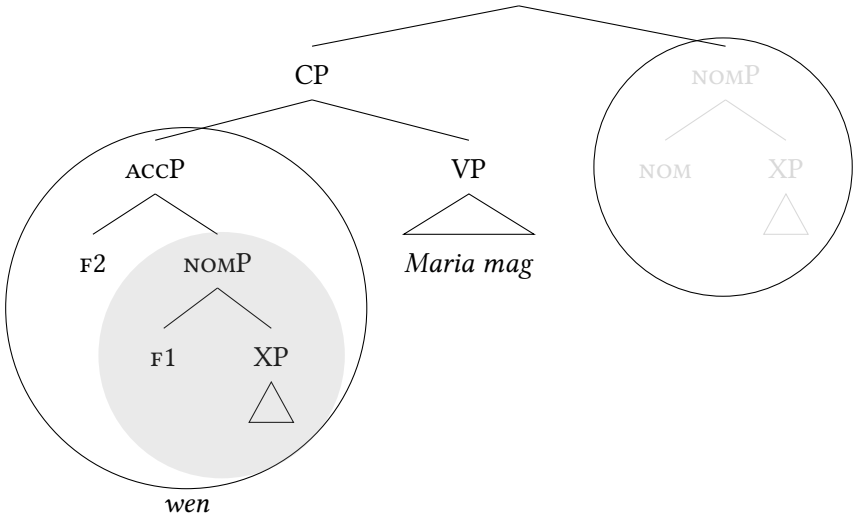
Where is this head in the syntactic structure?

- Somewhere where the relative pronoun can delete it: where it is c-commanded by the relative pronoun
- Somewhere where it can receive case from the main clause
- Where it normally is in SOV languages (does the thing in Polish move because it is a svo language?)

x

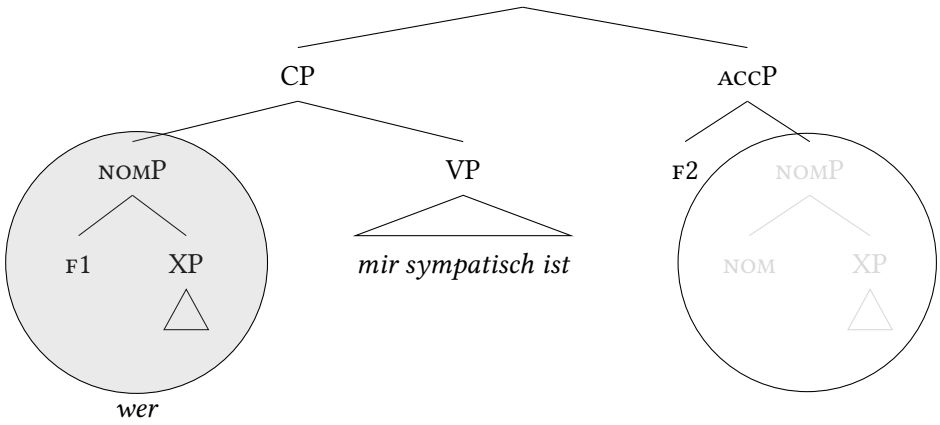
So this works.

(12)



But here it does not.

(13)



x

2.3 Deriving the patterns

2.3.1 Deriving internal-and-external

Old High German

featural content of relative pronoun

Table 2.1: Relative pronouns in headless relatives in Old High German

	N.SG	M.SG	feminine.SG
NOM	d-az	d-ër	d-iu
ACC	d-az	d-ën	d-ea/-ia/(-ie)
DAT	d-ëmu/-ëmo	d-ëmu/-ëmo	d-ëru/-ëro
	N.PL	M.PL	feminine.PL
NOM	d-iu/-ei	d-ē/-ea/-ia/-ie	d-eo/-io
ACC	d-iu/-ei	d-ē/-ea/-ia/-ie	d-eo/-io
DAT	d-ēm/-ēn	d-ēm/-ēn	d-ēm/-ēn

featural content of external head

(14) **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.

(15) **Cyclic Override** (Starke, 2018):
Lexicalisation at a node XP overrides any previous match at a phrase contained in XP.

If the spellout procedure in (14) fails, backtracking takes place.

(16) **Backtracking** (Starke, 2018):
When spellout fails, go back to the previous cycle, and try the next option for that cycle.

If backtracking also does not help, a specifier is constructed.

(17) **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.

(18) Merge F, Move XP, Merge XP

show how internal-wins works show how external-wins works

2.3.2 Deriving internal-only

Modern German

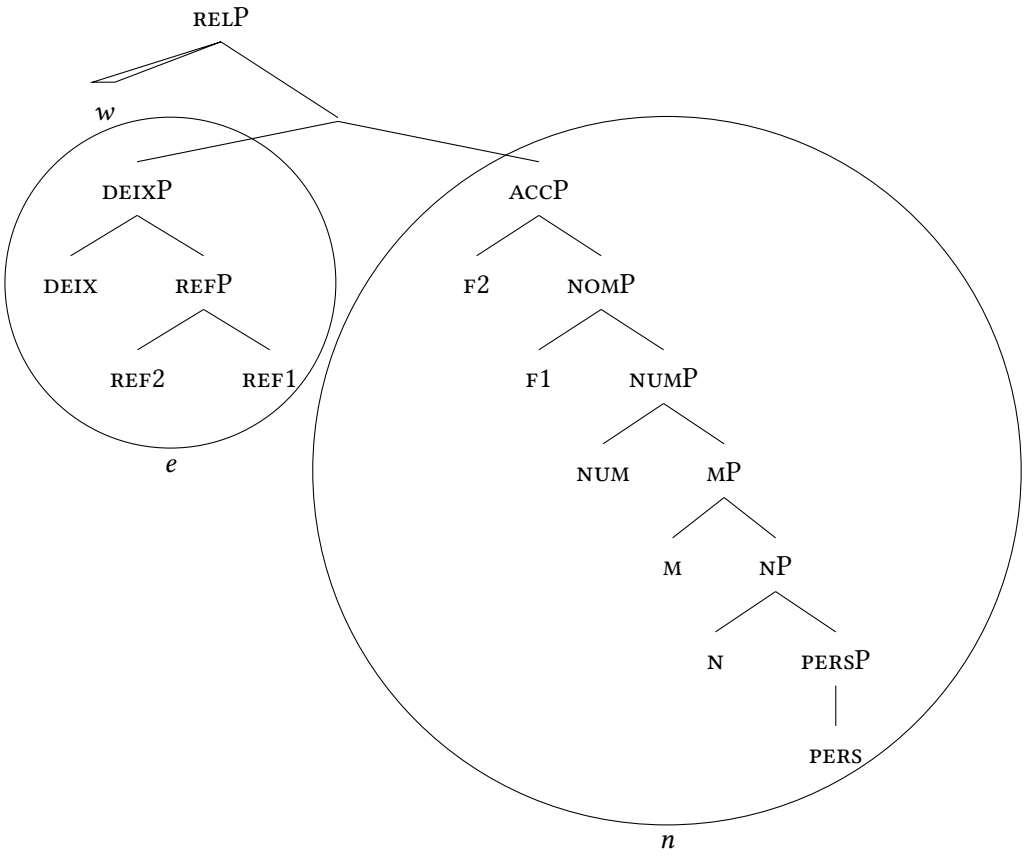
featural content of relative pronoun

Table 2.2: Relative pronouns in headless relatives in Modern German

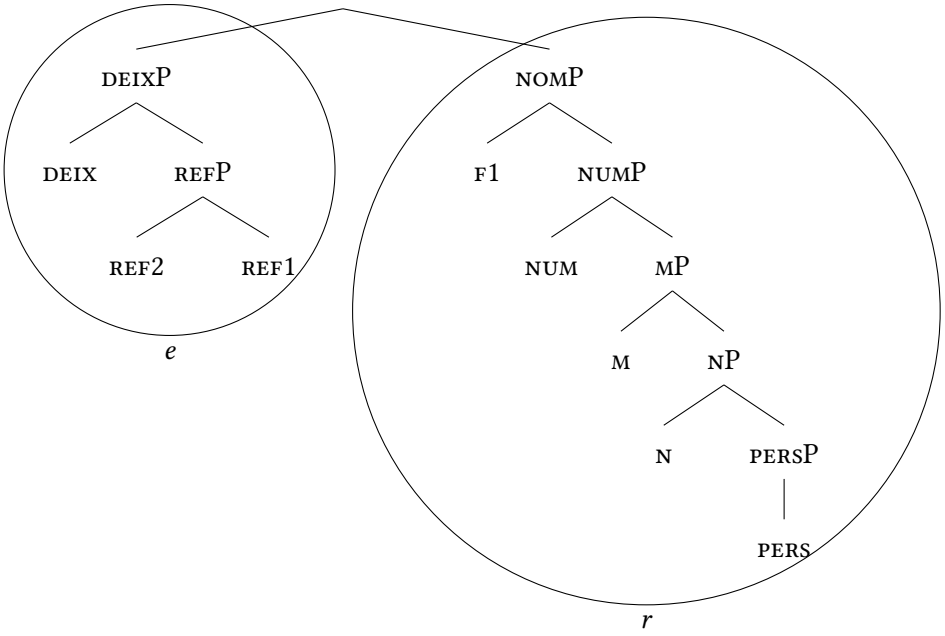
	inanimate	animate
NOM	w-as	w-er
ACC	w-as	w-en
DAT	-	w-em

featural content of external head

So German relative pronoun:



and German head:



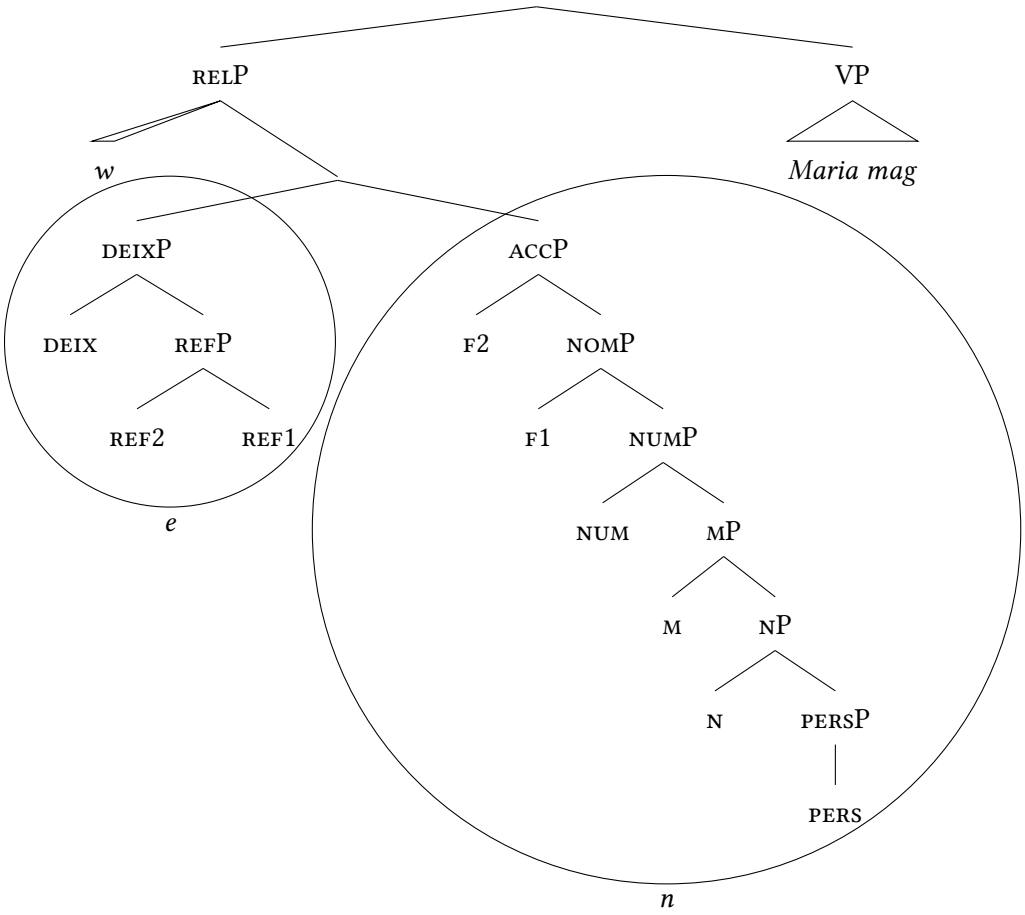
show how internal-wins works show how external-wins does not work
Florian with his am Main

(19) Uns besucht **wen** **Maria** **mag**.
we.ACC visit.3SG$_{[NOM]}$ REL.ACC.AN Maria.NOM like.3SG$_{[ACC]}$
'Who visits us, Maria likes.' (adapted from Vogel 2001: 343)

Internal structure of the relative clause.

w got merged as a complex spec. F1 and F2 ended up there via backtracking: taking *w* off, spec to spec movement, and spelling it out with the suffix.

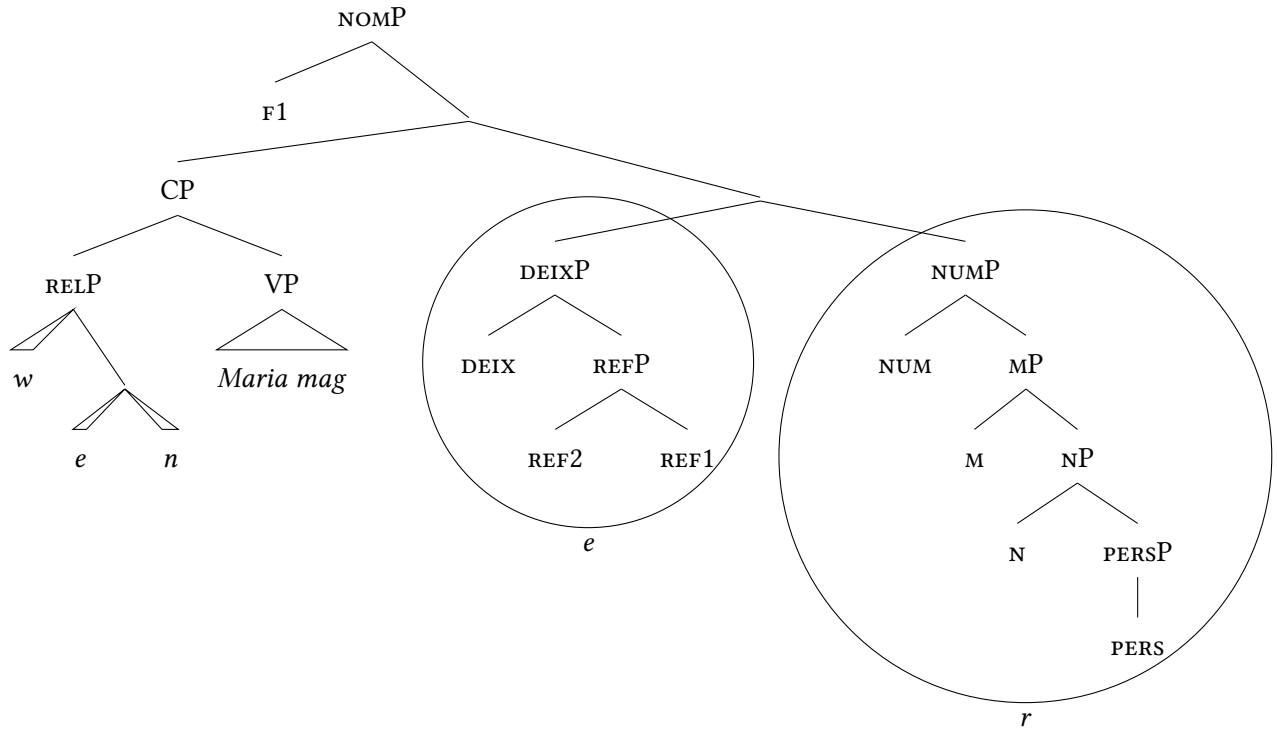
(20)



Structure of the relative clause + the external head that is going to be deleted.

Case is merged above the relative clause. Backtracking takes place, meaning that the relative clause and the head are going to be split up again. Then it can be spelled out with the suffix of the head after spec-to-spec movement.

(21)

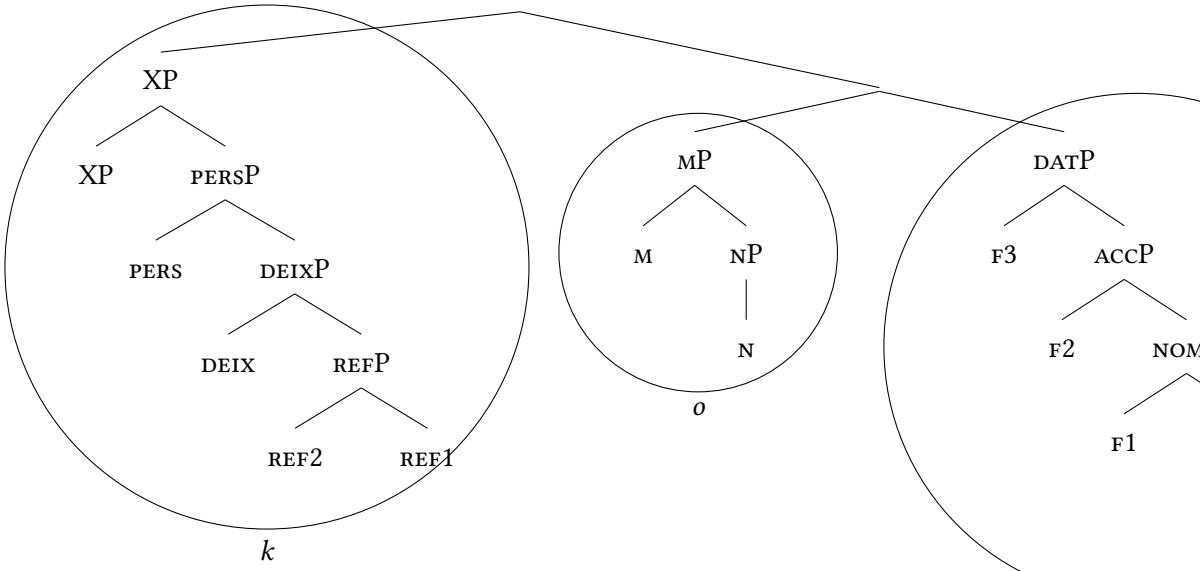


2.3.3 Deriving neither

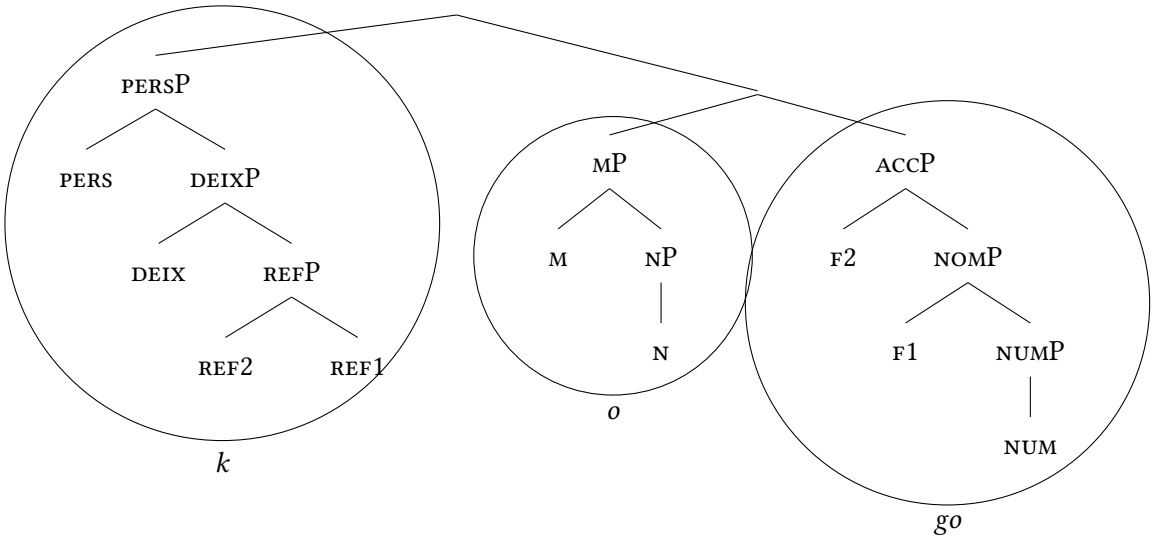
Polish

featural content of relative pronoun featural content of external head

Polish relative pronoun



Polish head



show how internal-wins does not work show how external-wins does not work
Radek with his definitnessless of Czech demonstratives

2.3.4 Excluding external-only

x

2.4 Alternative analyses

2.4.1 Himmelreich

2.4.2 Grafting story

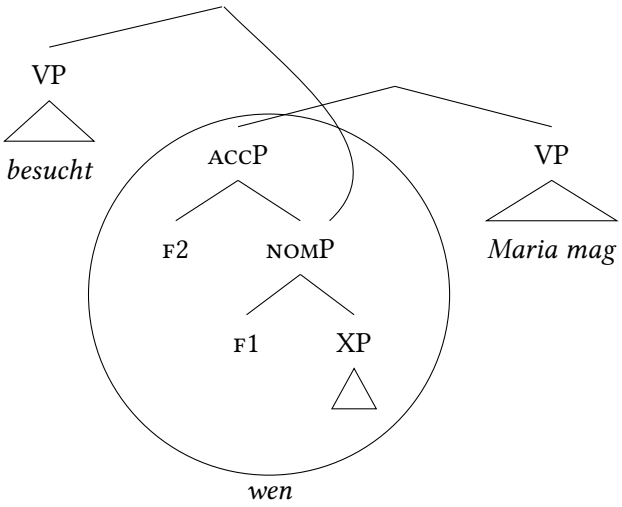
For this pattern a single element analysis seems intuitive, if you assume that case is complex and that syntax works bottom-up. First you built the relative clause, with the big case in there. Then you build the main clause and you let the more complex case in the embedded clause license the main clause predicate.

Consider the example in (22). Here the internal case is accusative and the external one nominative.

(22) Uns besucht **wen** **Maria** **mag**.
we.ACC visit.3SG$_{[NOM]}$ REL.ACC.AN Maria.NOM like.3SG$_{[ACC]}$
'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.

(23)

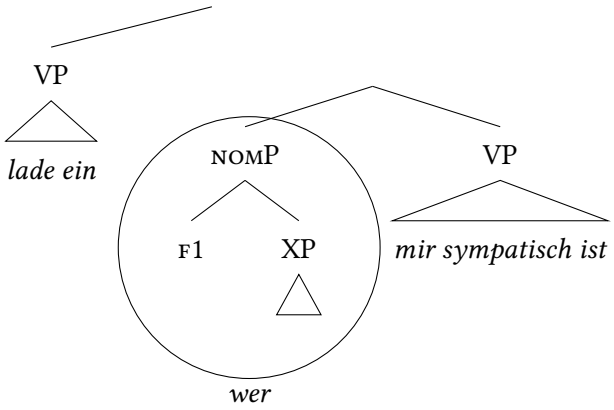


The other way around does not work. Consider (24). This is an example with nominative as internal case and accusative as external case.

(24) *Ich lade ein, wen **mir sympathisch ist**.
I.NOM invite.1SG$_{[ACC]}$ REL.ACC.AN I.DAT nice be.3SG$_{[NOM]}$
'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.

(25)



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.

2.5 Summary

here

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.

3.2 D also in Modern German

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.

3.3 Why FEM does not have WH-pronouns

3.4 Relativization in general

two features: topic and relativization topic = the movement relativization = the morpheme some languages have both, so it has be at least two features

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

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.'

x

Primary texts

Col. Colossians, New Testament

John John, New Testament

Luke Luke, New Testament

Nib. Das Nibelungenlied

Rom. Romans, New Testament

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