

CASE COMPETITION IN HEADLESS RELATIVES

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Contents

Contents	ii
List of tables	iv
List of figures	v
List of abbreviations	vii
 I Case competition	 1
 II The typology	 3
 III Deriving the typology	 5
1 Deriving the unrestricted type	7
1.1 The Old High German German relative pronoun	12
1.2 The Old High German light head	14
1.2.1 The extra light head	14
1.2.2 The light head	15
1.3 Comparing constituents	16
1.4 Possible predictions	23
 Primary texts	 25

Contents

iii

Bibliography

27

List of tables

1.1	Grammaticality in the unrestricted type (part 1)	7
1.2	Grammaticality in the unrestricted type (part 2)	10
1.3	Relative/demonstrative pronouns in Old High German (Braune 2018: 339)	13
1.4	Adjectives on <i>-a/-ō-</i> in Old High German Braune 2018: 300	13

List of figures

1.1	LH-1 and RP in the unrestricted type	8
1.2	LH-1 and RP in Old High German	9
1.3	LH-2 and RP in the unrestricted type	10
1.4	LH-2 and RP in Old High German	11
1.5	Old High German EXT _{NOM} VS. INT _{NOM} \rightarrow <i>dher</i> (ELH)	18
1.6	Old High German EXT _{NOM} VS. INT _{NOM} \rightarrow <i>dher</i> (ELH)	19
1.7	Old High German EXT _{NOM} VS. INT _{ACC} \rightarrow <i>then</i>	22

List of abbreviations

ACC	accusative
AN	animate
DAT	dative
DEM	demonstrative
ELH	extra light head
GEN	genitive
INF	infinitive
M	masculine
NOM	nominative
N	neuter
PL	plural
PRES	present tense
PST	past tense
PTCP	participle
REL	relative marker
SG	singular

Part I

Case competition

Part II

The typology

Part III

Deriving the typology

Chapter 1

Deriving the unrestricted type

In Chapter ??, I suggested that languages of the unrestricted type have two possible light heads, which are part of the derivation under different circumstances. The first possible light head can part of the derivation used when the internal and external case match, and it appears when the internal case is more complex than the external one. The second possible light head can be part of the derivation when the internal and the external case too, and it appears when the external case is more complex than the internal one.

In the first possible light head, the light head corresponds to the phi- and case-feature part of the relative pronoun. The phi- and case-features are spelled out by a portmanteau morpheme, just as they are in the internal-only type of language. This means that the features of the relative pronoun and the light head are spelled out in such a way that they form the constituents shown in Figure ??.

These lexical entries lead to a grammaticality pattern as shown in Table 1.1.

Table 1.1: Grammaticality in the unrestricted type (part 1)

situation	lexical entries		containment	deleted	surfacing
	LH	RP			
$K_{INT} = K_{EXT}$	$[K_1[\phi]]$	$[REL], [K_1[\phi]]$	structure	LH	RP_{INT}
$K_{INT} > K_{EXT}$	$[K_1[\phi]]$	$[REL], [K_2[K_1[\phi]]]$	structure	LH	RP_{INT}

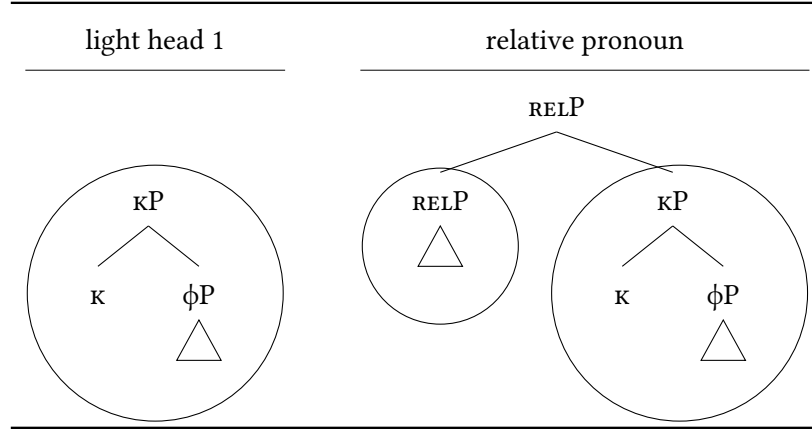


Figure 1.1: LH-1 and RP in the unrestricted type

First consider the situation in which the internal and the external case match. The situation here is identical to the one in the internal-only type of language. The light head consists of a phi- and case-feature portmanteau. The relative pronoun consists of the same morpheme plus an additional morpheme that spells out the feature REL. These lexical entries create such syntactic structures that the light head structurally forms a constituent within the relative pronoun. Therefore, the light head can be deleted, and the relative pronoun that bears the internal case surfaces.

Consider now the situation in which the internal case wins the case competition. Here the situation is identical to the one in the internal-only type of language too. The light head consists of a phi- and case-feature portmanteau. The relative pronoun consists of a phi- and case-feature portmanteau that contains at least one more case feature than the light head (κ_2 in Figure 1.1) plus an additional morpheme that spells out the feature REL. These lexical entries create such syntactic structures that the light head structurally forms a constituent within the relative pronoun. Therefore, the light head can be deleted, and the relative pronoun that bears the internal case surfaces.

In Chapter ??, I showed that Old High German is a language of the unrestricted type. In this chapter, I show that Old High German has light heads and relative pronouns of the type of structure described in Figure 1.1. I give a compact version of the structures in Figure 1.2.

Consider the first possible light head in Figure 1.2. These light heads (i.e. phi-

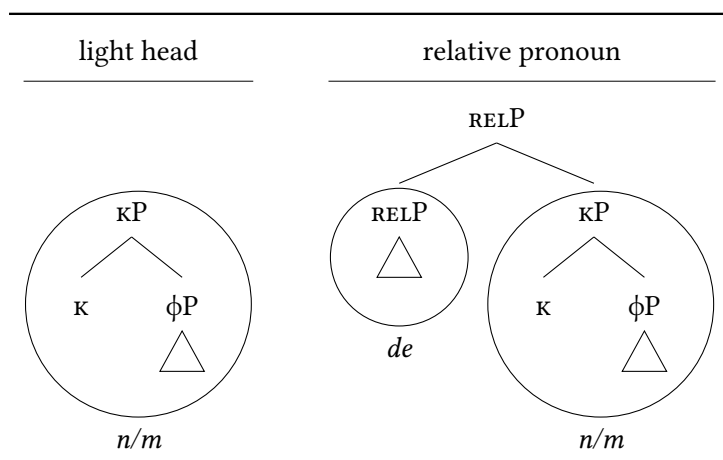


Figure 1.2: LH-1 and RP in Old High German

and case-features) in Old High German are spelled out by a single morpheme, indicated by the circle around the structure. They are spelled out as *n* or *m*, depending on which case they realize. Consider the relative pronoun in Figure 1.2. Relative pronouns in Old High German consist of two morphemes: the constituent that forms the light head (i.e. phi- and case features) and the RELP, again indicated by the circles. The RELP is spelled out as *de*. Throughout this chapter, I discuss the exact feature content of relative pronouns and light heads, I give lexical entries for them, and I show how these lexical entries form the constituents shown in Figure 1.2.

In the second possible light head, the light head corresponds to the phi- and case-feature part of the relative pronoun plus an additional feature *X*. This feature *X* is also present in the morpheme that spells out the feature REL. The phi- and case-features are still spelled out by a portmanteau morpheme. The feature *X* is spelled out by a separate morpheme, which is the same morpheme that spells out *X* plus the feature REL. This means that the features of the relative pronoun and the light head are spelled out in such a way that they form the constituents shown in Figure 1.3.

These lexical entries lead to a grammaticality pattern as shown in Table 1.2.

First consider the situation in which the internal and the external case match. The light head consists of a phi- and case-feature portmanteau and a morpheme that spells out the feature *X*, which corresponds to phonological form *X*. The relative

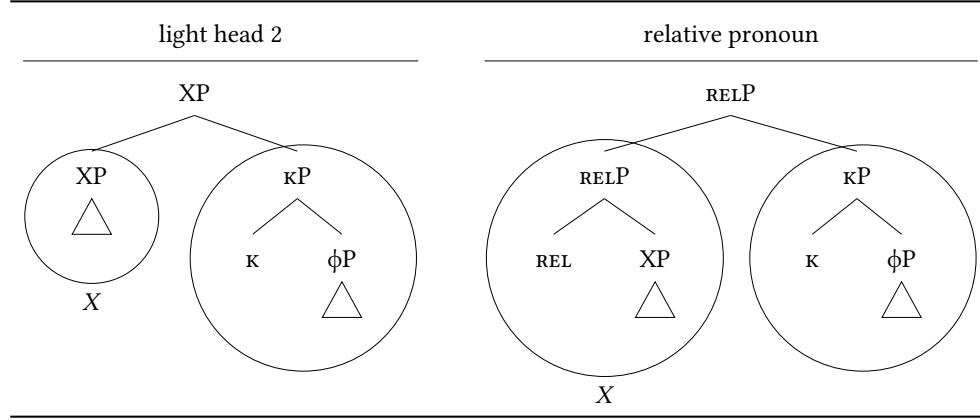


Figure 1.3: LH-2 and RP in the unrestricted type

Table 1.2: Grammaticality in the unrestricted type (part 2)

situation	lexical entries		containment	deleted	surfacing
	LH	RP			
$\kappa_{\text{INT}} = \kappa_{\text{EXT}}$	/X/, /Y/	/X/, /Y/	form	RP	LH_{EXT}
$\kappa_{\text{INT}} < \kappa_{\text{EXT}}$	/X/, /Y/	/X/, /Y/	form	RP	LH_{EXT}

pronoun consists of the same phi- and case-feature morpheme and a morpheme that spells out the feature X and the feature REL, which corresponds to the phonological form X too. When the internal and the external case match, the phonological form corresponding to the phi- and case features is identical between the light head and the relative pronoun too. These lexical entries create such syntactic structures that the light head and the relative pronoun are formally identical. Since there is formal containment, one of the elements can be deleted, and the other one surfaces with its case.

Consider now the situation in the external case wins the case competition. The light head consists of a phi- and case-feature portmanteau and a morpheme that spells out the feature X, which corresponds to phonological form X. The relative pronoun consists of the same phi- and case-feature morpheme and a morpheme that spells out the feature X and the feature REL, which corresponds to the phono-

logical form X too. When the external case is more complex than the internal case (i.e. when the two cases differ), the phonological forms corresponding to the phi- and case features of the light head and the relative pronoun differ. However, the derivation in which the external case is more complex than the internal one goes through a stage in which the internal and the external case match. Therefore, at that stage, these lexical entries form such syntactic structures that the light head and the relative pronoun are formally identical. Since there is formal containment, one of the elements can be deleted, and the other one surfaces with its case. Then, the more complex case is merged to the remaining element.

In Chapter ??, I showed that Old High German is a language of the unrestricted type. In this chapter, I show that Old High German has light heads and relative pronouns of type of structure described in Figure 1.3. I give a compact version of the structures in Figure 1.4.

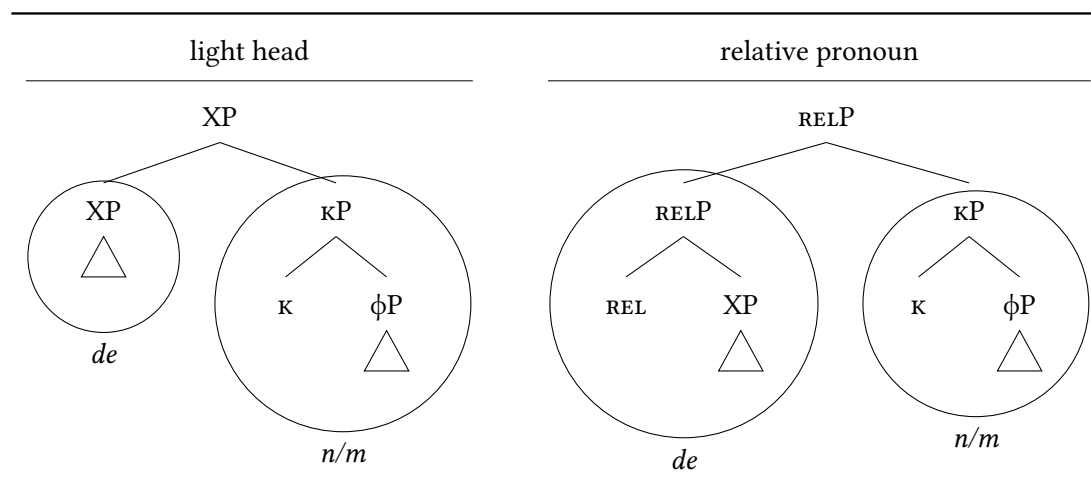


Figure 1.4: LH-2 and RP in Old High German

Consider the first possible light head in Figure 1.4. These light heads in Old High German are spelled out by two morphemes, which are both circled. The morpheme that realizes the feature X is spelled out as *de* and the phi- and case-features are spelled out as *n* or *m*, depending on which case they realize.

Consider the relative pronoun in Figure 1.4. Relative pronouns in Old High German are spelled out by the same two morphemes as the second possible light

head. There is the phi- and case-feature morpheme (spelling out as *n* or *m*) and the morpheme that spells out the feature X and in the relative pronoun also the feature REL (spelling out as *de*). Throughout this chapter, I discuss the exact feature content of relative pronouns and light heads, I give lexical entries for them, and I show how these lexical entries form the constituents shown in Figure 1.4.

This chapter is structured as follows. First, I discuss the relative pronoun. I decompose the relative pronouns into the two morphemes I showed in Figure 1.2 and 1.4, and I show which features each of the morphemes corresponds to. I illustrate how different morphemes are combined into the given constituents. Then I discuss the two possible light heads. I argue that headless relatives in Old High German can be derived from two different types of light-headed relative clauses. The first type actually surfaces in the language. The second one is the type of light-headed relative clause that does not surface in the language, just like those in Modern German and Polish. Next, I compare the constituents of the two different light heads and the relative pronoun. I show that the first possible light head can be deleted when the internal case and external case match and when the internal case is more complex than the external case via structural containment. The second possible light head can be deleted when the internal case and external case match and when the internal case is more complex than the external case via formal containment. In order to illustrate how this works, I need to make a few assumptions about the larger syntactic structure of headless relative clauses explicit.

1.1 The Old High German German relative pronoun

- relative pronoun, show that it's a D

What is different here, is that the relative pronoun is a D-pronoun instead of a WH.

Relative and demonstrative pronouns are syncretic in Old High German (Braune 2018: 338). Table 1.3 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.^{1,2}

¹*d* can also be written as *dh* and *th*, *ē* and *ē* can also be *e* and *é* (Braune 2018: 339).

²The suffix could also be further divided into a vowel and a suffix. As this is not relevant for the

Table 1.3: Relative/demonstrative pronouns in Old High German (Braune 2018: 339)

	N.SG	M.SG	F.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	F.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 1.4.

Table 1.4: Adjectives on *-a/-ō-* in Old High German Braune 2018: 300

	N.SG	M.SG	F.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	F.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

discussion here, I refrain from doing that.

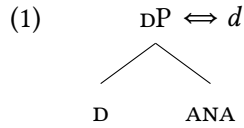
specific to being a demonstrative or relative pronoun, like anaphoricity and definiteness. I assume that these are expressed by the morpheme *d*.

split the suffix up in two morphemes

In this section, I only discuss two forms: the nominative and accusative masculine singular relative and demonstrative pronoun. The nominative is *dēr* and the accusative is *dēn*. In what follows, I discuss the feature content of the morphemes *d*, *ēr* and *ēn*. I start with the features that are expressed by the suffixes *ēr* and *ēn*.

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.



1.2 The Old High German light head

1.2.1 The extra light head

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 (10), 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.

- (2) Thíz ist then sie zéllent
 DEM.SG.N.NOM be.PRES.3SG_[NOM] REL.SG.M.ACC 3PL.M.NOM tell.PRES.3PL_[ACC]
 ‘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 (10), repeated from Chapter ?. In this example, the

author refers to the specific person who spoke to someone, and not to any or every person who spoke to someone.

- (3) enti aer ant uurta demo **zaimo**
 and 3SG.M.NOM reply.PST.3SG_[DAT] REL.SG.M.DAT to 3SG.M.DAT
sprah
 speak.PST.3SG_[NOM]
 ‘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)

1.2.2 The light head

Old High German is special because the relative pronoun in its headless relatives is syncretic with the relative pronoun in its light-headed relatives.³

This light head story never works for Modern German or Polish because for them the relative pronoun and the light head are not syncretic.

Consider the light-headed relative in (4). *Thér* ‘DEM.SG.M.NOM’ is the head of the relative clause, which is the external element. *Then* ‘RP.SG.M.ACC’ is the relative pronoun in the relative clause, which is the internal element.

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

I assume that whether both or only one of the elements surfaces is determined by information structure. In (4), 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.

³What about Modern German *der* - *der*? Modern German has two different relative pronouns, so there is actually the choice!

1.3 Comparing constituents

In this section, I compare the constituents of extra light heads and light heads to those of relative pronouns in Old High German. This is the worked out version of the comparisons in Section ???. What is different here is that I show the comparison for Old High German specifically, and that I motivated the content of the constituents that are being compared.

I give three examples, in which the internal and external case vary. I start with an example with matching cases, in which the internal and the external case are both nominative. I show that the grammaticality of the example can be derived by either taking the extra light head or by taking the light head as the present light head. Then I give an example in which the external accusative case is more complex than the internal nominative case. I show that the grammaticality of this example can only be derived by taking the light head as the present light head and not the extra light head. Before I can properly do that, I need to take a small detour into the larger syntactic structure of headless relatives. I end with an example in which the internal accusative case is more complex than the external nominative case. I show that the grammaticality of this example can only be derived by taking the extra light head as the present light head and not the light head.

I start with the situation in which the cases match. Consider the example in (5), in which the internal nominative case competes against the external nominative case. The relative clause is marked in bold. (5a) shows the example with the extra light head as the present light head and (5b) shows the example with the light head as the present light head. The internal case is nominative, as the predicate *senten* ‘to send’ takes nominative subjects. In both examples, the relative pronoun *dher* ‘REL.SG.M.NOM’ appears in the nominative case. The external case is nominative as well, as the predicate *queman* ‘to come’ also takes nominative subjects. In (5a), the extra light head *r* ‘ELH.SG.M.NOM’ appears in the nominative case. It is placed between square brackets because it does not surface. In (5b), the light head *dher* ‘DEM.SG.M.NOM’ appears in the nominative case. Here the relative pronoun is placed between square brackets because it does not surface.

- (5) a. quham [r] **dher** **chisendit**
 come.PST.3SG_[NOM] ELH.SG.M.NOM REL.SG.M.NOM send.PST.PTCP_[NOM]
scolda **uuerdhan**
 should.PST.3SG become.INF
 ‘the one, who should have been sent, came’
 (Old High German, Isid. 35:5)
- b. quham dher [**dher**] **chisendit**
 come.PST.3SG_[NOM] DEM.SG.M.NOM REL.SG.M.NOM send.PST.PTCP_[NOM]
scolda **uuerdhan**
 should.PST.3SG become.INF
 ‘the one, who should have been sent, came’
 (Old High German, Isid. 35:5)

Both examples in (5) can be the underlying light-headed relative clause for the head-less relative. First I show the comparison of the two constituents for (5a) and then the one for (5b).

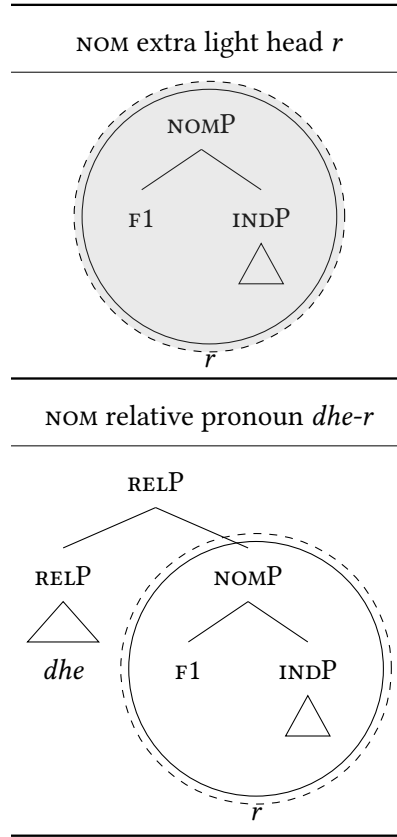
In Figure 1.5, I give the syntactic structure of the extra light head at the top and the syntactic structure of the relative pronoun at the bottom.

The relative pronoun consists of two morphemes: *dhe* and *r*. The extra light head consists of a single morpheme: *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, or I reduce the structure to a triangle, and I place the corresponding phonology under it. I draw a dashed circle around each constituent that is a constituent in both the extra light head and the relative pronoun.

The extra light head consists of a single constituent: the *NOMP*. This *NOMP* is also a constituent within the relative pronoun. Therefore, the extra light head can be deleted. I signal the deletion of the extra light head by marking the content of its circle gray.

In Figure 1.6, I give the syntactic structure of the extra light head at the top and the syntactic structure of the relative pronoun at the bottom.

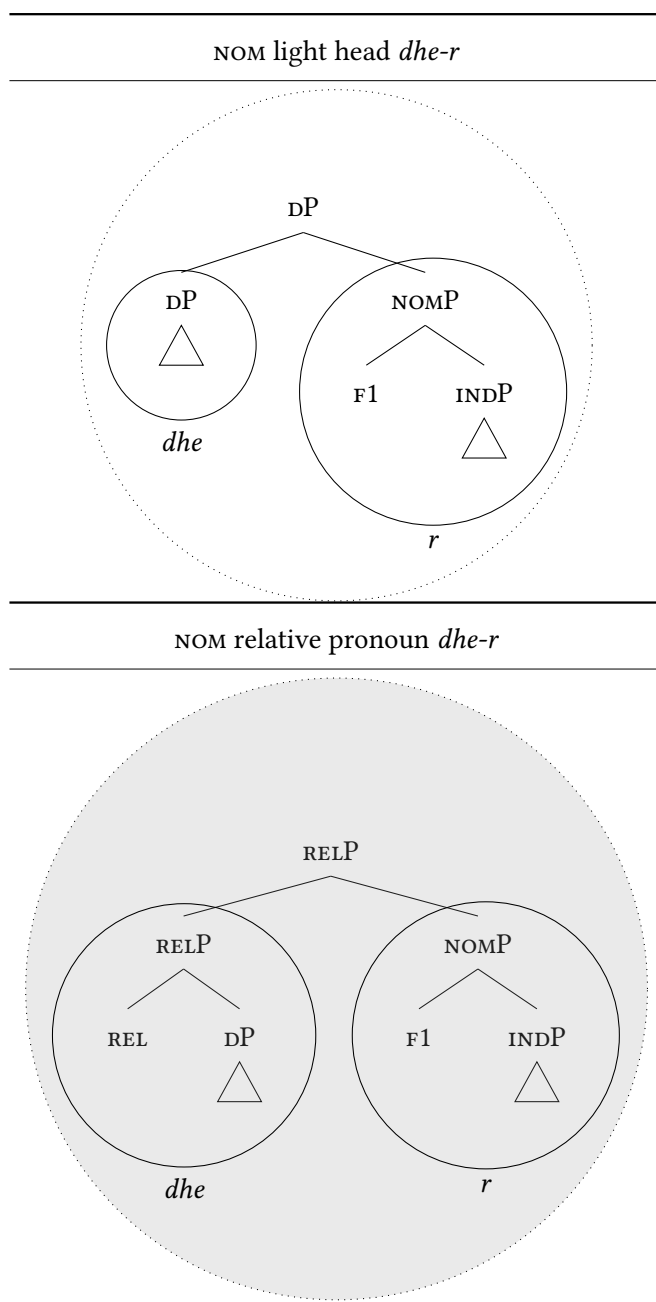
The relative pronoun consists of two morphemes: *dhe* and *r*. The light head also consists of two morphemes: *dhe* and *r*. I circle the part of the structure that corresponds to a particular lexical entry, and I place the corresponding phonology under

Figure 1.5: Old High German EXT_{NOM} VS. $\text{INT}_{\text{NOM}} \rightarrow dher$ (ELH)

it, or I reduce the structure to a triangle, and I place the corresponding phonology under it. I draw a dotted circle around each constituent that is a constituent in both the light head and the relative pronoun.

The light head (the dP realized by *dher*) is syncretic with the relative pronoun (the RELP realized by *dher*). As the two forms are entirely syncretic, either the light head or the relative pronoun can be deleted. I delete the relative pronoun here, as I discuss the situation in which the relative pronoun is deleted. I illustrate this by marking the content of the dotted circle for the relative pronoun gray.

I continue with the situation in which the external case is the more complex one. Consider the examples in (7), in which the internal nominative case competes against the external accusative case. The relative clause is marked in bold. The sur-

Figure 1.6: Old High German EXT_{NOM} vs. $\text{INT}_{\text{NOM}} \rightarrow \text{dher}$ (ELH)

face pronoun is *dhen* ‘DEM.SG.M.ACC’. The internal case is nominative, as the predicate *gisizzen* ‘to possess’ takes nominative subjects. The external case is accusative, as the predicate *bibringan* ‘to create’ takes accusative objects.

The relative pronoun *dher* ‘REL.SG.M.NOM’ appears in the nominative case. The light head appears in the accusative case. This is the element that surfaces.

I end with the situation in which the external case is the more complex one. Consider the examples in ??, in which the internal accusative case competes against the external dative case. The relative clauses are marked in bold. It is not possible to make a grammatical headless relative in this situation. 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. The external case is dative, as the predicate *vertrauen* ‘to trust’ takes dative objects. The extra light head *m* ‘ELH.AN.DAT’ appears in the dative case. ?? is the variant of the sentence in which the extra light head is absent (indicated by the square brackets) and the relative pronoun surfaces, and it is ungrammatical. ?? is the variant of the sentence in which the relative pronoun is absent (indicated by the square brackets) and the extra light head surfaces, and it is ungrammatical too.

- (6) *ih* *bibringu* *fona iacobes* *samin* *endi fona*
 1SG.NOM create.PRES.1SG_[ACC] of Jakob.GEN seed.SG.DAT and of
 iuda [n] ***dher*** ***mina***
 Judah.DAT REL.SG.M.ACC my.ACC.M.PL mountain.ACC.PL
 berga ***chisitzit***
 possess.PRES.3SG_[NOM]
 ‘I create of the seed of Jacob and of Judah the one, who possess my mountains’

(Old High German, Isid. 34:3)

- (7) *ih* *bibringu* *fona iacobes* *samin* *endi fona*
 1SG.NOM create.PRES.1SG_[ACC] of Jakob.GEN seed.SG.DAT and of
 iuda *dhen* [***dher***] ***mina***
 Judah.DAT REL.SG.M.ACC my.ACC.M.PL mountain.ACC.PL

berga**chisitzit**possess.PRES.3SG_[NOM]

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

(Old High German, Isid. 34:3)

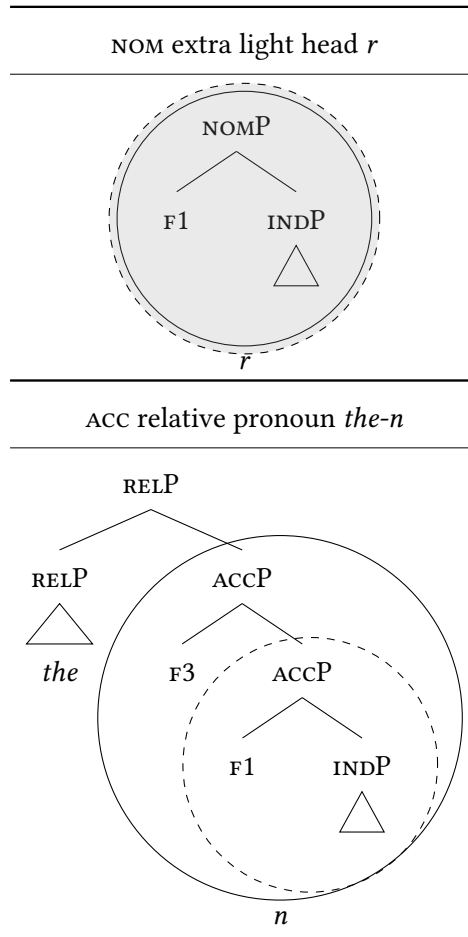
- ext wins doesn’t work, so first larger syntactic structure: head needs to be up there, for instance *cinque* (he also says we need to have it up there) then: yes, at some point in the derivation, and then merge the *k2*

I continue with the situation in which the internal case is the more complex one. Consider the example in (9), in which the internal accusative case competes against the external nominative case. The relative clause is marked in bold. The internal case is accusative, as the predicate *zellen* ‘to tell’ takes accusative objects. The relative pronoun *then* ‘REL.SG.M.ACC’ appears in the accusative case. This is the element that surfaces. The external case is nominative, as the predicate *sin* ‘to be’ takes nominative objects. The light head *r* ‘ELH.SG.M.NOM’ appears in the nominative case. It is placed between square brackets because it does not surface.

- (8) Thíz ist [r] **then** **sie**
 DEM.SG.N.NOM be.PRES.3SG_[NOM] DEM.SG.M.NOM REL.SG.M.ACC 3PL.M.NOM
zëllent
 tell.PRES.3PL_[ACC]
 ‘this is the one whom they talk about’ (Old High German, Otfrid III 16:50)
- (9) Thíz ist ther **[then]** **sie**
 DEM.SG.N.NOM be.PRES.3SG_[NOM] DEM.SG.M.NOM REL.SG.M.ACC 3PL.M.NOM
zëllent
 tell.PRES.3PL_[ACC]
 ‘this is the one whom they talk about’ (Old High German, Otfrid III 16:50)

In Figure 1.7, I give the syntactic structure of the extra light head at the top and the syntactic structure of the relative pronoun at the bottom.

The relative pronoun consists of two morphemes: *the* and *n*. The extra light head consists of a single morpheme: *r*. Again, I circle the part of the structure that corre-

Figure 1.7: Old High German EXT_{NOM} vs. $\text{INT}_{\text{ACC}} \rightarrow \text{then}$

sponds to a particular lexical entry, and I place the corresponding phonology under it, or I reduce the structure to a triangle, and I place the corresponding phonology under it. I draw a dashed circle around each constituent that is a constituent in both the extra light head and the relative pronoun.

The extra light head consists of a single constituent: the NOMP . This NOMP is also a constituent within the relative pronoun. Therefore, the extra light can be deleted. I signal the deletion of the extra light head by marking the content of its circle gray.

1.4 Possible predictions

- possible prediction: ext>int = def, int>ext = wh, not what we see, show 4 examples

Consider the example in (10), 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.

- (10) Thíz ist then sie zéllent
 DEM.SG.N.NOM be.PRES.3SG_[NOM] REL.SG.M.ACC 3PL.M.NOM tell.PRES.3PL_[ACC]
 ‘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 (11), repeated from Chapter ?? . In this example, the author refers to the specific person who spoke to someone, and not to any or every person who spoke to someone.

- (11) enti aer ant uurta demo zaimo
 and 3SG.M.NOM reply.PST.3SG_[DAT] REL.SG.M.DAT to 3SG.M.DAT
 sprah
 speak.PST.3SG_[NOM]
 ‘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)

Primary texts

Isid. Der althochdeutsche Isidor

Mons. The Monsee fragments

Otfrid Otfrid's Evangelienbuch

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