Case competition in headless relatives

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Contents

List of tables

Chapter 2

Chapter 3

Chapter 4

List of abbreviations

1	first person
3	third person
ACC	accusative
AN	animate
DAT	dative
EXT	external case
F	feminine
INAN	inanimate
INT	internal case
M	masculine
MG	Modern German
N	neuter
NOM	nominative
OHG	Old High German
PL	plural
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 noun, i.e. headless relatives.

I show that one aspect about case competition in headless relatives holds for all languages (under discussion here at least). That is, there is a fixed order which decides which case wins the competition. Another aspect of case competition in headless relatives differs per language. That is, whether the competition takes place to begin with. I connect this variable to the morphology of the language in question.

This phenomenon has been described as some special property of a few special languages. Therefore, language-specific rules have been postulated to account for the data. My goal is to show that this phenomenon can be captured with 'normal' syntactic processes, like ellipsis, c-command. The account makes predictions about how a language behaves based on the shape of its relative pronouns. And we see that the phenomenon is actually more wide-spread than what has been assumed.

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 The title

First, case marks the grammatical role of the noun phrases. Case also appears on relative pronoun. Case on head noun can differ from case on relative pronoun. What

happens if there is no noun? Two cases come together on the relative pronoun. What holds for all languages: there is a fixed order of who wins the competition. Specific from language to language: when does the competition take place?

Languages can use case to mark the grammatical role of a noun phrase in a clause. Consider the two Modern German sentences in (1). The case marking of the noun phrases is reflected on the determiner in the noun phrase. In (1a), *der* in *der Lehrer* 'the teacher' is marked as nominative, and it is the subject of *mag* 'likes'. *Den* in *den Schüler* 'the student' is marked as accusative, and it is an object of *mag* 'likes'. In (1b), the roles are reversed: *der* in *der Schüler* 'the student' is marked as nominative and it is the subject of *mag* 'likes'. *Den* in *den Lehrer* 'the teacher' is marked as accusative and it is the object of *mag* 'likes'. The grammatical roles of the noun phrases in (1) can also be derived from the positioning in the clause. The subjects precede the predicate *mag* 'likes' and the objects follow it. As it is not relevant for the discussion here, I ignore the positioning of noun phrases in the clause from now on.

(1) a. Der Lehrer mag den Schüler.
the.NOM teacher likes the.ACC student
'The teacher likes the student.'

b. Der Schüler mag den Lehrer.
the.NOM student likes the.ACC
'The student likes the teacher.'

Not only full noun phrases, but also other elements can be marked for case, such 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 consist of a main clause that is modified by a relative clause, which is placed between brackets. In (2a), the relative clause *der nach draußen guckt* 'that looks outside' modifies *den Schüler* 'the student'. *Den Schüler* 'the student' is called the head (noun) or the antecedent of the relative clause. *Den* in *den Schüler* 'the student' is marked as accusative, because it is the object of *mag* 'likes' in the main clause. The relative pronoun *der* 'that.NOM' is marked as nominative, because it is the subject of *guckt* 'looks' in the relative clause. So, the case of the

head noun *den Schüler* 'the student' differs from the case of the relative pronoun *der* 'that.NOM', because they each have their own grammatical function in their clauses.

In (2b), the relative clause *den er beim Verstecktspiel sucht* 'that he is searching for playing hide-and-seek' modifies *den Schüler* 'the student'. *Den* in *den Schüler* 'the student' is again marked as accusative, because it is the object of *mag* 'likes' in the main clause. The relative pronoun *den* 'that.ACC' is marked as accusative, because it is the object of *sucht* 'searches' in the relative clause. Here both the head noun *den Schüler* 'the student' and the relative pronoun *der* 'that.ACC' are both marked for accusative, because of their grammatical roles in their respective clauses.

(2) a. Der Lehrer mag den Schüler, [der nach draußen guckt].
the.NOM teacher likes the.ACC student that.NOM to outside looks
'The teacher likes the student that is looking outside.'

b. Der Lehrer mag den Schüler, [den er beim
the.NOM teacher likes the.ACC student that.ACC he at the
Verstecktspiel sucht].
hide-and-seek game searches
'The teacher likes the student that he is searching for playing hide-and-seek.'

The construction under investigation in this dissertation is a headless relative, i.e. a relative clause that does not have a head noun. As the name suggests, this type of relative clause lacks a head noun.[1] Consider the Gothic example of a headless relative in (3). The relative clause *þan -ei arma* 'who I pity' is placed between brackets. The relative pronoun is the object of *arma* 'pity', and it is marked as accusative. There is no head noun in the main clause for the relative pronoun to modify.

(3) gaarma [þan -ei arma]
pity$_{[ACC]}$ who.ACC -COMP pity$_{[ACC]}$
'I will pity him whom I pity' (Gothic, Rom. 9:15, after Harbert 1978: 339)

[1] This 'missing noun' has been interpreted in two different ways. Some researchers argue that the noun is actually absent, cf. Van Riemsdijk 2006. Others claim that there is actually a head noun, but it is phonologically zero, Himmelreich 2017. At this point in the discussion it is irrelevant which of the two is correct. I return to this issue in Chapter 5.

What happens with the case that is assigned by the predicate in the main clause, *gaarma* 'pity'? Unlike in the headed relatives, there is only a single element that can carry case. We cannot say anything about that, because *gaarma* 'pity' also assigns accusative. We cannot see whether the accusative comes from within the relative clause, from outside of the clause, or if its both.

then the cases can differ then, there is a case conflict

there we have case competition in headless relatives this thesis discusses different aspects of this phenomenon

(4) [þan -ei frijos] siuks ist
who.ACC -COMP love$_{[ACC]}$ sick is$_{[NOM]}$
'the one whom you love is sick' (Gothic, John 11:3, after Harbert 1978: 342)

(5) jah [þo -ei ist us Laudeikaion] jus ussiggwaid
and what.ACC -COMP is$_{[NOM]}$ from Laodicea you read$_{[ACC]}$
'and read that which is from Laodicea'
(Gothic, Col. 4:16, after Harbert 1978: 357)

1.2 Three parts

first, what holds for all languages is that there is a single order: highest in the hierarchy wins in the first part, I..

secondly I adress an aspect that differs across languages that is, not all languages are like gothic I connect this crosslinguistic variation to morphology.. so i reduce it to differences in the lexicon

finally, i show how all of this can be derived in derivations

Part I

The constant case complexity

Chapter 2

A reoccurring pattern

2.1 Case competition in Gothic headless relatives

(1) INT:NOM, EXT:ACC

a. NOM not attested

b. jah [þo -ei ist us Laudeikaion] jus ussiggwaid
and what.ACC -COMP is$_{[NOM]}$ from Laodicea you read$_{[ACC]}$
'and read that which is from Laodicea'
(Gothic, Col. 4:16, after Harbert 1978: 357)

(2) INT:NOM, EXT:DAT

a. NOM not attested

b. [þaim -ei iupa sind] fraþjaiþ
what.DAT -COMP above are$_{[NOM]}$ think on$_{[DAT]}$
'set your mind on those which are above'
(Gothic, Col. 3:2, after Harbert 1978: 339)

(3) INT:ACC, EXT:NOM

a. [þan -ei frijos] siuks ist
who.ACC -COMP love$_{[ACC]}$ sick is$_{[NOM]}$
'the one whom you love is sick'
(Gothic, John 11:3, after Harbert 1978: 342)

b. NOM not attested

(4) INT:ACC, EXT:DAT

a. ACC not attested

b. hva nu wileiþ ei taujau [þamm -ei qiþiþ þiudan Iudaie]?
what now want that do$_{[DAT]}$ who.DAT -COMP say$_{[ACC]}$ king of Jews
'what now do you wish that I do to him whom you call King of the Jews?' (Gothic, Mark 15:12, after Harbert 1978: 339)

(5) INT:DAT, EXT:NOM

a. iþ [þamm -ei leitil fraletada] leitil frijod
but who.DAT -COMP little is forgiven$_{[DAT]}$ little loves$_{[NOM]}$
'but the one whom little is forgiven loves little'
(Gothic, Luke 7:47, after Harbert 1978: 342)

b. NOM not attested

(6) INT:DAT, EXT:ACC, is with a preposition

a. ushafjands [ana þamm -ei lag]
picking up$_{[ACC][DAT]}$ on what.DAT -COMP lay
'picking up that on which he lay'
(Gothic, Luke 5:25, after Harbert 1978: 343)

b. ACC not attested

Table 2.1: Case attraction in headless relatives in Gothic

INT \ EXT	[NOM]	[ACC]	[DAT]
[NOM]	NOM	ACC ?NOM	DAT ?NOM
[ACC]	?NOM ACC	ACC	DAT ?ACC
[DAT]	?NOM DAT	?ACC DAT	DAT

(7) NOM < ACC < DAT

2.2 The accessibility hierarchy

(8) NOM < ACC < DAT

2.3 Case in morphology

2.3.1 Morphological containment

Nikolaeva 1999: 16

Table 2.2: Transparent case containment in Khanty

	1SG	3SG	1PL
NOM	ma	luw	muŋ
ACC	ma**ː-neːm**	luw-**eːl**	muŋ-**eːw**
DAT	ma**ː-neːm**-na	luw-**eːl**-na	muŋ-**eːw**-na

Boretzky 1994: 31-46

Table 2.3: Transparent case containment in Kalderaš Romani

	'brother'	'brothers'	'girl'	'girls'
NOM	phral	phral-(á)	rakl-í	rakl-já
ACC	phral-**és**	phral-**én**	rakl-**já**	rakl-já-**n**
DAT	phral-**és**-kə	phral-**én**-gə	rakl-**já**-kə	rakl-já-**n**-gə

Gippert 1987: 23-24

Table 2.4: Transparent case containment in West Tocharian

	'horses'	'men'
NOM	yakwi	eṅkwi
ACC	yakwe-**ṃ**	eṅkwe-**ṃ**
DAT	yäkwe-**ṃ**-ts	eṅkwe-**ṃ**-ts

(9) NOM < ACC < DAT

2.3.2 Suppletion patterns

(10) NOM < ACC < DAT

2.3.2.1 ABB

cognates widespread in Indo-European - Icelandic
cognates across Slavic - Russian
cognates across Slavic - Serbian

Table 2.5: ABB patterns in suppletion

	Icelandic	Russian	Serbian		
	1SG	1PL	3SG.F	3SG.M	3SG.N
NOM	ég	my	ona	oni	on
ACC	**m**ig	**n**as	**nj**u	**nji**h	**nje**-ga
DAT	**m**ér	**n**am	**nj**oj	**nji**ma	**nje**-mu

2.3.2.2 ABC

Table 2.6: ABC patterns in suppletion

	Khinalugh
	1SG
NOM	zɨ
ACC	jä
DAT	as(ɨr)

2.3.2.3 AAB

Table 2.7: AAB patterns in suppletion

	Yurok	Wardaman	
	3SG	3SG	3PL
NOM	**yo**ʔo·t), **wo**ʔo·t)	**narnaj**	**narnaj**-bulu
ACC	**yo**ʔo·t, **wo**ʔo·t	**narnaj**-(j)i	**narnaj**-bulu-yi
DAT	weyaʔik	gunga	wurrugu

2.3.3 Syncretism patterns

2.3.3.1 ABB

2.3.3.2 ABC

2.3.3.3 AAB

(11) NOM < ACC < DAT

2.4 Why the genitive is excluded

- possessive

- accessibility hierarchy
- not available

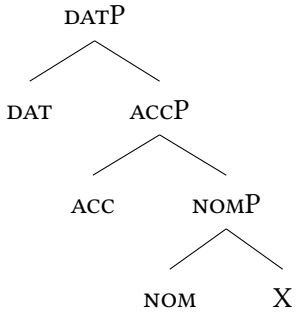
Chapter 3

Case decomposition meets ellipsis

3.1 Case decomposition

Syntax = morphology

(1)



3.2 Elipsis

Elipsis targets phrases

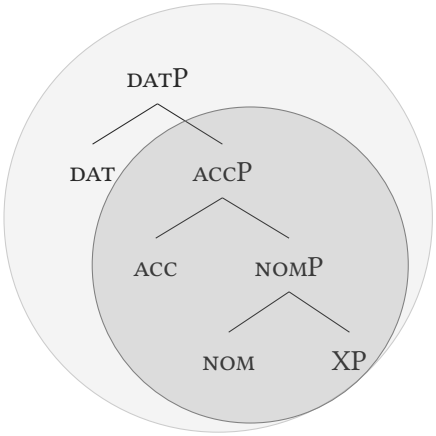
3.3 Phrasal spellout

Single morphemes spell out phrases

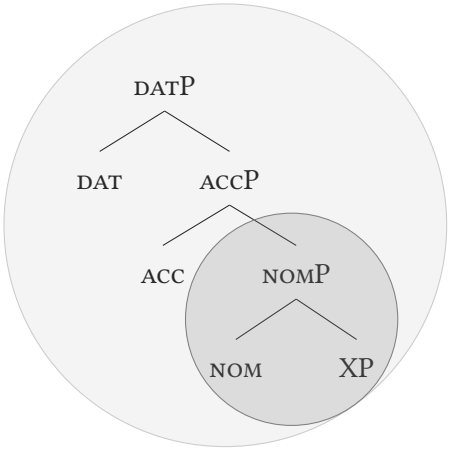
3.4 The intuition

3.4.1 Cases contain each other

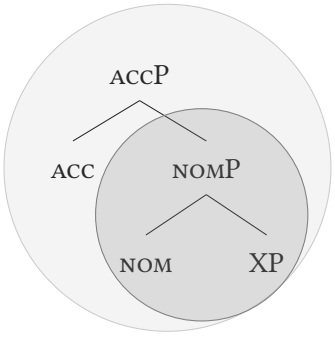
(2)



(3)



(4)



3.4.2 Cases elide each other

Table 3.1: DATP deletes ACCP

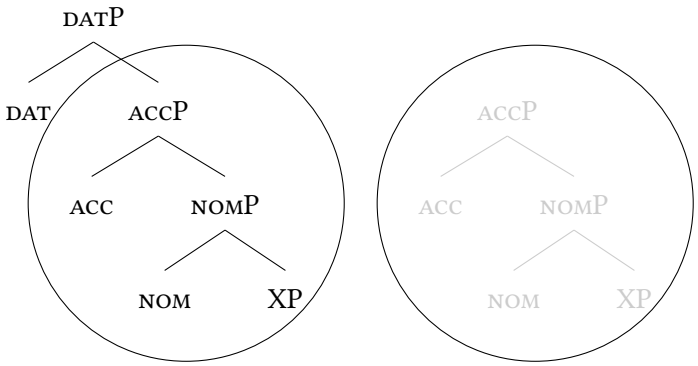


Table 3.2: DATP deletes NOMP

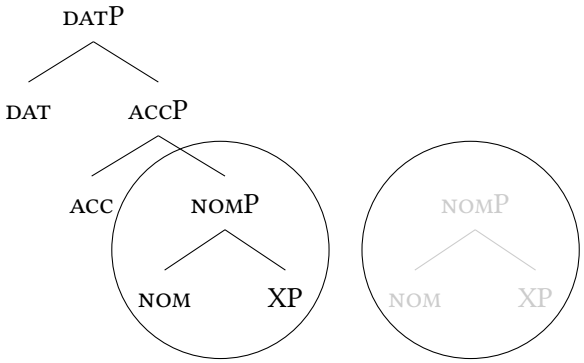
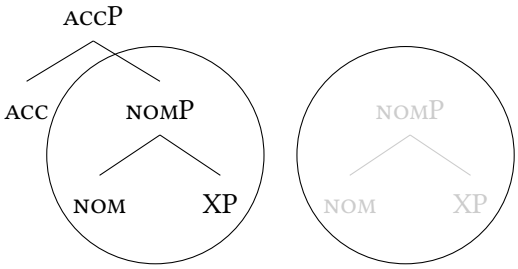


Table 3.3: ACCP deletes NOMP



Part II

The direction that differs

Chapter 4

The variation

4.1 The different patterns

In Gothic, the more complex case wins. In OHG, the more complex case wins, only if it is external. In MG, the more complex case wins, only if it is internal. In Italian, case mismatch is not allowed.

Table 4.1: Variation

	INT>EXT	EXT>INT
MG	✓	*
OHG	*	✓
Gothic	✓	✓
Italian	*	*

4.1.1 Both: Gothic

Table 4.2: Case attraction in headless relatives in Gothic

EXT / INT	[NOM]	[ACC]	[DAT]
[NOM]	NOM	ACC ?NOM	DAT ?NOM
[ACC]	?NOM ACC	ACC	DAT ?ACC
[DAT]	?NOM DAT	?ACC DAT	DAT

4.1.2 Only from external: Old High German

(1) INT:NOM, EXT:ACC

a. NOM not attested

b. ih bibringu fona Juda [dhen mina berga chisetzit]
I educate$_{[ACC]}$ about Juda who.ACC my mountains through pull$_{[NOM]}$
'I educate the one who wanders through my mountains about Judas'
(OHG, Isid. 34:3, Behaghel 1923-1932: 761)

(2) INT:NOM, EXT:DAT

a. NOM not attested

b. aer antuurta [demo zaimo sprah]
he replied$_{[DAT]}$ who.DAT to him spoke$_{[NOM]}$
'he replied to the one who spoke to him'
(OHG, Mons. 7:24, Behaghel 1923-1932: 761, after Pittner 1995: 199)

(3) INT:ACC, EXT:NOM

a. ACC not attested

b. NOM not attested

(4) INT:ACC, EXT:DAT

a. ACC not attested

b. istû furira Abrâhame, ouh [thên man hiar nû
are you superior$_{[DAT]}$ to Abraham also who.DAT one here now
zalta]?
named$_{[ACC]}$
'are you superior to Abraham to those which they just mentioned?'
(OHG, Otfrid III 18:33, Behaghel 1923-1932: 761)

(5) INT:DAT, EXT:NOM

a. DAT not attested

b. NOM not attested

(6) INT:DAT, EXT:ACC

a. DAT not attested

b. ACC not attested

Don't know:

(7) OHG

a. gaat uz diu halt za dem iz forchaufent

'' (OHG, Monsee Fragments 20,14, Behaghel 1923-1932, p. 761)

b. thisiu fon thiu, iru wan ist, siu alla iru libnara santa (ex eo, quod)

'hæc autem ex eo quod deest illi, totum victum suum quem habuit misit.'
(OHG, Tatian 118,1, Behaghel 1923-1932, p. 761)

c. thaz iru thiu sin guati nirzigi, thes siu bati

'' (OHG, Otfrid II,8,24, Behaghel 1923-1932, p. 761)

d. thia laz ih themo iz lisit thar

'' (OHG, Otfrid I,19,25, Behaghel 1923-1932, p. 761)

e. noh so neduohti in gnuoge des si habetin

‘’ (OHG, Notker I,63,29, Behaghel 1923-1932, p. 761)

f. tannoh pito ih tes noh fore ist (id quod)

‘’ (OHG, Notker 193,19, Behaghel 1923-1932, p. 761)

So, to sum up:

Table 4.3: Case attraction in headless relatives in OHG

EXT / INT	[NOM]	[ACC]	[DAT]
[NOM]	NOM	ACC ?NOM	DAT ?NOM
[ACC]	?NOM ?ACC	ACC	DAT ?ACC
[DAT]	?NOM ?DAT	?ACC ?DAT	DAT

4.1.3 Only from internal: Modern German

(8) INT:NOM, EXT:ACC

a. *Ich lade ein, [wer mir sympathisch ist].
I invite$_{[ACC]}$ who.NOM me nice is$_{[NOM]}$
‘I invite who I like.’ (Vogel 2001: 344)

b. *Ich lade ein, [wen mir sympathisch ist].
I invite$_{[ACC]}$ who.ACC me nice is$_{[NOM]}$
‘I invite who I like.’ (Vogel 2001: 344)

(9) INT:NOM, EXT:DAT

a. *Ich vertraue, [wer Hitchcock mag].
I trust$_{[\text{DAT}]}$ who.NOM Hitchcock likes$_{[\text{NOM}]}$
'I trust who likes Hitchcock.' (Vogel 2001: 345)

b. *Ich vertraue, [wem Hitchcock mag].
I trust$_{[\text{DAT}]}$ who.DAT Hitchcock likes$_{[\text{NOM}]}$
'I trust who likes Hitchcock.' (Vogel 2001: 345)

(10) INT:ACC, EXT:NOM

a. Uns besucht [wen Maria mag].
Us visits$_{[\text{NOM}]}$ who.ACC Maria.NOM likes$_{[\text{ACC}]}$
'Who visits us likes Maria likes.' (Vogel 2001: 343)

b. *Uns besucht [wer Maria mag].
Us visits$_{[\text{NOM}]}$ who.NOM Maria.NOM likes$_{[\text{ACC}]}$
'Who visits us likes Maria likes.' (Vogel 2001: 343)

(11) INT:ACC, EXT:DAT

a. *Ich vertraue [wem auch Maria mag].
I trust$_{[\text{DAT}]}$ who.DAT also Maria likes$_{[\text{ACC}]}$.
'I trust whoever Maria also likes.' (Vogel 2001: 345)

b. *Ich vertraue [wen auch Maria mag].
I trust$_{[\text{DAT}]}$ who.ACC also Maria likes$_{[\text{ACC}]}$.
'I trust whoever Maria also likes.' (Vogel 2001: 345)

(12) INT:DAT, EXT:NOM

a. Uns besucht [wem Maria vertraut].
us visits$_{[\text{NOM}]}$ who.DAT Maria trusts$_{[\text{DAT}]}$
'Who visits us, Maria trusts.' (Vogel 2001: 343)

b. *Uns besucht [wer Maria vertraut].
us visits$_{[\text{NOM}]}$ who.NOM Maria trusts$_{[\text{DAT}]}$
'Who visits us, Maria trusts.' (Vogel 2001: 343)

(13) INT:DAT, EXT:ACC

a. Ich lade ein [wem auch Maria vertraut].
I invite$_{[\text{ACC}]}$ who.DAT also Maria trusts$_{[\text{DAT}]}$.
'I invite whoever Maria also trusts.' (Vogel 2001: 344)

b. *Ich lade ein [wen auch Maria vertraut].
I invite$_{[ACC]}$ who.ACC also Maria trusts$_{[DAT]}$.
'I invite whoever Maria also trusts.' (Vogel 2001: 344)

Table 4.4: Case attraction in headless relatives in MG

EXT / INT	[NOM]	[ACC]	[DAT]
[NOM]	NOM	*ACC, *NOM	*DAT, *NOM
[ACC]	*NOM, ACC	ACC	*DAT, *ACC
[DAT]	*NOM, DAT	*ACC, DAT	DAT

4.1.4 None: Italian

4.2 Shape of relative pronoun

Table 4.5: Shape of relative pronoun per language

	rel pron in headless rel	rel prons in light-headed rel
Gothic	D +COMP	D + D + COMP
OHG	D	D + D
MG	WH	D + D
Italian	WH	D + WH

4.2.1 Gothic

4.2.1.1 Headless relatives

D + COMP

Table 4.6: Relative pronouns in headless relatives in Gothic

	N.SG	M.SG	F.SG
NOM	þ-at-ei	s-a-ei	s-ō-ei
ACC	þ-at-ei	þ-an-ei	þ-ō-ei
DAT	þ-amm-ei	þ-amm-ei	þ-izái-ei
	N.PL	**M.PL**	**F.PL**
NOM	þ-ō-ei	þ-ái-ei	þ-ōz-ei
ACC	þ-ō-ei	þ-anz-ei	þ-ōz-ei
DAT	þ-áim-ei	þ-áim-ei	þ-áim-ei

4.2.1.2 Light-headed relatives

D, D + COMP

4.2.2 Old High German

4.2.2.1 Headless relatives

D

Table 4.7: Relative pronouns in headless relatives in OHG

	N.SG	M.SG	F.SG
NOM	d-az̨	d-ër	d-iu
ACC	d-az̨	d-ën	d-ea/-ia/(-ie)
DAT	d-ëmu/-ëmo	d-ëmu/-ëmo	d-ëru/-ëro
	N.PL	**M.PL**	**F.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

4.2.2.2 Light-headed relatives

D, D

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.

4.2.3 Modern German

4.2.3.1 Headless relatives

WH

Table 4.8: Relative pronouns in headless relatives in MG

	INAN	AN
NOM	w-as	w-er
ACC	w-as	w-en
DAT	-	w-em

4.2.3.2 Light-headed relatives

Pattern in light-headed relatives: D, D

4.2.4 Italian

4.2.4.1 Headless relatives

WH: *che*

4.2.4.2 Light-headed relatives

D, WH: *quello*, *che*

4.3 Bringing this together

Table 4.9: Variation and relative pronoun shape

	rel pron in headless rel	rel prons in light-headed rel	INT>EXT	EXT>INT
Gothic	D +COMP	D + D + COMP	✓	✓
OHG	D	D + D	*	✓
MG	WH	D + D	✓	*
Italian	WH	D + WH	*	*

And how can we now derive this?

Chapter 5

Connecting morphology and syntax

5.1 Background: relative clause theory

Standard raising, probably Cinque's double-headed structures

5.2 Analysis

5.2.1 Old High German

In OHG, proper attraction in headless relatives can be derived from headed relatives. The relative pronoun is the determiner from the main clause. Under a double-headed Cinque-analysis, it is the internal DP that is deleted.

(1) ACC instead of NOM

a. unde ne wolden níet besên den mort den dô was
and not wanted not see the murder.ACC that.ACC there had
geschên
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)

5.2.2 Modern German

In German, inverse attraction in headed relatives can be shown to be very different from inverse attraction in headless relatives. I am not set on an analysis yet. Under a double-headed Cinque-analysis, it is the external DP that is deleted. Grafting is also still an option.

5.2.3 Gothic

In Gothic, ?

Part III

Details

Chapter 6

Technical implementation

6.1 Background

(1) **The Superset Principle** Starke (2009):
A lexically stored tree matches a syntactic node iff the lexically stored tree contains the syntactic node.

(2) **The Elsewhere Condition** (Kiparsky 1973, formulated as in Caha 2019):
When two entries can spell out a given node, the more specific entry wins. Under the Superset Principle governed insertion, the more specific entry is the one which has fewer unused features.

(3) **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.

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

If the spellout procedure in (3) fails, backtracking takes place.

(5) **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.

(6) **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.

6.2 Derivations

Chapter 7

Conclusion

Primary texts

Col.	Colossians, New Testament
Isid.	Der althochdeutsche Isidor
John	John, New Testament
Luke	Luke, New Testament
Mark	Mark, New Testament
Mons.	The Monsee fragments
Nib.	Das Nibelungenlied
Otfrid	Otfrid's Evangelienbuch
Rom.	Romans, New Testament

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