Case competition in headless relatives

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List of abbreviations

1	first person
3	third person
ACC	accusative
AN	animate
ASP	aspectual marker
COMP	complementizer
DAT	dative
DEF	definite
ERG	ergative
EXT	external case
F	feminine
INAN	inanimate
INT	internal case
M	masculine
MG	Modern German
N	neuter
NOM	nominative
OHG	Old High German
PASS	passive
PL	plural

PROG	progressive
PST	past
REL	relativizer
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.

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 Introducing the title

First, case marks the grammatical role of the noun phrases. Case also appears on relative pronoun. Case on head 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 assigned nominative case, because it is the subject in the clause. *Den* in *den Schüler* 'the pupil' is assigned accusative case, because it is an object of *mag* 'likes'. In (1b), the roles are reversed: *der* in *der Schüler* 'the pupil' is assigned nominative case, because it is the subject in the clause. *Den* in *den Lehrer* 'the teacher' is assigned accusative case, because 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 do not discuss the positioning of noun phrases in the clause into further detail.

(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
'the pupil 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 pupil'. *Den Schüler* 'the pupil' is called the head (noun) or the antecedent of the relative clause. *Den* in *den Schüler* 'the pupil' is assigned accusative case, because it is the object of *mag* 'likes' in the main clause. The relative pronoun *der* 'that.NOM' is assigned nominative case, because it is the subject of 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' is again marked as accusative, because it is the object of *mag* 'likes' in the main clause. The relative pronoun *den* 'that.ACC' is assigned accusative case, because it is the object of *sucht* 'searches' in the relative clause.

(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 pupil 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
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 accusative because it is the object in the main clause. The case of the relative pronoun in (2b) is also accusative, because of it is the object in the relative clause. The case of the relative pronoun in (2a) differs from the case of the head, it is nominative.

The focus of this dissertation lies on the headless relative, i.e. a relative clause that does not have a head. As the name suggests, this type of relative clause lacks a head.[1] Consider the Gothic example of a headless relative in (3). I placed subscripts between the square brackets on the glosses of verbs. They indicate which case the verbs assign to their object. In (3), the relative clause *þan -ei arma* 'who I pity' is placed between square brackets. There is no head that this relative clause modifies, it is a headless relative. This is different from the examples from German I gave above, which each had a head. The relative pronoun *þan(a)* 'who.ACC' is assigned accusative case.[2]

[1] This 'missing noun' has been interpreted in two different ways. Some researchers argue that the noun is truly missing, it is absent, cf. Van Riemsdijk 2006. Others claim that there is actually a head, but it is phonologically zero, Himmelreich 2017. At this point in the discussion this distinction is not relevant. I return to the issue in Chapter 5.

[2] The relative pronoun without the complementizer *-ei* is *þana*. Therefore, I refer to the relative

(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)

Where does this accusative case assignment come from? Logically speaking, there are two candidates: the predicate in the main clause *gaarma* 'pity' and the predicate in the relative clause *arma* 'pity'. Did the predicate in the relative clause *arma* 'pity' assign accusative case? In the headed relative clauses in (2), the relative pronoun received its case from the predicate in the relative clause. The crucial difference with that type of relative clause is that there is a head for the main clause to assign its case to. Did the predicate in the main clause *gaarma* 'pity' assign accusative case? I will argue that both of them did. (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.

In the remainder of this section I show evidence for the claim that there is case competition going on in headless relatives. I illustrate that relative pronouns can take the case assigned from within the relative clause or the case assigned from outside the relative clause (the main clause).

Consider the example in (4). In this example there is a subscript on a preposition, indicating that this is the element that assigns the case. The relative clause is placed between square brackets. The preposition *ana* 'on' is part of the relative clause, and it assigns dative case. The predicate *ushafjands* 'picking up' is not part of the relative clause but it is situated in the main clause. This predicate assigns accusative case. The relative pronoun *þamm(a)* appears in the dative case. This dative can only be assigned by the preposition *ana* 'on', which is part of the relative clause.

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

The conclusion that follows is that in headless relatives the relative pronoun can

pronoun as *þan(a)*.

take the case assigned within the relative clause. At this point it remains unclear what happened to the accusative case which is assigned by the predicate in the main clause.

Now consider the example in (5). The relative clause is placed between square brackets. The predicate *qiþiþ* 'say' is part of the relative clause, and assigns accusative case. The predicate *taujau* 'do' is not part of the relative clause but it is situated in the main clause. This predicate assign dative case. The relative pronoun *þamm(a)* appears in the dative case. This dative can only be assigned by the predicate *taujau* 'do', which is part of the main clause.

(5) hva nu wileiþ ei taujau [þamm -ei qiþiþ þiudan Iudaie]?
what now want that do$_{[\text{DAT}]}$ who.DAT -COMP say$_{[\text{ACC}]}$ 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)

The conclusion that follows is that in headless relatives the relative pronoun takes the case assigned in the main clause. Again, it is unclear at this point what happened to the accusative case, which is now assigned by the predicate in the relative clause.

The examples in (4) and (5) have shown that the relative pronoun in headless relatives is sensitive to cases assigned from within the relative clause and from the main clause. In these examples, accusative and dative were assigned, and it both cases, the relative pronoun appeared in dative case. In other words, there was a competition between accusative and dative, and dative won.

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.

In Part I I discuss the pattern observed in headless relatives in Gothic. This pattern has also been described for German, Greek, etc. etc. references references. The pattern that arises in headless relatives is not restricted to headless relatives. It can also be observed in another syntactic phenomenon: the accessiblity hierarchy. This is.. Lastly: the pattern we observe in these two syntactic phenomena is what we know from morphology. I discuss patterns in morphology: formal containment, syncretism patterns, suppletion patterns.

In Part I I discuss an aspect of headless relatives that differs per language. That is, not all languages act like Gothic.

(6) Modern German

a. accusative dative

‘’

b. dative accusative

‘’

(7) Old High German

a. accusative dative

‘’

b. dative accusative

‘’

(8) Italian

a. accusative dative

‘’

b. dative accusative

‘’

So far people said.. I connect this crosslinguistic variation to morphology.. so i reduce it to differences in the lexicon

In Part III I show how all of this can be derived in derivations.

Part I

The winner of the competition

Chapter 2

A reoccurring pattern

First I introduce the pattern that forms the focus of the first part of the dissertation. I show that headless relatives in Gothic adhere to the case strength scale: NOM < ACC < DAT.

Then I show two phenomena that follow the same ordering of NOM, ACC and DAT. The two phenomena are accessibility hierarchies. The first one is about agreement, the second one about relativization.

In the last section of this chapter I discuss how NOM, ACC and DAT pattern in morphology.

2.1 Case competition in Gothic headless relatives

In this section I show the behavior of Gothic headless relatives in detail. I systematically go through all case combinations, except for the genitive, which I discuss in Section 2.4. This leaves the nominative, accusative and dative.

I repeat the headless relative from the introduction in which both predicates assign accusative case in (1). The predicate in the relative clause *arma* 'pity' assigns accusative case. The predicate in the main clause *gaarma* 'pity' also assigns accusative case. The relative pronoun *þan(a)* 'who.ACC' appears in accusative case.

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

From this section on I use the terms internal case and external case. Internal case refers to the case assigned internal to the relative clause. In (1), the internal case is assigned by *arma* 'pity'. The external case refers to the case assign external to the relative clause, so the main clause. In (1), the external case is assigned by *gaarma* 'pity'.

I placed subscripts between the square brackets on the glosses of verbs. They indicate which case the predicate requires from the relative pronoun. For (1) this simply means which case the verb assigns to its object. Another possibility is that the subscript is placed on a preposition and refer to the case the preposition assigns. A last possibility is that the subscript is [NOM] and refers to the case in which the subject appears in. An example of that is given in (2).

In this example the predicate *matjai* 'eats' combines with a nominative subject in the relative clause. In other words, the internal case is nominative. The predicate *gadauþnai* 'die' in the main clause also combines with a nominative subject. In other words, the external case is nominative. The relative pronoun *sa* 'who.NOM' appears in nominative case.

(2) [ei [sa -ei þis matjai,] ni gadauþnai]
that who.NOM -COMP of this eats$_{[\text{NOM}]}$ not die$_{[\text{NOM}]}$
'that (he) who eats of this may not die'
(Gothic, John 6:50, after Harbert 1978: 337)

In the examples below, the internal case and external case are dative.

(3) a. [þamm -ei gabaur] gabaur
who.DAT -COMP tribute$_{[\text{DAT}]}$ tribute$_{[\text{DAT}]}$
'tribute to (him) whom tribute is due'
b. [þamm -ei mota] mota
who.DAT -COMP custom$_{[\text{DAT}]}$ custom$_{[\text{DAT}]}$
'custom to (him) whom custom is due'

c. [þamm -ei agis] agis
who.DAT -COMP fear$_{[DAT]}$ fear$_{[DAT]}$
'fear to (him) whom fear is due'

d. [þamm -ei sweriþa] sweriþa
who.DAT -COMP honour$_{[DAT]}$ honour$_{[DAT]}$
'honour to (him) whom honour is due'

(Gothic, Rom. 13:7, after Harbert 1978: 339)

Schematically, this looks like:

Table 2.1: Case attraction in headless relatives - only matching

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

In what follows I discuss the pattern that occurs when the internal and external case differs.

First, consider a situation in which the internal case is nominative and the external case is accusative. An attested example of that is given in (4). Internal to the relative clause, the predicate *ist us Laudeikaion* 'is from Laodicea' requires a subject in nominative case. External to the relative clause, *ussiggwaid* 'read' requires its object to be in accusative. In the example, the relative pronoun *þo* 'what.ACC' appears in accusative case. There are no examples of headless relatives with nominative as internal case and accusative as external case and a relative pronoun in nominative.

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

Consider a situation in which the internal case is nominative and the external case is dative. An attested example of that is given in (5). Internal to the relative clause, the predicate *iupa sind* 'are above' requires a subject in nominative case. External to the relative clause, *fraþjaiþ* 'think on' requires its object to be in dative. In the example, the relative pronoun *þaim* 'what.DAT' appears in dative case. There are no examples of headless relatives with nominative as internal case and dative as external case and a relative pronoun in nominative.

(5) [[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)

Consider a situation in which the internal case is accusative and the external case is nominative. An attested example of that is given in (6). Internal to the relative clause, *frijos* 'love' requires its object to be in accusative. External to the relative clause, the predicate *siuks ist* 'is sick' requires a subject in nominative case. In the example, the relative pronoun *þan(a)* 'who.ACC' appears in accusative case. There are no examples of headless relatives with accusative as internal case and nominative as external case and a relative pronoun in nominative.

(6) [[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)

Consider a situation in which the internal case is accusative and the external case is dative. An attested example of that is given in (7), repeated from the introduction. Internal to the relative clause, *qiþiþ* 'say' requires its object to be in accusative. External to the relative clause, *taujau* 'do' requires its direct object to be in dative

case. In the example, the relative pronoun *þamm(a)* 'who.DAT' appears in dative case. There are no examples of headless relatives with accusative as internal case and dative as external case and a relative pronoun in accusative.

(7) [hva nu wileiþ ei taujau [þamm -ei qiþiþ þiudan Iudaie]
what now want that do who.DAT -COMP say king of Jews [ACC]
] ?
[DAT]
'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)

Consider a situation in which the internal case is dative and the external case is nominative. An attested example of that is given in (8). Internal to the relative clause, *fraletada* 'is forgiven' requires its object to be in dative. External to the relative clause, the predicate *frijod* 'loves' requires a subject in nominative case. In the example, the relative pronoun *þamm(a)* 'who.DAT' appears in dative case. There are no examples of headless relatives with dative as internal case and nominative as external case and a relative pronoun in nominative.

(8) [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)

Consider a situation in which the internal case is dative and the external case is accusative. An attested example of that is given in (9), repeated from the introduction. Internal to the relative clause, the preposition *ana* 'on' requires its complement to be in dative. External to the relative clause, *ushafjands* 'picking up' requires its object to be in accusative case. In the example, the relative pronoun *þamm(a)* 'who.DAT' appears in dative case. There are no examples of headless relatives with dative as internal case and accusative as external case and a relative pronoun in accusative.

(9) [ushafjands [ana þamm -ei lag]]
picking up on what.DAT -COMP lay [DAT] [ACC]

'picking up that on which he lay'

(Gothic, Luke 5:25, after Harbert 1978: 343)

A summary of the data is given in Table 2.2. The left column gives the internal case between square brackets. The upper row indicates the external case between square brackets. The other cells show the case in of the relative pronoun. In the diagonal there is only a single case. These are the headless relatives in which the internal case is identical to the external case. The relative pronoun is grammatical and marked dark gray. they correspond to the examples x, y and z. Six cells show internal and external case differ. The lower left corner shows the internal case pronoun. The upper right corner shows the external case pronoun. The grammatical ones are marked in light gray. The unattested examples are marked with an asterix, and are not marked.[1] The pattern we see is that outer guys are grammatical.

Table 2.2: Summary of Gothic headless relative data

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

In sum, the situation can be summarized as in (10). In a competition, accusative and dative win over nominative. Additionally, dative wins over accusative.

(10) a. ACC wins over NOM

[1] Throughout this dissertation * stands for 'not found in natural language'. For extinct languages this means that there are no attested examples. For modern languages it means that the examples are ungrammatical.

b. DAT wins over NOM

c. DAT wins over ACC

Formulated in a scale of 'case strength':

(11) NOM – ACC – DAT

2.2 Parallels in accessibility hierarchies

2.2.1 Agreement

Moravcsik, Gilligan sub, obj, ind obj

Bobaljik default/dependent/dative

Mandarin Chinese does not show any agreement on the verb. In German, the verb agrees with the subject. In Huallaga Quechua, the verb agrees with the subject and the object. In Basque, the verb agrees with the subject, the object and the indirect object.

(12) a. Nǐ bǎ shū gěi wǒ-le.
you ba book give me-ASP
'You gave me the book.' (Mandarin Chinese)

b. Du gib -st mir das Buch.
you give -**2SG** me the book
'You give me the book.' (German)

c. tayta-yki qam-ta qu -maran
father-your you-ACC give -**3SG⟶1SG**.PST
'Your father gave you to me.' (Huallaga Quechua, Weber 1983: 21)

d. Zu-k ni-ri liburu-a emon d -austa -zu.
you-ERG me-DAT book-DEF.ACC given **ACC.3SG -DAT.1SG -ERG.2SG**
'You gave me the book.' (Basque, Arregi and Molina-Azaola 2004: 45)

Table 2.3: Agreement accessibility

agreement with				
subject	direct object	indirect object	number of languages	example
*	*	*	23	Mandarin Chinese
✓	*	*	31	German
✓	✓	*	25	Huallaga Quechua
✓	✓	✓	23	Basque
✓	*	✓	(1)	-
*	✓	✓	0	-
*	x	*	0	-
*	*	✓	0	-

2.2.2 Relativization

Keenan Comrie sub/obj/ind obj

Caha nom/acc/dat

In Malagasy, only subjects can be relativized.

(13) a. Nahita ny vehivavy ny mpianatra.
saw the woman the student
'The student saw the woman.'

b. ny mpianatra izay nahita ny vehivavy
the student that saw the woman
'the student that saw the woman'

c. *ny vehivavy izay nahita ny mpianatra
the woman that saw the student
'the woman that the student saw'

(Malagasy, Keenan and Comrie 1977: 70)

Objects can be passivized and then relativized (again relativization of a subject).

(14) a. Nohitan' ny mpianatra ny vehivavy.
seen.PASS the student the woman
'The woman was seen by the student.'
b. ny vehivavy izay nohitan' ny mpianatra
the woman that seen.PASS the student
'the woman that was seen by the student'
(Malagasy, Keenan and Comrie 1977: 70)

In Malay, subjects and objects can be relativized using *yang*. Below I only give an example of a relativized object.

(15) Ali bunoh ayam yang Aminah sedang memakan.
Ali kill chicken that Aminah PROG eat
'Ali killed the chicken that Aminah is eating.'
(Malay, Keenan and Comrie 1977: 71)

Indirect objects cannot be relativized in the same way.

(16) a. Ali beri ubi kentang itu kapada perempuan itu.
Ali give potato the to woman the
'Ali gave the potato to the woman.'
b. *perempuan yang Ali beri ubi kentang itu kapada
woman that Ali give potato the to
c. *perempuan kapada yang Ali beri ubi kentang itu
woman to who Ali give potato that
(Malay, Keenan and Comrie 1977: 71)

A different construction is made.

(17) perempuan yang menerima ubi kentang itu daripada Ali
woman that received potato the from Ali
'the woman that received the potato from Ali'
(Malay, Keenan and Comrie 1977: 71)

In Basque, subjects, objects and indirect objects can be relativized with the same strategy.

(18) a. Gizon-a-k emakume-a-ri liburu-a eman dio.
man-DEF-ERG woman-DEF-DAT book-DEF.ACC give has
'The man has given the book to the woman.'

b. emakume-a-ri liburu-a eman dio-n gizon-a
woman-DEF-DAT book-DEF.ACC give has-REL man-DEF
'the man who has given the book to the woman'

c. gizon-a-k emakume-a-ri eman dio-n liburu-a
man-DEF-ERG woman-DEF-DAT give has-REL book-DEF
'the book that the man has given to the woman'

d. gizon-a-k liburu-a eman dio-n emakume-a
man-DEF-ERG book-DEF.ACC give has-REL woman-DEF
'the woman that the man has given the book to'

(Basque, Keenan and Comrie 1977: 72)

Table 2.4: Relativization accessibility

relativization of			
subject	direct object	indirect object	example
✓	*	*	Malagasy
✓	✓	*	Malay
✓	✓	✓	Basque

2.3 Case in morphology

2.3.1 Suppletion patterns

Icelandic: Einarsson 1949: 68 Russian: Timberlake 2004: 117 Wardaman: Khinalugh:

Table 2.5: Suppletion patterns

pattern			NOM	ACC	DAT	translation	language
A	A	A	**þ**ú	**þ**ig	**þ**ér	2SG	Icelandic
A	B	B	my	**n**as	**n**am	1PL	Russian
A	A	B	**narnaj**	**narnaj**(j)i	gunga	3SG	Wardaman
A	B	C	zɨ	jä	as(ɨr)	1SG	Khinalugh
A	B	A					not attested

2.3.2 Syncretism patterns

Table 2.6: Syncretism patterns

pattern			NOM	ACC	DAT	translation	language
A	A	A	**inu**	**inu**	**inu**	2PL	Lavukaleve
A	B	B	ta	**bor**	**bor**	1PL	Teribe
A	A	B	**sie**	**sie**	ihr	3SG.F	German
A	B	C	zɨ	jä	as(ɨr	1SG	Khinalugh
A	B	A					not attested

(19) NOM < ACC < DAT

2.3.3 Morphological containment

Nikolaeva 1999: 16

Table 2.7: Case containment in Khanty

	1SG	3SG	1PL
NOM	ma	luw	muŋ
ACC	ma**:-ne:m**	luw-**e:l**	muŋ-**e:w**
DAT	ma**:-ne:m**-na	luw-**e:l**-na	muŋ-**e:w**-na

Boretzky 1994: 31-46

Table 2.8: 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 2.9: Case containment in West Tocharian

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

(20) NOM < ACC < DAT

2.4 A side note on the genitive

- possessive

- accessibility hierarchy
- not available

Chapter 3

Case decomposition meets ellipsis

The problem: so far people that account for headless relatives have made reference to this case hierarchy. they put them in their OT tables, let the fly in from the left in their syntax, whatever. What I want to do is unify all the instances of nom-acc-dat. I put nom-acc-dat in syntax. which is morphology.

3.1 Problem with previous analyses of headless relatives

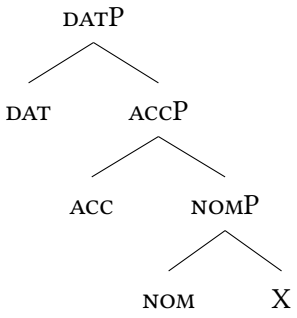
The problem: so far people that account for headless relatives have made reference to this case hierachy. they put them in their OT tables, let the fly in from the left in their syntax, whatever.

What I do is start is start from morphology. There we have complex case: dat - acc - nom. What we see in syntax is a by-product of the morphology, it´s a consequence, it´s an indirect relation. cause and effect if the morphology is different, than so will the syntax

3.2 Morphology

3.2.1 Case decomposition

(1)



morphological containment

3.2.2 Phrasal spellout

Single morphemes spell out phrases

suppletion and syncretism

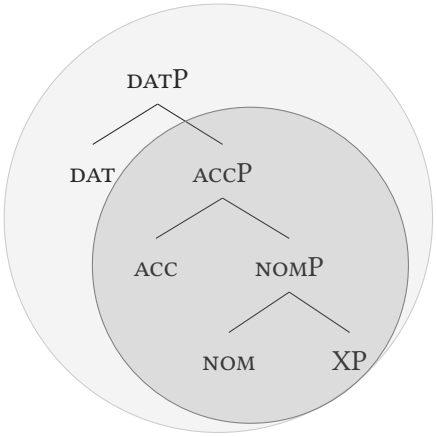
3.3 Ellipsis

Ellipsis targets phrases

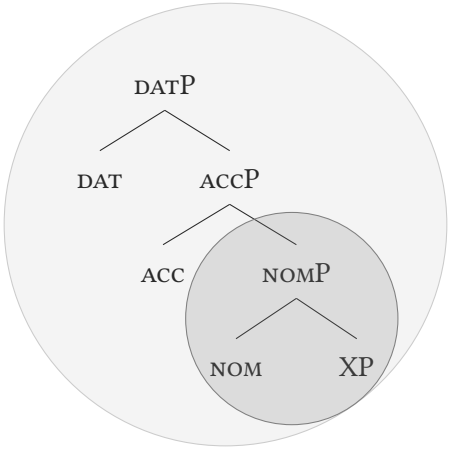
3.4 Reflex of morphology in syntax

3.4.1 Morphology

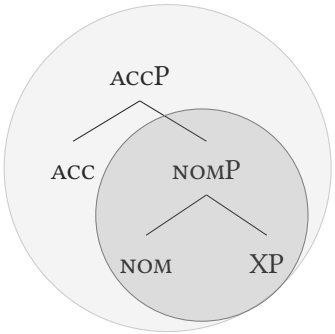
(2)



(3)



(4)



3.4.2 Syntax

Table 3.1: DATP deletes ACCP

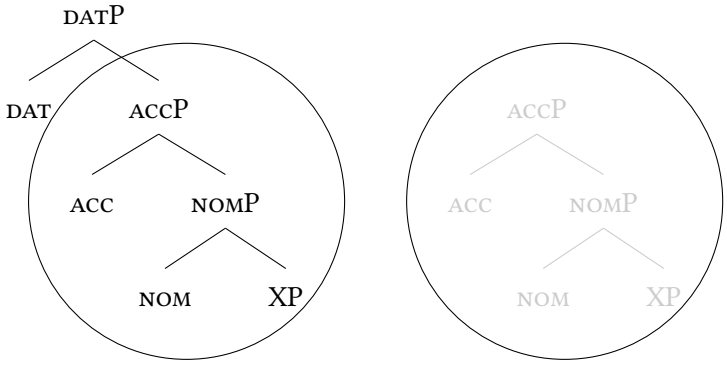


Table 3.2: DATP deletes NOMP

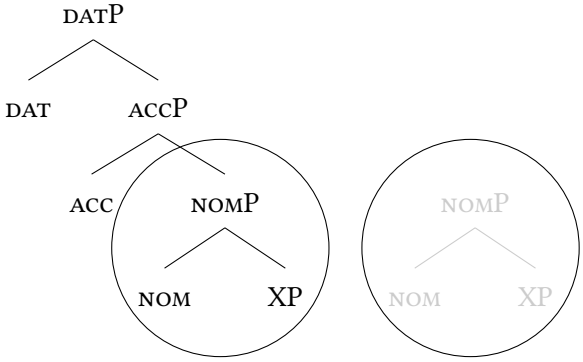
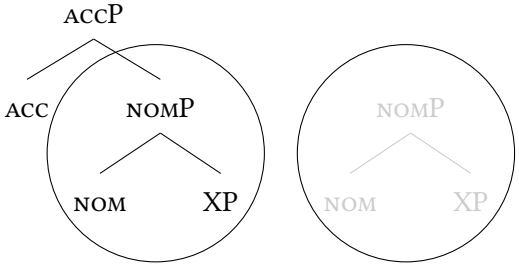


Table 3.3: ACCP deletes NOMP



3.5 Similar analyses

Himmelreich

Part II

The competitors in the competition

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

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$_{[\text{DAT}]}$ to Abraham also who.DAT one here now
zalta]?
named$_{[\text{ACC}]}$
'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. thia laz ih themo iz lisit thar

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

So, to sum up:

Table 4.2: 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$_{[DAT]}$ who.NOM Hitchcock likes$_{[NOM]}$
'I trust who likes Hitchcock.' (Vogel 2001: 345)

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

(10) INT:ACC, EXT:NOM

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

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

(11) INT:ACC, EXT:DAT

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

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

(12) INT:DAT, EXT:NOM

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

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

(13) INT:DAT, EXT:ACC

a. Ich lade ein [wem auch Maria vertraut].
I invite$_{[ACC]}$ who.DAT also Maria trusts$_{[DAT]}$.
'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 4.3: 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 4.4: Shape of relative pronoun per language

	rel pron in headless rel	rel prons in light-headed rel
Gothic	A +C	A + A + C
OHG	A	A + A
MG	B	A + A
Italian	B	A + B

4.2.1 Gothic

4.2.1.1 Headless relatives

D + COMP

Table 4.5: 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 4.6: 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 4.7: 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 4.8: Variation and relative pronoun shape

	rel pron in headless rel	rel prons in light-headed rel	INT>EXT	EXT>INT
Gothic	A +C	A + A + C	✓	✓
OHG	A	A + A	*	✓
MG	B	A + A	✓	*
Italian	B	A + B	*	*

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) DAT instead of ?

a. was allon them ando, them thar quamun at erist tuo
what all d.DAT do to d.DAT there x as first do?
''

than is im so them salte them (the M) man bi seuues Stade oido teuuirpit, 1370.
Hon them erlscipie them thar inne uuas, 2768.
allon them ando them thar quamun at erist tuo, 3435.

fon them herrosten them thes hnses giuueld, 3344 C.
sagda them alat them (the M) thar all giscaop, 4636. —

(2) 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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