CASE COMPETITION IN HEADLESS RELATIVES

Inauguraldissertation

zur Erlangung des Grades eines Doktors der Philosophie

im Fachbereich Neuere Philologien

der Johann Wolfgang Goethe-Universität

zu Frankfurt am Main

vorgelegt von

Fenna Bergsma

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Acknowledgements

thanks

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INAN	inanimate
NOM	nominative
PL	plural
PRES	present tense
REL	relative marker
SG	singular

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Chapter 6

The basic idea

In Chapter 4 I introduced two descriptive parameters that generate the attested languages, as shown in Figure 6.1. The first parameter concerns whether the external case is allowed to surface when it wins the case competition (allow EXT?). This parameter distinguishes between unrestricted languages (e.g. Old High German) on the one hand and internal-only languages (e.g. Modern German) and matching languages (e.g. Polish) on the other hand. The second parameter concerns whether the internal case is allowed to surface when it wins the case competition (allow INT?). This parameter distinguishes between internal-only languages (e.g. as Modern German) on the one hand and unrestricted languages (e.g. Old High German) on the other hand.

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

In this chapter I show how the typology can be derived from the morphology of the languages.

This chapter is structured as follows.

This chapter gives the basic idea behind my proposal. First, I introduce the the underlying assumptions that I am making. Second, I briefly go through the three options that arise as a consequence of these assumptions. Throughout the rest of the chapter I motivate the proposal, and I illustrate it with examples.

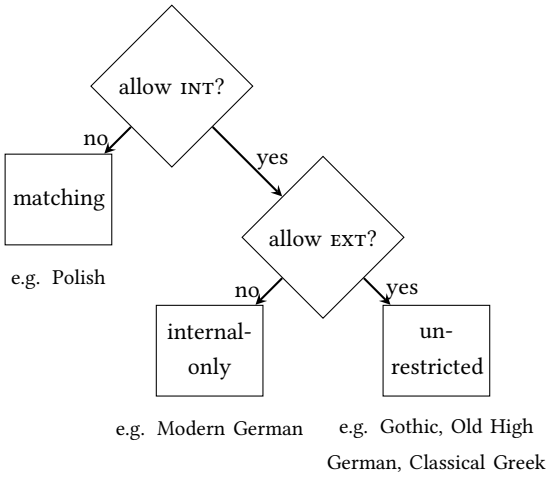


Figure 6.1: Two descriptive parameters generate three language types

6.1 Underlying assumptions

I start with my assumption that headless relatives are derived from light-headed relatives.[1] The light head bears the external case, and the relative pronoun bears the internal case, as illustrated in (1).

(1) light head$_{\text{EXT}}$ [RP$_{\text{INT}}$ ...]

In a headless relative, either the light head or the relative pronoun is absent. For the light head to be absent, it needs to form a constituent within the other element (i.e. the light head or the relative pronoun).

To see what a light-headed relative looks like, consider the light-headed relative in (2). *Thér* 'LH.SG.M.NOM' is the light head of the relative clause. This is the element that appears in the external case, the case that reflects the grammatical role in the

[1]The same is argued for headless relatives with D-pronouns in Modern German by Fuß and Grewendorf 2014; Hanink 2018 and for Polish by Citko 2004. A difference with Modern German and Polish is that one of the elements can only be absent when the cases match. In Chapter 11 I return to the point why Modern German does not have unrestricted headless relatives that look like Old High German, although it still has syncretic light heads and relative pronouns.

Several others claim that headless relatives have a head, but that it is phonologically empty, cf. Bresnan and Grimshaw 1978; Groos and van Riemsdijk 1981; Himmelreich 2017.

main clause. *Then* 'RP.SG.M.ACC' is the relative pronoun in the relative clause. This is the element that appears in the internal case, the case that reflects the grammatical role within the relative clause.

(2) eno nist thiz thér **then ir suochet**
now not be.3SG DEM.SG.N.NOM LH.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?'

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

Table 6.1 lists the two options that I just laid out plus an additional one. The first option is that the relative pronoun, which bears the internal case, appears as the surface pronoun. The second option is that the light head, which bears the external case, appears as the surface pronoun. The third option is that there is no grammatical form for the surface pronoun.

Table 6.1: Options for the surface pronoun

surface pronoun
light head_{EXT}
RP_{INT}
*

I propose that whether or the surface pronoun is the light head, the relative pronoun or none of them depends on whether one of the elements (i.e. the light head or the relative pronoun) can delete the other. The light head appears as the

surface pronoun when the light head can delete the relative pronoun. The relative pronoun appears as the surface pronoun when the relative pronoun can delete the light head. There is no grammatical surface pronoun possible when neither of them can delete the other one.

Whether or not one element can delete the other depends on the comparison between the two. Specifically, it depends on the comparison of the constituents they consist of. Light heads and relative pronouns do not only correspond to case features, but also to other features (having to do with number, gender, etc.). It differs per language how language organize these features into constituents. In this chapter, I illustrate how these different constituents within light heads and relative pronouns lead to the differences in whether or not the light head and the relative pronoun can be deleted, and therefore to different language types.

In order to be able to compare the light head and the relative pronoun, I zoom in on their syntactic structures. In Chapter 7 to 9 I give arguments to support the structures I am assuming here. Figure 6.2 gives a simplified representation of them.

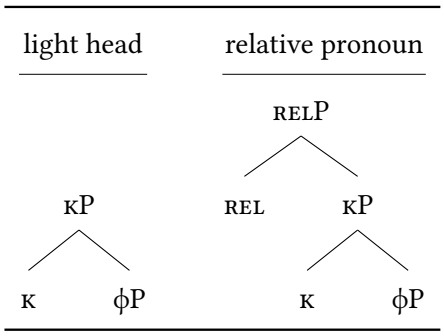


Figure 6.2: LH and RP

The light head and the relative pronoun partly contain the same syntactic features. The features they have in common are case features (K) and what I here simplify as phi-features (ϕ). The light head and the relative pronoun differ from each other in that the relative pronoun has at least one feature in addition, which I call here REL.

This system excludes the external-only type. An external-only type would be one in which the light head can delete the relative pronoun, but the relative pronoun cannot delete the light head. In my proposal, an element can be deleted if forms a

constituent within the other element. Relative pronouns always contain one more feature than light heads: REL. From that it follows that the light head does not contain all features that the relative pronoun contains. Therefore, it is impossible for a relative pronoun to form a constituent within the light head.

Summing up this section, I make four assumptions. First, headless relative clauses are derived from light-headed relatives. Light-headed relatives contain a light head and relative pronoun. Second, in a headless relative either the light head or the relative pronoun is deleted. This happens when one of them forms a constituent within the other.

I propose that the three attested different language types can be derived from this set of assumptions. The differences between them do not arise from changing the feature content of the light head and relative pronoun per language. Instead, the differences come from how the light heads and relative pronouns are spelled out.

6.2 The three patterns

In the next three sections, I briefly give the intuition behind how spellout generates the three attested language types. I take the internal-only type as the point of departure. The matching type differs from the internal-only type in that different constituents are formed. This is a consequence of having multiple morphemes spelling out different portions of the structure instead of having a single morpheme. The unrestricted type differs from the two other types in that it even different constituents are formed. In addition, it uses the same lexical entry for different portions of the structure. This is the consequence of there being a sycnretism.

As I mentioned, I take the internal-only type as the point of departure. In internal-only languages, headless relatives are grammatical when the internal and the external case match and when the internal case is more complex than the external case. Headless relatives are ungrammatical when the external case is more complex than the internal case. That means that the relative pronoun can delete the light head, but the light head cannot delete the relative pronoun. I show this in 6.2.

I go through the three types of situations in given in Table 6.2. I show that the relative pronoun can delete the light head when they have the same case and when

Table 6.2: Grammaticality in the internal-only type

	surface pronoun
$K_{INT} = K_{EXT}$	$RP_{INT/EXT}$
$K_{INT} > K_{EXT}$	RP_{INT}
$K_{INT} < K_{EXT}$	*

it has a more complex case. There is no grammatical result when the external case is more complex.

In Figure 6.3, I give an example in which the relative pronoun and the light head bear the same case.

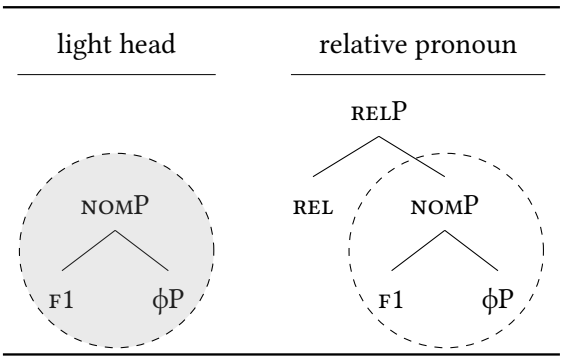


Figure 6.3: EXT_{NOM} vs. INT_{NOM} in the internal-only type

I draw a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun. The light head (the nomP) forms a constituent within the relative pronoun (the relP), so the relative pronoun can delete the light head. I illustrate this by marking the content of the dashed circles for the light head gray.

In Figure 6.4, I give an example in which the relative pronoun bears a more complex case than the light head.

I draw a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun. The light head (the nomP) still forms a constituent within the relative pronoun (the relP), so the relative pronoun can delete

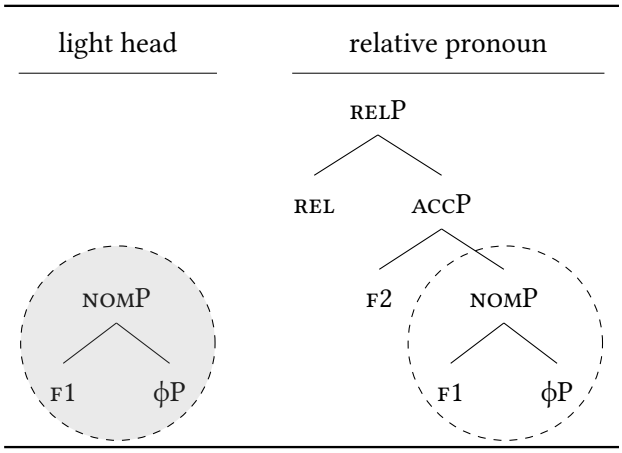


Figure 6.4: EXT_{NOM} vs. INT_{ACC} in the internal-only type

the light head. I illustrate this by marking the content of the dashed circles for the light head gray.

In Figure 6.5, I give an example in which the light head bears a more complex case than the relative pronoun.

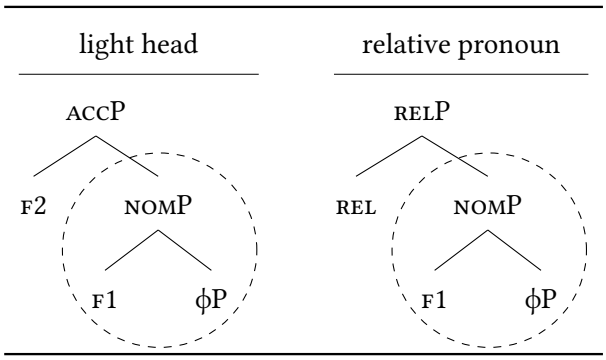


Figure 6.5: EXT_{ACC} vs. INT_{NOM} in the internal-only type

I draw a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun. Different from the examples in Figure 6.3 and 6.5, the light head does not form a constituent within the relative pronoun. The NOMP of the light head forms a constituent within the relative pronoun, but the relative pronoun does not contain the feature F2 that forms an ACCP. The NOMP of the relative pronoun forms a constituent within the relative pronoun, but the

light head does not contain the feature REL that forms a RELP. As a result, none of the elements can be absent. I illustrate this by leaving the content of both dashed circles unfilled.

6.3 Changing constituency

The difference between the internal-only type and the matching type lies in when the internal case is more complex than the external case. In the internal-only type this is grammatical, and in the matching type, it is not. This means that the relative pronoun can only delete the light head when the two cases match. I show overview of the language in 6.3.

Table 6.3: Grammaticality in the matching type

	surface pronoun
$K_{INT} = K_{EXT}$	RP_{INT}
$K_{INT} > K_{EXT}$	*
$K_{INT} < K_{EXT}$	*

I derive this difference by placing the constituents that the relative pronoun and light heads consist of in a different order. This is a simplification of the real proposal, in which I derive the difference in constituency by movement from the same base structure.

In the internal only type, the case features appear higher in the structure than the phi-features, as shown in Figure 6.6

I suggest that in the matching type, the case features appear lower in the structure than the phi features, as shown in Figure 6.7.

This is a result of having multiple morphemes spelling out different portions of the structure instead of having a single morpheme spelling this structure out at once. In Chapter 7 and 8 I motivate this claim for Modern German and Polish.

In this section, I show how this idea works out the matching type language. I discuss how the relative pronoun can still delete the light head when the internal

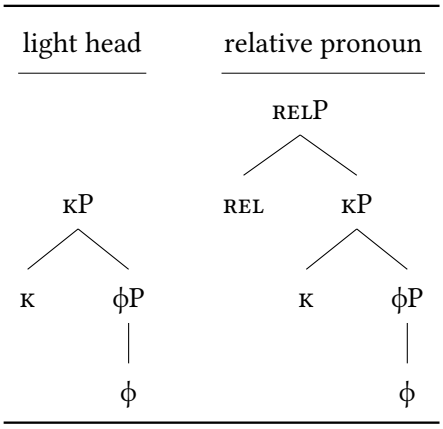


Figure 6.6: LH and RP in the internal-only type (repeated)

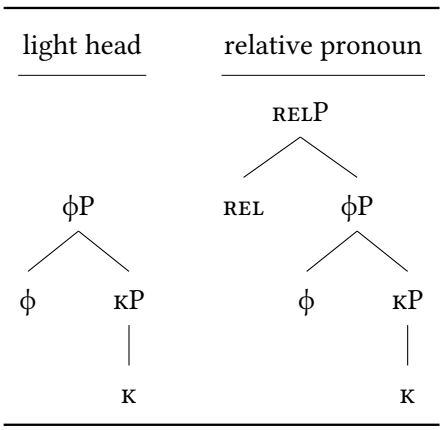


Figure 6.7: LH and RP in the matching type

and the external case match and how this does no longer work when the two cases differ.

In Figure 6.8, I give an example in which the light head and the relative pronoun bear the same case.

I draw a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun. In this instance it no problem that the phi-features appear higher in the structure than the case feature F1. The light head (the ϕP) still forms a constituent within the relative pronoun (the RELP), so the relative pronoun can delete the light head. I illustrate this by marking the content of the

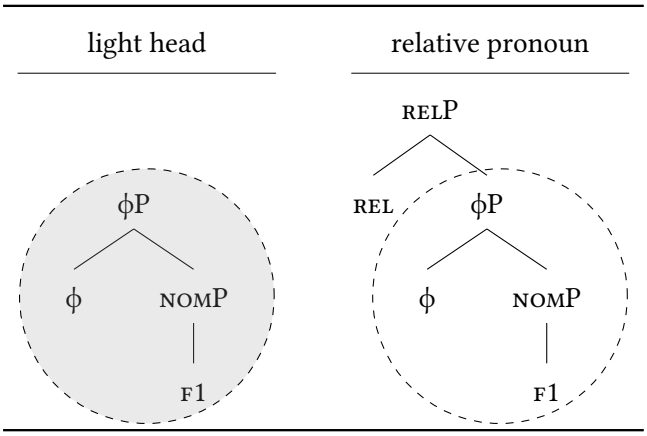


Figure 6.8: EXT_{NOM} vs. INT_{NOM} in the matching type

dashed circles for the light head gray.

In Figure 6.9, I give an example in which the relative pronoun bears a more complex case than the light head.

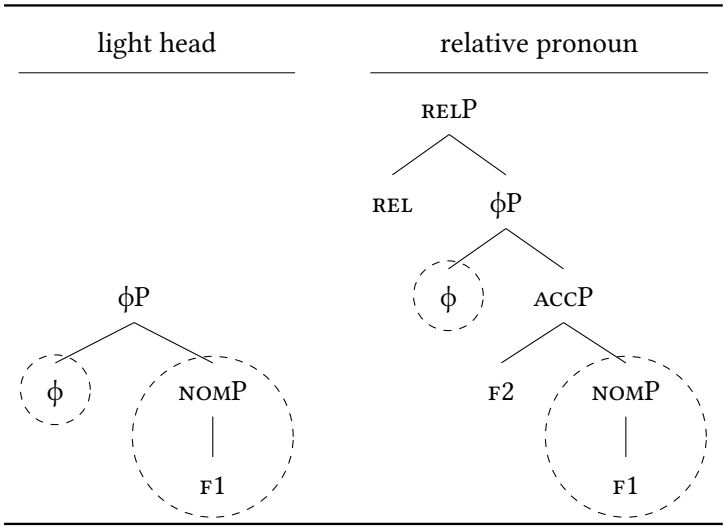


Figure 6.9: EXT_{NOM} vs. INT_{ACC} in the matching type

I draw a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun. The light head (the ϕP) no longer forms a constituent within the relative pronoun (the RELP). Therefore, the relative pronoun

cannot delete the light head, which I illustrate this by leaving the content of both dashed circles unfilled. It shows that in this instance it is a problem problem that the phi-features appear higher in the structure than the case features.

Something else the example shows is the necessity to formulate the proposal in terms of constituent containment instead of feature containment. To illustrate the difference, I show the example from the internal-only type in which the relative pronoun could delete the light head in Figure 6.10, repeated from 6.4.

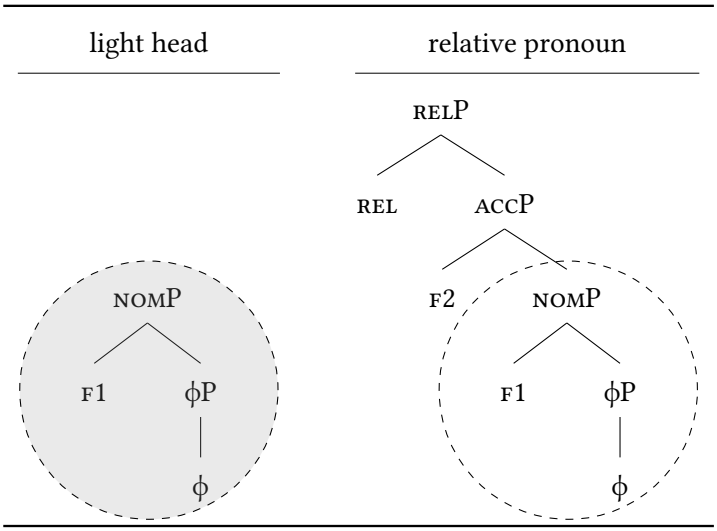


Figure 6.10: EXT_{NOM} vs. INT_{ACC} in the internal-only type (repeated)

In Figure 6.10, two different types of containment hold: feature containment and constituent containment. I start with feature containment. Each feature of the light head (i.e. ϕ and F1) is also a feature within the relative pronoun. Therefore, the relative pronoun contains the light head. Constituent containment works as follows. The NOMP forms a constituent within the RELP. Therefore, the relative pronoun contains contains the light head.

Consider Figure 6.9 again. Here feature containment holds, but constituent containment does not. The light head and the relative pronoun contain exactly the same features as in 6.10, so also here each feature of the light head (i.e. ϕ and F1) is also a feature within the relative pronoun However, the features are structured differently, in such a way that the light head does no longer form a single constituent

within the relative pronoun.

In sum, constituent containment is a stronger requirement than feature containment. Only this stronger requirement is able to distinguish the internal-only from the matching type. Therefore, this account crucially relies on constituent containment being the containment requirement that needs to be fulfilled.

Constituent containment is not only the requirement for deletion in headless relatives. It is also what seems to be crucial in the deletion of nominal modifiers. Cinque (2020) argues that nominal modifiers can only be absent if they form a constituent with the NP. If they are not, they can also not be interpreted.

In (3), I give an example of a conjunction with two noun phrases from Dutch. The first conjunct consists of a demonstrative, an adjective and a noun, and the second one only of a demonstrative.

(3) deze witte huizen en die
these white houses and those
'these white houses and those white houses' (Dutch)

The adjective *witte* 'white' forms a constituent with *huizen* 'houses'. I show this in Figure 6.11 under first conjunct. In the second conjunct, the constituent with the adjective and the noun in it is deleted. The adjective can still be interpreted in (3), because it forms a constituent with the noun.

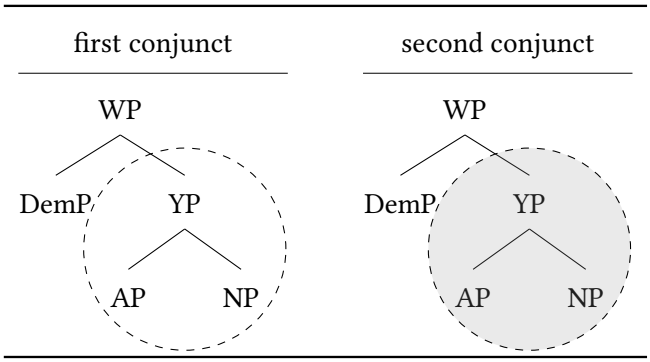


Figure 6.11: Nominal ellipsis in Dutch

The situation is different in Kipsigis, a Nilotic Kalenjin language spoken in Kenya. In (4), I give an example of a conjunction of two noun phrases in Kipsigis.

The first conjunct consists of a noun, a demonstrative and an adjective, and the second one only of a demonstrative (Cinque, 2020).

(4) kaarii-chuun leel-ach ak chu
houses-those white-PL and these
'those white houses and these houses'
not: 'those white houses and these white houses' (Kipsigis, Cinque 2020: 24)

The adjective *leel* 'white' does not forms a constituent with *kaarii* 'houses'. I showed this in Figure 6.12 under first conjunct. In the second conjunct, the adjective and the noun are deleted. Different from the Dutch example in 6.11, this is not a single constituent. The adjective cannot be interpreted in (4), because it does not form a constituent with the noun.

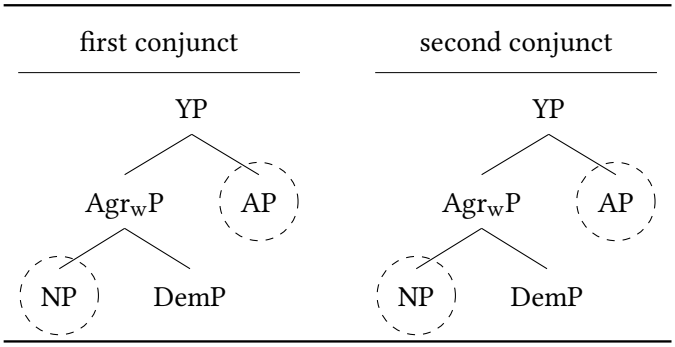


Figure 6.12: Nominal ellipsis in Kipsigis

In conclusion, a deleted phrase must form a single constituent within the deleting phrase. For light heads and relative pronouns that means that the light head must form a single constituent within the relative pronoun.

6.4 Syncretism

The difference between the internal-only type and the unrestricted type lies in when the external case is more complex than the internal case. In the internal-only type this is ungrammatical, and in the unrestricted type, it is grammatical. This means

that the light head can delete the relative pronoun when its case is more complex. I show overview of the language in 6.4.

Table 6.4: Grammaticality in the matching type

	surface pronoun
$K_{INT} = K_{EXT}$	$RP_{INT/EXT}$
$K_{INT} > K_{EXT}$	RP_{INT}
$K_{INT} < K_{EXT}$	LH_{EXT}

In order to let the relative pronoun form a constituent within the light head, I suggest two modifications should be made from the internal-only structure: a change in constituency and a syncretism.[2] I start with the change in constituency. Again, what I display here is a simplification of the real proposal, in which I derive the difference in constituency by movement from the same base structure. In the internal only type, the case features appear between the phi-features and the relative features, as shown in Figure 6.6

In the matching type, I suggested that the case features appear lower in the structure, namely below the phi features. For the unrestricted type, I suggest that the case features appear higher in the structure, namely above the relative features, as shown in Figure 6.14. Of course, this difference compared to the internal-only type can only be noticed in the relative pronoun, since the light head does not have relative features.

This brings me to the second change: syncretism. I suggest that there is a syncretism between the phi-features and the phi-features plus the relative features. That is, there is a lexical entry for the relP which contains the feature rel and feature ϕ, but not a more specific one that spells out ϕ on its own. In (5), I give the lexical entry, which spells out as /α/.

[2] Another option is that the relative pronoun does not actually form a constituent within the light head. Instead, the relative features form a separate constituent which is not deleted. In this chapter I only discuss the situation in which the relative pronoun as a whole forms a constituent within the light head, and the relative pronoun is deleted as a whole. I return to the deletion of separate constituents in Chapter 9.

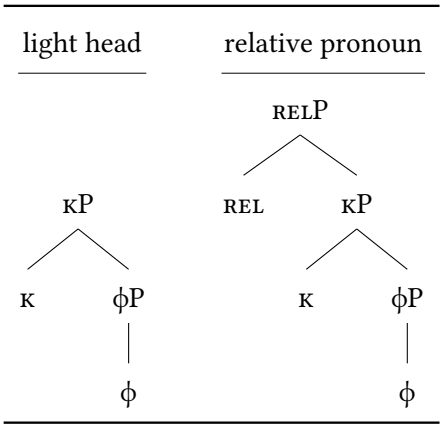


Figure 6.13: LH and RP in the internal-only type (repeated)

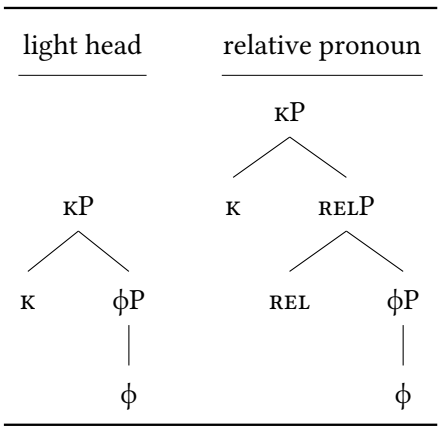
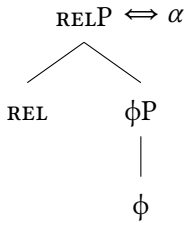


Figure 6.14: LH and RP in the unrestricted type (to be revised)

(5)



In Figure 6.15, I added the syncretism to the structures.

There are two ways of looking at the structures in Figure 6.15. Looking only at the features, the light head is a KP which contains the feature K and the ϕP.

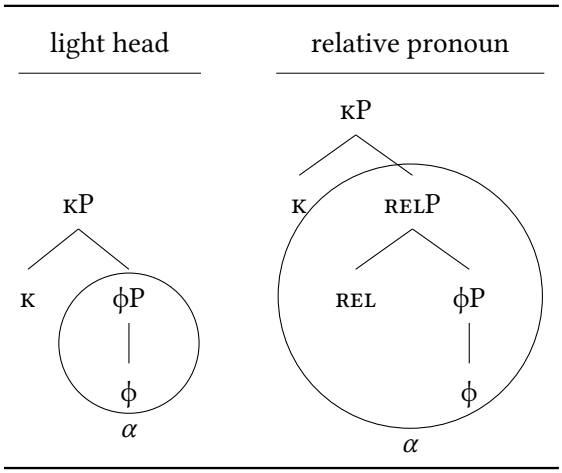


Figure 6.15: LH and RP in the unrestricted type

Similarly, the relative pronoun is a KP which contains the feature K and the RELP which contains the feature REL and the ϕP. From this perspective, the light head and the relative pronoun differ.

Looking also at the constituents that are formed within the structure, the light head and the relative pronoun are the same. The light head is a KP that contains the feature K and the constituent that corresponds to α. The relative pronoun is also a KP that contains the feature K and the constituent that corresponds to α. Syncretism has the effect that it 'overwrites' syntactic structure.

I suggest that these structures are the ones that generate the unrestricted type. However, these are not the structures found in Old High German. In Chapter 9 I discuss how Old High German differs from the image I sketched here.

In this section, I show how the structures in Figure 6.15 derive the unrestricted pattern. I show how the relative pronoun can still delete the light head when the internal case is more complex and how the light head can delete the relative pronoun when the external case is more complex.

In Figure 6.16, I give an example in which the relative pronoun bears a more complex case than the light head.

The ϕP in the light head corresponds to α, illustrated by the circle around the ϕP and the α under it. The RELP in the relative pronoun corresponds to α too, illustrated in the same way. The light head (the NOMP) consists of the feature F1 and a

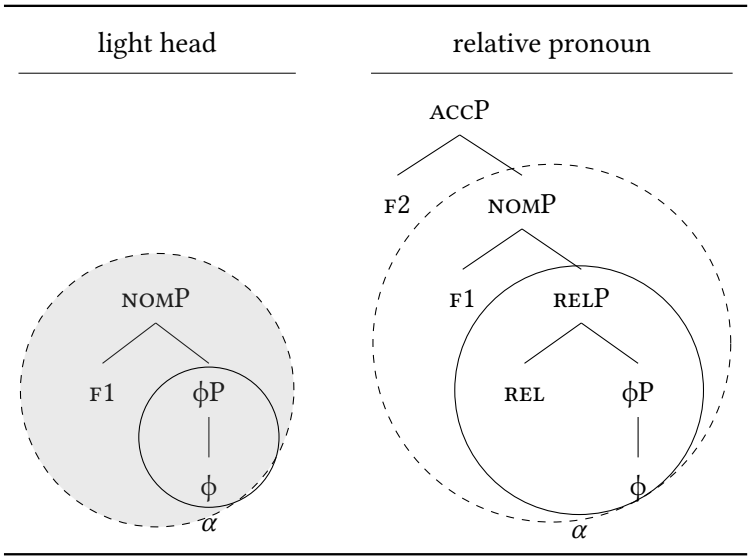


Figure 6.16: EXT_{NOM} vs. INT_{ACC} in the unrestricted type

constituent that corresponds to α. This constituent, a NOMP that consists of the feature F1 and a constituent that corresponds to α is contained in the relative pronoun (the ACCP). I illustrate this by drawing a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun and by marking the content of the dashed circles for the light head gray.

In Figure 6.17, I give an example in which the light head bears a more complex case than the relative pronoun.

The ϕP in the light head corresponds to α, illustrated by the circle around the ϕP and the α under it. The RELP in the relative pronoun corresponds to α too, illustrated in the same way. The relative pronoun (the NOMP) consists of the feature F1 and a constituent that corresponds to α. This constituent, a NOMP that consists of the feature F1 and a constituent that corresponds to α is contained in the relative pronoun (the ACCP). I illustrate this by drawing a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun and by marking the content of the dashed circles for the relative pronoun gray. This means that a light head can delete a relative pronoun when there is a syncretic form between the two, even though the light head lacks the feature REL that the relative pronoun contains.

The fact that syncretism licenses deletion is not specific to the portion of the

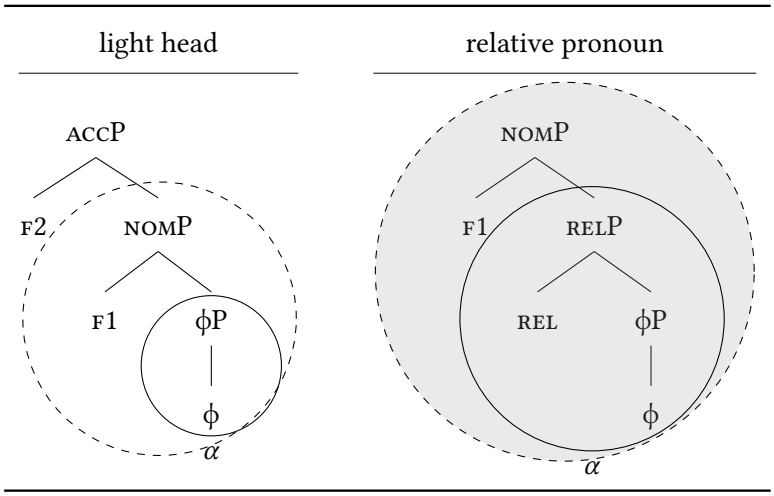


Figure 6.17: EXT_{ACC} vs. INT_{NOM} in the unrestricted type

structure that corresponds to the relP that contains the ϕP. Syncretism between different cases have the same effect. I illustrate this with an example from Modern German.

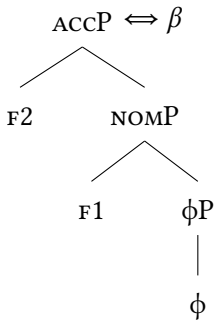
Consider the example in (6), in which the internal nominative case competes against the external accusative case. The relative clause is marked in bold. The internal case is nominative, as the predicate *gefällen* 'to please' takes nominative subjects. The external case is accusative, as the predicate *erzählen* 'to tell' takes accusative objects. The relative pronoun *was* 'rel.inan.nom/acc' is syncretic between the nominative and the accusative.

(6) Ich erzähle **was immer mir**
1sg.nom tell.pres.$1\text{sg}_{[\text{acc}]}$ rp.inan.nom/acc ever 1sg.dat
gefällt.
pleases.pres.$3\text{sg}_{[\text{nom}]}$
'I tell whatever pleases me.'
(Modern German, adapted from Vogel 2001: 344)

There is a syncretism between the nominative and the accusative. That is, there is a lexical entry for the accP which contains the feature f2 and the nomP, but not a more specific one that spells out the nomP on its own. In (7), I give the lexical entry,

which spells out as /β/.

(7)



In Figure 6.18, I give an example in which the light head bears a more complex case than the relative pronoun and there is a syncretism between the nominative and the accusative case.

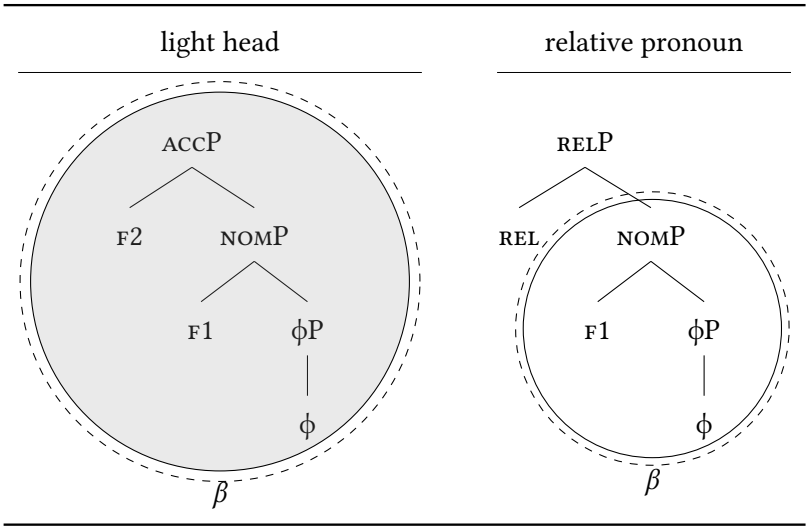


Figure 6.18: EXT_{ACC} vs. INT_{NOM} with case syncretism

The ACCP in the light head corresponds to β, illustrated by the circle around the ACCP and the β under it. The NOMP in the relative pronoun corresponds to β too, illustrated in the same way. The light head (the ACCP) forms a constituent that corresponds to β. A constituent that corresponds to α is contained in the relative pronoun (namely the NOMP). I illustrate this by drawing a dashed circle around each constituent that is a constituent in both the light head and the relative pronoun and

by marking the content of the dashed circles for the light head gray. This means that a less complex case can delete a more complex case when there is a syncretic form between the two.

Summing up, syncretic forms overwrite syntactic structure. A less complex structure can delete a more complex structure when there is a syncretism between the two.

6.5 Summary

In summing up this chapter, I return to the metaphor with the committee that I introduced in Chapter 4. I wrote that first case competition takes place, in which a more complex case wins over a less complex case. This case competition can now be reformulated into a more general mechanism, namely constituent comparison. A more complex case corresponds to a constituent that contains the constituent of a less complex case.

Subsequently, I noted that there is a committee that can either approve the winning case or not approve it. In Chapter 4 I wrote that the approval happens based on where the winning case comes from: from inside of the relative clause (internal) or from outside of the relative clause (external). I argued in this chapter that headless relatives are derived from light-headed relatives. The light head bears that external case and the relative pronoun bears the internal case. The 'approval' of an internal or external case relies on the same mechanism as case competition, namely constituent comparison. If the light head forms a constituent within the relative pronoun, the relative pronoun can delete the light head. The light head with its external case is absent, and the relative pronoun with its internal case surfaces. This is what corresponds to the the internal case 'being allowed to surface'. If the relative pronoun forms a constituent within the light head, the light head can delete the relative pronoun. The relative pronoun with its internal case is absent, and the light head with its external case surfaces. This is what corresponds to the the external case 'being allowed to surface'.

In other words, the grammaticality of a headless relative depends on constituent comparison. The constituents that are compared are those of the light head and the relative pronoun, which both bear their own case. Case is special in that it can

differ from sentence to sentence within a language. Therefore, the grammaticality of a sentence can differ within a language depending on the internal and external case. The part of the light head and relative pronoun that does not involve case features is stable within a language. Therefore, whether the internal or external case is 'allowed to surface' does not differ within a language.

In this dissertation I describe different language types in case competition in headless relatives. In my account, the different language types are a result of a comparison of the light head and the relative pronoun in the language. The larger syntactic context in which this takes place should be kept stable. The operation that deletes the light head or the relative pronoun is the same for all language types. In this work, I do not specify on which larger syntactic structure and which deletion operation should be used. In Chapter 10 I discuss existing proposals on these topics and to what extend they are compatible with my account.

To conclude, in this chapter I introduced the assumptions that headless relatives are derived from light-headed relatives and that relative pronouns contain at least one more feature than light heads. A headless relative is grammatical when either the light head or the relative pronoun forms a constituent within the other element. This set of assumptions derives that only the most complex case can surface and that there is no language of the external-only type.

Primary texts

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