

# On the (un)availability of long-distance movement

## Introduction

In this paper, I discuss diachronic data from German and Dutch suggesting long-distance movement constructions are replaced by alternatives involving short-distance movement. The short-distance alternatives concern partial wh-movement and the so-called resumptive prolepsis construction (cf. Salzmann, 2006). For both types of constructions, it has been argued that they do not involve long-distance movement at all, but rather strictly local, clause-bound movement.

The fact that these short-distance movement constructions appear to have replaced their long-distance movement counterparts suggests the constructions under consideration are competitors. I argue that this is indeed the case, in the sense that the short-distance constructions are derivationally related to their long-distance movement counterparts. Specifically, I argue that in both the long-distance movement constructions as well as in their short-distance movement alternatives, movement to the intermediate CP is motivated independently of successive-cyclic movement. This entails giving up the standard assumption that intermediate movement steps in long-distance movement constructions are solely due to successive-cyclicity.

The outline of this article is as follows. In section 1, I discuss the syntactic analyses of partial wh-movement and resumptive prolepsis in more detail. Section 2 treats the historical development of long-distance movement and its competitors in German and Dutch. In section 3, I argue that the decline in long-distance movement constructions in Dutch and German is due to the availability of alternative constructions. I further suggest in this section that these alternatives are derivationally related to their long-distance movement counterparts, and advance a unified analysis of all constructions under consideration. The article ends with a conclusion.

## 1.1 Alternatives to long-distance movement

Since Chomsky (1977), four types of constructions are considered to involve wh-movement: wh-questions, relatives, topicalization constructions and comparatives. In all cases, long-distance movement is possible, as shown in 1 – 4 below:

### *Wh-questions*

1. [Which girl<sub>i</sub> does Nina think [ John kissed t<sub>which girl</sub>]]?

### *Relativization*

2. [<sub>CP</sub> That is the girl [<sub>CP</sub> who<sub>i</sub> Nina thinks [<sub>CP</sub> John kissed t<sub>who</sub>]]]

### *Topicalization*

3. [<sub>CP</sub> The girl<sub>i</sub> OP<sub>i</sub> Nina thinks [<sub>CP</sub> that John kissed t<sub>OP</sub>]]

### *Comparative formation*

4. [<sub>CP</sub> John kissed more girls [<sub>CP</sub> than OP<sub>i</sub> Nina thinks [<sub>CP</sub> he did t<sub>OP</sub>]]]

Not all languages allow this type of cross-clausal movement: Russian and Polish, for example, do not allow long-distance movement at all (cf. Ross, 1967; Stepanov, 2006). In other languages, notably German, long-distance movement seems to be disappearing from the language. In this article, I present evidence that the same holds to a certain extent of Dutch.

Whenever long-distance movement is not available, languages have to resort to alternative constructions. In this paper, two of these alternatives are discussed: partial wh-movement and resumptive prolepsis. Partial wh-movement is widely used in German, but is much less widespread in Dutch, where standard long-distance wh-movement is still preferred (cf. Strik, 2009). The resumptive prolepsis construction on the other hand, is widely used in both languages. Furthermore, German has a third alternative, namely extraction from embedded V2 clauses, as in 5 below.<sup>1</sup> While this construction is possible in Dutch as well, it appears to have a much more marginal status and is more restricted to the spoken language.

5. [<sub>CP1</sub> *Wen meinst du* [<sub>CP2</sub> *liebt Maria?*]]  
    who think you      loves Maria?  
    ‘Who do you think loves Maria?’

In this paper, I focus on the partial wh-movement and resumptive prolepsis construction. Section 1.1 discusses the partial wh-movement construction in more detail, and in section 1.2, the resumptive prolepsis construction is treated.

## 1.2 Partial wh-movement

Partial wh-movement is exemplified in 6 for German.<sup>2</sup> In this construction, wh-phrases show up in intermediate CPs lower than their scope position, while the highest (interrogative) CP is occupied by the wh-phrase *was*, traditionally called the scope marker. The construction contrasts with standard long-distance movement as in 7, where only the highest CP is occupied by a wh-phrase, while intermediate CPs contain a complementizer.

6.    [<sub>CP1</sub> *Was meinst du* [<sub>CP2</sub> *wen Maria liebt?*]]  
       what think you    who Maria loves?  
       ‘Who do you think Maria loves?’
7.    [<sub>CP1</sub> *Wen meinst du* [<sub>CP2</sub> *dass Maria liebt?*]]  
       who think you    that Maria loves?  
       ‘Who do you think Maria loves?’

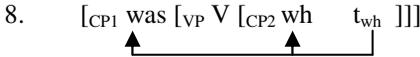
Regarding the analysis of this construction, two main types of analyses have been proposed: the Direct Dependency Approach (cf. McDaniel, 1989; Van Riemsdijk, 1983) and the Indirect Dependency Approach (cf. Dayal, 1994; 2000).

Within the Direct Dependency Approach, partial wh-movement is analyzed as a surface variant of long-distance wh-movement. This means that the scope marker and the true wh-phrase are considered to be part of the same movement chain. In this approach, it is either assumed that the scope marker is a type of wh-expletive which is eventually overwritten by the true wh-phrase, or that the scope marker is a partial spell-out of the true wh-phrase. The main reason for analyzing partial wh-movement as a surface variant of long-distance wh-movement stems from the fact that these constructions behave alike in many respects. Both constructions are only possible with bridge verbs (cf. Erteschik-Shir, 1973), both constructions obey locality constraints, and both usually have the same interpretation.<sup>3</sup> The constructions thus only seem to differ in how the movement chain is spelled out.

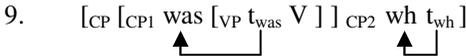
The Indirect Dependency Approach, on the other hand, does not analyze partial wh-movement as a mere variant of long-distance wh-movement. Several versions of this approach have been presented in the literature. These broadly fall out in two types of analyses. In the original analysis by Dayal (cf. Dayal 1994; 2000), the scope marker is analyzed as the object of the main verb, which is semantically associated with the embedded wh-clause. In a second type of analysis, the scope marker is analyzed as a CP-expletive, which together with the embedded clause functions as the complex object of the main verb (cf. Fanselow & Mahajan, 2000; Herburger, 1994; Mahajan, 2000; Stepanov & Stateva, 2006). Both analyses contrast with the Direct Dependency Approach in that it is assumed that the scope

marker is generated at a low position within the matrix clause, and is associated with the entire embedded clause, and not just with the wh-phrase contained in it. The three types of analyses are schematically illustrated below in 8 - 10:

*Direct Dependency Approach*



*Indirect Dependency Approach – argumental scope marker*



*Indirect Dependency Approach – expletive scope marker*



One of the mayor problems of the Direct Dependency Approach is the fact that it fails to account for the parametric property responsible for partial wh-movement. The Direct Dependency Approach generally predicts partial wh-movement to be possible in any language that has long-distance wh-movement, since partial wh-movement is contingent upon this operation. But this does not seem to be the case. Languages which employ long-distance movement, such as English and Scandinavian languages, do not allow partial wh-movement, while there are also languages that allow partial wh-movement, but not long-distance movement (Hindi, Russian and Polish). In fact, German, Hungarian and Frisian seem to be one of the few languages that have both partial and long-distance wh-movement. In general, however, these constructions are in complementary distribution (cf. Stepanov & Stateva, 2006). Furthermore, as will be discussed in more detail in section 2.1, there is evidence that partial wh-movement has replaced long-distance wh-movement in German. Such a replacement is rather odd in the face of the Direct Dependency Approach, since it leaves unexplained why there would be a diachronic change in which a long-distance wh-movement chain starts to get spelled out by means of the scope marker *was*. Therefore, I will adopt an Indirect Dependency Approach in this paper. The particular analysis I will adopt is the one proposed in Felser (2001). This analysis is discussed in more detail in section 3.2.

### 1. 3 Resumptive prolepsis

Resumptive prolepsis is, like partial wh-movement, used to express a long-distance dependency. The construction is discussed in quite some detail in Salzmann (2006). What follows is a shortened version of his discussion of this construction.

Unlike partial wh-movement, resumptive prolepsis cannot only be used to form wh-questions, but it can also be used to form relatives and topicalization constructions. The construction appears to be most natural for relatives, followed by topicalization and finally wh-questions. Dutch examples of the construction for relatives and topicalization constructions are in 11 and 12 below, respectively.

11. [<sub>CP</sub> *De man van wie ik denk* [<sub>CP</sub> *dat hij de fiets gestolen heeft*]]  
 the man of whom I think that he the bike stolen has  
 ‘The man who I think stole the bike’
12. [<sub>CP</sub> *Van de man denk ik* [<sub>CP</sub> *dat hij de fiets gestolen heeft*]]  
 of the man think I that he the bike stolen has  
 ‘The man I think stole the bike’

In the resumptive prolepsis construction, the DP that is allegedly extracted from out of the subordinate clause shows up in the matrix clause, where it is preceded by the preposition ‘of’ (*von* in German, *van* in Dutch). This DP is called the proleptic object. The position in the subordinate clause where the proleptic object is interpreted is filled by a pronoun that is coreferential with the proleptic object.

The idea that resumptive prolepsis does not involve long-distance movement proper seems rather uncontroversial. Salzmann gives several arguments against a long-distance movement analysis of this construction. First of all, there is evidence that the proleptic object is base-generated in the matrix clause. Dutch and German have an in-situ construction where the proleptic object can be found in a low position in the matrix clause, as shown in the Dutch example in 13. The proleptic object can subsequently be fronted, resulting in the ex-situ construction in 14.<sup>4</sup>

13. [<sub>CP</sub> *Ik denk van die man* [<sub>CP</sub> *dat ik hem gezien heb*]] (in situ)  
 I think of that man that I him seen have  
 ‘I think of that man that I have seen him’
14. [<sub>CP</sub> *Van die man<sub>i</sub> denk ik t<sub>i</sub>* [<sub>CP</sub> *dat ik hem gezien heb*]] (ex situ)  
 of that man think I that I him seen have  
 ‘Of that man I think that I have seen him’

Another argument against a long-distance movement analysis for resumptive prolepsis stems from the fact that resumptive prolepsis is possible with all sorts of matrix predicates other than bridge predicates, which should not be possible if resumptive prolepsis really involves long-distance movement. Further arguments against a long-distance movement analysis are the fact that the construction is not sensitive to islands, that it shows no superiority effects, and that the gap site is filled by a coreferring pronoun.

In sum, these observations argue against a long-distance movement analysis of resumptive prolepsis. Instead, it appears that the proleptic object originates in the main clause, in a position lower than vP, but higher than the verb.<sup>5</sup> From this position, it may be fronted. Salzmann (2006) further argues that in the embedded clause, operator movement takes place. There are two main reasons for assuming this. Firstly, the embedded CP in the resumptive prolepsis construction is an island for movement, which would follow quite naturally if there were movement to SpecCP. Second, Salzmann (2006) suggests operator movement in the embedded clause licenses an extra argument in the matrix clause, namely the proleptic object.

Example 15 below shows the derivation of the resumptive prolepsis involving relativization.<sup>6</sup> The derivation for resumptive prolepsis in topicalization constructions and wh-questions is essentially the same, but requires one ellipsis operation less, because wh-questions and topicalization constructions do not have an external head (e.g. *de man* in 15).

15. [CP[DP *de man*<sup>1</sup>] [PP *van wie*<sup>1</sup>]<sub>j</sub> [VP *ik*] t<sub>j</sub> [VP *geloof*] [CP OP<sub>i</sub> *dat ik* OP<sub>i</sub> *hem*<sup>1</sup>  
the man of whom I believe that I him  
*gezien heb*]]  
seen have  
‘The man of whom I believe that I have seen him’

In effect, resumptive prolepsis also appears to involve strictly short-distance movement operations under this analysis. In this sense, it is similar to partial wh-movement constructions when analyzed within the Indirect Dependency Approach.

## 2. The diachrony of long-distance movement in German and Dutch

In this section, I present historical evidence indicating that long-distance movement constructions have decreased over the past few centuries in German and Dutch. For German, this concerns evidence from the literature. With respect to Dutch, I present corpus data that indicates a similar pattern. It appears that instead of long-distance movement, alternative constructions such as partial wh-movement and resumptive prolepsis are used.

### 2.1 German

In contemporary German, long-distance movement appears to be out for many speakers. Authors differ to what degree they consider long-distance movement to be possible at all. According to Erben (1972) it is an “anomaly”, and Ebert (1973) even states that long-distance movement is impossible in contemporary German. However, in a later work (Ebert, 1978), this assertion is weakened, and he argues that the use of long-distance movement seems to have declined during the 19<sup>th</sup> and 20<sup>th</sup> century. That long-distance movement is not entirely impossible is also pointed out in Kvam (1983). He argues that while long-distance movement is rare, it is certainly not impossible. Kvam also cites Huber & Kummer (1974), who consider long-distance movement to be possible as well.

Nonetheless, it is clear that long-distance movement is out for many speakers of contemporary German. There does appear to be some dialectal variation in the acceptability of long-distance movement, with speakers from the North generally rejecting long-distance movement, while speakers of Southern varieties may allow it (cf. Müller, 1997). Most authors agree that long-distance movement is not possible in the standard language (cf. Fanselow et al., 2005). Furthermore, one of the generalizations that seems to hold is that while all speakers of German allow alternative constructions such as partial wh-movement, resumptive prolepsis and extraction from V2 clauses, only some allow long-distance movement (cf. Fanselow et al., 2005; Reis, 2000; Salzmann, 2006).

The timing of the decline in usage of long-distance movement during the 19<sup>th</sup> and 20<sup>th</sup> century is based on the discussion of this construction in (mainly) descriptive work. Andersson & Kvam (1984) point out that in a grammar by Schöten sack (1856), long-distance movement in questions is still classified as ‘frequent’. They further discuss a work by Lehmann (1862), who treats the language use of the German writer Lessing (\*1729 - † 1781). Lehmann pays specific attention to the frequent use of long-distance movement constructions by this writer (see also Behaghel, 1928 III: 551) and argues that while long-distance

movement constructions appear not to be used as frequently around the time of writing as it is in Lessing's work, it is still frequently attested in the spoken language. The works of Schöten sack and Lehmann thus seem to indicate that long-distance movement is still considered acceptable during the 19<sup>th</sup> century. However, as Andersson & Kvam (1984) point out, there is evidence that the construction already started to decline at that time, since in grammars by Paul (1920) and Behaghel (1928), the latest examples of long-distance movement constructions all come from the period around 1830.

During the 20<sup>th</sup> century, it is clear that long-distance movement is becoming increasingly rarer. Behaghel (1928), Blatz (1896) and Paul (1920) discuss historical data concerning long-distance movement and state that at the time of writing, the resumptive prolepsis construction is preferred over long-distance movement. This opinion is shared by Andersson & Kvam (1984), Ebert (1973), Lühr (1988) and Salzmann (2006). The latter points out that partial wh-movement and extraction from V2 clauses can be used as an alternative.

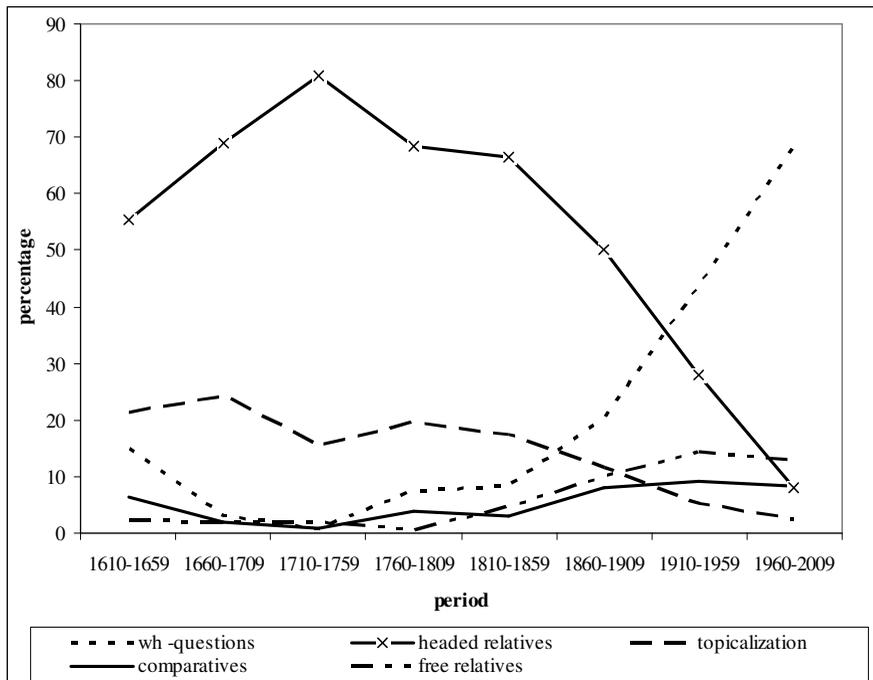
Whether there is a correlation between the decrease of long-distance movement and the rise of alternatives is however hard to prove conclusively. Reis (2000) points out that regarding partial wh-movement, practically no historical data is available. She mentions that the construction appears to surface somewhere around the 17<sup>th</sup> century. This means that partial wh-movement was already available at the time long-distance movement started to decline. Resumptive prolepsis can already be attested as early as the 16<sup>th</sup> century, judging from a citation of Behaghel (1928) from Luthers work.<sup>7</sup> Unfortunately though, there is no reliable quantitative data backing up the claim that long-distance movement has been replaced by the alternatives discussed in this paper. On the other hand, all the literature discussing long-distance movement and its alternatives does seem to point in this direction.

Summarizing, we may take the above as evidence that long-distance movement in German was a productive rule until approximately the 20<sup>th</sup> century. The construction started to recede around the middle half of the 19<sup>th</sup> century and became unacceptable for many speakers during the 20<sup>th</sup> century. In contemporary German, long-distance movement is out for the majority of speakers and hence they use alternative strategies, two of which are resumptive prolepsis and partial wh-movement.

## 2.2 Dutch

Contemporary Dutch differs from German in generally allowing long-distance movement in at least one construction, namely *wh*-questions. Long-distance headed relativization and topicalization, on the other hand, appear to have the same problematic status as in German. Just like German, the resumptive prolepsis construction is preferred in these cases (cf. Salzmann, 2006). Interestingly, the availability of long-distance movement in Dutch appears to have a diachronic dimension as well. Historical corpus data collected by Jack Hoeksema shows a decline in frequency for certain types of long-distance movement constructions. The corpus data collected by him concern occurrences of long-distance movement in *wh*-questions, headed relatives, free relatives, topicalization constructions and comparatives.<sup>8</sup> The data were collected by manually inspecting written texts and range from the 13<sup>th</sup> century up to contemporary Dutch. In what follows, data from the 17<sup>th</sup> century and up will be presented, since data before that period are simply too scarce to say anything meaningful about them. Figure 1 shows the development in frequency of these long-distance movement constructions over time.<sup>9</sup>

Figure 1: Relative frequencies of long-distance movement constructions over time.



The null hypothesis would be that the five types of long-distance movement do not develop differently over time. But Figure 1 shows that headed relatives and topicalization constructions decline over time, while wh-movement constructions, comparatives and free relatives increase.

To determine which of these increases and decreases were statistically significant, a multinomial logistic regression analysis was carried out, with PERIOD as the independent variable and TYPE as the dependent variable.<sup>10</sup> As expected, the analysis indeed showed a significant main effect [ $\chi^2$  (df 4, N = 1679) = 903.53,  $p \leq 0.000$ ], meaning that the frequencies of the four types of movement developed significantly different over time relatively to each other.

To determine which types of movement differed significantly from each other, the odds ratio (OR) for each of the comparisons between pairs of long-distance movement types were inspected. These odds ratios represent the probability of a change in the reference group versus the probability of a change in the comparison group as the independent variable (PERIOD) increases. The results are presented in Table 1:

*Table 1: odds ratios and p- values for each comparison*

<b>Comparison</b>	<b>Wald</b>	<b>p-value</b>	<b>Odds ratio</b>	<b>Confidence interval OR</b>
wh-questions vs. headed relatives	392.82	$\leq 0.000$	0.358	0.324 – 0.397
wh-questions vs. topicalization	306.35	$\leq 0.000$	0.341	0.303 – 0.385
wh-questions vs. comparatives	34.12	$\leq 0.000$	0.653	0.567 – 0.754
wh-questions vs. free relatives	8.329	0.004	0.807	0.697 – 0.933
headed relatives vs. topicalization	1.32	0.251	0.953	0.878 – 1.034
headed relatives vs. comparatives	83.61	$\leq 0.000$	1.824	1.604 – 2.075
headed relatives vs. free relatives	134.31	$\leq 0.000$	2.251	1.963 – 2.582
topicalization vs. comparatives	78.19	$\leq 0.000$	1.914	1.657 – 2.210
topicalization vs. free relatives	123.5	$\leq 0.000$	2.362	1.030 – 2.748
comparatives vs. free relatives	5.76	0.016	1.234	1.039 – 1.466

As can be seen, wh-questions differ significantly from all four other types of constructions. The odds ratios show that wh-questions increases significantly faster over time than all other constructions (e.g. the odds ratio of 0.358 for wh-questions versus headed relatives means that the chance of an increase of wh-questions versus the chance of an increase of headed relatives over time is 1: 0.358. Hence, wh-questions increase relatively faster than headed relatives).

Turning to headed relatives, it appears that they do not differ significantly from topicalization constructions, but do differ significantly from the remaining three constructions. That is, wh-questions, comparatives and free relatives increase

significantly faster than headed relatives, since the odds ratios are all  $> 1$  and the corresponding p-values  $\leq 0.000$ .

Topicalization constructions show a pattern similar to headed relatives; they too differ significantly from wh-questions, comparatives and free relatives in that these latter constructions increase faster.

Finally, comparatives differ significantly from all other constructions as well. They increase less than wh-questions and free relatives, but more than headed relatives and topicalization constructions.

Looking at Figure 1 again, we may thus conclude that wh-questions, comparatives and free relatives increase significantly faster than headed relatives and topicalization constructions. These latter two constructions do not differ significantly in the way they develop over time: they both show a decrease. Wh-questions, comparatives and free relatives, on the other hand, do show differences in the way they develop: wh-questions increase significantly faster than comparatives and free relatives, while free relatives in turn increase significantly faster than comparatives.

In sum, when the constructions under consideration are ordered from “most increasing” to “least increasing” (meaning decreasing for headed relatives and topicalization constructions), we get the following order: wh-questions  $>$  free relatives  $>$  comparatives  $>$  headed relatives and topicalization constructions.

### 3. Discussion

The Dutch data appear to comply with the pattern found for German in certain respects. This is specifically true for the decline in long-distance headed relatives and topicalization constructions. These constructions appear to decrease in frequency around the same time as in German (after the second half of the 19<sup>th</sup> century). However, Dutch differs from German in that it does not show an overall decline of long-distance movement constructions. Specifically, long-distance wh-movement does not decrease in frequency at all; on the contrary, this construction appears to increase in frequency. This also seems to be the case for comparatives and free relatives. Interestingly, these latter three constructions are precisely the constructions which do not have a suitable alternative in Dutch: resumptive prolepsis is not possible with comparatives and free relatives, and it is only rarely used in wh-questions.<sup>11</sup>

The replacement of long-distance movement constructions by alternatives involving short-distance movement could have a number of causes. For example, it is possible that for some reason, long-distance movement became ungrammatical. The functional gap created by the unavailability of long-distance movement may then have been filled by alternative strategies like the ones discussed here.

However, the correlation between the decline of long-distance movement and the availability of short-distance alternatives discussed above suggests otherwise. Specifically, the Dutch data show that long-distance movement itself is not ungrammatical, since it is still frequently attested in *wh*-movement constructions, and also does not seem to be dropping in free relatives and comparatives. Especially telling is the strong decline in long-distance headed relatives, which is not mirrored by a decline in long-distance free relatives. This shows that there is nothing particular about long-distance relativization itself which causes the decline in frequency, but rather that it is the availability of an alternative construction which causes the decrease. In conclusion, long-distance movement is only decreasing in cases where an appropriate alternative is available. If long-distance movement was blocked for another reason, it should be blocked in all constructions, not just in the ones for which an alternative is available.

This strongly suggests that the decline in long-distance movement constructions reported for German and Dutch is due to the replacement by alternative constructions. Whereas Dutch only has the resumptive prolepsis construction as an alternative, German also has partial *wh*-movement and extraction out of embedded V2 clauses. Both these constructions can be used to form a long-distance *wh*-dependency. Dutch, in which these two latter alternatives have a much more marginal status, continues to employ long-distance movement in questions, comparatives and free relatives.

Regarding comparatives and free relatives, it should be noted that both German and Dutch do not have alternative constructions available. As was mentioned in footnote 11, resumptive prolepsis cannot be used in the context of comparativization. As it turns out, comparatives are very infrequent in both languages. The Dutch corpus data only contained 104 instances of long-distance comparatives, against a total of 1734 occurrences. For German, Andersson & Kvam (1984) give a list of 59 examples of long-distance movement, of which only 4 examples concern comparatives. Since the construction is so infrequent in both languages, it is hard to say anything meaningful about its historical development. The Dutch data presented here suggests comparatives do not show a great deal of fluctuation in their frequency over the past few centuries.

Turning to free relatives, it must be noted that the Dutch dataset only contained 137 examples of this construction, hence free relatives appears to be relatively infrequent as well. They also do not seem to vary a lot in frequency over time, as can be learned from Figure 1. Unfortunately, the German literature on the historical development of long-distance movement does not address free relatives and comparatives specifically, so I do not know whether they show a similar development as in Dutch. The Dutch data is however suggestive of the idea that long-distance movement only declines in situations in which alternative constructions are available.

In conclusion, the most plausible scenario seems to be that the alternatives overtook their long-distance movement counterparts, causing them to gradually disappear from the language. An interesting question is what caused this. It could just be a spontaneous change, as argued by Andersson & Kvam (1984) and Salzmann (2006). However, this leaves open a number of questions. One of these questions is where these short-distance movement alternatives come from, in other words; where are they derived from? In the next section, I will argue that the short-distance alternatives are actually derivationally related to their long-distance movement counterparts.

### 3.1 Partial wh-movement and resumptive prolepsis as alternatives to long-distance movement

The historical data discussed before indicates that long-distance movement constructions are competing with partial wh-movement and resumptive prolepsis. However, it must be noted that these constructions are not syntactic competitors in the strict sense, since they are made up of different lexical items. Partial wh-movement differs from its long-distance movement counterpart in the presence of the scope marker *was* and the absence of a complementizer in the embedded clause. For resumptive prolepsis, it is the preposition ‘of’ which is inserted before the proleptic object and the presence of a resumptive pronoun at the gap site.<sup>12</sup> This means resumptive prolepsis and partial wh-movement are not in the same reference set for syntactic competition, and it is therefore more appropriate to speak of these constructions in terms of functional competitors. However, this does not mean that the constructions are not syntactically related to long-distance movement constructions in any sense. In fact, I would like to argue that resumptive prolepsis and partial wh-movement constructions are derivationally related to their long-distance movement counterparts.

One of the clearest arguments in favor of this is the fact that resumptive prolepsis and partial wh-movement can only be used to form a long-distance dependency. Hence, the constructions do not show up in any other environments, such as mono-clausal constructions. This is illustrated in 16 and 17 for German:

16. \**Was hast du wen gesehen?*  
 what have you who seen  
 ‘Who have you seen’
17. \**Der Mann von dem ich ihn vertrau*  
 the man of whom I him trust  
 ‘The man whom I trust’

This suggests that partial wh-movement and resumptive prolepsis are actually based on their long-distance movement counterparts, since they are not available outside the context of long-distance dependencies. The question is how this can be incorporated into the syntactic analysis of these constructions. While it is clear that resumptive prolepsis and partial wh-movement are functionally related to their long-distance movement counterparts, it is less clear to what degree the constructions are also syntactically related.

In order to express the syntactic parallels between partial wh-movement, resumptive prolepsis and their corresponding long-distance movement constructions, I would like to propose that movement to intermediate SpecCPs in long-distance dependencies is triggered independently of successive-cyclic movement. That is, contrary to standard assumptions about long-distance movement, where it is assumed that intermediate movement steps are solely the result of successive-cyclicality or some form of it (e.g. assignment of optional edge features), I assume movement to these intermediate positions is triggered by an independent checking requirement of intermediate Cs. Regarding the underlying structure of long-distance dependencies, I envisage a structure as in 18 below:

18.  $[[_{CP} C_{[wh/pred]}] \dots [_{VP} (\text{scope marker/proleptic object}) V]] [_{CP} C_{[wh/pred]} \dots ]$

A structure as in 17 has been proposed by Salzmann (2006) for resumptive prolepsis and by Felser (2001) for partial wh-movement. Both assume that the scope marker c.q. proleptic object originates in object position of the matrix clause, and that the matrix verb forms a complex predicate together with the embedded clause, of which the scope marker/proleptic object is the subject. I essentially adopt this analysis, but extent it to long-distance movement constructions in assuming that they have the same type of derivation. I have put the scope marker/proleptic object in parentheses, to indicate that they may be (optionally) merged in long-distance dependencies. Hence, the underlying structure of a long-distance movement construction is as in 18, but without the scope marker/proleptic object. The crucial difference between a long-distance movement construction and the alternative constructions is that once a scope marker/proleptic object is merged, it becomes the closest target for movement to the matrix CP. This means that there will actually be two separate, strictly local movement operations: movement of the operator in the embedded clause, and movement of the scope marker/proleptic object in the matrix clause.<sup>13</sup> If, on the other hand, no scope marker or proleptic object is merged, the derivation results in a normal long-distance movement construction, since in that case the operator (e.g. a wh-phrase) at the embedded SpecCP is the closest target for movement to the matrix SpecCP.

In this sense, the derivation of a long-distance movement construction proceeds in the same manner as standard accounts hold it. However, the analysis departs in one major respect from these standard accounts in that it is assumed that movement to the intermediate SpecCP is triggered by the same kind of feature as that of the matrix CP (see Stepanov & Stateva, 2006 for a similar idea). That is, instead of assuming movement to intermediate CPs is solely triggered by edge features (e.g. EPP/OCC features), I propose intermediate CPs in long-distance movement constructions contain the same features as matrix CPs. This feature may differ depending on the type of construction: for wh-questions it may be a [wh] or [Q] feature, for relatives a predicate [pred] feature. I assume it is this feature that triggers movement of an operator to the SpecCP. Importantly, whether or not the operator (e.g. a wh-phrase) gets moved to a higher CP depends on what is going on in the matrix clause. If the matrix verb has an extra argument in the form of a proleptic object or scope marker, it is this element which is the closest target for movement to the matrix CP. As a result, the operator in the embedded CP remains in place and may get spelled-out there. If no proleptic object or scope marker is merged, I assume the operator in the subordinate CP may move further up to satisfy the checking requirements of the matrix CP. This would follow under the assumption that an operator may check the same feature more than once, as proposed in Stepanov & Stateva (2006) in the context of long-distance wh-movement.

Note that the assumption that long-distance movement is the result of an actual feature checking requirement of intermediate Cs rather than of an optionally assigned edge-feature may solve some long-standing problems regarding the syntactic analysis of long-distance movement. Within generative grammar, the question of what triggers movement to intermediate positions has always been difficult to answer. It has long been clear that movement must target intermediate positions, but the how and why of these movement steps has remained rather elusive. There have been various proposals over the years in order to implement successive-cyclic movement in the syntax, ranging from the Subjacency condition (Chomsky, 1973) to the more recent minimalist versions Form Chain (Chomsky, 1993) and the assignment of optional edge features to intermediate phase heads (cf. Chomsky, 1998). In all these cases, the proposed principles seem rather ad-hoc and do not serve any other purpose than to derive the desired effect of successive-cyclic movement. If, however, it is assumed that movement to intermediate CPs is triggered by actual features, instead of optional edge features, we have a very natural explanation as to why successive-cyclic movement targets these intermediate positions.

The next issue I would like to turn to is the historical replacement of long-distance movement constructions by alternatives like partial wh-movement and resumptive prolepsis. Under the analysis sketched above, the historical change

from forming long-distance dependencies by means of standard long-distance movement to a system in which they are formed by strictly local, clause-bound movement operations would involve the following two components: (1) movement halts at intermediate instead of matrix CPs and (2) insertion of a scope marker/proleptic object in the matrix clause. The first point is already something which follows naturally under the current analysis, since it is assumed that operators are allowed to move to intermediate CPs irrespective of successive-cyclic movement. Paramount to the analysis of resumptive prolepsis and partial wh-movement is the fact that operators may also stay in this position. In the literature, various proposals have been put forward to account for the presence of operators in intermediate CPs in the alternative constructions discussed here, especially in the context of partial wh-movement. Generally speaking, it forms a problem for the Direct Dependency Approach, since it analyzes the intermediate CP as non-interrogative. As such, a wh-phrase would not be licensed in this position.<sup>14</sup> The Indirect Dependency Approach, on the other hand, is able to account for the presence of wh-phrases in intermediate CPs, since it assumes the embedded clause is a question in its own right. Regarding resumptive prolepsis, Salzmann (2006) suggests operators in intermediate CPs are licensed due to the optional assignment of a [pred] feature. In the current analysis, I simply assume that such a feature is always assigned. That is, I suppose intermediate Cs in long-distance dependencies always carry a feature like [pred] or [wh], regardless of whether movement actually stops there.

The second part of the change would involve the insertion of a scope marker/proleptic object. In case of partial wh-movement, this is due to the fact that certain matrix predicates allow for an extra argument (the scope marker). That the class of predicates allowed in partial wh-movement constructions and those allowed in long-distance movement constructions are not the same is well-known. Predicates allowed in partial wh-movement constructions are bridge predicates that may combine with a (pro)nominal direct object (cf. Reis, 2000). When the object position is occupied by something other than the scope marker, partial wh-movement is not possible, since the scope marker competes for the same structural position (Fanselow & Mahajan, 2000).<sup>15</sup> Therefore, partial wh-movement is not possible with complex object-verb predicates and sentential predicates. Furthermore, partial wh-movement is ungrammatical when the matrix predicate is a negative predicate, a preference predicate, a strong factive predicate, or when it is adjectival.<sup>16</sup> The fact that partial wh-movement appears to show island sensitivity and is only possible with bridge predicates suggests it is a true long-distance extraction construction. However, as pointed out in Reis (2000), parenthetical questions in German show the same kind of restrictions with respect to the type of predicates in the main clause. Since these constructions undeniably do not involve

long-distance movement, the ban on certain types of predicates does not appear to be syntactic in nature, but rather semantic.

In case of resumptive prolepsis, the proleptic object is not directly selected by the main verb, but it is thematically licensed since it is the subject of a complex predicate, as Salzmann (2006) argues. Because the proleptic object is not a true argument of the matrix predicate, the proleptic object gets case marked by a preposition. Contrary to partial *wh*-movement, resumptive prolepsis shows up with wide variety of matrix predicates. As Salzmann (2006) points out, the construction can be attested with desiderative verbs, factive verbs, finite control verbs, reflexives, verbs with *wh*-complements and manner-of-speaking verbs like ‘whisper’. There are, however, a number of semantic restrictions on the proleptic object that delimit the range of situations in which resumptive prolepsis is possible. That is, the proleptic object has to be individual denoting: manner and amount expressions and predicates as the proleptic object are inadmissible. Because of these limitations, resumptive prolepsis can therefore not always act as an alternative to long-distance movement.

In conclusion, while resumptive prolepsis and partial *wh*-movement may function as alternatives to long-distance movement constructions in most cases, they are not alternatives by all means and purposes. A number of syntactic and semantic constraints delimit the range of situation in which these constructions may act as alternatives. However, this does not mean that the constructions are not in any way syntactically related, or that they cannot compete with their long-distance movement counterparts. In this section, I have argued that although partial *wh*-movement and resumptive prolepsis are not in the same reference set as long-distance *wh*-movement, they do share a similar derivational base. Furthermore, it appears that the degree in which partial *wh*-movement and resumptive prolepsis can be used as alternatives to long-distance movement is delimited by certain syntactic and semantic constraints. For partial *wh*-movement, one of the most important limitations concerns the type of matrix predicates that is allowed in these constructions. For resumptive prolepsis, it is the semantic type of the proleptic object that determines when it can be used as an alternative to long-distance movement. As a consequence, we predict long-distance movement will continue to prevail in situations where no appropriate alternative is available.

## Conclusion

In this article, I presented evidence that long-distance movement has receded over the past few centuries in German and Dutch. Instead, alternative constructions such as partial wh-movement and resumptive prolepsis are used. The Dutch data showed a strong correlation between the decline in long-distance movement and the availability of alternatives: long-distance movement is only declining in constructions for which the resumptive prolepsis construction is available as an alternative. I argued that the alternatives partial wh-movement and resumptive prolepsis involve short- rather than long-distance movement. This is most clear for the resumptive prolepsis construction, which shows none of the hallmarks of long-distance movement. However, adopting an Indirect Dependency Approach, I have pointed out that this can also be argued for partial wh-movement.

Furthermore, it was suggested that partial wh-movement and resumptive prolepsis are derivationally related to their long-distance movement counterparts. Specifically, I argued that movement to intermediate CPs in both long-distance movement constructions and the alternative constructions is triggered by the same feature-checking requirement. The assumption that movement to intermediate positions is triggered independently of successive-cyclic movement gives a possible explanation for the origin of resumptive prolepsis and partial wh-movement. As was pointed out, both partial wh-movement and resumptive prolepsis are not available outside the context of long-distance dependencies, suggesting they are actually based on this construction. This parallel is now established by assuming that in all constructions under consideration, movement to intermediate CPs is independently triggered.

## Acknowledgements

I am greatly indebted to Jack Hoeksema for providing me with the Dutch data discussed in this paper, and for all his help in preparing this article. I would further like to thank the audience of the Syntax & Semantics seminar at the Center for Language and Cognition Groningen and the audience at the workshop “Facing Movement” at the Universitat Pompeu Fabra, Barcelona (August 23<sup>rd</sup> – 24<sup>th</sup>, 2008). I would also like to thank an anonymous reviewer for helpful comments.

## Notes

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<sup>1</sup> Reis (1996) argues that these constructions do not involve long-distance extraction at all, but rather that they are based on parentheticals, an analysis which I adopt.

<sup>2</sup> In the remainder of this paper, I will discuss the partial wh-movement construction as it surfaces in German, unless noted otherwise. The observations regarding this construction do not necessarily carry over to partial wh-movement constructions in other languages.

<sup>3</sup> There are a few cases in which partial wh-movement and long-distance wh-movement constructions have different interpretations: long-distance wh-movement may show scopal ambiguities (cf. Reis, 2000) and de re/de diction ambiguities (cf. Herburger, 1994), whereas partial wh-movement does not.

<sup>4</sup> In Dutch, preposition stranding in the ex-situ construction is possible, leaving the preposition in base position, showing the in-situ and ex-situ construction are related.

<sup>5</sup> The reason for assuming the proleptic object is generated below vP is that a vP internal subject may bind the proleptic object. The hypothesis that the proleptic object is higher than VP stems from the fact that in case of VP topicalization, the matrix verb forms a constituent with the subordinate clause, excluding the proleptic object (cf. Salzmann 2006: 194).

<sup>6</sup> Coreference relations are indicated by superscripts, movement relations by subscripts. Salzmann (2006) assumes that the operator in the embedded clause, the proleptic object and the relativized NP are linked to each other by means of ellipsis. Linking the operator, proleptic object and head noun by means of ellipsis is done in order to account for reconstruction effects. Whether or not this is the correct analysis I will not go into at this point, since it is not of direct relevance to the issues discussed in this paper.

<sup>7</sup> The example concerns a passage from Luther's 1534 German translation of the bible: *von einem verstorbenen Jhesu, von welchem Paulus sagete er lebete* 'of a deceased Jesus, of whom Paulus said that he lived' (*Apostelgeschichte* (Acts), chapter 25, verse 19).

<sup>8</sup> For reasons that will become apparent later, free relatives are treated separately from headed relatives.

<sup>9</sup> The graph shows the relative frequencies for each type of movement per 50-year interval. These relative frequencies were computed by dividing the number of occurrences for each construction type per period by the total number of occurrences in that period. This was done in order to control for the fact that not the same amount of data was available for each period. Figure 1 therefore shows how the four types of constructions develop over time relatively to each other, and not to some other independent benchmark.

<sup>10</sup> The multinomial regression analysis measures whether the independent variable has an effect on the dependent variable. For the case at hand, this means the analysis measures whether changes in the independent variable (PERIOD) affect changes in the five levels of the dependent variable (type of long-distance movement) in the same way. Hence, if the long-distance movement constructions develop the same over time, the multinomial regression analysis should show no main effect. If, on the other hand, the constructions do develop differently over time, this should lead to a significant main effect.

<sup>11</sup> Free relatives do not allow resumptive prolepsis because the wh-phrase in a free relative cannot be a PP (cf. Groos & Van Riemsdijk, 1981), which it has to be in the resumptive prolepsis construction. Comparatives involve amount expressions, and are for that reason excluded from the resumptive prolepsis construction, because resumptive prolepsis does not

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allow the proleptic object to have an amount reading (cf. Salzmann, 2006). As to why resumptive prolepsis is only rarely used in *wh*-questions, I do not have a clear answer. Although it is certainly not ungrammatical, resumptive prolepsis in questions is rarely employed in both German and Dutch (cf. Salzmann, 2006)

<sup>12</sup> Salzmann (2006) argues the presence of a resumptive pronoun is due to the fact that the filler of the operator is merged outside the embedded CP. This is not the case for partial *wh*-movement, where the true *wh*-phrase is locally available within the subordinate clause.

<sup>13</sup> I use the term operator broadly here, in that it denotes silent operators as well as other operator-like elements, such as *wh*-phrases.

<sup>14</sup> To circumvent this problem, various solutions have been offered within Direct Dependency Approaches. It is sometimes assumed that the *wh*-phrase in the intermediate (non-interrogative) CP is not offending, since it moves to the matrix CP at LF (cf. Von Stechow & Sternefeld, 1988). Others assume the *wh*-phrase in the intermediate CP is only a partial spell-out of true *wh*-phrase. For example, Cheng (2000) proposes the intermediate *wh*-phrase only consists of the indefinite, not the *wh*-part of the *wh*-phrase. Another solution is proposed in Sabel (2000), who assumes a *wh*-phrase moves to the intermediate SpecCP to check a focus feature, and is licensed in this position as such. However, notwithstanding the fact that there are possible explanations for the presence of *wh*-phrases in intermediate CPs within the Direct Dependency Approach, it is clear that this approach generally runs into problems accounting for this and must resort to additional assumptions.

<sup>15</sup> The idea that the scope marker is an argument of the matrix verb is corroborated by the fact that in Hungarian, which has overt case marking on the scope marker, the scope marker bears the case assigned by the matrix verb (cf. Horvath, 1997).

<sup>16</sup> For an overview of inadmissible predicates in partial *wh*-movement constructions, see Reis (2000).

## References

- Andersson, S. & Kvam, S. (1984). *Satzverschränkung im heutigen Deutsch*. Tübingen: Narr.
- Beck, S. & Berman, S. (2000). Wh-Scope-Marking: Direct vs. Indirect Dependency. In: Lutz, U., Müller, G. & Stechow, A. von (Eds.), *Wh-Scope Marking*. John Benjamins, Amsterdam, pp. 17-44.
- Behaghel, O. (1928). *Deutsche Syntax. Eine geschichtliche Darstellung. Vol III: Die Satzgebilde*. Heidelberg: Winter.
- Blatz, F. (1896). *Neuhochdeutsche Grammatik*. Karlsruhe: Lang.
- Cheng, L. (2000). Moving Just the Feature. In: Lutz, U., Müller, G. & Stechow, A. von (Eds.), *Wh-Scope Marking*. John Benjamins, Amsterdam, pp. 77 - 100.
- Chomsky, N. (1973). Conditions on Transformations. In: Anderson, S. & Kiparsky, P. (Eds.), *A Festschrift for Morris Halle*. New York: Holt, Reinhart and Winston, pp. 232 - 286.
- Chomsky, N. (1977). On Wh-Movement. In: Culicover, P. Wasow, T. and Akamajian, A. (Eds.), *Formal syntax*. Academic Press: New York.
- Chomsky, N. (1993). A minimalist program for linguistic theory. In: Hale, K. and Keyser, S., *The view from Building 20*. Cambridge, MA: MIT Press, pp. 1-52.
- Chomsky, N. (1998). Minimalist Inquiries: the framework. *MIT Occasional papers in Linguistics* 15.
- Dayal, V. (1994). Scope Marking as Indirect Wh-Dependency. *Natural Language Semantics* 2: 137 - 170.
- Dayal, V. (2000). Scope Marking: Cross-Linguistic Variation in Indirect Dependency. In: Lutz, U., Müller, G. & Stechow, A. von (Eds.), *Wh-Scope Marking*. John Benjamins: Amsterdam, pp. 157 - 194.
- Ebert, R. (1973). On the Notion 'Subordinate Clause' in Standard German. In: *You take the High Node and I'll take the Low Node: Papers from the Comparative Syntax Festival*. Chicago: Chicago Linguistic Society, pp. 164 - 177.
- Ebert, R. (1978). *Historische Syntax des Deutschen*. Stuttgart: Metzler.
- Erben, J. (1972). *Deutsche Grammatik. Ein Abriss*. München
- Erteschik-Shir, N. (1973). *On the nature of island constraints*. Indiana University Linguistics Club, Bloomington.
- Fanselow, G., Kliegl, R., Schlesewsky, M. (2005). Syntactic variation in German wh-questions. Empirical investigations of weak crossover violations and long wh-movement. *Linguistic Variation Yearbook* 5: 37 - 63.
- Fanselow, G. & Mahajan, A. (2000). Towards a Minimalist Theory of Wh-Expletives, Wh-Copying, and Successive Cyclicity. In: Lutz, U., Müller, G. &

- Stechow, A. von (Eds.), *Wh-Scope Marking*. John Benjamins, Amsterdam, pp. 195 – 230.
- Felser, C. (2001). Wh-expletives and secondary predication: German partial wh-movement reconsidered. *Journal of Germanic Linguistics* 13: 5-38.
- Groos, A. & Riemsdijk, H. van (1981). Matching Effects in Free Relatives: A Parameter of Core Grammar. In: Belletti, A., Brandi, L. & Rizzi, L. (Eds.), *Theory of Markedness in Generative Grammar*. Scuola Normale Superiore di Pisa, Pisa, pp. 171-216.
- Herburger, H. (1994). A Semantic Difference between Full and Partial Wh-movement in German. *Paper presented at the LSA Annual Meeting*, Los Angeles.
- Huber, W. & Kummer, W. (1974). *Transformationelle Syntax des Deutschen I*. W. Fink, München.
- Horvath, Julia (1997). The Status of ‘Wh-Expletives’ and the Partial Wh-Movement Construction of Hungarian. *Natural Language and Linguistic Theory* 15: 509-572.
- Kvam, S. (1983). *Linksverschachtelung im Deutschen und Norwegischen. Eine Kontrastive Untersuchung zur Satzverschränkung und Infinitivverschränkung in der deutschen und norwegischen Gegenwartssprache*. Tübingen, Max Niemeyer Verlag.
- Lehmann, J. (1862). *Sprachliche Bemerkungen über Lessing*. Schulprogrammabhandlung. Marienwerder.
- Lühr, R. (1988). Zur Satzverschränkung im heutigen Deutsch. *GAGL* 28: 74-87.
- Luther, M. (1534). *Biblia, das ist, die gantze heilige Schrift*. Wittemberg: Luftt.
- Mahajan, A. (2000). Towards a Unified Treatment of Wh-Expletives in Hindi and German. In: Lutz, U., Müller, G. & Stechow, A. von (Eds.), *Wh-Scope Marking*. John Benjamins, Amsterdam, pp. 317 - 332.
- McDaniel, D. (1989). Partial and Multiple Wh-Movement. *Natural Language and Linguistic Theory* 7: 565 - 604.
- Müller, G. (1997). Partial wh-movement and Optimality Theory. *The Linguistic Review* 14: 249 – 306.
- Paul, H. (1920). *Deutsche Grammatik IV*. Halle: Max Niemeyer Verlag.
- Reis, M. (1996). Extractions from V2 clauses in German? In Lutz, U., Pafel, J. (eds.), *On Extraction and Extraposition in German*. Amsterdam: John Benjamins, pp. 45 - 88.
- Reis, M. (2000). On the Parenthetical Features of German Was...W-Constructions and How to Account for Them. In: Lutz, U., Müller, G. & Stechow, A. von (Eds.), *Wh-Scope Marking*. John Benjamins, Amsterdam, pp. 359 – 408.
- Riemsdijk, H. van (1983). Correspondence Effects and the Empty Category Principle. In: Otsu, Y., Riemsdijk, H. van, Inoue, K., Kamio, A. & Kawasaki, N. (Eds.), *Studies in Generative Grammar and Language Acquisition: A Report*

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- on Recent Trends in Linguistics*. International Christian University, Tokyo, pp. 5 -16.
- Ross, J. (1967). Constraints on variables in syntax. Diss., Massachusetts Institute of Technology, Cambridge, MA.
- Sabel, J. (1998). Principles and Parameters of Wh-Movement. Diss., Universität Frankfurt/Main, Frankfurt.
- Salzmann, M. (2006). Resumptive Prolepsis. A Study in Indirect A'-dependencies. Diss., University of Utrecht.
- Schötensack, H. (1856). *Grammatik der neuhochdeutschen Sprache*. Erlangen: Verlag von F. Enke.
- Stechow, A. von & Sternefeld, A., 1988. Bausteine syntaktischen Wissens. Westdeutscher Verlag, Opladen.
- Stepanov, A. (2006). 'Single Cycle' languages. Implications for Cyclicity, Recursion and Acquisition. *Linguistic Variation Yearbook* 6: 25 – 71.
- Stepanov, A. & Stateva, P. (2006). Successive cyclicity as residual wh-scope marking. *Lingua* 116: 2107 - 2153.
- Strik, N. (2009). *Syntaxe et Acquisition des Phrases Interrogatives en Français et en Neerlandais : une Etude Contrastive*. Diss., Université Paris 8 – Saint Denis, Paris.