DIACHRONIC CHANGES IN LONG-DISTANCE DEPENDENCIES: THE CASE OF DUTCH

Jack Hoeksema and Ankelien Schippers
University of Groningen

Abstract

Dutch long-distance dependencies representing four constructions (wh-questions, relative clauses, topicalization and comparatives) are studied from a diachronic corpus-based perspective. There is a steep decline in usage of such dependencies for relative clauses (but not free relatives) and topicalization, which we attribute to the rise of resumptive prolepsis as an alternative to syntactic movement. Our corpus data show that resumptive prolepsis is particularly common with relative clauses and topicalization, but hardly in use for wh-questions and not at all for comparatives. Long-distance movement therefore needs to be viewed from a broad perspective that includes the available alternatives to movement constructions, such as wh-copying and partial wh-movement, as well as resumptive prolepsis. The historical record shows more violations of the wh-island constraint for early modern Dutch than for present-day Dutch. We argue that this is linked to the near disappearance of long-distance movement in relative clauses and topicalization.

1. Introduction[1]

Long-distance dependencies have been among the core topics of generative grammar ever since Ross (1967). Such dependencies, also known in the literature as long-distance movement, or extraction from subordinate clauses, are found in a wide variety of constructions: wh-questions (both direct and indirect), relative clauses (restrictive, nonrestrictive and free relative clauses), comparatives (of inequality and equality), clefts, and topicalization (cf. the examples in (1)):

(1)   a.   Who do you think he referred to?
        b.   That is the woman I believe he referred to.
        c.   That's who I believe he referred to.
        d.   Is he as strong as I think he is?
        e.   It is with an axe, that I think he was killed.
        f.   This woman, I believe he was referring to.

Chomsky (1977) proposed to unify them all under the heading WH-movement. Relatively little is known about the diachronic aspects of long-distance movement, no doubt because its infrequency makes the phenomenon relatively hard to study. The first author, however, has collected some 1900 examples of Dutch long-distance dependencies, spanning the period 1550-2009, which will allow us to make some reasonably accurate observations on their diachronic development.[2] We discovered that long-distance movement in relative clauses, and to a lesser degree topicalization structures, is slowly disappearing, while still remaining strong in wh-questions, comparatives, and, interestingly, free relative clauses.

It appears that Modern Dutch is in many ways intermediate between English and German (cf. van Haeringen 1956, Hüning et al., 2006), its closest Germanic relatives, and long-distance dependencies are no exception to this general claim. While modern German makes very little use of long-distance movement, and English seems to permit it quite freely, Dutch is like English when we look at wh-questions, comparatives and free relatives, and like German when we consider topicalization and restrictive and nonrestrictive relatives. Long-distance clefts are too rare for corpus study, so we will ignore them for the remainder of this paper. We will argue that German and to a lesser extent Dutch show innovations in the use of their long-distance dependency systems, whereas English has retained the archaic system. We claim that German and Dutch have never really lost long-distance movement in any of the constructions, but that in many cases alternatives are preferred. The decline of long-distance movement in German and Dutch is therefore not strictly a matter of grammar, but one of use, with new types of dependency making older ones obsolete.

German differs from English and Dutch, in preferring so-called partial wh-movement to regular long-distance movement (McDaniel 1989). Another important alternative is so-called embedded V2, a word order that has also been analyzed as involving a parenthetical construction, rather than true long-distance movement (Reis 1995). That is to say, instead of

(2), the long-distance movement [LD] pattern, German speakers tend to use either (3) or (4) (for an empirical study of acceptability differences between long-distance movement and parenthetical V2, see Kiziak 2007):

(2) *Wie glauben Sie, dass er das gemacht hat?* [LD]
      How believe you that he that done   has
      'How do you believe he has done that?'

(3) *Was glauben Sie, wie er das gemacht hat?* [PARTIAL WH-MOVEMENT]
      What believe you, how he that done has
      'How do you believe he has done that?'

(4) *Wie glauben Sie hat er das gemacht?*   ["EMBEDDED V2"]
      How believe you has he that done
      'How do you believe he has done that?'

Dutch does not use partial wh-movement much (cf. Strik, 2009), although various dialects do (cf. Barbiers et al. 2006, Schippers 2006), but parenthetical V2 is quite common (although primarily in spoken Dutch). However, as in German, the set of matrix predicates that partake in this construction is more limited than the set of predicates that serve as bridge predicates for long-distance movement (Reis 1995). For instance, verbs of preferring, as in German, do not appear parenthetically (see example (8) below). As long as these restrictions remain in place, it is unlikely that embedded V2 will ever fully replace long-distance movement.[3]

(5) *Hoe denkt U,   dat hij dat gedaan heeft?* [LD]
      How think you, that he that done has
      'How you think he has done that?'

(6) *%Wat denkt U, hoe hij dat gedaan heeft?* [PARTIAL WH-MOVEMENT]
      What think you how he that done has
      'How do you think he has done that?'

(7) *Hoe denkt U heeft hij dat gedaan?*   ["EMBEDDED V2"]
      How think you has he that done
      'How do you think he has done that?'

(8) *Hoe prefereert U dat hij dat doet?*   [LD]
      How prefer   you that het hat does
      'How do you prefer that he do that?'

(9) **Hoe prefereert U doet hij dat?*   ["EMBEDDED V2"]
      How prefer   you   does het hat
      'How do prefer that he do that?'

In the case of relative clauses, long-distance movement is replaced by a rather more versatile competitor, the resumptive prolepsis [RP] construction (Salzmann 2006). Compare:

(10) *Er war der Mann, den wir glaubten dass sie meinte.* [LD]
       He was the man, whom we believed that she meant
       'He was the man we believe she meant'

(11)   *Er war der Mann, von dem wir glaubten dass sie ihn meinte.* [RP]
        He was the man, of whom we believed that she him meant
        'He was the man about whom we believe she meant him'

Although, for the sake of clarity, we have translated (9) and (10) slightly differently, they serve for all purposes as equivalents. Sentences similar to (10) are to be found in modern Dutch as well:

(12)   *Hij was de man, van wie we geloofden dat zij hem bedoelde.*
        He was the man, of whom we believed that she him meant
        'He was the man about whom we believe she meant him'

The resumptive prolepsis construction is in some ways more versatile than long-distance movement. Most importantly, it is not subject to island conditions, as the following examples illustrate. (Example (13a,b) illustrate WH-islands, (14a,b) PP-islands[4] – cf. van Riemsdijk 1978.) In addition to this, it can be noted that resumptive prolepsis is not limited to constructions involving bridge verbs (Erteschik-Shir, 1973), compare the examples in (14).

(13)   a.   *Het is iemand van wie ik niet weet of we hem vertrouwen kunnen.*
              It is someone of whom I not know if we him trust   can
              'It is someone of whom I don't know if we can trust him'
        b.   ?**Het is iemand die ik niet weet of we vertrouwen kunnen.*
              It   is someone that I not know if we trust   can
              'It is someone that I do not know whether we can trust'

(14)   a.   *Het is iemand van wie ik geloof dat we op hem vertrouwen kunnen.*
              It   is someone of whom I believe that we on him rely   can
              'It is someone of whom I believe that we can rely on him'
        b.   **Het is iemand   die ik geloof dat we op vertrouwen kunnen.*
              It   is someone that I believe that we on rely   can
              'It is someone I believe we can rely on'

(15)   a.   *Wat denk je dat hij bakt?*
              What think you that he bakes
              'What do you think he is baking?'
        b.   **Wat ruik je   dat hij bakt?*
              What smell you that he bakes
              'What do you smell he is baking?'
        c.   *Het is een gerecht waarvan ik kan ruiken dat het aangebrand is.*
              It is a   dish   of-which I can smell that it burnt   is
              'It is a dish that I can smell got burned'

In other ways, however, resumptive prolepsis is rather more restricted. It is not possible to use it with free relatives, because of the so-called matching requirement on free relatives (Groos and van Riemsdijk 1981). This requirement, among other things, forbids the use of PP-headed free relatives in environments where DPs are required.

(16)   a.   *Dat is iets waarvan ik geloof dat het belangrijk is*. [regular relative]
That is something whereof I believe that it important is
'That is something I believe is important'

    b.   **Dat is waarvan ik geloof dat het belangrijk is.*   [free relative]
that is whereof I believe that it important is
'That is of which I believe it is important'

This observation will be relevant for our next section, in which we sketch the diachronic changes in our corpus.

2. Diachronic changes in long-distance movement

In Table 1, we show the main developments in our corpus of long-distance dependencies. We note that in interpreting our data, some caveats are in order. For example, it is important to note that for historical research, all we have are written documents, and so our findings pertain to the written language only. Another point worth noting is the strong relation between text type and frequency of constructions. Wh-questions, for instance, abound in dialogues, and hence we expect to find long-distance cases in texts such as novels and drama, and for recent times also newspaper genres such as interviews, but far less in academic prose, historical narrative or diaries. Long-distance topicalization is a phenomenon that seems more common nowadays in spoken language than it is in written language. Hence it was important for us, in constructing our data set, to make sure that the text types used for each period are varied and similarly distributed.[5]

Table 1: Five Types of Long-Distance Dependencies, Diachronically

Period	Wh-Q	%	Rel	%	Free Rel	%	Top	%	Compar	%	Total
<1700	16	7	159	68	6	3	48	21	5	2	234
1700-1749	4	3	113	72	4	3	32	21	3	2	156
1750-1799	17	7	160	69	1	0.5	45	19	8	3	231
1800-1849	13	7	126	65	3	2	46	24	6	3	194
1850-1899	36	17	111	52	23	11	28	13	14	7	212
1900-1949	63	32	69	36	29	15	13	7	20	10	194
1950-1999	303	73	40	10	42	10	4	1	27	6	416
2000-2009	194	66	19	6	42	14	11	4	28	10	294

The main developments to be seen are the decline of long-distance dependencies in relative clauses and topicalization constructions. As a result, the percentages for the remaining types

of long-distance movement, in particular questions, free relatives, and comparatives, jump up. The results of Table 1 are represented graphically in Figure 1 below.

Figure 1: Percentages of 5 types of long-distance dependencies
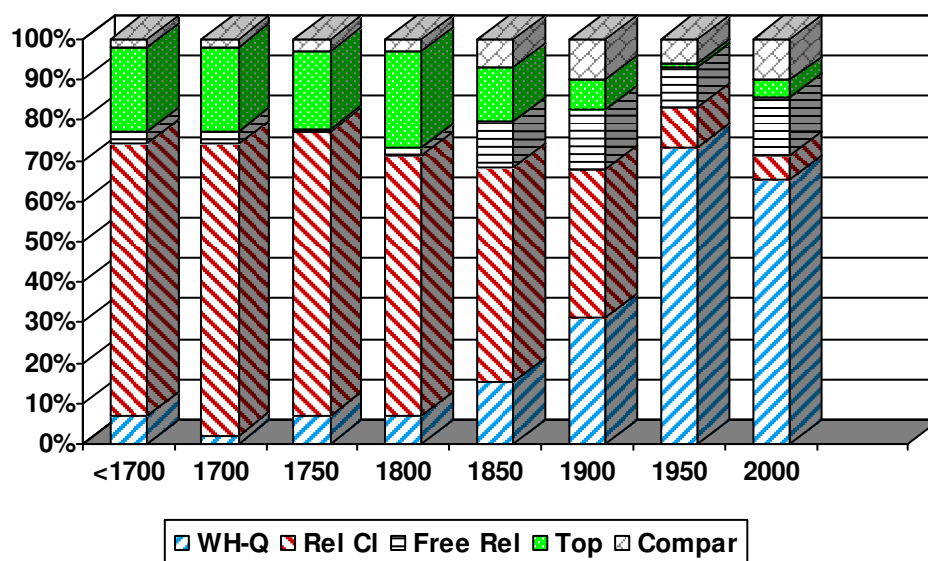
Note that the big changes happen in the second half of the 19th century, when relative clauses and topicalization start losing ground, but free relatives actually become far more common, and another one in the second half of the 20th century, when relative clause and topicalization show a further steep drop in usage frequency. For the 19th century, a decline of long-distance movement in German is reported (cf. Andersson & Kvam, 1984; Behaghel, 1928; Blatz, 1896; Ebert, 1978; Paul, 1920).

In Figure 2, we show the emergence in our data of the resumptive prolepsis construction:

Figure 2: Resumptive Prolepsis
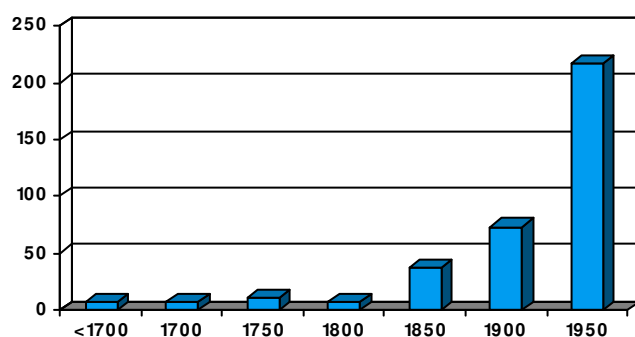
These data are to be taken with caution, as they are raw numbers of occurrences collected by us, and not, for instance, the number of occurrences of the construction per 1,000 words. The latter type of information would obviously be preferable, but is not available to us in the absence of a parsed diachronic corpus of Dutch. Nonetheless, there are some very strong

reasons to believe that resumptive prolepsis is really rapidly gaining ground in the period we are looking at, which stretches from the 16th century to the present. One clear change affecting this construction is that it gets to be employed with an ever-increasing set of matrix verbs. The oldest occurrences primarily involve verbs of communication, in particular *zeggen* 'say', as Table 2 shows:

Table 2: Matrix predicates for resumptive prolepsis (up to 1770s)

verb	N
zeggen 'say'	9
verhalen 'tell'	2
getuigen 'testify'	1
horen 'hear'	1
vernemen 'hear'	1
aantekenen 'note'	1
lezen 'read'	1
weten 'know'	1

When we compare this to the matrix predicates for long-distance dependencies in Table 3, we note that *zeggen* is a very prominent item in that set, but also that other types of predicates are in use as well.

Table 3: Matrix predicates long-distance dependencies (same Period: < 1770)

verb	transl.	N	verb	transl.	N	verb	transl.	N
aanmerken	remark	2	horen	hear	6	verhopen	hope	1
aannemen	assume	1	houden	keep	4	verklaren	declare	1
aantonen	show	1	ignoreren	ignore	1	vermanen	admonish	1
achten	consider	4	informeren	inform	1	vermoeden	presume	2
bedingen	negotiate	1	klagen	complain	1	vernemen	hear	1
bedoelen	intend	1	leren	learn	2	verstaan	understand	2
begeren	desire	2	menen	think	48	vertellen	tell	2
bekend	known	1	merken	notice	1	vertrouwen	trust	7
bekennen	admit	2	mogelijk	possible	1	verwachten	expect	1
bekommerd	concerned	1	nodig	necessary	1	verwijten	blame	1
believen	please	1	onderstellen	assume	1	verwonderen	wonder	1
bemerken	notice	3	onmogelijk	impossible	1	verzekeren	assure	6
berichten	announce	1	ontdekken	discover	1	verzoeken	request	13
bespeuren	notice	1	ontkennen	deny	1	vinden	find	5
bevinden	establish	5	oordelen	judge	11	voorkomen	prevent	3
beweren	claim	1	rekenen	reckon	1	voorzien	foresee	2
bidden	pray	1	remarkeren	remark	1	vragen	ask	1
blijken	turn out	2	schijnen	seem	1	vrezen	fear	14
denken	think	19	schrijven	write	4	wanen	think	2
duchten	fear	1	sustineren	sustain	1	wedden	bet	1
dunken	think	9	toelaten	admit	2	wensen	wish	8
gedogen	permit	1	tonen	show	2	weten	know	45
gelieven	please	1	twijfelen	doubt	3	willen	want	28
geloven	believe	15	v. doen hebben	involve	1	zeggen	say	78
geven	give	1	vaststellen	establish	2	z.flatteren	imagine	1
gewaarworden	realize	1	vereisen	require	1	z.verbeelden	flatter	2
hopen	hope	24	verhalen	recount	1	zien	see	29

In particular mental state verbs, such as *denken* 'think', *geloven* 'believe', *menen* 'mean, think' and *weten* 'know', are quite common in our long-distance movement data, but virtually

absent in the resumptive prolepsis construction. It should be noted that the amount of available data for resumptive prolepsis is severely limited for the first couple of centuries we are considering, but nonetheless it appears statistically quite unlikely that Table 2 and Table 3 come from similar populations. Interestingly, for modern Dutch, the matrix predicates found in the resumptive prolepsis constructions appear to resemble those in long-distance movement contexts. Table 4 gives the type of matrix predicates in the resumptive prolepsis for contemporary Dutch.

Table 4: Matrix predicates for the resumptive prolepsis construction, 21st century data.

VERB	TRANSLATION	N	VERB	TRANSLATION	N
aannemen	assume	7	melden	announce	1
aantonen	show	2	menen	think	2
begrijpen	understand	1	onbekend	unknown	1
bekend	known	18	ontdekken	discover	1
beoordelen	evaluate	1	overtuigd	convinced	1
besluiten	decide	1	uitsluiten	rule out	1
beweren	claim	4	vast staan	be certain	4
bewijzen	prove	2	vaststellen	determine	2
denken	think	32	vermoeden	suspect	10
documenteren	document	1	verwachten	expect	26
duidelijk maken	make clear	1	vinden	find	6
een idee hebben	have an idea	2	voorspellen	predict	2
garanderen	guarantee	1	vrezen	fear	6
gelden	count	1	weten	know	81
geloven	believe	3	wijsmaken	mislead	1
graag hebben	like	1	willen	want	6
het gevoel hebben	feel	1	zeggen	say	20
hopen	hope	9	zeker	certain	9
horen	hear	2	zich afvragen	wonder	4
laten zien	show	1	zien	see	4
lezen	read	2	zweren	swear	1

As you can see, the set of predicates now resembles that of long-distance dependencies. This strongly suggests that the resumptive prolepsis construction gradually extended its domain in direct competition with long-distance movement and gradually took over semantic domains, such as mental state ascriptions, that were originally reserved for long-distance dependencies.

It must be noted that resumptive prolepsis is not evenly distributed across the various constructions that support long-distance dependencies. As we have seen, it does not apply to free relatives, and in wh-questions, it is exceedingly rare (cf. Salzmann, 2006, who states this is also the case in German). In comparatives, resumptive prolepsis is impossible, presumably because comparatives involve a null operator, whereas resumptive prolepsis never does.[6] In

Figure 3 we show the distribution of resumptive prolepsis across the various constructions in which it occurs (21st century data only). As you can see, the main constructions involved are relative clauses and topicalization. These are precisely the two categories that we saw earlier on as the ones losing ground in long-distance movement. Clearly, these two observations have to be linked by a causal connection: The emergence of resumptive prolepsis in relative clauses and topicalization causes the gradual decline of long-distance movement in precisely these two constructions.

Figure 3: Resumptive prolepsis across various constructions
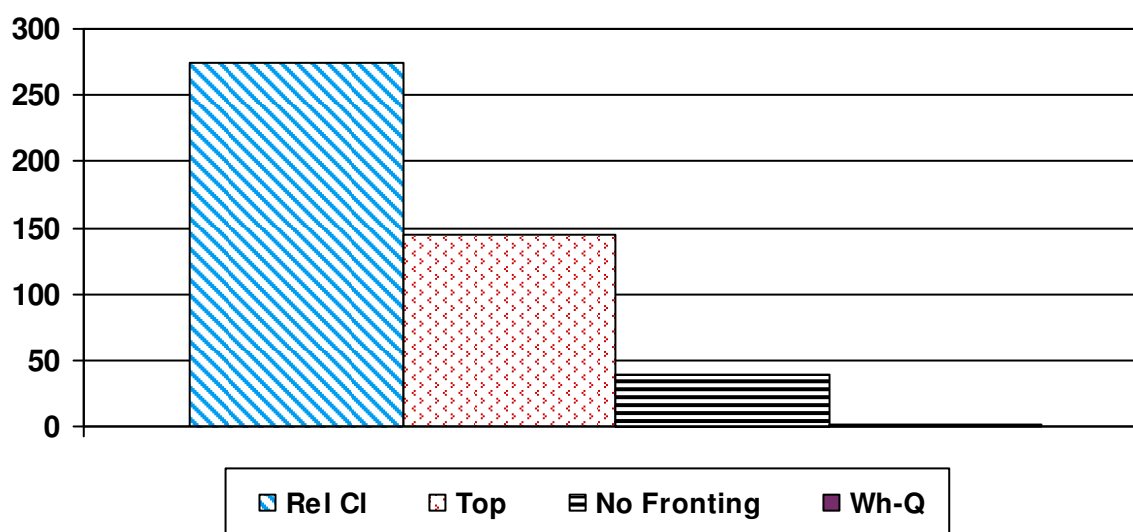
3. Island conditions

Extractions out of islands are rare in our material, with the exception of wh-islands. It is well-known that phrases may occasionally escape from such islands (Rizzi 1982). Here are some examples from our data set. The wh-islands are indicated in square brackets:

(17)   *Het oogwit van dezen arbeidzamen man, die ik niet weet [of __ in zulk gestadig*
         the goal   of   this   prolific   man who I not know if   in such steady
         blokken zyn wederga heeft hier te lande], was, den geleerden en voor al   de
         labor   his equal   has   here in land   was, the learned   and especially the
         letterlievende   jeugt, dienst te doen met eene bequame en wydluftige uitlegging[7]
         literaryminded youth service to do with a   proper   and extensive explanation
         'The goal of this hardworking man, who I do not know if had an equal in such steady
         work in this country, was to serve the learned and literary youth with a proper and
         extensive explanation'

(18)   *Durus had twee Vertoogen gepent die wy niet weeten [waar dat __ vervaaren zyn]*[8]
       Durus had two   essays   penned that we not know   where that   gone   are
   "Durus had written two essays which we do not know where __ went"

The total number of violations we found is 29. Figure 4 shows how this are distributed across the various periods.

Figure 4: Wh-island violations, raw numbers
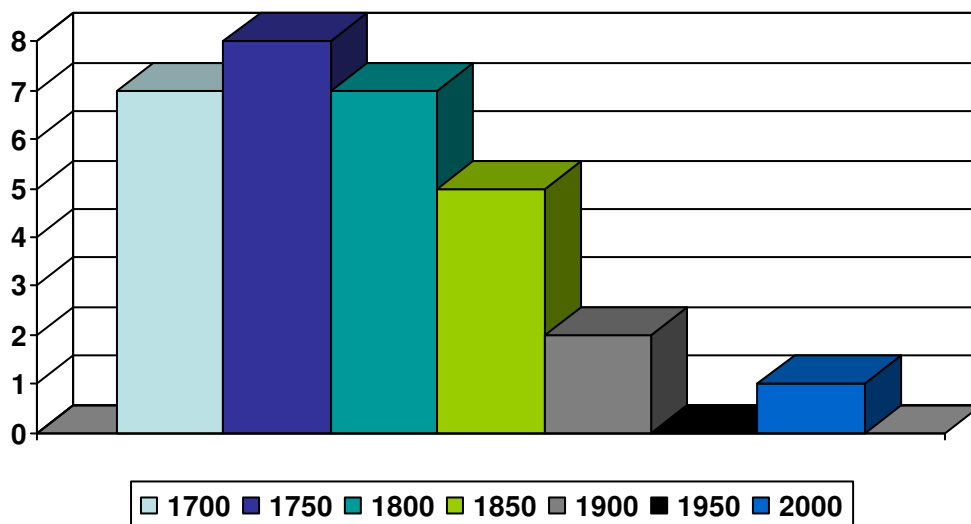

In Figure 5, we show the same data, now as a fraction per 100 cases of long-distance movement:

Figure 5: # of wh-island violations per 100 cases of long-distance extraction
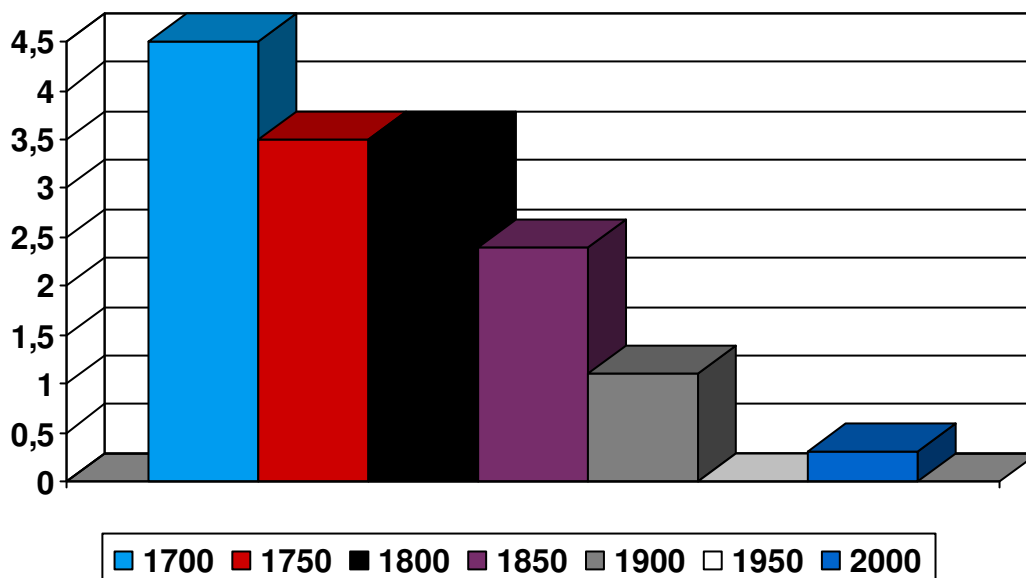
The data show a clear decline in wh-island violations in Dutch. It is important to note that all attested violations either occur in relative clauses or with topicalization.[9] These are precisely the constructions for which the resumptive prolepsis construction, which isn't sensitive to islands, is available as an alternative.

Another point of interest concerns the grammatical function of the moved element. It is well-known that movement of subjects is more constrained in general than movement of objects (cf. e.g. Pesetsky 1982). For Dutch and German, the evidence for subject-object asymmetries, such as the *That*-Trace filter (Chomsky and Lasnik 1977), is contested. (See however Bennis, 1986; Den Dikken, 2007; Den Dikken et al, 2007 for a discussion of *that*-trace effects in Dutch and Featherston, 2005 for German. Data discussed in these papers suggests both German and Dutch are sensitive to the that-trace effect, although that-trace configurations do not lead to severe ungrammaticality in most cases.) Looking at our data in Figure 6, we nonetheless see a clear effect of grammatical function. In Figure 6, we present 21st century data only, showing a clear difference between subjects (preference for resumptive prolepsis over long-distance movement) and direct objects (showing the opposite preference).

Figure 6: LD vs RP: distribution across grammatical functions
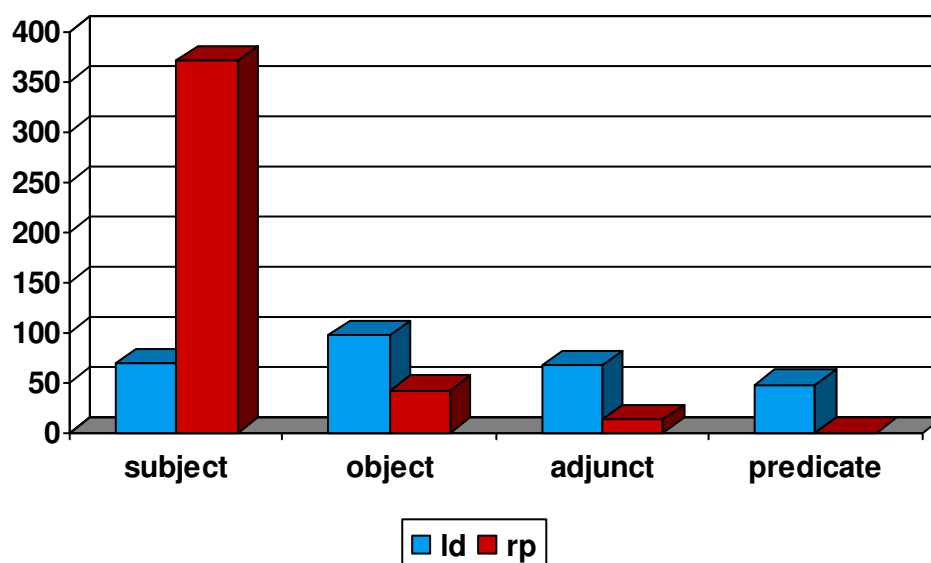
The effect is not an absolute one: our data show both extraction of subjects and subjects as resumptive pronouns in the resumptive prolepsis construction. However, subjects tend to favor resumptive prolepsis, and direct objects show a slight preference for long-distance movement. This would make sense if the ban on subject extraction is not a strong one, like the old ECP (Chomsky 1981), but a weak and violable one (cf. also Featherston 2005 for this claim). In that case one would expect extraction to be possible, which as our data show, it clearly is, but dispreferred when there is an alternative.

4. Conclusions

Let us now sum up our main conclusions. We conclude that some types of long-distance movement, in particular in relative clauses and topicalization structures, are disappearing due to competition from a structure involving a PP headed by *van* 'of' binding a resumptive pronoun (the 'resumptive prolepsis' construction of Salzmann 2006). So far, the drop in usage does not entail a corresponding change in the grammar. Long-distance movement in relative clauses is still attested, albeit fairly marginally, and it might well disappear entirely if the trend continues.[10]

Elsewhere, in free relatives and comparative clauses, long-distance movement is not in any way in danger of being pushed aside, and here long-distance movement is rather more versatile than in wh-questions, where there is a predominance of a few verbs such as *denken* 'think' with second-person subjects, as Verhagen (2006) has shown, and which we found in our material as well.[11] Free relatives show a much wider variety of matrix predicates, and no restrictions as to the type of subject.

Another question of interest is the status of Chomsky's (1977) unification of all long-distance movement as a single process of WH-movement (later also referred to as A-bar movement). If island behavior differentiates (as extraction behavior from wh-islands suggests) between relative clauses and topicalization on the one hand, and wh-questions and comparatives on the other, and, moreover, if replacement by resumptive prolepsis targets only specific constructions and not all long-distance movement, the case for such a unified process is weakened. At the moment, this conclusion remains speculative, given that, as we have noted, long-distance movement is still attested in all constructions. However, if and when it disappears from relative clauses altogether, one could begin to make a case along these lines.

Notes

———————————————

[1]   We would like to thank the audience at the Nijmegen ICHL, and an anonymous reviewer for comments and criticism. We remain solely responsible for all errors and omissions.

2 The data set only contains cases of extraction from finite clauses. Movement out of infinitival clauses has been ignored for the purposes of our study.

[3] Similar restrictions apply, by the way, to the matrix predicates of partial *wh*-movement (cf. Reis 2002). We will have nothing to say on this matter.

[4] Dutch, unlike English, does not allow for preposition stranding. Postposition stranding due to movement of so-called R-pronouns (*er 'there', hier 'here', daar 'there', etc.*) is possible however (cf. van Riemsdijk 1978).

[5]   A reviewer asked about the precise make-up of our database. Given that our data are mostly from books, either from a printed version or Internet, this would involve presenting a list of hundreds of sources, which would clearly take us beyond the limits of this contribution. However, the request is a reasonable one, and we will present our data set on a website: http://www.let.rug.nl/hoeksema. The reader can then judge for herself or himself how well the data are distributed, per period, across the various types of texts. Note that the nature of our data makes it difficult to use electronic corpora in a straightforward way: Long-distance movement is not easily detected in an electronic corpus, unless it is fully parsed, and parsed diachronic corpora for Dutch are as yet unavailable.

[6]   Salzmann (2006: 227) accounts for this difference by arguing that comparatives have an amount reading, requiring scope reconstruction, something which the resumptive prolepsis construction does not permit. Independent evidence for this claim comes from the fact that amount relatives do not participate in the resumptive prolepsis construction.

[7] *Boekzael der geleerde werrelt*, Julius 1715, 21.

[8] J. Campo Weyerman, *De levens-beschryvingen der Nederlandsche konst-schilders en konst-schilderessen*, 1729.

[9] This observation is more in line with an account like that of Rizzi's (1990) Relativised Minimality since it seems to crucially involve the use of different categories for X and Y in the crucial configuration X ..Y.. Z: if Y is a wh-pronoun, X has to be something else, e.g. a relative pronoun or a topicalized phrase. (Other constructions, such as comparatives, are too rare to shed much light on this matter.)

[10] A reviewer raised the question whether the decrease of long-distance movement in our material could be due to changing distance between the spoken vernacular and written Dutch. If long-distance movement is more typical of spoken Dutch, then an increase in distance might mean fewer cases in our corpus material. We do not think that this is likely to explain our data. The distance between spoken and written Dutch certainly increased since the Middle Ages, but seems to have decreased since the 19th century as a result of efforts by people such as Multatuli and others to eliminate from the written language words and constructions wholly alien to the spoken language (see Van der Wal and Van Bree 1992 for extensive motivation). Nonetheless the changes we document here continue throughout this period. In particular the asymmetry between wh-questions (still robust attestation of

long-distance movement) and relative clauses (hardly any long-distance movement) can be observed in present-day spoken Dutch as easily as in written Dutch.

[11] See Schippers and Hoeksema (2009) for critical discussion of Verhagen (2005, 2006).

References

Andersson, Sven-Gunnar and Sigmund Kvam. 1984. *Satzverschränkung im heutigen Deutsch.* Tübingen: Narr.

Barbiers, Sjef, Hans Bennis, Gunther de Vogelaer, Magda Devos & Margreet van der Ham. 2005. *Syntactic Atlas of the Dutch Dialects Volume I*. Amsterdam: Amsterdam University Press.

Behaghel, O. 1928. *Deutsche Syntax. Eine geschichtliche Darstellung. Vol III: Die Satzgebilde.* Heidelberg: Winter.

Bennis, Hans. 1986. *Gaps and dummies*. Amsterdam: Amsterdam University Press.

Blatz, F. 1896. *Neuhochdeutsche Grammatik*. Karlsruhe: Lang.

Chomsky, Noam. 1977, 'On Wh-movement.' In: P.Culicover, T. Wasow, and A. Akamajian (eds.), *Formal syntax,* 71-132. New York: Academic Press.

Chomsky, Noam. 1981. *Lectures on Government and Binding.* Dordrecht: Foris.

Chomsky, Noam and Howard Lasnik. 1977. 'Filters and Control.' *Linguistic Inquiry* 8, 425-504.

den Dikken, Marcel, Judy B. Bernstein, Christina Tortora & Raffaella Zanuttini. 2007. 'Data and Grammar: Means and Individuals.' *Theoretical Linguistics* 33, 335 – 353.

den Dikken, Marcel. 2007. 'Questionnaire study on Dutch that-trace effects: stimuli and results.' Ms. CUNY. http://web.gc.cuny.edu/dept/lingu/dendikken/docs/dutch_that_trace_results.pdf.

Ebert, Robert P. 1978. *Historische Syntax des Deutschen*. Stuttgart: Metzler.

Erteschik Shir, Nomi. 1973. *On the nature of island constraints*. PhD-dissertation, MIT.

Featherston, Sam, 2005. '*That-trace* in German.' *Lingua* 115: 1277 – 1307.

Groos, Anneke and Henk van Riemsdijk. 1981. 'Matching Effects in Free Relatives: A Parameter of Core Grammar.' In: A. Belletti, L. Brandi and L. Rizzi, eds., *Theory of Markedness in Generative Grammar.* Scuola Normale Superiore di Pisa, Pisa, 171-216.

Haeringen, C.B. van. 1956. *Nederlands tussen Duits en Engels*. Servire, Den Haag.

Hüning, Matthias, Ulrike Vogl, Ton van der Wouden and Arie Verhagen, eds. 2006. *Nederlands tussen Duits en Engels. Handelingen van de workshop op 30-9 en 1-10-2005 aan de Freie Universität Berlin.* SNL, Leiden.

Kiziak, Tanja. 2007. 'Long Extraction or Parenthetical Insertion? Evidence from Judgement Studies'. In: *Parentheticals*, ed. by Nicole Dehé and Yordanka Kavalova, 121-144. Benjamins, Amsterdam/ Philadelphia.

McDaniel, Dana. 1989. 'Partial and Multiple Wh-Movement.' *Natural Language and Linguistic Theory* 7, 565-604.

Paul, Hermann, 1920. *Deutsche Grammatik IV*. Halle: Max Niemeyer Verlag.

Pesetsky, David, 1982. *Paths and Categories.* Dissertation, MIT.

Reis, Marga. 1995. "Wer glaubst du hat recht? On So-called Extractions from Verb-Second Clauses and Verb-First Parenthetical Constructions in German". *Sprache und Pragmatik* 36: 27-83.

Reis, Marga. 2002. 'Wh-movement and integrated parenthetical constructions.' In: Jan-Wouter Zwart and Werner Abraham, eds., *Studies in comparative Germanic syntax: Proceedings from the 15th Workshop on Comparative Germanic Syntax*, 3-40. Amsterdam/Philadelphia: John Benjamins.

Riemsdijk, Henk van. 1978. *A Case Study in Syntactic Markedness: The Binding Nature of Prepositional Phrases.* Foris, Dordrecht.

Rizzi, Luigi. 1982. 'Violations of the Wh island constraint and the subjancency condition.' In: L. Rizzi, *Issues in Italian syntax*, 49-76. Foris, Dordrecht.

Rizzi, Luigi. 1990. *Relativized Minimality*. Cambridge, MA: MIT Press.

Ross, John Robert. 1967. *Constraints on Variables in Syntax.* Ph.D. dissertation, Massachusetts Institute of Technology.

Salzmann, Martin. 2006, *Resumptive Prolepsis. A Study in indirect A'-dependencies.* Dissertation, University of Leiden.

Schippers, Ankelien. 2006. 'Variation in the CP domain: Long-distance dependencies in the Dutch dialects.' Unpublished manuscript. University of Groningen.

Schippers, Ankelien and Jack Hoeksema. 2009, 'Variation in long-distance dependencies.' Submitted for publication.

Strik, Nelleke. 2009. *Syntaxe et Acquisition des Phrases Interrogatives en Français et en Neerlandais : une Etude Contrastive.* Dissertation, Université Paris 8 – Saint Denis.

Verhagen, Arie. 2005. *Constructions of Intersubjectivity*. Oxford: Oxford University Press.

Verhagen, Arie. 2006. 'On subjectivity and long-distance Wh-movement.' In: Angeliki Athanasiadou, Costas Canakis and Bert Cornillie, eds., *Subjectification: Various Paths to Subjectivity.*

Wal, Marijke van der Wal and Cor van Bree. 1992. *Geschiedenis van het Nederlands.* Utrecht: Het Spectrum.