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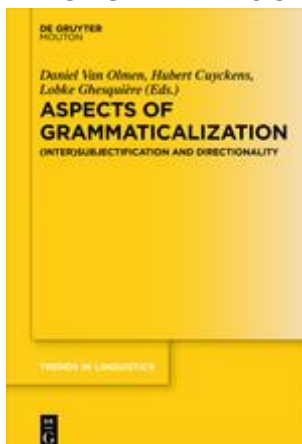
Aspects of Grammaticalization: (Inter)Subjectification and Directionality

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2 **4 Discourse continuity and the written** 3 **medium: Continuative relative clauses in** 4 **the history of Dutch**

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7
8 **Abstract:** The paper discusses the significant relativization change from *d*-forms
9 into *w*-forms in the history of Dutch. Focusing on relative adverbs and relative
10 pronominal adverbs in particular, we examine 17th-century data taken from the
11 Leiden *Letters as Loot Corpus*, a collection of private letters written by men and
12 women of all social ranks. It is shown that one specific type of relative clause
13 appropriates *w*-forms at a remarkably fast rate, i.e. continuative relative clauses.
14 Against the background of an evolutionary perspective on grammaticalization,
15 the *w*-preference of continuative relative clauses is treated as an example of the
16 syntactic coding of discourse continuity and in particular as an intersubjective
17 effort to create coherence. Since continuative relative clauses are often con-
18 sidered typical of written language, the paper also provides evidence that the
19 written medium may promote grammaticalization.
20

21 22 23 **1 Introduction**

24
25 Like other Germanic languages, Dutch has undergone a change from *d*- to
26 *w*-relativization, whereby relative adverbs, relative pronominal adverbs and rela-
27 tive pronouns change from a *d*-form to a *w*-form. *Het huis daar ik woon* ‘the
28 house there I live’ becoming *het huis waar ik woon* ‘the house where I live’ is a
29 case in point. For relative adverbs and relative pronominal adverbs, the 17th and
30 18th centuries constitute the crucial stage in this change. Rutten (2010) studied
31 it from the perspective of diachronic construction grammar (see Fried 2009),
32 using diaries from the period.¹ He claims that the change proceeds from
33 construction to construction and suggests that so-called continuative relative
34 clauses attract *w*-relativizers at a remarkably fast rate. This is in line with the
35 history of English, in which this type of relative clause also adopts *wh*-relativizers
36 early on (see Rissanen 1999: 293, 295). In the present study, we continue this line
37

38
39 ¹ See Rutten (2010) for a review of the literature, which includes Van der Horst and Storm
40 (1991), Schoonenboom (1997), De Schutter and Kloots (2000) and Van der Wal (2002).

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1 of research by focusing on continuative relative clauses in historical Dutch to
 2 find out whether they were truly forerunners in the appropriation of *w*-relativizers.
 3 After establishing that continuative relative clauses indeed prefer *w*-forms, we
 4 argue that this phenomenon enables language users to secure discourse con-
 5 tinuity. We also argue that the change from *d*- to *w*-relativizers constitutes an
 6 instance of grammaticalization co-occurring with intersubjectification. In doing
 7 so, we join in on recent discussions on the interplay of grammaticalization and
 8 intersubjectification (e.g. Cuyckens et al. 2010; Traugott 2010).

9 Continuative relative clauses are characterized by a discrepancy between
 10 form and function. They typically convey new information, which is normally
 11 presented in a main clause. Sentence (1) is an example from Modern English.
 12 Sentence (2) shows that it is possible to paraphrase (1) by means of a coordinated
 13 clause or an independent main clause.

14

15 (1) *She was found face down in the water and airlifted to hospital, where she*
 16 *died hours later.* (Loock 2007: 340)

17

18 (2) *She was found face down in the water and airlifted to hospital, and she died*
 19 *there hours later. / She died there hours later.* (Loock 2007: 342)

20

21 In the history of the Germanic languages, continuative (or sentential) relative
 22 clauses are often considered typical elements of written language or even
 23 latinisms (e.g. Van der Wal and Van Bree 2008: 271–272). However, it has been
 24 pointed out that this type of construction occurs long before the influence of
 25 Latin-style models may be assumed (Von Polenz 1994: 279). Still, the remarkable
 26 increase of continuative relative clauses in both postmedieval English and
 27 German is generally associated with the influence of Latin prose style (Von
 28 Polenz 1994: 279; Rissanen 1999: 295–296). With regard to the change from *d*- to
 29 *w*-relativization, this would mean that continuative relative clauses, taking on
 30 *w*-forms early on, are marked by *w*-forms at a time when *d*-forms are still
 31 common in texts closer to the oral mode of discourse. There is some evidence
 32 from the history of English and Dutch that this is in fact the case (Rissanen
 33 1999: 293; Rutten 2010). If continuative relative clauses are indeed more closely
 34 associated with written language, at least in postmedieval times, and if they
 35 take up *w*-relativizers at a remarkably fast pace, we have evidence that written
 36 language may promote the change of *d*-forms into *w*-forms. Moreover, since we
 37 consider the change from *d*- into *w*- a case of grammaticalization, as will be
 38 explained in Sections 2 and 3, this is proof that the written medium may pro-
 39 mote grammaticalization.

40

1 In Sections 2 and 3, we explain the concept of grammaticalization used in
 2 the present study and discuss the change from *d*- to *w*-relativization in Dutch
 3 as a case of grammaticalization. Section 4 presents a case study of relative
 4 clauses in 17th-century Dutch, which focuses on the distribution of *d*- and *w*-
 5 relativizers across different constructions and, most importantly, in continuative
 6 relative clauses. The latter will be shown to prefer *w*-relativizers. In Section 5,
 7 we interpret this result from the perspective of discourse continuity. Section 6
 8 summarizes the main results.

11 2 Grammaticalization from an evolutionary 12 perspective

14 The basic working hypothesis of evolutionary linguists is that syntax developed
 15 later than simple signs and words (e.g. Bickerton 1990; Jackendoff 1999; Nowak
 16 and Krakauer 1999; Nowak et al. 2000; Tomasello 2008). This is reminiscent of
 17 Givón's (1979: 208) well-known dictum that language develops from discourse
 18 into grammar, a development which he termed "syntacticization". By this, Givón
 19 (1979: 209) meant, first, that human pragmatic and semantic operations, includ-
 20 ing meaning-making through words, precede encoding into syntactic structures,
 21 and second, that basic syntactic structures may become more syntactic over
 22 time, even though syntactic structures may, in their turn, erode over time. Givón
 23 (2009: 10) presents a three-step evolutionary model:

- 24 (i) single words > simple clause;
- 25 (ii) simple clause > clause chains (parataxis);
- 26 (iii) clause chains > complex/embedded clauses (syntaxis).

27
 28 Steps (ii) and (iii), which Givón labels as the transition from parataxis to
 29 syntaxis, have also been described as a development from parataxis through
 30 hypotaxis to subordination (Hopper and Traugott 2003: 177). Here, parataxis
 31 refers to independent and unembedded clauses, hypotaxis to dependent but
 32 unembedded clauses, and subordination to dependent and embedded clauses
 33 (Hopper and Traugott 2003: 178). These changes constitute a popular topic in
 34 historical linguistics and they are also central to the present study. We will
 35 henceforth regard them as instances of grammaticalization, this being a less
 36 specific and more widely used term than syntacticization (Tomasello 2003: 8).
 37 In a similar vein, Heine and Kuteva (2007: 210–261) provide a fine-grained
 38 description of the evolution of subordinate clauses within a grammaticalization
 39 framework. The evolutionary perspective on grammaticalization sketched here is
 40

1 corroborated by research into child language acquisition (Tomasello 2003) and
2 by computational models of language evolution (Steels 2005).

3 With this brief overview we do not want to create the impression that
4 increasing complexity is a general trait of human language evolution. Simplifi-
5 cation occurs as well, but typically involves verbal and nominal deflexion rather
6 than the reversal of evolved syntactic structures (Dahl 2004; Sampson, Gil, and
7 Trudgill 2009; Trudgill 2011). Deflexion often co-occurs with syntacticization: as
8 is well known, when Dutch and English lost most of their cases, more preposi-
9 tional phrases developed and word order became more rigid (e.g. Lass 1999:
10 138–140).

11 For the history of Dutch, the following view of grammaticalization has been
12 taken by Burridge (1993). She argues that many of the changes characterizing
13 the transition from Middle Dutch to Modern Dutch are due to the grammaticali-
14 zation of word order, i.e. the stabilization of syntactic patterns, where previously
15 pragmatic considerations allowed more syntactic flexibility. The changes she
16 discusses include the fixation of verb-second (or V2) in main clauses and of
17 verb-final (or V-final) in subclauses, the development from bipartite to single
18 negation and the rise of dummy subjects and of expletive *er* ‘there’ in presenta-
19 tive constructions. The change under discussion in the present paper, i.e. the
20 change from *d*- to *w*-relativizers, will be treated as another such case of gramma-
21 ticalization.

22 Importantly, the development from parataxis to hypotaxis/subordination,
23 though a general trend in linguistic systems, may well be socially and/or cul-
24 turally motivated, especially from an evolutionary perspective (Croft 2000).
25 When we consider language as an evolutionary system that adapts to social/
26 cultural circumstances, the development of literacy must have had an enormous
27 impact on languages. Thirty years ago already, Pawley and Syder (1983: 552)
28 formulated their “adaptation hypothesis” (see Ellis et al. 2009 as well):

29 Our principal hypothesis is that in the history of English certain usages have developed or
30 gained preference in a given system because they are advantageous in the circumstances.
31 We are dealing with an ecology of grammar, in which forms of construction are molded to
32 suit the constitutive conditions and purposes of face-to-face talk, on the one hand, and
33 impersonal written communication on the other.

34 The basic idea is that the social/cultural context in which a language is used
35 influences its grammar. One of the most significant aspects of this context is
36 mode: is the language spoken or written? Pawley and Syder (1983: 557–558) list
37 systematic differences between written and spoken communication, which are
38 also well known from the work of Chafe (1985, 1994) and which are central to
39 corpus-based research into genre differences (Biber and Conrad 2009; see also
40

1 Koch and Oesterreicher 1985). Discourse phenomena may be coded in gestures,
 2 pauses, intonation and facial expressions, but the written mode needs other
 3 means to code pragmatic meanings. As will be demonstrated by means of a
 4 case study of relativization in Dutch, one such means is syntax.

3 The grammaticalization of Dutch relatives

5
 6
 7
 8
 9 The change from *d*- to *w*-forms in relative (pronominal) adverbs in Dutch is part
 10 of a significant series of changes in the relativization system, with relative
 11 pronouns, adverbs and pronominal adverbs all changing from a *d*-form into a
 12 *w*-form. The change from *d*- to *w*-relativization constitutes a major shift in the
 13 grammar of Dutch, as in other Germanic languages (Rissanen 1999: 292–301;
 14 Von Polenz 1994: 278–279). The change affects any kind of relative clause
 15 (restrictive and appositive relative clauses, including continuative relative
 16 clauses), any kind of relativizer (pronouns, adverbs and pronominal adverbs)
 17 and any kind of syntactic/semantic context (dependent and independent or
 18 free relative clauses). In Dutch, the change began somewhere in the Late Middle
 19 Dutch period, in the 14th or 15th century (Van der Horst 2008: 603, 703) and is
 20 not yet complete: relative pronouns are still widely used with *d*-forms and pre-
 21 scribed in many positions in Present-day Standard Dutch. With relative adverbs
 22 and relative pronominal adverbs, the change has now been completed, though.
 23 In this paper, we focus on the variation and change in relative (pronominal)
 24 adverbs, for which the crucial period was the 17th and 18th centuries (Van
 25 der Horst and Storm 1991; De Schutter and Kloots 2000; Van der Wal 2002;
 26 Van der Horst 2008). The case study in Section 4 focuses on the 17th century in
 27 particular.

28 A few examples, taken from the literature and the Internet, will illustrate the
 29 foregoing. The as yet incomplete changes in the pronominal system are shown
 30 with free relatives in (3) and (4) and with nominal antecedents in (5) and (6).
 31 The (a) examples are Middle Dutch, the (b) ones Modern Dutch. In (3) and (5),
 32 the antecedent is inanimate, in (4) and (6) it is animate. The change represented
 33 by (3) and (4) is complete. The change in (5) is in progress, with the *w*-form
 34 being common in many colloquial varieties of Dutch, while the *d*-form is
 35 preferred in the written standard. Only few speakers would accept (6b) but
 36 *w*-forms are attested in this position, also in written language.

- 37
 38 (3) a. *had ic ghevonden dat ic zoeck*
 39 had I found that I seek
 40 ‘had I found what I was looking for’

(Van der Horst 2008: 603; 14th century)

1 Similar changes have affected free relative adverbs as in (7), relative adverbs as
 2 in (8) and pronominal adverbs as in (9), all originating from locative expres-
 3 sions. The changes exemplified here are complete.

4
 5 (7) a. *Sine es niet **daer** si was tevoren.*
 6 she is not there she was before
 7 ‘She is not where she was before.’ (Van der Horst 2008: 477; 13th century)

8
 9 b. *dat had ze ook niet **waar** ze eerst was.*
 10 that had she also not where she before was
 11 ‘She didn’t have that where she first was.’
 12 (<http://www.dekattensite.nl/phpBB2/viewtopic.php?t=26880&p=558449>;
 13 accessed 9 June 2015)

14 (8) a. *tot Bruesel, **daer** sy hoer antwoord kregghen*
 15 in Brussels there they their answer got
 16 ‘in Brussels, where they got their answer’
 17 (Van der Horst 2008: 703; 15th century)

18
 19 b. *te Brussel, **waar** zij haar debuut maakte*
 20 in Brussels where she her debut made
 21 ‘in Brussels, where she made her debut’
 22 ([http://www.401dutchdivas.nl/nl/belgische-zangers/446-raymonde-](http://www.401dutchdivas.nl/nl/belgische-zangers/446-raymonde-serverius.html)
 23 [serverius.html](http://www.401dutchdivas.nl/nl/belgische-zangers/446-raymonde-serverius.html); accessed 9 June 2015)

24 (9) a. *den viere / **daer** die bouc in bernende lach*
 25 the fire there the book in burning lay
 26 ‘the fire in which the book lay burning’
 27 (Van der Horst 2008: 498; 12th century)

28
 29 b. *het vuur **waarin** ze branden zal niet doven*
 30 the fire wherein they burn shall not smother
 31 ‘the fire in which they burn will not smother’
 32 (<http://www.allaboutworldview.org/dutch/bestaat-de-hel.htm>;
 33 accessed 9 June 2015)

34
 35 In (3) to (9), *d*-relativizers are giving or have given way to *w*-forms. Generally
 36 speaking, interrogatives replace demonstratives as the main means of relativiza-
 37 tion. In Middle Dutch main clauses, the finite verb is usually in second position
 38 while it is mostly in third or a subsequent position in subordinate clauses
 39 (Burrige 1993: 26, 46–47; Van der Horst 2008: 536–537). This syntactic difference
 40 would distinguish (8a) from its constructed main clause alternative (10). It also
 implies that *daer* ‘there’ in (8a) is already a grammaticalized use of the original

1 locative expression, which has taken up the function of clause linker while
2 maintaining its locative function.

- 3
4 (10) *tot Bruesel, daer kreghen sy hoer antwoort*
5 in Brussels there got they their answer
6 ‘in Brussels, there they got their answer’
7

8 It should be noted that V2 in main clauses was merely a tendency in Middle
9 Dutch, as was the position of the finite verb further on in subclauses. What
10 characterizes the transition to Modern Dutch is, first, the stabilization of both
11 tendencies (with V2 becoming obligatory in declarative main clauses and V-final
12 in subclauses)² and, second, the replacement of *d*-relativizers by *w*-forms. Both
13 developments strengthen the difference between main and subordinate clauses.
14 Interrogatives are the source of *w*-relativizers, but when these forms are used as
15 interrogatives, as in the constructed dialogue in (11), the finite verb appears in
16 second position from the earliest Dutch onward (Van der Horst 1981: 43; Quak
17 and Van der Horst 2002: 60–61).

- 18
19 (11) *waer kreghen sy hoer antwoort? tot Bruesel*
20 where got they their answer? in Brussels
21 ‘Where did they get their answer? In Brussels.’
22

23 In other words, a *w*-form with the finite verb in third position or later has always
24 ruled out an interrogative reading, as in (8b), whereas a *d*-form left some room
25 for either a main clause demonstrative reading, as in (10), or a subclause relative
26 interpretation, as in (8a). Table 1 schematizes the relevant features (V2, V-final,
27 *d*-form and *w*-form) for all three contexts (declarative main clauses, interroga-
28 tives and relative subclauses).

29
30 **Table 1:** Word order and the distribution of *d*- and *w*-forms in declarative main clauses,
31 interrogative clauses and relative subordinate clauses

	Declarative main clause		Interrogative		Relative subclause	
	Modern Dutch		Modern Dutch		Middle Dutch	Modern Dutch
V2	+		+		–	–
V-final	–		–		+/–	+
<i>d</i> -form	+		–		+	–
<i>w</i> -form	–		+		–	+

32
33
34
35
36
37
38
39 **2** In Modern Dutch, it is mainly prepositional phrases that can still occur after the final verb in
40 subordinate clauses.

1 Without assuming any inherent teleology, we note that, with regard to word
 2 order and *d/w*-forms, the make-up of relative clauses has changed into the exact
 3 opposite of declarative main clauses. In addition, *d*-forms in main clauses are
 4 demonstratives while *w*-forms in relative clauses are relatives. So there seems
 5 to be a strong tendency toward functional specialization, with main clauses
 6 and subclauses adopting their own characteristics with regard to both word
 7 order and *d/w*-forms. Finally, the redistribution of *d*- and *w*-forms, with *w*-forms
 8 taking over the relative function previously fulfilled by *d*-forms, may very well
 9 have been catalyzed by the fact that demonstratives appear to have been much
 10 more frequent, at least in historical written Dutch (Rutten 2010). Similarly,
 11 Rissanen (1999: 294) notes that there is “little doubt that the spread of the
 12 *wh*-forms was supported by the heavy functional load of *that*”. The functional
 13 specialization described here amounts to marking the difference between main
 14 and relative clauses even more explicitly than before and it is for that reason
 15 that we view it as an instance of grammaticalization.

18 4 Continuative relative clauses in historical Dutch

20 Our case study concerns the change from *d*- to *w*-relativizers in adverbial rela-
 21 tive clauses, as in (7) to (9), in the 17th century, a crucial stage for the shift. In
 22 Section 4.1, we will briefly discuss our hypotheses, based on previous research,
 23 and introduce the corpus. In Section 4.2, the different types of relative clause
 24 will be discussed which are at the heart of the corpus study reported on in
 25 Section 4.3.

28 4.1 Hypotheses and corpus

30 Bergs (2005: 151) shows that the 15th-century Paston letters exhibit a remarkable
 31 distribution of *that* and *wh*-relativizers: whereas restrictive relative clauses use
 32 *that* in 83.3% of all instances, non-restrictive relative clauses prefer the new
 33 *wh*-relativizers in 90.3% of the cases. Rissanen (1999: 293) notes that “in the dis-
 34 cussion of the spread of the *wh*-forms [in the history of English] it has proved
 35 useful to distinguish a special type of non-restrictive clause called ‘continua-
 36 tive’”. He also points out that when *wh*-forms spread throughout the language,
 37 the old form *that* was mainly found in texts representing the oral mode of dis-
 38 course (Bergs 2005: 181). This interesting observation appears to be in line with
 39 the evolutionary perspective discussed in Section 2: if *wh*-forms are stronger
 40 markers of hypotaxis and subordination than, for instance, *that*, one would

1 expect the spread of *wh*-forms to be promoted in the written language and,
2 conversely, the older forms to be preserved in the spoken language.

3 Furthermore, it has been argued that continuative relative clauses play an
4 important role in the spread of *w*-forms in the history of Dutch. Rutten (2010), a
5 case study of 17th- and 18th-century diaries, reveals that continuative relative
6 clauses employ *w*-forms far more frequently than *d*-forms. They promote the
7 use of *w*-forms and therefore the grammaticalization of *w*-relatives. The study
8 is based on a fairly small number of diaries, however. Its line of research is
9 continued and improved upon in the present paper by taking into account a
10 larger collection of texts so as to establish the validity of the claims in Rutten
11 (2010), and to see whether the type of relative clause (e.g. restrictive/nonrestrictive)
12 influences the distribution of *d*- and *w*-forms. In particular, our hypothesis is
13 that continuative relative clauses are ahead of other constructions in the appro-
14 priation of *w*-relativizers.

15 The texts used for the present study are 17th-century private letters from the
16 so-called *Letters as Loot Corpus* compiled at Leiden University for historical-
17 sociolinguistic research.³ The corpus comprises letters from the 1660s–1670s,⁴
18 which have all been transcribed from the original manuscripts and digitized
19 within the project. For the present study, a selection was made of 210 letters,
20 totaling 109,000 words. Although the corpus is socially stratified and contains
21 letters by men as well as women, we will only focus on so-called internal factors
22 here. Note, however, that *w*-forms are more widely used by upper (middle) class
23 members than by lower (middle) class members and more widely by men than
24 by women (Rutten and Van der Wal 2014). This too suggests that the written
25 language promoted the use of *w*-forms, as upper (middle) class men were far
26 more involved in the written culture than lower (middle) class men and than
27 women in general.

30 4.2 Types of adverbial relative clause

31 Before we present the results of our case study, we will briefly discuss the types
32 of relative clause that we distinguish. Since continuative relative clauses are
33 said to promote *w*-forms, we suspect that the choice of relativizer depends on
34

35 ³ Letters as Loot (*Brieven als Buit*) is a research project funded by the Netherlands Organisation
36 for Scientific Research (NWO) (see www.brievenalsbuit.nl).

37 ⁴ The letters were part of ships' cargo confiscated by the English during the Anglo-Dutch wars
38 of the 17th century, when privateering was a legitimate activity. The letters are kept in the
39 National Archives in Kew, London.

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³ Letters as Loot (*Brieven als Buit*) is a research project funded by the Netherlands Organisation for Scientific Research (NWO) (see www.brievenalsbuit.nl). The corpus is available online at <http://brievenalsbuit.inl.nl>.

⁴ The letters were part of ships' cargo confiscated by the English during the Anglo-Dutch wars of the 17th century, when privateering was a legitimate activity. The letters are kept in the National Archives in Kew, London.

1 the degree of integration of the relative clause into the matrix clause. Syntacti-
 2 cally, the relative clause's degree of integration is determined by its position:
 3 embedded or clause-final. Its semantic integration depends on it being restric-
 4 tive or appositive. This leaves us with four options.

5 We consider the relative clause as an expansion of something that has
 6 already been mentioned (the antecedent), an expansion being a syntactic slot
 7 added and linked to an existing syntactic projection (Auer 2009). Adopting a
 8 linear approach to syntax (Sinclair and Mauranen 2006; Auer 2009), we first
 9 look at the syntactic position at which the relative clause is inserted. Two
 10 possible positions are attested: either immediately following the constituent it
 11 expands or postponed to clause-final position, as in (12) and (13) respectively.
 12 In the examples, taken from the corpus, the antecedents and the relativizers are
 13 in boldface.

14 (12) *dese gaende met een cleen scheepje, waer op neeff Cornelis*
 15 this going with a little ship.DIM where on cousin Cornelis
 16 *Meppelen gaet als assistent, sal alleen dienen ...*
 17 Meppelen goes as assistant, will only serve
 18 'this [one, letter], sent with a little ship on which cousin Cornelis Meppelen
 19 works as an assistant, will only serve...'

21 (13) *dat zij een poort hadden toe gesloeten waer doer dat*
 22 that they a gate had closed where through that
 23 *de hollanders moesten pasceren*
 24 the Hollanders had.to pass
 25 'that they had closed a gate the Hollanders had to pass through'

27
 28 In (12), the relative clause immediately follows the antecedent. The main clause
 29 continues with the finite verb *sal* 'will', the subject of which is *dese* 'this [one,
 30 letter]'. In Lehmann's (1984: 49) typology, this is an example of an embedded
 31 postnominal relative clause. In (13), the predicate *hadden toe gesloeten* 'had
 32 closed' with the subject *zij* 'they' precedes the relative clause attached to *een*
 33 *poort* 'a gate'. According to Lehmann (1984: 49), this is a relative clause in post-
 34 position. We will call examples such as (12) "embedded" and examples such as
 35 (13) "final".

36 As regards the semantics, we adopt the common distinction between restric-
 37 tive and appositive relative clauses. The relative clause in (12) is restrictive. It
 38 would be pointless to state that the letter is sent with some little ship. It is the
 39 fact that it is the ship on which the mutual acquaintance Cornelis Meppelen
 40 works as an assistant that is significant here. A syntactically similar construction

1 from the corpus is given in (14), which favors an appositive interpretation,
2 however.

3
4 (14) *uE schrivens wegens mijn lossicheyt int vrije daer ul*
5 your writing about my looseness in.the wooing there you
6 *naer mijn oordeel al vrij wat gelooff in slaedt maeckt*
7 to my opinion already quite some belief in hits makes
8 *mijn gans geen onsteltenisse af.*
9 me.DAT completely no dismay off

10 ‘Your writing about my moral laxity, to which you give quite some credit
11 in my opinion, does not at all nullify my dismay.’
12

13 So (12) contains an embedded restrictive relative clause, (13) a final restrictive
14 relative clause and (14) an embedded appositive relative clause. The fourth
15 possibility, i.e. a final appositive relative clause, is exemplified in (15).
16

17 (15) *Zal hem wel doen betaelen waermede Blijve met haest*
18 Shall him well do pay where.with remain with hurry
19 *Waerde Moeije UEDW:D: en Neef Alexander Batij.*
20 beloved aunt your.obedient.servant and nephew Alexander Batij
21 ‘[I] shall make him pay. With which I remain, [while I’m] in a hurry,
22 beloved aunt, your obedient servant and nephew Alexander Batij.’
23
24

25 The antecedent of *waermede* in (15), if there is one, is the entire previous stretch
26 of discourse. The relative clause is in final position, or in the first position of a
27 new clause, but, in any case, it is not embedded.

28 Example (15) is an instance of a continuative relative clause, which is a sub-
29 type of final appositives. According to Loock (2007), appositive relative clauses
30 come in three subtypes: continuative appositives, relevance appositives and
31 subjectivity appositives. The first subtype is mainly characterized by a dis-
32 crepancy between form and function. Continuative relative clauses typically con-
33 vey new information presented in a main clause. In conversation, they tend
34 to have their own intonation contour. They belong to what are often called
35 glue-ons or increments (Couper-Kuhlen and Ono 2007): pieces of discourse
36 which are prosodically distinct but syntactically, and sometimes also semanti-
37 cally, linked to the material they immediately follow. Continuative relative
38 clauses create coherence with the preceding discourse by employing subordinat-
39 ing syntax where the information structure would canonically trigger a new
40

1 main clause. The other two subtypes described by Loock (2007) are both used
 2 for detailing information in the main clause which the speaker/writer deems
 3 necessary on second thought. Relevance appositives are a “repair strategy”
 4 (Loock 2007: 346): adding the appositive repairs what may not have been
 5 sufficiently specified in the main clause. Subjectivity appositives verbalize the
 6 speaker/writer’s opinion, judgment or comment (Loock 2007: 353).

7 Bergs (2005: 136), discussing relative clauses in the history of English, notes
 8 how difficult it sometimes is to distinguish between restrictive and appositive
 9 clauses in actual practice. It can be equally difficult to distinguish between
 10 continuative, relevance and subjectivity appositives. But because research into
 11 final appositives is necessary to find out whether continuative relative clauses
 12 promote *w*-relativizers more strongly, we restricted ourselves to final appositives
 13 which could unambiguously be assigned to one of the subtypes of appositive
 14 clauses. We managed to assign 166 out of 183 appositive clauses (see Section
 15 4.3) to one of the subtypes distinguished by Loock (2007). Example (15) is a clear
 16 case of a continuative relative clause. Another continuative appositive is given
 17 in (16): the writer routinely confirms that s/he has received a letter and goes on
 18 to indicate what was in it, which brings new information into the discourse –
 19 information that is, arguably, more important than the preceding statement.
 20 Example (17) contains a relevance appositive: the ship, not sufficiently identified
 21 by its name, is specified further by mentioning the name of its commander.
 22 Example (18) features a subjectivity appositive, indicating the writer’s evaluation
 23 of the situation communicated in the preceding discourse.

24
 25 (16) *Soo ijst dat ick naer datto van dien een houder van datto uijt*

26 so is.it that I after date of that an older of date from

27 *Cap^t Tange hebbe ontfangen waer uijt verstaen ue*
 28 captain Tange have received where out understood you

29 *grootelijcx verwondert zijt ick soo weijnich rettour ben zendende.*
 30 greatly surprised are I so little return are sending

31 ‘So it is [the case] that after the date of that letter I received a [letter] of an
 32 older date through captain Tange, from which I have understood that you
 33 are greatly surprised that I am returning so little.’
 34

35 (17) *desen bryef aen den eersammen man ijan wijllemse luijtenant op*

36 this letter to the honourable man IJan Wjillemse lieutenant on

37 *het schep de spijegel daer op komder menheer menheer*

38 the ship De Spijegel there on commands Mr Mr
 39
 40

- 1 *fijes amarael de ruijter*
 2 vice admiral De Ruijter
 3 ‘this letter to the honorable man IJan Wijllemse, lieutenant on the ship
 4 De Spijegel, on which the vice-admiral Mr De Ruijter commands’
 5
 6 (18) *ende sal op donderdagh den 26 maijus begraven worden*
 7 and will on Thursday the 26 May buried be
 8 *daer Ick seer bedroeft om ben*
 9 there I very sad about am
 10 ‘and [he] will be buried on Thursday 26 May, about which I am very sad’
 11

12 Building on the above categorization of relative clauses, we investigated the
 13 distribution of *d*- and *w*-relativizers in our corpus.⁵ For this, we needed two
 14 more categories, however. Free or headless relative clauses such as the idiom
 15 in (19) cannot readily be analyzed in terms of the present classification and
 16 will be considered a separate category here. Another category was created for
 17 relativizers that have grammaticalized into conjunctions, fulfilling an argumen-
 18 tative function as in (20).
 19

- 20 (19) *Daer men hovden daer vallen spander.*
 21 there one chops there fall chips
 22 ‘You cannot make an omelette without breaking eggs.’
 23
 24 (20) *god ... dancken ende loeuen voor de genaede die heij aen ons*
 25 god thank and praise for the mercy that he to us
 26 *bewijst daer weij sulcke kinderen van verderf sijn*
 27 shows there we such children of doom are
 28 ‘[we should] thank God and praise him for the mercy which He shows to
 29 us there where / while / even though we are such children of doom’
 30
 31

32 4.3 Corpus results

34 We extracted all relative clauses introduced by an adverb or a pronominal
 35 adverb from the corpus by searching for forms such as *waer*, *waar*, *daer* and
 36 *daar*. This led to 269 tokens of *d*- and *w*-forms, including both bare adverbs
 37

38 ⁵ Examples (15) to (17) are instances of epistolary formulae, i.e. expressions frequently occurring
 39 in and presumably even restricted to the language of letters. Note, however, that these formulae
 40 are not necessarily conservative vis-à-vis language change, as illustrated by (15) and (16).

(e.g. *daer*, *waer*) and pronominal adverbs (e.g. *daer* + preposition). The prepositions, which are mostly graphically separated from the *d*- and *w*-forms, include a wide variety of types such as *van* ‘from’, *uit* ‘out, from’, *over* ‘over’, *na* ‘to, after’, *op* ‘on’, *voor* ‘for’, *in* ‘in’ and *achter* ‘after’. All 269 tokens were then allocated to one of the six categories described in Section 4.2: restrictive and appositive embedded relative clauses, restrictive and appositive final relative clauses, free relatives and grammaticalized relatives with an argumentative function. For five tokens, no final decision could be made for lack of context. The absolute numbers of *d*- and *w*-forms in our corpus are presented in Table 2.

Table 2: The distribution of *d*- and *w*-forms over six categories of relative clauses

		<i>d</i> -	<i>w</i> -
Embedded	Restrictive	7	1
	Appositive	9	0
Final	Restrictive	17	11
	Appositive	87	96
Free relative		9	10
Argumentative function		17	0
Undecided		3	2
Total		149	120

We will first discuss the distribution of *d*- and *w*-forms in the four main categories in Table 2, viz. embedded, final, free relatives and argumentative functions, and then zoom in on the embedded and final relative clauses and on restrictive and appositive relative clauses. Figure 1 gives the proportion of *d*- and *w*-relativizers in the main categories.

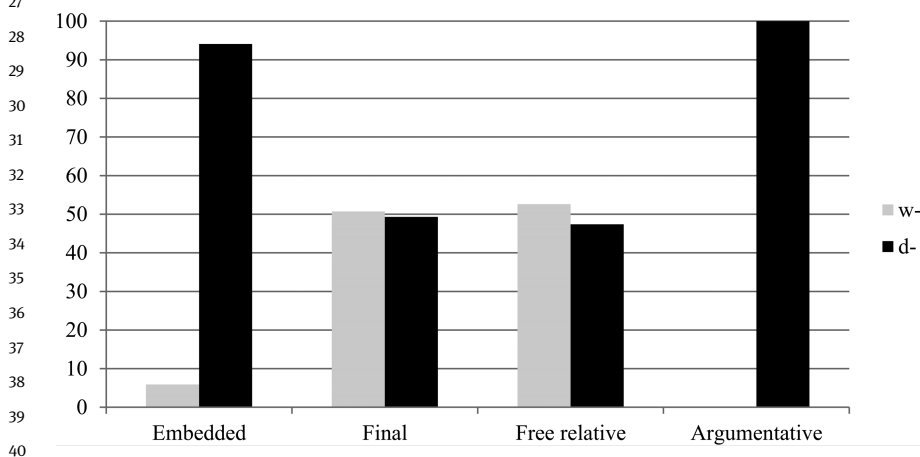
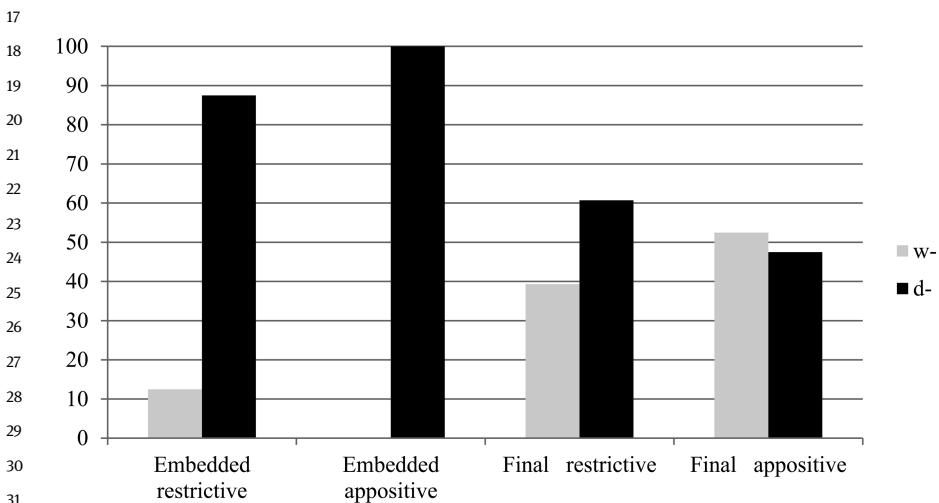


Figure 1: The proportion of *d*- and *w*-forms in the main categories of relative clauses

1 Two things stand out in Figure 1: *d*-forms are preferred both in embedded relative
 2 clauses and in argumentative functions. As to the relatives with an argu-
 3 mentative function, it should not come as a surprise that these retained the
 4 older *d*-forms. Rutten (2010) argues that one reason why *w*-forms took over the
 5 function of relativizer from the *d*-forms is the latter's polyfunctionality. *D*-forms
 6 served not only as relativizers but also as demonstratives in assertive clauses
 7 and they grammaticalized into argumentative connectives as well.⁶ Figure 1
 8 also shows that final relative clauses distribute *d*- and *w*-forms quite evenly
 9 while free relatives favor *w*-forms just slightly. The preference for *w*-forms in
 10 free relative constructions is in line with earlier studies as summarized by Van
 11 der Horst (2008: 1392–1392). For the present purposes, we will refrain from an
 12 extensive discussion of the argumentative and free relative uses and focus on
 13 embedded and final relative clauses instead.

14 For the difference between restrictives and appositives, consider the results
 15 in Figure 2, which gives the proportion of *d*- and *w*-relativizers in each of the
 16 subcategories.



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18
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31
32 **Figure 2:** The proportion of *d*- and *w*-forms in the different types of embedded and final relative
 33 clause

34
35

36
37 ⁶ *W*-forms have grammaticalized into argumentative connectives in Modern Dutch. The develop-
 38 ment may be fairly recent, as the examples in the extensive historical dictionary of Dutch, the
 39 WNT, only date back to the 19th and 20th centuries. The following sentence is a case in point: *Alle*
 40 *banden des maatschappelijken levens worden losgerukt, waar de eerbied voor beiden verloren is*
 [1837] 'All the ties of social life are torn loose, if deference to both is lost' (WNT s.v. *waar* VI).

Figure 2 shows that the semantic difference between restrictive and appositive embedded relative clauses does not influence the choice of relativizer. In both cases, *d*-forms are widely used. There is in fact only one embedded clause with a *w*-form (see Table 2). In final position, there does seem to be a small difference between restrictive and appositive clauses. Recall that, in general, final relative clauses distribute *d*- and *w*-forms quite evenly (see Figure 1). Restrictive relative clauses in final position appear to behave somewhat more conservatively, in that just over 60% retain the old *d*-form. Final appositives, however, turn out to be a modest *w*-promoting context – like free relatives (see Figure 1), they constitute the only context where *w*-forms actually outnumber *d*-forms. While the difference between final restrictives and final appositives is not statistically significant ($\chi^2 = 1.69$, $df = 1$, $p = 0.194$), the results in Figure 2 still suggest that both the syntactic and the semantic degree of integration may determine the form of the relativizer. Possible semantic differences are overruled by syntax in the case of embedded clauses, where *d*-forms largely outnumber the one attestation of a *w*-form. In final position, however, the semantic difference might be more important: appositives seem to prefer *w*-relativizers. In any case, this supposed preference calls for further investigation of the different types of final appositives.

Of the 183 final appositives, we were able to assign 166 instances to one of the three subtypes of appositive clause and to either *d*- or *w*-. Table 3 presents the results.

Table 3: The distribution of *d*- and *w*-forms in the different types of final appositive clause

	<i>d</i> -	<i>w</i> -	Total
Relevance	29	12	41
Subjectivity	38	23	61
Continuative	11	53	64

Relevance and subjectivity appositives mostly combine with *d*-relativizers whereas continuative relative clauses prefer *w*-relativizers. This is even more clear in Figure 3, which presents the proportion of *d*- and *w*-forms per type of appositive. The observed difference between continuative relative clauses as opposed to relevance and subjectivity appositives is statistically significant ($\chi^2 = 37.8$, $df = 2$, $p < 0.001$).

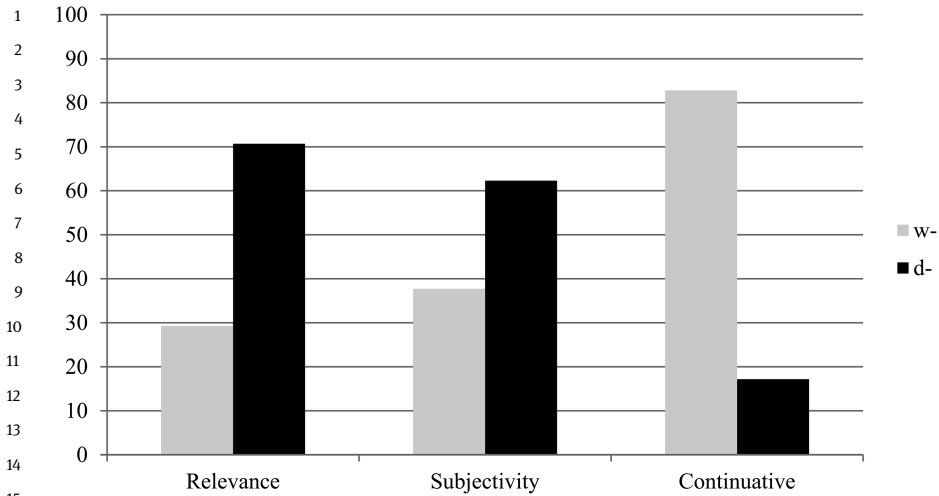


Figure 3: The proportion of *d*- and *w*-forms in the different types of final appositive clause

Relevance and subjectivity appositives occur with *d*-forms in 71% and 62% of the cases respectively, but this pattern is reversed for continuative relative clauses. These occur with *w*-forms in no less than 83% of the cases. This implies that the slight preference of final appositives for *w*-forms (see Figure 2) is mainly due to continuative appositives triggering the *w*-variant. The pattern for relevance and subjectivity appositives, with 60 to 70% of *d*-forms, resembles that for final restrictive relative clauses much more closely (see Figure 2). Summing up, continuative relative clauses constitute the sole context where *w*-forms are unambiguously preferred in the corpus.

5 Discourse continuity

Having established the *w*-preference of continuative relative clauses in Section 4, we now turn to the interpretation of this result against the background of the evolutionary perspective discussed in Section 3. Section 5.1 argues that continuative appositives introduced by *w*-forms secure discourse continuity by creating coherence, Section 5.2 argues that this is a reader-oriented or inter-subjective move.

5.1 Creating coherence

Continuative relative clauses are only loosely integrated into the matrix or preceding clause, both syntactically and semantically. We argue that this explains why they adopt *w*-relativizers early on. Consider (15) again, repeated here as (21).

(21) *Zal hem wel doen betaelen waermede Blijve met haest*
 Shall him well do pay where.with remain with hurry
Waerde Moeije UEDW:D: en Neef Alexander Batij.
 beloved aunt your.obedient.servant and nephew Alexander Batij
 ‘[I] shall make him pay. With which I remain, [while I’m] in a hurry,
 beloved aunt, your obedient servant and nephew Alexander Batij.’

In the first part of (21), the writer states that he will try his best to make a third party disburse. This is the final message he wanted to communicate to the addressee. There is in this part of the discourse no explicit linguistic material signaling to the reader that the discourse is going to be ended. In other words, the reader may have imagined many following statements, for instance, on the expected success of making this third party disburse or on a date by which the payment will have to be made, perhaps even a complaint on this third party’s reluctance to disburse. No such statement follows, however. Instead, the writer continues with the closing formula *Blijve ...* ‘[I] remain ...’ and thus finishes the discourse altogether. To avoid the disjoint transition from his final message to the closing formula, the writer inserts the relative pronominal adverb *waermede* ‘with which’, thereby creating a continuative relative clause. The relativizer *waermede* is anaphorically related to the preceding clause, which functions as its syntactic antecedent. Semantically, however, *waermede* favors a cataphoric interpretation: it introduces a whole new topic, viz. the end of the discourse, for which one would canonically expect a new main clause.⁷ What the *w*-form in (21) does is create coherence between two informationally distinct messages. They are glued together by the *w*-form, not necessarily at the semantic but at least at the syntactic level. This feature sets continuative relative clauses apart from relevance and subjectivity relative clauses, which are always semantically linked to the preceding discourse.

⁷ In (21), the writer could have opted for a *d*-form and a main clause (e.g. *daermede blijve ik ...* ‘with that I remain ...’). Since the subject is lacking (as is fairly common both in letter writing and in diary style), a *d*-form would in fact have left the clause type ambiguous (either a main clause or a subordinate relative clause).

1 By avoiding a disjointed transition between two separate stretches of dis-
 2 course, continuative relative clauses code discourse coherence and continuity
 3 syntactically where no obvious semantic or informational coherence exists. As
 4 such, they create what Mithun (2008: 69) calls “dependency beyond the
 5 sentence”. Continuative relative clauses may be analyzed as new sentences
 6 (for their semantic orientation) but also as part of a matrix sentence (for their
 7 syntactic structure). We will consider them primarily as new clauses, which
 8 happen to have the form of a subclause. This is in line with the traditional view
 9 of continuative relatives clauses as constructions that code new information in
 10 subclauses. It is also in line with recent research into insubordination, which
 11 focuses precisely on autonomous subclauses, i.e. on the conventionalized main
 12 clause use of what appear to be formally subordinate clauses (Evans 2007: 367).
 13 If we consider continuative relative clauses as new clauses and assume that
 14 grammaticalized *w*-relativizers mark subordination more strongly than *d*-forms,
 15 then these *w*-relativizers enable continuative relative clauses to become more
 16 explicitly connected to the preceding discourse. This is why continuative relative
 17 clauses adopt *w*-relativizers at the fastest pace. The *w*-relativizers introducing
 18 continuative relative clauses code a pragmatic function syntactically by creating
 19 discourse coherence and continuity where a semantic clash of two distinct
 20 statements threatens to occur. As such, they represent a textbook example of
 21 the grammaticalization pattern summarized in Givón’s (1979: 208) well-known
 22 slogan “from discourse to grammar”.

23 Example (21) is the most extreme situation of semantic incoherence, as the
 24 clause starting with *waermede* introduces an entirely new topic. Other continua-
 25 tive relative clauses too are semantically less connected to the preceding dis-
 26 course than relevance and subjectivity appositives but they do not change the
 27 topic altogether. Rather, in examples such as (22) (see also 16), the continuative
 28 appositive introduces a new subtopic within the current discourse topic.

29

30 (22) *twijfele niet of sal in Jndie wel voort geracken. soo hy hem*
 31 *doubt not if will in India well further get so he him*
 32 *als vooren wel comporteert. ende oock de gonst van eenige*
 33 *as before well behaves and also the favor of some*
 34 *vrinde moght bekomen. waer op ick oock uwe goede gonst*
 35 *friends may come where on I also your good favor*
 36 *voor hem versoeke*
 37 *for him request*
 38
 39 ‘[I] do not doubt whether [he] will go a long way in the Dutch East Indies,
 40 if he behaves himself well as before and may also find the favor of some
 friends. Whereupon I also request your good favor toward him’

1 Example (22) is taken from a passage about a young man. In the final clause,
 2 introduced by *waer op* ‘where on, whereupon’, the young man is still under dis-
 3 cussion, but the perspective has changed. He is not the central figure anymore,
 4 as the writer now draws attention to what he would like the addressee to do, viz.
 5 help the young man. The first part of (22) comprises fairly descriptive prose on
 6 the young man’s characteristics and career. The final part is a request directed
 7 toward the addressee. Although there is some continuity from the first part to
 8 the final part, i.e. the discourse is still about the young man in a broad sense,
 9 the request also constitutes a new piece of information that could have been
 10 packed in a new main clause. As in (21), however, the writer ensures discourse
 11 continuity by using subordinate syntax.

12 It should also be clear that continuative relative clauses are somewhere in
 13 between parataxis and subordination, with parataxis referring to independent
 14 and unembedded clauses and subordination to dependent and embedded ones
 15 (Hopper and Traugott 2003: 178). They are not however clear cases of Hopper
 16 and Traugott’s (2003) intermediate stage of hypotaxis, which refers to dependent
 17 but unembedded clauses. Whereas relevance and subjectivity appositives are
 18 indeed semantically dependent and may even be embedded (Hopper and Trau-
 19 gott 2003: 182), continuative relative clauses can be semantically independent
 20 while their syntax at least formally allows for dependency, as in the case of
 21 insubordination. As such, they offer an alternative interpretation of hypotaxis
 22 as well as an alternative to well-researched examples of the opposite, i.e. seman-
 23 tic subordination with syntactic coordination (e.g. Culicover and Jackendoff 1997;
 24 Fortuin and Boogaart 2009). Obviously, this does not imply that continuative rela-
 25 tive clauses are necessarily moving along a cline toward subordination (see
 26 Hopper and Traugott 2003: 199).

29 5.2 Grammaticalization and intersubjectification

30 When the locative adverb *daer* ‘there’ and pronominal adverbs with *daer*- gram-
 31 maticalized into relativizers, they took up a textual, clause linking function.
 32 Relativizers, like other items operating in the textual domain, may be said to dis-
 33 play subjectification, since they can be used to mark the speaker’s perspective
 34 on how utterances are connected to each other (see Traugott 2010: 40). As
 35 explained in Sections 2 and 3, we consider the subsequent change from *d*- into
 36 *w*-relativization as another instance of grammaticalization, which underlines the
 37 subordinate function of the relative clause. While the change from *d*- to *w*-forms
 38 was in full swing, it was – ironically – continuative relative clauses which
 39 appropriated *w*-forms at the fastest pace. This may be unexpected: continuative
 40

1 relative clauses can be semantically independent from the preceding clause, so
 2 why would their (syntactic) subordinate form need to be underlined? As argued
 3 in Section 5.1, continuative relative clauses employ the new *w*-forms to establish
 4 coherence and discourse continuity. They code a pragmatic meaning syntacti-
 5 cally, in that they signal to the reader that the discourse is coherent despite the
 6 fact that the new clause is informationally incoherent with the preceding clause.
 7 In (21), for instance, the form *waarmede* ‘with which’ centers on the addressee,
 8 for it is primarily in the interest of the reader that discourse coherence and con-
 9 tinuity are signaled. Traugott (2010: 35) defines intersubjectivity as “the mecha-
 10 nism by which . . . meanings . . . may be recruited to encode meanings centered
 11 on the addressee”, and we argue that this is exactly what is at stake here.⁸
 12 Because of this focus on the reader, the change from *d*- to *w*-relativizers in
 13 continuative relative clauses may qualify as an example of intersubjectification.
 14 Traugott (2010: 35) also stresses that we need to distinguish between two types
 15 of (inter)subjectivity, since “(inter)subjective” may indicate that a form “has
 16 pragmatic (inter)subjective meanings in relevant contexts” but also that it
 17 “has a newly coded (inter)subjective meaning”. We will argue that it is the first
 18 type of intersubjectivity which applies to continuative relative clauses in the
 19 history of Dutch.

20 Recall example (21). When the reader reaches the relative pronominal
 21 adverb *waarmede* ‘with which’, there is no formal sign as to what will follow.
 22 The adverb may introduce a relevance appositive (e.g. ‘with which I mean that
 23 I will take care of this’), a subjectivity appositive (e.g. ‘with which I will certainly
 24 enjoy myself’) or even a restrictive appositive (e.g. ‘with which he always pays
 25 me’). It is only when the informationally completely new *Blijve* . . . ‘remain . . .’
 26 follows that it becomes apparent that *waarmede* introduces a continuative rela-
 27 tive clause, confronting the reader with a new proposition, which in itself is not
 28 connected to the preceding discourse in any meaningful way. It is at this point
 29 that s/he is invited to infer that the discourse is coherent, as signaled by the
 30 morphosyntax of the relative adverb. Put differently, it is only in this specific
 31 context that *waarmede* codes an intersubjective meaning morphosyntactically.
 32 In a different context, the same relative might have coded another, possibly
 33 more objective meaning. Building on Auer (2009) and Fried (2010), we can say
 34 that *waarmede* itself in (21) only opens up a new syntactic slot, the interpretation
 35 of which depends on the discourse frame selected by the reader. As soon as s/he
 36 notices the semantic incoherence of the two clauses linked by *waarmede*, s/he

37
 38 _____
 39 **8** We need to distinguish the (inter)subjective function of the relative clause as coded by the
 40 relativizer and the relative clause’s actual propositional contents, which may also be subjective,
 as in the case of subjectivity appositives (see Section 4.2).

1 will understand its pragmatic/intersubjective function as a coherence creator
2 and exclude other interpretations.

3 This analysis of intersubjectivity as a pragmatic by-product of grammatical-
4 ization is in line with the view that grammaticalization does not necessarily
5 imply or co-occur with (inter)subjectification (see Cuyckens et al. 2010: 6;
6 Traugott 2010). In certain contexts, viz. when introducing continuative relative
7 clauses, Dutch *w*-relativizers may fulfill an intersubjective function. It so
8 happens that these intersubjective *w*-relativizers heavily promote the spread of
9 *w*-forms and thus speed up the grammaticalization process. But it appears to
10 be the frequency of continuative relative clauses rather than their pragmatic/
11 intersubjective function in certain contexts as such that fuels the spread of
12 *w*-forms (see Table 2). The *w*-forms do not code a new intersubjective meaning
13 by themselves and since the change from *d*- to *w*-relativization is in progress
14 in the period represented in our corpus, continuative relative clauses are not
15 necessarily formally distinguished from other relative clauses. All adverbial
16 relative clauses occur with both *d*- and *w*-forms (and all have changed to
17 *w*-forms only). In sum, the pragmatic/intersubjective function of continuative
18 relative clauses accompanies and speeds up the grammaticalization into *w*-forms
19 but is not inherently connected to it.

21 6 Conclusions

22 One of the major changes in 17th- and 18th-century Dutch is the change from *d*-
23 to *w*-relativization, whereby relative (pronominal) adverbs such as *daar* ‘there,
24 where’ and *daarmee* ‘therewith, with which’ changed into *waar* ‘where’ and
25 *waarmee* ‘with which’. In this paper, we have treated this change as an example
26 of grammaticalization. The new *w*-relativizers mark (syntactic) subordination
27 more strongly than the old *d*-forms. A corpus study of 17th-century private
28 letters reveals that, as in English, in subordinate continuative (or sentential)
29 relative clauses take up the new *w*-forms at a significantly faster pace than other
30 relative constructions, including other final appositives. By using the *w*-forms,
31 continuative relative clauses, which may be semantically completely independ-
32 ent from the preceding clause, become more strongly attached to the preceding
33 discourse. As a result, coherence and discourse continuity are secured. This
34 pragmatic move is primarily reader-oriented and therefore an example of inter-
35 subjectification.

36 We have taken an evolutionary view of grammaticalization. Central to this
37 view is the concept of syntacticization, i.e. the idea that pragmatic meanings
38 may become encoded in the grammar over time. Continuative relative clauses,
39
40

1 adopting subordinate w-forms at the fastest pace, exemplify this development
 2 from discourse to grammar. Furthermore, it is part of the evolutionary perspec-
 3 tive that social/cultural circumstances may influence the form of the language.
 4 One of these circumstances concerns the mode of communication: is the
 5 language spoken or written? Seeing that continuative relative clauses have often
 6 been considered as characteristic of the written language, our results provide
 7 evidence that the written medium may promote grammaticalization.

8

9

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11

12 We wish to thank two anonymous reviewers for their comments on an earlier
 13 draft.

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17 Abbreviations

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DIM = diminutive

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