# LIVE FAST, DIE EVEN YOUNGER: THE AFINITE CONSTRUCTION IN MIDDLE LOW GERMAN\*

## Anne Breitbarth Ghent University

ABSTRACT The afinite construction, that is, the ellipsis of a finite auxiliary from a verbal complex in a syndetic subordinate clause, curiously appears in Early New High German (ENHG) in the second half of the 15<sup>th</sup> century, and disappears again ca. 250 years later, though the ellipsis of perfect auxiliaries remains possible, at a much lower frequency, for longer. The same type of ellipsis has also been reported for Middle Low German (MLG) by Magnusson (1939), and the first attestation predates the ENHG one by about 200 years. Härd (2000: 1459) repeats Magnusson's observation and adds that the ellipsis becomes "very frequent" from the 13<sup>th</sup> century onwards. Based on the MLG reference corpus ReN, the current paper shows that while Magnusson's finding can be confirmed, Härd's claim cannot be substantiated. All in all, the afinite construction is only scatteredly attested in MLG, but there is great variation between texts. The current paper will attempt to identify the determining, mainly language-external, factors behind this variation. The new data furthermore afford a new assessment of the origin of the afinite construction, and lend support to the hypothesis that ENHG and MLG underwent independent developments with respect to the emergence of the construction.

### 1 INTRODUCTION

The afinite construction, that is, the ellipsis of a finite auxiliary from a verbal complex<sup>1</sup> in a syndetic subordinate clause (1), rather suddenly appears in the second half of the 15<sup>th</sup> century in Early New High German (ENHG), and

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<sup>1 &#</sup>x27;Verbal complex' should be understood broadly here, as this can include ellipsis of the copula and forms of *have* and *be* in passive-like constructions with a *zu*-infinitive, see Section 2.1 below.

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curiously disappears again ca. 250 years later,<sup>2</sup> though the ellipsis of perfect auxiliaries remains possible, at a lower frequency, for a little longer (Admoni 1967, 1980, Ebert, Reichmann, Solms & Wegera 1993, Demske 1990, Breitbarth 2005, Thomas 2019).

(1)czuo beichten solt er yecz sterben das er nit mer confession should he now die that he NEG anymore to mensch nit west [] das ain frommer cristen wer been [is/was] devout Christian person NEG that were a 'Should he die now, without having been to confession anymore, he would not be a devout Christian.'

(Geiler von Kaysersberg, *Bilger*, 1494, 34,6–9)

The same type of ellipsis has also been reported by Magnusson (1939) for Middle Low German (MLG). Magnusson cites (2) from the *Sächsische Welt-chronik* from the second half of the 13<sup>th</sup> century as (one of) the earliest attestations, already 200 years before the construction emerged in ENHG. Härd (2000: 1459) adds to Magnusson's observation that the ellipsis becomes "very frequent later".

(2) de marcgreve Albrecht gewan wider Brandenburch van den the margrave Albrecht won again Brandenburg from the Weneden, dat se eme afgewunnen [\_] Wends which they him won-off [had]
'Margrave Albrecht won Brandenburg back from the Wends, which they had taken from him'

(Sächsische Weltchronik 221; Magnusson 1939: 20)

The first aim of the current paper is to test Härd's claim based on data from the new *Referenzkorpus Mittelniederdeutsch und Niederrheinisch* (ReN-Team 2019). The second aim is to take a closer look at the causes of the emergence of the afinite construction. The new MLG data will be compared to the ENHG data collected by Breitbarth (2005), as well as Blum (2018) and Thomas (2019), and shown to afford new insights into the origin of the afinite construction. Based on this new evidence, it will be argued that the the afinite construction in MLG represents an independent development from ENHG. Finally, the reasons for the only scattered attestation in individual MLG texts will be examined. The data suggest that the afinite construction as a grammatical op-

<sup>2</sup> In response to a reviewer's comment, note that there is an important difference between the first appearance of the construction and its later rise in frequency.

tion, while available in MLG early on, arguably only started being used more frequently under the influence of ENHG.

## 2 The Afinite Construction in ENHG: State of the Art

2.1 Characteristics

The afinite construction in ENHG (Admoni 1967) is the ellipsis of a finite auxiliary verb from a periphrastic verb form, most frequently with a past participle, i.e. the ellipsis of *sein* (3 a) and *haben* (3 b) in perfect constructions, *sein* (3 c) and *werden* (3 d) in passive constructions, less frequently also *sein* (3 e) and *haben* (3 f) in modal constructions with a *zu*-infinitive. Besides, *sein* can also be dropped in a copula construction (3 g).

- (3) (a) eins teils darum-/ dz jnen der dingen jr låbē one part because.of that them these things their life lang nichts sonders begågnet [\_] long nothing special encountered [is]
  'For one part, it is because no such thing has ever happened to them in their whole life' (Lavater (1578; 12r,25-12v,01); Breitbarth 2005: 52)
  - (b) Als nun die Storcken ausgelacht [\_], when now the storks finished.laughing [had] gerahtschlagt sich Gargantua mit seim Hofgesind was zu deliberated REFL G. with his domestics what to thun sey.

do is.subj

'When the storks had finished laughing, Gargantua deliberated with his domestics what to do'

(Fischart (1590; 302,22-23); Breitbarth 2005: 1)

(c)  $K^{\epsilon}_{onig}$  Dieterich were nicht gut gnug/ das er king D. would.be not good enough that he oder sein Haußfraw verbündtnis mit jhm machen solten/ his house.wife coalition with him do should or dann er vnehelich geboren [\_] / because he illegitimately born [was]

'King Dieterich or his wife would not be good enough to make a coalition with him because he was born as an illegitimate child.'

(Bange (1599; 21r,09-10); Breitbarth 2005: 3)

(d) als nun den dritten Tag/ der Hauptman von allen when now the third day the major of all Officirn vnd Herrn von Hoff ins Closter zu den officers and sirs from court into the monastery to the Augustinern begrebnis begleitet zur [\_] Augustinians to.the funeral accompanied [became] when on the third day the captain was accompanied to the funeral in the monastery of the Augustinians by all officers and noblemen of the court ...'

(Aviso (1609; 3<sup>1</sup>, 30-32); Breitbarth 2005: 3)

(e) das also nichts sonders inn der Jnsel/ dieweil sie nit that thus nothing special in the island while it not bewohnet wirt/ zufinden [\_] / dann allein die wilde inhabited is to.find [is] than alone the wild Capparen capers

'that thus on this island, which is not inhabited, nothing special can be found apart from wild capers'

(Rauwolf (1587; 12,27-29); Breitbarth 2005: 3)

 (f) dessen er sich in seinem Stand im wenigsten nicht which.GEN he REFL in his class in.the least not zu beschämen [\_] to be.ashamed had

'of which he in his class would not have to be ashamed in the least'

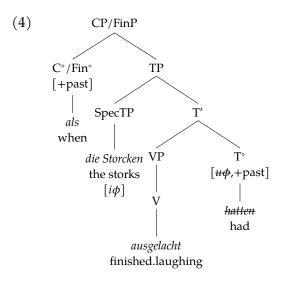
(Andreae (1614/16; 24,10-11); Breitbarth 2005: 4)

(g) da er nun schüldig [\_]/ wird gewißlich ein ernstlich as he now guilty [is] will certainly a serious *Exempel an jhme statuirt werden.* example of him made become
'As he is found guilty, he will certainly be punished rigorously.' (Aviso (1609; 3<sup>6</sup>,1-2); Breitbarth 2005: 4)

The ellipsis, argued to take place at Spell Out (Breitbarth 2005: 126), is formally licensed because the information of the silent auxiliary can be recovered through overt material: the  $\phi$ -features of the overt subject,<sup>3</sup> checking the uninterpretable  $\phi$ -feature of the finite (auxilliary) verb in T, and a finite

<sup>3</sup> The subject is always present, and only extracted in subject relative clauses, where it is therefore still present in the left periphery in the form of the relative pronoun.

complementizer or relative pronoun, spelling out the finiteness and temporal features of C/Fin, as shown in (4) (Breitbarth 2005: 126).



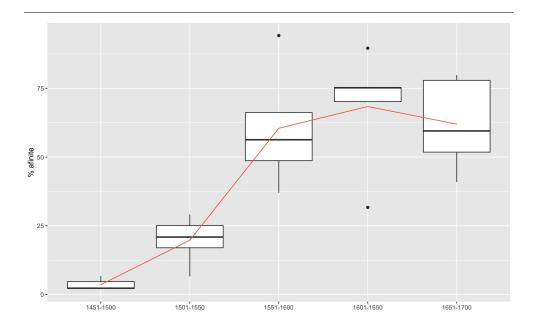
As variously observed in the literature (Admoni 1967, Demske 1990, Demske to appear, Breitbarth 2005, Senyuk 2014), the ellipsis of the finite auxiliary in ENHG has the function of marking the containing clause as dependent, as it is used particularly in backgrounded clauses. As argued in Breitbarth (2005), not spelling out the finite auxiliary reduces the overt expression of finiteness information, 'M-finiteness' (Lasser 1997), which serves to anchor a proposition in space and time. Using forms such as infinitives or participles in subordinate clauses that express fewer finiteness distinctions (tense, mood, aspect, person and number) than forms used in independent clauses is a cross-linguistically common *deranking strategy* (cf. Cristofaro 2002, Breitbarth 2005: 134). Not spelling out its carrier therefore works as a deranking strategy (functionally) marking subordination.<sup>4</sup>

#### 2.2 The diachronic development and regional variation

In the — manually compiled — corpus of Breitbarth (2005), charting the diachronic development in five subperiods of fifty years of ENHG and one period of a hundred years of early Modern German (five texts per period),<sup>5</sup>

<sup>4</sup> The fact that this strategy is only optionally used, given the presence of other means of expressing dependency (such as the development of a more fine-grained inventory of subordinating conjunctions), does not speak against an analysis as a deranking strategy, or the syntactic licensing analysis. In order to be available as an option, or a stylistic variant, it first needs to be possible in the language.

<sup>5</sup> The subperiods were 1451-1500, 1501-1550, 1551-1600, 1601-1650, 1651-1700 and 1701-1800.

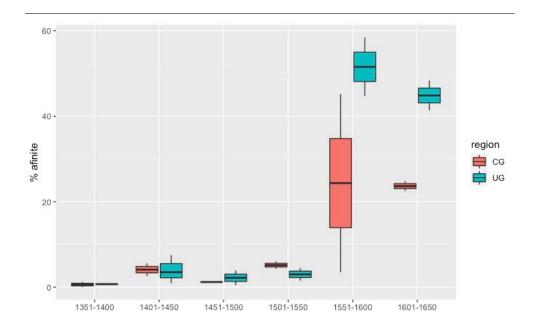


**Figure 1** Diachronic and individual variation in the frequency of the afinite construction in the ENHG texts in Breitbarth's (2005) corpus

it can be seen that the frequency of the afinite construction first increases rapidly, but then decreases even more rapidly after reaching its peak in the first half of the 17<sup>th</sup> century. Most of the texts in Breitbarth's (2005) corpus are from the Upper German area; only six out of the 25 texts between 1472 and 1678 (i.e., the ENHG period proper) are Central German. There is substantial individual variation between the texts, as the boxplot in Fig. 1 shows; the individual frequency of the afinite construction may deviate from the median frequency per period, but does not do so in a uniform way: the two outliers in the first half of the 17<sup>th</sup> century are both Central German texts, the *Aviso* with 89.6% and Opitz' *Poeterey* with only 31.7%, see Fig. 1.

Blum's (2018) data, based on a version of the later published Potsdam Treebank of ENHG (Demske 2019), and covering six 50-year subperiods between 1350 and 1650, contains at least one text per region in each subperiod.<sup>6</sup>

<sup>6</sup> For some subperiods, Blum's corpus contains more than one text for certain regions. Demske (to appear) seems to be based on a larger corpus, the Potsdam Treebank as well as an additional (not publically available) treebank based on an ENHG newspaper corpus; however, the frequencies are only presented in aggregated form, so information regarding regional distri-



**Figure 2** Diachronic development and regional variation in the frequency of the afinite construction, based on Blum's (2018) data

The frequency of the afinite construction is generally lower than in Breitbarth's corpus.<sup>7</sup> If one distinguishes Upper and Central German as larger regions in Blum's data, it appears that – apart from the first half of the 16<sup>th</sup> century – Upper German texts tend to exhibit the afinite construction more frequently. The difference is particularly evident in the second half of the 16<sup>th</sup> and the first half of the 17<sup>th</sup> century, i.e., the periods when the increase in use of the construction really gains speed, cf. Fig. 2.

Thomas's (2019) findings based on a study of three corpora, two of which cover the ENHG period,<sup>8</sup> suggest that the higher frequency of the afinite con-

bution of and frequencies in individual texts cannot be retrieved.

<sup>7</sup> For possible reasons for this difference cf. Blum (2018: 66).

<sup>8</sup> Viz. the Bonn corpus of ENHG and a corpus for the period 1490–1550, which she compiled according to the principles of the GerManC corpus, the third corpus she used. Like the GerManC corpus, she sought to represent different regions (East and West Central and Upper German) and six different genres (the GerManC additionally contains newspapers), with one text per region and genre (not three, as in the GerManC). In particular, her corpus contains legal texts, which are lacking in the Bonn corpus, and also in Blum's and Breitbarth's corpora.

struction in Central German texts in Blum's data in the first half of the 16<sup>th</sup> century might in fact be part of a more general trend, which has so far stayed under the radar due to the text selection in other corpora. She concludes from her data that the afinite construction must have emerged supraregionally in legal texts—because it is more frequent in that genre both in the post-ENHG GerManC corpus and in her 1490–1550 subcorpus—before it was extended to other genres in East Central German, and from there spread to other regions in this more general use. In the absence of sufficient data from all regions and genres in the rest, and particularly in the first half, of the ENHG period, more research will be needed taking into account data from a larger and more balanced corpus to confirm this.<sup>9</sup> As we will see below when looking at the MLG data, having only one text per genre and region may lead to dramatically different results depending on the choice of particular text.

#### 2.3 On the origin of the construction

Regarding the causes for the emergence of the afinite construction in ENHG, several hypotheses have been advanced in the literature, cf. Breitbarth (2005: 48–67) and Blum (2018: 20–44) for an overview. With a view to provide a background for the discussion of the new MLG data in the next section, we focus on only one scenario here.

Biener (1925) proposed that the afinite construction in ENHG originated in a reanalysis of finite past tense verb forms that were homophonous with past participles, and later spread to non-homophonous cases. Of particular importance for this hypothesis is the fact that before its establishment as a marker of past participles with a stressed first syllable in German, *ge*- was a morpheme marking perfective aspect, and as such could also combine with finite verbs. According to Biener (1925: 296–7), this reanalysis was restricted to embedded clauses because in the absence of fronting of the finite verb, both the finite verb and the non-finite product of such a reanalysis are found in clause-final position.<sup>10</sup> A problem with Biener's concrete proposal is the timing: finite *ge*-forms became very rare in the 15<sup>th</sup> c. in *both* main and embedded clauses (Ebert et al. 1993: 386), exactly when the afinite construction appears. As (Breitbarth 2005: 52–3) points out, the availability of a fully grammaticalized periphrastic perfect is a necessary precondition for such a reanalysis scenario to work, as only then can there be an ambiguity in embedded, but

<sup>9</sup> The new Reference Corpus ENHG (ReF) was not yet available when the current paper was written.

<sup>10</sup> To be sure, there was variation in the position of the finite verb in ENHG (e.g., Lühr 1985, Bies 1996), as in MLG (Mähl 2012, 2014), and extraposition was widespread, meaning that "clause-final" has to be understood as "later in the clause" or "not moved to second position".

not main clauses—a point that Biener does not address. However, ambiguity between finite past tense and participial forms is potentially more pervasive than realized by Biener, as it is also present in verbs with other perfective non-separable prefixes like *be*- in the verb *begaegnet* in (3 a), whose participles cannot combine with *ge*-. The hypothesis that the afinite construction arose through a reanalysis of homophonous finite forms (though not necessarily finite *ge*-forms) has recently been taken up again by Blum (2018). According to him, the basic requirements for such a reanalysis are (i) morphological, (ii) syntactic, and (iii) semantic ambiguity, all of which he finds present.

Regarding semantic ambiguity, Blum (2018: 55) refers to Dal & Eroms (2014: 156f) regarding the increasing encroachment of the perfect upon the functional domain of the preterite from the 15<sup>th</sup> century onwards.

Morphologically, the past tense of weak verbs in the first and third person singular may be ambiguous with participles, as can be the past tense of strong verbs in the first and third person plural. In the latter case, the strong verb forms need to share the same stem vowel in the preterite and the perfect, as is for instance the case with *vertrieben* 'expelled', *entflohen* 'fled', *gesungen* 'sung', *beschrieben* 'described', *funden* 'found', or *bissen* 'bit/bitten'. Also *worden* 'become' can be ambiguous in dialects where the past tense vowel is lowered (u > o). In the former case, with weak verbs, such an ambiguity can arise (a) if the verb forms show *e*-apocope in the preterite and (b) if an aspectual prefix *ge*- on a finite form is reinterpreted as a participial prefix. The option of *ge*- combining with finite verbs is on its way out of the language in the 15<sup>th</sup> century (Ebert et al. 1993: 386), which may have further encouraged a reanalysis. The apocope of final *-e* in preterite forms is a mainly Upper German development.

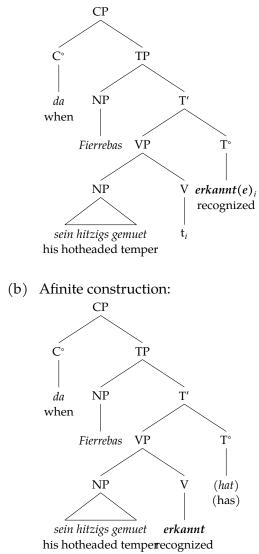
Potentially ambiguous weak verb forms are *gemacht* 'made', *erkannt* 'recognized', *vermeint* 'thought', *bracht* 'brought', or *regiert* 'governed' (Blum 2018: 46). While *e*-apocope (*bracht* < *brachte* 'brought') increases the number of syncretic forms that could either be preterite or perfect, the loss of the preterite exactly in those dialects that have the apocopated preterite forms reduces them around the same time, in the second half of the 15<sup>th</sup> century (Ebert et al. 1993: 389, cf. also Blum 2018: 47).<sup>11</sup>

Blum uses the syntactic ambiguity that could lead to the reanalysis seen in (5) (from Blum 2018: 53) as the main argument for the reanalysis scenario: only in embedded clauses do finite past tense forms occur in a position where participles occur, too, and can they not be disambiguated from a participle whose finite auxiliary has not been spelled out. This, according to

<sup>11</sup> Whether or not there is in fact a causal connection between the rise of the apocope and the loss of the preterite, is a different question, cf. Dal (1960).

Blum, would account for the restriction of the afinite construction to embedded clauses.

(5) (a) Finite embedded clause:



As argued by Breitbarth (2005: 52–3), a necessary precondition for a reanalysis on all three grounds — morphological, syntactic, and semantic — however, is the availability of a fully grammaticalized perfect construction, with which the afinite construction is in complementary distribution, as the availability of the same forms in main clauses (where they would not be ambiguous) should have blocked the reanalysis in embedded clauses. Blum therefore recognizes this as a fourth conditioning factor. All four factors would

have to coincide temporally to make such a scenario plausible. However, as Blum (2018: 59) himself points out, a reanalysis of finite forms as perfect participles might predict that the afinite construction should first emerge with perfects. Blum (2018: 68) admits that the data available so far (whether his own or those of Breitbarth 2005) do not support this prediction; Biener (1925: 292), too, concedes – with a measure of surprise – that the first example he found is in fact a passive. From early on, passive auxiliaries (3c)/(3d), the copula *sein* 'be' (3g), as well as *sein* in the modal passive with *zu*-infinitive (3e) are attested. We will return to this point in Section 4.

## 3 The Afinite Construction in MLG

#### 3.1 Methods

In order to test Härd's (2000) claim that the afinite construction became very frequent in MLG after first emerging in the 13<sup>th</sup> century, the *Referenzkorpus Mittelniederdeutsch / Niederrheinisch* (ReN) (ReN-Team 2019) was searched for relevant structures. This version of the corpus contains 146 annotated texts comprising 1,415,362 tokens. As the corpus is not parsed, one cannot search for embedded clauses directly.<sup>12</sup> The only way to restrict the query is to search for a complementizer occuring with verb-later placement, mostly introducing subordinate clauses (POS-tag KOUS), or a relative pronoun (POS-tag DPRELS) and a perfect/passive participle (POS-tag VVPP) within the same sentence-span, which thankfully is part of the ReN-annotation.<sup>13</sup> This covers at least a large part of the contexts in which the afinite construction is found in ENHG – complement clauses, most syndetic adverbial clauses, and relative clauses, and returns (plu)perfect as well as passive constructions.<sup>14</sup>

14 One of the reviewers remarks that it may be difficult to distinguish relative clauses with V2 order from relative clauses with later verb placement in the absence of a finite auxiliary, and refers to the possibility of V2-orders in (Present Day German) relative clauses. There are, in fact, only three relative clauses with an afinite construction in the MLG corpus used here, and

<sup>12</sup> Part of the ReN has been parsed as part of the *Corpus of Historical Low German* (CHLG) (Booth, Breitbarth, Ecay & Farasyn 2020) and is searchable online on www.chlg.ugent.be. However, as parsing is much more time-intensive, the CHLG covers much fewer texts than the ReN. Therefore, in order to gain as complete a picture as possible, the ReN was chosen for the present study.

<sup>13</sup> The queries used here were (i) and (ii):

<sup>(</sup>i) pos=/KOUS/ & pos=/VVPP/ & bound\_sent & #3 \_i\_ #1 & #3 \_i\_ #2

<sup>(</sup>ii) pos=/DPRELS/ & pos=/VVPP/ & bound\_sent & #3 \_i\_ #1 & #3 \_i\_ #2

The data were manually cross-checked with a query for ellipses of finite verbs (which do not have to be auxiliaries):

<sup>(</sup>iii) comment = /Ellipse des Finitums/

It should become possible to search for the explicit absence of a tag within a given context with (one of) the next release of ANNIS, however, this feature is not currently available yet.

Subsequently, the data were cleaned up. Tokens with non-auxiliary aspectual verbs combining with past participles such as *stan* 'stand' or *bliuen* 'remain' (6) were removed, as were clauses introduced by the conjunction *wente* 'as, for, because, until', unless they clearly showed absence of verb movement (7 a). Most clauses with *wente* are like (7 b), with clear V2 order after the conjunction, as shown by fronting of the object *dyne werke* and inversion of the subject and the finite verb (*hefstu* instead of *du hefst*), and were consequently removed.<sup>15</sup>

(6) (a) *also dar enbovene screuen steit* as there above written stands 'as is written above'

(Nowg. Schra Rig., max. 1297)

 (b) Meuen Dat vnse Stath mit folke Jo bewaret but that our city with people PRT protected <u>bliue</u> stay.sbjN
 'but that our city including its inhabitants may remain protected'

(Oldenburg, Urkunde, 1301–1350)

(7) (a) *wente he sic schuldich heuet ghemaket mit der vlucht* for he REFL guilty has made with the flight 'for he incriminated himself by fleeing'

(Oldb. Ssp. 1336)

(b) wente dyne werke hefst=u vaken vorkeret
 for your works have=you often turned-around
 'For you have often turned around your works'

(Lüb. Dod. Dantz 1489)

in all three, it is unlikely that this could be a V2-relative, given the correlation between V2-order and an independent assertion (cf. Breitbarth 2005 and references cited therein). Furthermore, none of the three cases in the corpus can be analysed as a continuative relative clause (Demske 1990). As Demske (1990) shows, the afinite construction is a sure sign in ENHG that one is not dealing with a continuative relative clause, and this probably also holds for MLG. The fact that older stages of German, whether ENHG or MLG, allowed for extraposition (including of arguments) more freely does not, in principle, interfere with the absence of verb movement in dependent clauses (for MLG verb placement, cf. Mähl 2014). Therefore, the presence of extraposition, even of an argument, does not warrant the conclusion that the position of the finite verb should be higher than in any other dependent clause (cf. Bies 1996).

<sup>15</sup> Regarding the the double character of *wente* as a coordinating and subordinating conjunction, cf. Schröder, Barteld, Dreessen & Ihden (2017: 49) or Booth et al. (2020: 773)

There is a (small) number of cases of afinite constructions in coordination structures. Only cases where neither conjunct has an overt auxiliary  $(8 a)^{16}$  or where the coordination is asymmetric in the sense that non-identical auxiliaries are dropped (8b) were counted as cases of afinite constructions.

(8)(a) Item Welker jemandes dorch schantschriffte to latine furthermore which someone by pasquill in Latin libell famosz ghenant (de he vthgebreydet [\_] / libel famously called which he distributed [has] vnde syk ordeninge der *rechte nicht jnschribeert*) па and REFL after ruling of.the law NEG submits vnrechtliker vnnd vnschuldiger wyse / schande laster unlawful.gen and innocent.gen manner shame libel vnde ouel tomet ... and evil attributes

'Furthermore, whoever by pasquills, in Latin famously called libel, which he distributed [has] and (who) does not submit himself to the rule of law and attributes shame, libel and evil in unlawful ways to innocent people ...'

(Bamberg 1510)

 (b) deme de détsleger vth fryem willen vnde whom the manslaughterer by free will and vnghenödiget nagefolget [\_] / vnde ene eerst jn der uninvitedly followed [be] and him only in the nafolginge erslagen hedde consequence slain has

'... whom the manslaughterer [had] ([were] in MLG) followed out of free will and without invitation, and had only slain him afterwards.'

(Bamberg 1510)

Cases where an overt auxiliary is present in one of the conjuncts were not analysed as afinite constructions (9a), even in cases that do not obey the directionality that holds in present-day German (9b).

(9) (a) *It ne ware also dhat he enen morth* . *ofte enen* it NE were so that he a murder or a

<sup>16</sup> In such cases, only one gap was counted, as the other gap could be regular coordination ellipsis. That is, in (8 a), only one afinite construction was counted for the two particples *vthge-breydet* 'distributed' and *jnschribeert* 'written'

rof ghedan hebbe ofte ene kerken robbery commited have.3sg.sbjn church or а ghebroken [ ]. ofte enen morthbrant ghedan heuet. burgled committed has has or an arson 'Unless it were the case that he had committed a murder or a robbery, [has] burgled a church or committed an act of arson' (Stader StR 1279)

HERE darsouluest vorweret (b) *dat* de hadde aller that the Lord there.self confused had all.gen / vnde se lande sprake vorstrouwet [] van countries languages and them scattered [had] from alle lande dar jn there into all countries '... that the Lord had confused all the languages there (in Babel) and [had] scattered them from there into all countries' (Lüb. Bug. Bibel 1534)

The filtered data, 7399 clauses in total, were then manually analysed, as to whether or not the finite auxiliary was omitted and whether the form of the participle was potentially ambiguous.

#### 3.2 Results

The first observation that can be made on the new data from the ReN is that indeed, the afinite construction emerges early, in the second half of the 13<sup>th</sup> century. In this respect, the present study confirms Magnusson's (1939) finding. However, it cannot be said that it ever becomes very frequent after that, contradicting Härd's (2000) claim.

First of all, there is great variation between the individual texts in the ReN corpus. While in most of them (107 out of 142,<sup>17</sup> i.e. three quarters), finite auxiliaries are never omitted at all, in some the ellipsis seems to occur comparatively frequently. Generally, the absolute numbers are very small, however. Table 1 gives the counts and frequencies aggregated by subperiods of 100 (13<sup>th</sup> and 17<sup>th</sup> centuries) or 50 years (remaining periods).<sup>18</sup> Given the

<sup>17</sup> Only 142 out of the 146 texts in version 1.0 of the ReN appear in the output of the queries used.

<sup>18</sup> As there was only one text from the first half of the 13<sup>th</sup> century, it was grouped together with the second half of the century. Likewise, as there were only three texts from the 17<sup>th</sup> century, one from the first half of the century, and two from the second, the numbers for the 17<sup>th</sup> century were aggregated. The numbers in the column 'total' are all the hits the queries returned, after removing false positives, that is, all possible contexts of the afinite construction in the corpus.

period	# afinite	% afinite	total
1201-1300	1	0.2	583
1301–1350	3	0.2	1250
1351-1400	3	0.6	533
1401–1450	5	0.6	587
1451-1500	25	1.0	2631
1501-1550	62	4.7	1385
1551–1600	52	19.0	274
1601–1700	6	3.2	185

extremely low numbers, it was not attempted to find differences between the scribal languages of MLG.<sup>19</sup>

## Table 1 Diachronic development of the afinite construction in MLG

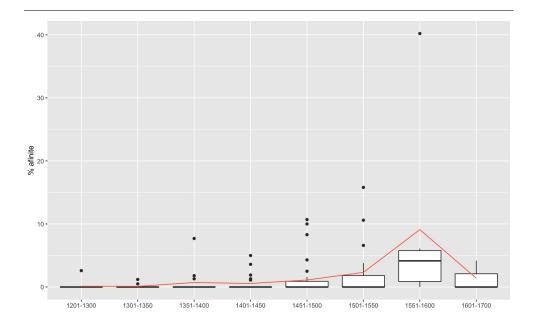
As Fig. 3 shows, the median frequency in each period stays rather low, there is great variation within periods, and there are significant outliers (black dots) deviating from the median.<sup>20</sup> In the first half of the 16<sup>th</sup> century, when the overall frequency begins to rise, the construction is only found in six out of 13 texts, with frequencies varying between 1% and 18.4%. Only in the second half of the 16<sup>th</sup> century do most texts (four out of six) exhibit at least some cases of the afinite construction, though the frequency varies enormously, between 3.5% and 40.2%. As a result, the average frequency (red line) shows a slight rise in the 16<sup>th</sup> century, around the time when the afinite construction became more frequent in ENHG, too. Given the fact that most texts do not have the afinite construction at all, the average frequency peaks at a much lower value compared to ENHG, though. Only one text, the *Chronica der Stadt Bremen* (1583), shows a frequency comparable to some ENHG texts (40.2%).

#### 3.3 Discussion

Given the very scattered attestation of the afinite construction in MLG, it has to be concluded that while Magnusson (1939) correctly observed that the ellipsis of finite auxiliaries did emerge (much) earlier in MLG than it did in ENHG, already around 1300, it never really caught on, certainly not in the fashion observed for ENHG. It is therefore also difficult to say anything about the syntactic licensing conditions or the functional properties of the construction in MLG.

<sup>19</sup> Westphalian, Eastphalian, North Low Saxon, Lübeck, Elbe Eastphalian, East Elbian, South Markish, and Baltic.

<sup>20</sup> The full details are given in the appendix.



**Figure 3** Diachronic and individual variation in the frequency of the afinite construction in the MLG texts in the ReN

In the earliest attestations in the ReN, the verb forms tagged VVPP in potential afinite constructions are often ambiguous with present tense forms, (10). Three out of the four afinite constructions until 1400 are of this kind. In one case, it is not clear whether the verb tagged VVPP is not mistagged, as a present tense interpretation certainly seems plausible: 'as one *repays* other damages described in this book' (10 a).<sup>21</sup>

(10) (a) he scal it beteren also me andere broke beteret
he shall it better as one other damages better[ed]
[\_] de in dessen boke bescreuen stat
[has] that in this book recorded stand
'He shall repay it as one repays/has repaid other damages that are recorded/written down in this book.'

(Oldb. Ssp. 1336)

<sup>21</sup> Unlike in other cases, the comments on the annotation do not indicate an ellipsis of the finite auxiliary here.

(b) we des <u>ghesmaket</u> [\_] den ne dorstet
 who this.GEN tastes/tasted [has] the.ACC NEG thirsts
 nicht mere
 NEG anymore
 'Whoever tasted/tastes this, he will not be thirsty anymore'
 (Nd. Apok. Tf., ca. 1400)

Ambiguity with past tense forms, as argued by Biener and Blum for ENHG, is not found. This is not surprising, considering that in MLG, there was much less potential for confusing finite weak preterite verbs with participles, because unlike in Upper German dialects, there is no *e*-apocope. (11) can serve to illustrate this. These are two cases where the participle could be a past tense form, but *only if* the *-e* ending of the weak past tense form was apocopated. But as the forms *makede* 'made' in (11 a) or *forde* 'led' in (11 b) make clear, *e*-apocope is not found in weak preterites in MLG, only allowing the analysis of *spaert* 'saved' and *erkandt* 'recognized' as past participles. In these particular two examples, it can be seen that the exigences of rhyme and metre seem to encourage the ellipsis of the auxiliary (as well as the extraposition of *alleynn* in (11 a), which seems to be part of the PP *vor my* (*alleynn*) 'only for myself', lit. 'for me alone', and should therefore not normally extract from it).

(11) (a) Szo ick ydt vor my spaert [\_] alleynn Vnd as I it for myself saved [had] alone and ydeeman nicht makede gemeynn everyone NEG made common 'as I had saved it for myself alone, and did not make [it] common with everyone'

(Verl. Sohn 1527)

(b) *Do he tholast syn sûnde <u>erkandt</u>* [\_] *Forde ohn* when he at.last his sin recognized [had] led him *GOT wedder ynn syn landt* God back to his country 'When at last he recognized his sin, God led him back to his country.'

(Verl. Sohn 1527)

But also ambiguity with strong plural past tense forms – which can be ambiguous with participles in the ablaut classes  $I-III^{22}$  – is hardly found. (12) might be a case in point.

<sup>22</sup> Particularly if, as is relatively common in MLG, the participial ge- is omitted. It must be con-

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(12) dath weren mene lude de myt erer wyszheyt that were mean people who with their wisdom vnderstunden de resen <u>ouerwunnen</u> ([\_]?) sometimes the giants won.over [had]
'Those were regular people who with their wisdom ([had]) sometimes overpowered the giants.'

(Lüb. SaxoGr. 1490)

In the ablaut classes V–VII, the stem vowel of the participle is the same as in the present, but here, too, very few ambiguous cases, like (13), are found, mostly because the subject is singular, or because a temporal complementizer (like *do* in (11b)) makes it clear that a present tense reference is excluded.

(13) vnd is de dudingh dat vaken orlege vnde stride komen and is the interpretation that often war and fight come ([\_]?) van eyner blomen [are] from one flower
'And the interpretation is that often, war and fight (have) come from a single flower.'

(Cronecken der sassen, Mainz: Peter Schoeffer, 1492)

That is, while there is syntactic ambiguity (clause-final position of the ambiguous verb form) and morphological ambiguity, mainly with singular present tense forms of weak verbs, considerably less with plural present or past tense forms of strong verbs, there is little semantic ambiguity. In case of stative verbs such as *bebort* 'befit(s)' in (14) the present tense has a meaning that is close to the result state of a perfect, and in case of perfective verbs such as *komen* 'come' in (13), together with the adverb *vaken* 'often', both the perfect ('often in the past until now') and the present ('often in general') overlap semantically.

(14) to mynem rechte so seck dat bebort ([\_])
 to my right as REFL that befit(s) ([has])
 'to my right, as it is / has been appropriate'

(Hild. Veck. Briefe 1413–23)

ceded that the prefix does occur more in the MLG texts in the ReN than one would expect from the present-day dialects, but the fact that it hardly occurs in texts representing spoken language such as the comedy *Teweschen Hochtiet* points to the fact that *ge*- was not a genuinely Low German feature.

The first unambiguous cases of the afinite construction in the ReN are not found in perfect, but in passive constructions (15), echoing the observations of Biener (1925) and Blum (2018) for ENHG. In fact, the very first (and only) attestation from the late  $13^{\text{th}}$  century (15 a) is of this kind.

(15) (a) Nu hir echt eyn ander vnderscheit ghescriuen now here legally a another difference written

[\_] wo men richten moghe
[is/became] where one judge may
'Now there [has] been written a another legal difference, where one may judge ...'

(Rüthen StatutR Hs. L, ca. 1300)

(b) *sint der tit dat he to vronenboden* <u>koren</u> [\_] since the time that he to bailiff <u>chosen</u> [was] 'since the time that he was elected/chosen as bailiff ...'

(Brem. Ssp. 1342)

(c) *in der tyd dad em bremen <u>afwůnen</u>* [\_]
 in the time that them Bremen <u>off.won</u> [was]
 'in the time that Bremen was taken from them'

(Brem. Uk. 1351-1400)

In the 15<sup>th</sup> and 16<sup>th</sup> centuries, clear cases of ellipsis become more frequent, but remain restricted to individual texts. For instance, 17 out of 258 dependent clauses in the MLG translation of the *Bamberger Halsgerichtsordnung* (1510) contain afinite constructions (16).

(16) *Jtem so de vordacht bewyset worde / dat he vorgyfft* equally if the suspect proven was that he poison *gekofft* [\_] bought [had]
'Equally, if it was proven about the suspect that he had bought poison ...'

(Bamberg 1510)

This may point to a potential transfer from Upper German in this translation, but there are two more texts with even higher frequencies in the same period, where such an influence is less likely, though it cannot be excluded given the beginning transition to ENHG (Peters 2000: 1485), viz. the Lüneburger *Liber Memorialis* (1501-1519) with 25 afinite constructions with participles in 158 dependent clauses and *Reynke de Vosz de olde* (Rostock 1539) with 13/123.

While we do not know the linguistic socialization and scribal education of the writer(s) adding documents to the Lüneburger *Liber Memorialis, Reynke de Vosz de olde* is based on an earlier MLG translation (Lübeck 1498; no afinite constructions; cf. appendix) of the story of the fox Reynard, which in turn is based on Middle Dutch sources. In the second half of the 16<sup>th</sup> century, the *Chronica der Stadt Bremen* (1583) stands out in particular, being the one text with the highest frequency of the afinite construction in the entire corpus with 40.2%. Here, a potential High German influence might stem from the fact that the author, Johann Renner, worked for a number of years as a sollicitor in Speyer (Rhineland-Palatinate) at the border between the Central and Upper German language areas. The afinite construction traditionally being considered a feature of chancery style in ENHG (Ebert 1986), he might have picked up the habit there.

The influence of individual texts (and writers) on the overall frequency of the afinite construction in the ReN corpus should therefore not be underestimated. The three texts mentioned in the previous paragraph account for 55 out of the 62 occurrences of the afinite construction in the first half of the 16<sup>th</sup> century, the remaining are distributed over five more texts; eleven texts in that subperiod do not show a single occurrence. In the second half of the 16<sup>th</sup> century, the Chronica der Stadt Bremen (1583) alone contributes 45 out of the 52 afinite constructions. A tendency to occur more in a particular genre cannot be confirmed. While due to the way the genres are represented in the attestation, legal texts and charters dominate in the earlier subperiods, and religious and literary texts only appear later. One cannot, therefore, conclude that the afinite construction was first restricted to legal texts, and only later spread to other genres (as argued by Thomas 2019 for ENHG), as the genres are so unevenly distributed over the subperiods. A linear mixed effects model using the 1mer method of the 1me4 package (Bates, Maechler, Bolker & Walker 2015) in R (R Core Team 2015), taking period, scribal language and genre as linear predictors and individual texts as random effect, found no effect of the scribal dialect, and only found the subperiod of 1551-1600 to significantly favour the construction, which can also be read off the data in Table 1 and Fig. 3. Furthermore, the model points to a slightly favouring effect of administrative texts. However, the afinite construction mainly occurs in one administrative text, the Liber Memorialis from Lüneburg (entries from 1501–1519) with 25 occurrences, and three more occurrences spread over two other texts (the Berliner Stadtbuch (entries from 1351–1400) and the Schweriner Stadtbuch (entries from 1451–1500)). Furthermore, charters and legal texts had no such effect, which casts doubts on the portability from ENHG to MLG of a scenario as sketched by Thomas (2019) according to which the afinite construction emerged first in legal and chancery texts. This becomes even clearer when the genres are recoded grouping 'more legal' genres (charters, legal and administrative texts) together opposing them to all 'non-legal' genres grouped together—there is no significant effect of either group of genres in the second model.<sup>23</sup>

All in all, the afinite construction appears much less frequently in MLG than in ENHG, and its attestation is much more scattered and less regular, with a large number of texts not showing the construction at all. The peak of its frequency lies around the same time as in ENHG, in the first half of the 16<sup>th</sup> century (cf. also Thomas 2019), and is mainly the result of a higher frequency of the construction in very few individual texts. This raises the question whether the scarce appearance of the afinite construction in MLG might be the result of transfer from ENHG, or alignment with certain ENHG stylistic conventions. We will look into this question in the next section.

## 4 Synthesis

The new MLG data presented in this paper contribute clear evidence for similar but distinct scenarios for the emergence of the afinite construction in ENHG and MLG. While a reanalysis of finite preterite forms as past participles lacking an overt auxiliary in clause-final position is at least possible for ENHG, as argued by Blum (2018), where as a consequence of *e*-apocope in weak preterites there was syncretism between 1sG and 3sG weak preterites and participles, as well as 1PL and 3PL strong preterites and participles with certain stem vowels, such a scenario is much less likely for MLG, as the weak preterites are not affected by *e*-apocope. Strong participles that could be ambiguous with plural forms (present or past, depending on the ablaut class) are hardly attested, or for other reasons not ambiguous (e.g. because of a singular subject). Rather, the earliest attestations are ambiguous with (weak) present tense forms. That is, while a reanalysis scenario is plausible also for MLG, it is a different form from ENHG that caused the reanalysis.

Even though for practical purposes, the ReN was only searched for perfect and passive participles in embedded clauses, meaning that afinite constructions with other types of predicates as they are attested in ENHG were not searched, the new data also afford a new perspective on the question raised by Blum (2018) as to why the afinite construction does not first only emerge in perfects, but is from the beginning attested with passives, in copula constructions, or with *zu*-infinitives.<sup>24</sup> Just as in ENHG, the first unambiguous

<sup>23</sup> Details on the models in Appendix B.

<sup>24</sup> Thomas (2019) proposes that the frequency of the afinite construction in ENHG depends on

cases (and in MLG, the first case in the ReN *tout court*) of the afinite construction are in fact passives. I submit that this in fact supports the reanalysis scenario. As variously argued in the literature (such as Timberlake 1977), a syntactic reanalysis arises first in a context of structural ambiguity. Timberlake calls this the *actuation* of the change. At this point, the reanalysis is not yet discernable due to the surface ambiguity, as seen in (10) above. Only when the new structure starts being used in contexts outside the original context of reanalysis does it become clear that the underlying reanalysis has occurred, and that speakers are extending the new structure to other, similar contexts. Timberlake calls this actualization, in the grammaticalization a similar process is known as *extension* (Heine 2003). It is only at the point when actualization occurs that the underlying change becomes apparent. In both ENHG and MLG, this happens when the possibility to drop the finite auxiliary with a past participle extends to passive constructions, but also to perfect constructions where the subject cannot be analysed as agreeing with a potentially finite verb in person and number. In these cases, ambiguity with the finite present or past tense forms is no longer possible.

Given the scarcity of the afinite construction in the MLG corpus, and the great individual variation between texts, however, we also need to consider what factors may determine the extreme differences in frequencies between MLG texts, and compared to ENHG. First, we can observe that until ca. 1400, the afinite construction only occurs very sporadically, and is completely unattested in the majority of the MLG texts in the ReN. Even at a time when it becomes more widespread, it remains extremely rare. This contrasts with ENHG, where even considering regional differences, it becomes robustly attested at least in the 16<sup>th</sup> century. Secondly, looking further at the regional distribution, while some corpora of ENHG suggest a prevalence in Upper German texts, others point to an important role of East Central German ones. It needs to be kept in mind that as discussed in Section 2, all the ENHG corpora used in the literature are still very limited compared to the MLG ReN, often only containing one text per region (and genre, where this is differentiated). More research using the *Referenzkorpus Frühneuhochdeutsch* (ReF) only released after the research for the present paper was done-will need to verify the role of region and/or genre in ENHG. As it stands, at least, the new data discussed in the present paper allow us to firmly reject a possibility considered – and considered unlikely – by Blum (2018: 24–7), viz. that the afinite construction could have spread from MLG to ENHG, after it emerged there (significantly) earlier than in ENHG. The fact that the afinite construction first

the frequency of the type of verbal complex. However, she considers perfect and passive constructions as one category (VerbH/S), so some distinctions are lost.

occurs mainly in legal texts in MLG seems to have to to with the not quite balanced composition of the corpus, which contains many more charters, legal, and administrative texts in the earlier subperiods, and only later also religious, literary, or scientific texts. In the second half of the 15<sup>th</sup> century, one text sticks out, the MLG translation of the Bamberger Halsgerichtsordnung, followed by a chronicle and a translation of *Reynke De Vos*.

At this point, it is useful to look a little further north. Johannisson (1945, 1960) proposes that ellipsis of finite auxiliaries in syndetic subordinate clauses in Swedish is a syntactic loan from German, which piggy-backed off the possibility already available in the language to omit an auxiliary from a coordination structure even if the overt auxiliary is not identical with the deleted one. It is borrowed into Swedish from ca. 1670 onwards and rapidly becomes the dominant form (Johannisson 1960, Bäckström 2020), while in German, it already begins to decline and ultimately disappear again (cf. Härd 1981; Breitbarth 2005). The fact that the afinite construction only appears in few individual texts in MLG, and only becomes a little more frequent in the first half of the 16<sup>th</sup> century, particularly in literary texts or texts translated from ENHG, but also in an administrative text (the Liber Memorialis from Lüneburg mentioned above), this being the period when the first chanceries began to transition from MLG to ENHG, suggests a possible imitation of a Central or Upper German stylistic fashion, piggy-backing, as it does later in Swedish, off an option already present in the grammar, viz. (asymmetric) coordination ellipsis, as well as the possibility to drop the auxiliary in passive constructions as in (15), helped along by an ambiguity of weak present tense forms and participles.

Crucially, such an analysis requires the presence of such an option in the grammar. While stylistic factors and in particular the influence of an ENHG stylistic fashion may govern the frequency of the construction in ENHG, the omission of the auxiliary itself first needs to be possible in the language to be able to serve as an option, or stylistic variant. The fact that the afinite construction is unambiguously attested in MLG long before it emerges in ENHG points to the fact that this option had been independently innovated long before its use became more fashionable, at least with some authors.

#### 5 Conclusion

With an eye on the initial aims of this paper, we can conclude that the data from the ReN do not confirm Härd's claim that the afinite construction ever became very frequent in MLG.

Regarding the emergence of the afinite construction, the MLG data suggest that similarly to what has recently been argued again for ENHG by Blum (2018), after it was first proposed by Biener (1925), a reanalysis of morphologically and syntactically ambiguous finite forms as participles with a dropped auxiliary in cases where the context does not allow to semantically discriminate between either analysis. Unlike what Biener and Blum hypothesed for ENHG, the ambiguous forms giving rise to the reanalysis in MLG are not past tense forms (weak singulars or strong plurals with matching stem vowels), but present tense forms (mainly weak verbs, hardly strong verbs). As in ENHG, the first unambiguous cases of the afinite construction appear to be passives, where an interpretation of the participle as a finite verb form is excluded. I have argued that the fact that perfects are not initially the exclusive context in which the afinite construction appears is in fact expected under a reanalysis approach. In the original context of reanalysis, the old and new forms are ambiguous. Only once the reanalysis actualizes and extends to contexts that only allow the new underlying structure, which is the case most notably in passives, does it become visible.

I also briefly touched upon the question of why the afinite construction is only so sporadically attested in individual texts in MLG. A plausible reason is that the little used grammatical option of dropping the finite auxiliary, which had developed relatively early compared to ENHG, became reinforced as an ENHG-influenced stylistic fashion later on in texts where such an influence is present, at a time when it had become nearly ubiquitous in ENHG texts.

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## A Data

I K

The column 'genre' uses the ReN's abbreviations for 'fields of writing':

R

law

- inscriptions
  - U charters/documents
- K clerical writing/religion L literature
- V administration
- P private writing and correspondence W transfer of knowledge

## Anne Breitbarth

text	genre	# afinite	% afinite	total	
1201–1300					
Blankenburger Urkunden 1290	U	0	0.0	21	
Braunschweig Stadtrecht, Ius Ottonianum, 1227/1231	R	0	0.0	6	
Braunschweig Stadtrecht, Bestätigung Ius Ottonianum, 1265	R	0	0.0	5	
Braunschweig Stadtrecht/Duderstadt 1279a,b	R	0	0.0	17	
Das erste Hallische Schöffenbuch, 1266-1300	V	0	0.0	11	
Goslarer Kramerrecht, 1281	R	0	0.0	15	
Hildesheimer Münzvertrag, 1300	U	0	0.0	2	
Lübeck: Chronik Albrechts von Bardewik, 1298	W	0	0.0	13	
Lübeck: Schiffsrecht, ca. 1300	R	0	0.0	14	
Nederrijns Moraalboek 1. Teil	W	0	0.0	56	
Nederrijns Moraalboek 2. Teil	W	0	0.0	31	
Nederrijns Moraalboek 3. Teil	W	0	0.0	68	
Nowgoroder Schra II (Rigaer Hs.)	R	0	0.0	51	
Osnabrück, Sühne (= Koldenbeker Urkunde), ca. 1288	U	0	0.0	6	
Rüthener Statutarrecht, Hs. L (ca. 1300)	R	1	2.6	38	
Ravensberger Urkunde	U	0	0.0	2	
Sachsenspiegel-Fragm. 22	R	0	0.0	6	
Sachsenspiegel-Fragm. mgf 750, Bel. 1-2	R	0	0.0	8	
Stader Stadtrecht, 1279	R	0	0.0	151	
Stadtrecht Hildesheim	R	0	0.0	66	
Urkunde Hermanns von Neheim (= Werler Urk.)	U	0	0.0	1	
1301–1350					
1 Hamburger Urkunde (ASnA), 1301–1350	U	0	0.0	1	
2 Berliner Urkunden (ASoR), 1301–1350	U	0	0.0	3	
4 Rigaer Urkunden (ASoR), 1300–1350	U	0	0.0	15	
4 Stralsunder Urkunden (ASoR), 1301–1350	U	0	0.0	17	
5 Bremer Urkunden (ASnA), 1301–1350	U	0	0.0	24	
5 Oldenburger Urkunden (ASnA), 1301–1350	U	0	0.0	14	
Braunschweig, ältestes Degedingbuch der Altstadt II	V	0	0.0	15	
Bremer Stadtrecht, 1303/04, Abschrift	R	1	0.5	194	
Bremer Stadtrecht, 1303/04, Originalhandschrift	R	0	0.4	226	
Das ältere Hamburger Schiffsrecht, 1301	R	0	0.0	115	
Goslarer Stadtrecht (Ratskodex), ca. 1350	R	1	0.6	160	
Hamburger Stadtrecht, 1301	R	0	0.0	95	
Oldenburger Bilderhandschrift des Sachsenspiegels 1336	R	2	1.1	173	
Sachsenspiegel-Fragmente (Braunschweig), 1. H. 14. Jh.	R	0	0.0	23	
Sachsenspiegel, Bremer Handschrift, 1342		0	0.0	129	
Sächsische Weltchronik (Hs. 16), 1. H. 14. Jh.	R W	0	0.0	40	

text	genre	# afinite	% afinite	total
1351–1400	TT	0	0.0	40
10 Rigaer Urkunden (ASoR), 1351–1400	U	0	0.0	49
10 Bremer Urkunden (ASnA), 1351–1400	U U	1 0	1.3 0.0	80
10 Oldenburger Urkunden (ASnA), 1351–1400	-			31
11 Stralsunder Urkunden (ASoR), 1351–1400	U	0	0.0	26
14 Hamburger Urkunden (ASnA), 1351–1400	U	0	0.0	54
2 Berliner Urkunden (ASoR), 1301–1350	U	0	0.0	10
8 Berliner Urkunden (ASoR), 1351–1400	U	0	0.0	13
Berliner Stadtbuch, 16 ausgew. Einträge 1351–1400	V	1	1.8	55
Gerart van Rossiliun, Prosaroman, Fragmente, ca. 1400	L	0	0.0	16
Herforder Rechtsbuch 1375	R	0	0.0	107
Niederdeutsche Apokalypse	K	1	7.1	14
Revaler Handwerkerschragen 1351–1400	U	0	0.0	9
Soester Schrae im Statutenbuch, ca. 1367	R	0	0.0	41
Stralsunder Frieden von 1370	R	0	0.0	20
Wunstorfer Urkunden 1290 und 1303	U	0	0.0	8
1401–1450				
2 Bremer Urkunden (ASnA), 1401–1450	U	0	0.0	5
2 Hamburger Urkunden (ASnA), 1401–1450	U	0	0.0	6
2 Rigaer Urkunden (ASoR), 1401–1450	U	0	0.0	10
3 Oldenburger Urkunden (ASnA), 1401–1450	U	0	0.0	13
3 Stralsunder Urkunden (ASoR), 1401–1450	U	0	0.0	15
7 Berliner Urkunden(ASoR), 1401–1450	U	0	0.0	20
8 Rigaer Urkunden (ASoR), 1451–1500		0	0.0	5
Arnt Buschmann: Mirakel, Greifswalder Hs.	Κ	1	1.1	88
Berliner Stadtbuch, Ende 14. Jh., 12 ausgew. Einträge 1401–1450	V	0	0.0	5
Brandan, Helmstedter Sammelhs.	L	0	0.0	24
Briefe des Hansekaufmanns Hildebrand Veckinghusen	Κ	1	3.7	79
De deif van brugghe, Stockholmer Handschrift (Hs. Cod. Holm. Vu 73)	L	0	0.0	8
De vorlorne sone, Stockholmer Handschrift (Hs. Cod. Holm. Vu 73)	L	0	0.0	31
Dietrich Engelhus: Chronica nova (Weltchronik), 1435	W	1	1.9	54
Erste mnd. Eintragungen im Lübecker Niederstadtbuch, 1418	V	0	0.0	6
Flos vnde Blankeflos, Stockholmer Handschrift (Hs. Cod. Holm. Vu 73)	L	0	0.0	25
Ludolf von Sudheim, Reisebericht	W	2	10.0	20
Revaler Handwerkerschragen (insg. 14), 4 Schragen von 1401– 1450	U	0	0.0	37
Schweriner Stadtbuch, 10 ausgewählte Einträge von 1401–1450	V	0	0.0	16
Theophilus-Spiel	L	0	0.0	10
Theophilus, Helmstedter Sammelhs.	L	0	0.0	10
Valentin vnde Namelos, Stockholmer Handschrift (Hs. Cod. Holm. Vu 73)	L	0	0.0	14
Van Alexander, Helmstedter Sammelhs.	L	0	0.0	15
Van flosse vnde blankeflosse, Helmstedter Sammelhs.	L	1	3.6	28

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text	genre	# afinite	% afinite	total
1451–1500				
5 Berliner Urkunden (ASoR), 1451–1500	U	0	0.0	5
7 Oldenburger Urkunden (ASnA), 1451–1500	U	0	0.0	26
7 Stralsunder Urkunden (ASoR), 1451–1500	U	0	0.0	26
8 Bremer Urkunden (ASnA), 1451–1500	U	0	0.0	32
8 Hamburger Urkunden (ASnA), 1451–1500	U	1	2.8	36
8 Rigaer Urkunden (ASoR), 1451–1500	U	0	0.0	7
Arnt Buschmann: Mirakel, Wolfenbütteler Hs.	Κ	5	4.4	117
Bürgersprache der Stadt Greifswald (1451),	R	0	0.0	12
Bibel, Köln (Ku), ca. 1478	Κ	0	0.0	45
Biblia, Lübeck 1494	Κ	1	1.2	83
Bilderhandschrift des Hamburger Stadtrechts, 1497	R	2	0.9	213
Bordesholmer Marienklage, 1475/76, Hs.	L	0	0.0	18
Cronecken der sassen, Mainz, 1492	W	1	0.9	108
Des dodes dantz, Lübeck, 1489	Κ	3	3.8	80
Göttinger Liebesbriefe	Р	0	0.0	6
Gandersheimer Reimchronik	L	3	3.8	79
Henselynsboek, Lübeck, ca. 1498	L	0	0.0	6
Hermen Bote: Boek van veleme rade. Lübeck, ca. 1493	L	3	10.7	28
Historienbibel, Hs. L, 1470	Κ	0	0.0	83
Jacobus de Cessolis: Schachbuch, übers. v. Meister Stephan,	W	0	0.0	65
Lübeck				
Jacobus de Voragine: Passional, Lübeck, 1488	Κ	0	0.0	70
Jean de Mandevilles Reise in das gelobte Land (Lüneburg), (StaBi	W	0	0.0	73
mgf 204)				
Johannes Gerson: Monotessaron	Κ	0	0.0	42
Johannes Veghe: Predigten, ca. 1492	Κ	0	0.0	33
Jutisch Lowbok, Lübeck, 1485	R	0	0.0	132
Münster, Johannes Veghe, 3 Autographe	U	0	0.0	1
Magdeburger Prosa-Äsop, Magdeburg, ca. 1492	L	1	1.5	63
Prosa- und Versdichtungen, Medingen, 3. Drittel 15. Jh.	Κ	1	4.2	24
Psalter, Lübeck, ca. 1473–1475	Κ	1	1.6	64
Qvatuor Evangeliorum versio Saxonica, 2. H. 15. Jh.	Κ	1	0.5	213
Redentiner Osterspiel	L	0	0.0	49
Revaler Handwerkerschragen 1451–1500	U	1	1.4	70
Reynke de vos, Lübeck, 1498	L	0	0.0	92
Rostocker Liederbuch, 2. Hälfte des 15. Jahrhunderts	L	2	16.7	24
Saxo Grammaticus: De denske kroneke, Lübeck	W	1	0.0	159
Schweriner Stadtbuch, 9 ausgew. Einträge 1451–1500	V	2	10.0	20
Sebastian Brant: Dat narren schyp. Lübeck 1497	L	0	0.0	11
Speygel der leyen. Lübeck 1496	K	0	0.0	120
Sunte Birgitten openbaringe, Lübeck 1496	K	0	0.0	118
Thomas von Kempen: Dat myrren bundeken, Münster, 1480	K	0	0.0	107
Zeno, Helmstedter Sammelhs.	L	0	0.0	43

text	genre	# afinite	% afinite	total
1501–1550				
Agneta Willeken, Hamburg: Brief von 1535	Р	0	0.0	10
Amerigo Vespucci: Van den nygen insulen und landen, Magde- burg, 1506	W	1	2.5	40
Bamberger Halsgerichtsordnung 1507, mnd. Übersetzung, Druck, Rostock, 1510 [BC 474]	R	17	6.7	258
Boccaccio, Historie van veer Koepluden, Druck, Hamburg 1510 [BC 470]	L	0	0.0	37
Briefe der Brüder Gottschalk aus Goslar	Р	0	0.0	8
Burchard Waldis, De Parabell vam vorlorn Szohn, 1527 [BC 930]	L	3	3.2	95
De Schapherders Kalender, Ludwig Dietz, Rostock, 1523	W	1	1.0	100
Duisburg: Chronik Wassenberch, 1518	W	0	0.0	77
Emmericher Süsternbuch, 1503	Κ	0	0.0	110
Griseldis (nebst) Sigismunda und Guiscardus, Druck: Hamburg, 1502 [BC 362]	L	1	0.9	109
Halberstädter Bibel, 1522, 1. Mose Kap. 1 V. 1 bis Römer Kap. 7 V. 12	К	0	0.0	50
Hermen Bote: Braunschweiger Schichtbuch, 1514	W	0	0.0	35
Joh. Cincinnius (Krushaer), Van der Niderlage drier Legionen, Köln, 1539	K	0	0.0	7
Joh. Cincinnius, Liudger-Vita, 1512	К	4	7.7	52
Lübecker Bibel, sog. Bugenhagen-Bibel, Lübeck, 1533 [1534]	Κ	1	1.0	96
Lüneburg: Liber memorialis (augew. Einträge Kanzleiordnung 1501-1519)	V	25	15.8	158
Revaler Handwerkerschragen 1501–1550	U	0	0.0	20
Reynke de Vosz de olde, Druck: Rostock, 1539 [BC 1312]	L	16	12.9	124
1551–1600				
Bürgersprache der Stadt Rostock (1580)	R	0	0.0	3
Chronica der Stadt Bremen, Johann Renner, 1583	W	45	40.2	112
De Hörnen Sifrit, Dre kortwilige Historien, Hamburg, ca. 1560 [BC 1785]	L	2	9.1	22
De Rese Sigenot, Dre kortwilige Historien, Hamburg, ca. 1560 [BC 1785]	L	3	5.3	57
Köninck Laurin, Dre kortwilige Historien, Hamburg, ca. 1560 [BC 1785]	L	8	11.9	67
Seekarte, ost und west tho segelen, Hamburg, 1577 [BC 2157]	W	0	0.0	15
1601–1700				
Teweschen Hochtiedt, Hamburg, 1640 [BC 3284]	L	0	0.0	40
Johann Lauremberg, Druck von 1652 (HAB Wolfenbüttel, Sign. Lo 4314)	L	8	5.6	143

## B Models

# B.1 Model 1: ReN genres separately

	Data: model	MLG		
	REML criter	ion at convergence:	-8509.6	
Scaled residuals	:			
Min	1Q	Median	ЗQ	Max
-2.8000	-0.0880	-0.0357	-0.0043	7.4653
Random effects:				
	Groups	Name	Variance	Std.Dev.
	Text	(Intercept)	0.00135	0.03674
	Residual		0.01777	0.13330
Number of obs: 7	401, groups:	Text, 142		
Fixed effects:				
	Estimate	Std. Error	t-value	p-value
(Intercept)	-0.0009340	0.0273178 -0.034	0.973	
Time[1301-1350]	-0.0018029	0.0176926 -0.102	0.919	
Time[1351-1400]	0.0039418	0.0187370	0.210	0.833
Time[1401-1450]	0.0024002	0.0183723	0.131	0.896
Time[1451-1500]	0.0089224	0.0170300	0.524	0.600
Time[1501-1550]	0.0211681	0.0182139	1.162	0.245
Time[1551-1600]	0.1128657	0.0266852	4.230	<0.001***
Time[1601-1700]	0.0159247	0.0341989	0.466	0.641
region[EF]	-0.0129898	0.0318270	-0.408	0.683
region[LU]	-0.0022499	0.0209764	-0.107	0.915
region[NN]	0.0019819	0.0176719	0.112	0.911
region[NR]	-0.0143101	0.0254624	-0.562	0.574
region[OE]	0.0119341	0.0193424	0.617	0.537
region[OF]	-0.0023367	0.0192312	-0.122	0.903
region[SM]	-0.0130947	0.0270939	-0.483	0.629
region[WF]	0.0058609	0.0224396	0.261	0.794
texttype[L]	0.0004144	0.0145783	0.028	0.977
texttype[P]	-0.0033354	0.0290389	-0.115	0.909
texttype[R]	0.0021154	0.0172584	0.123	0.902
texttype[U]	-0.0031434	0.0179537	-0.175	0.861
texttype[V]	0.0468434	0.0233596	2.005	0.045*
texttype[W]	0.0163734	0.0151698	1.079	0.280

B.2 Model 2: ReN genres recoded into two groups (legal/non-legal)

E	•	1	L	
Formula: AC $\sim$ T	-	-	lext)	
	Data: model			
	REML criter	ion at converg	gence: -853	57.4
Scaled residuals	:			
Min	1Q	Median	3Q	Max
-2.8021	-0.0909	-0.0373	-0.0062	7.4654
Random effects:				
	Groups	Name	Variance	Std.Dev.
	Text	(Intercept)	0.001424	0.03774
	Residual	-	0.017763	0.13328
Number of obs: 7	401, groups:	Text, 142		
Fixed effects:				
	Estimate	Std. Error	t-value	p-value
(Intercept)	-0.0022690	0.0240274	-0.094	0.925
Time[1301-1350]	-0.0051818	0.0178599	-0.290	0.772
Time[1351-1400]	-0.0008062	0.0182594	-0.044	0.965
Time[1401-1450]	0.0005665	0.0175361	0.032	0.974
Time[1451-1500]	0.0060085	0.0162721	0.369	0.712
Time[1501-1550]	0.0221433	0.0178632	1.240	0.215
Time[1551-1600]	0.1133708	0.0270442	4.192	<0.001***
Time[1601-1700]	0.0093116	0.0341043	0.273	0.785
region[EF]	-0.0012774	0.0313025	-0.041	0.967
region[LU]	0.0049411	0.0199117	0.248	0.804
region[NN]	0.0081586	0.0174401	0.468	0.640
region[NR]	-0.0030915	0.0247141	-0.125	0.900
region[OE]	0.0204772	0.0188175	1.088	0.277
region[OF]	0.0046167	0.0185218	0.249	0.803
region[SM]	0.0052059	0.0264687	0.197	0.844
region[WF]	0.0106402	0.0206461	0.515	0.606
genre[RUV]	0.0013269	0.0117308	0.113	0.910

Anne Breitbarth Department of Linguistics Ghent University Blandijnberg 2 9000 Ghent Belgium ......

anne.breitbarth@ugent.be https://research.flw.ugent.be/en/anne.breitbarth