The historical development of the Dutch posture-verb progressive construction: including a comparison with German

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Chapter 4 Results and analysis

5.1 Overview

This chapter addresses the question of whether the expected changes proposed in Chapter 3 are confirmed on the basis of the corpus data. Through the analyses presented in this chapter, this research aims to provide a detailed description of how the posture-verb construction developed, thereby shedding light on how the replacement of the *en(de)* and *te* constructions took place and how the *te* construction emerged (cf. section 1.3.3.). This first section provides an overview of the data and presents general observations. In sections 4.2. to 4.4., each hypothesis presented in Chapter 3 is evaluated based on analysis of the data. The last section (4.5.) summarizes the results and draws conclusions concerning the grammaticalization of the Dutch posture-verb progressive construction.

As described in section 2.3, the data for this research comprise sentences collected from three corpora: the *Corpus Gysseling*, the *Corpus Middelnederlands*, and the *Corpus literair Nieuwnederlands*. Sentences meeting the criteria described in 2.2.3. were entered into the database. The database used in this research[1] yields 957 instances for *staan*, 790 for *zitten*, and 495 for *liggen*.[2] Table 1 and Figure 1 show the frequency distribution for each verb per century.[3]

[1] The database file ('database_nl.csv') is freely available in the DataverseNL repository (Okabe 2022).

[2] The general trend that *staan* has the most instances and *liggen* the fewest corresponds to the corpus research reported in Lemmens (2005) concerning the posture-verb progressive construction in Modern Dutch.

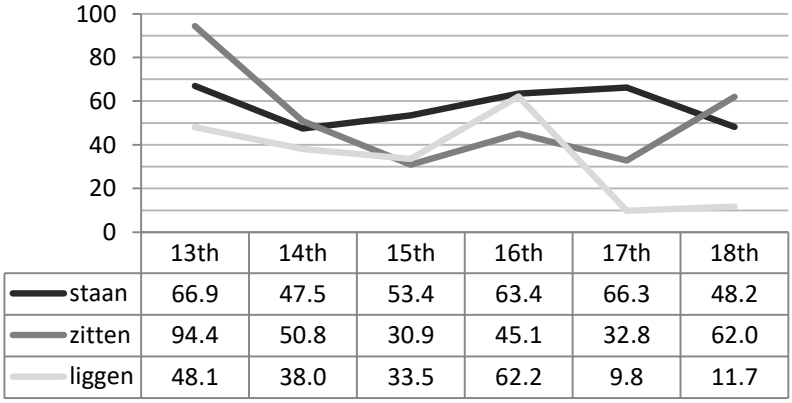
[3] One point which should be noted is that there are very few instances found in the first half of the 13th century (0 for *staan*, 3 for *zitten*, 1 for *liggen*), meaning that the data for the 13th century actually (almost) exclusively represent the latter half of the century.

Table 1. Absolute and relative frequencies of the verbs

		13th	14th	15th	16th	17th	18th	sum
staan	a.f.	39	211	282	52	216	157	957
	r.f.	66.93	47.46	53.43	63.40	66.28	48.17	
zitten	a.f.	55	226	163	37	107	202	790
	r.f.	94.4	50.8	30.9	45.1	32.8	62.0	
liggen	a.f.	28	169	177	51	32	38	495
	r.f.	48.1	38.0	33.5	62.2	9.8	11.7	

a.f. = absolute frequency (raw frequency)
r.f. = relative frequency (frequency per million words)

Figure 1. Relative frequencies per verb across time



In general, the relative frequencies hover around 30 to 70 instances per million words, with some outliers such as 94.4 for *zitten* in the 13th century, and 9.8 and 11.7 for *liggen* in the 17th and 18th centuries. It is evident that the frequencies of all three verbs fluctuate to a certain extent. *Staan* demonstrates the most stable pattern, with a relative frequency ranging from 47 to 67 cases per million words per century. The verb *zitten* shows a U-shaped trend, with a drop in frequency toward the middle of the period in question and an increase at the end. The relative frequencies for this verb range from approximately 30 to 50 per million words, with the exception of the 13th century (94.4 per million words) and the 18th century (62 per million words). As for *liggen*, the relative frequency remains largely stable in Middle Dutch (13th–15th century), followed by an increase in the 16th century and a drop in the 17th and 18th century.

There are various possible reasons for these fluctuations. For instance, a drop from the 13th to the 14th century, most clearly attested for *zitten*, may

reflect the difference in data source. As described in 2.3., the period studied is covered by different corpora, namely the *Corpus Gysseling* and the *Corpus Middelnederlands* for Middle Dutch and the *Corpus literair Nieuwnederlands* for Early Modern Dutch. This might lead to differences between the data from the 13th century and the 14th–16th century, and between the data from the 14th–16th century and the 17th–18th century. For example, the distinctions between these periods could underlie a drop in the frequency of *liggen* from the 16th to the 17th century. Possible influences of these unbalanced distributions will be further discussed in 4.5.3.

In line with findings in the literature, the instances in Middle Dutch already show indications of grammaticalization, such as the IPP effect (cf. sections 1.2.2. & 1.3.3.). Examples are provided in (1).

(1) a. Want hi te lange hier heeft **liggen quelen** [1868[4]]
'because he lay and suffered here too long'[5]
b. daer si omme hadde **sitten spinnen** [1308]
'where she sat around and span'

Example (1a) dates from the 14th century and (1b) from the 15th century; that is, both come from the Middle Dutch period. Both instances show the IPP effect, with the posture verbs in the infinitive. These examples indicate that the posture-verb construction was already quite grammaticalized halfway through the Middle Dutch period, as is suggested in the literature.[6]

Before embarking on the analysis, it is useful to make some general remarks on the approach used to analyze the data. The three posture verbs are distinguished within each analysis, as reflected in Table 1 and Figure 1,

[4] The number in square brackets after the example corresponds to the number of the instance in the database.

[5] In this chapter, the translations of the instances of the database are done based on the following rules: instances with *en(de)* or no connector are translated with coordinated verbs, regardless of their (possible) progressive readings. This is to avoid any bias in interpretation, and does not mean that a given instance is not or cannot be interpreted with a progressive meaning. Instances with *te* are translated as progressive sentences (i.e. 'be V-ing'), since this construction is thought to be exclusively progressive in meaning.

[6] In my data, the IPP effect accounts for 17 instances with *staan*, 18 with *zitten*, and 3 for *liggen*. Although some relevant cases are found in Middle Dutch, as shown in (1), most of the instances (34 of 38 instances) are from the Early Modern Dutch corpus (i.e. from the 17th and 18th centuries). Furthermore, it should be noted that all instances in my database that are in the perfect tense show the IPP effect.

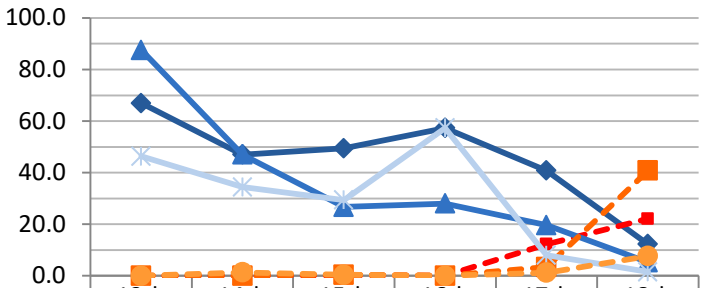
in order to provide insight into possible differences between the verbs. Furthermore, where appropriate, the data are additionally categorized according to the connectors used in each instance. Here, it is possible to distinguish two broad categories: instances with *ende* or *en*, and instances with *te*, respectively. This categorization reflects the distinction between the older type of construction with *en(de)* and the newer type with *te*, and accordingly whether the construction can form a coordinate structure. Additionally, where necessary for the analysis, the data are further subdivided into instances with *ende* and instances with *en*.

The connector *en(de)* derives from a coordinating conjunction and was available in this function throughout the period under investigation. This means that, unless the monoclausal structure is overtly marked, it is always possible to interpret a sentence with *en(de)* as coordinate instead of progressive (e.g. *hij* ***stond*** *daar* ***en wachtte*** *op haar* 'he was standing there, and he was waiting for her' rather than 'he was waiting there for her (in a standing posture)'). The newer type of construction, on the other hand, contains the infinitive marker *te* and is not open to a coordinate interpretation (e.g. *hij* ***zat te eten*** 'he is eating (in a sitting posture)' and not 'he is sitting, and he is eating'). Although this might seem to be a subtle difference, it has considerable influence, for example on whether individual conjuncts can be modified separately and whether both verbs can have an overtly realized subject. In other words, the independence of the conjuncts can be retained in the *en(de)* construction due to its originally coordinate structure, whereas this is not the case for the *te* construction with its exclusively monoclausal structure.

Moreover, the characteristics of the *en(de)* construction are expected to change diachronically. As outlined in 3.3., the development of the construction with *en(de)* can be characterized as changing from a biclausal structure to a monoclausal one, which is not always comparable with the consistently monoclausal structure of the construction with *te*. Furthermore, the progressive construction with *en(de)* with a monoclausal structure is expected to disappear as the *te* construction becomes dominant (cf. section 3.3.5.), at which point instances with *en(de)* revert to having a coordinate interpretation. Considering these developments specific to *en(de)*, for the majority of the analyses in this chapter the two connector types are treated separately.

The diachronic development of the two types of construction is presented below in Figure 2. The unbroken lines in blue are for the relative frequencies of instances with *en(de)* and the broken lines in orange are for those with *te*.

Figure 2. Relative frequencies of instances with the connector *en(de)* vs. *te*



	13th	14th	15th	16th	17th	18th
staan en(de)	66.9	47.0	49.5	57.3	40.8	12.3
staan te	0.0	0.0	0.2	0.0	12.3	22.1
zitten en(de)	87.5	47.0	26.7	28.0	19.6	5.2
zitten te	0.0	0.0	0.4	0.0	3.4	40.8
liggen en(de)	46.3	34.4	29.4	57.3	8.0	1.5
liggen te	0.0	1.3	0.4	0.0	1.2	7.7

As can be seen from Figure 2, the relative frequencies of *en(de)* with *staan* and *liggen* stay relatively stable till the 16th century, except for a peak for *staan* in the 13th century and one for *liggen* in the 16th century, both followed by a decrease in the 17th and 18th century. The frequency of *en(de)* with *zitten* shows a steady decrease from the 13th to 18th century. This reduction in frequency is statistically significant (Kendall's tau = -0.87, p = 0.02).[7] This means that the older type of construction with *zitten* was already becoming less frequent in Middle Dutch before it further decreased in frequency in Early Modern Dutch. For all the verbs, the relative frequencies of instances with *te* as a connector increase in the 17th and 18th centuries. For *zitten* in particular, the sharp rise in relative frequency (i.e. from 3.4 to 40.8 cases per million words) coincides with the upward trend observed in the general relative frequency of the verb in the 17th and 18th centuries, as reported in Figure 1. These frequency developments will be taken into consideration in the analysis of the data categorized by connector (i.e. by whether the instance contains *en(de)* or *te*; see also Figure 9 in 4.2.5. for how the constructions with *en(de)* and *te* develop respectively).

Additionally, it can be seen in Figure 2 that the *en(de)* construction prevailed for four centuries without competing with the *te* construction,

[7] Statistical measures used in the analyses are explained in 2.5.

while the *te* construction co-existed with the *en(de)* construction from the beginning of its rise. The co-existence of the two constructions could possibly be regarded as having facilitated the *te* construction's acquisition of a progressive meaning (cf. section 1.3.3.).[8]

In the following, the data are analyzed per hypothesis. The hypotheses for this research can be found in section 3.4., and are based on the grammaticalization path with five stages presented in 3.3. Most of the hypotheses are concerned with ratios of mutually exclusive categories (cf. section 3.4.). For example, Hypothesis 12 focuses on the ratio of instances with locative modification to instances without locative modification. This requires that all the instances in the database are categorized into two groups: one containing instances with locative modification and the other containing those without. In the same manner, most of the hypotheses are tested by splitting the data into instances displaying a feature related to grammaticalization and instances that do not display this feature.

Note that not all the hypotheses apply to the whole database; some are only related to certain instances with a specific feature. For example, for the investigation of object extraction (cf. Hypothesis 7), only instances that have both an object and *en(de)* as connector are relevant. Therefore, in this case, a subset of the data is made that only includes relevant cases. Furthermore, some hypotheses require extra data beyond the main database. The examination of the replacement of *en(de)* by *en* (cf. Hypothesis 3), for instance, requires us to take into consideration the development of *en(de)* as a coordinating conjunction. In this case, an extra database is formed to provide the necessary basis for the investigation. Whenever the hypothesis is only related to a subset of the data or requires extra data, the method of the analysis is described in the respective section.

When interpreting the results, it should be borne in mind that the corpora include rhyming texts from both Middle Dutch and Early Modern Dutch (cf. section 2.3.; see examples in (18) and (19) in 4.2.4., among others). Rhymes may, for example, affect the word order of a sentence by reordering elements into a non-canonical order (cf. footnote 5 in Chapter 2). Therefore,

[8] Other progressive constructions may have competed with the posture-verb construction in the history, including the construction with a copula and a present participle (i.e. [*zijn* V_{pptcp}], especially in Middle Dutch), the *aan het* construction (especially from Early Modern Dutch; cf. IJbema 2003, Geleyn & Colleman 2015), which also possibly affected each other (see section 1.2.2. for the modern language situation).

it is important to pay attention to the text genre the instance in question comes from.

Lastly, the statistical methods used in the analyses are Fisher's exact test and Kendall rank correlation, as presented in 2.5. Most of the hypotheses concern a proportion that is expected to increase or decrease; this is examined using Kendall rank correlation. Other hypotheses predict a combination of an increase and a decrease; this is analyzed using Fisher's exact test. Both types of statistical test were conducted using the programming language R, version 3.6.3 (R Core Team 2018).

5.2 4.2. Verbal complex

5.2.1 4.2.1. Hypothesis 1

The posture-verb construction is expected to show greater semantic cohesion during the period when the construction was pseudo-coordinate (cf. section 3.3.2.) compared to the other periods. Semantic cohesion would be reflected, on the one hand, in a larger number of different verb types in V^2 position and, on the other hand, in greater semantic compatibility between the posture verb and the second verb. The former expectation is formulated in Hypothesis 1 in this section and the latter in Hypothesis 2 in the next section (4.2.2.).

As for the variety of verb types, it is expected that the posture-verb construction had some verbs that frequently occurred in V^2 position and that formed conventionalized patterns while it was pseudo-coordinate; it is also expected that this stage was preceded and followed in time by a more variable co-occurrence pattern. To assess this, the hapax-token ratio (= the number of hapaxes divided by the total number of tokens, henceforth HTR) is investigated. As described in 3.4.1., a high HTR indicates wide lexical variety and a low HTR indicates limited lexical variety. Therefore, a low HTR is expected to be observed temporarily at the pseudo-coordinate stage of the construction. This expectation is formulated in Hypothesis 1.

Hypothesis 1
The hapax-token ratio of the second verb shows a temporary dip at Stage 2.

There are two important points to note here. First, the HTR is affected by dataset size, which means that the amount of data per period needs to be equal for cross-period comparison to be possible (cf. section 3.4.1.). As shown in 2.4., in the database for this research, the amount of data per period differs considerably and hence the dataset needs to be subdivided to yield subsets of a uniform size. Second, the data include various Bible translations, sometimes resulting in multiple occurrences of the same sentence, as shown in (2).

(2) a. ende hi **sat** metten dienren **ende waremde** hem biden viere. [1017]
b. ende hi **sat** metten dienaren **ende warmde** hem ten viere. [1088]
'and he sat with the servants and warmed himself by the fire'

The two instances in (2) are from two different texts, but they share the same sentence structure and lexicon. The repetitive nature of Bible translations can be attributed not only to the fact that the content is unchanging, but also to the existence of conventions in how the Bible is translated and transmitted. That is, new Bible translations often copy from earlier ones, with the result that the newer versions of the Bible are heavily influenced by older versions. As a result, different Bible translations may have sentences in common, as shown by (2a) and (2b). In view of this, such instances do not reveal much about the lexical diversity of the second verb in the posture-verb construction. Consequently, when the subsets of data are created, it is important to do so in a manner that does not include too many copied texts.

In order to test Hypothesis 1, the data were prepared in the following manner. First, three broad periods were delineated: the 13th and 14th centuries, the 15th and 16th centuries, and the 17th and 18th centuries. The analysis per century was abandoned for this hypothesis since the amount of data for the 13th and 16th centuries was significantly smaller than for the other centuries, which could affect the incidence rate of hapaxes (cf. Baayen 2008: 222-226). By aggregating the data per two centuries, each time period had sufficient data for a fruitful analysis. In addition, this approach made it feasible to further extract a subset of data from each period, enabling exclusion of repetitive Bible translations and adjustment to achieve a uniform dataset size. Once the recurring Bible translations had been excluded,[9] the smallest

[9] The book of the Bible that most frequently recurs in the database is the Gospel of Luke in the New Testament. This book is included in four Bible translations in the database, one from the 13th century and three from the 14th century. I selected one

dataset was that of the 13th and 14th centuries, with approximately 4.4 million tokens. Accordingly, similarly-sized datasets were formed for the 15th and 16th centuries and the 17th and 18th centuries by randomly selecting texts from the respective periods (cf. Appendix B).

Table 2 provides the numbers of types, tokens, hapaxes, and HTRs for each verb per time period. Figure 3 visualizes the HTRs per verb across the three time periods.

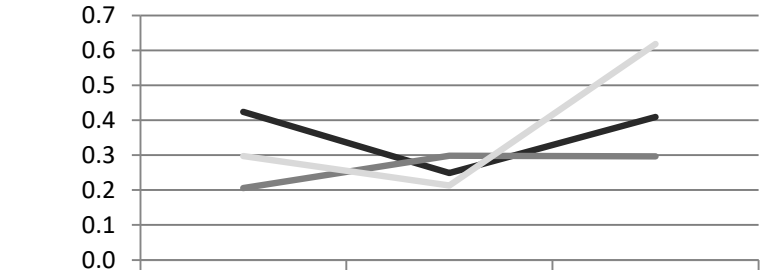
The HTRs of *staan* and *liggen* show the expected drop from the first to the second time period. For *staan*, the HTR is lower in the middle period, preceded and followed by a higher HTR in the first and the last periods. This indicates a more restricted lexical variety in the 15th and 16th centuries compared to the other two time periods. Pairwise comparisons using Fisher's exact test showed that the drop from the first to the middle time period and the increase from the middle to the last time period are both statistically significant ($p = 0.03$ for the former, and $p = 0.01$ for the latter).

Table 2. Total types, tokens, hapaxes, and HTRs per verb

		13th & 14th centuries	15th & 16th centuries	17th & 18th centuries
staan	type	73	125	149
	token	125	309	269
	hapax	53	77	110
	HTR	0.42	0.25	0.41
zitten	type	65	73	101
	token	199	181	206
	hapax	41	54	61
	HTR	0.21	0.30	0.30
liggen	type	74	77	37
	token	165	221	55
	hapax	49	47	34
	HTR	0.30	0.21	0.62

version of the translation at random (*het Luikse Diatessaron* from the 13th century) and excluded all the other versions from the dataset for this analysis.

Figure 3. HTRs per verb across the three time periods



	13th & 14th	15th & 16th	17th & 18th
staan	0.42	0.25	0.41
zitten	0.21	0.30	0.30
liggen	0.30	0.21	0.62

For *liggen*, as with *staan*, the HTRs decrease from the first time period to the middle and increase from the middle to the last; however, the increase (from 0.21 to 0.62) is more pronounced for *liggen* than for *staan*. Pairwise comparisons using Fisher's exact test revealed that the HTR of *liggen* in the last time period is significantly higher than that of the first and middle time periods ($p = 0.02$ with the first period, $p < 0.001$ with the middle period). This means that the 17th and 18th centuries show the widest lexical variety of second verbs occurring with *liggen*. For *zitten*, meanwhile, the HTRs do not change much over time (0.21–0.3), and remain particularly stable between the middle and the last period; this indicates that the lexical diversity of the second verb with *zitten* did not undergo dramatic changes.

In sum, the relatively low HTR for *staan* in the 15th and 16th centuries could indicate a limited lexical variety for the second verb and could be linked to the pseudo-coordinate status of the construction. Meanwhile, the HTRs for *zitten* show a rather stable pattern across time, which runs counter to the expectation expressed in Hypothesis 1. Lastly, the HTRs of *liggen* appear to show a distinction between Middle Dutch and Early Modern Dutch.

It is also informative to inspect the type-token ratios (henceforth TTRs; cf. section 3.4.1.). Here, somewhat different developments are observed than for the HTRs. For *staan* and *liggen*, the TTRs generally develop in the same manner as the HTRs; however, the HTRs of *zitten* show a steady increase (0.33 for the first time period, 0.4 for the middle, and 0.49 for the last). This growth probably reflects changes in the number and variety of verbs that frequently co-occur with *zitten*.

The specific verbs that co-occur most frequently with each posture verb (> 5% of instances) are presented in Table 3. The absolute frequency of each verb is indicated in parentheses, and the total number of tokens per posture verb per period is given after the slash (/).

Table 3. The most frequent co-occurring verbs per posture verb

	13th & 14th centuries	15th & 16th centuries	17th & 18th centuries
staan	*seggen* (12), *sien* (8), *wachten* (7) /125	*seggen* (34), *spreken* (22), *sien* (16) /309	*kijken* (36), *wachten* (15) /269
zitten	*eten* (63), *spreken* (19) /199	*eten* (61), *drinken* (12) /181	*lezen* (15), *schrijven* (11) /206
liggen	*slapen* (29), *bidden* (10), *sien* (10) /165	*slapen* (76), *sien* (12) /221	*slapen* (17) /55

As can be seen in Table 3, there are verbs which co-occur with more than one posture verb, of which *sien* 'to see, look' is the most common. However, in general, each posture verb shows a different pattern of co-occurring verbs. Notably, *zitten* in Middle Dutch (13th–15th century) and *liggen* in Middle and Early Modern Dutch (i.e. 13th–18th century) both show strong attachments to a single verb: *eten* 'to eat' and *slapen* 'to sleep', respectively. Meanwhile, *staan* does not show a strong orientation toward one verb. Instead, it co-occurs with various verb types, and each verb type accounts for a small share of the pie. This observation aligns with the higher HTRs and the corresponding wider lexical variety of *staan* compared the other posture verbs (cf. Table 2).[10]

Some examples of the verbs that frequently co-occur with *staan* are shown in (3).

(3) a. ende hi **stont** midden onder die iongheren **ende seide**: vrede si mit u. [50]0]
'and he stood among the disciples and said: "Peace be with you"'

b. hier **staat** men nou **en kykt** [633]
'one stands here and looks'

[10] The co-occurrence pattern found here, i.e. that *staan* shows the widest variety, followed by *zitten* and then by *liggen*, is also found for the posture-verb progressive construction in Modern Dutch, as reported by Lemmens (2005: 197; cf. section 1.2.2.).

c. Dar die iueden al sonder noet / **Stonden ende wachten** ihesus doet [2]
'there, all the Jews without distress stood and waited for Jesus' death'

In Middle Dutch, *staan* frequently co-occurs with verbs of saying, such as *seggen* 'to say' and *spreken* 'to speak'. These verbs were commonly used to introduce reported speech in the Middle Dutch texts, i.e. as a quotative, as in (3a). *Staan* also co-occurs frequently with verbs of visual perception throughout the period under investigation, such as *sien* and *kijken* 'to look', as shown in (3b). The fact that *wachten* 'to wait' appears alongside *staan* in Table 3 is of particular interest, since this is the verb that most frequently co-occurs with *staan* in the Modern Dutch posture-verb progressive construction (cf. section 1.3.3.). The frequent co-occurrence of *wachten*, illustrated in (3c), thus suggests that the 13th/14th-century construction has some commonalities with the modern construction.

The co-occurrence pattern of *zitten* changes a great deal from Middle Dutch to Early Modern Dutch. Examples from the 15th and 18th centuries are given in (4a) and (4b), respectively.

(4) a. Ende Benedap **sat ende at** mit sinen volc in der tenten [1329]
'and Benedap sat and ate with his people in the tent'
b. (…) de kamer, op welke ik u deezen **zit te schrijven** [1737]
'(…) the room where I am sitting and writing this to you'

From the 13th to the 16th century, *zitten* shows a very strong preference for *eten* (accounting for 124 of 380 tokens). Considering that *drinken* 'to drink' also emerges as a frequently co-occurring verb, *zitten* apparently combines well with eating-and-drinking situations, as illustrated in (4a). In Early Modern Dutch, *zitten* co-occurs more often with verbs describing activities that take place at a table or desk, such as *lezen* 'to read' and *schrijven* 'to write' (4b). This change is probably related to changes in the real world: reading and writing were not common practice in the Middle Dutch period, but had become increasingly popular toward the latter half of the period studied. In other words, the change seems to reflect extra-linguistic factors.

Liggen apparently has a strong connection to *slapen*, as illustrated in (5), which is unsurprising considering that sleeping is typically done lying down, and that the purpose of lying down is often to sleep.

(5) Mer si **liggen ende slapen** [1783]
'but they lie and sleep'

In Middle Dutch, *liggen* was also used to refer to a person staying in a certain location, not necessarily in a lying posture, as in (6) with a frequently co-occurring verb *sien*.

(6) ende galefier **lach** op sijn casteel **ende sach**se comen. [2145]
'and Galefier was at his castle and saw them come'

In this example, it is possible that *lach* 'lay' could refer literally to a lying posture; however, based on the context, it is more reasonable to interpret the meaning as being that the agent remained in a certain place for a while.

Although *liggen* is still strongly linked to the verb *slapen* in the 17th and 18th centuries, it also frequently occurs with other verbs, albeit only once or twice per verb. The co-occurrence with verbs other than *slapen* is illustrated by the examples in (7).

(7) a. Toen ik er uit het vaartuig op **lag te tuuren** [2218]
'when I was lying and looking at it from the vessel'
b. dat ik veeltyds in myn slaap overluid **lag te droomen** [2208]
'that I often lay dreaming very loudly in my sleep'

Both *tuuren* (= *turen* 'to look') and *droomen* (= *dromen* 'to dream') are hapaxes, i.e. one-off cases, in Early Modern Dutch. The frequent occurrence of hapaxes (accounting for 34 of 55 tokens) certainly underlies the higher HTR of *liggen* in the 17th and 18th centuries compared to the other periods, as shown in Table 2 and Figure 3.

The increase in hapaxes with *liggen* and the higher HTR in the 17th and 18th centuries could be explained by the decrease in the use of *liggen* with a general locative meaning (cf. (6)), given that 90% of such cases are found between the 13th and 16th centuries (67 of 74 such instances). This decrease may thus reflect the verb's stronger postural meaning in the 17th and 18th centuries, possibly resulting in a strong orientation toward *slapen* and just occasional co-occurrences with other verbs (cf. (7)). This situation would lead to a higher HTR in the later period, compared to the earlier period where the general locative meaning of *liggen* meant it was more easily combined with verbs other than *slapen*. In other words, the difference in HTR between Middle Dutch and Early Modern Dutch would reflect the (im)possibility of using *liggen* with a general locative meaning. In turn, this

means that the HTRs of *liggen* may not indicate any stages of grammaticalization, but may instead reflect the semantic development of the verb.[11]

Some of the verbs that frequently co-occur with particular posture verbs, such as *slapen* with *liggen*, can be considered cases of natural coordination (cf. section 3.3.1.). These verbs not only combine well with the semantics of their associated posture verbs, but also seem to facilitate a composite interpretation of the verb sequence. The frequent co-occurrences with these verbs, therefore, could indicate semantic cohesion of the posture-verb construction. At the same time, it should be noted that natural coordination is a characteristic that is already present when the construction is still at the coordinate stage. Hence, there are frequent and possibly conventionalized co-occurrence patterns observed in the data that should be viewed as not only related to grammaticalization but also related to verbal coordination with posture verbs in general.

In sum, the analysis of the HTR suggests that *staan* goes through a phase (15th and 16th centuries) where the HTR is relatively low, suggesting therefore that the lexical diversity of the second verb was limited during this time period. This period may correspond to Stage 2 in the grammaticalization path; that is, when the construction was pseudo-coordinate and semantic cohesion between the verbs was important, as outlined in 3.3.2. The HTR of *zitten*, on the other hand, stays rather stable, indicating that the lexical diversity of the second verb remained basically unchanged; the frequently co-occurring verbs do change over time, but this probably reflects extra-linguistic developments. The HTR of *liggen* shows a similar pattern to that of *staan*, but this may reflect the semantic development of the verb and not necessarily the grammaticalization of the posture-verb construction. Lastly, there is some overlap in the verbs that frequently co-occur with the three posture verbs; however, there are also verbs that frequently co-occur with only one of the posture verbs (such as *eten* with *zitten* and *slapen* with *liggen*), which could be regarded as cases of natural coordination.

[11] Note that the reduction in the general locative use of *liggen* could also be linked to the relatively low overall frequencies of *liggen* in Early Modern Dutch compared to those of Middle Dutch (cf. Table 1 in 4.1.).

5.2.2 4.2.2. Hypothesis 2

In the course of grammaticalization, not only the lexical diversity (as discussed in the previous section) but also the semantic variety of the second verb is hypothesized to change. During the pseudo-coordinate stage (i.e. Stage 2 in Table 1 in 3.3.), the construction is expected to have been relatively strict in terms of semantic cohesion of the verbs and to have co-occurred more frequently with verbs that are semantically compatible with posture verbs. This would be evidenced by a temporary period of strong semantic compatibility between the posture verb and second verb (cf. section 3.3.2.). This expectation is formulated as Hypothesis 2.

> Hypothesis 2
> The proportion of second verbs that are semantically compatible with posture verbs shows a temporary increase at Stage 2.

As discussed in 3.4.1, semantic cohesion is assessed in terms of four features: (i) dynamicity, (ii) telicity, (iii) compatibility with the posture denoted by the posture verb, and (iv) movement.[12] Specifically, the verbs that match best with the semantics of posture verbs are dynamic as well as atelic, describe an event compatible with the posture indicated by the posture verb, and involve no movement from one point to another. See (8a) and (b) for examples with a semantically compatible and incompatible verb, respectively.

(8) a. Na den etene **saten** si **ende spraken** / Weder ende vort van menegen saken [1064]
'after the meal, they sat and spoke back and forth about many things'
b. Dat ic hier **ligh en wroet** om sulcken cleynen huer [2177]
'that I lie here and work hard for such a small rent'

[12] The advantage of analyzing the data using these semantic features and not others (e.g. cognition verbs, verbs of saying) is that these features are relevant to aspect. For example, the verb *spreken* used as a quotative verb (e.g. *Paulus **stont** onder hem ghemeene* / ***Ende sprac**: Ghi heren van Athene!* [2025] 'Paulus stood together with them and said: "You men from Athens!"') can be regarded as telic, while it is atelic with a prepositional object as in (8a) in this section. The approach adopted here enables us to capture this difference and to provide detailed characterizations of the verbs in each context.

In (8a), *spraken* 'spoke' illustrates an atelic event of indeterminate duration that can happen in a sitting posture without change of place. The more grammaticalized the construction is, the more frequently we expect to find instances with less compatible features (i.e. stative, telic, incompatible with the posture, involving movement), as in (8b). In this example, the verb *wroeten* means 'to work hard', which is usually incompatible with a lying posture (cf. WNT headword *liggen*: 9).[13]

In the following, the results are first reported and described per verb, and then per semantic feature. Taking *staan* first, Table 4 presents the number of instances for each semantic feature and Figure 4 visualizes the corresponding proportions across the centuries.[14]

It is evident that, in general, the semantic features that are more compatible with the semantics of the posture verb (marked as '+' in the table) are vastly more frequent than the less compatible or incompatible features (marked as '-' in the table). In particular, the second verb is strongly restricted in terms of postural compatibility and movement throughout the period studied.

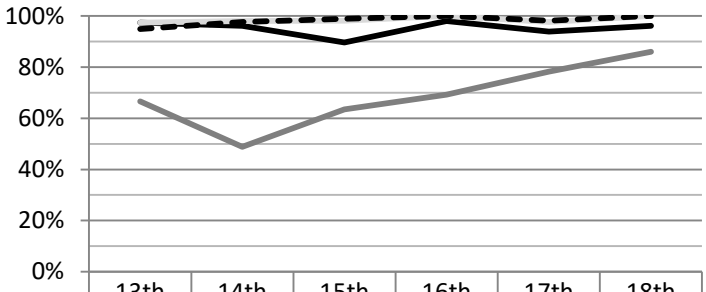
Table 4. The distribution per semantic feature for second verbs with *staan*

		13th	14th	15th	16th	17th	18th	sum
dynamic	+	38	203	253	51	203	151	899
	-	1	8	29	1	13	6	58
atelic	+	26	103	179	36	169	135	648
	-	13	108	103	16	47	22	309
postural compatibility	+	38	207	277	52	211	157	942
	-	1	4	5	0	5	0	15
no movement	+	37	206	279	52	212	157	943
	-	2	5	3	0	4	0	14

[13] It could be the case that the general locative meaning of *liggen* (cf. (6)) facilitated the possibility to combine with a semantically incompatible second verb. At the same time, it should be remembered that the general locative use of *liggen* was not very common in the Early Modern Dutch period, where the example in (8b) comes from.

[14] Note that the distribution is not necessarily characteristic of the posture-verb construction. Since we have no standard of comparison, this distribution may be typical of the entire verb vocabulary.

Figure 4. Semantic compatibility of second verbs with *staan*



	13th	14th	15th	16th	17th	18th
dynamic	97.4%	96.2%	89.7%	98.1%	94.0%	96.2%
atelic	66.7%	48.8%	63.5%	69.2%	78.2%	86.0%
postural compatibility	97.4%	98.1%	98.2%	100.0%	97.7%	100.0%
no movement	94.9%	97.6%	98.9%	100.0%	98.2%	100.0%

In terms of dynamicity, there are more than 50 instances with the incompatible semantic feature (i.e. not dynamic), as illustrated in (9).

(9) [s]i **stonden** te gader […] **ende hadden** enen bliden Paesschen [4362]
'they stood together […] and had a cheerful Easter'.

In this example, the second verb *hadden* 'had' is a stative verb and denotes a temporal state of enjoying. As described in 3.3.1., the coordination with a stage-level predicate expressing a temporal state seems to be theoretically possible but marginally acceptable with posture verbs. Indeed, this type of co-occurrence pattern, with a sequence of a posture verb and a stative second verb, only accounts for 2–10% of the total number of instances, and no diachronic development can be observed.

Examples of verbs with the more compatible semantic features are given in (10).

(10) a. hi **staet** agter di **ende siet** ter vensteren **ute** [105]
'he stands behind you and looks out through the window'
b. en daar gaa [*sic*] je **staan huilen** als een kind! [883]
'and there you go standing and crying like a child!'

In both examples, the second verb, i.e. *siet … ute* (< *utesien*[15] 'to look out') in (10a) and *huilen* 'cry' in (10b), describes an activity compatible with the standing posture and implies no change of place.

The data for telicity show a somewhat different picture. On average, about one-third of the instances (32%) take a telic second verb, as illustrated in (11).

(11) Mozes zuster **stond** daar ook / **En riep** al: O wonder! [685]
'Moses' sister also stood there and shouted "Oh wonder!"'

In this example, the utterance *O wonder!* indicates an endpoint for the shouting activity (i.e. *riep* 'shouted'). The proportions of atelic second verbs are especially low in the 14th century (48.8%), with a gradual increase toward the 18th century (86%). Using Fisher's exact test, it was established that the differences in frequency between the 14th and the 17th and 18th centuries are statistically significant ($p < 0.001$ for all cases).

Turning now to *zitten*, Table 5 presents the frequencies for each semantic feature and Figure 5 visualizes the corresponding ratios across the centuries.

The general trend for *zitten* is comparable with that for *staan*: the second verb almost always describes an activity that is compatible with the sitting posture and does not include change of place, as illustrated by the examples in (12).

(12) a. Up enen dach **sat** Jhesus **ende leerde** in ene synagoge. [1220]
'one day, Jesus sat and taught in a synagogue'
b. Dan doe si thuus **sat ende span** [1215]
'then, when she sat home and span'

As with *staan*, the proportions of atelic second verbs are smaller compared to the other semantic features. Still, the proportions do not develop significantly over time, and the average proportion of verbs that are atelic (83.8%) is larger than that for *staan* (67.7%). See (13) for an example where *zitten* combines with a telic verb, *suchtede* 'sighed'.

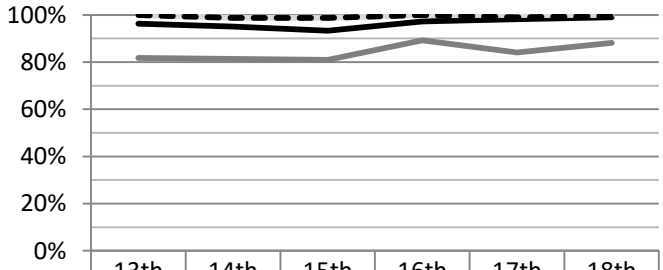
(13) Bruyn die **sat ende suchtede** ende steende [1305]
'Bruin (the Bear) sat and sighed and moaned'

[15] The expression after '<' shows the dictionary form of the preceding word.

Table 5. The distribution per semantic feature for second verbs with *zitten*

		13th	14th	15th	16th	17th	18th	sum
dynamic	+	53	215	152	36	105	200	761
	-	2	11	11	1	2	2	29
atelic	+	45	184	132	33	90	178	662
	-	10	42	31	4	17	24	128
postural compatibility	+	55	223	161	37	107	202	785
	-	0	3	2	0	0	0	5
no movement	+	55	223	161	37	106	201	783
	-	0	3	2	0	1	1	7

Figure 5. Semantic compatibility of second verbs with *zitten*



	13th	14th	15th	16th	17th	18th
dynamic	96.4%	95.1%	93.3%	97.3%	98.1%	99.0%
atelic	81.8%	81.4%	81.0%	89.2%	84.1%	88.1%
postural compatibility	100.0%	98.7%	98.8%	100.0%	100.0%	100.0%
no movement	100.0%	98.7%	98.8%	100.0%	99.1%	99.5%

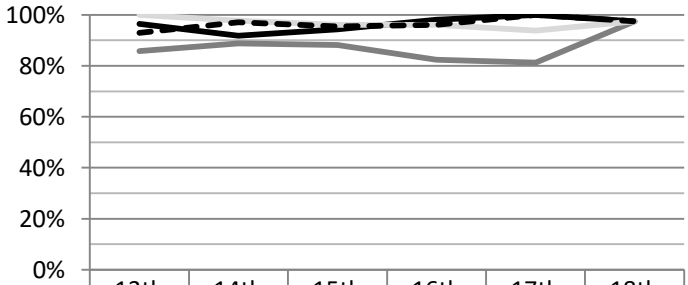
With all the semantic features, the proportions of instances with compatible semantic features remain above 81% throughout the period studied, which suggests that there is no diachronic development.

Turning lastly to *liggen*, Table 6 provides the numbers for each semantic feature and Figure 6 visualizes the diachronic developments.

Table 6. The distribution per semantic feature for second verbs with *liggen*

		13th	14th	15th	16th	17th	18th	sum
dynamic	+	27	155	167	50	32	37	468
	-	1	14	10	1	0	1	27
atelic	+	24	150	156	42	26	37	435
	-	4	19	21	9	6	1	60
postural compatibility	+	28	165	170	49	30	37	479
	-	0	4	7	2	2	1	16
no movement	+	26	164	169	49	32	37	477
	-	2	5	8	2	0	1	18

Figure 6. Semantic compatibility of second verbs with *liggen*



	13th	14th	15th	16th	17th	18th
dynamic	96.4%	91.7%	94.4%	98.0%	100.0%	97.4%
atelic	85.7%	88.8%	88.1%	82.4%	81.3%	97.4%
postural compatibility	100.0%	97.6%	96.1%	96.1%	93.8%	97.4%
no movement	92.9%	97.0%	95.5%	96.1%	100.0%	97.4%

According to the table and the graph, *liggen* presents a similar pattern to *zitten*. Similar to the other posture verbs, the second verb is generally a dynamic verb, and the event it expresses is mostly compatible with the postural meaning[16] and does not include change of place. See (14) for

[16] In 4.2.1., it was pointed out that *liggen* can be used as a general locative verb without referring to the lying posture. In annotation, whether *liggen* is used with or without a postural meaning did not affect the judgment of the compatibility with the posture. This is because the postural compatibility was always decided based on whether the event described by the second verb is compatible with the lying posture, regardless of how *liggen* can be interpreted.

examples involving second verbs with the more compatible semantic features.

(14) a. Hy **lach en huylde** als een hont [2075]
'he lay and cried like a dog'
b. wanneer iemant in het gras **ligt te slaapen** [2222]
'when someone lies sleeping in the grass'

Both *huylde* 'cried' in (14a) and *slaapen* (= *slapen*) in (14b) can be analyzed as atelic, dynamic verbs, describing an event without movement. *Slaapen* in (14b) in particular aligns well with the postural meaning of *liggen* and occurs frequently in V^2 position, as described in the previous section (4.2.1.).

In terms of telicity, the proportion of atelic second verbs is slightly lower than the proportions for the other semantic features (as seen in Figure 6). However, it is on average higher than the proportions of atelic verbs with the other posture verbs (87.9%). See (15) for an example where *liggen* combines with a telic verb, *schoot* 'shot'.

(15) Ick **lagh** in mijn gebedt, **en schoot** als uit den droom. [2192]
'I lay in my prayer and suddenly awoke as if from a dream'

The percentage of instances where the second verb shows compatible semantic features remains above 81% across the board, suggesting an absence of diachronic development.

As is evident from Tables 4–6, the second verb is mostly semantically compatible with posture verbs throughout the period under study, and instances showing the incompatible semantic features are infrequent. Postural compatibility and movement are the most restricted features, in the sense that the second verb only very rarely shows postural incompatibility or involves movement from one point to another (0–7.1%). Dynamicity is less restricted, but instances with the more compatible feature dominate (89.9–100% of second verbs are dynamic). None of these three semantic features show diachronic developments. Turning to telicity, atelic verbs are generally more preferred than telic verbs, accounting for 68–88% of the instances for each verb on average; however, these proportions are lower than those of the other semantic features. In other words, in terms of semantic compatibility, telicity seems to play a more minor role compared to the other semantic features. As for diachronic development, for *zitten* and *liggen* the proportions of atelic verbs remain high throughout the period

under study; on the other hand, for *staan* the proportion increases from about 50% to 86% from the 14th to the 18th century.

This increase in the proportion of atelic verbs with *staan* seems to be linked to the frequent occurrence of verbs of saying in the earlier periods. As shown in the analysis of the HTRs (cf. Table 3), *staan* frequently co-occurs with such verbs in the 13th–16th century. Illustrative examples are provided in (16).

(16) a. ende hi **stont** midden onder die iongheren **ende seide**: vrede si mit u. [500]
'and he stood among the apostles and said, "Peace be with you"' (= (3a))
b. Mozes zuster **stond** daar ook / **En riep** al: O wonder! [685]
'Moses' sister also stood there and shouted, "Oh wonder!"'
(= (11))

Example (16a) includes *seide* 'said', which is one of the verbs typically used as a quotative, and (16b) includes *riep* 'shouted'; both of these are followed by an utterance, which could be regarded as temporally bounded and hence as a telic activity. Judging from the variation of the second verb (cf. Table 3), this quotative use of verbs of saying to express a telic activity was common in Middle Dutch (13th–16th century) but not in Early Modern Dutch (17th and 18th centuries). Therefore, the decrease in frequency of verbs of saying (and hence quotatives) seems to underlie the decreased co-occurrence of telic second verbs with *staan*.

In terms of the relatively limited role played by telicity in general, the results align with the semantic characteristics of the Modern Dutch posture-verb progressive construction. As described in 1.2.2., both telic and atelic verbs are accepted as the second verb in the modern construction, although atelic verbs are preferred. Moreover, the scene-setting function of posture verbs may also have an influence, in the sense that when posture verbs are used as lexical verbs in natural coordination, they can set an atelic timeframe for the described event (cf. section 3.3.1.). In this way, the verb sequence may acquire an atelic interpretation regardless of the aspectual profile of the second verb. [17] These two points could underlie the relatively high proportions of telic verbs with the posture-verb construction throughout the period studied.

[17] Note that this does not mean that the second verb always automatically receives an atelic interpretation (cf. (15)).

In summary, the analysis of the semantic properties of the second verb suggests that the construction did not change greatly in this respect; semantic cohesion is evident throughout the entire period. This conclusion is based on the observation that no particular period of increased semantic cohesion is observed in my data; in other words, there is no evidence of a temporary period of strong semantic compatibility between the verbs (cf. Hypothesis 2). Instead, the semantic compatibility of the verbs appears to have been important for the posture-verb construction throughout the period studied.

The patterns observed in the data therefore do not seem to reflect increasing grammaticalization, but rather reflect the general characteristics of coordination and the fact that the postural meaning of the construction is not fully bleached, as is also observed for the Modern Dutch posture-verb progressive construction. As presented in 3.3.1., coordination requires the two conjuncts to be semantically and/or pragmatically comparable, especially in the case of natural coordination. This characteristic of natural coordination seems to have imposed semantic restrictions on the construction with *en(de)*. For the *te* construction, the lack of full semantic bleaching in Modern Dutch seems to have been of influence: as described in 1.2.2., the modern construction still retains a link to the postural meaning of the posture verbs, which in turn places some semantic restrictions on complement verbs. In sum, it is plausible that these aspects give rise to semantic restrictions on the second verb throughout the grammaticalization path, and that this is reflected in the data as a consistently high proportion of instances where the second verb displays semantically compatible features.

5.2.3 4.2.3. Hypothesis 3

As grammaticalization proceeds, the connector *ende* is expected to occur more frequently in its phonologically reduced form *en* (cf. section 3.3.3.), as illustrated in (17).

(17) Al op een beddeken soete ende sachte / **Liggen <u>en</u> slapen** twee ghelieve [2119]
'on a comfortable and soft bed, two lovers lie and sleep'

In (17), the coordinating conjunction between the adjectives *soete* 'comfortable' and *sachte* 'soft' is realized as *ende*, whereas the connector between *liggen* and *slapen* is realized as *en*.

As described in 3.4.1., not only does the connector in the posture-verb construction undergo a change from *ende* to *en*, but there is also a lexical development of the coordinating conjunction *ende* to *en*. It is important to investigate the timing of both these developments. If the change from *ende* to *en* is found to begin earlier in the posture-verb construction than in other contexts, this could indicate that the change is internal to the construction; alternatively, if the change of *ende* to *en* in the posture-verb construction is found to occur simultaneously with or later than other contexts, this would suggest that the change observed in the posture-verb construction instead falls under the general development of the coordinating conjunction. Accordingly, the hypothesis is formulated as follows:

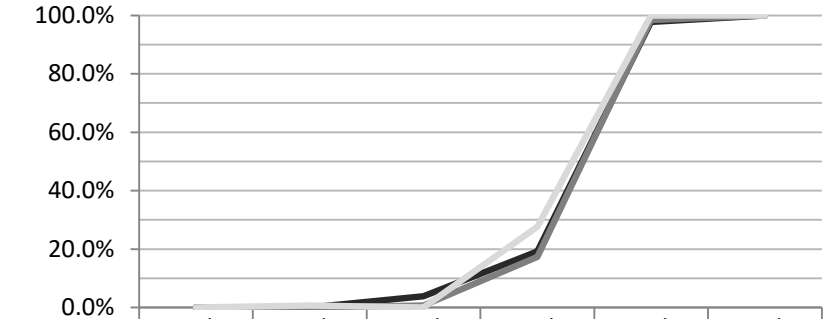
> Hypothesis 3
> The ratio of *en* (versus *ende*) as a connector increases with increasing grammaticalization. This increase precedes the general development of the coordinating conjunction from *ende* to *en*.

In what follows, a general overview of the distribution of the connector *ende* and *en* in the database is first presented. Since the hypothesis is not concerned with instances that have either *te* as connector or no connector at all, a subset of the data was extracted containing only the instances with either *ende* or *en* as a connector. This subset comprises 729 instances for *staan*, 505 for *zitten*, and 406 for *liggen*. The distribution of the instances per connector is presented below in Table 7, and Figure 7 visualizes the ratio of *en* (versus *ende*) over time.

Table 7. The distribution of instances with either *ende* or *en* as a connector

		13th	14th	15th	16th	17th	18th	sum
staan	*ende*	39	209	251	38	3	0	540
	en	0	0	10	9	130	40	189
zitten	*ende*	51	209	140	19	1	0	420
	en	0	0	1	4	63	17	85
liggen	*ende*	27	152	148	34	0	0	361
	en	0	1	0	13	26	5	45

Figure 7. The distribution of instances with *en* versus *ende* as connector



	13th	14th	15th	16th	17th	18th
staan	0.0%	0.0%	3.8%	19.1%	97.7%	100.0%
zitten	0.0%	0.0%	0.7%	17.4%	98.4%	100.0%
liggen	0.0%	0.7%	0.0%	27.7%	100.0%	100.0%

The table clearly shows that the frequency of *ende* reduces over time, while that of *en* grows mostly from the 16th century. As evident from the table and the figure, the tipping point is between the 16th and the 17th century, where *en* starts to surpass *ende*. The table also shows a general decrease in the total number of instances with *ende* or *en* in the 18th century, as the construction further develops to take *te* as a connector in the last stage (cf. Figure 2).[18]

To verify whether the replacement of *ende* by *en* as a connector in the posture-verb construction precedes the change in form of the coordinating conjunction, it was first necessary to conduct an analysis to establish the development of the coordinating conjunction. To make this feasible, I opted to take a representative sample of instances of *ende* and *en* covering the period studied. One text was chosen per 50 years for each text genre.[19] For

[18] At the same time, instances with *en* never entirely vanish, since *en* can be used as a coordinating conjunction, which can also appear in the database.

[19] Two text genres were distinguished for Middle Dutch, namely prose and verse, and three for Early Modern Dutch, namely non-fiction, drama and prose. This categorization is based on what the corpora provide (cf. section 2.3.), but the category 'prose and verse' for Middle Dutch was excluded. The exclusion is due to the temporally limited distribution of the texts included in this category (cf. Table 3 in section 2.4.). See Appendix C for the list of the names of the texts used. The timeframe of 50 years is used with the aim of distributing the publication years of the texts as much as possible. The results are integrated into the timeframe per century for the sake of comparison.

every text, the first 100 occurrences of each of the forms *ende* and *en* were assessed for whether the word was functioning as a coordinating conjunction. *En* was, for example, a common negator in Middle Dutch, as shown as (18), which accounts for most of the occurrences of *en* in this period.

(18) Hi sat ende dacht, ende **en** at niet [1298]
'he sat and thought and did not eat'

Such instances are not included in the comparison. Since the intention of the analysis is to compare cases in the posture-verb construction and elsewhere, the instances which are already included in the database as a (possible) case of the posture-verb construction were also excluded from the sampling.

Table 8 presents the number of times that *en* and *ende* are used with a coordinating function in the sample, separated by century. Since the first instance of *en* as a connector is from the 14th century, the sample covers data from the 14th century and later. Note that the frequency of *ende* decreases diachronically, and it was not always possible to find 100 cases of this word form in the 17th and 18th centuries.

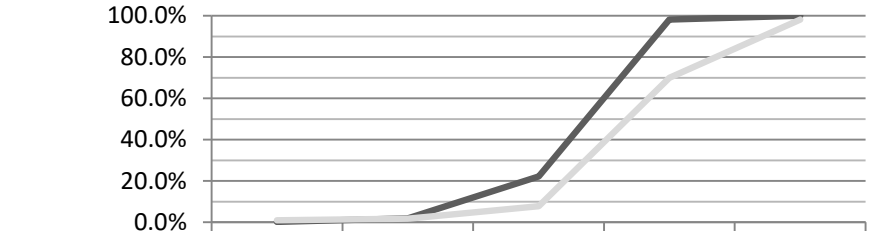
Table 8. Frequency of the coordinating conjunction in the form of *ende* or *en*

	14th	15th	16th	17th	18th
ende	398	399	400	218	11
en	4	7	34	509	599

As can be seen in the table, there is a clear reduction of frequency for *ende* from 398 to 11 instances, contrary to *en*, which shows an increase from 4 to 599 instances.

Figure 8 below compares the proportion of instances of *en* (versus *ende*) used as a connector (in the posture-verb construction, cf. Table 7) and used as a coordinating conjunction (outside the posture-verb construction, cf. Table 8).

Figure 8. Proportion of *en* (versus *ende*) as connector and as coordinating conjunction



	14th	15th	16th	17th	18th
connector	0.2%	2.0%	22.2%	98.2%	100.0%
coordinating conjunction	1.0%	1.7%	7.8%	70.0%	98.2%

As can be observed from the graph, *en* as a coordinating conjunction is also observed from the 14th century; this suggests that the emergence of *en* as a connector does not precede that of *en* as a coordinating conjunction. At the same time, the proportion of *en* as a connector increases faster than that of *en* as a coordinating conjunction. In the 17th century, the connector is almost always realized as *en* (98.2%) rather than *ende*, while the coordinating conjunction reaches a comparable percentage (98.2%) a century later, i.e. in the 18th century. In short, the figures seem to suggest that the replacement of *ende* by *en* proceeded faster for the connector than for the coordinating conjunction.

Reflecting on the hypothesis, the simultaneous onsets of *en* as a connector and as a coordinating conjunction could indicate that the replacement of the connector *ende* by *en* is not internal to the posture-verb construction. At the same time, the faster phonological reduction of the connector may suggest that the constructional environment facilitated the change.

We may speculate as to why the construction might be a conducive environment for the reduction of *ende*. For example, in a typical pseudo-coordinate structure with monosyllabic verb pairs, such as *lag en sliep* 'lay and slept' and *zat en at* 'sat and ate', the combination of stressed verbs and an unstressed connector leads to the sequence [stressed – unstressed – stressed]. This might facilitate phonological reduction of the connector, especially in rhyming texts (cf. footnote 26 in Chapter 1). At the monoclausal stage of the construction, the function of the connector as a verb introducer (i.e. a function word) might have further facilitated reduction. Alternatively,

regional differences could have played a role: for example, perhaps the construction mainly developed in a region where *ende* was reduced to *en* earlier than other regions. In short, there are various possible reasons for why *ende* was replaced by *en* faster as a connector than as a coordinating conjunction.

In conclusion, the replacement of *ende* with *en* in the posture-verb progressive construction cannot be seen as a construction-internal development. On the other hand, it seems that the replacement progressed faster for the connector than for the coordinating conjunction, possibly indicating that the construction facilitated the development from *ende* to *en*.

5.2.4 4.2.4. Hypothesis 4

As the posture-verb construction became more grammaticalized and was interpreted as having a monoclausal structure, *en(de)* lost its original status as a coordinating conjunction. One of the possible consequences of this development, based on the literature, is that the conjunction developed into an infinitive marker that combined with a second verb in the infinitive, similar to the infinitive marker *te* that would later come to replace it (cf. section 1.3.3.). In the resulting structure [PV_{fin} *en(de)* V^2_{inf}], a disagreement in inflection is observed between the finite posture verb and the infinite second verb.

The disagreement in inflection in the construction with *en(de)* is expected to emerge in the latter phase of its development (cf. section 3.3.3.) and increase in proportion as grammaticalization proceeds. This expected finding is summarized by Hypothesis 4.

> Hypothesis 4
> The proportion of instances of the type [PV_{fin} *en(de)* V^2_{inf}] increases with increasing grammaticalization.

The database for this research contains a very limited number of instances that possibly show this phenomenon (one for *staan*, one for *zitten*, four for *liggen*). Three of the six attested instances occur in Middle Dutch with *liggen*; these are presented here in (19). Example (19a) is from the 14th century and (19b) is from the 15th century (note that (19a) includes two instances, one with *laghen ende vaen* lit. 'lay and catch' and the other with *laghen ende eten* lit. 'lay and eat').

(19) a. Want si **laghen ende vaen** / Die dulle vissce **ende eten** saen [1887, 1888]
'because they lay and caught the foolish fish and ate quickly'
b. so **laghen** si op hoor eten **en brassen** mit gulsicheit [2100]
'they lay on their meal and banqueted with greediness'

The fact that the two second verbs both appear in the infinitive in (19a) suggests that the infinitive form is chosen intentionally, but the fact that they share one posture verb also indicates that they do not constitute independent choices. Of these two examples, only (19a) rhymes (in *–aen*). All of the presented instances take a plural subject *si* 'they', which means that the second verbs can theoretically also be interpreted as being in the present tense plural form, which formally overlaps with the infinitive. However, there is no compelling reason why the second verbs would be in the present tense while the associated posture verbs are in the past tense. Therefore, it seems more plausible to interpret the second verbs as being in the infinitive.

The other three instances appear in Early Modern Dutch texts, and are presented here as (20). All three are rhyming.

(20) a. Om dat myn oudt Oóm daar so langhe **stont en drenten** [744][20]
'because my old uncle stood there for a long time and tarried'
b. op 't outaar, daar 't vyer op **lach en branden** [2201]
'on the altar, on which the fire lay and burned'
c. 'tlijckt aers of ghy **sat en suften** [1532]
'it looks otherwise as if you sat and sighed'

In these examples, the posture verb is in the singular form in the past tense, while the second verb can be interpreted as having either the plural present tense form or the infinitive form. The former option is highly unlikely considering that the coordinated verbs would then disagree in both tense and number with the posture verb, and in number with the subject. Meanwhile, if we interpret the second verb as an infinitive, there is disagreement in finiteness between the posture and the second verb. Alternatively, it is possible to analyze the second verb as a spelling variation of the past tense plural form, for example interpreting *suften* (= *zuchten* 'to sigh') in (20c) as a variant of *sufften* (= *zuchtten*). In this case, there would be a number disagreement between the posture verb and the second verb.

[20] The WNT (headword *drentelen* 'to tarry') points out that the form *drenten* is a case of back-formation from *drentelen*, probably for the sake of rhyme.

The rare occurrence of such instances—where a possibly infinitive second verb combines with a finite posture verb—leads us to assume that this phenomenon does not represent a systematic development of the posture-verb construction. Instead, these instances might represent cross-contaminations between the old and new type of construction. In other words, the structure of the old type of construction with the [*en(de)* V^{2}_{fin}] phrase may have been influenced by the new type of construction with the [*te* V^{2}_{inf}] phrase, possibly resulting in the mixed phenomenon of the connector *en(de)* with an infinitive second verb (i.e. [*en(de)* V^{2}_{inf}]). On the other hand, instances with the [*en(de)* V^{2}_{inf}] phrase are not restricted to the latter half of the period studied (cf. (20)); that is, they are attested earlier than the period when the new type of construction with *te* gained popularity according to the literature. Another possible account is that the examples showing a [PV_{fin} *en(de)* V^{2}_{inf}] structure derive from specific regions where this phenomenon was common, as in modern West Flemish dialects (cf. section 1.2.3.). The distribution of the instances in my database, however, is too sporadic to support further discussion of distribution per period or region.

5.2.5 4.2.5. Hypothesis 5

As indicated in the literature (cf. section 1.3.3.), the connector *en(de)* is thought to have been replaced by the infinitive marker *te* in the 17th century. This point is also investigated here to assess whether the change took place with the expected timing in my database.

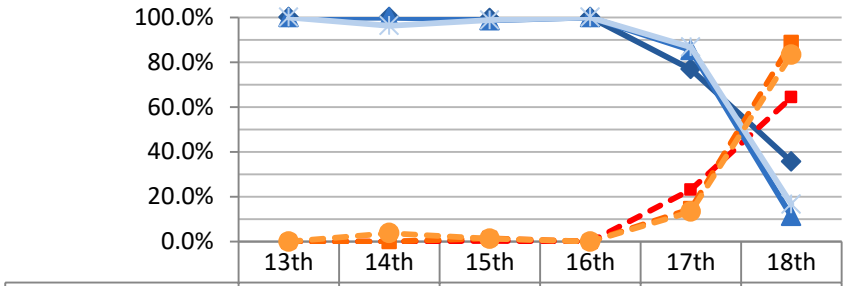
> Hypothesis 5
> In the 17th century, the proportion of *en(de)* as a connector decreases while *te* increases.

For the analysis, all instances with a connector were extracted. The extracted sample comprises 842 instances for *staan*, 651 for *zitten,* and 450 for *liggen*. Table 9 presents the numbers of instances with *en(de)* or with *te*, and Figure 9 visualizes the change in the ratio between *en(de)* and *te* over time.

Table 9. The distribution of instances with the connector *en(de)* or *te*

		13th	14th	15th	16th	17th	18th	sum
staan	*en(de)*	39	209	261	47	133	40	729
	te	0	0	1	0	40	72	113
zitten	*en(de)*	51	209	141	23	64	17	505
	te	0	0	2	0	11	133	146
liggen	*en(de)*	27	153	155	47	26	5	413
	te	0	6	2	0	4	25	37

Figure 9. Ratio of instances with the connector *en(de)* or *te*



	13th	14th	15th	16th	17th	18th
staan en(de)	100.0%	100.0%	99.6%	100.0%	76.9%	35.7%
staan te	0.0%	0.0%	0.4%	0.0%	23.1%	64.3%
zitten en(de)	100.0%	100.0%	98.6%	100.0%	85.3%	11.3%
zitten te	0.0%	0.0%	1.4%	0.0%	14.7%	88.7%
liggen en(de)	100.0%	96.2%	98.7%	100.0%	86.7%	16.7%
liggen te	0.0%	3.8%	1.3%	0.0%	13.3%	83.3%

With all three posture verbs, instances with *en(de)* decrease toward the 18th century. Instances with *te*, meanwhile, appear primarily from the 17th century, eventually dominating over *en(de)* in the 18th century with all three verbs. Although infrequently, some cases with *te* are found already in Middle Dutch with a possible progressive reading, as shown in (21) (note that (21a) includes two instances, one with *sat te etene* lit. 'sat to eat' and the other with *sat te drinckene* lit. 'sat to drink').

(21) a. ende tfolc **sat te etene** ende **te drinckene** [1264, 1265]
'and the people sat to eat and to drink' / 'and the people were sitting eating and drinking'

b. Ende eens centurioes knecht was qualeke hebbende ende **lach te stervene** [1804]
'and once, the centurion's servant was sick and lay to die' / 'and once, the centurion's servant was sick and lay dying'

The first example, from the 15th century, derives from the book of Exodus (3: 6), which describes people holding a banquet. The second instance, from the 14th century, comes from the Gospel of Luke (7: 2), describing a sick person dying. In these two examples, it is not possible to exclude a purpose interpretation (i.e. 'in order to eat/drink') or a resultative one (i.e. 'fated to die') of the *te* phrase,[21] but a progressive interpretation is also not ruled out, as indicated in the translation.

To conclude, the data reflect the expected development from the *en(de)* construction to the *te* construction. The timing of the change coincides with observations in the literature: the former was still frequent in the 17th century until it was superseded by the latter in the 18th century.

5.2.6 4.2.6. Summary of the analyses concerning the verbal complex

In short, the general development of the posture-verb construction from the old type with *en(de)* to the new type with *te* is confirmed by the analysis here (4.2.5.). According to the data, the old type decreased in frequency in the 17th and 18th century, while the new type increased in the same period, overtaking the old type in the 18th century.

Specifically for the old construction, it was further expected that the connector *ende* would be phonologically reduced to *en* (4.2.3.) and that the connector would function as an infinitive marker (4.2.4.). For the first point, the reduction of *ende* to *en* certainly took place during the period under study, and in fact proceeded faster than the replacement of *ende* by *en* as a coordinating conjunction. At the same time, the evidence does not indicate that this was a construction-internal development, although the construction seems to have accelerated the change. For the use of the connector *en(de)* as an infinitive marker, instances with a second verb (possibly) in the infinitive following a finite posture verb are found only sporadically, indicating that there was no structural development in this respect. Since the connector did not acquire the function of infinitive marker, the *en(de)* construction remains

[21] See Bogaards (2019: 43-49) on the modern Dutch posture-verb construction with a past participle that has a resultative meaning.

formally comparable with a regular coordinate sentence except when the underlying monoclausal structure is clearly marked (e.g. by objects of the second verb being placed before the connector).

With regard to the semantic cohesion of the verbal complex, which was expected to strengthen at the pseudo-coordinate stage of the construction, the analyses present a mixed picture. The analyses of the HTR in 4.2.1. suggest that the 15th–16th century could correspond to the pseudo-coordinate stage of the construction, at least in the case of *staan*, which shows a relatively low HTR and a corresponding limited lexical variety of the second verb. In 4.2.2., on the other hand, it was found that the semantic properties of the second verb had not undergone much development, indicating that no particular period involved stronger semantic cohesion than other periods. The consistently strong semantic compatibility between the posture verb and the second verb could be attributed to the general characteristics of natural coordination. It simultaneously suggests consistency in the spatial semantics of posture verbs over the centuries, which in turn imposed semantic restrictions on the second verb. Further discussion of the correspondence between the observed data and the degree of grammaticalization will follow in 4.5., taking the results for the hypotheses on the noun (4.3.) and the modifier (4.4.) into consideration.

5.3 4.3. Noun

5.3.1 4.3.1. Hypothesis 6

The posture-verb construction with *en(de)* is hypothesized to start as an ordinary coordinate structure, which means that, at the very beginning of the grammaticalization path (cf. section 3.3.1.), there would have been freedom to realize the subject of the second verb as shown in (22a).[22] This possibility is expected to be lost when the *en(de)* construction has a monoclausal structure, presumably resulting in a structure like (22b) with one subject (here, *dye heeren ende vrouwen* 'the men and the women') for the posture verb and the second verb.

[22] Note that coordination of two events with different agents (e.g. *hij zat bij het raam en zij stond in de keuken* 'he sat by the window and she stood in the kitchen') is possible but is not included in the database for this research (cf. section 2.2.3.).

(22) a. Si **saten ende** si **aten** [1127]
'they sat, and they ate'
b. ende hi quam inder salen daer dye heeren ende vrouwen **saten ende aten** [1421]
'and he came into the hall where the men and women sat and ate'

If the coreferential subject for the second verb was not realized except in the period where the construction was coordinate, the proportion of instances with an overt subject for the second verb will decrease as the construction becomes more grammaticalized. This expectation is stated in Hypothesis 6.

Hypothesis 6
In instances of the *en(de)* construction, the proportion of overt subjects for the second verb decreases in the course of grammaticalization.

Table 10 presents the distribution of instances with and without an overtly realized subject for the second verb in the *en(de)* construction.

Table 10. The distribution of instances with and without an overt subject of the second verb in the *en(de)* construction

		13th	14th	15th	16th	17th	18th	sum
staan	with	0	2	4	0	0	1	7
	without	39	207	257	47	133	39	722
zitten	with	0	9	5	0	0	0	14
	without	51	200	136	23	64	17	491
liggen	with	0	7	2	0	0	0	9
	without	27	146	153	47	26	5	404

As can be seen in the table, the numbers of relevant instances are very low and mostly restricted to the 14th and 15th centuries (29 of 30 instances). Note, however, that these two centuries are the periods with the most data in the first place.

Two examples with an overt subject for the second verb are shown in (23) with the subjects underlined. Note that (23b) rhymes, and the subject pronoun (*si* 'she') is possibly inserted for the sake of meter.

(23) a. Ende alsi dit spraken, **stont** Ihesus in midden hen **ende** hi **seide** hen (…) [155]
'and when they spoke about this, Jesus stood among them, and he said to them'
b. Daer die vrouwe ten venstren **lach** / **Ende** si den ridder comen **sach** [1934]
'when the woman lay at the window, and she saw the knight come'

Although such instances are found in the data, the major trend is that only the posture verb takes an overt subject, as shown in (22b). Additionally, the number of such instances (i.e. 30 instances in the entire database) is arguably too small to provide conclusive evidence on the diachronic development of the construction in this respect.

5.3.2 4.3.2. Hypothesis 7

With increasing grammaticalization of the *en(de)* construction, not only the subject but also the object is hypothesized to behave differently. As outlined in Chapter 3, two developments are expected in this respect: object extraction, and objects of the second verb being placed before the connector. In the following, I first discuss object extraction, before turning to objects before the connector in the next sections (4.3.3. & 4.3.4.).

Object extraction refers to a phenomenon whereby the (in)direct or prepositional object of the second verb is extracted and placed in clause-initial position, as shown by (24) (cf. sections 2.2.1. & 3.4.2.).

(24) (…) waar op een ieder **zit en peinst** [1557]
'(…) upon which each sits and thinks'

In this example, the prepositional phrase associated with the second verb (*peinst* 'thinks') is extracted to the clause-initial position, in the form *waar op* 'upon which'.

As presented in 3.3.2., object extraction is already possible when the first verb is quasi-auxiliary, meaning that the occurrence of this phenomenon is not a strong indication of the auxiliation of posture verbs. Nonetheless, it reflects the fact that the verb is starting to lose its status as a full lexical verb, since object extraction is not possible with regular coordination (cf. (3b) in

2.1.1.). As the phenomenon is linked to somewhat auxiliarized posture verbs, it is expected to appear more frequently as grammaticalization proceeds and as posture verbs become more auxiliarized. This expectation is formulated as Hypothesis 7.

Hypothesis 7
In the *en(de)* construction, the incidence of object extraction increases in the course of grammaticalization.

All the instances of the *en(de)* construction where the second verb has no (in)direct or prepositional object/objects were excluded from the data, resulting in a subset with 693 instances. Table 11 shows the absolute frequency of instances with and without object extraction in this subset.

Table 11. The distribution of instances with object extraction in the *en(de)* construction

		13th	14th	15th	16th	17th	18th	sum
staan	with	0	0	0	0	1	0	1
	without	19	119	135	17	48	19	357
zitten	with	0	0	0	0	0	2	2
	without	23	86	62	4	23	8	206
liggen	with	0	0	0	0	1	0	1
	without	8	57	42	13	4	2	126

As can be seen in the table, instances with object extraction are very infrequent in the dataset (one instance for *staan*, two for *zitten,* and one for *liggen*). All four instances occur in the period of Early Modern Dutch (17th and 18th centuries). In addition to the example shown in (24) from the 18th century, (25) provides an example from the 17th century.

(25) Siet aen myn slinckerhant: waer na **staen** wy **en drieghen**? [743]
'look at my left hand: what do we stand and wait for?'

In this example, the prepositional phrase associated with the second verb *drieghen* 'tarry, delay' is placed in clause-initial position in the form *waer na* (= *waarnaar* 'for what').

Since object extraction with *en(de)* is still attested in the 18th century, specifically with *zitten* (see (24a) for an example), the construction with *en(de)* may have still retained its meaning and function as a progressive

construction in the 18th century. On the other hand, given that instances with object extraction are rare in the database, it is difficult to draw valid conclusions about the diachronic development of this phenomenon.

5.3.3 4.3.3. Hypothesis 8

Besides extraction of the object, the placement of the unextracted object is also thought to reflect the auxiliation of posture verbs. In a monoclausal structure, objects of the second verb may be placed before the connector and after the posture verb, as presented in 3.3.3. This is illustrated in (26) with the object underlined.

(26) Een waterlantsche Trijn **sat** eens ajuyn **en schelde**.
'a girl from Waterland once sat and peeled onions'
(=(18a) in Chapter 1)

In this example, the object *ajuyn* (= *ajuin* 'onion') of the second verb (*schelde* 'peeled') is placed before the connector *en*. This phenomenon will henceforth be referred to as a preposed object.

In ordinary coordination with a biclausal structure, objects of the second verb are normally placed after the second verb, as illustrated by (27).

(27) Ende hi **stont** boven hare **ende gheboot** den coorts [56]
'and he stood over her and ordered the fever (away)'

In this example, the object *den coorts* 'the fever' of the second verb *gheboot* 'ordered, commanded' is placed after the second verb. This sentence pattern is expected to be observed for a biclausal structure, while those like (26) indicate a monoclausal one involving a clause bracket (cf. section 3.3.3.). Therefore, the placement of objects after the posture verb and before the connector, as in (26), is expected to occur when the construction has a monoclausal structure, and to grow in frequency with increasing grammaticalization. This expectation is formulated as Hypothesis 8.

Hypothesis 8
In instances of the *en(de)* construction with the posture verb in non-clause-final position, the placement of objects after the posture verb and before the connector increases in the course of grammaticalization.

The analysis is conducted with a subset of the data comprising only instances with *en(de)* as a connector and a posture-verb non-clause-final word order, and where the second verb has one or more objects associated with it. This subset contains 478 instances.

Table 12 presents the number of instances with and without a preposed object in the posture-verb non-clause-final word order.

Table 12. The distribution of instances with (non-)preposed object(s) in the posture-verb non-clause-final word order

		13th	14th	15th	16th	17th	18th	sum
staan	preposed	0	1	1	1	2	0	5
	non-preposed	10	87	100	14	36	13	260
zitten	preposed	0	0	0	0	2	0	2
	non-preposed	17	55	41	2	12	7	134
liggen	preposed	0	0	0	0	0	0	0
	non-preposed	4	33	25	10	3	2	77

The number of instances with a preposed object (i.e. [PV Obj *en(de)* V^2]) is very limited, with five instances for *staan*, two for *zitten* and none for *liggen*. An example with *zitten* is given in (28).

(28) u Vader is geseten / Al aen de tafel Heer, en **sit** <u>na u</u> **en wacht**
[1528]
'your father is seated already at the table, sir, and sits and waits for you'

In this example, the prepositional object *na u* 'for you' of the second verb *wacht* 'waits' is placed before *en wacht*, suggesting the existence of a middle field between *sit* 'sits' and *en* and indicating that the sentence has a monoclausal structure. Note, however, that this example comes from a text with rhyme and meter. Overall, such instances appear to be infrequent during the period studied.

A question arises as to whether this sporadic occurrence of preposed objects is characteristic of the *en(de)* construction or whether it can also be observed with the *te* construction. If the word order [PV Obj C V^2] does not differ in frequency between the *en(de)* and the *te* construction, then the phenomenon may still count as evidence—albeit weak—that the *en(de)* construction has a monoclausal structure (as the *te* construction is more

strongly associated with a monoclausal structure).[23] On the other hand, if it is frequent for the *te* construction but not for the *en(de)* construction, this is a good indication that the *te* and *en(de)* constructions are different in terms of their structure; in particular, that the *en(de)* construction is generally biclausal (cf. section 3.4.2.). In order to investigate this point, the rates of instances with a preposed object in the *en(de)* and the *te* construction will be compared here.

Table 13 provides the number of instances where object(s) are preposed and where they are not, per connector. When interpreting the table, it is important to note that in the posture-verb non-clause-final word order there is an overall difference in the frequency of the *en(de)* versus the *te* construction (548 and 60 instances respectively for *staan*, 308 and 83 instances for *zitten*, and 216 and 16 instances for *liggen*).[24]

Table 13. Distribution of instances with (non-)preposed object(s) per connector

	staan		*zitten*		*liggen*	
	en(de)	*te*	*en(de)*	*te*	*en(de)*	*te*
preposed object(s)	5	10	2	19	0	0
non-preposed object(s)	260	6	134	8	77	0

As can be seen in the table, the numbers of instances of the *te* construction with preposed object(s) are more frequent compared to those with non-preposed object(s), at least for *staan* and *zitten*. This trend contrasts with that of the *en(de)* construction, which has more instances where the object is after the connector, i.e. not preposed, for all posture verbs. The data thus appear to suggest that the two constructions are different in terms of the placement of the object of the second verb; only the *te* construction occurs frequently with a preposed object. As outlined above, this distributional difference

[23] Recall also that the position of the object between the posture verb and the connector (i.e. [PV Obj *te* V²]) is the only possible placement of (in)direct objects in the *te* construction (cf. (13) in 3.4.2.).

[24] Although the trend that the *en(de)* construction has more instances than the *te* construction is common to all posture verbs, the proportions of instances with an object differ between the verbs. *Zitten* shows no difference between the constructions: both are accompanied by the object in about one-third of cases. *Staan* and *liggen*, meanwhile, take an object more frequently in the *en(de)* construction (265 of 548 instances for *staan* and 72 of 216 instances for *liggen*) than in the *te* construction (16 of 60 instances for *staan* and 0 of 16 instances for *liggen*). This observation can probably be linked to the development of frequent co-occurring verbs presented in 4.2.1.

could be linked to the difference in the structure of the constructions. Since the sentence pattern [PV Obj C V²] can be linked to a monoclausal structure, the data seem to indicate that the *en(de)* construction can only rarely be interpreted as monoclausal and is mostly treated as biclausal. However, the limited frequency of instances of instances with preposed objects and *en(de)* as connector makes it difficult to test the hypothesis.

5.3.4 4.3.4. Hypothesis 9

The second hypothesis regarding the placement of the object in the *en(de)* construction concerns instances where the posture verb is clause final, i.e. with a posture-verb clause-final word order. For this word order, a development has been proposed in section 3.4.2. involving three stages, as illustrated in the examples in (29) with the objects underlined.

(29) a. Die sieke sal recht **staen ende** hem **recken** [296]
'the sick person shall stand upright and stretch out'
b. daer hi eens nachts **lach** gode **ende bat** [1765]
'when he lay and prayed to God one night'
c. Want ic mi **ligge ende aisiere** / Met groten rasten bi den viere [1876]
'because I was lying and resting myself very peacefully by the fire '

In ordinary coordination, as shown by (29a), the reflexive pronoun *hem* (= *zich* 'himself') belonging to the second verb *recken* 'to stretch out' is placed between *ende* and *recken*. (29b) shows that the object *gode* (= *god* 'god') of the second verb *bat* 'prayed' occupies the position before the connector *ende* and after the posture verb *lach* (= *lag* 'lay'). Such an instance is supposed to represent an intermediate stage in the formation of a monoclausal sentence pattern like (29c), in which the reflexive pronoun *mi* 'myself' of the second verb *aisiere* 'rest, restore' is placed before the whole verbal complex. Note that it is possible to place a prepositional object after the second verb in both a bi- and a monoclausal structure (cf. (16b & e) in 3.4.2.), meaning that the [PV C V² Obj] order is not indicative of structure.

In short, the development from a structure like (29a) through (29b) to (29c) is expected, as formulated as Hypothesis 9.

Hypothesis 9
In instances of the *en(de)* construction with the posture verb in clause-final position, objects are increasingly likely to appear before the connector in the course of grammaticalization:
a) Placement of objects between the posture verb and the connector initially increases and then decreases again (as the construction becomes more fully monoclausal);
b) Placement of objects before the posture verb (i.e. in the middle field) increases at a constant rate.

The analysis is conducted with the subset of data that includes only instances with *en(de)* as a connector in the posture-verb clause-final word order and where the second verb has one or more objects associated with it. This subset contains 214 instances. Table 14 gives an overview of the distribution of instances that have one or more objects appearing before the second verb.

Table 14. The distribution of instances with objects in the *en(de)* construction in the posture-verb clause-final word order

		13th	14th	15th	16th	17th	18th	sum
staan	[PV *en(de)* Obj V²]	2	15	14	0	6	4	41
	[PV Obj *en(de)* V²]	0	0	0	0	0	0	0
	[Obj PV *en(de)* V²]	0	1	3	0	1	0	5
zitten	[PV *en(de)* Obj V²]	0	10	11	0	1	1	23
	[PV Obj *en(de)* V²]	0	0	0	0	0	0	0
	[Obj PV *en(de)* V²]	0	0	0	1	4	0	5
liggen	[PV *en(de)* Obj V²]	1	13	8	1	1	0	24
	[PV Obj *en(de)* V²]	1	0	0	1	0	0	2
	[Obj PV *en(de)* V²]	0	1	0	0	0	0	1

The word order [PV *en(de)* Obj V²] is the most frequent with all the verbs, accounting for about 80–90% of all cases. An example with this structure is given in (30). Note that the verb *bat* 'begged' rhymes with *sat* 'sat' in the previous line.

(30) Enen man, die daer met crocken **sat** / **Ende** <u>om almoessene</u> daer **bat** [1107]
'a man, who sat there with crutches and begged there for alms'

In this instance, after the posture verb *sat* 'sat', the prepositional object *om almoessene* 'for alms' of the second verb *bat* 'begged' is placed between the connector and the second verb; this represents the normal word order with coordination in a subordinate clause.

In contrast, the structures with the object before *en(de)* ([PV Obj *en(de)* V^2] and [Obj PV *en(de)* V^2]) are very limited in frequency (five instances for *staan*, five for *zitten* and three for *liggen*). In particular, the sentence pattern [PV Obj *en(de)* V^2] is only found twice, both times with *liggen* in combination with *wachten* 'to wait'. An example of each word order is given in (31).

(31) a. ende dye int bedde **leyt** <u>na u</u> **en wacht**, dats die duvel Belial [2159]
'and the one that lies in bed and waits for you, that is the devil Belial'

b. Daer die aertsebiscop Durbrices / <u>Na hem</u> daer **stont ende wacht** [337]
'where the Archbishop Dubricius stood there and waited for them'

Example (31a) shows the word order [PV Obj *en(de)* V^2], in which the prepositional object *na u* 'for you' of the second verb *wacht* 'waits' is placed between the posture verb and the connector. In my database, this instance and the instance given in (29b) are the only ones found with this structure. (31b) illustrates the pattern where the object *na hem* 'for him' is placed before the whole verbal complex ([Obj PV *en(de)* V^2]), which is thought to represent the most grammaticalized form. Although each pattern is attested at least once in my dataset, the major trend—particularly in the Middle Dutch period—is that the object is placed between the connector and the second verb (88 of 101 instances), as shown in (30).

In line with the previous hypothesis (cf. section 4.3.3.), the findings are compared with those of the *te* construction. Table 15 presents the number of instances in each sentence pattern per connector.

Table 15. Distribution of instances with objects in the different posture-verb clause-final sentence patterns, per connector

	[PV C Obj V2]		[PV Obj C V2]		[Obj PV C V2]	
	en(de)	*te*	*en(de)*	*te*	*en(de)*	*te*
staan	41	0	0	1	5	11
zitten	23	0	0	4	5	21
liggen	24	0	2	0	1	3

As can be seen in the table, the *en(de)* construction is more frequent with the [PV C Obj V2] order (the leftmost column), while the *te* construction occurs more often in the [Obj PV C V2] order (the rightmost column). In other words, the *en(de)* construction occurs more often in a sentence pattern typical of a biclausal structure (cf. (29a) & (30)) and the *te* construction more often in a word order associated with a monoclausal structure (cf. (29c) & (31b)). Therefore, on this basis, there is little reason to consider the *en(de)* construction monoclausal, especially in comparison with the unambiguously monoclausal *te* construction.

To conclude, the analysis of the placement of objects in the posture-verb clause-final word order suggests that the *en(de)* construction is biclausal rather than monoclausal, although a monoclausal word order ([Obj PV *en(de)* V2]) is not impossible according to the data. This result aligns with what we have seen in the previous section (4.3.4.) for the placement of objects in the posture-verb non-clause-final word order. With regard to the diachronic perspective, no indications of historical development are found.

5.3.5 4.3.5. Summary of the analyses concerning the noun

The analyses concerning the noun of the *en(de)* construction suffer from a general lack of relevant instances. Throughout 4.3.1.—4.3.4., it was difficult—if not impossible—to find solid evidence for any specific diachronic development of the phenomena studied. In 4.3.1., it was demonstrated that most instances do not overtly realize a subject for the second verb, meaning that it was not possible to confirm the expected development, i.e. from frequent realization of the subject of the second verb in coordination to infrequent realization in pseudo-coordination. This could imply that the development from a coordinate to a pseudo-coordinate structure is not reflected in the data; but it is also possible that it was not common to realize the coreferential subject in coordination in the first place.

The data for object extraction were even more limited, with only 4 relevant instances from the 17th and 18th centuries, making it hard to draw valid conclusions about the diachronic development of this phenomenon.

The data for instances with objects preceding the connector were also few, with 7 relevant instances in the posture-verb non-clause-final word order (cf. section 4.3.3.) and 13 instances in the posture-verb clause-final word order (cf. section 4.3.4.). Nonetheless, the comparison with the data for the *te* construction provided some insight on the structure of the *en(de)* construction. In short, the data for the placement of the unextracted object seem to suggest that the *en(de)* construction is mostly treated as biclausal and not monoclausal. It should be noted that some instances are found which can be interpreted as having a clause bracket and a middle field (i.e. a monoclausal structure); however, these occurrences are scarce.

With respect to the temporal order of the phenomena, the expectation that object extraction occurs earlier than the preposing of objects is not borne out. According to the analyses, objects may be placed before the connector from the earliest period, namely from the 14th century with *staan* in the posture-verb non-clause-final word order (cf. Table 12 in 4.3.3.) and from the 13th century with *liggen* in the posture-verb clause-final word order (cf. Table 14). In contrast, the first attested instance of object extraction (cf. section 4.3.2.), which is assumed to be associated with a less grammaticalized stage (i.e. pseudo-coordination), dates from the 17th century. The existence of early cases of preposed objects of the second verb (i.e. appearing before the connector) could be attributed to a greater freedom of word order in earlier periods and, in some cases, to artistic license in adjusting word order for the sake of rhyme and/or meter; however, they could also be an indication that the construction was already grammaticalized in an early period, although—again—this does not constitute strong evidence.

Additionally, the progressive *en(de)* construction was expected to disappear in the final step of the development of the posture-verb construction (cf. section 3.3.5.). At that stage, the construction with *en(de)* would thus be expected to allow an overtly realized subject for the second verb, while disallowing object extraction and preposed objects before the connector. In all cases, the numbers of relevant instances of the phenomena in question are very small, which precludes a fruitful discussion of diachronic developments. It may still be worth pointing out that the latest instances with preposed objects date from the 17th century and the latest with object extraction date from the 18th century, which could indicate the gradual disappearance of the progressive *en(de)* construction toward the 18th century.

5.4 4.4. Modifier

5.4.1 4.4.1. Hypothesis 10

The analyses regarding the placement of the adverbial in the *en(de)* construction are presented in this section and the next section (4.4.2.), distinguishing between the two word orders (i.e. posture-verb non-clause-final and posture-verb clause-final). First, the behavior of the adverbial in the posture-verb non-clause-final word order is described below.

As presented in 3.4.3., adverbials associated with the second verb are typically placed after the second verb in a biclausal structure in a main clause (32a), while they can be placed after the posture verb and before the connector (i.e. in the middle field) in a monoclausal structure (32b).

(32) a. Daer **lach** de vrouwe **ende sach** uutwart [1933]
'there, the lady lay and looked outside'
b. Hi **stoet** van vruchte **en beeft** [537] (= (18b) in Chapter 1)
'he stood and trembled with fear'

Example (32a) is an example of ordinary coordination; here, the adverb *uutwart* (< *utewaert* 'outward') modifying the second verb *sach* 'looked' is placed after the second verb. Meanwhile, (32b) represents a more grammaticalized state of the construction, since the intervening adverbial *van vruchte* (= *van vrees* lit. 'from fear') can be semantically interpreted as modifying *beeft* 'trembled', expressing the reason for the agent's behavior; yet it is positioned after the posture verb. As part of the expected development of the posture-verb construction with *en(de)* from a biclausal to a monoclausal structure, the placement of adverbials after the second verb (32a) should decrease in proportion, while the placement between the posture verb and second verb (32b) may increase. The hypothesis can therefore be formulated as follows:

Hypothesis 10
In instances of the *en(de)* construction with the posture verb in non-clause-final position, the placement of non-locative/durative adverbials after the posture verb and before the connector increases in the course of grammaticalization.

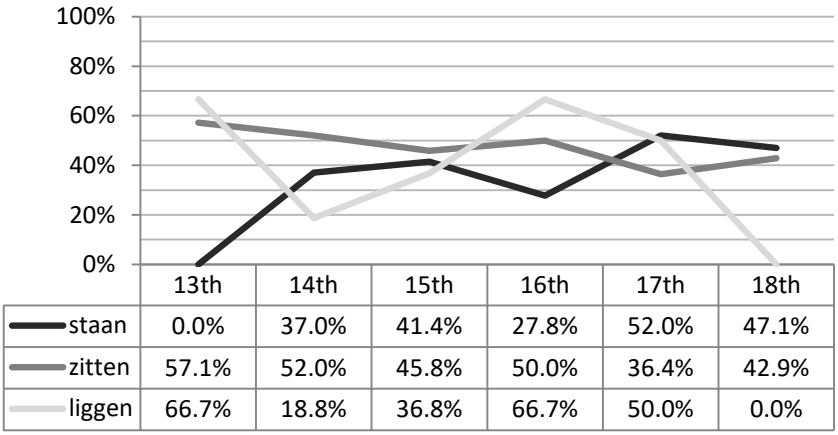
For the analysis, I extracted instances in the posture-verb non-clause-final word order with *en(de)* as a connector and with a non-locative and non-

durative adverbial, resulting in a subset with 421 instances. In this subset, 350 instances have one or more adverbials that appear after the posture verb and either before the second verb (cf. (32b)) or after it (cf. (32a)). Table 16 presents the distribution of these instances with each sentence pattern, and Figure 10 visualizes the proportion of instances with an adverbial between the posture verb and *en(de)*.

Table 16. The distribution of non-locative adverbials in the *en(de)* construction in the posture-verb non-clause-final word order

		13th	14th	15th	16th	17th	18th	sum
staan	[PV *en(de)* V² Adv]	2	17	41	13	24	9	106
	[PV Adv *en(de)* V²]	0	10	29	5	26	8	78
zitten	[PV *en(de)* V² Adv]	3	24	13	1	7	4	52
	[PV Adv *en(de)* V²]	4	26	11	1	4	3	49
liggen	[PV *en(de)* V² Adv]	1	26	12	2	2	1	44
	[PV Adv *en(de)* V²]	2	6	7	4	2	0	21

Figure 10. Proportion of instances with non-locative/durative adverbials between the posture verb and *en(de)* in the posture-verb non-clause-final word order



The proportion of instances for *staan* appears to increase over time, showing a more or less steady pattern around 35–50%, with a notable rise from the 13th to 14th century. However, this upward trend is not statistically significant (Kendall's tau = 0.6, p = 0.13). For *zitten*, meanwhile, the proportion appears to remain around 40–50%; there is a slight decrease, but this is not statistically significant (Kendall's tau = -0.73, p = 0.06). The

proportion of *liggen* fluctuates, with the lowest proportion occurring in the 14th century (18.8%) and peaks in the 13th and 16th centuries (both, 66.7%). However, the differences between the periods are not statistically significant (pairwise comparisons using Fisher's exact test, $p > 0.46$).

In summary, the data do not show the expected development: it appears that the two sentence patterns [PV *en(de)* V^2 Adv] and [PV Adv *en(de)* V^2] are overall evenly distributed throughout the period studied. Examples of both sentence patterns are given in (33).

(33) a. Hier **zat** zy eenzaem, **en weende** bitter [1494]
'she sat here lonely and cried bitterly'
b. hoe **stae**je hier soo bitterlijck **en huylt**? [656]
'why do you stand here and cry so bitterly?'

In (33a), the adverb *bitter* 'bitterly' is placed after the verb that it modifies (i.e. *weende* 'cried'). In (33b), the adverbial phrase *so bitterlijck* 'so bitterly' can be also interpreted as modifying the verb (i.e. *huylt* 'cries'), though it is placed between the posture verb and *en(de)*. The former example is thought to represent a biclausal structure and the latter a monoclausal one. As stated in the hypothesis, the sentence pattern exemplified by (33b) was expected to increase in proportion; however, this expectation was not borne out. Nonetheless, the results do provide evidence that structures associated with monoclausality and biclausality, respectively, are both observed during the period studied.

5.4.2 4.4.2. Hypothesis 11

The placement of adverbials in the *en(de)* construction in the posture-verb clause-final word order is hypothesized to develop through three stages (cf. section 3.4.3.). The adverbial for the second verb may first be placed after the connector and before the second verb (34a), subsequently after the posture verb and before the connector (34b), and eventually before the whole verbal complex (34c).

(34) a. Dese drie dade die koninck Artur mettien / Ten verster **liggen ende** wtwaert **zien** [1992]
'the king Arthur made these three immediately lie at the window and look outside'

b. dat si dus **saten** / Met groter bliscap **ende aten** [1048]
'that they thus sat and ate with great pleasure'
c. Daer hi van vruchte **staet en beeft** [528]
'while he stands and trembles with fear'

In (34a), an example of regular coordination, the adverb *wtwaert* (< *utewaert* 'outward'), which modifies the second verb *zien* 'look', is placed between *ende* and *zien*. Meanwhile, (34b) is thought to reflect a more grammaticalized pattern, since the adverbial phrase *[m]et groter bliscap* 'with great pleasure' is placed before the connector and closer to the posture verb than the second verb, although it can be interpreted as modifying the second verb *aten* 'ate'. In the most grammaticalized form—that is, the monoclausal form—the adverbial is placed before the posture verb, as in (34c), where *van vruchte* 'with fear' (lit. 'from fear') indicates the reason for trembling (i.e. *beeft* 'trembles').

Since the *en(de)* construction is expected to develop from a biclausal to a monoclausal structure, instances like (34b) and eventually (34c) should increase in proportion over time. This expectation is formulated as Hypothesis 11.

Hypothesis 11
In instances of the *en(de)* construction with the posture verb in clause-final position, the placement of non-locative/durative adverbials before the connector increases in the course of grammaticalization:
a) Placement of the adverbials between the posture verb and the connector initially increases and then decreases again (as the construction becomes more fully monoclausal);
b) Placement of the adverbials before the posture verb (i.e. in the middle field) increases continuously.

For the analysis, I extracted instances in the posture-verb clause-final word order with *en(de)* as a connector and with one or more non-locative/durative adverbials, resulting in a subset with 181 instances. Among these cases, 153 instances have one or more adverbials between *en(de)* and the second verb (cf. (34a)), between the posture verb and *en(de)* (cf. (34b)), or before the posture verb (cf. (34c)). The distribution of these 153 instances is given in Table 17, distinguishing the three sentence patterns presented in (34).

Table 17. The distribution of non-locative adverbials in the *en(de)* construction in the posture-verb clause-final word order

		13th	14th	15th	16th	17th	18th	sum
staan	[PV *en(de)* Adv V²]	0	3	1	0	2	2	8
	[PV Adv *en(de)* V²]	0	2	1	0	0	0	3
	[Adv PV *en(de)* V²]	2	3	8	1	8	4	26
zitten	[PV *en(de)* Adv V²]	0	3	4	0	0	0	7
	[PV Adv *en(de)* V²]	0	11	2	0	2	0	15
	[Adv PV *en(de)* V²]	2	16	11	1	4	3	37
liggen	[PV *en(de)* Adv V²]	1	8	6	0	0	1	16
	[PV Adv *en(de)* V²]	1	3	2	0	0	0	6
	[Adv PV *en(de)* V²]	1	14	14	5	1	0	35

According to the table, the pattern with adverbials preceding the posture verb ([Adv PV *en(de)* V²]) is the most frequent throughout the centuries for all the verbs, ranging around 60–80% on average. An example with this structure is given below in (35).

(35) die zijn handen op een simpele manier **zat en klouwde** [1501]
'who sat and grasped his hands in a simple way'

In this example, the adverbial phrase *op een simpele manier* 'in a simple way', which can be interpreted as modifying the second verb *klouwde* 'grasped', is placed before the posture verb. Recall that the appearance of adverbials in this position is thought to indicate that the instance in question has a monoclausal structure. Note also that the direct object of *klouwde* (i.e. *zijn handen* 'his hands') is placed before the verbal complex in this example, which also supports the monoclausal analysis (cf. section 4.3.4.).

On the other hand, the placement of the adverbial after the posture verb (as in [PV *en(de)* Adv V²] and [PV Adv *en(de)* V²]) is relatively infrequent (20.3% and 15.7% on average, respectively). In particular, the latter pattern is almost completely absent in the Early Modern Dutch period (16th–18th century), although it should also be noted that the overall frequencies of the *en(de)* construction drop in this period (cf. Figure 2 in 4.1.). An example of each sentence pattern is shown in (36).

(36) a. Als si op een tijt in haer ghewoenlike ghebet **lach ende** seer **screyde** [2048]
'when she once lay in her usual prayer and cried hard'

b. Ter cameren, daer hi in **lach** / Haerde sachte **ende sliep** [1954]
'at the room, in which he lay and slept very soundly'

Example (36a) illustrates a biclausal sentence pattern with the adverb *seer* 'hard, extremely' being placed before the verb that it modifies (*screyde* 'cried, screamed'). This pattern is the second-most frequent for *staan* and *liggen*, accounting for about 17% of the data for *staan* and 32% for *liggen*. In (36b), the adverbs *haerde sachte* 'very soundly', which can be interpreted as modifying the second verb *sliep* 'slept', are placed between the posture verb and *ende*. This pattern is almost exclusively found in the Middle Dutch period and only accounts for approximately 6–9% of the instances with *staan* and *liggen*. Note, however, that for *zitten* this is the second-most frequently observed structure, with 15 cases (13.6%), of which 13 cases come from Middle Dutch. Nonetheless, the restricted occurrence of the intermediate [PV Adv *en(de)* V²] pattern in the Middle Dutch period may indicate the structural ambiguity of the posture-verb construction that is characteristic of the intermediate period, although it is important to also bear in mind the effect of rhyme and/or meter found in Middle Dutch verses.

In conclusion, the data do not show the expected developments. The preposing of the adverbial, which is expected to coincide with the monoclausal stage of the construction, is common throughout the period studied. This result could indicate that the verb phrase was already strongly integrated from the beginning of the 13th century.

5.4.3 4.4.3. Hypothesis 12

As posture verbs become more grammaticalized, they lose their status as full lexical verbs in the construction. One of the possible consequences of this change is the backgrounding of their postural/locative semantics and the corresponding omission of locative modifiers (cf. section 3.3.2.). As postural/locative verbs, posture verbs usually need locative modification, such as *op de bank* 'on the couch' in (37a). Note that an adverbial describing the manner of posture is also counted as a locative modifier in this research, like *rechtop* 'straight' in (37b).

(37) a. De man **zat** op de bank.
'the man sat on the couch'

b. De vrouw **stond** rechtop.
'the woman stood up straight'

The same sentences without these modifiers (e.g. *de man zat* 'the man sat') are less acceptable, and require specific contexts to sound natural (for example, a contrastive context, such as *de man zat terwijl de vrouw stond* 'the man sat while the woman stood').

When posture verbs are used as auxiliaries, on the other hand, there is no strong necessity for locative modification (cf. sections 2.2.1. & 3.3.2.). See (38) for an example.

(38) Ik **zat** (op mijn kamer) een boek **te lezen**.
'I was sitting and reading a book (in my room)'

The progressive sentence in (38) is grammatical with or without a locative modifier (here, *op mijn kamer* 'in my room').

As posture verbs are expected to grammaticalize over time, a decrease in locative modification should be observed over the period studied, as stated as Hypothesis 12.

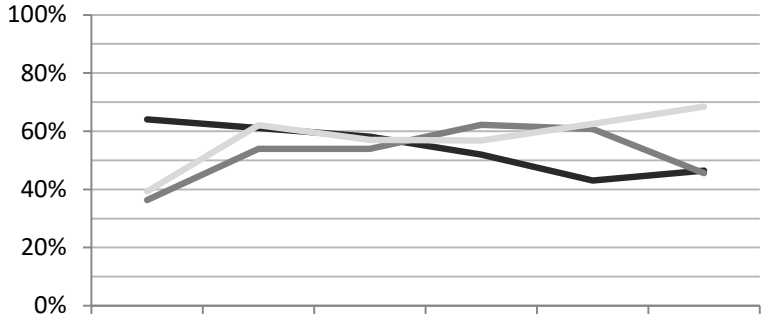
Hypothesis 12
Instances with one or more locative modifiers decrease in proportion in the course of grammaticalization.

Table 18 provides the number of instances with and without locative modification, and Figure 11 visualizes the change in the proportion of instances with locative modification (versus those without).

Table 18. The distribution of instances with and without locative modification

		13th	14th	15th	16th	17th	18th	sum
staan	with	25	129	164	27	93	73	511
	without	14	82	118	25	123	84	446
zitten	with	20	122	88	23	65	92	410
	without	35	104	75	14	42	110	380
liggen	with	11	105	101	29	20	26	292
	without	17	64	76	22	12	12	203

Figure 11. Proportion of instances with locative modification



	13th	14th	15th	16th	17th	18th
staan	64.1%	61.1%	58.2%	51.9%	43.1%	46.5%
zitten	36.4%	54.0%	54.0%	62.2%	60.7%	45.5%
liggen	39.3%	62.1%	57.1%	56.9%	62.5%	68.4%

As can be seen in the table and the figure, each verb shows a different tendency. Only *staan* shows a downward trend, from 64.1% to 46.5%, and this is statistically significant (Kendall's tau = -0.87, p = 0.02). Meanwhile, the proportions for *zitten* and *liggen* rather stay stable. *Zitten* shows relatively fixed proportions around 54–60% with low points in the 13th and 18th centuries, while *liggen* shows an upward trend from 39.3% to 68.4%, which is not statistically significant (Kendall's tau = -0.60, p = 0.13). It should be noted, however, that the proportions mostly hover between 50–70% for all three posture verbs. Even in the latest century investigated, more than 45% of the sentences occur with a locative modifier.

Two examples with locative modification are given in (39).

(39) a. Dat witte meysje, dat daar ginder **sit en schreyt** [1518]
'that white girl, who sits and cries over there'
b. dat is een mooi voogeltje, dat daar **ligt te slaapen**. [2232]
'that is a beautiful bird, that lies sleeping there'

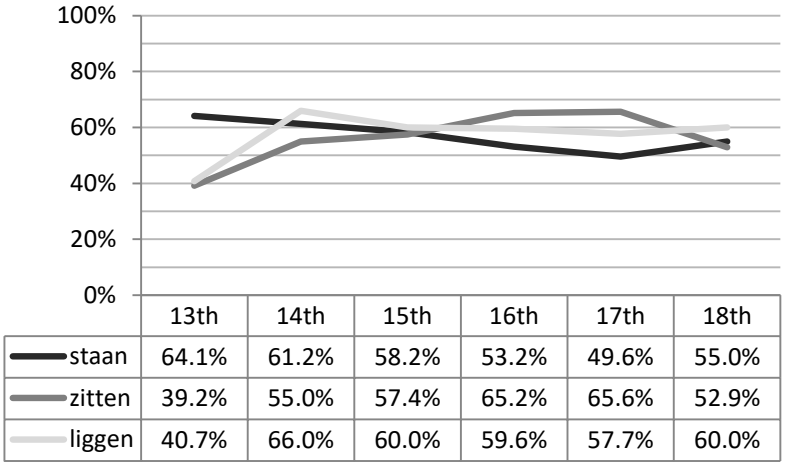
In (39a), *daar ginder* 'over there' is considered to be a locative adverbial associated with the posture verb *sit* (= *zit* 'sits'); the same holds for the adverb *daar* 'there' and the posture verb *ligt* 'lies' in (39b). The fact that locative modification, as illustrated in (39), never becomes infrequent during the period under study could indicate that the postural/locative meaning of posture verbs has remained stable over time.

It is also expected that the construction with *en(de)* would be more frequently modified by locative modifiers at its last stage of development, given that the progressive *en(de)* construction was lost at that point, and instances with *en(de)* should come to be interpreted as coordinate structures involving lexical posture verbs (cf. section 3.3.5.). The number of instances with and without locative modification in the *en(de)* construction are reported in Table 19, and the corresponding proportions are visualized in Figure 12.

Table 19. The distribution of instances of the *en(de)* construction with and without locative modification

		13th	14th	15th	16th	17th	18th	sum
staan	with	25	128	152	25	66	22	418
	without	14	81	109	22	67	18	311
zitten	with	20	115	81	15	42	9	282
	without	31	94	60	8	22	8	223
liggen	with	11	101	93	28	15	3	251
	without	16	52	62	19	11	2	162

Figure 12. Proportion of instances of the *en(de)* construction with locative modification



As can be observed from the table and the figure, the proportions stay relatively stable around 50–70%, with some outliers such as 39.2% for *zitten* and 40.7% for *liggen* in the 13th century. The patterns for the *en(de)* construction seem to align with the overall patterns for locative modification,

shown in Figure 11; in particular, the proportions do not increase in the last centuries. In other words, no specific development for the *en(de)* construction is found in the data with regard to this feature.

In sum, it seems that the construction underwent a slight decrease in locative modification with *staan*, though not with *zitten* and *liggen*. This may indicate that there is a difference between the verbs in terms of how they developed: *staan* seems to have gradually weakened its status as a postural/locational (i.e. lexical) verb, while *zitten* and *liggen* remained relatively unchanged in this respect. Attention should also be paid to the fact that the proportions stay around 50–70% with all of the verbs, which means that locative modification was not a rare phenomenon at any point during the period studied. This suggests that posture verbs largely retained their postural meaning and hence were compatible with locative modifiers throughout the period under study, although locative modification is no longer obligatory when the posture-verb construction is a grammaticalized progressive construction.

5.4.4 4.4.4. Hypothesis 13

Backgrounding of the postural/locative meaning of posture verbs, as presented in the previous section (4.4.3.), is expected to have proceeded hand in hand with the foregrounding of their temporal semantics and the acquisition of progressive aspectual meaning (cf. section 3.3.2.). This temporal profile can be further emphasized by temporal modifiers that highlight the duration of the activity described by the second verb (e.g. *de hele dag* 'the whole day').[25] Accordingly, we can hypothesize as follows:

> Hypothesis 13
> Instances with one or more temporal modifiers expressing the duration of time increase in proportion in the course of grammaticalization.

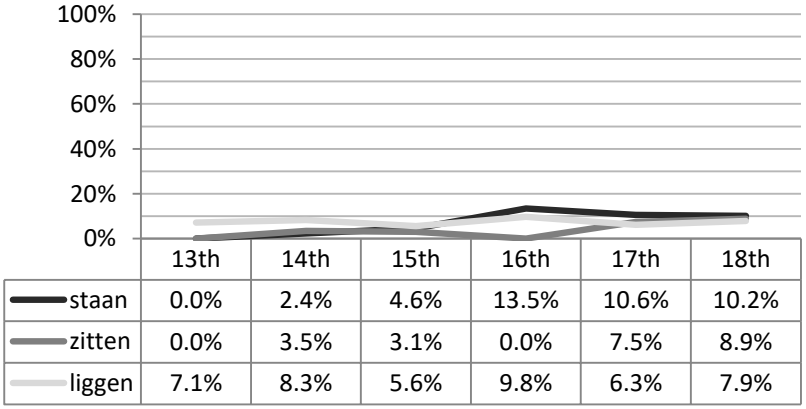
Table 20 presents the number of instances with and without durative temporal modification and Figure 13 visualizes the diachronic development of the proportion of instances with durative temporal modification.

[25] Non-durative temporal adverbials are not included in this analysis; these include, for example, *nu* 'now' and *deze maandag* 'this Monday'.

Table 20. The distribution of instances with and without durative temporal modification

		13th	14th	15th	16th	17th	18th	sum
staan	with	0	5	13	7	23	16	64
	without	39	206	269	45	193	141	893
zitten	with	0	8	5	0	8	18	39
	without	55	218	158	37	99	184	751
liggen	with	2	14	10	5	2	3	36
	without	26	155	167	46	30	35	459

Figure 13. Proportion of instances with durative temporal modification



	13th	14th	15th	16th	17th	18th
staan	0.0%	2.4%	4.6%	13.5%	10.6%	10.2%
zitten	0.0%	3.5%	3.1%	0.0%	7.5%	8.9%
liggen	7.1%	8.3%	5.6%	9.8%	6.3%	7.9%

The table and figure reveal that the proportions of instances with a durative temporal modifier are always below 13.5%. These low proportions are not surprising, as this kind of marking is optional. For *staan* and *zitten*, the proportions increase slightly over the period studied, particularly in the last three centuries (rising to around 10–13% for *staan* and 7.5–9% for *zitten*). For *staan*, the differences in proportion between the 14th century and the 17th and 18th century are statistically significant (pairwise comparison using Fisher's exact test, $p = 0.01$ and $p = 0.03$ respectively). *Staan* may therefore be characterized by a somewhat higher co-occurrence with durative temporal modifiers in the Early Modern Dutch period compared to the Middle Dutch period. *Liggen*, meanwhile, shows a rather stable pattern, around 7% on average.

Examples with durative temporal modification are given in (40). Example (40a) is from the 14th century and (40b & c) are from the 18th century.

(40) a. Daer de proefst Florens **lach** / **Ende wachte** nacht ende dach [1814]
'where the dean Florens lay and waited night and day'
b. myn neef heeft lang hier voor de deur **staan wachten** [889]
'my nephew/cousin has been standing and waiting here in front of the door for a long time'
c. Zy **zit** een uur **te ontbyten**, zonder iets te doen [1690]
'she is sitting and having breakfast for an hour, without doing anything'

Example (40a) includes *nacht ende dach* 'night and day', (40b) includes *lang* 'for a long time', and (40c) includes *een uur* 'for an hour', which are regarded as durative temporal modifiers.

With regard to the development of the *en(de)* construction, temporal modification is expected to become relatively infrequent in the last centuries due to the disappearance of the progressive *en(de)* construction (cf. section 3.3.5.). Based on the data, it is certainly true that instances of the *en(de)* construction with a temporal modifier are infrequent in the 17th and 18th centuries (12 of 173 instances for *staan*, 6 of 81 instances for *zitten*, and 1 of 31 instances for *liggen*), but this tendency matches the general trend reported in Table 20. Therefore, there is no indication that the *en(de)* construction underwent a specific development in this respect at the end of the period studied.

To conclude, the occurrence of a durative temporal modifier in the construction is infrequent overall. Of the three posture verbs, only *staan* seems to show a slight increase in the proportion of such instances, which could be linked to foregrounding of durative aspect. *Zitten* and *liggen*, on the other hand, are relatively limited in their co-occurrence with durative temporal modifiers (proportions between 0–9.8%) and thus do not appear to develop over time in this respect.

5.4.5 4.4.5. Hypothesis 14

As the *en(de)* construction becomes more grammaticalized, the posture verb and the second verb are expected to lose their mutual independence and increasingly behave as a two-verb unit. One of the consequences of this development is that it becomes impossible to negate individual verbs. In

ordinary coordination, both the posture verb and the second verb can in theory be individually negated, as demonstrated in (41).

(41) a. Die avond **lag** zij niet vroeg in bed, **en las** een spannend boek.
'that evening, she did not lie early in bed, and read an exciting book'
b. (…) dat hij voor de deur **stond en** niet **wist** wat te zeggen.
'(…) that he stood in front of the door and did not know what to say'

In (41a), the negator *niet* (underlined) is in the position to negate *lag* 'lay', i.e. after the verb it modifies. On the other hand, in (41b) only the second verb is negated. This example also shows that in a subordinate clause, the negator is placed before the verb it modifies (here, *wist* 'knew').

As the construction becomes more grammaticalized, the negator for the posture verb is expected to take scope over the whole verbal complex, as shown in (42).

(42) Wie van u is, die enen toern tymmeren wil, **sit** hi niet ierst **ende rekent** den cost [1077]
'who of you is the one who wants to build a tower, who does not sit first and calculate the costs'

In this example, the negator *niet* 'not' is in the position to negate *sit* (= *zit* 'sits'), but, semantically, it is interpreted as negating the whole verb sequence (i.e. the action of sitting and calculating).[26] When one negator takes scope over the whole verbal complex, as in (42), an individual negator for the second verb would be unnecessary or even redundant. Under this view, the proportion of instances with an individual negator for the second verb would decrease as the *en(de)* construction grammaticalizes. The hypothesis can therefore be formulated as follows:

Hypothesis 14
In the *en(de)* construction, negators that modify only the second verb decrease in proportion in the course of grammaticalization.

[26] The translation of this part (Gospel of Luke 14: 28) in Modern Dutch is 'Want wie van jullie die een toren wil bouwen gaat niet eerst de kosten berekenen' (Nieuwe Bijbelvertaling), and in Modern English 'Suppose one of you wants to build a tower. Won't you first sit down and estimate the cost to see if you have enough money to complete it?' (New International Version).

Table 21 presents the number of instances where a negator appears in the position to negate the posture verb (e.g. (41a), (42)), or only the second verb (e.g. (41b)).

Table 21. The distribution of instances with a negator for the posture verb (PV) or the second verb (V^2)

		13th	14th	15th	16th	17th	18th	sum
staan	for PV	0	0	1	0	0	0	1
	for V^2	1	1	2	0	0	1	5
zitten	for PV	3	7	0	0	0	0	10
	for V^2	0	1	2	0	2	0	5
liggen	for PV	0	0	0	0	0	0	0
	for V^2	0	2	1	0	0	0	3

Clearly, the overall number of instances with a negator is very low for all three verbs (6 of 729 instances for *staan*, 15 of 505 instances for *zitten*, and 3 of 413 instances for *liggen*). These low frequencies make it difficult to evaluate the change in proportion from a diachronic perspective; however, some observations can be made. For *staan* and *liggen*, instances with a negator in the position to negate the second verb are more frequent than those with a negator in the position to negate the posture verb. An example with *staan* is given below.

(43) hy **staat** als een gek, **en weet** niet wat te antwoorden [891]
'he stands like an idiot and does not know what to answer'

In this example, the negator *niet* is in the position to negate the second verb *weet* 'knows'.

Zitten, meanwhile, shows the opposite trend; there are more instances with a negator in the position to negate the posture verb. In these instances, the negator can be interpreted as taking scope over the whole verbal complex, as in examples (42) and (44). It should be noted, however, that all ten examples with *zitten* in the 13th and 14th centuries come from the same part of the Gospel of Luke (14: 28 & 31).

(44) Of wat coninc isder, die strijt leveren sal yeghens enen anderen coninc, **sit** hi niet irst **ende dencket**, of hi mit tien dusent ghemoeten mach den ghenen die mit twintich dusenten tot hem comet? [1078]

'or what king is there, who is to fight against another king, and does not sit first and think if he can face the one who comes against him with twenty thousand (soldiers), with ten thousand?'

In this example from the 14th century, the negator *niet* should be interpreted as negating not only *sit* 'sits' but also *dencket* (= *denkt* 'thinks').[27]

Besides these ten examples with *zitten*, only one other instance of a posture-verb negator is found; this instance, with *staan*, comes from the 15th century, and is provided in (45). Note that in this example the negator only takes scope over the posture verb (not the whole verbal complex).

(45) Selich is die man die (…) niet en **stont** in den weghe der sundere ende niet en **sat** in den stole der steruinghe [329][28]
'blessed is the man who (…) did not stand in the way of sinners and did not sit in the chair of death'

This example includes two pairs of negators (both underlined): one pair for the posture verb *stont* 'stood' and the other for the second verb *sat* 'sat'. The fact that each verb is accompanied by an individual negator indicates that this is a case of coordination of two negated clauses. Except for this example, no further instances were found with a negator that exclusively negates the posture verb.

In sum, the instances with a negator for the second verb and for the posture verb are roughly evenly distributed (13 and 11 instances, respectively), but the latter mostly comprises instances from the Gospel of Luke, which is one of the most repeated text sources in the database (cf. footnote 9 in 4.2.1.). Considering this point, the pattern with a negator just for the second verb seems to be slightly more widespread than the pattern with a negator in the position to (also) negate the posture verb. At the same time, however, the data for negators are limited (24 instances in total), which

[27] The modern translation of this passage (from the Gospel of Luke 14: 31) in Modern Dutch is 'En welke koning die eropuit trekt om met een andere koning oorlog te voeren, zal niet eerst bij zichzelf te rade gaan of hij wel met tienduizend man kan optrekken tegen iemand die met twintigduizend man tegen hem oprukt?' (Nieuwe Bijbelvertaling), and in Modern English 'Or suppose a king is about to go to war against another king. Won't he first sit down and consider whether he is able with ten thousand men to oppose the one coming against him with twenty thousand?' (New International Version).

[28] Recall that negation in Middle Dutch commonly includes two parts (*en* and *niet*), as shown in (18) in 4.2.3.

makes it difficult to evaluate the diachronic development of the *en(de)* construction with a negator.

5.4.6 4.4.6. Summary of the analyses concerning the modifier

The analyses regarding the placement of adverbials seem to hint at a monoclausal structure for the *en(de)* construction. In 4.4.1., it was suggested that the *en(de)* construction in the posture-verb non-clause-final word order forms both monoclausal and biclausal structures. For the posture-verb clause-final word order, discussed in 4.4.2., the analysis appears to suggest that the verb phrase was strongly integrated from the beginning of the period studied.

In terms of specific types of adverbial modification, locative and temporal adverbials were investigated in 4.4.3. and 4.4.4. The results in 4.4.3. suggest that locative modification was a common phenomenon during the period studied, possibly suggesting that the postural/locative meaning of posture verbs remained stable. Only the data for *staan* show a steady downward trend, in line with Hypothesis 12. This may reflect some backgrounding of the postural/locative meaning of the verb. The data for *zitten* and *liggen*, meanwhile, follow a rather stable pattern with no significant diachronic development. This could imply that these two verbs did not undergo increased backgrounding of the postural/locative meaning over the period studied.

The analysis of durative temporal modifiers in 4.4.4. also presents a distinction between *staan*, on the one hand, and *zitten* and *liggen*, on the other hand. According to the data, *staan* shows a relatively frequent occurrence of temporally modified instances in the 16th–18th century, while *zitten* and *liggen* appear to show a stable pattern without diachronic development. At the same time, the proportions are generally very low for all the verbs (below 13.5%), indicating that temporal modification might not be a good indication of how grammaticalized the construction is.

For both locative and temporal modifiers, the percentages in the 18th century are generally comparable with those reported in Lemmens (2005) for the modern posture-verb progressive construction. According to Lemmens, the posture-verb progressive construction in Modern Dutch is modified for location in 44% of cases (601 of 1369 instances) and for durative temporal aspect in 12.2% of cases (167 of 1369 instances), while the corresponding percentages in the 18th century are 48.1% for location (191 of 397 instances)

and 9.3% for duration (37 of 397 instances; cf. sections 4.4.3. & 4.4.4.). Therefore, it is likely that the posture-verb construction in the 18th century is comparable with the modern construction, especially in terms of locative and temporal modification.

As for the characteristics of the *en(de)* construction in the last phase—that is, when the *te* construction took over the progressive meaning and *en(de)* was reduced to a normal coordinating conjunction—no specific diachronic development was found for locative and durative temporal modification (cf. sections 4.4.3. & 4.4.4.). This means that the expectation that the progressive *en(de)* construction would disappear, and that the accompanying features would be lost, was not borne out by the data (cf. section 3.3.5.).

With respect to negation, the overall number of instances with a negator was too small to provide evidence for any diachronic development (cf. section 4.4.5.).

5.5 4.5. Summary and discussion

5.5.1 4.5.1. Summary of the results

The major developments revealed by the analyses above (sections 4.2. –4.4.) can be summarized as follows.

(46) Verb complex
- a. The lexical diversity of the second verb is temporarily restricted in the 15th and 16th centuries with *staan*, but not with *zitten* and *liggen*. (4.2.1.)
- b. The semantics of the second verb stay stable, except for the semantic feature of telicity. (4.2.2.)
- c. *Ende* reduces to *en* over time; this change proceeds slightly faster within than outside the posture-verb construction. (4.2.3.)
- d. The structure [PV_{fin} *en(de)* V^{2}_{inf}] is rarely found. (4.2.4.)
- e. The connector *te* is mainly used from the 17th century onward. (4.2.5.)

(47) Noun

The object of the second verb is rarely placed before the connector in the *en(de)* construction. (4.3.3. & 4.3.4.)

(48) Modifier
- a. In the posture-verb non-clause-final word order, adverbials may be placed either between the posture verb and *en(de)*, or after the second verb. (4.4.1.)
- b. In the posture-verb clause-final word order, adverbials are mostly placed before the verbal complex. (4.4.2.)
- c. Locative modification remains common overall; for *staan*, there is a decrease in frequency over time which is statistically significant. (4.4.3.)
- d. Durative temporal modification occurs occasionally; for *staan*, there is a small increase in frequency over time which is statistically significant. (4.4.4.)
- e. Locative and durative temporal modification both show stable frequencies over time with *zitten* and *liggen*. (4.4.3. & 4.4.4.)

According to the analyses reported in the previous sections, the data reflect the general development from the old type of construction with *en(de)* to the new type with *te* (45e). The results reported in 4.2.5. clearly illustrate that the *en(de)* construction decreases in frequency in the 17th and 18th centuries, while the *te* construction becomes more frequent in the same period.

With regard to the *en(de)* construction, the data confirm the reduction of the connector from *ende* to *en* (46c). As to whether the *en(de)* construction developed from a biclausal to a monoclausal structure, the evidence seems to be contradictory. The findings on the placement of the object (in 4.3.3. and 4.3.4.) seem to suggest that the construction is fundamentally biclausal (47). On the other hand, the findings on the placement of adverbials (in 4.4.1. and 4.4.2.) indicate that the verb phrase has an integrated status, particularly in the posture-verb clause-final word order (48a & b).

What is not confirmed by the data is the semantic and lexical development of the second verb (46a & b). As shown in 4.2.2., the semantics of the second verb do not appear to have developed over time, which seems to indicate that posture verbs did not undergo semantic bleaching. This conflicts with some examples presented in the literature (cf. section 1.3.3), but aligns with the strong semantic compatibility observed for the second verb of the Modern Dutch posture-verb progressive construction (cf. section 1.2.2.). In addition, the expectation regarding the infinitival second verb was not borne out, since only eight relevant instances were found (46d),

indicating that the phenomenon was not widespread in the database for this research (cf. section 4.2.4.).

For some hypotheses, such as Hypothesis 7 on object extraction (cf. section 4.3.2.), we do not have sufficient instances to draw valid conclusions. Furthermore, instances with an overtly realized subject for the second verb (cf. section 4.3.1.) and with a negator (cf. section 4.4.5.) only number 30 and 24 cases respectively, making it difficult to observe diachronic changes.

In summary, the development of the posture-verb construction from the *en(de)* to the *te* construction is confirmed by the data. The conflicting results regarding the structure of the *en(de)* construction (47, 48a & b) and verb-specific characterization (46a & 48c-e) will be discussed in detail in the next section.

5.5.2 4.5.2. Discussion

The question arises of whether the *en(de)* construction can be characterized as monoclausal or biclausal. One of the structural indications of monoclausality was the infinitival second verb (i.e. [PV_{fin} *en(de)* V^2_{inf}]). As described in 3.2., when the two verbs do not agree in finiteness, this could suggest that the original coordinating conjunction *en(de)* is functioning as an infinitive marker in a comparable manner with *te*; this would in turn indicate that the verbal elements comprise an integrated unit as in the *te* construction. Given that the phenomenon occurred only sporadically (as revealed by the analysis in 4.2.4., see also (45d)), it seems that *en(de)* never functioned systematically as an infinitive marker, and the *en(de)* construction seems not to be comparable with the *te* construction in this respect. The finding with regard to infinitival second verbs is thus one reason to view the *en(de)* construction as monoclausal, albeit not in the same way as the *te* construction.

Moreover, the analyses in sections 4.3.3. and 4.3.4. reveal that the object of the second verb is rarely placed before the connector, suggesting that the *en(de)* construction is mostly treated as biclausal. On the other hand, the analyses regarding the placement of adverbials seem to indicate that the construction is monoclausal: structures which are assumed to indicate monoclausality are found regularly in the posture-verb non-clause-final word order (48a) and are even frequent in the posture-verb clause-final word order (48b). One way to deal with these seemingly contradictory results is to interpret such mixed characteristics as indicating pseudo-

coordination. In 3.3.2., the pseudo-coordinate *en(de)* construction was hypothesized to be semantically monopredicative and structurally biclausal, with some monoclausal-like behaviors such as object extraction. It is plausible that the placement of adverbials could also feature among such deviant behaviors.

A possible reason why adverbials are more likely to behave in a monoclausal way is ambiguity in the modification relationship. Some adverbials are ambiguous in terms of whether they can be interpreted as modifying either one of the verbs or both verbs, while this kind of ambiguity does not arise with objects. For example, the adverbial *te nacht* 'in the night' in (49) can be interpreted as modifying either *lach* 'lay' or *sliep* 'slept', or both.

(49) ende daer ic te nacht **lach en sliep**, so quam een stemme dye mi toe riep [2158]
'and when I lay and slept in the night, the voice came that shouted to me'

Since *te nacht* is compatible with both verbs, it is difficult to determine which verb the adverbial is associated with (if not with both verbs), let alone to argue that this instance has a monoclausal structure in which the adverbial of the second verb is preposed. Meanwhile, the same word order (with the adverbial before the posture verb, i.e. [Adv PV *en(de)* V^2]) may be seen as having a monoclausal structure when the adverb is interpreted as modifying only the second verb, as shown in (50) (cf. section 4.4.2.).

(50) Daer hi van vruchte **staet en beeft** [528]
'while he stands and trembles with fear' (= (34c))

In this example, the adverbial *van vruchte* (= *van vrees* lit. 'from fear') is interpreted as being associated with the second verb *beeft* 'trembled'.

In short, the structure with an adverbial before the connector can be interpreted as monoclausal (50) but not necessarily (49). This ambiguity of interpretation may have meant that adverbials relating only to the second verb could still appear before the connector, resulting in frequent occurrences of the structure that is hypothesized to be associated with monoclausality.

Crucially, this kind of ambiguity does not arise with objects. Since posture verbs are intransitive verbs, the object in the structure must be affiliated with the second verb, regardless of where it is placed. Therefore, a structure with an object before the connector (e.g. [PV Obj *en(de)* V^2]) is a

strong indication that the object is preposed and that the posture verb is reduced to a kind of auxiliary. However, as we have seen, posture verbs have generally retained their postural semantics; they never really become bleached (section 4.2.2). Therefore, preposing of the object may have been less easily motivated than preposing of the adverbial. This difference between the structure with preposed adverbials and preposed objects may account for the apparently contradictory results in terms of mono-/biclausality of the *en(de)* construction.

In sum, the *en(de)* construction cannot be strictly characterized as monoclausal. The connector *en(de)* is not an infinitive marker and the object of the second verb is rarely preposed. On the other hand, the frequent placement of the adverbial before the connector may suggest that the construction is not totally biclausal either. The characterization of the *en(de)* construction as mostly biclausal with some deviations aligns with the definition of pseudo-coordination, as presented in 1.2.3. The conclusion is thus that the *en(de)* construction is pseudo-coordinate.

In line with this discussion, it may also be worth pointing out that most instances with *en(de)* in the database lack clear evidence determining whether the structure is monoclausal or biclausal. For example, a sentence such as *[i]ck (…)* ***lagh*** *in mijn slaepkamer* ***en sliep*** [2214] 'I lay in my bedroom and slept' may be interpreted as structurally biclausal with a locative adverbial following the posture verb, but also as a monoclausal structure where the two verbs are placed at the first and the second poles and the adverbial in the middle field. The fact that the majority of instances in the database are ambivalent in terms of structure makes it difficult to evaluate the clausal structure of the *en(de)* construction; however, the conclusion that this construction has a pseudo-coordinate structure is supported by the analyses presented above.

The proposal made here—that the *en(de)* construction is pseudo-coordinate with occasional cases of monoclausal features, even at its most grammaticalized stage—contradicts the initial assumption presented in 3.2. and 3.3. There, it was asserted that the transition from the *en(de)* construction to the *te* construction proceeded with the former gradually developing into a monoclausal structure, followed by the replacement of the connector *en(de)* by *te*. As no monoclausal *en(de)* construction seems to have existed (at least, not on a large scale), the data instead suggest that a pseudo-coordinate *en(de)* construction developed into a monoclausal *te* construction. However, it would be difficult to conceive of this as a gradual development. It would be more reasonable to view the *en(de)* construction and the *te* construction as inherently independent of each other, although both could be used to

express progressive meaning. Under this view, the *te* construction did not develop out of the *en(de)* construction, but rather emerged as a separate posture-verb construction. This assumption aligns with the proposals of Van der Horst (2008) and Van den Toorn (1975), who do not consider the *te* construction as having grown out of the *en(de)* construction (cf. section 1.3.3.). In other words, the current findings align with proposals that assume that the *en(de)* construction and the *te* construction are two fundamentally distinct linguistic phenomena, of which one (the *te* construction) has ultimately supplanted the other.

As the *te* construction does not seem to have grown out of the *en(de)* construction, the question arises how it emerged. The earliest two attestations in my database date back to the 14th century (cf. (21b) in section 4.2.5.). In both cases, the sentences were not exclusively progressive in meaning and were open to other interpretations (e.g. purposive and resultative). These ambiguous attestations could be seen a locus of change, showing the onset of the posture-verb progressive construction with *te*. As a result of this change, the 'on-goingness' became a fixed part of the construction, crystallizing into a progressive construction at some moment in late Middle Dutch or Early Modern Dutch (cf. section 4.2.5.). If we adopt the theory of Van den Toorn (1975: 261ff.) and Van Pottelberge (2002: 163), the establishment of the [*om te* V_{inf}] construction as a purposive construction possibly facilitated the fixation of the *te* construction as a progressive (cf. section 1.2.3.). The present observations on the earliest attestations of the *te* construction lends support to this proposal.

In addition to the general development of the posture-verb construction, individual differences between posture verbs are also observed in the analyses above. On the one hand, *zitten* and *liggen* show a stable pattern (46a & 48e); on the other hand, *staan* seems to develop diachronically in terms of the lexical variety of the second verb (46a) and locative and durative temporal modification (48c & d).

The stable characterization of *zitten* and *liggen* is also reflected in their preferences for certain second verbs (cf. Table 3 in 4.2.1.). The former shows a strong orientation toward *eten* (124 of 380 occurrences) between the 13th and 16th century, and the latter shows a strong orientation toward *slapen* (122 of 441 occurrences) throughout the whole period studied. The repeated occurrence of these idiomatic verb pairs, i.e. *zitten en(de) eten* (lit. 'sit and eat') and *liggen en(de)/te slapen* (lit. 'lie and/to sleep'), could have facilitated the verb sequence being interpreted as a unit, but may not be strongly linked to grammaticalization. In other words, the development of *zitten* and *liggen* may be regarded as the fossilization of such idiomatic expressions—

especially in the case of *liggen*, which decreased in frequency as a general locative verb, further strengthening its orientation toward *slapen* in Early Modern Dutch. With regard to *zitten*, the idiomatic combination of *zitten en(de) eten* seems to have subsided toward the end of Middle Dutch (cf. section 4.2.1.). This downward trend is probably reflected in the tendency of *zitten* to occur less frequently with *en(de)* in general (cf. Figure 2 in 4.1.). Despite possible fossilization, the construction with *zitten* and *liggen* first participated in the *en(de)* construction and later in the *te* construction, just like *staan* (cf. section 4.2.5.). Therefore, the developments of *zitten* and *liggen* could still be considered as part of the grammaticalization of the posture-verb progressive construction.

Besides, the repeated occurrence of certain verb types with *zitten* and *liggen* could be linked to the relatively restricted number of activities one can carry out while sitting or lying. Not many activities are compatible with the lying posture except sleeping, resting, and waiting, for example (cf. Lemmens 2005: 201). The sitting posture could be combined with a wider variety of activities, such as eating, drinking, writing, reading, and watching, but, as noted in 4.2.1., some of these were not common in Middle Dutch (e.g. reading and writing). Since the postural meaning of the verbs never became bleached on a large scale (cf. section 4.2.2.), the kind of activities that can combine with the posture has probably had a great impact on the variety of second verbs throughout the centuries.

On the other hand, *staan* seems to have undergone some diachronic development. As described in 4.2.1., the HTR of *staan* develops in three stages with a low point in the 15th to the 16th century, which could be an indication of limited semantic diversity linked to the pseudo-coordinate status of the construction with *staan*. Other deviant patterns observed for *staan* compared to *zitten* and *liggen* come from locative and temporal modification. In particular, the proportions of instances modified for location and temporal duration increase over time with *staan*, which contradicts the steady rates of modification with *zitten* and *liggen*. The stable rates of modification observed for *zitten* and *liggen* align with the fixed semantics of the second verb, which indicates that posture verbs did not undergo semantic bleaching. Although *staan* also shows semantic stability of the second verb (cf. section 4.2.2.), the adverbial modification seems to have developed diachronically.

It is not clear from the data why only *staan* developed in these respects. With regard to HTRs, the three-stage development of the HTRs of *staan* could be regarded as a deviant pattern probably influenced by the diachronic development of the use of the verb (e.g. as a quotative in Middle

Dutch), considering the results regarding the semantic variety of the second verb (cf. section 4.2.2.). This pattern may also have been influenced by extra-linguistic factors, as observed for *zitten*. With regard to adverbials, the proportion of instances with *staan* that have temporal modification grows from 0% in the 13th century to 10.2% in the 18th century (cf. section 4.4.4.). Still, the overall infrequency of temporal modification could be seen as aligning with the low proportions of modification observed for *zitten* (4.9% on average) and *liggen* (7.3% on average). As such, the growth could be considered a marginal phenomenon which does not contradict the stable semantic characterization observed for the other posture verbs. For locative modification with *staan*, the proportion decreases from 64.1% in the 13th century to 46.5% in the 18th century (cf. section 4.4.3.). Although this drop should not be dismissed, it is also true that instances without locative modification always account for a sizeable proportion of the data, in line with the other posture verbs.[29] Therefore, despite some verb-specific developments, the stability of the postural/locative meaning of *staan* could be regarded as comparable with *zitten* and *liggen*. In short, there is not conclusive evidence to view *staan* as having a divergent pattern of development, compared to *zitten* and *liggen*.

5.5.3 4.5.3. Some reflections on sources and analytic tools

Before presenting a final proposal, it is useful to reflect on the limitations of the data sources used, and on some of the implications.

As already indicated in 2.3., the data sometimes showed a clear distinction between Middle Dutch and Early Modern Dutch; however, this corresponds not only to the historical stages of the language, but also to the boundaries of the corpora used. As mentioned in Chapter 2, most of the Middle Dutch period (i.e. 14th–15th century) is covered by the *Corpus Middelnederlands* while the Early Modern Dutch period (i.e. 17th–18th century) is covered by the *Corpus literair Nieuwnederlands*. Some of the results seem to reflect this distinction, including the frequencies and proportions of the instances with *te*. As observed in 4.1. and 4.2.5., instances with the connector *te* are mostly restricted to Early Modern Dutch (i.e. 17th–18th century) in my

[29] Compare this result with the Swedish pseudo-coordinate construction with *sitta*, of which about 70% of instances are not modified for location in the modern language (Hilpert & Koops 2008: 253).

database. This coincides with previous research and could be regarded as observable language change; however, the clear boundary between Middle Dutch (with almost no instances with the connector *te*) and Early Modern Dutch (with almost all attested instances involving *te*) might instead reflect the change in data source, i.e. a difference between types of data in the corpora. But although there may be a discrepancy between the data sources for Middle Dutch and Early Modern Dutch, the data do nonetheless seem to be reflective of gradual language change, witness, for example, the reduction of *en(de)* to *en* (cf. the discussion of Hypothesis 3 in section 4.2.3.). The data can therefore be considered reliably informative.

Another issue worth reflecting on is the potential influence of rhyme on the results. As pointed out in the beginning of this chapter, rhymes could affect the word order of a sequence: elements can appear in a non-canonical order (cf. section 4.1.). This point was taken into account in the analyses (cf. 4.2.4.) but not in a systematic way, due to two reasons. First, the distinction of genres is not consistent between corpora. As described in section 2.4., the Middle Dutch corpora provide a bipartite classification of verse and prose, while the Modern Dutch corpus consists of three text genres, namely, drama, prose, and non-fiction. This made it difficult to handle the data in a uniform manner. Second, the data size was not large enough to retain detailed classifications of relevant attestations. For example, when the data for Hypothesis 10 regarding the placement of adverbials in the *en(de)* construction were further split into prose and verse, each data set had only 8 attestations on average per century for two types of word order (i.e. 4 attestations on average per word order). These numbers are not large enough to discuss diachronic development of one category in comparison to the other one in a meaningful way. Therefore, in the present analysis, the whole relevant data set was treated comprehensively under the assumption that the influence of rhyme was constantly present but can be neglected from a holistic viewpoint. In this way, each category of data retained as many attestations as possible, which enabled meaningful analysis. This assumption possibly underestimated the potential influence of rhyme but was realistic considering the characteristics of the data available.

Additionally, potential interactions between the hypotheses are not discussed in the present analysis. It may well be the case, for example, that changes in word order interact with the change from *en(de)* to *te*. How each feature may have contributed to the replacement of the *en(de)* construction by the *te* construction can be assessed, for instance, by conducting a regression analysis for the dataset per century and comparing the regression coefficients. But there are problems for applying this kind of statistical

modeling to my dataset. First, we see the systematic absence of data (e.g., the number of instances of each construction per century is highly imbalanced, see Table 9 in 4.2.5.). Second, for some features only a part of the data is relevant (e.g., the analyses on the noun are solely based on the data of the *en(de)* construction). Therefore, the data available for modeling is limited, which impairs the validity of the results. Moreover, before applying any statistical modeling, it is important to check basic descriptive statistics, which is what I have reported in the previous sections. The above description thus constitutes a meaningful first step, awaiting further analytical methods applicable to the data.

Still, an attempt was made, as a test of costs and benefits, to conduct a logistic regression analysis for some explanatory variables to which these objections do not (fully) apply. These were restricted to verbal parameters (i.e. the information regarding the posture verb (2), the semantic features of the second verb (4 d-g), and the location of the posture verb (9), as mentioned in Appendix A), since all instances have two verbs in each attestation and, theoretically, there are no missing values. Furthermore, the data of the 17th and 18th century were selected in order to secure enough attestations for both constructions (response variable). Two models were built, based on the data for each century. These models do not differ much in terms of which variables are linked with either construction, indicating that most (if not all) relevant information relating to such links has been captured. The only notable result of the analysis was that the atelic semantic feature seems to be strongly linked to the *te* construction in the 18th century. This probably reflects the high frequency of an atelic second verb in the *te* construction (208 of 397 instances). Further analysis of the atelic semantic feature in both the *en(de)* and the *te* constructions could thus be an option for future study. But the fact that this was the only result of the regression analysis, for one of the few cases in which it could be applied at all, indicates that we will need much richer data sets before this kind of statistical modeling can be used fruitfully.

5.5.4 4.5.4. Final proposal

This section discusses how the observations presented in (46-48) are spread over the centuries and how they can be temporally ordered in the form of a step-by-step developmental pathway, as proposed in 3.3. The proposed grammaticalization path comprises five stages: Stage 1 for coordination,

Stage 2 for pseudo-coordination, Stage 3 for the monoclausal *en(de)* construction, Stage 4 for the transition from the *en(de)* construction to the *te* construction, and Stage 5 for the dominance of the *te* construction as the only posture-verb progressive construction (cf. Table 1 in 3.3.).

The major observation of the analyses in relation to the grammaticalization path is that the proportion of instances with the connector *te* increases from the 17th century, while the proportion of instances with *en(de)* decreases in the same period. Hence, a transitional period from the *en(de)* to the *te* construction, i.e. Stage 4, is verified by the data. The transition from Stage 4 to Stage 5 could be determined based on when the progressive *en(de)* construction disappeared (cf. section 3.3.5. & (12b) in 3.3.6.). An overall decrease in frequency is certainly observed, in particular in the 17th and 18th centuries (from 223 to 62 instances), presumably reflecting the increasing dominance of the *te* construction and the loss of the progressive *en(de)* construction (cf. section 4.2.5.). Other changes expected to coincide with the disappearance of the progressive *en(de)* construction concern the rate of locative and durative temporal modification (i.e. Hypotheses 12 and 13), and the placement of adverbials (i.e. Hypotheses 10 and 11) and the object (i.e. Hypotheses 8 and 9). The analyses regarding modification (i.e. Hypotheses 10-13) do not indicate that the progressive *en(de)* construction was becoming lost during the period studied (cf. section 4.4.6.). The analyses regarding nouns, on the other hand, may suggest the gradual loss of the progressive *en(de)* construction toward the 18th century, based on the relative timing of the latest attested instances of object extraction and of preposed objects of the second verb (cf. section 4.3.5.). Consequently, Stage 4 (transition from the *en(de)* to the *te* construction) in the 17th century and Stage 5 (dominance of the *en(de)* construction) in the 18th century will be distinguished in the following.

Apart from the behavior of objects, the *en(de)* construction seems to have stayed mostly stable during the period studied. This observation is based on the analyses of semantic and lexical variety of the second verb, especially with *zitten* and *liggen* (cf. sections 4.2.1. & 4.2.2.), and adverbial modification (cf. 4.4.1.–4.4.4.), which do not show much evidence of diachronic change. In particular, the stability of the *en(de)* construction in the earlier phases suggests that the development from coordination (Stage 1) to pseudo-coordination (Stage 2) is not reflected in the data (cf. (9) in 3.3.6.); rather, the *en(de)* construction seems to have been pseudo-coordinate throughout the period studied.

The proposal that the *en(de)* construction was pseudo-coordinate from the earlier periods is supported by further evidence from the analyses.

Indicators of early grammaticalization, such as objects of the second verb being placed before the connector, already appear in the 13th century. Additionally, as shown in 4.1, the early instances displaying the IPP effect (i.e. from the 14th and 15th centuries) also support the view that posture verbs were already (quasi-)auxiliaries in the 14th and 15th centuries.

The characterization of the *en(de)* construction as generally stable also entails that the construction did not develop into a monoclausal structure (cf. Stage 3). As concluded in the previous section, we may assume that the *en(de)* construction was fundamentally biclausal in structure, except for some occasional cases. Therefore, Stage 3 (a monoclausal construction with *en(de)*) should be abandoned. The stability of the *en(de)* construction could also support the view that it did not gradually develop into the *te* construction; that is, the *en(de)* and the *te* construction should be regarded as inherently independent constructions (cf. section 4.5.2.).

In summary, the results suggest that the period studied (13th–18th century) covers the time when the pseudo-coordinate *en(de)* construction was prevalent, and the time when the *en(de)* construction was replaced by the monoclausal *te* construction. Specifically, the Middle Dutch period (i.e. 13th–15th century) and the beginning of the Early Modern Dutch period (i.e. 16th century) correspond to the stage when the pseudo-coordinate *en(de)* construction was prevalent (i.e. Stage 2), while the 17th century corresponds to the transition from the *en(de)* construction to the *te* construction (i.e. Stage 4), and the 18th century corresponds to the dominance of the *te* construction (Stage 5). This proposal necessarily implies that Stage 1 (coordination) probably corresponds to the period before the 13th century and hence possibly to Old Dutch. These observations are summarized in Table 22, and example sentences corresponding to each stage are given below in (51-54).

Table 22. Development of the Dutch posture-verb progressive construction

Stage	Form/meaning
Stage 1 [pre-1200]	Biclausal/bipredicative or monopredicative S PV_{fin} Adv_{loc} *en(de)* (S) V^2_{fin}
Stage 2 [1200–1600]	Biclausal/monopredicative S PV_{fin} Adv_{loc} *en(de)* V^2_{fin}
Stage 3 [1600–1700]	Biclausal/monopredicative S PV_{fin} Adv_{loc} *en(de)* V^2_{fin} Monoclausal/monopredicative S PV_{fin} Adv_{loc} *te* V^2_{inf}
Stage 4 [1800–now]	Monoclausal/monopredicative S PV_{fin} Adv_{loc} *te* V^2_{inf}

(51) [Stage 1]
Si **saten ende** si **aten** [1127]
'they sat, and they ate' (= (22a))

(52) [Stage 2]
a. Ende doe si **saten ende aten**, seyde Ihesus (…) [1071]
'and when they sat and ate, Jesus said (…)'

(53) [Stage 3]
a. s' Nachts als ick **lach en sliep** (…) [2202]
'at night, when I lay and slept (…)'
b. PApa [*sic.*], Helena **stond** daar met een man **te praaten** [629]
'papa, Helena was standing there talking with a man'

(54) [Stage 4]
zy **liggen** na het eeten **te rusten** [2220]
'they are lying and resting after eating'

In the database for this research, the *en(de)* construction was mostly found between the 13th–17th century. The *te* construction, meanwhile, increased in frequency from the 17th century and became the only posture-verb construction in Modern Dutch. It is reasonable to assume that the characteristics of the *te* construction in the 18th century resemble those of the Modern Dutch construction; this view is supported by the comparable proportions of instances with locative and temporal modification and the

comparable variety of co-occurring verbs in the 18th and 21st centuries (cf. sections 4.2.1. & 4.4.6.). Stage 1 (coordination), meanwhile, does not seem to be clearly reflected in the data and remains a hypothetical stage, which possibly preceded the pseudo-coordinate stage of the construction.

Although two constructions are distinguished here, it is notable how strongly the postural meaning was retained throughout the period studied. Judging from the stability of the semantics of the second verb, there was no semantic bleaching of posture verbs, and thus there was always a requirement for the second verb to be semantically compatible with the posture verbs.

Comparing the summary table here (Table 22) with the initial version in section 3.3. (Table 1), one key difference is the removal of Stage 3 (monoclausal *en(de)* construction), since this stage was not supported by the data. Another difference is that locative modifiers now occur throughout the table (indicated by Adv_{loc}). As revealed in 4.4.3 (Hypothesis 12), locative modification occurs with more than half of the instances on average. Therefore, it could be argued that it remained part of the posture-verb construction over time. Another difference is the deletion of the sentence pattern [S PV_{fin} *en(de)* V^2_{inf}]. As seen in 4.2.5., the structure with a finite posture verb and an infinitival second verb with the connector *en(de)*, while not entirely absent, is extremely infrequent in my database (six instances in total). This indicates that the phenomenon was not among the key developments of the construction.

The grammaticalization path proposed in Table 22 is a general summary of what is found in the analysis, and as such, omits a few of the findings. For example, it disregards the difference in word order and does not reflect the gradual replacement of the connector *ende* by *en*, as presented in 4.2.3. Overall, however, the table provides a clear and concise overview of how the Dutch posture-verb progressive constructions developed from the 13th to the 18th century, based on the analyses conducted in this chapter.

In the next chapter, the pseudo-coordinate posture-verb construction in Modern German is investigated to assess how grammaticalized it is relative to the Dutch *en(de)* construction. Finally, Chapter 6 provides a summary and discussion of the findings of the dissertation, in which the relationship between the *en(de)* construction and the *te* construction emerges as a competition that is ultimately won by the unambiguously progressive, and hence functionally superior *te* construction.