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

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Chapter 5 The posture-verb construction in Modern German

5.1 Introduction

In Dutch, posture verbs have been used as progressive auxiliaries for several centuries, as demonstrated in the previous chapters. Contrary to Dutch, Modern German posture verbs are not grammaticalized, and they do not form a progressive construction. However, the language does have a formal equivalent of the Dutch *en(de)* construction (i.e. [PV *und* V²]), which seems to show properties of pseudo-coordination. As described in section 1.2.3., pseudo-coordination refers to the phenomenon that two verbs, typically in the same inflectional form, are linked by a coordinating conjunction, with no overt subject of the second verb. In pseudo-coordination, the verbal complex overlaps formally with regular coordination, but is monopredicative and typically shows some grammatical properties that can be linked to monoclausality, such as object extraction (cf. section 2.1.1.). Pseudo-coordination is not widely attested in German, but is it not entirely absent (cf. Van Pottelberge 2002: 146-150). For example, the pseudo-coordinate construction is common in Low German dialects and North High German varieties (Höder 2011, 2012); it is attested particularly with some aspect-like functions, involving the posture verbs *stehen* 'to stand' and *sitzen* 'to sit' (Proske 2017, 2019; see also section 1.2.3.).[1]

Proske (2017, 2019) notes that the German pseudo-coordinate construction with *stehen* and *sitzen* is not clearly grammaticalized as it is in other Germanic languages, such as Swedish and Norwegian; however, she argues that it exists as a conventionalized construction and 'aspectual and subjective meaning components are emerging' (Proske 2019: 133). An example of pseudo-coordination with *sitzen* is given in (1).

(1) weil ich halt da immer nur **sitze und** irgendwas **schreibe** oder **lerne**
'because I always sit there and write or learn something' / 'because I am writing or learning all the time' (= (4a) in Chapter 1)

[1] See the examples in (13) in section 1.2.3. for instances of pseudo-coordination with non-posture verbs.

In (1), the posture verb *sitze* 'sit' is linked by the coordinating conjunction *und* 'and' with the verbs *schreibe* 'write' and *lerne* 'learn', both of which can be interpreted as denoting a temporally extended activity. According to Proske (2019: 128), the new aspectual meaning emerges due to the alignment between the temporal extension of the activities and the temporal unboundedness of *sitzen*, which gives rise to an atelic interpretation of the sentence.

Proske (2019) also includes the posture verbs with the particle *da-* in her study. These are verbs which consist of a posture verb (i.e. *stehen* and *sitzen*) as a base and a separable prefix *da-*. These particle verbs seem to behave similarly to those without the particle.[2] The examples in (2) contain the particle verbs *dasitzen* and *dastehen*, respectively, which introduce 'an interpretation of the V2 event as temporally extended' (*ibid.*: 126) and even highlight this temporal extension of the activity.

(2) a. und dann **sitzen** wir **da und warten**
'and then we sit there and wait' / 'and then we sit there waiting'
(Proske 2019: 127)

b. und Myrte **steht** dann **da und föhnt** sich die Haare als ich komme
'and Myrte stands there and blow-dries her hair when I come' / 'and Myrte is blow-drying her hair when I come'
(= (4b) in Chapter 1)

Moreover, as can be seen in the English translation of (2b), foregrounding of the temporal meaning implies backgrounding of the postural meaning. For the German verbs *(da)stehen* and *(da)sitzen*, Proske notes that the postural meaning 'is clearly bleached' (presumably meaning that the postural semantics are not foregrounded and are not necessarily relevant in the interpretation of the sentence); in her data, 10–15% of the pseudo-coordinate sentences have a potential aspectual interpretation (*ibid.*: 126).

Furthermore, Proske remarks that pseudo-coordination in (2b) indicates that both the action of standing and the action of blow-drying are in progress and unfinished. Thus, according to the author, the pseudo-coordinate structure of the construction serves as an indicator for the concurrence of the two temporally extended and uncompleted activities. In

[2] Detailed characteristics of the particle verbs *dastehen*, *dasitzen*, and *daliegen* can be found in 5.2.2.

light of these characteristics of pseudo-coordination with posture verbs, Proske interprets example (2b) as showing 'the potential for progressive aspect to grammaticalize out of pseudo-coordinated uses' (*ibid.*: 129).

Proske further analyzes her data with regard to two features: the co-occurrence of a locative modifier and the semantic class of the second verb. Concerning locative modification, she finds that all the instances in her dataset are modified for location, but almost half of them take a deictic adverb, such as *da* 'there' and *hier* 'here', or the particle *da-* as illustrated in (2) (*ibid.*: 126). As for the semantic class of the second verb, both the posture verbs *stehen* and *sitzen* occur mainly with activity verbs, particularly *warten* 'to wait'. They also co-occur relatively frequently with verbs of thinking and perception (e.g. *(sich) denken* 'to think') but less frequently with verbs of communication (e.g. *sagen* 'to say').

In sum, it could be argued that there is a Modern German construction that is comparable with the Dutch posture-verb progressive construction in an earlier form, i.e. [PV *en(de)* V^2]. The emergent status of the Modern German construction and its possible comparability with the earlier Dutch posture-verb construction with *en(de)* raises the question of whether the German construction may develop further. In other words, if the Modern German construction in question shows some commonalities with the Dutch posture-verb construction, these commonalities could predict further grammaticalization along the lines attested for Dutch. In this study, I therefore aim to establish the degree to which the German construction is grammaticalized compared to the Dutch posture-verb progressive construction, and to evaluate the potential of the German construction for further grammaticalization.

5.2 Methods

This chapter concerns Modern German, and as such, the investigation here has a synchronic character; that is, no temporal changes will be examined for the German construction in this chapter. Given that the posture-verb construction is still emergent in German, data from earlier periods is not expected to be informative as to how the construction has developed. The synchronic approach of this chapter differs from the investigation of the Dutch posture-verb progressive construction, which was diachronic in nature (not including the modern language).

Nevertheless, the method of analysis used for the Dutch data—that is, counting the number of relevant instances and calculating ratios—can also be adopted for the German data. This approach makes it possible to describe the contemporary German posture-verb construction from various perspectives that may shed light on the degree of grammaticalization. For the Dutch data, the grammaticalization of the posture-verb construction was hypothesized to be reflected in changes in the proportions of instances with a certain feature in the database (cf. section 3.4.). Since the German data are not diachronic in nature, the analysis in this chapter does not involve comparing proportions relative to an earlier baseline; rather, the analysis explores relative differences in proportion between verb types (e.g. *stehen* compared to *sitzen*). In addition, the results for the Dutch posture-verb construction are used as a tentative benchmark for comparison where needed. Considering all the differences between the Dutch and German data, including the difference in the period under study and the size of the dataset, it is not feasible to conduct a precise comparative analysis, such as one involving statistical tests; however, the comparison between the languages can yield a general picture of how grammaticalized the German posture-verb construction is relative to the Dutch construction.

Moreover, the German data may shed light on the gap in the Dutch grammaticalization path (cf. Table 22 in 4.5.3.) by supplying data for the transition from the first to the second stage (i.e. Stage 1, coordination, to Stage 2, pseudo-coordination). Therefore, the German data may complement the Dutch data by providing indications of how the Dutch construction may have looked at its initial stage.

One apparent difference between the languages should be noted: the existence of the particle verbs, or '*da*-verbs', in German. As demonstrated in (2), the German posture verbs with the particle *da-* behave in a similar way to those without the particle, so that Proske (2019), for example, does not always distinguish between them. On the other hand, Dutch does not have analogous posture verbs with a particle. However, as noted above, the German posture verbs with *da-* also seem to participate in pseudo-coordination and, in some instances, show foregrounded temporal meaning and backgrounded postural meaning (cf. (2b)), which is considered an indication of further grammaticalization by Proske (2019). Therefore, *dastehen*, *dasitzen*, and *daliegen* are included in this study.[3] This decision

[3] There also exist other particle verbs with a posture verb as the base. Of these, the particle most similar to *da-* is *herum-* 'around'. Such verbs are not included in this research, in order to maintain comparability with Proske's studies.

inevitably means diminished comparability with the Dutch data, which only include data for posture verbs without a particle. Further characterization of the *da*-verbs, and a possible role of the *da-* particle in the grammaticalization of the German posture-verb construction, can be found in 5.2.2.

5.2.1 Data source and extraction methods

Since the aim is to relate the findings for German to those for Dutch, the datasets for the two languages should be comparable. Therefore, in selecting a corpus for the German data, one with literary texts is preferable (cf. section 2.1.2.). For this purpose, the *DWDS-Kernkorpus 21 (2000-2010)* was selected. The corpus includes 15,469,000 tokens from 12,184 texts and can be filtered according to four different text genres: *Belletristik* 'belles-lettres', *Wissenschaft* 'science', *Gebrauchsliteratur* 'functional literature', and *Zeitung* 'newspaper'. Furthermore, the corpus is lemmatized and enriched with PoS tagging, enabling automated sentence extraction. Therefore, the literary *Belletristik* sub-corpus (3,477,000 tokens) is selected as a suitable data source which enables comparison with the Dutch data analyzed in previous chapters.

As described in the previous section, this investigation covers not only the three posture verbs (*stehen*, *sitzen*, *liegen*) but also the particle verbs with posture verbs as base (*dastehen*, *dasitzen*, *daliegen*), which is in line with Proske (2019). Since *da* can also be an adverb meaning 'there', it is not always obvious whether a combination of posture verb and *da* constitutes a particle verb or a simplex verb plus adverb. In speech, the two are differentiated by sentence stress patterns;[4] however, in the written language (i.e. the form of data used in this study), there can be ambiguity. In this study, ambiguous cases were classified as particle verbs. Example (3a) shows a non-ambiguous case of a simplex verb (*stehen*) with adverb *da*, and (3b) shows an ambiguous case categorized as a particle verb (*dastehen*).

[4] In speech, the separable particle (*da-*) of the particle verb is stressed (e.g. *dann steht er DA und wartet* 'then he stands (there) and waits', stress indicated by upper case) while the adverb *da* 'there' is not (e.g. *dann STEHT er da und wartet* 'then he stands there and waits'; Duden 2016: 709).

(3) a. Da **stand** er nun **und sah** mit seinen Augen, Augen grell vor Angst, durch uns hindurch. [212]
'there he stands now and looked with his eyes, eyes glaring with fear, through us'
b. Malka **stand da und starrte** den Jungen **an**. [68]
'Malka stood there and stared at the boys'

Example (3a) includes *da* but it is placed in sentence-initial position, which is impossible for a separable prefix. *Da* in (3b), on the other hand, is ambiguous in terms of whether it is a particle or an adverb. Since the sentence lacks any clear indication that the verb should be construed as simplex, it is categorized as containing a particle verb.

This manner of categorization risks incorrectly classifying some cases of adverb *da* as particle *da-*; however, with this approach, no particle verbs are incorrectly classified as simplex verbs. This means that the dataset for simplex verbs is maximally comparable with the Dutch dataset, which only contains simplex verbs.

In studying the Dutch posture-verb progressive construction, three kinds of sentences were extracted from the corpora, as shown in (4) (cf. section 2.1.3.):

(4) a. $PV_{fin/inf}$ ($word^{1-5}$) *en(de)* ($word^{1-5}$) $V^{2}_{fin/inf}$
b. $PV_{fin/inf}$ ($word^{1-7}$) *te* ($word^{1}$) V^{2}_{inf}
c. $PV_{fin/inf}$ ($word^{1-3}$) V^{2}_{inf}

For German, sentences with structure (4a) with the connector *und* were extracted (i.e. [$PV^{1}_{fin/inf}$ ($word^{1-5}$) *und* ($word^{1-5}$) $V^{2}_{fin/inf}$]), using the DDC query language.[5] The extracted sentences were further assessed according to the following criteria, as was done for Dutch (cf. section 2.1.3.).

(5) a. Both verbs have the same agent regardless of whether it is realized as an overt subject (e.g. *der Mann sitzt da und (er) schaut zu* 'the man sits there and (he) watches' is permitted but *der*

[5] The DDC query language is comparable with the CQL (cf. section 2.3.1.). The queries used are: 'stehen #5 und #5 $p=VV*' (1025 hits), 'dastehen #5 und #5 $p=VV*' (26 hits), 'sitzen #5 und #5 $p=VV*' (554 hits), 'dasitzen #5 und #5 $p=VV*' (26 hits), 'liegen #5 und #5 $p=VV*' (356 hits), and 'daliegen #5 und #5 $p=VV*' (7 hits).

Mann sitzt da und die Frau schaut zu 'the man sits there and the woman watches' is excluded).

b. The second verb is not an auxiliary (e.g. *steht und kann gehen* 'stands and can go' is excluded).
c. The second verb is not in the past unless the posture verb is in the past (*sitze und aß* 'sit and ate' is excluded but *saß und aß* 'sat and ate' is permitted)
d. The verbs may be modified by the same auxiliary (e.g. *will liegen und kann schlafen* 'want to lie and can sleep' is excluded but *will liegen und schlafen* 'wants to lie and sleep' is permitted).
e. There is no indication of temporal sequence (e.g. *stand da und klopfte dann* 'stood there and knocked then' is excluded).
f. The posture verb is not a part of a multiword expression with a noncompositional meaning (e.g. *jemandem auf der Pelle sitzen/ liegen* lit. 'sit/lie someone on the peel', meaning 'keep bothering somebody', is excluded).

The sentences meeting these criteria were entered into the database of this study.[6] The method used to annotate the sentences in the database is summarized in Appendix D. The statistical test used for the analysis is again Fisher's exact test (see section 2.4. for more details), and this test was conducted using the programming language R, version 3.6.3 (R Core Team 2018).

5.2.2 Expectations

Based on Proske's observation, the German pseudo-coordinate construction is emergent, meaning that it is possibly somewhere between Stage 1 (coordination) and Stage 2 (pseudo-coordination) of the grammaticalization path proposed for Dutch (cf. Table 22 in section 4.5.3.). Therefore, in the following I first outline the general characteristics of coordination in German, followed by the possible alternations from coordination to pseudo-coordination.

Similar to Dutch, coordination in German is typically understood as connecting two linguistic elements of the same sort (Sommerfeldt & Starke 1998: 230ff., Blühdorn 2008: 4f., Duden 2016: 908), as shown by example (6).

[6] The database file ('database_de.csv') is available in the DataverseNL repository (Okabe 2022).

(6) Die Pinguine waren braun-gelb **und** die Giraffen waren schwarz-weiß.
'the penguins were yellow-brown, and the giraffes were black and white' (Blühdorn 2007: 70)

In this example, the coordinating conjunction *und* coordinates two clauses.

In some cases, the order of the conjuncts contributes to the semantics of the sentences. In the following examples from Blühdorn (2007), the author remarks that the most plausible readings are that 'the connected events are ordered in a temporal sequence' (*ibid.*: 70).

(7) a. Maria ging in die Bibliothek **und** sie bekam Hunger.
'Maria went to the library, and she began to feel hungry'
b. Maria bekam Hunger **und** sie ging in die Bibliothek.
'Mary began to feel hungry, and she went to the library'
(Blühdorn 2007: 70)

In these examples, Maria first went to the library and then became hungry (7a), or vice versa (7b). The sequence can be further interpreted as two sub-events of a larger event (Reich 2008: 286-289). Therefore, some coordinated sentences can be seen as expressing two related events forming one composite interpretation.

When the coordinated conjuncts share one or more elements, the repeated element(s) may stay unrealized (Sommerfeldt & Starke 1998: 230, Duden 2016: 909-912). For example, in (8), the subject pronoun *er* 'he' for the second conjunct is elided.

(8) Er geht jetzt in Buchhandlungen und liest Neuerscheinungen.
'now, he goes in bookstores and reads new publications'
(Reich 2008: 285)

In coordination, modifiers in the first conjunct may have scope not only over this conjunct but also over the second (Höhle 1983: 28f.), as shown by (9).

(9) a. Karl fährt <u>am Abend</u> <u>in Mainz</u> los und kommt <u>am Morgen</u> <u>in Bonn</u> an.
'Karl departs from Mainz in the evening and arrives in Bonn in the morning'
(constructed based on Höhle (1983: 25); translation mine)

b. Deine Freunde sind hoffentlich schon angekommen und verteilen Flugblätter.
'your friends have hopefully already arrived and are distributing flyers' (*ibid.*: 28; translation mine)

c. Karl ist nicht zurückgekommen und hat seine Sachen geholt (sondern das Zeug steht immer noch hier rum).
'Karl has not returned and taken his things (rather the stuff is still standing around here)' (*ibid.*: 30; translation mine)

In (9a), each conjunct takes a locative and temporal adverbial (underlined in the example), which are incompatible with those in the other conjunct. This means that adverbials in each conjunct have scope over that conjunct only. *Hoffentlich* in (9b), on the other hand, has scope over both conjuncts, i.e. the speaker hopes that the friends have already arrived and started distributing flyers. This wide scope also applies to negation: the negator *nicht* 'not' in (9c) has scope over both the first and the second conjunct.

In sum, the general characteristics of coordination with *und* in German are comparable with Dutch in terms of juxtaposition of linguistic elements of the same sort, the possibility of receiving a one-event interpretation, and the possibility of eliding shared elements.

Additionally, German has one specific type of coordination that obligatorily requires a composite reading. This phenomenon is referred to as 'subject gap in finite clause coordination' (henceforth referred to as SLF coordination, after the German term *Subjektlücke in finiten Sätzen*, Höhle 1983, Thiersch 1993: 145ff., Larson 2005: 215-267, Reich 2008, 2009, 2013, Bonitz & Holler 2011, Mayr & Schmitt 2017).[7] Since this phenomenon could affect the structure and the interpretation of instances from the corpus, a detailed characterization is provided in the following.

SLF coordination can be characterized by (i) inversion in the first conjunct, (ii) subject gap in the second conjunct, and (iii) a finite verb placed in clause-initial position (i.e. directly after *und*) in the second conjunct, as illustrated in example (10).[8]

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[7] As pointed out by Larson (2005: 217), there is intense discussion about how the structure of the SLF coordination should be analyzed. It is beyond the scope of this research to examine the validity of the proposed theories. This research focuses on the apparent structure and behavior of SLF coordination, especially with respect to the comparability with [PV *und* V²] coordination.

[8] SLF coordination is also observed in Dutch (Zwart 1991, 2011: 263ff.), but the structure seems to be less acceptable than the German one (?*[n]a Zwolle rijdt deze trein verder als intercity naar Groningen en zal alleen stoppen te Assen* 'after Zwolle this train

(10) Da **stellt** sich jemand vor die Mikrofone **und tut** so, als könne er etwas erklären.
'somebody stands there in front of the microphone, and pretends to be able to explain something' (Reich 2008: 282)

In this example, the first conjunct contains the adverb *da*, followed by a verb in second position; the subject then appears in the position following the verb (a word order known as inversion). The second conjunct starts with a verb and contains no overtly realized subject. This yields a typical SLF coordination structure.

Structurally, SLF coordination has a fixed word order of [Adv V^1 … S … *und* V^2], without allowing any intervening elements between *und* and the following verb (Larson 2005: 219f., Mayr & Schmitt 2017: 10f.). This is demonstrated by (11).

(11) *Gestern musste der Hans morgens mit der Anna frühstücken und **heute** sollte abends mit der Maria ausgehen.
'Yesterday, Hans had to have breakfast with Anna in the morning and today he should have gone out with Maria in the evening'
(Mayr & Schmitt 20017: 11; translation mine)

In this example, the adverb *heute* 'today' is placed after *und* and before the second finite verb *sollte* 'should', which makes the sentence ungrammatical.[9]

With regard to semantics, it is known that SLF coordination has an obligatory one-event interpretation (Höhle 1983: 22, Reich 2008: 285).[10] This

goes on as an intercity to Groningen and will only stop in Assen'; Zwart 1991: 1). Moreover, Larson (2005: 216, footnote 59) notes that "[s]ome Dutch speakers do not accept SLF constructions at all or accept some, but not the others. It is not clear what characteristic makes Dutch SLF examples unacceptable". This vague characterization of SLF coordination in Modern Dutch makes it even more difficult to discuss this phenomenon in a historical context. Therefore, SLF coordination is not taken up in 3.1.1. as part of the discussion of coordination in Dutch. At the same time, note that German SLF coordination is also inconsistent and seems to be subject to some structural and regional differences (Bonitz & Holler 2011).

[9] Note that the ungrammaticality of this example is *not* induced by the fact that the second conjunct takes an adverb (*heute* 'today') that is semantically contrastive with the adverb in the first conjunct (*gestern* 'yesterday'). As can be seen in (9a), it is possible that each conjunct takes its own adverbial, but adverbials for the second conjunct need to be placed after the second verb.

can be understood in the sense that the first conjunct sets the scene, which is further extended by the event described in the second conjunct (cf. Reich 2008: 288).[11] Therefore, instances of SLF coordination are characterized by obligatory semantic cohesion.

A shift from coordination to pseudo-coordination is thought to include the following changes, based on cross-linguistic observations, as summarized in 3.3.6. and repeated here as (12).[12]

(12) a. Less frequent overt realization of the subject of the second verb
b. Locative modification occurs infrequently
c. Temporal modification occurs frequently
d. Semantic compatibility of the posture verb and the second verb is strictly required, limiting lexical variety of the second verb
e. Negator negates the verb sequence, not just individual verbs
f. Object extraction is possible (= (9) in section 3.3.6.)

A change from a coordinate to a pseudo-coordinate structure could generally be characterized as an increase of cohesion, both structurally and semantically. One of the expected consequences is that the subject of the second verb is realized less frequently (12a). With respect to adverbials, less frequent occurrence of locative modifiers and more frequent occurrence of durative temporal modifiers is hypothesized (12b & c); this is associated with backgrounding of the postural/locative semantics of posture verbs and corresponding foregrounding of their temporal meaning (cf. section 3.3.2.). Note that the Dutch data also indicate that the adverbial may frequently be

[10] Höhle (1983: 22) remarks that the two predicates can be seen as directly and naturally related to each other (cf. 'einen unmittelbaren natürlichen Zusammenhang zwischen Prädikaten'), which could be understood on a par with natural coordination presented in 3.3.1. for Dutch coordination.

[11] Note that this one-event interpretation implies that the agent for the first and the second conjunct are the same (Höhle 1983: 12f., Reich 2013: 363f.). Therefore, in the case of (10), it is not possible to interpret the sentence as involving two agents (e.g. a person A stands in front of the microphone and a person B pretends to be able to explain).

[12] Recall that it was concluded that the transition from coordination to pseudo-coordination was absent in the Dutch data (cf. section 4.5.3.). Therefore, it is important to investigate not only the changes which were attested in the Dutch data, but also those that were originally proposed in Chapter 3 for the transition from coordination to pseudo-coordination, since these changes could nonetheless be attested in the German dataset (which is expected to reflect this transition).

placed before the connector in pseudo-coordination (cf. sections 4.4.1. & 4.4.2.); if this kind of adverbial placement is also observed in the synchronic German data, this may be taken as evidence for pseudo-coordination. Since pseudo-coordination involves a composite interpretation, it is also required that the events described by each conjunct are compatible (e.g. no lying and running), which possibly leads to a limited semantic and lexical variety of the second verb compared to the coordinated construction (12d). Furthermore, negation of individual conjuncts would also be unlikely (12e). The cohesion of the verb sequence may also lead to object extraction as in Swedish (cf. section 2.1.1.), which could in theory also be observed in German if the construction is pseudo-coordinate (12f). In addition to object extraction, the Dutch data suggest that pseudo-coordination allows the placement of the object of the second verb before the connector (cf. sections 4.3.4. & 4.5.2.); this phenomenon will also be investigated along with object extraction.

These expectations will be examined in terms of the verbal complex, the noun, and the modifier, as in Dutch. Table 1 summarizes the features to be assessed for each category, as well as the expectations regarding these features if the structure is pseudo-coordinate rather than coordinate.

Table 1. Summary of the expectations

Features to be assessed	Expected observations if structure is pseudo-coordinate
(13) Verb complex	
a. Hapax token ratio (= (12e))	lower (smaller lexical variety)
b. Semantic compatibility of V^2 (= (12e))	more compatible
(14) Noun	
a. Overt subject of V^2 (= (12a))	less frequent
b. Object extraction (= (12g))	more frequent
c. Object of V^2 placed before *und*	more frequent
(15) Modifier	
a. Placement of adverbials of V^2 before *und*	more frequent
b. Locative modifier (= (12c))	less frequent
c. Durative temporal modifier (= (12d))	more frequent
d. Negator for the whole verb cobmplex (= (12f))	more frequent

These nine points presented in (13-15) will be investigated in the next sections (5.3.2.-5.3.4.).

Given that the data include verbs with and without the particle *da-*, there are a couple of additional points that need to be considered in the analysis. First, while the posture verbs without the particle typically require a locative modifier, the corresponding particle verbs do not. For example, when the first verb in (16) is interpreted as *daliegen* (and not as a posture verb co-occurring with an adverb *da*, which is also possible), it is perfectly acceptable without any extra modifiers.

(16) Ich **lag da und sah fern**. [642[13]]
'I lay there and watched TV'

Indeed, 33% of instances of the posture verbs with the particle in my database take no adverbials, resulting in a simple structure like (16) (14 of 50 instances for *dastehen*, 11 of 35 for *dasitzen*, and 9 of 18 for *daliegen*).[14] Only a

[13] The numbers in the square brackets correspond to the sentence numbers given in the database ('database_de.csv').

[14] In contrast, only 1.9–2.8% of the instances with simplex verbs occur without

few instances take locative adverbials (0 of 50 instances for *stehen*, 4 of 35 for *sitzen*, and 0 of 18 for *liegen*).[15]

Second, *da-* can be interpreted as a locative modifier, but also as referring to a certain situation or state.[16] For example, (16) does not necessarily indicate a specific place. *Da-* in *daliegen* instead seems to emphasize the aimlessness of the activity of the second verb (here, watching TV) without a specific endpoint, and hence the atelic aspect of the event (Jenny Audring, personal communication). In short, *da*-verbs seem to have the meaning of 'hanging around without purpose'. This bleached locative meaning of *da*-verbs may serve as a good starting point for the grammaticalization of posture verbs as a progressive marker.

The characteristics of *da*-verbs mentioned above serve as a good reason to distinguish these verbs in the analysis, especially when analyzing locative modification (cf. (15b)). Therefore, in the analysis, the data for the verbs with the particle will be handled separately from that for the verbs without the particle.

In addition, SLF coordination also deserves attention. As outlined above, SLF coordination has a fixed structure with specific slots for the subject and adverbials (cf. (10)). This requirement would influence the rate of overtly realized subjects of the second verb (cf. (14a)) and the position of the adverbial (cf. (15a)). Additionally, this fixed structure with a compulsory one-event reading may be a good starting point for further grammaticalization. Therefore, the number of instances with SLF coordination should be taken into consideration in the analysis.

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modifiers (5 of 262 instances for *stehen*, 8 of 286 for *sitzen*, 5 of 97 for *liegen*).

[15] Note that this does not mean that the particle verbs cannot take extra modifiers. For example, it is possible to add an extra locative modifier to specify the location (e.g. *wenn sie im Bett daliegt und nachdenkt* lit. 'when she in bed there-lies and thinks'). There are also adverbials that indicate the manner of location (e.g. *Elinor saß kerzengerade da und starrte ihn an.* [464] 'Elinor sat there bolt upright and stared at him'), which is also counted as a locative modifier in this research.

[16] Cf. Duden Wörterbuch, headword *dastehen*: "sich in einer bestimmten Lage, Situation, Verfassung befinden" 'find oneself in a certain location, situation, state'.

5.3 Results and analysis

5.3.1 Overview

Table 2 provides the numbers of instances extracted from the corpus as potential cases of the pseudo-coordinate construction. As presented in the previous section (5.2.2.), the data for *dastehen*, *dasitzen*, and *daliegen* are included but dealt with separately from the data for *stehen*, *sitzen*, and *liegen*.

Table 2. Absolute frequencies of the verbs

(da)stehen		*(da)sitzen*		*(da)liegen*	
stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
262	50	286	35	96	18

As can be seen in the table, *(da-)stehen* and *(da-)sitzen* have almost the same number of instances (312 and 321, respectively), while *liegen* has a considerably lower number of instances (114 cases). This unbalanced distribution aligns with the general frequency distribution of the posture-verb progressive construction in Dutch (cf. sections 1.2.2. & 4.1.). At the same time, the percentage of instances accounted for by *da*-verbs is similar for both *(da)liegen* and *(da)stehen* (around 16%), while *dasitzen* only accounts for about 10% of all instances of *(da)sitzen*.[17]

With regard to SLF coordination, 88 instances are found for *(da)stehen* (28.2%), 26 for *(da)sitzen* (8.1%), and 32 for *(da)liegen* (28.1%). Based on this finding, there appears to be a considerable difference in proportion between *(da)sitzen* (about 8%) and *(da)stehen* and *(da)liegen* (both about 28%). In terms of the distinction between posture verbs with and without the particle, *da*-verbs seem to show a higher proportion with SLF coordination (15 of 50 instances for *dastehen* (30%), 4 of 35 for *dasitzen* (8.6%), and 8 of 18 for *daliegen* (44%)).

In the following, the data will be analyzed in terms of the expected changes presented in the previous section and summarized in Table 1. Attention will be paid to the difference between the verbs, as in the analysis for Dutch.

[17] Note that the overall frequency distribution in the corpus for each posture verb is as follows: 5,275 instances for *(da)stehen*, 2,310 for *(da)sitzen*, and 2,983 for *(da)liegen*. This means that 5.9% of all instances with *(da)stehen*, 13.9% of those with *(da)sitzen*, and 3.9% of those with *(da)liegen* have a pseudo-coordinate structure.

5.3.2 Verbal complex

In this section, the semantic cohesion of the verb sequence is examined from two perspectives. The first is the lexical diversity of the second verb and the second is the semantic compatibility between the posture verb and the second verb.

The lexical diversity of the second verb can be evaluated using hapax token ratios (henceforth HTR), as in Dutch (cf. section 4.2.1.). A low HTR can be associated with the pseudo-coordinate stage of the construction, since it is possible that the construction at this stage regularly occurs with a set of verbs that are semantically compatible with posture verbs (cf. section 3.3.2.). On the other hand, a high HTR could indicate that the construction is either non-grammaticalized or highly grammaticalized: in both situations, we would expect to see a diverse set of co-occurring verbs. In the case of the former, a standard coordinate structure can retain independence between the conjuncts and the semantic cohesion between the conjuncts is not always of great relevance. Meanwhile, the latter case concerns increasing collocate diversity, which may be expected for a grammaticalized construction (cf. section 1.3.1.). Since the German construction is not thought to be very grammaticalized, the latter situation can be ruled out. Thus, a high HTR would indicate that the construction has a more coordinate-like (that is, less grammaticalized) status (cf. (13a)).

Table 3 presents the numbers of types, tokens, hapaxes, and HTRs per verb type. To provide insight into the data, in what follows I compare the HTRs between the different verb types, and with those for the Dutch posture-verb construction.

Table 3. Total types, tokens, hapaxes, and HTRs per verb

	(da)stehen		*(da)sitzen*		*(da)liegen*	
	stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
type	161	36	153	28	66	16
token	262	50	286	35	96	18
hapax	116	28	114	25	56	14
HTR	0.44	0.56	0.4	0.71	0.59	0.78

As the table shows, the HTRs are all approximately 0.4 or higher; this is generally higher than the HTRs for the Dutch posture-verb construction (0.42 for *staan*, 0.27 for *zitten*, and 0.29 for *liggen* on average). Note, however, that the magnitude of this difference is difficult to evaluate and the

difference in the size of datasets should be taken into consideration.[18] It can also be seen from the table that the *da*-verbs always show higher HTRs than their equivalents without *da-*, which means that *da*-verbs show a wider variety in terms of the verbs that co-occur with them.[19]

Table 4 provides the most frequent verbs found together with each posture verb, with the absolute frequencies given in parentheses.

Table 4. The most frequent co-occurring verbs per posture verb

(da)stehen		*(da)sitzen*		*(da)liegen*	
stehen (262)	*dastehen* (50)	*sitzen* (286)	*dasitzen* (35)	*liegen* (96)	*daliegen* (18)
warten (15)	*schauen* (6)	*warten* (19)	*warten* (6)	*schlafen* (15)	*starren* (2)
halten (10)	*anstarren* (3)	*lesen* (16)	*zuhören* (2)	*lesen* (5)	*warten* (2)
sehen (10)	*starren* (3)	*trinken* (12)	*ansehen* (2)	*starren* (5)	
zuschauen (9)		*essen* (11)		*denken* (3)	
starren (5)		*starren* (10)		*warten* (3)	

Based on the information presented in Tables 3 and 4, *(da)stehen* and *sitzen* have a set of verbs that they frequently co-occur with, while *liegen* shows a strong orientation toward one verb, namely, *schlafen* 'to sleep'. Therefore, *liegen* could be seen as fossilizing in a specific combination, *liegen und schlafen* 'lie and sleep', as in Dutch (cf. section 4.5.2.). Moreover, *dasitzen* and *daliegen* seem to occur with various verbs with low frequencies, which leads to higher HTRs (0.71 for *dasitzen* and 0.78 for *daliegen*) than the other verbs, indicating a wider lexical variety.

There are two verbs that occur with almost all six verbs: *warten* 'to wait' (17a) and *starren* 'to stare' (17b).

(17) a. Geduldig **stand** er vor der verschlossenen Tür **und wartete**, bis die Dame wiederkam (…). [184]
'he stood patiently in front of the closed door and waited till the lady came again'

[18] HTRs from datasets of different sizes are not necessarily comparable (cf. sections 3.4.1. & 4.2.2.). The dataset size for the HTR analysis in Dutch is approximately 4.4 million tokens, while the corpus size for German is about 3.4 million tokens. A larger text size is said to result in a lower HTR, since as a text gets longer, word frequencies increase in general, leading to a larger number of tokens and a lower number of hapaxes (Baayen 2008: 222-226). Therefore, the comparison between German and Dutch HTRs should be interpreted with caution.

[19] The type-token ratios (cf. section 3.4.1.) are generally higher than the HTRs, but show a comparable pattern of higher and lower numbers between the verbs.

b. Ich **lag da und starrte** auf den Wecker; (…). [656]
'I lay there and stared at the alarm clock'

The frequent occurrence of *warten* aligns with the frequent occurrence of the Dutch verb *wachten* 'to wait' that we see with the Dutch posture-verb progressive construction (cf. sections 1.2.2. & 4.2.1.).[20] Perception verbs including not only *starren* but also *ansehen* 'to look at', *anstarren* 'to stare at', *schauen* 'to look', *sehen* 'to see', *zuhören* 'to listen to' and *zuschauen* 'to watch' occur with almost all the verbs. These trends coincide with the findings reported in Proske (2019: 127).

Considering other verbs that co-occur with specific posture verbs, we see that *stehen* frequently co-occurs with *halten* 'to hold', as in (18).

(18) Phillip **steht** an der Wand **und hält** meine Sachen im Arm. [155]
'Phillip stands at the wall and holds my stuff on his arm'

In this example, the verb is used to describe a person holding certain objects in his arm. Holding activities can be dynamic and atelic, which align well with the semantics of the posture verb.

Sitzen frequently co-occurs with *essen* 'to eat', *lesen* 'to read', and *trinken* 'to drink', as illustrated in (19).

(19) a. Ein paar Primaner, die ich vom Sehen kannte, **saßen** an einem Tisch **und aßen** Pizza. [326]
'a couple of sixth-formers, whom I knew by sight, sat at a table and ate pizza'
b. Auf dem Sofa **saß** der Babysitter **und las**. [346]
'the babysitter sat on the sofa and read'

The activities described by these verbs usually take place in a sitting posture, which can explain their high frequency with *sitzen*, which is comparable to the situation for the Dutch posture-verb construction with *zitten* (see (4) in section 4.2.1.).

For *dasitzen*, Proske (2019: 120) further observes that this verb more frequently co-occurs with 'mental, stative, and perception verbs' (e.g. *(sich) denken*) than *sitzen*. This is corroborated here by its co-occurrence with verbs

[20] Note that the co-occurrence of a posture verb with the verb for 'waiting' is also found in other Germanic languages, such as English (Newman & Rice 2004: 370) and some North Germanic languages (Kinn et al. 2018).

such as *ansehen*, *denken*, *schauen*, *sehen*, *starren*, and *zuhören*, as illustrated in (20), although each occurs only once or twice in the database for this research.

(20) Bernadette **saß** zurückgelehnt **da und starrte** auf die Reste ihres Toastes. [557]
'Bernadette sat there reclined and stared at the remainder of her toast'

Liegen also echoes the Dutch findings for *liggen*, in that it frequently co-occurs with *schlafen* (15 of 97 instances), as illustrated in (21).

(21) Chris **liegt** noch im Bett **und schläft**. [690]
'Chris is still lying in bed and sleeping'

In summary, the HTRs for the German pseudo-coordinate construction are roughly comparable but slightly higher than the Dutch HTRs, which could suggest somewhat more limited patterns of co-occurring verbs than observed for Dutch. Notably, the *da*-variants of the verbs are characterized by higher HTRs than the verbs without the particle, and hence by a wider lexical variety in the second verb. In terms of frequent co-occurring verbs, the verb types that often co-occur with each posture verb are comparable with the results of Proske (2019) and with the Dutch posture-verb progressive constructions (cf. section 4.2.1.).

Having considered the lexical diversity of the second verb, let us now turn to the semantic compatibility between the posture verb and the second verb. The cohesion of the verb sequence is evaluated by investigating the semantic features of the second verb (cf. (13b)). As outlined in 5.2.2., the second verb is expected to become semantically more compatible with the associated posture verb in the initial stage of grammaticalization. This means that the second verb is likely to be a dynamic, atelic verb, describing an event that can take place in the posture indicated by the posture verb and which typically does not include change of place from one place to another (cf. sections 3.3.2. & 3.4.1.). Accordingly, four semantic features (dynamicity, telicity, compatibility with the posture, movement) are individually investigated, as was done for Dutch. Table 5 presents the distribution of instances per semantic feature.

Table 5. The distribution of instances per semantic feature of the second verb

		(da)stehen		*(da)sitzen*		*(da)liegen*	
		stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
dynamic	+	253	49	279	35	92	17
	-	9	1	7	0	4	1
atelic	+	180	43	203	28	76	13
	-	82	7	83	7	20	5
postural compatibility	+	256	49	282	35	95	18
	-	6	1	4	0	1	0
no movement	+	253	47	281	35	96	18
	-	9	3	5	0	0	0

In general, the features which are semantically more compatible with posture verbs (indicated with '+' in the table) account for more than 94% of all cases regardless of the presence or absence of the particle. One exception for this is the semantic feature of telicity. For this feature, the atelic cases only represent 68–86%, meaning that there are a relatively higher number of cases with telic verbs, as illustrated in (22).

(22) a. Ich sehe, wie Laura am CD-Spieler **steht und** die CD **einlegt** (…). [141]
'I see how Laura stands at the CD player and inserts the CD'
b. Sie **liegt** im Sanatorium auf der Terrasse **und faßt** einen Entschluß: [634]
'she lies in the sanatorium on the terrace and makes a decision'

In both examples in (22), the second verb describes an event with an implied endpoint, and hence both verbs are categorized as telic.

In addition, there appears to be a minor difference in terms of telicity between the *da*-verbs and the simple verbs. In most of the cases, there are no significant differences between particle verbs and simplex verbs, but with *(da)stehen*, the form without the particle (*stehen*) occurs more frequently with telic verbs compared to the one with *da-* (*dastehen*); this difference is statistically significant (Fisher's exact test, $p = 0.02$).

The high acceptability of telic verbs echoes the general compatibility of telic verbs with the posture-verb progressive construction in Modern Dutch. The results seem to indicate that telicity is less important in terms of semantic compatibility with posture verbs in German as well as Dutch. In

other words, the high acceptability of telic verbs suggests that the semantic feature of telicity is not a good indicator of grammaticalization.

In sum, the results reveal that the German posture-verb construction shows considerable semantic cohesion. This is mostly observed in the analysis of semantic features of the second verb, with high proportions of instances showing the semantically compatible features (cf. Table 5). This finding could also be supported by the HTRs for simplex posture verbs (i.e. *stehen*, *sitzen*, *liegen*): these are not much higher than those of the Dutch posture-verb progressive construction, which probably results from the existence of frequently recurring second verbs, such as *essen/lezen/trinken* with *sitzen* and *schlafen* with *liegen* (cf. Tables 3 & 4).

The analyses presented here thus seem to align more with pseudo-coordination than coordination, in line with expectations (cf. (13a & b)). It should be noted, however, that the semantic compatibility of the first and second verb in a verb sequence can be seen as a general characteristic of verbal coordination, especially when the structure has a one-event interpretation (cf. section 5.2.2.).

It is also important to consider the differences between the verbs. The results for the HTRs, for example, indicate that *da*-verbs accept a wider lexical variety in co-occurring verbs, which could be linked to a lower degree of grammaticalization (cf. (13b)). Further discussion of possible differences between verb types will follow in 5.4. taking the results for the noun and the modifier into consideration.

5.3.3 Noun

Three points are investigated for the noun: one relating to the subject and two relating to the object. The first concerns the realization of the subject of the second verb (cf. (14a)). The elision of the co-referential subject of the second verb is considered a premise for an unambiguously composite interpretation of the pseudo-coordinate construction (cf. section 3.3.2.), so if the German posture-verb construction is indeed developing into pseudo-coordination, this feature should be frequently seen.

Table 6 provides the distribution of instances with and without an overtly realized subject for the second verb.

Table 6. The distribution of instances with and without an overt subject of the second verb

	(da)stehen		*(da)sitzen*		*(da)liegen*	
	stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
with	1	0	2	2	0	0
without	261	50	284	33	96	18

It is evident from the table that the construction strongly prefers not to realize the subject of the second verb. The following examples show cases with and without an overt subject for the second verb.

(23) a. (…) und er **saß** auf seinem Stuhl **und unterhielt** sich mit seinem Vater. [393]
'and he sat on his chair and chatted with his father'
b. Wie ein Schlafwandler **saß** ich **da**, **und** ich **hörte** das Krachen meines Gewehrs, (…). [473]
'I sat there like a sleepwalker, and I heard the report of my gun'
c. Eines Abends **lagen** wir im Bett **und sahen** uns den zweiten Teil von »Alien« **an**. [644]
'one evening, we lay in bed and watched the second part of *Alien*'

Example (23a) demonstrates the most frequently observed pattern, with subject elision. Meanwhile, as can be seen in (23b), it is certainly not impossible to realize the subject of the second verb. The structure of (23c) coincides with SLF coordination, with inversion in the first conjunct and no overtly realized subject for the second verb. Instances like (23a & c) with no overtly realized subject of the second verb account for the majority of the data.

Regarding the behavior of the object, placing the object of the second verb before the connector *und* may be possible if the construction is a fully-qualified pseudo-coordinate construction, as in Swedish (Hilpert & Koops 2008, see also section 2.1.1.) and Dutch (cf. sections 4.3.2.–4.3.4.). However, no instances with object extraction or objects of the second verb appearing before *und* are found in the database for this research.

Based on the findings concerning the nouns in the construction, it could be argued that no obvious sign of pseudo-coordination has been observed here. The first argument for this is that no instances are found in the database where an object shows behavior associated with monoclausality of the structure. The non-existence of these cases means that there is hardly any

structural indicator of integrity of a single verbal phrase. Second, while the high frequencies of instances with an unrealized subject of the second verb *could* be linked to a higher degree of grammaticalization (cf. (14a)), this is not necessarily so (cf. (8)), especially when we consider SLF coordination as a kind of normal coordination (cf. section 5.2.2.). Therefore, the analyses of the nouns in the construction suggest that the German posture-verb construction does not have a typical pseudo-coordinate structure, which would normally be characterized by a coordinated clause displaying monoclausality in some respects (cf. section 1.2.3.).

5.3.4 Modifier

Four points are investigated with respect to the modifier. The first concerns the placement of adverbials other than the locative or durative type (15a). Similar to the preposing of the object, the adverbial belonging to the second verb may be placed before the connector *und* in a pseudo-coordinate structure (see 4.4.1. and 4.4.2. for examples in Dutch).

In ordinary coordination, the adverbial associated with the second verb is placed after the second verb in posture-verb non-clause-final word order, as in (24a), and after *und* and before the second verb in posture-verb clause-final word order, as in (24b).

(24) a. Laura **sitzt** neben mir **und legt** plötzlich ihren Kopf auf meine Schulter. [429]
'Laura sits next to me and suddenly puts her head on my shoulder'

b. (…) daß Zelda immer noch bei ihm **stand und** den Teller ein zweites Mal **füllte**. [249]
'that Zelda still stood by him and filled the plate a second time'

In (24a), the adverb *plötzlich* 'suddenly' is placed after the verb it modifies (i.e. *legt* 'puts'). Meanwhile, (24b) is an example of a subordinate clause with the adverbial *ein zweites Mal* 'a second time' placed before the verb it modifies (i.e. *füllte* 'filled'). The question is thus whether the adverbial of the second verb can be placed after the posture verb and before the connector in posture-verb non-clause-final word order (i.e. [PV Adv *und* V^2]), and before the connector in posture-verb clause-final word order (either before or after the posture verb; i.e. [Adv PV *und* V^2] or [PV Adv *und* V^2]).

For the posture-verb non-clause-final word order, the numbers of instances with a relevant adverbial either after the second verb or between the posture and second verb are reported in Table 7.

Table 7. The distribution of non-locative adverbials in the posture-verb non-clause-final word order

	(da)stehen		*(da)sitzen*		*(da)liegen*	
	stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
[PV *und* V² Adv]	29	13	31	6	10	1
[PV Adv *und* V²]	18	13	28	10	11	3

As the table shows, the instances are mostly evenly distributed between the two sentence patterns. Most of the adverbials that are placed between the posture verb and *und* (i.e. [PV Adv *und* V²]) are, however, interpretable as modifying just the first verb, as in (25a). Some adverbials may be semantically interpreted as modifying the whole verbal complex, as is the case for *jetzt wahrscheinlich* 'now probably' in (25b) (cf. (9b)).

(25) a. Malka **lag** steif und starr **da und wusste** nicht, was sie machen sollte, (…). [666]
'Malka lay there stiffly and rigidly and did not know what she should do'
b. Sie **stand** jetzt wahrscheinlich oben in Ostberlin **und wartete** auf ihn, (…). [85]
'she stood now probably up in East Berlin and waited for him'

No cases are found where the adverbial placed between the posture verb and *und* seems to be strongly associated with the second verb.

For the posture-verb clause-final word order, Table 8 shows the distribution of instances with an adverbial between *und* and the second verb ([PV *und* Adv V²]), between the posture verb and *und* ([PV Adv *und* V²]), and before the posture verb ([Adv PV *und* V²]).

Table 8. The distribution of non-locative adverbials in the posture-verb clause-final word order

	(da)stehen		*(da)sitzen*		*(da)liegen*	
	stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
[PV *und* Adv V²]	18	0	10	1	3	0
[PV Adv *und* V²]	0	0	0	0	0	0
[Adv PV *und* V²]	20	0	31	3	10	0

It is notable that no instances are found in which the adverbial is placed between the posture verb and *und* (see the second row in the table). This gap can indicate that the posture verb always occupies the clause-final position in its own clause, as nothing except a prepositional phrase can follow a clause-final finite verb (Duden 2016: 897f.). Although the database does contain instances with a prepositional adverbial, no cases with an extraposed prepositional phrase are found.

Moreover, there are only four relevant instances that contain *da*-verbs, all of which involve *dasitzen*. This low number of data points probably relates to the generally low rate of adverbial modification with these verbs, as described in 5.2.2.

The two sentence patterns for which instances are found (i.e. [PV *und* Adv V²] and [Adv PV *und* V²]) are exemplified in (26).

(26) a. (…) aber die Frau, die zwischen uns **stand und** manchmal **rief**, > es ist doch ähnliche, (…). [34]
'but the woman, who stood between us and shouted sometimes, "but it is similar'

b. Wenn wir später in der Kneipe **saßen und** über den Film **redeten**, (…). [331]
'when later we sat in the pub and talked about the film'

In example (26a), the adverb *manchmal* 'sometimes' appears between *und* and the second verb (*rief* 'shouted'). As seen in (24b), this is the typical word order for coordination. In (26b), meanwhile, the adverb *später* 'later' is placed before both of the verbs and can be semantically interpreted as modifying both the sitting and talking events. Most if not all of the adverbials placed before the posture verb can be interpreted in this way. There are no instances in my database where the adverbial in this position is strongly associated with the second verb.

To summarize the analyses of the placement of the adverbial, the results indicate that the German posture-verb construction has a coordinate

structure. No cases are found in which an adverbial associated only with the second verb is placed before *und*. In other words, all cases found in my database fall within the scope of adverbial modification of coordinated clauses, as described in 5.2.2.

Turning now to individual types of adverbials, let us first consider locative modification (cf. (15b)). This type of modification is expected to occur less frequently with increasing grammaticalization due to backgrounding of the spatial semantics of posture verbs, as has been proposed in the grammaticalization path for the Dutch posture-verb progressive construction (cf. section 3.3.2.). Table 9 provides the number of instances with and without locative modification. As explained in 5.2.2., *da-* verbs do not require locative modification, and while the particle *da-* itself may have a locative function, this does not always seem to be the case. Therefore, the data presented in the table are restricted to the verbs without the particle (i.e. *stehen*, *sitzen*, and *liegen*).

Table 9. The distribution of instances with and without locative modification

	stehen	*sitzen*	*liegen*
with locative modification	249	276	93
without locative modification	13	10	3

According to the table, there do exist instances of each of the three posture verbs occurring without a locative modifier. Examples are given in (27).

(27) a. Ich **stand und sah**; [213]
'I stood and saw'
b. So **saß** ich **und wartete**. [451]
'so, I sat and waited'
c. Ich werde **liegen und schlafen**, und es wird keinen Unterschied geben. [739]
'I will lie and sleep, and there will be no difference'

However, the overall percentages of instances without locative modification are very low (5% for *stehen*, 3.5% for *sitzen*, and 3.1% for *liegen*). This finding is comparable with what Proske (2019) observes for the spoken language: all of the sentences in her data are modified for location.

One point to consider is the type of locative modification. Proske (2019: 126) points out that almost half of the locative modifiers in her data are realized as deictic adverbs, such as *hier* 'here' and *da* 'there' (note that the

latter includes the *da-* particle of *da*-verbs). Such adverbs are usually short and can be semantically light (see (28a)), compared to more elaborate locative modification like *auf einem wichtigen italienisch-österreichischen Grenzübergang* 'at an important Italian-Austrian border crossing' in (28b).

(28) a. Statt dessen **stand** ich hier **und starrte** eine Fassade **an**. [26]
'instead, I stood here and stared at a façade.'
b. Dieser Pardell (…) **stand** auf einem wichtigen italienisch-österreichischen Grenzübergang **und schrie**: (...) [107]
'this Pardell stood at an important Italian-Austrian border crossing and screamed: (...)'

The brevity of the deictic expressions may facilitate the placement of locative adverbials outside the verb sequence (e.g. [**Adv$_{loc}$** PV S C V^2] or [S PV C V^2 **Adv$_{loc}$**] in main clauses; see also (3a)), which is hypothesized as one of the initial developments for the Dutch posture-verb construction (cf. section 3.3.2.). Furthermore, their semantic lightness may draw less attention to the locative information, which could eventually result in locative modifiers becoming omissible. Both relocation and omission of locative adverbials can be associated with the weakening of the link between posture verbs and locative modifiers and the backgrounding of the postural/locative meaning of posture verbs. Therefore, under this view, the frequent occurrence of deictic adverbs observed in Proske (2019) could be an indication of a situation conducive to the backgrounding of the locative dimension of posture verbs, and hence to grammaticalization.

To explore this point further, it is useful to look more closely at the proportion of instances in my database where locative modification is in the form of a deictic adverb. Table 10 presents the numbers of instances with a deictic modifier and a non-deictic modifier.

Table 10. The distribution of deictic and non-deictic locative modifiers

	stehen	*sitzen*	*liegen*
deictic	22	12	3
not deictic	227	264	90

Apparently, the deictic modifier is not as common here as in Proske's data. This may suggest that the frequent occurrence of deictic adverbs in Proske's research is affected by the nature of her data source, i.e. that her data is drawn from the spoken language.

In sum, more than 90% of the instances in my database are modified for location, indicating that locative modification is typical. Most of the modifiers are not deictic adverbs, a result which contradicts the findings of Proske (2019).

The second type of adverbial modification investigated is temporal modification (cf. (15c)). The grammaticalization of the posture-verb construction is expected to lead to the acquisition of progressive aspectual meaning, which could be reflected in the frequent co-occurrence of a temporal modifier expressing event duration (e.g. *die ganze Nacht* 'the whole night').

The numbers of instances with and without durative temporal modification are given in Table 11.

Table 11. The distribution of instances with and without durative temporal modification

	(da)stehen		*(da)sitzen*		*(da)liegen*	
	stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
with	26	12	15	4	12	1
without	236	38	271	31	84	17

As is evident from the table, most of the instances do not contain a durative temporal modifier. (29) provides examples of durative temporal modifiers occurring with the posture verbs *dastehen*, *dasitzen*, and *liegen*.

(29) a. Lange **stand** sie **da und starrte** in den Schrank, (…). [65]
'for a long time, she stood there and stared into the closet'
b. Du **sitzt** den ganzen Abend **da und schweigst** vor dich hin (…). [433]
'you sit there the whole evening and do not say a word'
c. Du **liegst** den ganzen Tag im Bett **und säufst**! [678]
'you lie in bed all day and drink!'

Example (29a) has the durative temporal adverbial *lange* 'for a long time', (29b) has *den ganzen Abend* 'the whole evening', and (29c) has *den ganzen Tag* 'the whole day', all of which highlight the temporal duration of the event.

The difference in proportion between verbs with and without the particle is statistically significant (Fisher's exact test, $p = 0.01$). Considering the per-verb frequencies presented in Table 11, some differences between the verbs can be noted. Firstly, it is notable that *dastehen* occurs with temporal

modification at a higher proportion than its simplex equivalent *stehen* (24% compared to 9.9%). Similarly, *dasitzen* is also accompanied by a temporal modifier more frequently than its simplex equivalent *sitzen* (11.4% compared to 5.2%). With *daliegen*, on the other hand, the trend is the other way around: *liegen* appears more frequently with temporal modification (12.4%) than *daliegen* (5.6%). Although there are some minor differences in ratio between the verbs, the overall picture is that the occurrence of one or more durative temporal modifiers is not typical of the posture-verb construction.

The final analysis concerns negation (cf. (15d)). As the verb phrase gains in cohesion, it may become uncommon to negate individual verbs in the sequence. In this scenario, negation of the posture verb would entail negation of the whole verb sequence, as in the Modern Dutch progressive construction (e.g. *ik* ***sta*** *niet* ***te wachten*** 'I am not standing and waiting'), and the negator for the second verb would thus become redundant. Given that the German construction is reported to be increasing in cohesion, we may expect that negators for the second verb will be infrequent in the data.

Table 12 presents the distribution of instances with a negator for the posture verb or for the second verb. Overall, there are not many instances in the database for this study that contain a negator, as can be seen from the table.

Table 12. The distribution of instances with a negator for the posture verb (PV) or the second verb (V^2)

	(da)stehen		*(da)sitzen*		*(da)liegen*	
	stehen	*dastehen*	*sitzen*	*dasitzen*	*liegen*	*daliegen*
for PV	0	0	0	0	0	0
for V^2	6	1	5	0	1	1

As the table shows, all the negators in my database relate to the second verb. Examples are given in (30).

(30) a. Malka **stand** auf der Straße **und verstand** nicht gleich, was passiert war. [58]
'Malka stood at the street and did not immediately understand what happened.'

b. Malka, Schlomo und Jossei **saßen** auf der Bank **und rührten sich** nicht. [377]
'Malka, Schlomo, and Jossei sat on the sofa and did not move.'

The negator *nicht* 'not' takes scope over the second verbs *verstehen* 'to understand' in (30a) and *sich rühren* 'to move' in (30b). This result aligns with the findings for Dutch (cf. section 4.4.5), in the sense that more instances are found of a negated second verb than a negated posture verb. There were no cases where the negator had scope over the posture verb or over both verbs. Therefore, the analysis of the negator does not yield any indications of integrity of the verb phrase.

To summarize the analyses of the placement of the adverbial, we have seen that all instances in the database can be interpreted as having a coordinate structure rather than a pseudo-coordinate structure. Furthermore, the analyses of the modifier revealed that locative modifiers are still highly preferred, while durative temporal modifiers occur infrequently. Therefore, there is no clear indication that the postural/locative meaning of posture verbs is becoming backgrounded or that the temporal semantics is becoming foregrounded. Recall, however, that postural/locative backgrounding and temporal foregrounding did not emerge as clear developments in the Dutch data either; this is in contrast to the Swedish data reported by Hilpert & Koops (2008: 253), who show that only about 30% of the instances of the Swedish pseudo-coordinate construction co-occur with a locative modifier. Therefore, if we assume that the German posture verbs are more comparable with posture verbs in Dutch than in Swedish, it is not surprising to find that the locative meaning of posture verbs is not significantly backgrounded. Nonetheless, the proportions of instances with locative modification are considerably higher in German (96% on average) than in Dutch (53.8% on average), which does seem to indicate a difference between these two languages in the requirement for locative modification. In short, there does seem to be some difference in modification rates between an established pseudo-coordinate construction (in Dutch) and a reportedly emergent pseudo-coordinate construction (in German).

The analysis with respect to negation only yielded 14 relevant instances, among which no cases were found where the posture verb is negated. This means that no indications of the integrated status of the verb phrase are found with respect to negation; however, given the low frequencies of relevant instances, this conclusion should be treated as provisional.

5.4 Summary and discussion

According to the findings reported in the previous sections (5.3.2.–5.3.4.), the German posture-verb construction seems to show semantic cohesion (cf. section 5.3.2.). The strong semantic compatibility may be linked to grammaticalization (cf. Table 1 in 5.2.2.), but it could also be part of the general characteristics of verbal coordination, especially for instances with a composite interpretation. The low rate of overt subjects of the second verb could also be seen as facilitating a one-event interpretation of the construction (cf. section 5.3.3.). Although a composite interpretation of the construction is in line with expectations for a grammaticalized structure, whether it can be a strong indication of grammaticalization by itself is questionable.

Moreover, the analyses of the object and the placement of the adverbial indicate that the posture-verb construction is not grammaticalized to a high degree. This means that the structure of the German posture-verb construction appears to be biclausal and not monoclausal (cf. sections 5.3.3. & 5.3.4.). The analysis of the negator does not indicate an integrated status of the verb phrase either, although the evidence here is limited (cf. section 5.3.4.).

With respect to the modifier, locative modification is observed to be very frequent. Although backgrounding of the postural/locative meaning of posture verbs is not a necessary condition for posture verbs to grammaticalize into aspectual markers, the relatively high rate of locative modification in German compared to Dutch (cf. section 5.3.4.) suggests that the postural/locative meaning remains salient. As for temporal modification, the occurrence of a durative temporal modifier in the construction is not frequently attested in my data. We may interpret this finding as evidence that there is no foregrounding of the temporal dimension of posture verbs in the German construction. However, it should also be noted that the co-occurrence of a durative temporal modifier is not particularly frequent even with a relatively grammaticalized posture-verb progressive construction, like that of Modern Dutch.[21] Therefore, as Kuteva (1999: 209, 2001: 71) notes, the occurrence of temporal modifiers seems to be 'redundant rather than necessary' and does not serve as a good diagnostic for grammaticalization.

[21] As described in 4.4.6., durative temporal modifiers occur in the posture-verb progressive construction in only 12.2% of cases (167 of 1369 instances) in Modern Dutch (Lemmens 2005: 210).

There are some further observations to be made regarding the differences between the verb types, and the possible distinction between the verbs with and without the particle *da-*. Firstly, there are some minor differences between *(da)stehen*, *(da)sitzen*, and *(da)liegen*, but none of these are particularly significant. The most notable distinction concerns the choice of second verbs. Since posture verbs still retain their postural meaning and the second verb typically describes an activity that can take place in that posture, the posture verbs differ in terms of which types of second verbs co-occur with them most frequently. For example, *sitzen* frequently co-occurs with *essen*, *lesen*, and *trinken*, which express activities that are usually performed in a sitting posture, whereas these verbs do not often appear with *(da)stehen* and *(da)liegen*. In general, however, *(da)stehen*, *(da)sitzen*, and *(da)liegen* do not differ from each other in a systematic way.

A more considerable distinction is observed between the verbs with and without the particle *da-*. As reported in 5.3.2., the analysis of HTRs invokes a possible distinction between the verbs without the particle *da-* (*stehen*, *sitzen*, *liegen*) and those with it, especially *dastehen* and *daliegen*: the HTRs for *da*-verbs are higher than the corresponding simplex verbs, indicating that *da*-verbs accept a wider lexical variety of second verbs and hence are possibly less grammaticalized (cf. (13a)). In particular, *dastehen* co-occurs more frequently with telic verbs compared to *stehen*; telic verbs are thought to be semantically less compatible with posture verbs. On the other hand, the analysis of durative temporal modifiers shows that *dastehen* and *dasitzen* take temporal adverbials more frequently than *stehen* and *sitzen*, while *(da)liegen* demonstrates the opposite pattern. In sum, the data for *da-*verbs present a mixed picture in terms of whether the verbs are more or less grammaticalized than their simplex counterparts.

To summarize the above discussion, the German posture-verb construction does not appear to be significantly grammaticalized. No particular cohesion of the construction can be established on the basis of my data, except for the semantic compatibility of the two verbs and the fact that the subject of the second verb is typically not overtly realized. Moreover, even these features can be accounted for in the context of ordinary verbal coordination. In addition, there are no indications of monoclausality or of backgrounded spatial semantics of the posture verbs. In short, the German posture-verb construction is in principle (still) coordinate, and not pseudo-coordinate.

At the same time, it is true that some instances can be found in the data that seem to indicate favorable conditions for grammaticalization, just as Proske (2019) points out. Two such instances are presented in (31).

(31) a. (…) doch sie **steht** immer noch **und horcht**, (…). [4]
'yet, she still stands and listens'
b. Eine schöne Zeit **lag** er **da und wartete**. [658]
'for a good while, he lay there and waited'

Example (31a) lacks locative modification but contains a temporal adverbial *immer noch* 'still', thus arguably backgrounding the spatial semantics and foregrounding the temporal duration of the standing and listening activities. In other words, the sentence does not convey any spatial information, as would usually be expected for posture verbs in their locative use; instead, it describes an atelic activity of 'listening in a standing posture'. In (31b), the particle *da-* can function as a locative modifier, but it does not indicate a specific location, it merely anchors the agent to the context in an atelic and aimless manner, which could be considered a typical semantic property of *da*-verbs (cf. section 5.2.2.). This atelic aspect of the sentence is further emphasized by the durative temporal adverbial *eine schöne Zeit* 'for a good while' and the omission of an overt endpoint for the activity *warten* 'to wait', which would normally be expressed by a prepositional phrase with *auf* 'for (someone or something)' or *bis* 'until'. In short, the sentence (31b) is defined more by its atelic semantics than its locative semantics. Such shifts can possibly lead to further grammaticalization of the construction as an aspectual expression.

Before concluding, it is useful to revisit the status of *da*-verbs with respect to grammaticalization. It could be argued that the *da*-verbs are more likely to grammaticalize than their equivalents without the particle. *Da*-verbs, which are less likely to be modified by adverbials (cf. section 5.2.2.), frequently give rise to a simple structure that is comparable with a typical pseudo-coordinate structure (i.e. [PV *und* V^2]), as illustrated in (32).

(32) a. Luise **steht da und schaut** sie **an**. [164]
'Luise stands there and stares at her/it.'
b. Meggie **saß da und zitterte** am ganzen Leib. [466]
'Meggie sat there and trembled with her whole body.'
c. Ich **lag da und sah fern**. [642]
'I lay there and watched TV.'

Furthermore, the *da-* particle itself does not necessarily refer to a specific location (cf. section 5.2.2.), which means that the locative meaning of the verb is already somewhat backgrounded. Instead, as seen in (16), *da-*

appears to emphasize the atelic aspect of the event, which could be linked to the relatively frequent co-occurrence of durative temporal adverbials observed particularly for *dastehen* (cf. Table 11). This function of *da-* could facilitate grammaticalization of the posture-verb construction, since the emphasized atelicity aligns well with a progressive aspectual meaning.

This view is supported by a number of further observations and considerations. First, instances with a *da*-verb can more often be interpreted as having an SLF coordination structure, where a composite interpretation is obligatory (cf. section 5.3.1.). Therefore, *da*-verbs seem to be a better candidate for further grammaticalization than their simplex counterparts. Additionally, the higher HTRs of *da*-verbs observed in 5.3.2. could be interpreted as an indication of a wider collocational variety and a more grammaticalized status compared to the simplex verbs. As described in 5.3.2., the initial assumption was that the German construction is not grammaticalized to a degree that it has gained collocate diversity. However, the situation may be different for *da*-verbs. The more frequent co-occurrences of *da*-verbs with telic verbs (cf. section 5.3.2.) point in the same direction (cf. section 3.3.3.) and hint at a more grammaticalized status of *da*-verbs.

To conclude, we may compare the findings for German with the grammaticalization path proposed for the Dutch posture-verb progressive construction (cf. Table 22 in section 4.5.3.). It could be argued that the German construction is still at Stage 1 (coordination), possibly moving toward Stage 2 (pseudo-coordination). This means that the German data complement the Dutch data in the sense that the former cover Stage 1 and the latter Stage 2 onward. As Proske (2019) argues, the current situation of the German posture-verb construction does not exclude the possibility that the construction will continue to develop into a full pseudo-coordinate construction, as has happened in some other Germanic languages (cf. section 1.2.3.). At the same time, considering that German is known for its systematic lack of linguistic forms expressing progressive aspect (cf. section 1.2.1.), the conditions do not appear conducive to further grammaticalization. In any case, for the construction in its present form, my data do not show any clear indications of systematic grammaticalization. In the final chapter, the results for the Dutch posture-verb construction and the German construction will be presented side by side, and the development of posture verbs as progressive auxiliaries will be discussed from a contrastive perspective.