

## Mass, Iteration, and Pejoration: On the Evolution of Iterative Adverbs from Indefinite Quantifiers in German Varieties

Sophie Ellsäßer

*Universität Osnabrück*

This article deals with the formal and functional development of aspectual adverbs from indefinite quantifiers in German. More specifically, it focuses on the functions of adverbs that prompted their development into different iterative markers. Through a corpus analysis of spoken language data, insights were gained into the semantic spectrum of the nonstandard adverb *als* ‘always’. This adverb can be classified as an iterative and, in certain contexts, as a habitual marker, which has undergone a similar development to the standard language adverb *viel* ‘much’. The article shows that lexical markers of iterativity and—to some extent—habituality may suggest new avenues for variation and change research. It traces the development of the habitual function of *als* and offers new perspectives for in-depth analyses of the evolution of lexical aspectuality marking.\*

**Keywords:** habituality, iteration, adverb, indefinite quantifiers, German varieties

---

\* This article is based on my presentation at DGfS 2021 AG 5: “Encoding Aspectuality in Germanic Languages: Empirical and Theoretical Approaches”. For their input and help I would like to thank the audience of my presentation and Hanna Fischer, Melitta Gillmann, Mirjam Schmuck, the anonymous reviewers as well as Lea Schäfer for helpful comments on earlier versions of this article.

© The Author(s), 2023. Published by Cambridge University Press on behalf of Society for Germanic Linguistics. This is an Open Access article, distributed under the terms of the Creative Commons Attribution licence (<https://creativecommons.org/licenses/by/4.0/>), which permits unrestricted re-use, distribution, and reproduction in any medium, provided the original work is properly cited.

## 1. Introduction.

Research on aspectuality markers has a strong focus on verbal morphology. This applies not only to Standard German and its nonstandard varieties, but to other Germanic languages as well (see, among others, Flick & Kuhmichel 2013, Weber 2017, Fischer 2018, as well as Boogards, Ihdén, and Proske, this issue). There are, however, adverbs that can also be classified as aspectuality markers, namely, iterative adverbs, which mark situations or actions that repeat at various points in time (see Xrakovskij 1997b:27–28). For the purposes of this study, I am particularly interested in iterative adverbs that express HABITUALITY. Based on Xrakovskij 1997b:27–28 and Boneh & Jędrzejowski 2019:4, habitual situations or actions are those that occur—or repeat—at regular intervals, whenever circumstances permit. Under this definition, all habitual actions are also iterative, but not all iterative actions are habitual. Accordingly, habitual adverbs are by definition iterative, but iterative adverbs are only habitual in certain contexts.

Note also that habituality—but not iterativity—shares the sense of “entirety” with universal quantification, and so adverbs that develop out of universal quantifiers, such as *als*, initially tend to express habitual meaning. The shared semantics behind aspectuality and quantification is relevant for the development of habitual and iterative markers and is discussed in detail in sections 2.2 and 2.3.

Different approaches exist as to how habituality and iterativity should be classified within the system of aspectuality. Comrie (1976:26–27), for example, classifies habituality as a subcategory of imperfectivity, while he assigns certain forms of iterativity (namely, temporally limited repetitions) to perfectivity. Other approaches consider habituality as a separate category next to imperfectivity (see, for example, Boneh & Jędrzejowski 2019:4–7 for a detailed discussion). Crucially, however, what all of these approaches have in common is that they all treat habituality as a category of aspectuality. I argue that in German, certain iterative adverbs can perform a habitual function. I also show how an adverb can develop and later lose its habitual meaning.

Iterative adverbs have different lexical sources and therefore different morphosyntactic properties. For example, many of them derive from NPs (for example, *sonntags* ‘on Sundays’; see Haspelmath 1997, Ramat 2011, Waldenberger 2015) or originate from a combination of numeralia and time words or phrases (for example, *zweimal die Woche* ‘twice a week’; see Moreno Cabrera 1998). In this article, however, I focus on a particular

type of iterative adverb, namely, those that can be classified as indefinite quantifiers. These adverbs form a functionally defined category that includes words from different word classes. The common feature of the adverbs that belong to this class is the non-numerical, indefinite specification of quantification. Examples include *viel* ‘much’, *wenig* ‘rare’, and *mehr* ‘more.’ Word forms classified as indefinite quantifiers are ambiguous with respect to their word class. On the one hand, they can be used as indefinite pronouns, as in 1a, or as indefinite determiners, as in 1b. In this case, they perform the function of nominal quantification (following Gil’s 2001 terminology) and mark frequency of occurrence or proportion of a quantity or mass.

- (1) a. Er hat **wenig** gesammelt.  
 he AUX.3.SG little.PRON collect.PTCP  
 ‘He has collected little.’
- b. Sie hat **viel** Holz gehackt.  
 she AUX.3.SG much.PRON wood chop.PTCP  
 ‘She has chopped a lot of wood.’

On the other hand, these pronouns have acquired an adverbial function and can be used as adverbs, as in 2. In this case, they function as verbal quantifiers that mark the iteration of situations or events (see Gil 2001).

- (2) a. Wir gehen **wenig** in den Wald.  
 we go.1.PL sometimes.ADV into the forest  
 ‘We sometimes go into the forest.’
- b. Wir gehen **viel** in den Wald.  
 we go.1.PL much.ADV into the forest  
 ‘We often go into the forest.’

This phenomenon is not limited to German; it is also observed in other Germanic languages, such as English, as in *We go to the forest a lot*, or Dutch, as in *We gaan veel naar het bos* ‘We go to the forest a lot’.

In addition to *viel*, *wenig*, and *mehr*, some varieties of German also use *als*, as in 3. For now, I tentatively gloss this word ‘always’, as its semantics is to be explored in the article. As far as its etymology is

concerned, *als* as an iterative adverb can be traced back to the pronoun *alles* ‘everything’ in Middle High German (MHG; Grimm 1831:90, Grimm & Grimm 1983, column 246; Beneke et al. 1990, column 20a). Today examples such as 3 are only attested in some West Central German (Christmann & Kraemer 1965–1968, column 176) and western Upper German (Staub 1881, column 170) dialects.

- (3) Wir gehen **als** in den Wald.  
 we go.1.PL always<sup>?</sup>.ADV into the forest  
 ‘We always/often/sometimes go into the forest.’

As a universal marker, *alles* is a rather marginal representative of indefinite pronouns; yet it can be classified as an indefinite quantifier based on its morphosyntactic and functional properties. Just like the adverb *viel* in 2b, *als* has developed from a pronoun. The pronoun *alles* ‘everything’ and the adverb *als* ‘always?’ both fulfill the function of non-numerical quantification. In the course of this article, I explore their status as non-numerical quantifiers in more detail.

In the context of an investigation of iterative adverbs, indefinite quantifiers present a special interest for a variety of reasons. First, the category *indefinite quantifier* subsumes pronouns, determiners, and adverbs. Therefore, they are fit for an analysis of the formal development of iterative markers. Second, indefinite quantifiers vary between nominal and verbal quantification, and thus promise insights into the functional-semantic development of iterative adverbs. Finally, by virtue of being indefinite quantifiers, iterative adverbs do not delimit situations they quantify: In contrast to numeral adverbs such as *zweimal* ‘twice’, they do not specify the number of iterations of a particular situation or action; unlike NP-based adverbs such as *sonntags* ‘on Sundays’, they provide no specific point in time at which the situation or action recurs. I propose that this semantic vagueness allows for a certain spectrum of functional variation and subsequently enables functional change.

In this article, I present the results of a pilot study on the development of the adverb *als* in nonstandard German varieties. At the same time, I also address standard German iterative adverbs that can be classified as indefinite quantifiers, especially *viel*. In addition to presenting substantive findings, the article aims to lay methodological groundwork for a corpus-based analysis of lexical aspectuality markers. The pilot study shows

which aspects can and which cannot be investigated in a corpus analysis and how such an analysis can be designed.

The structure of this article is as follows: First, I briefly discuss the formal development of adverbs of indefinite quantification and examine their functional scope (section 2). In doing so, I highlight the (formal and functional) similarities and differences between *viel* and *als*. Then, I give a brief overview of the data and methodology of the pilot study on which this article is based (section 3). After that, I focus on the functional development of the two adverbs and the expansion of their quantificational range, that is, the emergence of the iterative and habitual function (section 4). The nonstandard adverb *als* seems to have undergone a somewhat complex development compared to *viel*. While a clear metaphorical development can be seen with *viel*, more advanced stages can already be observed with *als*: In addition to being an iterative and a habitual maker, *als* has developed pragmatic functions that may not be explained based on its metaphorical development.

## 2. Indefinite Quantifiers: The Classification of *Viel* and *Als*.

### 2.1. Morphosyntactic Properties of Indefinite Quantifiers.

As stated in the introduction, in this paper, I treat the adverbs *viel* and *als* as indefinite quantifiers. Examples 1 and 2 can be used to illustrate the different characteristics of (indefinite) pronouns, determiners, and adverbs. In general, indefinite quantifiers are not prototypical indefinites (such as *jemand* ‘someone’, *etwas* ‘something’, etc.), which are often categorized as a separate word class. Some approaches do not classify quantifiers as indefinites but as adjectives (for example, Roehrs & Sapp 2016, Fleischhauer 2016), whereas others create a quantifier category that is either separate from the category of indefinites (for example, Zifonun 2011:77) or included within it as a subcategory (for example, Haspelmath 2001). For the purposes of this study, I adopt Haspelmath’s (2001) approach.

In terms of their morphosyntactic properties, German indefinites in turn are a heterogeneous category (see, for example, Duden 2016:30). Indefinite pronouns can replace an NP and thus be an argument, as in 1a (*Er hat [wenig]<sub>NP</sub> gesammelt* ‘He has collected little’ or *Er hat [alles]<sub>NP</sub> gestohlen* ‘He has stolen everything’). In contrast, indefinite determiners are modifiers; they cannot replace an argument, but they can be its part, as

in 1b (*Sie hat [viel Holz]<sub>NP</sub> gehackt* ‘She chopped a lot of wood’ or *Sie hat [alles Essen]<sub>NP</sub> gegessen* ‘She ate all the food’).

Furthermore, indefinite pronouns and determiners do not necessarily show inflection in German. Some indefinites demonstrate no inflection at all (for example, *man* ‘one’), while others have a defective paradigm (for example, *jemand* ‘someone’). This defective inflection of indefinite quantifiers is due to their complex historical development, from words belonging to a variety of classes (see Fobbe 2004:19–31). From a paradigmatic point of view, indefinites such as *viel* ‘much’ are fully inflected (as in *vieles*, *vieler*); nevertheless, in certain semantic contexts their inflection may be omitted—for example, when they occur with noncountable nouns, such as mass or abstract nouns, as in *viel Wasser*, ‘a lot of water’ or *viel Liebe* ‘much love’. Adverbs are not inflected in German at all (see Duden 2016:329, 581).

Roehrs & Sapp (2016) analyze the development of *viel* from Old High German to Modern German. Under their approach, *viel* is not assigned to different word classes; rather, it is assigned to one prototypical word class in each language period. Roehrs & Sapp (2016) identify several contexts in which reanalysis could take place leading to a change in the word class to which *viel* can (prototypically) be assigned. They outline the reanalysis of *viel* from a noun to a quantifying particle and to a quantifying adjective. However, they do not include the development of the adverb *viel* in their study.

Ellsäßer (2022) presents a plausible scenario of the development of adverbs of indefinite quantification, such as *viel*. It is proposed that the use of indefinite pronouns and determiners created a transitional context, in which these words were ambiguous in terms of their morphosyntactic properties, such as formal word class and inflection; their semantics was also ambiguous, that is, it was not clear whether these lexemes expressed quantity or iteration. For example, the sentence in 4 is ambiguous: Under the reading 4a, the word *viel* is interpreted as a nominal quantifier expressing quantity; it can be classified as a determiner that is part of the NP. In this case, there is no inflectional affix because *Schreibkram* ‘paperwork’ is a noncountable noun denoting a nonindividuated unit. Under the reading in 4b, *viel* is classified as an adverb, which is not part of the NP, [*viel*]<sub>ADV</sub> [*Schreibkram*]<sub>NP</sub>. In this case, too, the inflection is missing.

(4) ... dass ich im Gegensatz zu ihr **viel** Schreibkram  
 that I in contrast to her much.ADV/DET paperwork  
 hab.  
 have-1-PS

a. ‘that I have much paperwork, unlike her.’

b. ‘that I often have paperwork, unlike her.’

(FOLK\_E\_00287\_SE\_01\_T\_01\_DF\_01)<sup>1</sup>

These contexts can be classified as critical contexts (see, among others, Diewald 2002). Ellsäßer (2022) proposes that they have led to a reanalysis and thus to the evolution of adverbs within the class of indefinite quantifiers.

In contrast, the examples in 5 illustrate a context, in which *viel* can only be interpreted as an adverb.

(5) a. ... dass ich im Gegensatz zu ihr **viel** Bürotage  
 that I in contrast to her often.ADV office days  
 habe.  
 have.1.SG

‘that I often have office days, unlike her’

b. ... dass ich im Gegensatz zu ihr **viel** im  
 that I in contrast to her often.ADV in the  
 Büro sitze.  
 office sit.1.SG

‘that I often sit in the office, unlike her’

---

<sup>1</sup> The examples used so far have been constructed. However, throughout the paper I also use authentic evidence from various corpora from *Datenbank für gesprochenes Deutsch (DGD; Database for Spoken German)*. These are marked with the corresponding transcript IDs. The abbreviation *FOLK* stands for *Forschungs- und Lehrkorpus Gesprochenes Deutsch* (Research and Teaching Corpus) and the abbreviation *ZW* for *Zwirner Corpus*.

The form *viel* in 5a is not inflected, although the noun has a countable, individuated referent (that is, “office days”). Thus, there is no concord between the noun and the quantifier, which shows that they do not form an NP. In 5b, there is an intransitive verb with no quantifiable argument; therefore, *viel* can only be interpreted as an adverb.

To sum up the discussion so far, adverbs classified as indefinite quantifiers are often based on indefinite pronouns or determiners. As *viel* shows, usually, the pronominal source remains quite transparent, despite clear iterative semantics or certain morphosyntactic properties, such as the lack of an inflectional ending. In contrast, the source of the nonstandard German quantifier *als* is not as transparent. It is described in more detail in section 2.3.

## 2.2. *The Function of Indefinite Quantifiers.*

The function of the adverbs classified as indefinite quantifiers can generally be described as iterative. They describe a repetition of a situation or action at different moments in time involving the same actants (Xrakovskij 1997b:27–28). Members of this word class vary in the proximity of the intervals at which the situation is repeated, for example, *Ich gehe wenig spazieren* ‘I rarely go for a walk’ versus *Ich gehe viel spazieren* ‘I often go for a walk’. If this situation or action is carried out without exception (as long as the circumstances remain constant), the iterative adverb additionally marks habituality (Xrakovskij *ibid.*).

In German, there is no clear strategy for expressing habituality. There is only one adverb (*gewöhnlich* ‘usually’) that exclusively marks habituality (see Kibardina 1997:345). The verb *pflegen* ‘to have a tendency’ can also be used to express habituality in certain contexts, as described in Jędrzejowski 2001: *Sie pflegt ihren Kaffee auf dem Balkon zu trinken* ‘She tends to drink her coffee on the balcony’. Kibardina (1997:346) argues that the iterative adverb *immer* ‘always’ combined with different verbs of action could also perform a habitual function, at least, as a secondary feature. Although she does not provide any further details, I would like to explore her idea and extend it to the iterative adverb *als*.

Before I proceed with the analysis, however, I take a closer look at the semantic spectrum of indefinite quantifiers in German. Based on the classification in Gil 2001:1279, Zifonun (2011:77–78) distinguishes between nominal and verbal quantification, with the former referring to the quantification over entities and the latter over situations or actions. As



for the quantifiers studied here, they have been undergoing a noticeable shift from nominal quantification (expressed by pronouns and determiners) toward verbal quantification (expressed by adverbs). It may be argued that iterative adverbs have developed out of indefinite pronouns and determiners through a metaphorical extension of the notion *quantity* from entities (either concrete or abstract) to events: Just as one can have a certain quantity of water or love, one can have a “certain quantity” of going to the forest. While prototypical pronouns and determiners refer to concrete or even abstract quantities, prototypical adverbs refer to frequencies of repeated situations or actions.

Moreno Cabrera (1998) formulated fine-grained typological criteria for classifying (verbal) quantifiers, which combine syntactic, semantic, and morphological properties. Based on this set of criteria, and also taking into account the scope of quantification, the German indefinite quantifiers perform the function of external quantification. The adverbs are used to quantify over the set of time intervals at which a situation or action takes place (for example, *often* in *He ironed his shirt often*). There is no evidence of indefinite quantifiers referring to the number of times an action or situation is repeated within a time interval. This would correspond to internal quantification (for example, *twice* in *He often ironed his shirt twice*; see Moreno Cabrera 1998:149–150). This classification is supplemented with information on the morphological structure.

In general, different scales may be used to describe the semantics of quantification. Following Horn (1972:66), Zifonun (2011:79–81), Haspelmath (2001:11–12), and Gil (2001), existential, mid-range, and universal quantifiers can be distinguished, which denote low, medium, and high proportion of an entity, respectively. This scale is applicable to verbal quantification as well, as adverbs derived from pronouns and determiners tend to retain the quantificational semantics of their source. Adverbs denote the same proportion of the whole as their pronominal sources, but in the temporal domain (for example, *viel* ‘much’, *viel* ‘often’).

The pronoun *alles* and the adverb *als* in their canonical function are typically classified as universal quantifiers (or “Totalisatoren”; Vater 1986:30, Fobbe 2004:81). In their prototypical use, they denote all elements of a set or the entire period of time and as such may not be classified as indefinites (see Zifonun 2011:81). However, as mentioned above, they are grouped with indefinite quantifiers due to their formal similarity and historical development, as well as some of their lexical

properties that manifest in certain contexts (see Fobbe 2004:81–82, 84 for a similar argument). Note that in some contexts, universal quantifiers can denote a proportion rather than the entire set. For example, it is possible to say *I met all my colleagues at the conference* even if some of my colleagues with whom I have no regular contact were not there. This example shows that universal quantification allows for certain contextual exceptions, and that universal quantifiers do not always denote a definite number of units. *Alles* and *als* can certainly function as mid-range quantifiers in these contexts. Therefore, they may be included among the indefinite quantifiers, albeit as marginal representatives of this category.

While the primary function of the adverb *als* is to express iteration, it can also be used to express habituality of this iteration. This adverb expresses repetition that is most likely regular and can continue potentially indefinitely, until the circumstances change. By using a universal quantifier, such as *als*, the speaker implies that the chance of such change is extremely low; however, it still exists.<sup>2</sup>

In contrast, the adverb *viel* is classified as a mid-range quantifier that does not have a clear habitual function. This is the case for most of the German quantifiers that denote a portion of the set or mass and as such are classified as indefinites (see Zifonun 2011:79–81; although see, for example, Haspelmath 2001:11–12 for a different approach).

---

<sup>2</sup> An example of the adverb *always* performing the habitual function would be *When Daniel is here on Fridays, we always go to the canteen*. If the circumstances change and Daniel is not there on a particular Friday, the situation would not repeat.

	existential quantifiers	mid-range quantifiers		universal quantifiers
nominal		<i>wenig</i>	<i>viel</i>	<i>alle</i>
		<i>wenige</i>	<i>viele</i>	<i>alles</i>
		...	...	...
			<i>mehr</i> <i>mehrere</i> ...	
verbal		<i>wenig</i>	<i>viel</i> <i>mehr</i>	<i>als</i> <sup>2</sup>
		PAUCAL	MULTAL	OMNIAL

Figure 1. Scale ranges of nominal and verbal quantification (based on Moreno Cabrera 1998, Gil 2001, Haspelmath 2001, Zifonun 2011).

Moreno Cabrera (1998:158) provides a more fine-grained scale for (verbal) quantification. As shown in figure 1, his scale includes the categories PAUCAL ‘a few times’, MULTAL ‘many times’, and OMNIAL ‘always’. PAUCAL is located within the lower mid-range, MULTAL within the upper mid-range, and OMNIAL within the upper range, where universal quantifiers are located. German *wenig* ‘few’ can be classified as a paucal quantifier, *mehr* ‘more’ and *viel* ‘much’ as multal, and *alles/als* ‘all/everything’ as omnial.<sup>3</sup>

<sup>3</sup> Some members of this class are forms of the same lexical item, for example, *viel* ‘much’ and *mehr* ‘more’. It is still an open question to what extent these are individual lexemes or comparative forms of the same lexeme, especially in the case of verbal quantification. Roehrs & Sapp (2016:121–122), for example, propose a classification according to which *wenig* ‘rare’ as a quantifier is no longer a comparative form of the lexeme *viel* ‘much’ and thus constitutes a lexeme of its own. A similar approach could be taken with respect to *mehr* ‘more’, in which case it would be interesting to analyze whether *mehr* denotes a larger proportion of a unit than *viel*. In any case, in German, different indefinite quantifiers function as iterative markers of different counts of iteration.

### 2.3. A Special Look at Als.

In this section, I focus on the adverb *als*, which has been classified as an indefinite (although prototypically universal) quantifier. At first glance, *als* may not be traced back to a pronominal source because, in contrast to *viel*, it does not have a corresponding pronoun *als*. Its pronominal source is no longer transparent in modern German. The adverbial use of *als* in Middle Franconian and Rhenish Franconian is illustrated in 6a and 6b, respectively.<sup>4</sup>

- (6) a. Da sind als viele Paare mitgegangen.  
 there AUX.3.PL als.ADV many.DET couples come.along.PTCP  
 ‘There were always’ many couples coming along.’  
 (ZW--\_E\_01762\_SE\_01\_T\_01\_DF\_01)

- b. Wir sind als morgens  
 we AUX.3.PL als.ADV in\_the\_morning  
 um sieben Uhr hinausgefahren.  
 at seven o'clock drive.out.PTCP  
 ‘We always’ went out at 7 o'clock in the morning.’  
 (ZW--\_E\_04633\_SE\_01\_T\_01\_DF\_01)

As seen in the examples, *als* is used as an adverb of indefinite quantification. In 6a, it cannot be part of the NP *\*[als viele Paare]<sub>NP</sub>* since the quantifier position is already filled by *viele* ‘many’. It does not show agreement with the noun and cannot be classified as an object of *come along* either. In 6b, it appears in an intransitive construction, and so it may not be interpreted as a direct object. Therefore, it cannot be classified as either an indefinite pronoun or a determiner in these examples.

The adverbial use of *als* does not occur in Standard German. This is a nonstandard phenomenon that can only be found in certain regional varieties of German. It is documented in dictionaries of the West Central German (Christmann & Kraemer 1965–1968) and western Upper German

---

Accordingly, these indefinite quantifiers are located within different ranges along the scale.

<sup>4</sup> Note that German dialects are classified primarily according to phonological variants, so this classification does not implicate syntactic phenomena.

(Staub 1881) dialects. Formally, the adverb has the same form as the particle or conjunction *als*, which can fulfill different functions in German, as in *Unsere Berge sind höher als eure* ‘Our mountains are higher **than** yours’ or temporal connection *als wir gestern Abend nach Hause kamen...* ‘**when** we came home last night...’.

With respect to their source and etymology, however, these standard forms differ from the adverb examined here: Most historical dictionaries trace them back to the MHG form *also*, which had a variety of functions, including causal, temporal, and modal. In contrast, the adverb *als* focused on here is traced back to the MHG pronoun *allez* ‘everything’ (for example, Grimm & Grimm 1983, columns 229–232). The development from the pronoun marking nominal quantification to an adverb marking verbal quantification can be dated to MHG. The meaning of the adverb in MHG is given as ‘always’ (Grimm & Grimm 1983, column 229). As explained above, it is an omnia adverb and thus can be classified as iterative and habitual at this stage.

The New High German form *alles* ‘everything’, which developed out of MHG *allez*, does not belong to prototypical indefinite pronouns. However, this pronominal source—which is at least a marginal representative of the indefinite quantifiers—can be identified in the data as well. A development similar to other indefinite quantifiers (such as *viel*) is therefore quite realistic. Based on her initial analysis of the MHG data, Ellsäßer (2022) argues that the adverb *als* formally developed through the reanalysis of a pronominal phrase, as presented in 7, where it can be analyzed both as a determiner in a ProP [*daz allez*]<sub>ProP</sub> or as an adverb [*daz*]<sub>ProP</sub> [*allez*]<sub>Adv</sub>.

- (7) fo er daz **allez** getuot  
 as he that.DEM allez.DET/ADV do.3.SG.PRF  
 ‘As he did it all/always?’ (11\_2-12\_1-obd-PV-G > M242)<sup>5</sup>

Thus, the adverb *als* appears to have followed the same developmental path as other quantificational adverbs, such as *viel*. Similar to *viel*, the semantics of the pronoun *allez* in MHG could have undergone a metaphorical extension, from denoting portions of concrete or abstract

---

<sup>5</sup> This record was taken from *Referenzkorpus Mittelhochdeutsch* ‘Reference Corpus of Middle High German’.

entities to denoting portions of situations or actions. The nominal universal quantifier becomes a verbal universal quantifier that quantifies over units of time. Further information on the morphosyntactic and semantic development of *als* or on its distribution in nonstandard German varieties could not be found. Yet the phenomenon seems to be more complex than historical dictionaries suggest. In particular, in addition to its quantificational omnia semantics documented in MHG, the adverb seems to have developed other functions, as shown in 8.

- (8) a. Es ging schon **als** mal  
 it go.3.SG.PRF already als.ADV from\_time\_to\_time  
 eine Scheibe kaputt.  
 DET pane broken  
 ‘Sometimes a pane would be broken.’  
 (ZW--\_E\_02611\_SE\_01\_T\_01\_DF\_01)
- b. S3: Du. Hilfst Du **als** Deinem Nachbarn aus?  
 you help.2.SG you als.ADV 2.SG.POSS neighbor out  
 ‘Do you sometimes help your neighbor?’  
 S2: Ha, wenn es fehlt.  
 PART if it miss.3.SG  
 ‘If necessary.’ (ZW--\_E\_00602\_SE\_01\_T\_01\_DF\_01)

As seen in the examples, the adverb *als* can be used not only as a universal quantifier—the function that has resulted from the metaphorical reanalysis of *alles* ‘everything’—but also as a mid-range paucal quantifier. Thus, *als* seems to have expanded its semantic spectrum. The use of *als* illustrated in 8 is quite limited, and there is currently no explanation for it. Yet it is relevant for the analysis in this article. First, the examples in 8 indicate the evolution of *als* from an adverb whose status as an indefiniteness marker is controversial (some approaches would not place it in this category) to a clear marker of indefiniteness (at least, in some contexts). Second, currently *als* is classified as a habitual maker only in its “nonuniversal” function. Further development of its functional spectrum could potentially make *als* a habitual marker.

### 3. The Pilot Study on Indefinite Quantifiers.

#### 3.1. Data and Methodology.

In general, verbal indefinite quantifiers offer the possibility of studying the emergence and evolution of iterative markers in the German language system. Such an investigation may also provide some interesting insights into lexical marking of aspectuality, which has been quite understudied. First, the functional scope of indefinite quantifiers is partially determined by their non-numerical reference: Unlike numerical quantifiers, such as *twice*, non-numerical quantifiers, such as *often*, do not specify counts of iteration. This lack of specificity allows for certain vagueness, when in some contexts, the same word can function as either a nominal or a verbal quantifier, as in 4 above. Thus, a more detailed investigation of these indefinite quantifiers may have different starting points: One may begin with analyzing their formal as well as functional properties. Such an investigation would provide new insights into the emergence of iterative and—to some extent—habitual markers, as well as into their synchronic formal and functional properties. A metaphorical relationship between nominal and verbal quantification was discussed in sections 2.2 and 2.3. However, it is not clear to what extent this relationship holds for each member of the indefinite quantifier class.

Second, a more detailed diachronic investigation of the development of *als* may shed light on the semantic development of habitual markers in nonstandard German varieties. In nonstandard varieties, processes of language change can happen relatively fast, as such varieties are not subject to normative constraints. The fact that the standard variety influences certain—but not all—markers suggests that there could be further possibilities for the development of standardized markers of iteration (such as *viel*, *mehr*, etc.). Their development could proceed in a similar direction, albeit with a certain delay.

In the pilot study, I first identify the systems in different geographic regions where the adverb *als* occurs. I then examine these systems in detail and raise the question of what semantic functions the adverb can fulfill in each of them. In addition to the analysis of different functions of *als*, methodological issues must also be addressed. I discuss methods that can be used for a detailed analysis of the semantic and pragmatic spectrum of lexical units. The analysis addresses the methodological question of how and to what extent lexical markers of aspectuality can be studied using corpus data. I demonstrate that the formal properties of these markers lend

themselves to a corpus-based analysis, while functional properties do not and propose an explanation for this.

In this pilot study, I examined the morphosyntactic and semantic properties of indefinite quantifiers. For the purposes of this paper, I specifically focus on the results concerning the semantics and pragmatics of the adverb *als*, as well as its geographic distribution.<sup>6</sup> The pilot study used spoken language data because the adverb *als* is characteristic of nonstandard varieties, and so its occurrence in written language is limited (see also Proske, this issue). A corpus-based analysis seems reasonable at this stage, because there is currently little knowledge about the adverbial use of *als*. The corpus data can be used to identify and analyze the basic functions of *als*, and the results of this analysis can form the basis for future more in-depth research. At the same time, this analysis also aims to determine to what extent this phenomenon can be studied using corpus data and to identify potential limitations of this methodology.

The pilot study uses the Zwirner and Pfeffer corpora, both accessible via the DGD. The corpora represent different varieties of German: The Zwirner corpus is based on surveys conducted largely in the 1950s (up to the 1970s in some cases) in the Federal Republic of Germany, with the recordings representing mostly dialectal German.<sup>7</sup> The Zwirner corpus contains approximately 4,863,876 tokens. The surveys that led to the Pfeffer corpus were conducted in the 1960s. The data in the corpus are somewhat closer to the German standard language, although they also contain regional features and can thus be classified as less standardized, regional colloquial language. It contains approximately 646,492 tokens. By comparing the two types of data, I analyze the degree of standardization of the phenomenon.

The corpus data are available in the DGD both as sound recordings and as annotated transcriptions. The transcriptions that form the base of this study contain part-of-speech annotations (see Westpfahl & Schmidt 2013). However, the annotations do not take into account the adverbial use

---

<sup>6</sup> An analysis of the data, which does not expand on the functional development of these forms but is focused on the morphosyntactic evolution of both *viel* and *als* with respect to the change of word class, is outlined in Ellsäßer 2022.

<sup>7</sup> Recordings from the former German Democratic Republic are not available here, which is why it is not possible to make any statements about large parts of Eastern Germany on the basis of this corpus.



of *als*. For this reason, I could only carry out the study in a partially automated manner. A total of 3,887 occurrences of the form *als* were taken randomly from the corpora (2,000 from the Zwirner corpus and 1,887 from the Pfeffer corpus).<sup>8</sup> The entire sample was then scanned manually to identify any uses of *als* as an iterative adverb. The results were geographically referenced and are now available for further morphosyntactic and semantic analysis.

### 3.2. Preliminary Results.

A total of 286 instances of the iterative adverb *als* were identified out of 3,887 tokens. The results are presented in table 1.

	Pfeffer <i>n</i> =1,887	Zwirner <i>n</i> =2,000
iterative adverb	32 (1.7%)	254 (12.7%)
ambiguous	0	12 (0.6%)
other functions	1,831 (97%)	1,702 (85.1%)
unclear function	24 (1.1%)	32 (1.6%)

Table 1. Occurrence of *als* in the corpus data.

Table 1 shows that overall, the adverbial use of *als* is rare in the sample. It can also be seen that most occurrences of *als* as an iterative adverb are found in the Zwirner corpus: 254 versus 32 in the Pfeffer corpus. There may be two reasons for this: First, the Zwirner corpus contains more data than the Pfeffer corpus, and so the Zwirner dataset may be somewhat more balanced. This would be a quantitative explanation for the difference in the number of tokens. The second explanation, however, is qualitative; it has to do with the corpora content and is much more conceivable: The data in the Zwirner corpus come from nonstandard varieties, and since the adverbial use of *als* is a nonstandard phenomenon, it is expected to be more widespread in this corpus. The regional colloquial language in the

<sup>8</sup> The query was based on the transcribed form, not on the lemma. Initially, I took a sample of 2,000 occurrences from the Pfeffer corpus as well. However, some instances of *als* could partly be due to defective articulation. Furthermore, the sentences in which such instances occurred were too incomplete to determine the function of *als*. Therefore, these tokens were removed from the sample.

Pfeffer corpus is closer to Standard German, which could have led to a limited occurrence of the phenomenon that does not occur in the standard language.

This explanation is also supported by the geographic distribution of the phenomenon, which can be seen in figure 2. As seen from the maps in figure 2, not only is the adverb *als* significantly less frequent in the sample from the Pfeffer corpus, it is also used across a smaller (but still contiguous) geographic area. This means that the phenomenon may not be as widespread in the regional colloquial language as the data from the Zwirner corpus suggest; instead, the adverb *als* is used within a much more limited area compared to the dialectal data in the Zwirner corpus. Both maps show that the area of distribution of the iterative adverb has its core in the West Central German and western Upper German dialects (in the south of the German speaking area).

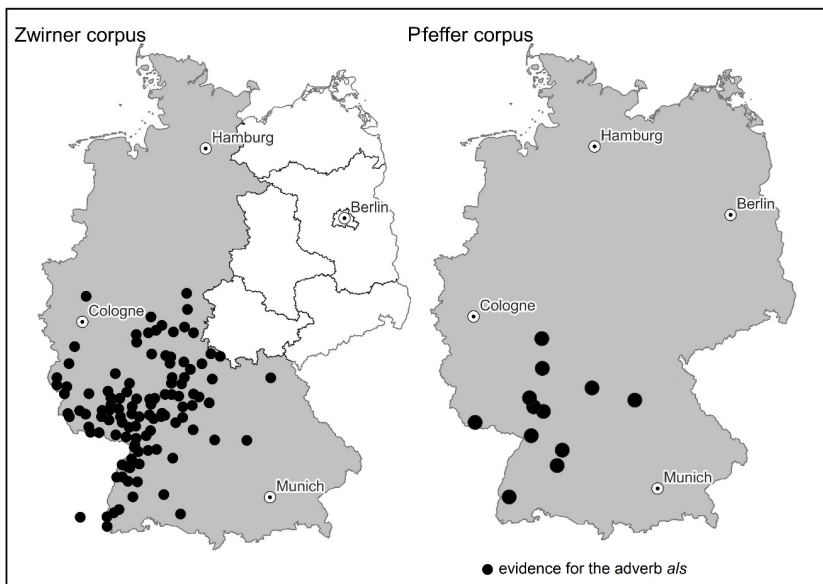


Figure 2. Geographic distribution of *als* as an iterative adverb in the sample.<sup>9</sup>

<sup>9</sup> The Zwirner corpus does not contain any data from the former German Democratic Republic, which is why no statements can be made about the occurrence of the iterative adverb *als* in this region. There is also no data on

Unfortunately, however, the empirical data are still somewhat limited geographically. In particular, no statements could be made on the basis of these data with respect to Swiss German dialects, where the phenomenon has also been described (Staub 1881). Additionally, when considering the findings across different regions, one must take into account that these are pure production data, which only reflect positive evidence. Whether the use of *als* as an iterative adverb is not found in a particular area because it was rejected by speakers or merely because it was not documented cannot be determined based on the data. Furthermore, the data from both the Zwirner corpus and the Pfeffer corpus do not represent recent nonstandard varieties, since they were collected nearly 70 years ago. They exemplify the most recent comprehensive collection of georeferenced spontaneous spoken data available to date.<sup>10</sup> Despite these limitations, however, this pilot study may provide an initial insight into the geographic distribution of the adverb *als*.

Unlike its geographic distribution, the functional spectrum of the adverb is much more difficult to determine based on these data. There is also no automated way to search for the relevant semantic or pragmatic features. To identify lexical meaning or, in this case, the function of an adverb in a corpus-based study, the established practice is to examine the context of the lexemes. In some instances, an extended context can provide information about how often certain situations or actions occur. For example, 9 describes a situation that likely used to occur every morning.

- (9) Früher bin ich **als** her, morgens  
 earlier be.1.SG I als.ADV here in\_the\_morning

---

German-speaking regions outside of Germany, such as Switzerland and Austria, in the two corpora. However, occurrence of the adverb *als* could be expected there as well. The map was created using the Free Open Source Software QGIS (<http://www.qgis.org>) and geographical data from Natural Earth.

<sup>10</sup> I also analyzed data from the FOLK corpus, which represents modern spoken language. This corpus (approximately 3,203,882 tokens) is currently being expanded. However, the data there cannot be clearly tied to specific locations and are therefore not suitable for my purposes to the same extent as the data from Zwirner and Pfeffer. The FOLK corpus is more than twice the size of the other two corpora combined, but I still could only find two occurrences of the adverb *als* in there.

früh im Winter mußte da Feuer anmachen  
 early in winter must.1.SG.PF here fire light.INF

‘In the past, I always came here; in the winter, had to make fire here  
 early in the morning’<sup>11</sup> (ZW--\_E\_04608\_SE\_01\_T\_01\_DF\_01)

The speaker in 9 talks about the daily routine on a farm in the past. He provides the details such as having to light a fire, which was necessary throughout the winter (at various points in time), before a heating system was installed. Based on this context, *als* can be classified as OMNIAL. To use this method, however, one must carefully study the context of each occurrence, which is an extremely time-consuming process that can only be performed manually. Moreover, the resulting classification is not entirely uncontroversial, as the interpretation of each context is always subjective. Yet this method allows one to identify specific semantic features of each individual occurrence.

In the Zwirner corpus, 40% (98) of the adverbs and all 32 adverbs in the Pfeffer corpus could be classified based on context. Although this procedure by no means yields reliable information for every occurrence, this seems to be the only sensible approach in the initial stages of investigation.

#### 4. Functional Development of Indefinite Quantifiers.

##### 4.1. Beyond Metaphor: Quantity to Iteration and the Semantics of *Als*.

As shown in sections 2.2 and 2.3, with some indefinite quantifiers, the same form can sometimes belong to different parts of speech: The same word can be interpreted as either a nominal or a verbal quantifier. As discussed above, this situation can be explained by a metaphoric development: Notions such as *much* or *little* can apply to events through a “quantity-to-iteration” extension. The verbal quantifier tends to retain the quantificational scope of the source pronoun or determiner. For example, if the indefinite pronoun *viel* ‘much’ is classified as a mid-scale quantifier that quantifies over units, or portions of an entity, and denotes “many units”, the adverb *viel* ‘often’ quantifies over iterations of an event and denotes “many iterations”. At this point, given the limited data examined in this study, it may not be verified whether such metaphorical extension

<sup>11</sup> The example in 9 differs somewhat from the actual example in the Zwirner corpus. The modification is based on the corresponding sound recording.

is characteristic of all quantificational pronoun/determiner–adverb pairs. However, the preliminary results suggest that this might be true of most indefinite quantifiers.

With respect to *als*, even the small number of tokens, whose interpretation I could clearly determine for the purposes of this pilot study, indicate an expansion of its semantic spectrum. Based on the information found in historical dictionaries (for example, Grimm & Grimm’s 1983; see section 2.3), *als* developed out of the universal nominal quantifier *alles* ‘everything’. Thus, just as discussed for other indefinite quantifiers, such as *viel*, an initial metaphorical extension from quantity to iteration may be assumed for *als* as well. Having retained the quantificational scope of *alles*, *als* is an omnia verbal quantifier and as such can express habituality (see discussion in sections 2.2 and 2.3). However, the data analyzed in this study suggest a clear widening of its quantificational scope toward the upper (multal) and lower mid-scale (paucal) range. Figure 3 outlines the distribution of the paucal, multal, and omnia use of *als* in the sample. The semantics of each occurrence of *als* was determined on the basis of the wider context. Since I could only semantically classify 32 adverbs from the Pfeffer corpus on the basis of context, figure 3 is based on the data from the Zwirner corpus alone.

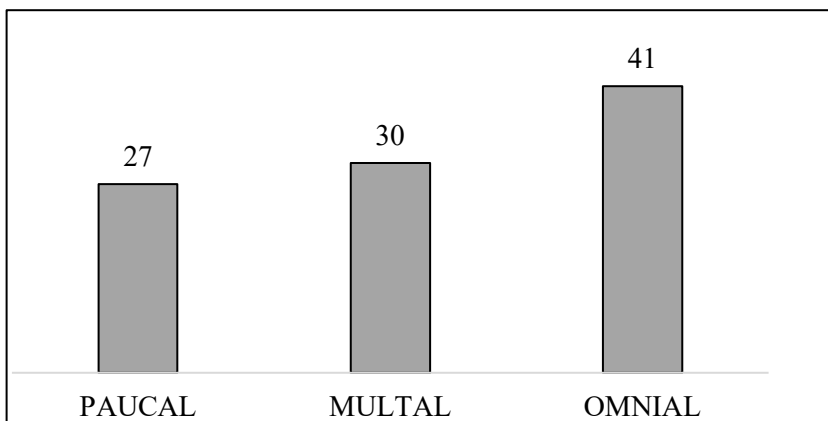


Figure 3. Quantificational scope of the adverb *als* based on the wider context (the Zwirner corpus),  $n=98$ .

One can see that the original omnia semantics of *als*, which enables its habitual function, is still dominant in the data. However, the paucal and

multal use of *als* is not rare either. The examples in 10 illustrate other iterative uses documented in the dataset.

- (10) a. Und sind wir herum im Dorf herum und sind  
 And be.1.PL we around in\_the village around and be.1.PL  
**als** manchesmal den Maskierten nach  
 als.ADV often.ADV DEF masked\_ones after  
 ‘And we went around the village and repeatedly followed the  
 masked people’ (ZW--\_E\_00620\_SE\_01\_T\_01\_DF\_01)
- b. So hat er als mal mit dem Finger  
 so AUX.3.SG.PF he sometimes.ADV with the finger  
 gemacht! Wenn ’s mal zu arg war  
 make.PCTCP when =it sometimes.ADV too bad be.3.SG.PF  
**als,** wurde gedroht.  
 als.ADV AUX.3.SG.PF threaten.PTCP  
 ‘That is what he did with his finger from time to time. When things  
 were too bad, sometimes threats were made.’  
 (ZW--\_E\_03251\_SE\_01\_T\_01\_DF\_01)

Example 10a describes a carnival custom of following people around who wear masks. This activity takes place on a given day but at unspecified intervals. Therefore, this example has been classified as MULTAL. Example 10b is taken from a story about children going sledging next to the school building; it describes the actions of the teacher watching the children. The activity is limited to a few days during the winter, and the teacher’s actions are not habitual; they only occur “sometimes” and under certain circumstances. Therefore, I assume that in this case, *als* is a PAUCAL quantifier.

The current quantificational range of the iterative adverb *als* suggests that a lexical aspectuality marker may undergo a significant semantic change during its evolution; it may acquire new meaning and functions while retaining its original semantics. As no regional distinctions emerge from the data, for the purposes of this study I assume that the use of *als* is more or less the same across all dialects. Although this assumption should

be verified using a broader dataset, possible regional differences might not be significant.

Moreover, the findings indicate that the adverb *als* is undergoing a shift from the periphery to the center of the class of indefinite quantifiers: As it gradually acquires a multal and a paucal meaning, its status as a universal quantifier is weakening to some extent. Thus, in its multal or paucal function, *als* no longer refers to all units of a set, mass, or iteration, but only to parts of these units. In other words, *als* is now located within the quantificational range of a mid-scale quantifier. The adverb can increasingly be used with indefinite reference and thus extend its functional scope. Since indefinite reference is a prototypical feature of indefinite quantifiers, *als* is moving toward becoming a true indefinite quantifier.

Accordingly, *als* is gradually losing its habitual function. As habituality is associated with universal quantification, the shift of *als* toward existential quantification—or toward the center of the scale—makes this function less prominent. Based on the definition formulated in the introduction (Xrakovskij 1997b), *als* may not function as a habitual marker in contexts where it does not receive an omnia interpretation.

Finally, there is an indication that *als* might eventually become a generalized iterative marker. A wide range of iterative meanings could potentially gradually replace its original habitual semantics, which would lead to *als* becoming a purely indefinite quantifier. It would no longer specify a frequency range of iterations for situations or actions but merely act as a marker of iterativity. To date there is no marker in German that fulfills this function, and so nonstandard German varieties would thus have developed a unique new marker.

However, this development is far from being completed. For example, *als* can combine with other iterative adverbs, as shown in 11. The Zwirner corpus contains 45 such instances (17.7%) and the Pfeffer corpus contains 2 (6.25%).

- (11) Die ist **als** immer so nachts [...] ist die  
 she AUX.3.SG als.ADV always.ADV so at\_night AUX.3.SG she  
 so erschienen auf den Schloßmauern  
 so appear.PTCP on the castle walls

‘She always appeared on the castle walls at night’

(ZW--\_E\_01111\_SE\_01\_T\_01\_DF\_01)

Example 11 shows an interesting combination of *als* with another omnia marker, *immer* ‘always’, which is a definite (universal) quantifier. At first glance, combining two iterative adverbs that are also habitual (at least, to some extent in the case of *als*) should lead to redundancy. However, such examples may suggest that the quantificational range of *als* is so indefinite and unclear at this point that speakers see the need to complement it with another adverb whose meaning is more precise. In other words, it could be proposed that the indefinite semantics of *als* is supplemented by the definite semantics of *immer* to define the range of *als*.

Note that adverbs that co-occur with *als* are mostly found within the low mid-scale portion of the quantification spectrum. Figure 4 shows the distribution of these adverbs based on the data from the Zwirner corpus.

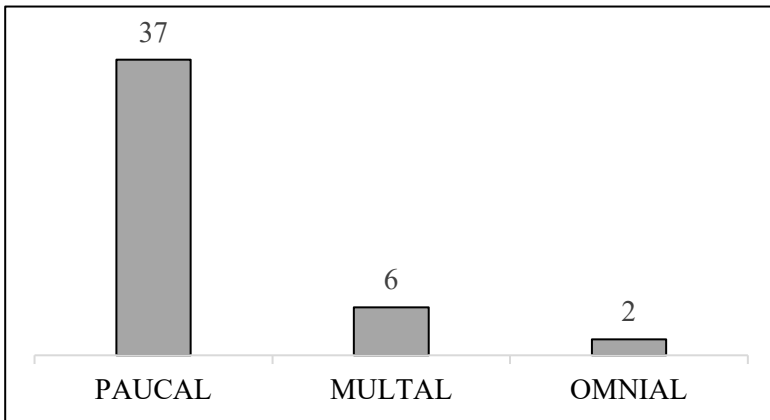


Figure 4. Semantic distribution of adverbs occurring with *als* (the Zwirner corpus),  $n=45$ .

Figure 4 shows that in 37 out of 45 instances, *als* co-occurred with adverbs within the paucal range. An example appears in 12.

- (12) Morgens um neun Uhr ist **als**  
 in\_the\_morning at nine o'clock AUX.3.SG als.ADV  
mal die Sonne herausgekommen  
 sometimes.ADV the sun come.out.PTCP



‘At nine o’clock in the morning, the sun would sometimes come out.’  
(ZW--\_E\_04633\_SE\_01\_T\_01\_DF\_01)

The paucal semantics represents the opposite end of the spectrum and is the furthest from the original habitual semantics of *als*, which could be described as OMNIAL. The fact that paucal adverbs are the ones that occur most often with *als* indicates that the latter has not fully acquired this meaning yet. Otherwise, the use of both adverbs would be redundant.

#### 4.2. *Nonaspectual (Nontemporal) Functions of Als.*

In addition to the habitual and iterative functions described in detail above, isolated instances of *als* performing a pragmatic function have been found in the corpus data. In its pragmatic use, *als* expresses the speaker’s attitudes and beliefs about the real world (for example, an attitude toward the listener). The pragmatic function of *als* suggests its further development, beyond a habitual/iterative marker. Hints of this development can already be found in older dictionaries (see, for example, Grimm & Grimm 1983, column 229 for 16th- and 17th century data), but it has not yet been described in detail. This observation is in line with the findings described for other lexical items or constructions that used to be markers of aspectuality but later developed other functions. For example, Wit & Brisard (2020:459–460) distinguish between the “canonical” and “pragmatically derived” uses of some aspectual constructions:

Most accounts of such aspectual constructions presuppose a ‘temporal’ meaning (a situation’s ongoingness or completion, or its location relative to some other situation or time point) as being prototypical and/or basic. Non-temporal uses, if considered at all, are typically treated as secondary, pragmatically derived.

It is extremely difficult to detect such pragmatic functions in corpus data, because they are strongly tied to the wider context. For example, at first glance, *als* in 13 could be construed as a purely iterative marker.

- (13) Ihr seid als durch den Dings gemacht da,  
you be.2.SG als.ADV though the thing make.PTCP there

und dadurch haben die Hosen gebrennt.  
 and thus have.3.PL the trousers burn.PTCP

(ZW--\_E\_04285\_SE\_01\_T\_01\_DF\_01)

Note, however, that sentences such as 13 often appear within narratives and jokes or in emotional statements, and that the context of their use is clearly evaluative.<sup>12</sup> In such examples, *als* seems to perform a different function, and its quantificational range appears to be irrelevant. Thus, in 13, it is irrelevant how many times or how often the pants caught fire; the remark focuses on the fact itself that they were burned. This suggests that in this case, *als* has a pragmatic function, namely, it contributes to a pejorative meaning: It is a marker of the speaker's evaluation of the iterated action or of the person performing this action.

Such evaluative contexts are relatively difficult to detect unambiguously in a corpus. However, examples have been found in the Zwirner corpus where other evaluative markers occur in addition to *als*. Two of them are examined in more detail here:

- (14) a. Anders wie Du. Mit Deinem blauen Anzüge kannst  
 different from you with your blue suit.DIM can.2.SG  
 Du **als** hinein.  
 you als.ADV inside

'Unlike you. With your little blue suit, you can always go inside.'

(ZW--\_E\_00602\_SE\_01\_T\_01\_DF\_01)

---

<sup>12</sup> Example 13 is from a story that relays an amusing conversation between an apprentice and his master:

Auf einmal sagte ich: "Meister, Eure Hosen brennen ja!" "Ei der Donnerwetter" sagt er "wie kommt denn das?" da sage ich: "Ihr seid als durch den Dings gemacht da, und dadurch haben die Hosen gebrennt", nicht? War auch noch ein schönes Erlebnis.

Right away I say, "Master, your pants are on fire!" "Oh my gosh," he says, "How come?" and I say, "You have gone through the thing, and so your pants are now burned," right? It has also been a nice experience."

- b. Bin dann vier Jahre hinauf gelaufen auf Bredstadt  
 AUX.1.SG then four years up walk.PTCP to Bredstadt  
 und das war das dann— hat sich dann das  
 and that be.3.PF that then— AUX.3.SG.PF REFL then that  
**als** gemacht und gemacht.  
 als.ADV make.PTCP and make.PTCP

‘I went up to Bredstadt for four years and that was it; it has been going on and on since then.’

(ZW--\_E\_01652\_SE\_01\_T\_01\_DF\_01)

The examples in 14 also indicate the pragmatic function of *als*: They express the speaker’s evaluation of the listener (14a) and of the situation (14b). Example 14a contains a diminutive form, *Anzügle*. In addition to their prototypical functions, diminutive forms can function as (often pejorative) evaluation markers (for example, Merlini Barbaresi 2015, Scherer 2019). Example 14b contains a repetition of the nonfinite verb form *gemacht*. This repetition has no syntactic function and is redundant from a grammatical perspective, which suggests that it was inserted for pragmatic reasons.

However, even though *als* does seem to perform an evaluative function here, the latter cannot be clearly separated from its iterative or, in this case, its habitual function. The habitual character of the action is preserved in all instances evaluated in this way. Moreover, it is precisely this habituality that seems to be negatively evaluated in 13 and 14, even though the frequency of iteration is not in focus. Thus, evaluation is only a secondary function of *als*.<sup>13</sup>

Methodologically, however, the pilot study reaches its limits here. Examples such as 13 and 14 could be classified as pejorative due to the contexts in which they are found in the corpus, although these are incidental findings. The extent to which other examples might reflect the evaluative function of the habitual adverb is extremely difficult to investigate on the basis of corpus data. Even with the examples shown

---

<sup>13</sup> There seems to be a general tendency for aspect markers to develop other functions, such as subjective or evaluative (see Wit & Brisard 2020:468 and Brisard 2022 on nonaspectual usages of progressive markers and Proske, this issue on pseudo-coordination in German).

here, it is difficult to identify reliable markers of evaluation. Other markers, including suprasegmental ones (for example, a stress placed on the otherwise mostly unaccented adverb) would also have to be examined more closely. Studying nontemporal, pragmatic functions using corpus data nevertheless remains a difficult task.

## 5. Conclusion.

The aim of this article was to show that lexical aspectual markers offer an interesting subject for in-depth analysis. Phenomena like the one described here demonstrate that aspectuality should not be classified as a category only conveyed by verbal morphology. A comprehensive analysis of the expression of aspectuality must also include lexical markers, although in German, marking aspectuality is often their secondary function. In particular, indefinite quantifiers present an exciting opportunity for studying formal and functional evolution of lexical iterative markers in general and of habitual markers in particular. Crosslinguistically, indefinite quantifiers seem to be a good source of iterative markers. In turn, iterative markers denoting universal quantification are a good source of habitual markers.

The development of the habitual adverb *als* in nonstandard varieties of German has been traced in detail in this article. Having developed out of a universal quantifier *allez*, at first glance, this adverb may not be classified as a prototypical member of the indefinite quantifier class. However, the initially missing prototypical feature of indefiniteness evolved in the course of the adverb's development. At the same time, the adverb's original habitual function is gradually disappearing. In addition to the striking expansion of its quantificational range, *als* exhibits similarities to other (especially verbal) aspectual markers. This way, the complete life cycle of a habitual marker could be traced.

Notwithstanding, the study of *als* has revealed limitations of a corpus-based approach when it comes to analyzing indefinite quantifiers. First, the data yielded only positive evidence, which does not allow one to determine what functions or uses of a given quantifier are unacceptable. In the case of *als*, the data only showed that speakers in certain areas use the adverb (in certain functions). Based on these data, no conclusions may be drawn with respect to areas in which *als* is not attested: It may simply be the case that the use of *als* is not documented for these areas.

Second, it is difficult to determine the precise semantic spectrum of adverbs based on corpus data. Although corpus linguistics offers a variety of methods to conduct semantic analysis, these methods are not readily applicable to the study of aspectuality markers, including adverbs. The success of such studies relies, to a large extent, on accidental findings. This is particularly true with respect to noncanonical functions of aspectuality markers.

Yet, even if corpus-based methodology may not be used to analyze large volumes of data, it is suitable for laying the groundwork for more in-depth research. In the future, other studies would be necessary to examine the phenomenon more closely. In particular, experimental studies involving acceptability tests would allow one to verify the findings of a corpus-based analysis and to generate a larger amount of data.

#### REFERENCES

- Beneke, Georg, Wilhelm Müller, & Friedrich Zarncke. 1990. A–L (*Mittelhochdeutsches Wörterbuch 1*). Stuttgart: Hirzel.
- Bogaards, Maarten. This issue. Top-down versus bottom-up approaches aspect: The case of the Dutch prepositional progressive. 311–338.
- Boneh, Nora, & Łukasz Jędrzejowski. 2019. Reflections on habituality across other grammatical categories. *STUF: Language Typology and Universals* 72. 1–20.
- Brisard, Frank. 2022. The modal basis of progressive marking. *Aspektualität in Varietäten des Deutschen (Linguistische Berichte Sonderheft 32)*, ed. by Hanna Fischer, Melitta Gillmann, & Mirjam Schmuck, 15–33. Hamburg: Buske.
- Christmann, Ernst, & Julius Kraemer. 1965–1968. Band 1: A, B/P, (C) (*Pfälzisches Wörterbuch 1*). Wiesbaden: Steiner.
- Comrie, Bernard. 1976. *Aspect: An introduction to the study of verbal aspect and related problems*. Cambridge: Cambridge University Press.
- Diewald, Gabriele. 2002. A model for relevant types of contexts in grammaticalization. *New reflections on grammaticalization (TSL 49)*, ed. by Ilse Wischer & Gabriele Diewald, 103–120. Amsterdam: John Benjamins.
- Ellsäßer, Sophie. 2022. Pronomen, Adverb, Partikel: Zur Entwicklung der indefiniten Quantifizierer *viel* und *als*. *Adverbien und Adverbiale: Grenzen und Gliederung einer syntaktischen Kategorie im Deutschen*, ed. by Pierre-Yves Modicom, 29–47. Heidelberg: Winter.
- Fischer, Hanna. 2018. *Präteritumschwund im Deutschen. Dokumentation und Erklärung eines Verdrängungsprozesses*. Berlin: De Gruyter.

- Fleischhauer, Jens. 2016. *Degree gradation of verbs (Dissertations in Language and Cognition 2)*. Düsseldorf: Düsseldorf University Press.
- Flick, Johanna, & Katrin Kuhmichel. 2013. Der am-Progressiv in Dialekt und Standardsprache. *Jahrbuch für Germanistische Sprachgeschichte* 4. 52–76.
- Fobbe, Eilika. 2004. *Die Indefinitpronomina des Deutschen: Aspekte ihrer Verwendung und ihrer historischen Entwicklung*. Heidelberg: Winter.
- Gil, David. 2001. Quantifiers. *Language typology and language universals: An international handbook*, ed. by Martin Haspelmath, Ekkehard König, Wulf Oesterreicher, & Wolfgang Raible, 1275–1294. Berlin: De Gruyter.
- Grimm, Jacob. 1831. *Deutsche Grammatik*, vol. 3. Göttingen: Dieterich.
- Grimm, Jacob, & Wilhelm Grimm (eds.). 1983. *Deutsches Wörterbuch*. Leipzig, Stuttgart: Hirzel.
- Haspelmath, Martin. 1997. *From space to time: Temporal adverbials in the world's languages (LINCOS Studies in Theoretical Linguistics 3)*. München: Unterschleissheim.
- Haspelmath, Martin. 2001. *Indefinite pronouns*. Oxford: Oxford University Press.
- Horn, Laurence R. 1972. *On the semantic properties of logical operators in English*. Los Angeles, CA: UCLA dissertation.
- Ihden, Sarah. This issue. The present participle with *wërden* and *wësen* in Middle Low German: A corpus-based analysis of structure and meaning. 409–446.
- Jędrzejowski, Łukasz. 2001. On the habitual verb *pflegen* in German: Its use, origin, and development. *Linguistics* 59. 1473–1530.
- Kibardina, Svetlana. 1997. Means of denoting situational plurality in German. *Typology of iterative constructions*. Xrakovskij 1997a, 340–348.
- Merlini Barbaresi, Lavinia. 2015. Evaluative morphology and pragmatics. *Edinburgh handbook of evaluative morphology*, ed. by Nicola Grandi & Livia Kortvelyessy, 32–42. Edinburgh: Edinburgh University Press.
- Moreno Cabrera, Juan C. 1998. Adverbial quantification in the languages of Europe: Theory and typology. *Adverbial constructions in the languages of Europe*, ed. by Johan van der Auwera, 147–158. Berlin: De Gruyter.
- Proske, Nadine. This issue. Pseudo-coordinated *sitzen* and *stehen* in spoken German: A case of emergent progressive aspect? 447–486.
- Ramat, Paolo. 2011. Adverbial grammaticalization. *The Oxford handbook of grammaticalization*, ed. by Heiko Narrog & Bernd Heine, 503–510. Oxford: Oxford University Press.
- Roehrs, Dorian, & Christopher D. Sapp. 2016. *Quantifying expressions in the history of German: Syntactic reanalysis and morphological change*. Amsterdam: John Benjamins.

- Scherer, Carmen. 2019. Expressivität in der Wortbildung. Ein Überblick. *Expressivität im Deutschen*, ed. by Franz d' Avis & Rita Finkbeiner, 49–74. Berlin: De Gruyter.
- Staub, Friedrich. 1881. *Schweizerisches Idiotikon (Schweizerisches Idiotikon: Wörterbuch der schweizerdeutschen Sprache I)*. Frauenfeld: Huber.
- Vater, Heinz. 1986. Zur Abgrenzung der Determinantien und Quantoren. *Zur Syntax der Determinantien*, ed. by Heinz Vater, 13–31. Tübingen: Narr.
- Waldenberger, Sandra. 2015. Lexicalization of PPs to adverbs in historic varieties of German. *Adverbs: Functional and diachronic aspects*, ed. by Daniela Elsner, Fabian Barteld, & Karin Pittner, 179–206. Amsterdam: John Benjamins.
- Weber, Thilo. 2017. *Die TUN-Periphrase im Niederdeutschen. Funktionale und formale Aspekte*. Tübingen: Stauffenburg.
- Westpfahl, Swantje, & Thomas Schmidt. 2013. POS für(s) FOLK—Part of Speech Tagging des Forschungs- und Lehrkorpus Gesprochenes Deutsch. *Journal for Language Technology and Computational Linguistics* 1. 139–156.
- Wit, Astrid de, & Frank Brisard. 2020. Aspect beyond time: Introduction. *Journal of Linguistics* 56. 459–477.
- Xrakovskij, Victor S. (ed.). 1997a. *Typology of iterative constructions*. Munich: LINCOM Europa.
- Xrakovskij, Victor S. 1997b. Semantic types of the plurality of situations and their natural class classification. Xrakovskij 1997a, 3–46.
- Zifonun, Gisela. 2011. *Grammatik des Deutschen im europäischen Vergleich: Das Pronomen. Teil IV: Indefinita im weiteren Sinne*. 2nd edn. Mannheim: Institut für Dt. Sprache.

#### DICTIONARIES AND CORPORA

- Duden. 2016. *Die Grammatik: Unentbehrlich für richtiges Deutsch*, 9th edn. Berlin: Dudenverlag.
- IDS. Datenbank für Gesprochenes Deutsch (DGD), FOLK. Available at <http://dgd.ids-mannheim.de>, accessed on July 29, 2022.
- IDS. Datenbank für Gesprochenes Deutsch (DGD), PFEFFER. Available at <http://dgd.ids-mannheim.de>, accessed on July 29, 2022.
- IDS. Datenbank für Gesprochenes Deutsch (DGD), ZWIRNER. Available at <http://dgd.ids-mannheim.de>, accessed on July 29, 2022.
- Klein, Thomas, Klaus-Peter Wegera, Stefanie Dipper, & Claudia Wich-Reif. 2016. Referenzkorpus Mittelhochdeutsch (1050–1350), Version 1.0. Available at <https://www.linguistics.ruhr-uni-bo-chum.de/rem/>, accessed on October 12, 2021.

Osnabrück University  
Institut für Germanistik  
Neuer Graben 40  
49074 Osnabrück  
Germany  
[sophie.ellsaesser@uni-osnabrueck.de]