

# A Diachronic Perspective on Evaluative Adverbs in German: The Case of *leider*

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**Abstract** This article presents a corpus-based study of the syntactic and semantic development of the German evaluative adverb *leider* ‘unfortunately’. The analysis identifies syntactic and interpretative ambiguity as key factors in the reanalysis of *leider* as a sentence adverb, providing further empirical support for existing accounts of the development of such elements. In addition, the paper proposes a general developmental path for evaluative adverbs in German, highlighting the interplay between syntactic reanalysis and subjectification in their development.

**Keywords** Evaluative adverbs. Sentence adverbs. Syntactic reanalysis. Metonymic shift. Subjectification.

**Summary** 1 Introduction. – 2 Evaluative Adverbs as a Class in its Own Right. – 3 Existing Accounts for the Development of Evaluative Adverbs in German. – 4 *Leider* as a Case Study. – 4.1 *Leider*: Etymological Origin and Present-Day Use. – 4.2 The Study: Methodological Premises and Results. – 4.3 Syntactic Analysis. – 4.4 Semantic Analysis. – 4.5 Interim Conclusions: A Separate Developmental Path for Evaluative Adverbs? – 5 Conclusions.



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## 1 Introduction

Sentence adverbs<sup>1</sup> represent a class of adverbial elements typically assumed to operate at the sentential level, modifying the propositional content of the sentence in which they occur.<sup>2</sup> Consider the following examples:

- (1) a. **Wisely**, he didn't answer my letter.  
b. He didn't answer my letter **wisely**. (Ramat, Ricca 1998, 189, ex. 5)

The adverb *wisely* is polyfunctional and can be used either as a sentence-level modifier (1a) or as a predicate-level modifier (1b). As Ramat and Ricca (1998, 189) observe, in (1a) *wisely* functions as a sentence adverb, affecting the content of the sentence in which it appears and taking the whole proposition (including the negation) in its scope. (1a) can be paraphrased as 'He was wise not to answer my letter'. Conversely, in (1b) *wisely* modifies only the predicate, its scope does not extend to the whole proposition. (1b) can be paraphrased as 'He answered my letter, but not in a wise manner'.

Given the internal heterogeneity of the class of sentence adverbs, various classification proposals have been suggested in the literature at different stages of research.<sup>3</sup> In the present paper, I adopt a tripartite classification into evidential, epistemic, and evaluative subcategories – which has gradually become established in the literature –, following in part the terminology and layered model proposed by Ramat and Ricca (1998, 192). So-called 'speech-act adverbs' such as *frankly*, *briefly*, and *honestly* – called 'pragmatic adverbs' in Bellert (1977) and 'discourse-oriented adverbs' in Ernst (2009) – are excluded from consideration here. Sentence adverbs are thus classified in this paper into the following three classes (since

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**2** Cf. Jackendoff 1972; Bellert 1977; Helbig 1984; Ramat, Ricca 1998; a.o. For further references on sentence adverbs in German linguistic research, see Hetland 1992; Zifonun, Ludger, Strecker 1997; Helbig, Buscha 2001; Eroms 2006; 2010; Schäfer 2008; Duden-Grammatik 2009; Duffner 2010; Müller 2022.

**3** See Jackendoff 1972; Bellert 1977; Helbig 1984; Swan 1988; Zifonun, Hoffmann, Strecker 1997, 1125-6; Helbig, Buscha 2001, 435; Eroms 2006; Duden-Grammatik 2009, 586-7.

the focus of this article are evaluative adverbs in German, examples from German will be discussed below):<sup>4</sup>

- evidential adverbs (e.g., *anscheinend* ‘apparently’, *offenbar* ‘evidently’, *angeblich* ‘allegedly’), which express the speaker’s stance towards the source or epistemic status of the information, as illustrated in (2). Here, by using *anscheinend*, the speaker signals that the information presented – namely that the fox killed a few hares – comes from some indirect evidence no further specified:
- (2) Der Fuchs hat **anscheinend** auch schon ein paar Hasen gerissen und sorgt damit für Unmut bei den Anrainern. (DeReKo: Tiroler Tageszeitung, 17 May 2008)  
‘The fox has apparently already killed a few hares, causing annoyance among the neighbours.’
- epistemic adverbs (e.g., *möglicherweise* ‘possibly’, *wahrscheinlich* ‘probably’, *sicher* ‘certainly’), which encode the speaker’s degree of commitment to the truth of the proposition, as exemplified in (3). In this example, the speaker, by using the adverb *möglicherweise*, presents the proposition as possible:
- (3) Wer im Moment viel niest, muss nicht unbedingt erkältet sein. **Möglicherweise** ist auch eine Allergie schuld an den Niesattacken. (DeReKo: Saale-Zeitung, 24 January 2011)  
‘If you’re sneezing a lot right now, it doesn’t necessarily mean you have a cold. Possibly, an allergy is also responsible for the sneezing attacks.’
- evaluative adverbs (e.g., *bedauerlicherweise* ‘regrettably’, *glücklicherweise* ‘fortunately’, *leichtsinnigerweise* ‘carelessly’), which indicate the speaker’s evaluation of the proposition, as shown in (4). Here, by using *bedauerlicherweise*, the speaker expresses regret at the weather conditions affecting the market:
- (4) “Für die Besucher ist diese Kombination aus Bauern- und Antik-Markt natürlich sehr gut [...]. Das Wetter ist **bedauerlicherweise** nicht optimal.” (DeReKo: Saarbrücker Zeitung, 16 October 2002)  
““For the visitors, this combination of farmer’s market and antiques market is of course very good [...]. Regrettably, the weather is not ideal.”

In recent years, the diachronic development of sentence adverbs has gained interest in German linguistic research from both

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<sup>4</sup> I would like to thank an anonymous reviewer for suggesting more precise formulations for defining the classes of sentence adverbs.

semanto-pragmatic and syntactic perspectives.<sup>5</sup> However, the subclass of evaluative adverbs has not received as much attention as epistemic and evidential adverbs, despite some studies on speaker-oriented adverbs (to which also evaluative adverbs belong) and on *-erweise* formations (which represent most of the evaluative sentence adverbs) in the synchronic literature (see below). In diachronic investigation of sentence adverbs, evaluative adverbs have been discussed more briefly, notably in Axel-Tober (2016, 29-30) and in Müller, Axel-Tober (2025, 16-17).

This paper investigates the developmental path of the evaluative sentence adverb *leider* ('unfortunately, regrettably'), pursuing two aims: primarily an empirical one, and secondarily a theoretical one. Empirically, the contribution seeks to examine the diachronic development of *leider* across different historical stages. In particular, it aims to investigate its morphosyntactic and semantic development in light of existing analyses proposed in the literature for both evaluative and other sentence adverbs. In fact, *leider* represents a particularly interesting case of sentence adverb from a morphological point of view, as it derives from the adverbial comparative form of the Old High German (henceforth OHG) adjective *leid* ('hateful, repulsive, shameful, disgraceful'), rather than from an *-erweise* formation with adjectival base like most (if not all) German evaluative adverbs, as will be shown below. On the theoretical side, the paper aims to offer insights into the interaction between syntax, semantics, and pragmatics, and the role of subjectification in the emergence of evaluative adverbs. This analysis aligns the syntactic development of evaluative adverbs with that proposed for other classes of sentence adverbs, suggesting a common developmental pathway independent of specific semantic subtypes.

At this stage, it is important to define the terminological and theoretical assumptions that will be adopted in this paper to describe and refer to the clausal syntax of OHG, Middle High German (henceforth MHG), and present-day German (henceforth PDG). As observed by Axel (2007, ch. 1), a.o., and in the literature cited therein, OHG prose already displays two core properties characteristic of a verb-second (V2) grammar: verb movement and XP-fronting to the left sentence periphery, corresponding to the C-domain. At the same time, as she points out, OHG prose texts also show quite frequently verb-third (V3) configurations (ch. 4) and declarative clauses with verb-first (V1) order (ch. 3), which occur with fewer restrictions than in PDG. Following standard assumptions for German, this paper adopts the view that V2 word order results from movement of the finite verb

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<sup>5</sup> See Axel-Tober 2016; Axel-Tober, Müller 2017; Müller 2021, ch. 5; Axel-Tober et al. 2025; Müller, Axel-Tober 2025.

from its base position to the head of the CP, and from movement of some XP to Spec, CP. For the purposes of the study presented here, I will use the terms CP, C-domain and left sentence periphery synonymously, without distinguishing between further projections within this area. Building on the recent analysis by Catasso and De Bastiani (2024), I assume that sentence adverbs occurring in V3 clauses in an utterance-initial position (followed by an XP preceding the finite verb) in OHG and MHG are base-generated in a clause-external position. Furthermore, Axel (2007) observes that in OHG, XPs can be quite freely extraposed to positions beyond the verbal complex (ch. 2.6.1). In the present study, this area is referred to as the right sentence periphery. Descriptive terms from the *topologisches Satzmodell* are also occasionally employed: in particular, the so-called 'prefield', which corresponds to Spec, CP, and the 'middle field', consisting of all material which is linearly between the head of the CP (so-called 'left sentence bracket') and the head of the VP ('right sentence bracket'). Within this area, the present paper distinguishes between an I-domain, where so-called 'high adverbs' such as the sentence adverbs described above operating at the sentential level are adjoined, and a V-domain, which hosts event-related adverbs such as manner adverbs.

The article is structured as follows. § 2 provides an overview of evaluative adverbs in German as a distinct subclass, focusing on their syntactic, pragmatic, and semantic properties. § 3 reviews previous research on the development of (evaluative) sentence adverbs in German. § 4 presents the corpus-based study of the diachronic development of *leider*. § 5 concludes.

## 2 Evaluative Adverbs as a Class in its Own Right

As previously mentioned, evaluative sentence adverbs have often been treated more generally within the broader distinction between speaker-oriented and subject-oriented adverbs (see Ernst 2009; Liu 2009), or within the context of morphological processes such as English *-ly* formations and German *-(er)weise* formations (see Elsner 2015; Pittner 2015; Lewis 2020). Only few studies have focused specifically on evaluative adverbs (see Bonami, Godard 2008; Liu 2012). The aim of this section is not to provide a comprehensive synchronic analysis of evaluative adverbs in German, but rather to outline their core properties and to situate them within the larger category of sentence adverbs, without offering a detailed explanatory account of their synchronic behaviour.

Sentence adverbs are generally assumed to take scope over the proposition without being part of it, building a sort of condensed modal (meaning epistemic and evidential) or evaluative proposition

over the main one.<sup>6</sup> In German, several operational tests have been developed to differentiate sentence adverbs from manner adverbs and modal particles (see Helbig 1984, 108-9 and the cited literature therein; Helbig, Buscha 2001, 430-9; Axel-Tober 2016, 24-6). For instance, according to these tests, sentence adverbs can often be paraphrased as matrix (5a) or parenthetical clauses (5b):<sup>7</sup>

- (5) a. Er kommt **vermutlich**. ← Man vermutet (Es wird vermutet, es ist vermutlich so), dass er kommt. (Helbig, Buscha 2001, 430)  
'He is probably coming.' ← 'We assume (It is assumed, it is probably so) that he is coming.'
- b. Er hat den Zug **vermutlich** nicht erreicht. ← Er hat den Zug – wie ich vermute (so vermute ich) – nicht erreicht. (430)  
'He probably didn't catch the train.' ← 'He didn't catch the train – as I assume (so I assume).'

Furthermore, although they can be expanded into full clauses, they cannot be pronominalised (6), questioned via *wh*-questions (nor through *yes/no*-questions) (7), nor can they be negated (8b):

- (6) Er kommt **vermutlich**. → \*Er kommt so. (431)  
'He is probably coming.' → 'He is coming so.'
- (7) Wie kommt er? \***Vermutlich**. (431)  
'How is he coming? Presumably.'
- (8) a. Er kommt **vermutlich** nicht. (431)  
'He is probably not coming.'
- b. \*Er kommt nicht **vermutlich**. (431)  
'He is not probably coming.'

Following the same operational tests, sentence adverbs generally do not occur in interrogative (9a), imperative (9b), or optative constructions (9c).

- (9) a. \*Kommt er **vermutlich (leider)**? (431)  
'Is he probably (unfortunately) coming?'
- b. \*Kommt **vermutlich (leider)**! (431)  
'Come probably (unfortunately)!''
- c. \*Käme er doch **vermutlich (leider)**! (431)  
'If only he probably (unfortunately) came!'

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<sup>6</sup> Cf. Jackendoff 1972; Bellert 1977; Helbig 1984; Ramat, Ricca 1998. Also see Frey, Pittner 1998; Cinque 1999.

<sup>7</sup> Their parenthetical nature is sometimes reflected orthographically through parentheses or dashes (cf. Zifonun, Hoffmann, Strecker 1997, 895).

Typically, they also cannot be compared (10a), coordinated (10b), or modified by degree particles (10c):<sup>8</sup>

- (10) a. \*Er kommt **vermutlicher (sicherer)**. (432)  
'He is more probably (definitely) coming.'  
b. \*Er kommt **vermutlich und leider**. (432)  
'He is probably and unfortunately coming.'  
c. \*Maria ist **sehr erstaunlicherweise** schon fertig. (Axel-Tober 2016, 25, ex. 2c)  
'Maria is very astonishingly already finished.'

In addition, they are excluded from performative utterances, cf. (11):

- (11) \*Ich frage dich (hiermit) **vermutlich (leider)**, wann du kommst. (Helbig, Buscha 2001, 432)  
'(Hereby), I am probably (unfortunately) asking you when you are coming.'

These properties, which are generally attributed to sentence adverbs and which in part derive from the fact that sentence adverbs operate at the propositional level, are also shared by evaluative sentence adverbs, as partly suggested by the examples above containing *leider*.

A key aspect in the distinction between the evaluative subgroup and other types of sentence adverbs concerns their position in the sentence. Various proposals have been put forward to account for adverbial ordering, reflecting either primarily semantic or primarily syntactic approaches.<sup>9</sup> Semantically based approaches, exemplified by Ernst (2002), argue that the ordering of adverbials is primarily determined by lexical properties and satisfies inherent semantic requirements. In contrast, syntactically oriented approaches, such as the one proposed by Cinque (1999), emphasise the role of syntax, claiming that each type of adverb is hosted in the specifier of a dedicated functional projection within a hierarchical structure of projections. Within this hierarchy, evaluative adverbs occupy a structurally very high position, just below speech-act adverbs and above evidential and epistemic ones as well as event-related adverbs:

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<sup>8</sup> Empirical observation (based, for example, on corpus data) reveals that counterexamples can indeed be found (see, for instance, Axel-Tober 2016, 25). In these paragraphs, I focus only on presenting the properties commonly attributed to sentence adverbs in the literature, from a purely descriptive perspective. I do not aim here to explore or account for the underlying reasons why sentence adverbs occasionally occur in interrogative contexts or can be coordinated with other sentence adverbs. These questions will be addressed in part later in this section, drawing on Liu's (2009) analysis of speaker-oriented adverbs.

<sup>9</sup> For a review of different approaches applied to German, see Möhrstädt 2021. For a discussion about the adverbial ordering and the interaction between syntax and semantics, see Pittner 2004; Ernst 2007.

- $$\text{Mod}_{\text{necessity}} [\text{possibly Mod}_{\text{possibility}} \dots]]]]]]]]$$

From a morphological point of view, most German evaluative adverbs are derived from adjectival bases through the highly productive suffix *-erweise* (e.g., *dummerweise* ‘stupidly’).<sup>10</sup> In this respect, *leider* represents a sort of morphological exception, as it does not exhibit this type of derivation (see below). However, it should be noted that there is no morphological element uniquely characterising the evaluative subgroup – although most evaluative adverbs are derived via the suffix *-erweise* and the prototypical use of *-erweise* involves its combination with adjectives to derive sentence adverbs (cf. Elsner 2015, 105). For instance, the adverb *lesenderweise* ‘while reading’ combines a present participle (*lesend*) with the same suffix *-erweise*, yet functions as a manner adverb rather than as an evaluative one (120-8).

**10** Cf. Motsch 1999, 191-2; Elsner 2015; Pittner 2015; Müller 2022, 217. For an overview of works dealing with *-(er)weise*-formations, see the literature cited in Elsner 2015, 101-3.

**11** The factive character of evaluative adverbs is mentioned in Helbig (1984, 125-6); Zifonun, Hoffmann, Strecker (1997, 1125); Bonami, Godard (2008, 275); a.o.



- (13) a. **Fortunately** John has come. → John has come.  
b. **Fortunately** John has not come. → John has not come. (Bellert 1977, 342, ex. 13)

As already mentioned above, evaluative adverbs tend not to occur in nonveridical contexts, that is, contexts where the truth value of the proposition is not entailed, such as questions (14a), hypotheticals (14b), imperatives (14c), and performative utterances (14d) (cf. Liu 2009, 334-5):<sup>12</sup>

- (14) a. Hat die Vorschule **\*glücklicherweise** einen tollen Spielplatz?  
'Does the preschool fortunately [have] a great playground?' (335, ex. 5a)  
b. Wenn die Schule **\*glücklicherweise** einen tollen Spielplatz hätte, könnten die Kinder **\*erfreulicherweise** mehr Sport treiben.  
'If the preschool fortunately had a great playground, the kids could luckily do more sports.' (335, ex. 4b)  
c. Stirb **\*unglücklicherweise!**  
'Die unfortunately!' (335, ex. 7)  
d. **\*Ich befehle glücklicherweise**, dass Du sofort losfährst.  
'I order fortunately that you set off immediately.' (335, ex. 6)

Liu (2009, 334-6) provides an overview of the distributional properties of speaker-oriented adverbs and observes that since in the contexts mentioned above the speaker does not assert the proposition, the use of speaker-oriented adverbs, which predicate over an asserted proposition, would be pragmatically infelicitous (342-3). On the contrary, in veridical contexts, such as antecedents of indicative conditionals (15a) and unreal (echo and tag) questions (15b-c), the use of evaluative adverbs appears to be felicitous because these constructions are associated with an implicit assertion of the proposition (343).<sup>13</sup> This behaviour extends to embedded declarative clauses introduced by factive predicates (e.g., *wissen* 'to know', as

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<sup>12</sup> Here, the notion of (non)veridicality provided by Giannakidou (2013) is adopted.

<sup>13</sup> Empirical data show that evaluative adverbs can be found also in antecedents of counterfactual conditionals and rhetorical questions, as shown in the examples below:

- (i) Meinen Sie, heißt es in *Emilia Galotti*, dass Raffael nicht das größte malerische Genie gewesen wäre, wenn er **unglücklicherweise** ohne Hände wäre geboren worden? (DeReKo: Südkurier, 11 February 2005)  
'Do you mean, as it is said in *Emilia Galotti*, that Raphael wouldn't have been the greatest painterly genius if he had unfortunately been born without hands?'
- (ii) Und was ist **leider** herausgekommen? Erstens einmal sind die Förderwerte geringer geworden. (DeReKo: Sitzungsbericht der 34. Sitzung der Tagung 2010/11 der XVII. Gesetzgebungsperiode des Landtages von Niederösterreich. Donnerstag, den 24. Februar 2011. Plenarprotokoll, Sankt Pölten (AT), 2011)  
'And what has unfortunately resulted from this? Firstly, the subsidy levels have been reduced.'

in 16a) or reportives verbs (e.g., *sagen* ‘to say’, as in 16b), which are veridical (336):

- (15) a. Wenn die Vorschule **glücklicherweise** einen tollen Spielplatz hat, können die Kinder **\*erfreulicherweise** mehr Sport treiben.  
‘If the preschool fortunately has a great playground, the kids can luckily do more sports.’ (335, ex. 4a)  
b. Wer ist **unglücklicherweise** in einen Unfall verwickelt worden?  
‘Who (again) unfortunately got into an accident?’ (335, ex. 5b)  
c. Tom ist **unglücklicherweise** in der Prüfung durchgefallen, gell?  
‘Tom unfortunately failed in the exam, right?’ (335, ex. 5c)
- (16) a. Maria weiß (nicht) dass Peter **unglücklicherweise** gestorben ist.  
‘Maria does (not) know that Peter unfortunately died.’ (336, ex. 9a)  
b. Maria sagte (nicht) dass Peter **unglücklicherweise** gestorben war.  
‘Maria did (not) say that Peter unfortunately died.’ (336, ex. 9b)

Furthermore, Liu (2009, 338-9) states that the speaker, by using speaker-oriented adverbs, performs two speech acts simultaneously: an assertive act (stating the proposition) and an expressive act (conveying the speaker’s stance), with the former being independent from the latter and the latter presupposing the former. In this view, the speaker presents a situation and simultaneously expresses an evaluation of it.

Regarding their lexical semantics, building on Averina’s (2022) classification, evaluative adverbs can be further divided into two subgroups: those expressing the speaker’s evaluation of the proposition (e.g., *leichtsinnigerweise* ‘carelessly’, *klugerweise* ‘sensibly’) and those expressing the speaker’s emotion towards the proposition (e.g., *erfreulicherweise* ‘fortunately’, *leider* ‘unfortunately’). This distinction corresponds to the categories *Bewertungsindikatoren* (‘indicators of evaluation’) and *Emotionsindikatoren* (‘indicators of emotion’) proposed by Helbig and Buscha (2001, 435). According to Averina (2022, 182-3), the meaning difference between the two types is also reflected in their paraphrasing: in the case of evaluative adverbs expressing emotion, the paraphrase explicitly includes a reference to the speaker by employing a first-person pronoun (*mir* in (17b)):

- (17) a. Er hat **klugerweise** geschwiegen. → Es ist klug, dass er geschwiegen hat.  
‘Sensibly, he kept quiet.’ → ‘It is sensible, that he kept quiet.’  
b. Ich kann dir **leider** nicht helfen. → Es tut *mir* leid, dass ich dir nicht helfen kann.  
‘Unfortunately, I cannot help you.’ → ‘I am sorry that I cannot help you.’

### 3 Existing Accounts for the Development of Evaluative Adverbs in German

Although the diachronic development of sentence adverbs has recently gained interest also in German linguistic research, the subclass of evaluative adverbs has not received the same attention as epistemic and evidential adverbs. While some observations on the grammaticalization of evaluative adverbs can be found in Axel-Tober (2016) and in Axel-Tober et al. (2025) – both of which address the issue of the development of sentence adverb(ial)s (and modal particles) –, the evaluative subclass has rarely been treated as a distinct category – also synchronically and beyond German, as already mentioned. Additional remarks on the diachronic development of evaluative adverbs are provided in the studies by Paraschkewoff (1976), Elsner (2015), and Pittner (2015). However, these works focus on the suffix *-(er)weise* and consider the broader class of sentence adverbs formed with this suffix, without specifically examining the evaluative subgroup (for example, adverbs such as *möglicherweise* ‘probably’ and *notwendigerweise* ‘necessarily’ also feature the suffix *-erweise*, but they are not classified as evaluative adverbs).

In what follows, I will summarise the main claims found in Paraschkewoff (1976), Elsner (2015), and Pittner (2015) regarding the development of the suffix *-erweise*. Furthermore, I will mention the account(s) proposed by Axel-Tober (2016), Axel-Tober and Müller (2017), and Axel-Tober et al. (2025) concerning the diachronic development of sentence adverbs in general, in order to provide an overview of recent German scholarship on the topic.<sup>14</sup>

Most lexemes classified as evaluative sentence adverbs in German are morphologically derived using the suffix *-erweise*, which is assumed to be the most productive adverbial suffix in PDG (cf. Pittner 2015, 149). The origin of this suffix goes back to nominal phrases in the genitive case consisting of the noun *Weise* (‘manner’) combined with an adjective preceding it, for instance *merkwürdiger Weise* (‘in a strange manner’; *-er* corresponding to the genitive marker). In MHG, such constructions functioned only as manner adverbials. The suffix *-erweise* is considered to be the result of a process of univerbation of the adjective and the noun, and the subsequent reanalysis of the genitive marker *-er* as part of a new adverbial suffix, i.e. *-erweise* (cf. Paraschkewoff 1976, 171-6; Pittner 2015, 149-50). This process can be illustrated as follows:

- (18) [ADJ-*er Weise*]<sub>NP</sub> univerbation → [ADJer-*weise*]<sub>ADV</sub> reanalysis → [ADJ-*erweise*]<sub>ADV</sub>  
(adapted from Pittner 2015, 149, ex. 7)

<sup>14</sup> For English see, e.g., Swan 1988; van Gelderen 2011.

As Elsner (2015, 105) explains, in the sixteenth and seventeenth centuries the productivity of *-erweise* formations increased, and it is likely that *-erweise* constructions were no longer built via univerbation of adjective and noun, but rather by adding *-erweise* to an adjectival base via suffixal derivation. Starting from the nineteenth century, the suffix *-erweise* developed the function of marking sentence adverbs (cf. Paraschkewoff 1976; Pittner 2015, 150). Pittner (2015, 150) interprets this development from manner adverbs to sentence adverbs as an instance of subjectification (see also Traugott 1989). In the view of Axel-Tober (2016), interpretative ambiguity played a crucial role in this process.

According to Axel-Tober (2016), Axel-Tober and Müller (2017), and Axel-Tober et al. (2025), the emergence of sentence adverbs in German can be attributed to a morphosyntactic reanalysis, in which surface ambiguity played a pivotal role. Axel-Tober (2016) investigates the development of various sentence adverbials from two kinds of sources: manner adverbials and parenthetical clauses. She argues that these expressions originally had no sentence adverbial reading and illustrates ambiguity, a key concept in her analysis, as follows:

- (19) Peter hat die Prüfung **sicher** bestanden.

interpretation A: 'Peter certainly passed the exam.' *epistemic reading*

interpretation B: 'Peter passed the exam comfortably.' *manner reading*

(adapted from Axel-Tober 2016, 26, ex. 9)

In (19), the adverb *sicher* is ambiguous: it can be interpreted either as an epistemic sentence adverb (interpretation A) or as a manner adverb (interpretation B). These two readings correspond to different syntactic structures: in the interpretation A, *sicher* is adjoined at the IP level, whereas in the interpretation B, it is adjoined at the VP level, as illustrated in (20). These two underlying structures, however, cannot be distinguished at the surface level.<sup>15</sup>

- (20) interpretation A: [<sub>CP</sub> Peter [<sub>C</sub> hat [<sub>TopP</sub> die Prüfung [<sub>IP</sub> **sicher** [<sub>IP</sub> Peter [<sub>I'</sub> [<sub>VP</sub> Peter [<sub>V'</sub> [<sub>VP</sub> [<sub>V</sub> **die-Prüfung** bestanden ]]]]] **hat** ]]]]]]]  
 interpretation B: [<sub>CP</sub> Peter [<sub>C</sub> hat [<sub>TopP</sub> die Prüfung [<sub>IP</sub> Peter [<sub>I'</sub> [<sub>VP</sub> Peter [<sub>V'</sub> [<sub>VP</sub> **sicher** [<sub>V</sub> **die-Prüfung** bestanden ]]]]] **hat** ]]]]]]]

According to Axel-Tober (2016), it is precisely this type of ambiguity, which in some cases persists to this day, which led to the reanalysis of such expressions from manner adverbs to sentence adverbs.

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<sup>15</sup> The 'low' surface position of the IP-related *sicher* is due to the fact that the phrasal constituent *die Prüfung* ('the exam') is scrambled out of the VP to a Topic position above the IP (also see Frey 2004).

Building on this, in a subsequent study, Axel-Tober and Müller (2017) explore the semantic and morphosyntactic development of the evidential sentence adverbs *offensichtlich* 'obviously', *offenbar* 'evidently', *anscheinend* 'apparently', and *scheinbar* 'seemingly'. They argue that all four expressions originated from adjectives (with *anscheinend* derived from a participle) and that the sentence adverbial reading emerged at a later stage as a secondary development. From a syntactic perspective, they interpret this shift as the result of an upward reanalysis from a VP-related to an IP-related adverbial (cf. Axel-Tober, Müller 2017, 25; also see Roberts, Roussou 2003). This syntactic reanalysis led to a recategorisation: alongside the original lexical entry, a second lexical entry emerged for the corresponding sentence adverbial reading, both entries being homonymous (Axel-Tober, Müller 2017, 23, 26).<sup>16</sup>

Axel-Tober et al. (2025) further develop Axel-Tober's (2016) observations as well as the account by Axel-Tober and Müller (2017) presented above, extending it also to modal particles. They suggest that sentence adverbs and modal particles share common grammaticalization paths and identify two main pathways for their development: one from lower event-related adverbs via upward reanalysis and the other from parenthetical constructions via syntactic integration.

In general terms, it can be said that although the single sentence adverbs discussed in the literature presented here originated at different times and from different sources, a common underlying factor can be identified: their reanalysis is rooted in surface ambiguity.

## 4 *Leider* as a Case Study

This section is divided as follows: § 4.1 outlines the etymological origin and present-day use of *leider*. § 4.2 describes the methodology and presents the results of the study. In §§ 4.3 and 4.4 the syntactic and semantic analyses, respectively, are discussed. § 4.5 draws the interim conclusions and situates the development of *leider* within broader grammaticalization patterns identified for sentence adverbs in German.

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<sup>16</sup> While *offensichtlich*, *scheinbar*, and *offenbar* still retain both lexical entries in PDG, *anscheinend* seems to be used only as a sentence adverb by most speakers (cf. Axel-Tober, Müller 2017, 26) or, as an anonymous reviewer points out, there are possibly fewer contexts in which *anscheinend* can be used as an adjective.

#### 4.1 *Leider*: Etymological Origin and Present-Day Use

The adverb *leider* is assumed to derive from OHG *leid-ōr* (MHG *leid-er*) as the comparative form of the adverb *leid-o* (MHG *leid-e*), which in turn stems from the adjective *leid* (MHG *leit*, PDG *leid*).<sup>17</sup> According to the EWA s.v. “leid”, the OHG adjective *leid* had the following meanings: ‘verhasst’ (‘hateful’), ‘widerwärtig’ (‘despicable’), ‘lästig’ (‘disagreeable’), ‘unlieb’ (‘unpleasant’), ‘garstig’ (‘nasty’), ‘schändlich’ (‘shameful’), ‘abscheulich’ (‘disgraceful’), ‘böse’ (‘evil’), ‘unheilvoll’ (‘harmful’), ‘schmerzlich’ (‘painful’).<sup>18</sup> The origin of *leid* can be traced back to the Germanic adjective *\*lajþa-* (< *\*h₂lōit-o-*), meaning ‘schädigend’ (‘harmful’), ‘kränkend’ (‘hurtful’), ‘widerwärtig’ (‘despicable’), ‘unangenehm’ (‘unpleasant’) and deriving from the Indo-European verbal root *\*h₂lejt-*, with the meaning of ‘verabscheuen’ (‘to detest’), ‘freveln’ (‘to commit sacrilege’), ‘Böses tun’ (‘to do evil’) (cf. EtymWB s.v. “leid”; EWA s.v. “leid”).

According to the EtymWB s.v. “leider”, OHG *leidor*, as a comparative form, had an intensifying function and was used to express regret or lament. Klein, Solms, and Wegera (2017, 332) provide following translation for MHG *leider*: “schmerzlicher; im Übermaße schmerzlich; bedauerlicherweise” (‘more painful, excessively painful, regrettably’). They argue that over time, MHG *leider* acquired an independent meaning and that it was also used as an interjection. A similar observation is found in the AWB s.v. “leidōr”, where this element is defined both as an adverb and as an interjection used to express regret over sins. Grimm (1890, § 596) claims that OHG *leidor* served as an interjection. Similarly, Wilmanns (1899, § 476) includes *leidor* in the section addressing interjections. More generally, OHG *leidor* and its MHG counterpart *leider* are associated with the meanings ‘bedauerlicherweise’ (‘regrettably’), ‘leider’ (‘unfortunately’), ‘ach!’ (‘oh!’), and ‘wehe (mir)!’ (‘alas!’) (cf. AWB s.v. “leidōr”; EWA s.v. “leidlîh-leidōr”).

In PDG, *leider* can be used in any linguistic context to express regret, sorrow, and remorse over an eventuality. Following Averina’s (2022) classification of sentence adverbs, *leider* can be thus categorised as an evaluative adverb of emotion. From both a functional and a syntactic perspective, *leider* represents a prototypical example of sentence adverb in German, displaying the characteristic features

<sup>17</sup> Cf. EWA s.v. “leidlîh-leidōr”; EtymWb s.v. “leider”; Kluge [1883] 2011, 570; Klein, Solms, Wegera 2017, 332; a.o.

<sup>18</sup> Cognate words of the adjective *leid* are found in every Germanic language except for Gothic (cf. EWA s.v. “leid”).

of the evaluative class discussed above.<sup>19</sup> Typically it occurs in the left sentence periphery in a specifier position (21a) or in the middle field, adjoined within the I-domain (21b). Occasionally, *leider* appears in the right periphery beyond the verbal complex (21c):

- (21) a. **Leider** bemächtigt sich das Museum nicht anderer Sprachen als Französisch und Flämisches. (DeReKo: Oberösterreichische Nachrichten, 29 October 2011)  
'Unfortunately, the museum does not make use of any languages other than French and Flemish.'  
b. Ich kann **leider** nicht Schwäbisch sprechen, aber ich verstehe jedes Wort, das Raff von sich gibt. (DeReKo: Stuttgarter Zeitung, 9 September 2008)  
'Unfortunately, I can't speak Swabian, but I understand every word Raff says.'  
c. Ich habe den Kollegen nie wieder gesehen, **leider**. (DeReKo: Saarbrücker Zeitung, 1 February 2003)  
'I never saw the colleague again, unfortunately.'

Moreover, *leider* can be accompanied by an overt prepositional phrase (PP), as illustrated below:<sup>20</sup>

- (22) Ich bekomme keine Provision, **leider für mich**, gut für Sie. (DeReKo: Süddeutsche Zeitung, 23 May 2013)  
'I don't receive a commission – unfortunately for me, fortunately for you.'  
(23) Steiners Kritiker, von denen es nicht wenige gibt, hätten das «Sennentuntschi» lieber anders gehabt: **Leider für sie** ist der Film ein brillantes Stück Schweizer Filmkunst. (DeReKo: St. Galler Tagblatt, 24 September 2010)  
'Steiner's critics, of whom there are quite a few, would have preferred «Sennentuntschi» to be different: unfortunately for them, the film is a brilliant piece of Swiss cinematography.'

The overt PP can refer either to the speaker, as in (22), or to another entity, as in (23). Nevertheless, in both cases, *leider* expresses the speaker's stance, meaning that the negative evaluation or rather emotion originates from the speaker. The crucial distinction is between the attitude-holder and the subject of evaluation. The speaker can be considered as attitude-holder in both cases, presenting the eventuality as negative. What varies is the subject of evaluation: in (22) the speaker themselves is construed as the subject of the emotion, while in (23) it is the critics (the speaker assesses the situation as

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<sup>19</sup> Nevertheless, counterexamples can be found also in the case of *leider*. For instance, when contrastive focus is applied, *leider* can fall within the scope of negation, as shown in the example below:

(iii) aber ein guter Roman ist zunächst mal **nicht leider, sondern zum Glück** zeitlos. (DeReKo: Berliner Zeitung, 17 May 2021).  
'But a good novel is, first and foremost, not unfortunately, but fortunately timeless.'

<sup>20</sup> Similar constructions involving an overt prepositional phrase are also attested in other languages such as English (*unfortunately for me*), French (*malheureusement pour moi*), and Italian (*purtroppo per me*).

unfortunate *for them*). The speaker thus remains the source of the emotion in (23), while the critics are construed as negatively affected by the eventuality. This becomes evident if we imagine a possible felicitous reply from the critics or the hearer, rejecting the speaker's evaluation (by saying, for instance, 'Well, no, actually it was good for us/them after all'). Such a response shows that the negativity is anchored in the speaker's stance.<sup>21</sup>

## 4.2 The Study: Methodological Premises and Results

In order to investigate the diachronic development of *leider*, a corpus-based study was carried out using the the Referenzkorpus Altdeutsch (version 1.0,<sup>22</sup> henceforth ReA; Donhauser et al. 2015) for OHG (750-1050) and the Referenzkorpus Mittelhochdeutsch (henceforth ReM; Klein et al. 2016) for MHG (1050-1350). For both periods, all occurrences of *leider* were systematically collected and analysed.<sup>23</sup> For later historical stages, no comprehensive corpus study was conducted.

Before presenting the results, a methodological note is necessary: the ReA and the ReM differ not only in terms of annotation levels and corpus size, but also with respect to the text genres they contain – a difference that stems not from the corpus architecture itself, but from the nature of the available textual materials. In particular, the OHG corpus primarily consists of religious, theological, and spiritual texts, whereas the MHG corpus also includes a broader range of genres, such as poetry, chronicles, heroic epics, and love songs. These differences impose certain limitations on the conclusions that can be drawn regarding the use, meaning, and development of *leider* over time. In particular, they limit direct comparisons between the corpora in terms of genre distribution and word frequency. Moreover, the OHG texts contained in the ReA are predominantly written in Alemannic, Frankish, and Bavarian dialects, which further restricts the representativeness of the data.

Against this background, the results from the ReA and the ReM will be presented below.

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**21** I thank an anonymous reviewer for pointing this out. In a brief section on embedded evaluatives, Bonami and Godard (2008, 292) suggest that “the agent responsible for the evaluative may be different from the speaker”. See Bonami, Godard 2008, 291-2 and the cited literature therein for some examples and debate.

**22** The study presented here was conducted using version 1.0 of the ReA and the searching tool ANNIS3. At present (2025), version 1.2 of the corpus is available and can be searched using ANNIS4.

**23** The OHG occurrences of *leider* in the ReA were retrieved through the query: lemma = “leidor”. The MHG occurrences in the ReM were retrieved through the query: lemma = “lèider”.



#### 4.2.1 Results from the ReA

In the ReA, *leider* has 18 occurrences across five texts: Otfrid's *Evangelienbuch* (5 occurrences), *Ludwigslied* (1), *Memento Mori* (1), *Bamberger Glaube und Beichte* (6), and *Erster Wessobrunner Glaube und Beichte* (5),<sup>24</sup> that is, texts predominantly of religious nature. It is worth noting that the *Bamberger Glaube und Beichte* and the *Erster Wessobrunner Glaube und Beichte* are two versions of the same creed and homiletic text and thus exhibit substantial overlap. Nevertheless, some divergences can be observed, including variations in the usage of *leider* (see below). Given that the ReA consists almost exclusively of religious, theological, and spiritual texts, the distribution of *leider* across the corpus likely reflects the corpus composition itself rather than an inherent distributional restriction of this lexeme due to genre-based constraints.<sup>25</sup> A closer examination of the contexts in which *leider* occurs reveals that its use is restricted to sentences in which the speaker experiences inner suffering because either they themselves, humankind in general, or Adam and Eve have sinned by transgressing God's precepts (15 out of 18 attestations). These instances consistently involve moral wrongdoing from a Christian perspective, where the violation of divine commandments leads to a sense of shame and disgrace. Consequently, *leider* can be interpreted as an element that either conveys the speaker's lament over such moral failings (sentence adverbial reading) or describes the manner in which the actions were conducted – namely, in a shameful (and thus regrettable) manner (manner adverbial reading).

The following instances illustrate the use of *leider* in various contexts. In the examples below, the speaker themselves (24-5) and humanity at large (26) are portrayed as sinners because they violated God's precepts by engaging in morally wrong behaviour:

(24) (ReA: BGuB)

Ích	hábe	<b>leidir</b>	uirbrôchen	ioh	firsûmit	alliu	diniu
I	have	<i>leider</i>	broken	and	neglected	all	your
gibót	ioh	dîna	êwa	in	sunthafton	wíllôn	
rule	and	your	law	in	sinful	will	

'Shamefully/Despicably, I have broken and negligently followed all your commandments and your law in sinful (impulses of) will.' *sentence adverbial reading*  
'I have broken and negligently followed all your commandments and your law in a (very) shameful/despicable manner, in sinful (impulses of) will.' *manner adverbial reading*

<sup>24</sup> In addition, *leider* appears at least once in Notker III's translation of the *Psalms*, although this occurrence is not present in the version 1.0 of the ReA.

<sup>25</sup> I thank an anonymous reviewer for highlighting this point.

(25) (ReA: BGuB)

wande	mîner	súndôn,	unde	mîner	meindatône	der	ist
because	my	sins	and	my	misdeeds	of.them	is
disiu	wérlt	uól,	die	sint	<b>leidir</b>	úber	méz,
this	world	full	they	are	<i>leider</i>	over	measure
uber	alla	dúsent	zala,	[...]			
over	all	thousand	amount				

‘Because my sins and my misdeeds, of which this world is full, – shamefully, they are beyond measure, in excess [...].’

(26) (ReA: EB 5.23)

Wir	fúarun	<b>leidor</b>	thánana	fon	páradises	hénti	in
we	went	<i>leider</i>	from.there	from	of.paradise	area	in
suaraz	élilenti;	Fon	hímlriches	súazi	in	jámarlichaz	wízi
sad	misery	from	of.heaven	sweetness	in	wretched	pain

‘Shamefully/Despicably/Regrettably, we went from the realm of paradise into dangerous misery, from the loveliness of Heaven into wretched pain.’ *sentence adverbial reading*

‘We went from the realm of paradise into dangerous misery, from the loveliness of Heaven into wretched pain in a (very) shameful/despicable manner.’ *manner adverbial reading*

In (27), the narrative recounts the original sin, which, according to Christian belief, has condemned all of humanity to a state of sin and suffering:

(27) (ReA: EB 2.6)

Ér	gistant	uns	méron	then	mánagfaltan	wéwon,	bálo	ther
he	stood	us	increase	the	manifold	woe	suffering	that
uns	klíbit,	joh	<b>leidor</b>	nu	ni	líbit		
us	clings	and	<i>leider</i>	now	not	spares		

‘He increased our manifold woes, the suffering that clings to us and shamefully/unfortunately no longer spares us.’

At this stage, the meaning of *leider* appears to remain closely tied to the meaning of the OHG adjective *leid*. Specifically, *leider* seems to convey an attitude of regret and sorrow arising from sinful and thus repugnant, disgraceful, or detestable behaviour – which reflects the core meaning of the OHG adjective *leid*. However, *leider* is never used as the comparative form of the adverb *leido* in the corpus. Rather, it expresses the speaker’s evaluation of the narrated event, or it might be ambiguous between a sentence adverbial and a manner adverbial reading. This will be discussed in § 4.3.

From a syntactic perspective, *leider* predominantly occurs in the middle field, with 15 out of 18 attestations found there. In the examples (24) and (26), *leider* appears in a high surface position, which is nonetheless compatible with both an adjunction in the I-domain and in the V-domain, as the element(s) linearly following *leider* can be assumed to occupy linear positions after a potential adjunction within the VP. In two instances,<sup>26</sup> *leider* occurs in a clause-external position to the left of the XP preceding the finite verb:

(28) (ReA: Ludwigslied)

<b>Leidhor,</b>	thes	ingald	iz.
<i>leider</i>	of.it	paid	it

‘Alas!/Unfortunately, they atoned for it [their sins].’ (see also ex. (51))

(29) (ReA: EB 2.6)

<b>léidor,</b>	thaz	ni	scólta	sin.
<i>leider</i>	this	not	should	be

‘Alas!/Unfortunately, that [God taking pity on Adam] was not meant to be.’

Lastly, in one attestation, *leider* occurs in a linear position in the right periphery of the clause beyond the verbal complex:

(30) (ReA: EB 4.31)

[...]	thio	unso	míssodati;	Tház	wir	ofto	wórahtun	joh	súslih
	the	our	misdeeds	that	we	often	cause	and	such
er	ni	fórahtun,	<b>leidor,</b>	ih	inti	thú			
earlier	not	feared	<i>leider</i>	I	and	you			

‘[...] our misdeeds, which we often commit and once did not fear – woe is us! – you and I.’

In three instances from the *Bamberger Glaube und Beichte* and three from the *Erster Wessobrunner Glaube und Beichte*, *leider* is directly followed by the dative first person pronoun *mir*. This is exemplified in (31a) and (32b). Interestingly, in a passage where the scribe of the *Bamberger* version wrote *leider mir*, the scribe of the *Wessobrunner* version recorded only *leider*, omitting the personal pronoun *mir* (31). Conversely, in another passage, the *Bamberger* version shows only *leider*, while the *Wessobrunner* version has *leider mir*, as shown below (32):

<sup>26</sup> One example comes from the *Ludwigslied* and the other from the *Evangelienbuch*, both composed in a Rhine Frankish dialect.

(31) (ReA: BGuB)

a. *Bamberger* version

unde	wile	gérno	minna	unde	hóltscraft	giwínnen, [...]	umbe	álle
and	want	gladly	love	and	goodwill	gain	for	all
wider	die	ih	sie	<b>leidir</b>	<b>mir</b>	uirwórhrt	habe	
against	whom	I	them	<i>leider</i>	to.me	forfeited	habe	

b. *Wessobrunner* version

unde	uילו	gerno	minna	unde	holtschaft	geuúnnen, [...]	umba
and	want	gladly	love	and	goodwill	gain	for
alla	die	ih	si	<b>leider</b>	feruúorht	han	
all	who	I	them	<i>leider</i>	forfeited	habe	

‘and I gladly wish to regain affection and goodwill [...] from all those with whom I have, shamefully/despicably/– woe is me! –, forfeited them.’ *sentence adverbial reading*  
 ‘and I gladly wish to regain affection and goodwill [...] from all those with whom I have forfeited them shamefully/despicably.’ *manner adverbial reading*

(32) (ReA: BGuB)

a. *Bamberger* version (see also ex. 24)

Ích	hábe	<b>leidir</b>	uirbróchen	ioh	firsúmit	alliu	diniu	gibót [...]
I	have	<i>leider</i>	broken	and	neglected	all	your	rule

b. *Wessobrunner* version

Ih	han	<b>leidir</b>	<b>mir</b>	ferbrochen	ioh	fersumet	elliu	diniu	gebot [...]
I	have	<i>leider</i>	to.me	broken	and	neglected	all	your	rule

‘Shamefully/Despicably, I have broken and negligently followed all your commandments [...].’ *sentence adverbial reading*

‘I have broken and negligently followed all your commandments [...] in a (very) shameful/despicable manner.’ *manner adverbial reading*

It is, however, difficult to determine whether these variations result from intentional changes or accidental omissions. One reason for this uncertainty is that there is no evidence of erasure, overwriting, or later additions in the manuscripts that transmit these texts. The construction *leider mir* seems to emphasise that the feeling of regret or sorrow is affecting negatively the speaker, or it might be a fixed or formulaic expression.<sup>27</sup> *Leider mir* could have a similar internal structure as *leider für mich* in PDG, with *leider* occupying the head of a XP and *mir/für mich* the complement position as a NP/PP.

<sup>27</sup> A comparable usage is documented in Grimm’s *Deutsches Wörterbuch*, where an example from the MHG work *Iwein* is cited (*leider uns*) (cf. DWB s.v. “leider”).

#### 4.2.2 Results from the ReM

In the ReM, a total of 261 attestations of *leider* across 91 texts were analysed.<sup>28</sup> *Leider* appears most frequently in *Kaiserchronik* (17 instances), Hugo von Trimberg's *Der Renner* (17), *Speculum ecclesiae* (11), *Rolandslied* (9), *Der Sünden Widerstreit* (7), *König Rother* (7), *Wiener Genesis* (6), and *Dietrichs Flucht* (6). Geographically, *leider* is attested across almost the entire High German area: it appears in texts written, according to the ReM metadata, in Alemannic, Swabian, Bavarian, East Franconian, Ripuarian, Moselle Franconian, Rhine Franconian, Hessian, and Hessian-Thuringian dialects.

In the Early MHG period, attestations of *leider* are mostly found in religious and spiritual works, including hagiographies, biblical poetry, sermons, and allegories. As in the OHG period, in these texts *leider* frequently appears in contexts where the Christian speaker laments his own wretched condition or sinful behaviour, or the sinful state of humankind, or where the original sin and its consequences are described. Throughout the MHG period, the use of *leider* extends to religious contexts unrelated to sinfulness as well as to other domains, such as heroic epics and various kinds of narratives, simply describing events that the speaker considers regrettable or sad, such as loss, death, or other unfortunate events. *Leider* thus begins to convey a more general sense of sorrow and regret, independent of association with religious or moral concerns. In the occurrences from the ReM, *leider* mostly has a sentence adverbial reading. It is used in contexts where the speaker expresses an evaluative attitude towards the proposition. The ambiguous occurrences are very few. The following examples illustrate the use of *leider* in the MHG sources. In (33-4) *leider* refers explicitly to the violation of God's precepts, while (35-6) are cases where sinfulness is not directly mentioned:

(33) (ReM: *Speculum ecclesiae*)

**Leidir** do uolgte er dem leidigim tiefil.  
*Leider* then followed he the wretched devil

'Shamefully/Unfortunately, he [Adam] followed the wretched devil.'

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<sup>28</sup> In the ReM, *leider* appears 274 times across 95 texts. However, 13 occurrences (from four texts) have been excluded from the analysis for the following reasons: the texts *Bamberger Glaube und Beichte*, *Erster Wessobrunner Glaube und Beichte*, and *Memento Mori* are included and annotated in both the ReA and the ReM, and I have chosen to treat these texts as works of Late OHG and to include the corresponding instances of *leider* in the ReA results, excluding them from the ReM data. Additionally, one instance from the text *St. Trudperter Hohelied* has been excluded, as it represents the comparative form of *leid* in the construction *jdm. ist etw. leid* ('sb can't stand sth'; cf. DWB s.v. "leid").

(34) (ReM: Predigten, Krakauer Frag.)

Disiv wart [...] div ze allen liuten sint gesprochen.werdent doh uonallen  
these words that to all people are said are thou by all

**laider** niht wol behalten

*leider* not well followed

‘These words [...], which are said to everyone, are shamefully/unfortunately not carefully followed by everyone.’

(35) (ReM: Wiener Physiologus)

Vnser trehtin giscuof unsich duo wir ne waren. **laider** dare widere sluogen  
our Lord created us then we not were *leider* there repulsed

wir in unter siniu ougen

we him under his eyes

‘Our Lord created us when we did not yet exist. Shamefully/Unfortunately/Alas! We rejected Him before His eyes.’ (reference to the crucifixion of Jesus)

(36) (ReM: St. Pauler Pred.)

waenet ir daz er do fvnde triwe vnd warheit vf der erde **laider**  
think you that he then found loyalty and truth on the earth *leider*

des ne was niht

of.it not was nothing

‘Do you believe that He found loyalty and truth on Earth? Unfortunately/Alas! None of it was there.’

The examples (37-9) are clearly unrelated to the religious or spiritual sphere:

(37) (ReM: Rolandslied (P))

Liebiu libiu alda. ich ne tar nicht liegin. **laider** [...]

dear dear Alda I not dare not lie *leider*

du ne gesest in niemir. er lit **laider** toter begra==bin.

you not see him never he lies *leider* dead buried

‘Dear, dear Alda, I do not dare to lie: Alas!/Unfortunately, you will never see him again [...]. Unfortunately, he lies buried, dead.’

(38) (ReM: König Rother)

**lieder** sie ne heten uro=wede nicht. wene vrost vnd naz

*leider* they not had joy not only frost and wet

‘Unfortunately, they had no joy. There was only cold and dampness.’

(39) (ReM: Kaiserchronik A)

Nu ist **leider** in disen ziten ein gewoneheit witen manege erdenchent  
now is *leider* in these times a habit widespread many devise  
in luge vnd v.=gen si zesamen. mit scophelichen worten  
them lies and fit them together with creative words

‘Shamefully/Unfortunately, there is a widespread habit nowadays: many invent webs of lies and weave them together with poetic words.’

In addition, *leider* occurs evidently as an interjection in a total of four instances out of 99 in the thirteenth century and seven out of 90 in the fourteenth century. (40) is an example of *leider* used as an interjection:

(40) (ReM: Karl und Galie)

O wi **leider** inde o wach. Wie we deit mir der arm min  
oh woe *leider* and oh woe how hurt does to.me the arm my

‘Oh woe! Alas! Oh! How much my arm hurts!’

Regarding the syntactic distribution of *leider*, in nearly four-fifths of its occurrences it appears in the middle field, cf. (34) and (39), as well as the second occurrence of *leider* in (37). The word order observed in (39), for instance, is incompatible with a structural position of *leider* in the V-domain. Similarly, in (34), it seems plausible to assume that *leider* is adjoined within the I-domain if we analyse the phrasal constituent *uon allen* ‘by everyone’ as occupying a Topic position immediately above IP (as in the structure proposed in (20), interpretation A). In the second occurrence of *leider* in (37), nothing excludes a structural position within the VP, although from an interpretative perspective *leider* here seems to function as a sentence adverb rather than as a manner adverb. Particularly noteworthy is the presence, in twelfth-century manuscripts, of instances where *leider* occupies an utterance-initial position preceding the left periphery of the clause (linearly, it appears before the XP preceding the finite verb), thereby giving rise to V3 word orders. The frequency of this usage pattern, illustrated in the examples (33), (35), (36), (38), and in the first instance of (37), decreases in the manuscripts from the thirteenth and fourteenth centuries (from 33% of total occurrences in the twelfth century to 16% in the thirteenth century to 13% in the fourteenth century). Overall, in the ReM *leider* is attested in V3 configurations in an utterance-initial position in 52 out of 261 instances. Apart from a few cases where *leider* linearly precedes a NP or PP, the element following *leider* in these V3 clauses is typically either a personal pronoun, an indefinite pronoun such as *niemand* ‘nobody’ or *man* ‘one’, or an adverb like *da* ‘there, then,

so' or *nun* 'now'. In these attestations *leider* seems to function as a sentence adverbial. Building on the analysis proposed by Catasso and De Bastiani (2024), *leider* can be assumed to be generated clause-externally in these constructions. Referring to elements such as markers of relevance, markers of textual-narrative coherence, and sentence adverbs occupying this position, Catasso and De Bastiani (2024, 30) argue that these items "perform a purely textual-pragmatic function" and that "their occurrence does not seem to be related to the functions generally associated with clause-internal ForceP, but rather to establishing a relation between the clause they linearly introduce and the (pre-)context and/or the speaker's dimension". The occurrence of *leider* in utterance-initial position in V3 clauses, together with the quantitative distribution of this word order across the ReM outlined above, raises the question of whether this pattern (*leider* followed by an XP preceding the finite verb) triggered, or conversely resulted from, the broadening of its semantic scope, or whether these phenomena are related in some other way or totally unrelated. This question will be addressed in the following subsection.

### 4.3 Syntactic Analysis

As already mentioned, *leider* is never attested in the ReA and ReM as the comparative form of the adverb *leido* (nor as the comparative form of the adjective *leid*). Although the sources cited in § 4.1, as well as older works such as Graff (1836, 171) and Grimm (1890, § 596), trace the etymology of *leider* back to a comparative origin, no actual example is provided in the cited literature to support this derivation. The etymological dictionaries and historical grammars consulted for this study that state or assume such an origin do not cite any clear textual source or corpus evidence to substantiate this claim, which, nonetheless, appears to be standardly accepted today.<sup>29</sup> Outside the corpora examined here, this etymology might be supported by what historical grammars of German describe about the formation of comparative forms in OHG.<sup>30</sup> The regular way to derive adverbs (sometimes called *Adjektivadverbia* 'adjective adverbs')<sup>31</sup> from adjectives in OHG is by adding the suffix *-o* (e.g., OHG *ubil* 'bad' >

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**29** I would like to thank an anonymous reviewer for raising the issue of why it is standardly assumed that *leider* derives from a comparative form.

**30** Ramat and Ricca (1998, 240), in a small section on the words meaning 'unfortunately' in the languages of Europe, list two examples, which also appear to show a comparative origin: Danish *desværre* and Swedish *tyvärr*, "from 'worse than that' and 'because worse' respectively" (240).

**31** See Paul, Coniglio, forthcoming for a recent (diachronic) analysis of these elements.



*ubilo* ‘badly’; cf. Sonderegger 2003, 303). The comparative form is then built with the suffix *-ōr* (analogously to the formation of the comparative grade of adjectives, cf. Braune 2004, 232) (e.g., *langōr* ‘longer’; cf. Sonderegger 2003, 303).<sup>32</sup> Based on this morphological derivation, the following paradigm can be posited:

(41)

base adjective	<i>leid</i>	‘shameful, despicable, painful’
adverb	<i>leido</i>	‘shamefully, despicably, painfully’
comparative adverb	<i>leidōr</i>	‘in a more/very shameful/despicable/painful manner’

However, as noted above, in its actual attestations from the corpora *leider* does not function as a comparative. Rather, it may be interpreted either as a manner adverb adjoined at the VP level (taking scope over the event) and/or as a sentence adverb(ial) adjoined at the IP level (taking scope over the entire proposition) (cf., for instance, examples (24-7) from the ReA and (33-9) from the ReM). In both ReA and ReM, no co-occurring instances of *leider* in the I-domain and *leider* in the V-domain are attested. Additionally, uses of *leider* as interjection are recorded, cf. (40). In PDG, *leider* does not convey a manner reading and can only be used as a sentence adverb, suggesting that, synchronically, only one lexical entry exists for this element.

As shown in the previous section, throughout the historical stages of German, *leider* appears in various surface positions, including the middle field, an utterance-initial position preceding the left periphery of the clause, and, more rarely, the right periphery of the clause. Based on the assumptions regarding the ordering of adverb(ial)s in PDG outlined above in § 2 and following the analysis proposed by Axel-Tober et al. (2025), two possible developmental paths can be hypothesised for *leider*: one from a manner adverb and one from a parenthetical. No strong evidence favours one analysis over the other. The common point between the two scenarios is that the evaluative sentence adverbial use of *leider* is a secondary development that emerged in contexts of surface ambiguity within the middle field.

#### 4.3.1 Development from a Manner Adverb

One potential developmental path involves contexts of surface ambiguity, where both a manner and a sentence adverbial reading are possible. Since diachronically there are occurrences that are either ambiguous between a manner and a sentence adverbial

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<sup>32</sup> See also Ramat 1986, 159-61; Sonderegger 2003, 278, 302-4; Braune 2004, 231-3; Fulk 2018, 239; a.o.

interpretation or show a clear sentence adverbial reading, it is plausible that, over time, the manner reading disappeared, and the sentence adverbial reading prevailed. Such ambiguous contexts can be identified in the middle field of the German sentence. As outlined in the previous sections, sentence adverbs are assumed to occupy positions in the I-domain, right above event-related adverbs (in the V-domain). There is no evidence against the assumption that such an ordering was possible – or even required or preferred – already in the earlier stages of German. In this scenario, *leider* as a manner adverb could have been reinterpreted as a sentence adverb in contexts where the two structural positions (one corresponding to adjunction to VP for the manner reading and the other to adjunction to IP for the sentence adverbial reading) were indistinguishable at the surface level. In other words, ambiguous surface sequences made possible the syntactic reanalysis of *leider* as a sentence adverb:

(42)  $[_{CP} \dots [_{IP} [_{VP} \text{ leider } [_{VP} \dots ] ] \dots ] ] \rightarrow [_{CP} \dots [_{IP} \text{ leider } [_{IP} [_{VP} \dots ] ] \dots ] ]$

This ambiguity is illustrated, for example, by (31b), which is repeated below as (43) for the reader's convenience:

(43) (ReA: WGuB)

unde	uילו	gerno	minna	unde	holtscraft	geuunnen,	[...] umba	alla	die
and	want	gladly	love	and	goodwill	gain	for	all	who
ih	si	<b>leider</b>	feruoorht	han					
I	them	<i>leider</i>	forfeited	habe					

'and I gladly wish to regain affection and goodwill [...] from all those with whom I have, shamefully/despicably, forfeited them.' *sentence adverbial reading*

'and I gladly wish to regain affection and goodwill [...] from all those with whom I have forfeited them shamefully/despicably.' *manner adverbial reading*

In this example, *leider* could be adjoined either at the IP-level (immediately below *si* 'them') or at the VP-level (above the head of the VP hosting the past participle *feruoorht* 'forfeited'). Both analyses are compatible with the surface position of *leider* observed in (43).

Based on Axel-Tober and Müller's (2017) analysis, we can postulate for *leider* an upward reanalysis within the middle field from a VP-related adverb to an IP-related adverb, and its consequent recategorisation as a sentence adverb, from which a new lexical entry would have emerged (see Roberts, Roussou 2003). If this analysis holds, the attestations of *leider* as the first element in V3 word orders would be a consequence, rather than the cause, of its development into a sentence adverb. However, the reason why *leider* appears in utterance-initial position cannot easily be accounted for if we assume a developmental path from a manner adverb. Unlike other sentence adverbs such as *giwisso*

(‘certainly’), *leider* is attested within the left sentence periphery only from the Early New High German period onwards, with a very few occurrences in MHG. Thus, it remains unclear within the present analysis why and how *leider* should have been realised in a clause-external position preceding the left periphery.

#### 4.3.2 Development from a Parenthetical

An alternative developmental pathway is from a parenthetical construction. As a parenthetical, *leider* would have been able to adjoin freely at various syntactic levels. However, since surface ambiguity is assumed to be a necessary condition for reanalysis in the account under consideration, and given that the position outside the CP where *leider* is historically attested is not typically associated with sentence adverbs, we assume in this scenario that the reanalysis from a parenthetical into a sentence adverb took place within the middle field. In this area, both parentheticals and sentence adverbs can occur, and thus the necessary surface ambiguity for reanalysis could potentially have been available. If this analysis is correct, the sentence adverbial use of *leider* would have developed from its parenthetical use in the middle field via syntactic integration of the parenthetical construction (cf. Axel-Tober et al. 2025). In a small section on the different words meaning ‘unfortunately’ in the languages of Europe, Ramat and Ricca (1998, 240) point out that “many instances [of ‘unfortunately’ in different languages] originate from interjections and formulaic expressions of complaint which got integrated in the sentence”. In their view, however, *leider* is not included in this group: “[o]f course, many formations occur with words meaning ‘sorrow’: these are not necessarily of interjectional origin. Cf. [...] Grm. *leider*, originally the comparative of the adjective *leid*” (240). (44) illustrates the reanalysis of *leider* from a parenthetical:

(44) [<sub>CP</sub> [<sub>IP</sub> [<sub>XP</sub> *leider*] ...]] → [<sub>CP</sub> [<sub>IP</sub> *leider* ...]]

The internal structure of the parenthetical *leider* remains unclear. The exact source structure of this parenthetical construction can only be speculated upon, since from its earliest attestations *leider* consistently appears in the corpora only in the form *leider* (or *leider mir*). It is possible that this form is a relic of a main clause such as *es/das ist leider* (‘it is *leider*’), or that it has always consisted of *leider* alone.<sup>33</sup>

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**33** Across the ReM, four instances of *leider, dass ...* (‘unfortunately that ...’) are attested. Assuming that *leider* is originally and formally a relic of a clause such as *es/das ist leider* could account for such instances.

In the developmental scenario under discussion, in the attestations in the middle field *leider* can be interpreted either as a parenthetical or as a sentence adverb (reanalysed from the original parenthetical construction). By contrast, *leider* occurring in V3 configurations would correspond to the parenthetical in its original form. Nevertheless, both the parenthetical *leider* and the sentence adverbial *leider* would express the speaker's stance towards the proposition, since the parenthetical too seems to feature a speaker-oriented dimension and to operate at the sentence level. For instance, consider once again example (37), repeated below as (45):

(45) (ReM: Rolandslied (P))

Liebiu libiu alda. ich ne tar nicht liegin.**laider** du ne gesestin niemir.  
dear dear Alda I not dare not lie *leider* you not see him never  
[...] er lit **laider** toter begra==bin.  
he lies *leider* dead buried

'Dear, dear Alda, I do not dare to lie: Alas!/Unfortunately, you will never see him again [...]. Unfortunately, he lies buried, dead.'

Here, the first occurrence of *leider* might correspond to the original parenthetical construction, while the second instance is ambiguous between a parenthetical and a sentence adverb.

Parentheticals are ruled out from the prefield of the modern German sentence (cf. Axel-Tober 2016, 30). Assuming that a similar restriction also applied in historical German, the hypothesis that *leider* was originally used as a parenthetical would explain why it is not attested in the left periphery in the ReA nor in the ReM (in the ReM there are just very few occurrences). Furthermore, this origin would not only account for the occurrences of *leider* as the first element in V3 word orders, but it would also explain why such orders are very frequent in twelfth-century manuscripts and then show a quantitative decrease. This decrease can be attributed to the reanalysis of *leider*: as a sentence adverb, it became subject to syntactic restrictions that prevented it from occupying an utterance-initial position in V3 configurations.

#### 4.4 Semantic Analysis

The contrast between the original meaning of the OHG adjective *leid* and the current meaning of the adverb *leider* raises questions not only about the evolution of its lexical semantics but also about the development of its evaluative and speaker-oriented components,

which characterise its current meaning and support its classification as an evaluative sentence adverb.

Based on the results presented above, I argue that *leider* underwent a semantic change process best described as semantic extension.<sup>34</sup> The data indicate an expansion in the range of linguistic contexts in which *leider* could be employed: OHG *leider* is primarily attested in passages where the speaker, the humanity, or Adam and Eve are portrayed as sinners because they violated God's precepts or had a morally wrong behaviour from a Christian perspective. In the MHG period, *leider* also started to be used to comment on sad or unfortunate situations not necessarily associated with shameful actions or an immoral conduct. I suggest that this extension was initially pragmatically motivated by the lexicalisation of a conversational implicature:<sup>35</sup> in Christian thought, a sinful behaviour might have been viewed as repugnant, disgraceful, detestable, or shameful, causing regret and sorrow to the Christian speaker. It is thus possible that the meaning 'regrettably, unfortunately' emerged as a secondary development from the gradual lexicalisation of the conversational implicature 'shamefully, despicably' +> 'regrettably'.

The OHG and Early MHG attestations of *leider* are indeed primarily found in religious and theological texts, and it could therefore be argued that the semantic extension posited here is only apparent and does not reflect a genuine broadening of meaning, but rather the limitations of the available texts. In other words, it could be proposed that *leider* always had a broader potential range of uses, but that the extant sources simply do not fully capture this. However, two observations should be considered. The first concerns the expressions of sorrow, lament, and pain in Otfrid's *Evangelienbuch*. Here, two expressions have a function similar to that of *leider*: *lê(we)* s 'alas! unfortunately!' and *(bi) dia meina* 'unfortunately, in truth'.<sup>36</sup> According to the EWA s.v. "*lê(we)s*" and the AWB s.v. "*lê(uue)s*", *lê(we)s* functions as an interjection expressing (a) joy or surprise, (b) lament, pain, and regret ('alas! unfortunately!'), and (c) a call to action. The EWA s.v. "*lê(we)s*" and the BMZ s.v. "*lê*" report that *lê(we)s* and *leider* can be considered as synonyms in OHG and MHG sources. The ReA (version 1.0) records a total of 18 instances of *lê(we)s* that are compatible with the expression of lament, regret, or pain. These

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**34** On the topic of semantic extension, see Bloomfield 1933, 425-7; Campbell 2013, 223; Koch 2016, 26, 31-6; Bechmann 2016, 241-9; a.o. For mechanisms of semantic change and related issues in general see Bloomfield 1933; Blank 1997; Traugott, Dasher 2002; Hopper, Traugott 2003; Keller, Kirschbaum 2003; Koch 2016; a.o.

**35** For discussion of (lexicalisation of) conversational implicatures, see Traugott 1988, 411-12; Grice 1989, 39; Traugott 1989, 50; Hopper, Traugott 2003, 82.

**36** Both expressions were retrieved through the query: translation = /.\**leider*.\*.

attestations are found in Otfrid's *Evangelienbuch* (15 occurrences) and in the Notker III's translations (3 occurrences), specifically one instance in his translation of the *Psalms* and two in his translation of Boethius' *De consolazione philosophiae*. In the *Evangelienbuch*, *lê(we)* s primarily conveys emotional pain and lament, often in contexts involving physical or spiritual suffering, as illustrated in the following examples (46-8). It seems likely that *lê(we)s* was used to lend the passages greater expressivity.

(46) (ReA: EB 4.19)

Tho	spíun	sie	óuh	ubar	tház	in	ánnuzzi	sínaz,	síh	ouh
then	spat	they	also	moreover	in	face	his	REFL.3.SING	also	
thes	ni	míðun,	<b>lés,</b>	sines	hálsslagonnes!					
it	not	refrain	lewes	his	hit					

'They also spat in his face. Alas! They did not even refrain from hitting him in the face.'

(47) (ReA: EB 4.26)

wánu	sie	ouh	thaz	rúzin	waz	síe	imo	<b>lewes</b>	wízzin;	Sie
assume	they	also	it	wailed	what	they	him	lewes	accused	they
wéinotun	tho	lúto	joh	scrírun	filu	thráto				
cried	then	loudly	and	screamed	very	intensely				

'I think they [the women of Jerusalem] also wailed over what he [Jesus] – alas! – was accused of. They cried out loudly and screamed with great intensity.'

(48) (ReA: EB 5.7)

"Mág	mih",	quad	si	zi	in	tho,	<b>"lés!</b>	gilusten	wéinonnes,	
can	REFL.1.SING	said	she	to	them	then	lewes	desire	cry	
sér	joh	léid	ubar	wan	istmir	háto	gidan;	Háben	ih	zi
pain	and	sorrow	over	imagination	isto.me	strongly	done	have	I	to
klágonne	joh	léidalih	zi	ságenne,	ni	wéiz				
complain	and	any	grief	to	say	not	know			
hi	<b>les!</b>	in	gáhe,	war	ih	iz	ánafahe.			
I	lewes	in	haste	where	I	it	begin			

'Alas! – she said to them – I wish to lament. Terrible pain and sorrow have been inflicted upon me. I must complain and tell of any grief, yet – woe is me! – in my haste I do not even know where to begin.'

While the regret expressed by OHG *leider* primarily originates in sinful behaviours (as in the examples (24-7), (30-1) and (51) below), *lê(we)s* seems to convey sorrow arising especially from distressing and physically painful events. In particular, *leider* is mostly associated with regret over wrongful behaviour, namely the violation of God's precepts (in 4 out of the 5 occurrences of *leider* in the *Evangelienbuch*),

whereas *lê(we)s* appears alongside words such as ‘bitter/bitterness, dead/death, painful/pain/woe, tribulation, misfortune, to endure, to strike, to weep/to mourn’ and expresses pain and regret arising from witnessing or experiencing a hurtful event (in 11 out of the 15 instances found in the *Evangelienbuch*). In two attestations, however, the words ‘sins’ and ‘sinful’ do appear in the linguistic context around *lê(we)s*.<sup>37</sup> Although no strict binary distinction can be drawn between these interpretative categories (i.e., *leider* expressing regret over sinfulness vs. *lê(we)s* conveying sorrow over other kinds of suffering), certain tendencies can nonetheless be identified, at least in Otfrid’s *Evangelienbuch*: it seems likely that Otfrid consciously reserved *leider* for contexts involving sin and the transgression of God’s commandments, while using *lê(we)s* to express lament over other forms of suffering, especially physical pain or sorrow caused by the sight or experience of some painful events.

In Notker III’s translation of *De consolatione philosophiae*, which dates to the Late OHG period, *lê(we)s* is used to translate the Latin interjections *oh* and *heu* (PDG ‘ach! o weh!’). In his translation of the *Psalms*, *lê(we)s* is freely inserted, as illustrated in (49):

(49)

Latin: Propter quid irritauit impius deum?  
OHG: Ziû **lêuues** crámda got der ubelo? (ReA: Psalter)  
‘Oh! Why did the Evil anger God?’

In the ReM, *lê(we)s* appears once in a Late OHG/Early MHG version of Notker III’s translation of the *Psalms* preserved in an Early MHG manuscript (the so-called *Wiener Notker*, dated to the end of the eleventh century), and once each in Frau Ava’s *Leben Jesu* and the *Wiener Physiologus* (Early MHG, twelfth century). Interestingly, in the *Millstätter Physiologus*, which is a later adaptation of the *Wiener Physiologus* (cf. Maurer 1964, 169; Zapf 2011, 561; Stricker 2013, 366), *lê(we)s* is replaced by *leider*. This replacement might suggest that *lê(we)s* and *leider* were perceived as equivalent or closely related, or at least that *leider* was regarded as the more appropriate expression for the replacement. Moreover, this supports the hypothesis that *leider* expanded its range of usage.

(*Bi*) *dia meina* and its variants *dem meinom*, *io meinu*, *den meinom*, *in dia meina* occur 14 times in the ReA (version 1.0), exclusively in the *Evangelienbuch*, where it appears to have a partly evaluative (‘unfortunately’) and partly modal function (‘truly, verily’):

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**37** I thank an anonymous reviewer for pointing this out.

(50) (ReA: EB 1.20)

Ira férah bot thaz wíb, thaz iz múasi haben líb; ni  
of.her life offered the woman that it can have life not  
funtun **thía meina** gináda niheina.  
found *dia meina* mercy not any

‘The woman offered her own life to save that of her child. Alas!/Sadly, they had no mercy on her.’

The second observation comes from the *Ludwigslied*. Although the *Ludwigslied* is clearly a Christian text, it is also a poem celebrating King Louis III’s victory over the Northmen. In this work, *leider* appears exactly in the passage that links the sinfulness of the Frankish people to God’s punishment:

(51) (ReA: Ludwigslied)

[...] Thiot Urancono Manon sundiono [...] Uuas erbolgan krist  
folk of.Franks remind of.sins was got angry Christ  
**Leidhor**, thes ingald iz.  
*leider* of.it paid it

‘[...] to remind the Franks of their sins [...]. Christ raged. Alas! They atoned for it.’

This example provides further evidence for the view that, at this stage, the use of *leider* is still contextually restricted to the expression of sorrow over reprehensible actions in Christian perspective.

If we assume a developmental path from a parenthetical, no further semantic change would need to be postulated for *leider*. In this case, we would have to assume that the speaker-oriented (subjective) component of the meaning of *leider* was already present in its parenthetical use. However, if the hypothesis of a syntactic development from a manner adverb is adopted, an additional semantic change must be posited to account for the shift from a manner adverbial to a sentence adverbial interpretation. This further semantic development may be defined as a metonymic shift from the lexical subdomain [EXTERNAL ACTION] to the subdomain [INTERNAL PERCEPTION] within the conceptual domain of [SHAMEFUL/UNFORTUNATE SITUATION/BEHAVIOUR].<sup>38</sup> In other words, *leider* shifted from describing an external quality of an action or behaviour (i.e., how the action was performed) to conveying the speaker’s internal perception of the action itself. I propose that this conceptual shift represents a case of subjectification in the sense proposed by Traugott: “[m]eanings

<sup>38</sup> For metonymic shift in particular, see Croft 2002, 178; Traugott, Dasher 2002, 27-34; Hopper, Traugott 2003, 87-93; Campbell 2013, 225-6; Koch 2016, 38-46.



tend to become increasingly based in the speaker's subjective belief state/attitude toward the proposition" (1989, 35).<sup>39</sup> This is also consistent with Visconti's definition of subjectification: "an item undergoing subjectification will tend to shift from being an element participating compositionally to the building of the proposition, thus operandum (or part thereof), to an operator, binding an individual to an evaluation" (2013, 16). At this stage, *leider* developed its speaker-oriented component.

#### 4.5 Interim Conclusions: A Separate Developmental Path for Evaluative Adverbs?

The primary aim of this study was to investigate the morphosyntactic and semantic development of *leider*. The findings suggest that the emergence of *leider* as a sentence adverb can be traced back to the earliest stages of German.<sup>40</sup> It seems plausible that a separate lexical entry for the sentence adverb already existed in the (Early) MHG period. No evidence of a use of *leider* as the comparative form of the OHG adverb *leido* was found in the examined corpora. The study identified two possible developmental pathways:

- Development from a manner adverb: In this scenario, *leider* developed into a sentence adverb in contexts within the middle field characterised by syntactic and interpretative ambiguity, where both a manner and a sentential reading were available at the surface level. In such contexts, *leider* was reanalysed and subsequently recategorised as a sentence adverb. This led to the emergence of a distinct lexical entry for the sentence adverb. Semantically, *leider* first underwent a process of semantic extension via the lexicalisation of a conversational implicature: while still functioning as a manner adverb, it developed a more abstract, secondary meaning associated with the expression of regret (in addition to meanings related to something repugnant, disgraceful, or detestable). Later, it underwent a process of metonymic shift, through which it developed a speaker-oriented component. In this account, syntactic reanalysis and metonymic shift are understood as simultaneous and interrelated processes. The frequent occurrence of *leider* in utterance-initial position

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<sup>39</sup> See also Traugott 1995; 2010 for additional insights on this topic.

<sup>40</sup> As an anonymous reviewer rightly points out, it should be noted that the OHG translation of the Latin text *De fide catholica contra Iudaeos*, originally written by Isidore of Seville and translated into German around the year 800 (cf. Krotz 2013), does not feature *leider*, despite being one of the earliest texts in OHG and dealing with religious and moral themes.

in V3 configurations during the twelfth century cannot be fully accounted for within this scenario.

- Development from a parenthetical: According to this alternative pathway, *leider* developed into a sentence adverb through the syntactic integration of a parenthetical construction in contexts of syntactic and interpretative ambiguity in the middle field. The attestations of *leider* in V3 word orders are regarded as instances of its original parenthetical use. A process of semantic extension is also postulated. This analysis offers a more satisfactory explanation for the presence of *leider* in V3 configurations. However, it does not account for the emergence of the speaker-oriented component of *leider*. Moreover, it remains unclear what the exact configuration of the parenthetical structure was and whether *leider* represents a reduction from a broader and more complex construction.

Both analyses summarised here share a common element: they posit a reanalysis of *leider* in the middle field due to syntactic and interpretative ambiguity, providing further empirical support for the account proposed by Axel-Tober et. al (2025). While the first developmental path better integrates the syntactic account with the lexical-semantic evolution and the etymological origin of *leider*, the second pathway offers a stronger explanation for the occurrence of *leider* in positions outside the middle field.

Building on the studies of *-erweise* formations presented above in § 3 and considering the case of *leider*, the paper will discuss here whether a specific developmental path can be identified for the class of evaluative sentence adverbs in German. On the semantic level, the process of subjectification, which was hypothesised for *leider* in the previous section (assuming a reanalysis from a manner adverb), does not exclusively characterise the development of *leider* or that of the evaluative subgroup. A general tendency towards subjectification can indeed be observed across all subgroups of sentence adverbs (see Swan 1988, 159-62; Ramat, Ricca 1998, 243-4; Axel-Tober, Müller 2017, 39-41 for evidential adverbs). Ramat and Ricca (1998, 243) note that “[t]he semantic development [of sentence adverbs] usually goes from the world being talked about to the views on that world uttered by the speaker in her/his act of speaking”. However, for evaluative sentence adverbs that developed from manner adverbs, I suggest that a specific mechanism underlies the process of subjectification. This mechanism consists of a metonymic shift from the subdomain [EXTERNAL ACTION] to the subdomain [INTERNAL PERCEPTION] within the domain of [Adj. EVENT/SITUATION], where *Adj.* stands, for example, for *dumm* ‘stupid’ in *dummerweise* ‘stupidly’ or *bedauerlich* ‘regrettable’ in *bedauerlicherweise* ‘regrettably’. Through this specific metonymic shift from an action-related to a speaker-oriented meaning, evaluative

adverbs developed the subjective component that characterises their meaning. From a syntactic and functional perspective, evaluative adverbs do not appear to have undergone a developmental process that is different or unique compared to that of other subtypes examined by Axel-Tober (2016), Axel-Tober and Müller (2017), and Axel-Tober et al. (2025). Instead, it can be assumed that evaluative adverbs were subject to the same processes of upward reanalysis and syntactic integration observed for other subclasses of sentence adverbs. For the diachronic syntactic development of the *-erweise* formations, I assume a mechanism of upward reanalysis similar to that described for *leider* in § 4.3.1.

In summary, no unique syntactic process appears to characterise the development of evaluative adverbs. Instead, they seem to follow the same mechanisms of syntactic change affecting other categories of sentence adverbs. Semantically, however, a distinct pattern does emerge (at least for evaluative adverbs originating from manner adverbs), as the specific mechanism of semantic change they exhibit, namely metonymic shift, is not shared by other types of sentence adverbs.

## 5 Conclusions

This contribution has presented a diachronic, corpus-based study of the development of *leider* from its earliest attestations in OHG through MHG. Two developmental pathways can be hypothesised: one from a manner adverb and one from a parenthetical. Regardless of which specific analysis one adopts, the case of *leider* highlights surface ambiguity in the middle field as a central factor in its development. This provides further empirical support for the account put forward by Axel-Tober et al. (2025). Furthermore, it shows that the unique morphological origin of *leider* does not set it apart from other sentence adverbs in terms of diachronic development.

The paper has also aimed to offer insights into the interaction between syntactic reanalysis and semantic change in the development of evaluative sentence adverbs. Building on existing observations in the literature on *-erweise* formations and the analysis provided by Axel-Tober et al. (2025), as well as in light of the study of *leider*, the diachronic development of evaluative adverbs in German can be situated within broader developmental pathways shared across adverbial subtypes. What distinguishes evaluative sentence adverbs from other sentence adverbs is their distinctive process of subjectification through metonymic shift.

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