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Syntactic variation and interactional coherence in online communication: The German conjunction "weil" in written interactions

The current study presents an analysis of a linguistic device supporting interactional coherence in computer-mediated communication (CMC). The analysis focused on the use of the German causative conjunction *weil* and, more specifically, on the syntactic variation of verb-final versus verb-second word order in the *weil*-clause. Verb-final word order in German indicates a dependent clause, whereas verb-second word order indicates an independent clause. While only the former is accepted in written Standard German, the latter is well documented in oral communication. Relying on freely available Facebook, WhatsApp, and Wikipedia corpus data, the analysis shows that both grammatical constructions are used in written CMC. In a specific usage across discrete messages, the syntactic variation of the *weil*-clause can serve to unambiguously identify its reference clause. While verb-final *weil*-clauses can be used to refer to previous messages by both an interlocutor and oneself, verb-second *weil*-clauses are predominantly used to relate to an own previous message. Thus, the syntactic variation in *weil*-clauses can be used for disambiguating references in written interactions.

Key words: interactional coherence, conjunctions, social network sites, German CMC

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The coherence of a text is a relevant topic for literacy research. The competence to build a coherent text is one of the key skills in literacy development (Torrance, 2016). One method to build a coherent text is to use lexical cohesion markers, such as conjunctions. In contrast to, for example, academic writing, a specific kind of coherence is relevant in computer-mediated communication (CMC), namely, interactional (or communicative) coherence. Interactional coherence is created when chat partners commonly develop a topic and "an individual turn ideally relates locally to the previous turn, and globally to the discourse topic" (Herring, 1999, p. 8). Difficulties may arise in many-to-many chats when various topics are discussed simultaneously and users might find it hard to follow "the flow of conversation" (Markman, 2013, p. 539).

Problems related to interactional coherence in CMC have been discussed in many articles. Some focused on many-to-many chat communication (e.g., Herring, 1999; Markman, 2013), others on email and newsgroup communication (e.g., Severinson Eklundh, 2010), instant messaging (e.g., Baron, 2010), forum discussions (e.g., Lapadat, 2007) and YouTube comments (e.g., Bou-Franch et al., 2012). Herring (1999) published one of the first studies on this topic, describing frequently used methods to ensure coherence between messages by different interlocutors in group chats. Writers were found to use backchannels (e.g., "post-turn minimal responses"), turn-change signals (e.g., "%" as a floor holding device), and cross-turn references (e.g., user names, explicit linkages to previous turns, quoting), to name a few examples. The list of devices proposed by Herring (1999) has been extended by follow-up studies by various authors, which show that the frequency of their use differs by CMC genre. For example, the use of quotations has been frequently found in both email and newsgroup conversations, but the way these are used is genre specific (Severinson Eklundh, 2010). According to Bou-Franch et al. (2012), the most popular cohesive devices in YouTube comments are lexical means and the use of explicit references to other contributions. Far less frequent devices are the use of substitutions, ellipses, and conjunctions.

However, the role of conjunctions as a cohesive device in instant messages has been emphasised by Baron (2010, p. 3). She focused on so-called utterance break pairs (i.e., partitions of "single utterances into several components" comparable to intonation units in spoken language) and analysed the linguistic means used to signal cohesion between the utterance chunks. 60% of the second chunks started with a conjunction (mostly coordinating) and only 15% were independent clauses (a conjunction can then be found in the first part of the utterance break pair). This result shows the relevance of conjunctions as a cohesive device between utterance pairs.

According to Günthner (2012), utterance break pairs in CMC are sometimes jointly produced by the chat partners. In interactional linguistics, the term *collaborative productions* is used for this phenomenon.¹ To indicate that an utterance is meant to be an extension and completion of a previous speaker's turn, a speaker can exploit various prosodic, syntactic, and lexical means, which

1 See Günthner (2012, p. 5) for related approaches in the research literature.

then serve as cohesion markers (e.g., Szczepek, 2000). With respect to CMC, collaborative productions are yet to be analysed.

The present study introduces partial findings from a project that investigated the use of conjunctions in CMC. The study focuses on the use of a specific conjunction (*weil* "because") in German Facebook, WhatsApp, and Wikipedia messages, and investigates how it is used as a cohesive device in cross-message usages.

The Conjunction *Weil* in Contemporary German

Much research has been published on the German conjunction *weil*, in particular on the syntactic variation between verb-final and verb-second word order that can be observed in the *weil*-clause. In a very popular nonscientific publication, the use of verb-second *weil*-clauses has been listed as one example of common language errors made by native speakers of German (Sick, 2009, pp. 157–160). To this day, Standard German considers *weil* as a subordinating conjunction to be used with verb-final clauses (e.g., Duden, 2016). Nevertheless, many linguists have described the use of verb-second *weil*-clauses, which widely occur in spoken language nowadays, and thus often cause doubts in writers whether they can also be used in Standard German texts. According to Duden (2021, p. 1036), they should not be used.

The following sections shortly describe the syntactic variation and its semantic, pragmatic, and sociolinguistic features.

Syntactic Variation in *Weil*-Clauses

One can observe word order variation in *weil*-clauses in contemporary German (Duden, 2016, pp. 1222–1223). In written Standard German, *weil* is usually used as a subordinating conjunction, which causes verb-final word order indicating subordinate clauses (see Table 1).

In Table 1, the *weil*-clause is a dependent clause. As a subordinating conjunction, *weil* joins the dependent clause with an independent clause (reference clause), occupying the leftmost position of the dependent clause (so called left bracket),

Table 1. Verb-Final Word Order: Subordinate Clause

	reference clause	subordinated <i>weil</i> -clause
present tense (Präsens)	E-Mail ist so beliebt,	weil sie jeden Tag Zeit und Geld spart.
gloss	Email is so popular	because it every day time and money saves.
English	Emails are so popular	because they save time and money every day.
past tense (Perfekt)	E-Mail war so beliebt,	weil sie jeden Tag Zeit und Geld gespart hat.
gloss	Email was so popular	because it every day time and money saved has.
English	Emails were so popular	because they have saved time and money every day.

Table 2. *Verb-Second Word Order: Main Clause*

	reference clause		coordinated <i>weil</i> -clause
present tense (Präsens)	E-Mail ist so beliebt,	weil	sie spart jeden Tag Zeit und Geld.
gloss	Email is so popular	because	it saves every day time and money.
English	Emails are so popular because they save time and money every day		
past tense (Perfekt)	E-Mail war so beliebt,	weil	sie hat jeden Tag Zeit und Geld gespart.
gloss	Email was so popular	because	it has every day time and money saved.
English	Emails were so popular because they have save time and money every day.		

while the finite verb (part) occupies the rightmost position (right bracket), thus leading to verb-final word-order. All constituents of the clause find their position between the conjunction and the finite verb in the so-called central field.

However, in spoken language, *weil* is frequently used as a coordinating conjunction, causing verb-second word order, which indicates a main clause (see Table 2).

In Table 2, as coordinating conjunction, *weil* is not considered a part of the linear structure of the *weil*-clause but as linguistic element linking two independent clauses (the reference clause and the coordinated *weil*-clause). The *weil*-clause has a main-clause structure, that is, the finite verb (part) must be placed directly after the first constituent (often but not necessarily occupied by the subject) in the second position of the clause (verb-second word order). All other constituents will be placed after the finite verb (left bracket), but before a potential infinite verb part (right bracket) of complex predicates.

Dependent and independent *weil*-clauses are not always interchangeable, as there might be a semantic or pragmatic difference related to the choice of word order.

Semantic and Pragmatic Differences of Verb-Final and Verb-Second *Weil*-Clauses

According to Sweetser (1990), conjunctions often have different meanings depending on their pragmatic use. They can be understood on the content level, on the epistemic level, or as speech act-related. For example, the English causal conjunction *because* can connect two clauses expressing a causality in the real world, as in the sentence "John came back because he loved her" (Sweetser, 1990, p. 77). The conjunction may also express an epistemic relation between the two clauses conveying a conclusion based on the speaker's knowledge of the world, for example, "John loved her, because he came back" (Sweetser, 1990, p. 77). Speech act-related causal relations give "the cause of the speech act embodied by the main clause" (Sweetser, 1990, p. 77). In Sweetser's example "What are you doing tonight, because there's a good movie on" (Sweetser, 1990, p. 77), the *because*-clause provides a reason or a justification (*there's a good movie on*) for the speaker's question (*What are you doing tonight*), which might suggest watching the movie together.

Sweetser’s taxonomy can be adopted for the German conjunction *weil*, which also can be used to relate clauses on the content level, on the epistemic level, and on the speech act level (e.g., Breindl et al., 2014, pp. 833–837). The main difference with English is that there is a correlation between the pragmatic meaning and the word order variation of the *weil*-clause. For epistemic and speech act-related usages of the *weil*-clauses, verb-second clauses are often used, whereas verb final-clauses typically express a content-related causal relation (Duden, 2016, pp. 1222–1223). Nevertheless, content-related relations may also be expressed in *weil*-verb-second clauses, and epistemic and speech act-related relations can be expressed with verb-final *weil*-clauses if prosodically marked by, for example, a short pause (Antomo & Steinbach, 2010). In addition to Sweetser’s taxonomy, Gohl and Günthner (1999) point to discourse-related usages of *weil*-verb-second clauses in which the causal meaning of the conjunction is lost but discourse functions (e.g., as floor holding device or topic changing signal) are more relevant. Discourse-related *weil*-clauses are also used with verb-second word order. The use of different semantic and pragmatic meanings of *weil*-clauses and, therefore, potential syntactic variation is typical of spoken interaction, but may also appear in written interactions,² including, for instance, CMC.

Sociolinguistic Features of the Syntactic Variation in *Weil*-Clauses

Corpus-based studies of the distribution of verb-second *weil*-clauses in spoken German find different percentages of this construction depending on the period and the region in which the data was collected. Wegener’s (2000, p. 58) overview of older corpus studies shows an increase of verb-second *weil*-clauses over time and is led by data collected from southern German speakers. Scheutz (2001) confirms high percentages of verb-second *weil*-clauses in southern German speakers in his study on Austrian German conversations. However, according to Hoffman (2013, pp. 355–357), verb-second clauses in spoken German originated in southern German dialects, but are nowadays used throughout the German-speaking world.

Weil-Clauses in CMC

Previous studies on CMC show genre-specific differences in the occurrence of word order variation in *weil*-clauses. Storrer (2019) found a clear preference for verb-final word order on Wikipedia discussion pages. Abel and Glaznieks (2020a) found evidence for the usage of verb-second *weil*-clauses in Facebook chat messages. The current study analyzed word order variation in *weil*-clauses used in Facebook, WhatsApp, and Wikipedia conversations as a cohesive device between single messages. Therefore, the focus is on *weil*-clauses in cross-message usages, a topic which has not been addressed in previous studies.

2 For example, Elspass (2007) found *weil*-verb-second clauses in 18th century letters of German-speaking lower-class emigrants.

The Conjunction *Weil* in Cross-Message Usages

In traditional texts, conjunctions combine two clauses by the same author. As a subordinate clause, the *weil*-clause is integrated into the sentence structure of the main clause. Sometimes, a *weil*-clause is orthographically not integrated into a main clause and appears as a formally independent sentence indicated by interpunctuation signs, such as a full stop or a colon (cf. so-called "punctuation units" in Chafe, 1984, p. 438), but rarely additionally marked by word order (verb-second instead of verb-final). In this case, the *weil*-clause usually delivers additional information that might be relevant to what has been written before (either factual, epistemic, or speech act-related "afterthoughts," cf. Chafe, 1984, pp. 445–448). However, in spoken conversations, prosodically or syntactically nonintegrated *weil*-clauses occur more frequently (Wegener, 2000, p. 58). The reference and *weil*-clauses may even be uttered in different turn pairs by different speakers. Question/response pairs are a well-described example in which a *weil*-clause can appear completely "independent," and the reference clause and the *weil*-clause may have different authors (Uhmann, 1998, pp. 121–123). In addition, *weil*-clauses also occur in collaborative productions (Günthner, 1996, pp. 333–337; cf. Scheutz, 2001, p. 120).

Regarding CMC, cross-message usage occurs when the *weil*-clause and its reference clause appear in different messages. Based on previous research, three types of cross-message usages can be distinguished: question/response pairs, utterance break pairs, and collaborative productions. In the following, potential word order preferences for each cross-message type are described.

According to many authors (e.g., Antomo & Steinbach, 2010, p. 8; Günthner, 2008; Uhmann, 1998, pp. 121–123), verb-final *weil*-clauses are preferred over verb-second *weil*-clauses in direct responses to why-questions (with German *warum* or *weshalb* "why") within a question/response pair (1).

(1) question/response pairs

A: Warum ist E-Mail so beliebt? ("Why is email so popular?")

B: Weil sie jeden Tag Zeit und Geld spart! | ?Weil sie spart jeden Tag Zeit und Geld! ("Because it saves time and money every day!")

Uhmann (1998, pp. 121–123) explains the preference of verb-final word order in direct responses to why-questions with the status of information delivered in question/response pairs. Question and response usually build a unit of background (question) and focal information (reason) in which the background information expressed in the question can be dropped elliptically in the response. Pragmatically, this unit creates one illocutionary act of giving a reason for whatever has been asked for. Background and focal information must be expressed in one illocutionary act, which might not be the case in a verb-second *weil*-clause, as it may create an additional illocutionary act and, therefore, sound odd. However, some authentic instances of verb-second *weil*-clauses in direct responses to why-

questions are mentioned in Uhmann (1998, p. 122 footnote 44). To the author's best knowledge, the use of *weil*-clauses in question/response pairs in CMC is yet to be investigated.

Besides question/response pairs, no study in CMC research has systematically investigated if and how *weil*-clauses also appear in collaborative productions (2), and if the syntactic variation in the *weil*-clause is observable there.

(2) collaborative productions:

A: E-Mail ist so beliebt! ("Email is so popular!")

B: Weil sie jeden Tag Zeit und Geld spart! | ?Weil sie spart jeden Tag Zeit und Geld! ("Because it saves time and money every day!")

The creation of collaborative productions in spoken conversations is characterised by the attempt of one person to tie in an utterance with a previous utterance of an interlocutor (Günthner, 2012; Scheutz, 2001). This attempt can serve various communicative functions, such as displaying congruent perspectives, supporting one's own argumentative line, checking understanding, or expressing astonishment (Günthner, 1996, pp. 333–337). With regard to *weil*-clauses, the attempt is usually supported by verb-final word order indicating a syntactical integration into the previous utterance rather than by verb-second word order, which syntactically indicates two independent main clauses: "[...] in using syntactic integration, the second speaker grammatically incorporates her utterance into the preceding turn and iconically marks her turn as a continuation of his." (Günthner, 1996, p. 334). As there is no counterevidence in the literature so far, *weil*-clauses in collaborative productions in CMC are assumed to also be preferably construed as a subordinate clause using verb-final word order.

Finally, *weil*-clauses in CMC may also occur in utterance break pairs (3).

(3) utterance break pairs:

A: E-Mail ist so beliebt, ("Email is so popular")

A: weil sie jeden Tag Zeit und Geld spart! | weil sie spart jeden Tag Zeit und Geld! ("because it saves time and money every day!")

The usage of utterance break pairs is comparable to "independent" verb-final *weil*-clauses in traditional texts separated orthographically by a full stop or a colon, or in spoken language separated prosodically by a short break or a change in intonation. By separating the *weil*-clause from the reference clause, the meaning of *weil* becomes more flexible but tends to be epistemic, regardless of whether it appears in a verb-second or in a verb-final clause (cf. Antomo & Steinbach, 2010). Both verb-second and verb-final word order are possible in utterance break pairs. Yet, which one will be preferred remains an open issue.

In the next section, word order variation in *weil*-clauses used in written online communication is investigated. The first part analyzes the distribution of various

weil-clauses with respect to their syntactical features in different CMC corpora. The second part focuses on the analysis of *weil* as a cohesive device in different types of cross-message usages and investigates whether word order variation can be used to clarify reference.

Data

Four freely available corpora of German CMC were used. First, the DiDi Corpus (Frey et al., 2016), consisting of Facebook status updates, comments, and chat messages of 136 different users. As the corpus contains different languages, only the German part was used, which amounts to 373,383 tokens from 130 authors. Second, a subsample of the most recent (2019) German Wikipedia article discussion corpus (Wiki-AD) and the user discussion corpus (Wiki-UD), in which different authors interact with one another (Margaretha & Lungen, 2014), was used. Finally, the "growing" corpus of German WhatsApp messages provided on the MoCoDa2 platform (Beißwenger et al., 2019) on 30th September 2020 was used. Table 3 gives an overview of the four corpora.

The corpora are very diverse. The Wikipedia and the WhatsApp data have a comparable number of threads involving a high number of different writers. On the other hand, the Facebook data contains a much higher number of threads written by a much lower number of writers. Sample sizes in the Wikipedia and the Facebook corpus are comparable³ but the WhatsApp collection accessible on MoCoDa2 at the date of data collection was, unfortunately, smaller than the other corpus samples. The corpora represent speakers from the south (DiDi) and the north-west (MoCoDa2) of the German-speaking world. The regional origin of the writers in the two Wikipedia corpora is unknown.

Method

For each corpus, a corpus analysis was conducted. The analysis consisted of three steps: all instances of *weil* were extracted and annotated according to the following categories: (a) word order of the *weil*-clause (verb-final vs. verb-second) and (b) location of the reference clauses (within the same message or split over two messages).

Table 3. Corpora Used for the Study

	Wiki-AD	Wiki-UD	Facebook	WhatsApp
# tokens	376,478	377,373	373,383	277,403
# threads	673	573	8,909	669
# authors	4,161	3,198	130	2,786

3 The dataset of a previous investigation (Abel & Glaznieks, 2020b) was used, for which the Wikipedia corpora (Wiki-AD: <http://hdl.handle.net/10932/00?03B6?558F?5EA0?6301?B>; Wiki-UD: <http://hdl.handle.net/10932/00-03B6-558F-6EF0-6401-F>) were downsampled to the size of the DiDi Corpus so as to make analysis comparable.

Finally, the type of cross-message usage (question/response pair vs. collaborative production vs. utterance break pair) was analyzed in a predominantly qualitative manner. To test if the CMC genres differed in (a) the proportions of verb-final and verb-second word order in *weil*-clauses and in (b) the location of the reference clause, a Pearson’s chi-square test with the Yates correction ($\alpha = .05$, cf. Tables 5 and 7) was carried out if the expected values were below 5.

Results

Quantitative Analysis

Table 4 shows absolute and relative numbers per 100,000 tokens of *weil* in the four corpora. The highest number of *weil* occurred in the WhatsApp corpus, followed by the Facebook corpus. The occurrences in the Wikipedia corpora are almost equal and lower than in the Facebook and WhatsApp corpora.

Since the corpora were not equal in size, a random sample of 300 *weil*-clauses was taken from each corpus. The resulting dataset of 1,200 *weil* occurrences was then annotated using the previously mentioned annotation categories.

Focusing (a) on the distribution of verb-final and verb-second *weil*-clauses (cf. Table 5), the percentage of verb-final constructions was very high in the Wikipedia corpora (Wiki-AD: 94.7%; Wiki-UD: 96.0%), while only two thirds (67.0%) of *weil* occurrences in the Facebook dataset, and almost 70% in the WhatsApp dataset were used with this construction. On the other hand, verb-second *weil*-clauses were more frequent in the Facebook (27.0%) and WhatsApp datasets (24.0%) than in Wikipedia, where they very scarcely occurred (Wiki-AD: 2.0%; Wiki-UD: 0.7%). This difference between the two Wikipedia dataset on the one hand and the Facebook and the WhatsApp datasets on the other proved to be statistically significant at $\alpha = .05$, $X^2(1, N = 1,143) = 157.097$, $p < .00001$. This means it is more likely that a verb-second *weil*-clause is used in Facebook and WhatsApp messages than in Wikipedia discussions. Therefore, verb order variation in *weil*-clauses might be a substantial feature of language use in these genres. The same cannot be said for Wikipedia. It is also noteworthy that there was no significant difference in the percentage of verb-second *weil*-clauses between the two Wikipedia datasets, $X^2(1, N = 580) = 1.1407$, $p = .285497$, $\alpha =$

Table 4. Total Number of Weil in the Four Investigated Corpora in Absolute Numbers (#) and per 100,000 Tokens (#/100k)

	Wiki-AD		Wiki-UD		Facebook		WhatsApp	
	#	#/100k	#	#/100k	#	#/100k	#	#/100k
<i>weil</i> TOTAL	317	84.2	316	83.7	519	139.0	492	177.4

.05, and between the Facebook and the WhatsApp datasets, $X^2(1, N = 564) = 0.7984$, $p = .371582$, $\alpha = .05$. The latter may exclude regional preferences⁴.

In the second step all *weil*-clauses (i.e., verb-final and verb-second) in each dataset were annotated with respect to the location of their reference clauses in order to analyze the use of *weil* as a cohesive device in interactions. Reference clauses in the same post, comment, or message ("same-message usage") were distinguished from those appearing in a different one ("cross-message usage"). Table 6 shows the distribution of *weil*-clauses in same- and cross-message usages for all four datasets

Cross-message usages were rare in the Wikipedia data (between 1% and 2%), occurred in the Facebook data only to a certain extent (ca. 10% of *weil*-clauses), and were the most frequent in the WhatsApp data (more than 25% of *weil*-clauses).

As cross-message usages of *weil*-clauses did not occur frequently in the Wikipedia data, the Facebook and Wikipedia datasets are now analyzed with respect to word order variation in cross-message usages. Table 7 gives an overview of the distribution of verb-final and verb-second *weil*-clauses in same- and cross-message usages.

The two datasets differed in the way the syntactic variation is distributed. In both datasets, cross-message usages of verb-final *weil*-clauses occurred more often than usages with verb-second clauses.

Table 5. Distribution of *Weil* in Wikipedia Discussion Pages, Facebook, and WhatsApp Messages

	Wiki-AD		Wiki-UD		Facebook		WhatsApp	
	#	%	#	%	#	%	#	%
<i>weil</i> verb-final	284	94.7	288	96.0	201	67.0	209	69.7
<i>weil</i> verb-second	6	2.0	2	0.7	81	27.0	72	24.0
<i>weil</i> ellipsis ⁵	5	1.7	4	1.3	12	4.0	5	1.7
<i>weil</i> other ⁶	5	1.7	6	2.0	6	2.0	14	4.7
<i>weil</i> TOTAL	300	100	300	100	300	100	300	100%

4 The results presented in Table 5 give no reason to assume a regional variation, which was, however, observable in the results of studies of spoken language conducted between 1960 and 1995 in various German-speaking regions (cf. Wegener, 2000, p. 58). However, the datasets used in the current study did not allow for any generalization or further conclusions regarding regional variation in the use of verb-second *weil*-clauses.

5 Dropping the subject and the copula verb in a *weil*-clause is possible if the subject is identical to the subject of the reference clause (Pasch et al., 2003, pp. 361–268). To illustrate the resulting elliptic clause, an example from the Wiki-AD dataset may help: *Der Name Mathias Tobias von Hebborn ist falsch, weil unvollständig*. "The name Mathias Tobias von Hebborn is wrong because (it is) incomplete." Since it is impossible to determine the verb position (verb-final or verb-second) in elliptic *weil*-clauses, a new category was created.

6 The category "other" included *weil*-clauses in which word order cannot be classified with respect to the position of the inflected verb. In the message *Bin in den Uniräumen ^^ Deutsch machen weil ich warte* "I am in the rooms at the University ^^ Doing German [exercises] because I am waiting" (MoCoDa2, chat code: H6QWv, Message 5), the *weil*-clause could be verb-final as well as verb-second. In addition, rare usages of the attributive *weil* (*Die richtige, weil unausweichliche Entscheidung ...* "The correct, because inevitable decision ...") (DiDi Corpus, text_id: 1589730360_353111811465804) were also put in the "other" category.

Table 6. Occurrences of Weil-Clauses According to Their Usage in the Same or Across Messages

	Wiki-AD		Wiki-UD		Facebook		WhatsApp	
	#	%	#	%	#	%	#	%
same-message usage	282	97.2	286	98.6	247	88.2	206	73.3
cross-message usage	6	2.1	3	1.0	29	10.4	71	25.3
unclear	2	0.7	1	0.3	4	1.4	4	1.4
TOTAL	290	100	290	100	280	100	281	100

Table 7. Variation in weil-clauses According to their Usage in Same or Across Messages in the Facebook and WhatsApp data

	Same-message usage				Across-message usage			
	Facebook		WhatsApp		Facebook		WhatsApp	
	#	%	#	%	#	%	#	%
verb-final	168	68,02	159	77,18	28	96,55	46	64,79
verb-second	79	31,98	47	22,82	1	3,45	25	35,21
TOTAL	247		206		29		71	

However, the percentage of verb-second *weil*-clauses in cross-message usages in the WhatsApp dataset (35%) was significantly higher, $X^2(1, N = 100) = 10.7968$, $p = .001017$, $\alpha = .05$, than that of the Facebook dataset (only 1 case), where verb-second usages more often occurred in same-message usages (32%, $X^2(1, N = 453) = 4.7024$, $p = .030121$, $\alpha = .05$).

Qualitative Analysis

In the final step, the analysis for all cross-message usages of *weil* in the four datasets was deepened by categorizing them into the three types introduced earlier: question/response pairs, collaborative productions, and utterance break pairs. This analysis may help to understand differences in the distribution of the syntactic variation in the analysed datasets.

In both Wikipedia datasets, cross-message usages of *weil*-clauses were rare (Wiki-AD: 6, Wiki-UD: 3), and all occurrences were instances in question/response pairs as direct answers to why-questions. They all appeared in verb-final *weil*-clauses. Example 1, taken from the Wiki-AD dataset, illustrates a typical question/response pair. User Φ responds to the two why-questions of user ahz with a verb-final *weil*-clause.

Example 1⁷:

(https://de.wikipedia.org/wiki/Diskussion:Helena_Petrovna_Blavatsky/Archiv/1)

initial message by user ahz:

Warum ist die Person Franz Hartmann nicht verlinkt?

http://de.wikipedia.org/wiki/Franz_Hartmann

Und warum setzt du keinen Link?

"Why is the person Franz Hartmann not linked?

And why don't you put a link?"

response message by user Φ:

Weil er für nicht-angemeldete BenutzerInnen gesperrt ist, was für aber [sic] angemeldete BenutzerInnen jedoch nicht ohen [sic] Weiteres erkennbar ist. Ich hab den Link mal gesetzt - aber bitte, bitte, gern geschehen, nicht der Rede wert.

"Because it is blocked for non-registered users, but this is not readily apparent to registered users. I have set the link - but please, please, you're welcome, don't mention it."

In the Facebook dataset, verb-final *weil*-clauses in cross-message usage also occurred mostly (21 of 31 cases) in question/response pairs as direct answers to a why-question. In six instances, verb-final *weil*-clauses occurred in collaborative productions. These *weil*-clauses connected to an utterance of a chat partner in an adjacency pair but were not responses to why-questions. They usually gave a reason for the proposition in the previous utterance, as Example 2⁸ shows.

Example 2 (DiDi Corpus, message id= 54956_p03403_c5379)

- 1 A: ok ba 3:24 mocht PP an drillshine, jetz sog i nicht mehr^^
 "ok at 3:24 PP makes a drillshine, now I say no more^^"
- 2 B: ach, hel sein gewohnheitssochen
 "ach, these are habitual things"
- 3 A: na hon mi geteischt
 "no I am wrong"
- 4 A: wor no a wavedash dozwischn
 "there was a wavedash in between"
- 5 B: joa
 "yes"

⁷ All German examples were translated by the author.

⁸ In Example 2, taken from the DiDi Corpus, the chat partners use Tyrolean dialect, a southern Bavarian variety of German. There are no orthographic rules for Tyrolean dialect as it is mainly used in spoken conversations. However, it is popular to use it also in written digital communication among South Tyrolians (Glaznieks & Glück, 2019).

- 6 B: ober a do wars theoretisch meglich
 "but also there it would have been theoretically possible"
- 7 A: jo weil dor ondre 0 dmg kopp hot
 "yes because the other had 0 dmg"
- 8 A: und volle oidn DIId hot
 "and he has a very low DIId"

In Message 7 of Example 2, User A connects their utterance to the one before, which was an assertion made by User B. The *weil*-clause encodes a reason for the content of the assertion by B, although there was no request for this. Nevertheless, the *weil*-clause was uttered in a cooperative sense as indicated by the agreement marker *jo* "yes" at the beginning of Message 7.

The only verb-second *weil*-clauses in cross-message usage in the Facebook dataset occurred in a question/response pair, which did not match the assumptions formed on the basis of the literature (see below).

In the WhatsApp dataset, verb-final *weil*-clauses in cross-message usage also occurred in both question/response pairs (16 of 46 cases) and collaborative productions (10 of 46). Unlike the Facebook dataset, the WhatsApp dataset also provided 18 examples for verb-final *weil*-clauses connecting utterance break pairs. In Example 3, Saskia and Konny are chatting about a stranger who appeared at a recent birthday party despite not having been invited. The situation was very awkward and embarrassing for everyone present as the celebrating guests were a small, closed group intolerant of newcomers. From Message #9 onwards, Konny admits that the situation was unpleasant, but did not know how he could have saved it, seeing as he no longer had any control over it. The whole utterance (#9-#12) develops over four messages, which are all connected by conjunctions indicating either a continuation of the utterance in the following message (cf. #9 *als* "when" points to the independent clause in #10) or a connection to the previous utterance in #11 (*und* "and") and #12 (*weil* "because").

Example 3⁹ (MoCoDa2, Chat Code #y1XTe, Messages #7-#12)

- #7 Saskia: Ja hab euch ja davor gesagt wir sind eine Gruppe und das [sic]
 das eher abgekapselt ist
 "Yes I told you before that we are a group and that it is rather closed off"
- #8 Saskia: Und dann auch noch so ein random dude mitbringen 😊
 "And then also you bring such a random dude with you"
- #9 Konny: Jaa als wir davor standen
 "Yes, when we stood in front of you"
- #10 Konny: War ich auch eher so äh lol
 "I was also more like uh lol"
- #11 Konny: Und wusste selber nicht was Ich machen soll

9 All names in example 3-7 from the MoCoDa2 database are pseudonyms.

"And did not know what to do"

#12 Konny: Weil ich gar keine richtige Kontrolle über die Situation mehr hatte
 "Because I no longer had any real control over the situation"

However, in most utterance break pairs, verb-second *weil*-clauses are preferred. This type of cross-message usage explains almost all occurrences of verb-second *weil*-clauses in cross-message usages (24 of 25). Examples 4-5 illustrate utterance break pairs with different semantic meanings. While Example 4 must be interpreted as content-related, Example 5 is speech-act-related.

Example 4 (MoCoDa2, Chat Code #RkDi4, Messages #38-#40)

#38 Paola: Und theoretisch bekomme ich ja im Monat 900 euro
 "and theoretically I get 900 euros a month"

#39 Laura: Oh Gott ist das alles kompliziert
 "Oh God it's all complicated"

#40 Paola: Weil die Eltern von meine Babysitte [sic] leihen mir quasi 500 im Monat
 "because my babysitter's parents lend me 500 a month"

In Example 4, Paola partitioned a longer message into two related shorter messages, as the *weil*-clause in Message #40 provides the reason for the content of Message #38. By using verb-second word order, it is clear that Message #40 did not refer to Laura's message (#39), in which she expressed sympathy with Paola, but to her own previous message right before.

Example 5 (MoCoDa2, Chat Code #gcPuE, messages #115-#118)

#115 D.: Wann steht ihr auf?
 "When do you get up?"

#116 K.: Ich hab keine Ahnung, denke vor neun fahren wir eh nicht aus
 "I have no idea, but I don't think we'll be leaving before nine anyway"

#117 K.: *los. Ich kann Name w sonst nochmal fragen bevor wir schlafen gehen
 "[self-correction]. I can ask name w again before we go to sleep"

#118 D.: Weil ich steh da nicht um 9 auf der matte und bin dann die einzige
 "Because I don't want to be there at 9am and then I'm the only one"

#119 D.: Ja das wäre super
 "Yes that would be great"

Example 5 illustrates a speech act-related use of a *weil*-clause. In Message #115, D. asked a question (*Wann steht ihr auf?* "When do you get up?") to make sure that an appointment for a joint trip between the chat partners will be respected by everyone. In Message #116, K. answered that the exact starting time of the excursion is unclear, but they will find out before bedtime (#117). D.'s *weil*-clause in Message #118 did not relate to K.'s previous answers to D.'s initial request, but justified the request in Message #115. Only Message #119 referred

to K.’s suggestion made in Message #117. Using a verb-second *weil*-clause made it clear that D. referred to an own previous message and did not connect their message in Message #118 to K.’s messages in Messages #116-#117.

Table 8 summarizes cross-message usages in all four datasets. It shows that verb-second *weil*-clauses were almost always used in utterance break pairs, whereas verb-final *weil*-clauses can be used for all types of cross-message usages. Not all types can be found in all datasets. The Wikipedia datasets contained only question/response pairs, the Facebook dataset additionally showed instances of collaborative productions, and in the WhatsApp dataset, utterance break pairs were found in addition to the other two types.

With respect to word order variation, Table 9 summarizes occurrences of verb-second and verb-final *weil*-clauses in cross-message usages in the datasets. It shows that verb-second *weil*-clauses are a good indicator for utterance break pairs, as they rarely occur in other types of cross-message usages, thus revealing self-reference when used in cross-message usage.

Finally, an example of a verb-second *weil*-clause used in a question/response pair is presented (Example 6). Although verb-second *weil*-clauses are not very common as direct responses to why-questions and, according to linguistic literature, should not occur (e.g., Antomo & Steinbach, 2010; but see Uhmman, 1998, pp. 122, Footnote 44 for other authentic examples in the literature), the data showed two cases (out of 48 question/response pairs) in which they were used.

Table 8. Summary of the Distribution of Verb-Final and Verb-Second Weil-Clauses in the Analysed Data Sets

	Wiki-AD/UD		Facebook		WhatsApp		Total
	verb-final	verb-second	verb-final	verb-second	verb-final	verb-second	
question/ response pair	9	/	21	1	16	1	48
collaborative production	/	/	6	/	10	/	16
utterance break pair	/	/	/	/	18	24	42
other	/	/	4	1	2	/	7
Total	9	0	31	2	46	25	113

Table 9. Summary of the Distribution of Verb-Final and Verb-Second Weil-Clauses in Different Types of Cross-Message Usage

	question/response pair	collaborative production	utterance break pair
verb-final <i>weil</i> -clause	yes	yes	yes
verb-second <i>weil</i> -clause	no ¹⁰	no	yes

10 There are two cases of verb-second *weil*-clauses in responses to a why-question (cf. Table 8). They were treated as exceptions and, therefore, “no” is given here.

Example 6 (MoCoDa2, Chat Code #DQi83, Message #469-#476)

- #469 Ahmet: mein neues insta pw
 "my new Instagram password"
 #470 Ahmet: galatasaray
 "galatasaray"
 #471 Fatma: Labbberrrrrr
 "babble"
 #472 Fatma: HAHAHAH als ob
 HAHAHAH as if
 #473 Ahmet: ja
 "yes"
 #474 Fatma: Wieso
 "why"
 #475 Ahmet: weil das ist unknackbar
 "because it is uncrackable"

The chat between Ahmet and Fatma consists of short messages about Ahmet's new Instagram password – the name of a famous Turkish football club from Istanbul. The choice of the password seems to have been unexpected and even funny for Fatma (Messages #471-#472), and leads to the why-question in Message #474. In Message #475, Ahmet revealed the reason for his choice as a verb-second *weil*-clause. The reason for using a verb-second instead of a verb-final *weil*-clause could be that Ahmet wanted to express an epistemic causal relation. By using a verb-second clause, he distanced himself from knowing exactly the reason for his choice of a password and indicated that he just assumed that he has chosen the password because it is uncrackable. Thereby, he overexpanded the possibility of the syntactic variation of *weil*-clauses to question/response pairs. As most of the question/response pairs are used with verb-final *weil*-clauses, the data confirms the general preference for verb-final *weil*-clauses in such pairs.

Discussion

In all four analyzed datasets, *weil*-clauses were mainly used in accordance with Standard German grammar, that is, as subordinating conjunction and mainly within nonseparated messages. This distribution was more evident in the two Wikipedia datasets than in the Facebook and WhatsApp datasets. In addition, the analysis confirmed three scenarios in which *weil*-clauses and corresponding reference clauses occurred in cross-message usages within an ongoing communication thread. *Weil*-clauses related either to a reference clause in a message by an interlocutor as a response to a why-question (Example 1) and as part of a collaborative production, extending the previous utterance by providing a reason to, or explanation for, the previous assertion by the interlocutor (Example 2). Alternatively, they relate to one's own previous message in utterance break

pairs (Examples 3-5). Cross-message usages of *weil*-clauses occurred most often in the WhatsApp dataset and more often in the Facebook dataset than in the Wikipedia dataset. One reason for this distribution may be the different genre types that were represented in the analyzed data. Besides status updates and comments, the Facebook corpus also contains private chat messages, which may support the use of question/response pairs and collaborative productions, whereas the Wikipedia discussion pages only consist of forum discussions, which may rather support the use of completed messages and allow single *weil*-clauses only as responses to why-questions. By contrast, the WhatsApp corpus consists only of instant messages which are mostly written on a smart-phone. This leads to shorter messages and a partitioning of longer utterances into shorter units, often based on single speech acts (cf. Imo, 2015, pp. 16–25). Therefore, utterance break pairs can also be found in the WhatsApp dataset.

The following observation regarding word-order preference in *weil*-clauses in cross-message usages can be made: Verb-final clauses occur in all three types, but verb-second clauses rarely occur in question/response pairs, do not occur in collaborative productions, but frequently occur in utterance break pairs. Verb-second *weil*-clauses relate mainly to one's own previous messages and are not used to relate to interlocutors' messages in the data. Therefore, word order can help to clarify the reference clause in cross-message usage, especially in instant messages.

The assumptions of the study were confirmed. Subordination qualifies for a syntactic integration into a previous utterance even if this utterance may come from a chat partner. This characteristic does not only tie utterance break pairs together, but is also the basis of collaborative productions in which one message ties in with a previous message from a chat partner in order to extend it and add information (Günthner, 2012). By contrast, the use of an independent verb-second *weil*-clause identifies subsequent, follow-up information ("afterthoughts"). Such subsequent utterances indicate that "the preceding claim is corroborated or supported by supplying presuppositions or assumptions as evidence" (Scheutz, 2001, p. 126). In spoken conversations, there are often short pauses in between the two independent clauses, indicating distinct intonation units (Chafe, 1984, p. 437). In written language, pauses cannot be indicated with prosodic means, but can be visualized by separating the clauses by means of punctuation (colon, full stop), creating distinct punctuation units (Chafe, 1984, p. 438). In CMC, writers have an additional alternative to creating distinct units that serve similar purposes. Writers in CMC, especially instant messages, can do this through distinct messages, creating utterance break pairs (Baron, 2010). Follow-up information is usually added to own utterances and may be indicative of an "internal process of thinking of something additional to say" (Ford, 1993, p. 17), that is, on the basis of cognitive motivation. In addition, observations made by Ford (1993) and Ford et al. (2003) in spoken conversations underline the interactional nature of adverbial clauses used as post completion extensions. In most cases (70%), the extension of a completed utterance is motivated by a lack

of, or dispreferred, reactions of the interlocutor and only 30% can be attributed to self-motivated extensions ("afterthoughts," Ford, 1993, pp. 105–124). The contribution or absence of interlocutors' reactions was not part of the present study, so whether near-synchronous CMC differs from synchronous spoken conversations remains an open issue. However, all types of cross-message usages of *weil*-clauses investigated in the present study – and probably adverbial clauses in general – require the interlocutors to be highly attentive to the continuation of the interaction. For example, collaborative productions are a manifestation of engagement of the interlocutors in the ongoing conversation – even in written communicative exchange. They may be used to signal agreement and to check understanding of the ongoing conversation. Thus, their use in CMC seems similar to Ford's (1993, p. 129) conclusion for their occurrences in spoken conversations from a psycholinguistic and interactional perspective: "Whether an adverbial clause is used to display agreement, check understanding, or co-tell, it is an effective strategy in that it makes use of, and incorporates, another person's talk. In fact, it is, at least in part, this coordination with another speaker's talk that makes adverbial clauses particularly effective in signaling understanding of both the content and form of prior talk."

The fact that verb-second *weil*-clauses are also used to express a causal relation on the epistemic and pragmatic level supports their usage with reference to own messages in cross-message usages. One usually justifies one's own assumptions or speech acts. Nevertheless, epistemic and speech-act-related *weil*-clauses with reference to an interlocutor also exist. They are formulated as requests (i.e., do you assume X because of Y? or do you ask X because of Y?) and then used with verb-final word order, as Example 7 (Message #957) shows.

Example 7 (MoCoDa2, Chat Code #fhLyA, message #953-#958)

#953 Markus: Hallo

"Hello"

#954 Janus: Jo

"Yes"

#955 Janus: Hi

"Hi"

#956 Markus: Wollte nur testen, dachte mein WhatsApp spinnt

"Just wanted to test, thought my WhatsApp was going crazy"

#957 Janus: Weil dir keiner schreibt? Liegt nicht am WhatsApp

"Because nobody writes to you? It's not because of WhatsApp"

#958 Markus: Ok

"Okay"

Finally, some limitations of the present study should be mentioned. The number of instances of each kind of cross-message usage found in the four datasets was very low (cf. Table 8). This might be directly related to the chosen sample sizes.

To further investigate this phenomenon, the present study could be extended to other existing CMC corpora (e.g., Ueberwasser & Stark, 2017) or a new and larger corpus of adequate social media communication could be collected. The more data provided in linguistic corpora, the easier it will be to analyze linguistic phenomena such as syntactic variation, which might become visible only in bigger collections.

To extend the dataset, further research on syntactic variation in interactions could also consider other subordinating conjunctions and analyze whether they show similar results as demonstrated for *weil*-clauses. In contemporary German, syntactic variation can be observed for at least two additional subordinating conjunctions: *obwohl* "(even) though, although" and *wobei* "although" (Günthner, 2000, 2001). Although these two conjunctions warrant further investigation, most subordinating conjunctions do not show syntactic variation, and changing the word order from verb-final to verb-second usually results in a grammatically incorrect clause. However, the matter of whether other subordinating conjunctions will follow the example of *weil* is open to further inspection.

The results of this study could also be validated by extending the data to other CMC genres and social media platforms (e.g., Reddit). Based on the results presented in this contribution, platforms with a high degree of question/response interactivity, be those Twitter Direct Messages, Facebook Messenger or instant messaging in general, deserving of further research of the phenomenon.

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References

- Abel, A., & Glaznieks, A. (2020a). Textqualität in Sozialen Medien. In K. Marx, H. Lobin, & A. Schmidt (Eds.), *Deutsch in Sozialen Medien* (pp. 53–74). De Gruyter. <https://doi.org/10.1515/9783110679885-004>
- Abel, A., & Glaznieks, A. (2020b). Kohärenz digital: Zum Konnektorengebrauch in der Online-Kommunikation und dessen Repräsentation in Sprachressourcen. *Deutsche Sprache*, 2020(2), 146–173. <https://doi.org/10.37307/j.1868-775X.2020.02.05>
- Antomo, M., & Steinbach, M. (2010). Desintegration und interpretation: Weil-V2-Sätze an der Schnittstelle zwischen Syntax, Semantik und Pragmatik. *Zeitschrift für Sprachwissenschaft*, 29(1), 1–37. <https://doi.org/10.1515/ZFSW.2010.001>
- Baron, N. S. (2010). Discourse Structures in Instant Messaging: The Case of Utterance Breaks. *Language@Internet*, 7(4), 1–25.
- Beißwenger, M., Imo, W., Fladrich, M., & Ziegler, E. (2019). <https://www.mocoda2.de>: a database and web-based editing environment for collecting and refining a corpus of mobile messaging interactions. *European Journal of Applied Linguistics*, 7(2), 333–344. <https://doi.org/doi:10.1515/eujal-2019-0004>
- Bou-Franch, P., Lorenzo-Dus, N., & Blitvich, P. G. C. (2012). Social interaction in YouTube text-based polylogues: A study of coherence. *Journal of Computer-Mediated Communication*, 17(4), 501–521. <https://doi.org/10.1111/j.1083-6101.2012.01579.x>
- Breindl, E., Volodina, A., & Waßner, U. H. (2014). *Handbuch der deutschen Konnektoren 2. Semantik der deutschen Satzverknüpfers*. de Gruyter. <https://doi.org/10.1515/9783110341447>
- Chafe, W. (1984). How People Use Adverbial Clauses. *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society*, 437–449.
- Duden. (2016). *Die Grammatik* (9th ed.). Dudenverlag.
- Duden. (2021). *Sprachliche Zweifelsfälle. Das Wörterbuch für richtiges und gutes Deutsch*. Dudenverlag.
- Elspass, S. (2007). "Everyday language" in emigrant letters and its implications for language historiography - The German case. *Multilingua*, 26(2–3), 151–165. <https://doi.org/10.1515/MULTI.2007.008>
- Ford, C. E. (1993). *Grammar in interaction*. Cambridge University Press.
- Ford, C. E., Fox, B. A., & Thompson, S. A. (2003). Social interaction and grammar. In M. Tomasello (Ed.), *The new psychology of language: cognitive and functional approaches to language structure* (pp. 119–144). Lawrence Erlbaum.
- Frey, J.-C., Glaznieks, A., & Stemle, E. W. (2016). The DiDi Corpus of South Tyrolean CMC Data: A multilingual corpus of Facebook texts. In A. Corazza, S. Mentemagni, & G. Semeraro (Eds.), *Proceedings of the Third Italian Conference on Computational Linguistics CLiC-it. 5-6 December 2016*,

- Napoli* (pp. 157–161). Accademia University Press.
- Glaznieks, A., & Glück, A. (2019). From the valleys to the World Wide Web: Non-standard spellings on social network sites. In C. R. Wigham & E. W. Stemle (Eds.), *Building computer-mediated communication corpora for socio-linguistic analysis* (pp. 21–45). Presses universitaires Blaise-Pascal.
- Gohl, C., & Günthner, S. (1999). Grammatikalisierung von "weil" als Diskursmarker in der gesprochenen Sprache. *Zeitschrift für Sprachwissenschaft*, 1, 39–75.
- Günthner, S. (1996). From subordination to coordination? Verb-second position in German causal and concessive constructions. *Pragmatics. Quarterly Publication of the International Pragmatics Association (IPrA)*, 6(3), 323–356. <https://doi.org/10.1075/prag.6.3.05gun>
- Günthner, S. (2000). From concessive connector to discourse marker: The use of obwohl in everyday German interaction. In E. Couper-Kuhlen & B. Kortmann (Eds.), *Cause, condition, concession, contrast. Cognitive and discourse perspectives* (pp. 439–468). de Gruyter.
- Günthner, S. (2001). "wobei (.) es hat alles immer zwei seiten." Zur Verwendung von wobei im gesprochenen Deutsch. *Deutsche Sprache*, 4, 313–341.
- Günthner, S. (2008). "weil - es ist zu spät". Geht die Nebensatzstellung im Deutschen verloren? In M. Denkler, S. Günthner, W. Imo, J. Mache, D. Meer, B. Stoltenburg, & E. Topalović (Eds.), *Frischwärts und unkaputtbar. Sprachverfall oder Sprachwandel im Deutschen* (pp. 103–128). Aschendorff.
- Günthner, S. (2012). "Geteilte Syntax": Kollaborativ erzeugte dass-Konstruktionen. *Gidi Arbeitspapierreihe*, 43(08/2012).
- Herring, S. (1999). Interactional coherence in CMC. *Journal of Computer-Mediated Communication*, 4(4). <https://doi.org/10.1109/hicss.1999.772674>
- Hoffmann, L. (2013). *Deutsche Grammatik. Grundlagen für Lehrerbildung, Schule, Deutsch als Zweitsprache und Deutsch als Fremdsprache*. Erich Schmidt Verlag.
- Imo, W. (2015). Vom Happen zum Häppchen ... Die Präferenz für inkrementelle Äußerungsproduktion in internetbasierten Messengerdiensten. *Networx*, 69. <http://www.mediensprache.net/networx/networx-69.pdf>
- Lapadat, J. (2007). Discourse devices used to establish community, increase coherence, and negotiate agreement in an online university course. *The Journal of Distance Education / Revue de l'Éducation à Distance*, 21(3), 59–92. <http://www.jofde.ca/index.php/jde/article/view/32/29>
- Margaretha, E., & Lungen, H. (2014). Building linguistic corpora from Wikipedia articles and discussions. *Journal of Language Technology and Computational Linguistics (JLCL)*, 29(2), 59–82.
- Markman, K. M. (2013). Conversational coherence in small group chat. In S. Herring, D. Stein, & T. Virtanen (Eds.), *Pragmatics of Computer-Mediated Communication* (pp. 539–564). de Gruyter. <https://doi.org/10.1515/9783110214468.539>
- Pasch, R., Brauße, U., Breindl, E., & Waßner, U. H. (2003). *Handbuch der deutschen Konnektoren. Linguistische Grundlagen der Beschreibung und syntaktische*

- Merkmale der deutschen Satzverknüpfen (Konjunktionen, Satzadverbien und Partikeln)*. de Gruyter. <https://doi.org/10.1515/9783110201666>
- Scheutz, H. (2001). On causal clause combining: The case of ‘weil’ in spoken German. In M. Selting & E. Couper-Kuhlen (Eds.), *Studies in Interactional Linguistics* (pp. 111–139). John Benjamins. <https://doi.org/https://doi.org/10.1075/sidag.10.08maz>
- Severinson Eklundh, K. (2010). To quote or not to quote : Setting the context for computer-mediated dialogues. *Language@Internet*, 7(5).
- Sick, B. (2009). *Der Dativ ist dem Genitiv sein Tod : Folge 2*. Kiepenheuer & Witsch.
- Storrer, A. (2019). Text und Interaktion im Internet. In L. Eichinger & A. Plewnia (Eds.), *Neues vom heutigen Deutsch* (pp. 221–244). de Gruyter. <https://doi.org/10.1515/9783110622591-011>
- Sweetser, E. (1990). *From etymology to pragmatics. Metaphorical and cultural aspects of semantic structure*. Cambridge University Press.
- Szczepek, B. (2000). Functional aspects of collaborative productions in english conversation. *Interaction and Linguistic Structures*, 21.
- Torrance, M. (2016). Understanding planning in text production. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 72–87). The Guilford Press.
- Ueberwasser, S., & Stark, E. (2017). What’s up, Switzerland? A corpus-based research project in a multilingual country. *Linguistik Online*, 84(5). <https://doi.org/10.13092/lo.84.3849>
- Uhmann, S. (1998). Verbstellungsvariation in Weil-Sätzen: Lexikalische Differenzierung mit grammatischen Folgen. *Zeitschrift für Sprachwissenschaft*, 17(1), 92–139. <https://doi.org/10.1515/zfsw.1998.17.1.92>
- Wegener, H. (2000). Da, denn und weil – der Kampf der Konjunktionen. Zur Grammatikalisierung im kausalen Bereich. In R. Thierhoff, M. Tamrat, N. Fuhrhop, & O. Teuber (Eds.), *Deutsche Grammatik in Theorie und Praxis* (pp. 69–81). Niemeyer. <https://doi.org/10.1515/9783110933932.69>