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HISTORICAL SYNTAX

From a focus particle to a conjunction: Diachronic and synchronic analysis of German *zumal*

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This article addresses the German conjunction *zumal* ‘the more so as’ from both synchronic and diachronic perspectives. On the basis of historical corpus data, I trace the uses and meaning development of the lexical item *zumal*, from a temporal adverb to a conjunction. I argue that it acquired its current syntactic and interpretive features from the final step in this development: the focus particle *zumal* adopted some syntactic features and meaning components from the subordinate causal conjunctions *da* and *weil*, with which it frequently cooccurred in the historical data. In the current language it is thus best analyzed as a subordinate causal conjunction with focus-marking properties, similar to the combination *besonders weil* ‘especially since’.

Keywords: focus particle, causal conjunction *zumal*, German, diachrony, syntax, grammaticalization

1. INTRODUCTION. This article addresses the German causal conjunction *zumal* ‘the more so as, especially since’, as in 1.

- (1) Die Gäste waren zufrieden, **zumal** sie ihren besten
the guests were satisfied **the.more.so.as** she her best
Schoko-Kuchen gebacken hatte.
chocolate-cake baked had

‘The guests were satisfied, **the more so as** she had made her best chocolate cake.’

Unlike other German causal conjunctions, *zumal* has not had much attention in the literature. There has in fact been no systematic description of this conjunction so far. Syntactically, clauses introduced by *zumal* belong at first sight to the class of noncanonical clauses that are not integrated into the matrix clause. But the tests for the internal and external syntactic behavior of *zumal* in §2 below suggest that this conjunction has exceptional features and requires special treatment. Since—as I show below—these clauses exhibit some syntactic behaviors not yet observed for this group, this article contributes toward the current debate on the key topic of clause combining.

Zumal-clauses also show a very distinctive interpretational feature in that they presuppose a set of alternative causal relations to the matrix-clause proposition. Both the syntactic behavior and the meaning of *zumal*-clauses thus show interesting patterns: with regard to the attachment of noncanonical clauses in the first case, and the alternative semantics of Rooth 1992 in the second.

The diachronic analysis of the word *zumal* presented in §3 plays a crucial role in this research, as it provides key evidence for the syntactic analysis of the conjunction in present-day German. The different meanings of *zumal* are described from the earliest stage in its development to the current stage. During this investigation, we shall see that before becoming a conjunction, *zumal* was also used as an ADDITIVE SCALAR FOCUS PARTICLE. As a focus particle it could also scope over embedded causal clauses introduced by a conjunction *da* or *weil*.

Section 4 brings the synchronic and diachronic data together. Historical corpus data show that in about a third of the examples from 1350–1650 the particle *zumal* scopes over a causal subordinate clause. These data lead us to my diachronic hypothesis here,

namely, that the conjunction *zumal* is a product of the recategorization of the focus particle *zumal* scoping over a causal conjunction.

In order to confirm the diachronic hypothesis, I show in §§4.2 and 4.3 that subordinate clauses in the scope of an additive scalar focus particle have certain features and that the internal and external syntax and also semantics of *zumal*-clauses as shown in §2 correspond to it. I advance further evidence in §4.3: I show that the special alternative semantics of *zumal*-clauses can also be explained by the diachronic hypothesis. The latest development of *zumal*, described in this article as a possible case of grammaticalization, is discussed in §5.

To summarize: §2 contains the synchronic description of the internal and external syntax and semantics of *zumal*-clauses, showing that they have peculiar qualities in both respects. Although there is no synchronic evidence for their peculiarity, the diachronic data from §3 lead us to the postulation of a diachronic hypothesis in §4 that can be supported through the synchronic tests. We can thus observe a valuable synergy effect, in which the diachronic and synchronic analyses benefit each other.

2. ZUMAL-CLAUSES IN PRESENT-DAY GERMAN. In this section I give a synchronic analysis of the conjunction *zumal*. In §2.1, there is a short overview of recent investigations into clause embedding, in both English and German. I then take a closer look at the internal and external syntax of *zumal*-clauses in present-day German (§2.2). We will see that *zumal*-clauses have features typical of nonembedded constructions but at the same time also have features of embedded clauses. In a further step I present a detailed meaning description of the conjunction (§2.3).

2.1. ADVERBIAL CLAUSES: DEGREES OF EMBEDDING. A hotly debated topic in recent research on adverbial clauses is whether they are integrated into the matrix clause and how deeply they are embedded. Unfortunately, the large number of different approaches has given rise to an equally wide range of different terminologies. The most prominent approach for English is that of Haegeman (2003), who distinguishes between CENTRAL and PERIPHERAL ADVERBIAL CLAUSES. In the literature on German adverbial clauses, the terms EMBEDDED vs. NONEMBEDDED are generally used (e.g. Wegener 1993, Reis 1997, 2013). Reis (1997) has even argued for the further distinction of the class of nonembedded clauses into relatively and absolutely unintegrated clauses. Frey (2011) adopts Haegeman's (2003) terminology and approach for German. The types of adverbial clauses he discusses only partly intersect with those discussed in Reis 1997 and Antomo & Steinbach 2010.¹ A detailed comparison of the different approaches and a critical evaluation remain for further research.

In the present article, the focus is on causal adverbial clauses. At this stage, the most detailed treatments of German causal clauses are Antomo & Steinbach 2010, Antomo 2012, and Reis 2013, which make use of the insights gained in the extensive literature on clause types from the 1980s. Their main focus lies on the different grammatical behavior of the two types of *weil* 'because' clauses in German: those with canonical verb-final word order, as in 2, and those with verb-second word order, as in 3.

- (2) Wir können Schlittschuh laufen, weil der See zugefroren ist.
 we can ice.skate because the lake frozen is
 'We can ice-skate, because the lake is frozen.'

¹ See also Axel & Wöllstein 2009 and Reis & Wöllstein 2010.

(3) Es hat Frost gegeben, weil — der See ist zugefroren.

it has frost given because the lake is frozen

‘There was frost, because the lake is frozen.’

(Küper 1991:137)

It has been shown that these two types of clauses differ in their external syntax: the verb-final variant is embedded, and the verb-second variant is nonembedded. Various tests have been established as a diagnostic of the syntactic embeddedness of a clause. The usual integration tests indicate that verb-second *weil*-clauses are nonembedded: (i) they are prosodically nonembedded, (ii) verb-second clauses do not occur in the Spec C position of the associated clause, and (iii) cannot be within the scope of matrix negation or (iv) of matrix focus, or indeed of any matrix operator. They do not allow correlative elements in the matrix clause or ellipsis of the associated clause.²

Furthermore, in the older literature a hypothesis as to the relation of embeddedness and the semanto-pragmatic interpretation was made. It was often assumed that the form of the *weil*-clause often covaries with its meaning. On that assumption, verb-final *weil*-clauses would mostly modify the propositional content of the matrix clause, while verb-second *weil*-clauses would be epistemic, or function as speech-act modifiers (see e.g. Günthner 1993, Wegener 1993, Keller 1995).

However, as Reis (2013) has most recently shown, this strong hypothesis cannot be maintained. She extends the discussion by bringing into focus examples of prosodically unintegrated verb-final *weil*-clauses (epistemic as well as propositional).³

(4) Paul ist UMgezogen, weil ihm das Pendeln **halt/leider**

Paul is moved because him the commuting MP⁴/unfortunately

zu VIEL wurde.

too.much became

‘Paul moved house, because commuting was just too much for him.’

(Reis 2013:250)

As example 4 shows, there are two pitch accents, shown with small capital letters, which is an indication of two different focus-background structures, and speaker-oriented expressions such as the modal particle *halt* and the sentence adverb *leider*. Both confirm that the verb-final propositional *weil*-clause in 4 is nonembedded. Crucially, this type of clause does not pass the tests for syntactic embedding, even though it has verb-final word order.

This shows that there is no absolute correlation between verb position within the *weil*-clause and its syntactic embeddedness in the matrix clause.

2.2. THE SYNTACTIC PROPERTIES OF ZUMAL-CLAUSES. In this section the syntactic properties of *zumal*-clauses in modern German are presented. To the best of my knowledge, there is no difference between the current syntax of *zumal*-clauses and that in previous language stages, although we cannot test diachronic data as we can test synchronic data.

The tests used in the following sections originate from various publications on clause embedding in present-day German (see §2.1). As far as I am aware, these tests have not

² See the data in §2.2 for *zumal*-clauses.

³ Scheutz (1998) discusses propositional *weil*-clauses with verb-second word order in East Upper German. He states, however, that this kind of clause is not obligatorily prosodically unintegrated. Pasch (1997) discusses prosodically unintegrated verb-final *weil*-clauses (see also Pasch 1983), but restricts her analysis to epistemic *weil*-clauses. Speyer (2011) shows that in Early New High German causal clauses could be embedded or nonembedded in both propositional and epistemic readings.

⁴ The abbreviations used in glosses are: AUX: auxiliary verb, DAT: dative case, MP: modal particle, NEG: negation, PTCL: particle, and REFL: reflexive pronoun.

previously been applied to *zumal*-clauses. In the following, we investigate the internal and external syntax of *zumal*-clauses.

INTERNAL SYNTAX: VERB POSITION WITHIN *ZUMAL*-CLAUSES. In canonical embedded clauses in German, the finite verb occurs in verb-final position, as in 5. In nonembedded clauses with *denn* ‘since’ as in 6, the finite verb appears in second position; that is, it has undergone V-to-C movement, according to the standard generative analysis. As can be seen in 7, the finite verb in *zumal*-clauses is placed in clause-final position just as in canonical embedded clauses—see 5.⁵

- (5) Das Kind schrie, weil es sich am Knie **verletzte**.
 the child cried because it REFL on.the knee hurt
 ‘The child cried, because he hurt himself on the knee.’
- (6) Du kochst, denn deine Lasagne **schmeckt** besser.
 you cook since your lasagna tastes better
 ‘You are cooking, since your lasagna tastes better.’
- (7) Peter hilft dir, zumal er gerade genug Zeit **hat**.
 Peter helps you the.more.so.as he right.now enough time has
 ‘Peter will help you, the more so as he has enough time right now.’

We will see later that verb position is one of only three features that *zumal*-clauses share with canonical embedded clauses. All other features are shared with nonembedded structures.

EXTERNAL SYNTAX. The following tests deal with the relation of *zumal*-clauses to the matrix clause.

Placement in the prefield/Spec C position of the matrix clause. If a clause can appear in the prefield (or Spec C) position of the matrix clause, then it is generally a sign of its embedded status. Such elements can be complement clauses (8) or canonical adverbial clauses (9), but not parenthesis (10) or nonembedded (adverbial) clauses (11).

- (8) Direct object: *Dass du schon da bist*
 Dass du schon da bist, sehe ich.
 that you already here are see I
 ‘I can see that you are already here.’
- (9) Temporal adverbial clause: *Als ich klein war*
 Als ich klein war, waren die Bäume größer.
 when I small was were the trees bigger
 ‘When I was small, the trees were bigger.’
- (10) *Parenthesis: *heißt es*
 a. Die Fähre sei, heißt es, völlig überladen gewesen.
 the ferry was [they say] completely overloaded been
 ‘They say the ferry was completely overloaded.’ (Duden: 1033)
 b. *Heißt es, sei die Fähre völlig überladen gewesen.
 [they say] was the ferry completely overloaded been
- (11) *Paratactical adverbial clause: *denn es regnet*
 a. Wir bleiben zu Hause, denn es regnet.
 we stay at home since it rains
 ‘Since it is raining, we are staying at home.’ (Pasch et al. 2003:349)

⁵ Verb position cannot, however, be the only criterion for embedding (see e.g. Holler 2008, Speyer 2011, Reis 2013, and §2.1 in this article).

- b. *Denn es regnet, bleiben wir zu Hause.
since it rains stay we at home

An embedded verb-final *weil*-clause in the prefield position is thus grammatical (12), while the parallel example with a nonembedded *denn*-clause is not (13). *Zumal*-clauses are marginally possible in the Spec C position of the matrix clause (14).⁶

- (12) Weil sich das Kind am Knie verletzte, schrie es.
because REFL the child on.the knee hurt cried it
'The child cried, because he hurt himself on the knee.'
- (13) *Denn deine Lasagne schmeckt besser, kochst du.
since your lasagna tastes better cook you
'You are cooking, since your lasagna tastes better.'
- (14) ?Zumal Peter gerade genug Zeit hat, hilft er dir.
the.more.so.as Peter right.now enough time has helps he you
'Peter will help you, the more so as he has enough time right now.'

Matrix negation scope. Accessibility to matrix negation is the next feature shared by canonical embedded clauses. Since they are a part of the matrix proposition, embedded clauses can be negated by a negative operator in the matrix clause. Example 15 is taken from Haiman & Thompson 1984. There are two readings of this example: in one, the embedded causal clause is negated, meaning that the beating takes place, but not because they love us (15a). In the other reading, the main clause is negated—there is no beating (15b).⁷

- (15) a. They don't beat us because they love us.
b. They don't beat us, because they love us. (Haiman & Thompson 1984:517)

In the case of paratactic structures, no negation over the second sentence is possible.

⁶ Although it is rare, there are *zumal*-clauses in this position as corroborating examples from a corpus (see §4.2). Note also that this criterion, although traditionally one of the key tests for embedding in German, has more recently been questioned. Some other sorts of adverbial clauses that fail all or most other embedding tests do nevertheless apparently occur in this position. One example is the verb-initial conditional as in (i) (cf. Axel & Wöllstein 2009, Reis & Wöllstein 2010).

- (i) Wäre er ein ehrlicher Mann, würde er das Geld zurückgeben.
were he an honest man would he the money return
'If he were an honest man, he would return the money.'

This sentence would appear to show that the apodosis is located in the prefield of the main clause, judging by the position of the matrix finite verb. Since this is in contradiction to the otherwise exceptionless paratactic behavior of these clauses, Axel and Wöllstein (2009) suggest that it is not in the prefield but rather an adjunction to the main clause. This account necessitates the controversial analysis of the main clause as a verb-first CP projection. The authors note that this structural arrangement is restricted to adverbial clauses that are always prosodically unintegrated, as verb-first conditionals are.

This analysis cannot be extended to *zumal*-clauses, since we have seen above that they are, exceptionally, prosodically integrated when in this marginal position, although they are normally prosodically unintegrated.

Frey (2011) discusses types of adverbial clauses with QUASI-PARATACTICAL behavior, which seem to at least appear in the prefield. On his analysis, they are base-generated in the prefield, an option that is not available to canonical/central adverbial clauses, and is possible only because they are licensed by the Force projection of their host clause. The cases Frey discusses differ from our *zumal*-clauses in that the prefield is the position where they quite standardly appear, whereas it is only marginal for *zumal*-clauses. His cases are also not driven by focus, which makes it unlikely that his analysis can be extended to our own case with *zumal*.

⁷ Haegeman (2003) showed the same principle for CANONICAL vs. PERIPHERAL *if* (and also *while*) clauses.

- (i) John won't finish on time if there's a lot of pressure on him.
(ii) John won't finish on time, if there's (already) such a lot of pressure on him now.

(Haegeman 2003:322)

- (16) They don't beat us, for they love us. > they don't beat; *they beat

The same situation can be observed in German. Embedded clauses can be in the scope of matrix operators. In 17 there are thus two readings. In the first reading, the negation *nicht* 'not' has scope over the *weil* 'because' clause: the friend went away but not because of the parlor games, but for some other reason. The second reading negates only the matrix clause: he did not go away and the reason was the parlor games.

- (17) Sein Freund ist nicht gegangen, weil sie noch Gesellschaftsspiele
his friend is NEG gone because they still parlor.games
spielen wollten.
play wanted

'His friend didn't go, because they were still going to play parlor games.'

Nonembedded clauses cannot be in the scope of matrix negation. In 18 the negation *nicht* 'not' can only scope over the matrix clause, never over the nonembedded *denn*-clause. The only possible reading in 18 is therefore that his friend did not leave.

- (18) Sein Freund ist nicht gegangen, denn sie wollten noch Gesellschaftsspiele
his friend is NEG gone since they wanted still parlor.games
spielen.
play

'His friend didn't go, since they were still going to play parlor games.'

Zumal-clauses have only one of the two readings. The matrix negation scope is not possible in this clause type, just as in nonembedded clauses. The negation *nicht* 'not' in 19 can only scope over the matrix clause: Peter did not leave the house.

- (19) Peter hat das Haus nicht verlassen, zumal es bereits dunkel war.
Peter has the house NEG left the.more.so.as it already dark was
'Peter didn't leave the house, the more so as it was already dark.'

Matrix focus-particle scope. Canonical embedded clauses can be in the scope of a focus particle in the matrix clause. As in matrix negation, the scope of the focus particle can, but need not, expand over the embedded clause. Local focus is also possible. In 20, there are two possible readings: (a) scope over the embedded *weil*-clause, meaning that the only reason for the fine was his status as a foreigner, and (b) scope over the matrix NP *eine Geldstrafe* 'a fine', meaning that the fine was the only punishment he got and not, for example, a probation or imprisonment.

- (20) Er hat nur eine Geldstrafe bekommen, weil er Ausländer war.
he has only a fine got because he foreigner was
'He was only fined, because he was a foreigner.'

The focus-particle scope from the matrix clause is not possible in nonembedded adverbial clauses. Thus nonembedded German *denn*-clauses are never in the scope of a matrix focus particle. This can be seen in 21. The only possible reading here is the (b) reading of 20: scope over the matrix NP, meaning that the fine was the only punishment he got.

- (21) Er hat nur eine Geldstrafe bekommen, denn er war Ausländer.
he has only a fine got since he was foreigner
'He was only fined, since he was a foreigner.'

Our *zumal*-clauses act in this respect just like nonembedded *denn*-clauses. Here again, only the (b) reading is possible.

- (22) Wir konnten nur zu diesem Ergebnis kommen, zumal wir nicht
 we could only to this result come the.more.so.as we NEG
 genug Fakten hatten.
 enough facts had
 ‘We could only arrive at this conclusion, the more so as we did not have
 enough facts.’

Interrogative operator scope. A further property of embedded clauses is that they can be in the scope of an interrogative operator. Haegeman (2003) shows that nonembedded event conditionals in English, as in 23, are part of the questioned content. Nonembedded premise conditionals act differently: they cannot be within the scope of the interrogative matrix operator, as in 24.

- (23) Will John get any fitter if he takes more exercise?
 (24) Is John getting any fitter (?), if [as you say] he is taking so much exercise?
 (Haegeman 2003:322)

The same is valid for German embedded and nonembedded adverbial clauses. In example 25, adapted from Günthner 1993:43, the *weil*-clause can be a part of the whole question and thus behave as embedded. In such a case the speaker is asking whether the bad mood of the woman could be the reason for the man’s drinking. But 25 can also have a nonembedded reading. In this case, the actual question is *Hat er gesoffen?* ‘Did he drink?’ and does not include the adverbial clause. In fact, the adverbial clause expresses the reason for this question: the speaker sees that the woman is walking around depressed and concludes that the man could have drunk again.⁸

- (25) Hat er gesoffen, weil sie total deprimiert durch die Gegend läuft?
 has he drunk because she totally depressed through the area walks
 ‘Did he drink, because she walks around in such a depressed mood?’

Nonembedded *denn*-clauses can only have the reading in which the adverbial clause is not a part of the actual question but rather the reason for it, as in 26.

- (26) Hat er gesoffen, denn sie läuft total deprimiert durch die Gegend?
 has he drunk since she walks totally depressed through the area
 ‘Did he drink? Since she walks around in such a depressed mood.’
 (Günthner 1993:43)

Zumal-clauses can also have only one reading: as nonembedded *denn*-clauses. In the only possible interpretation in 27, the *zumal*-clause expresses the reason for the question about Grandma’s baking. The embedded reading (in which Grandma was sick last

⁸ Even though both readings are possible in 25, there is a strong preference for a *weil*-clause with the finite verb in the C⁰ position in the nonembedded reading. Günthner (1993:42–43) even argues for ‘the non-interchangeability of both *weil* constructions’. According to her analysis, *weil*-clauses with verb-final word order can only have the embedded reading, as in (i), and *weil*-clauses with verb-second word order can only have the nonembedded reading, as in (ii). This difference is determined by semantic and discourse-pragmatic features of both clause types.

- (i) Der hat sicher wieder gesoffen, weil sie total deprimiert durch die Gegend läuft.
 he has surely again drunk because she totally depressed through the area walks
 ‘He has surely drunk again, because she walks around in such a depressed mood.’
 (ii) Der hat sicher wieder gesoffen. (0.3) weil — sie läuft total deprimiert durch die Gegend.
 he has surely again drunk because she walks totally depressed through the area
 ‘Surely, he has drunk again. Because she walks around in such a depressed mood.’

However, there is no absolute form-meaning correspondence in German *weil*-clauses (cf. Reis 2013 and §2.1 of this article).

week and because of her illness she has to make a cake) is not available for 27. Thus *zumal*-clauses cannot be in the scope of the matrix interrogative operator.

- (27) Muss die Oma schon wieder backen, zumal sie letzte Woche
 must the granny again bake the.more.so.as she last week
 so krank war?
 so sick was
 ‘Does the granny have to make a cake again? The more so as she was so
 sick last week.’

Intonational integration. Embedded clauses build one prosodic structure together with the matrix clause. Both clauses share one main pitch accent, and there is no intonation break between them, as shown in 28. Nonembedded clauses are not intonationally integrated into the matrix clause; they have their own prosodic curve and pitch accent, as in 29. Our *zumal*-clauses have prosodic features of a nonembedded clause: they have their own prosodic structure and their own pitch accent, as shown in 30.

- (28) Er hat sich für die roten Schuhe entschieden, weil sie SCHÖNER
 he has REFL for the red shoes decided because they more.beautiful
 waren.
 were
 ‘He went for the red shoes, because they were more beautiful.’
- (29) Er hat sich für die roten Schuhe entschieden, denn sie waren
 he has REFL for the red shoes decided since they were
 SCHÖNER.
 more.beautiful
 ‘He went for the red shoes, since they were more beautiful.’
- (30) Er hat sich für die roten Schuhe entschieden, zumal sie
 he has REFL for the red shoes decided the.more.so.as they
 SCHÖNER waren.
 more.beautiful were
 ‘He went for the red shoes, the more so as they were more beautiful.’

However, when put in the Spec C position of the matrix clause, *zumal*-clauses are prosodically integrated into the matrix clause. In this position, they have the same features as embedded *weil*-clauses, as in 31.⁹

- (31) Weil er keine andere Wahl hatte, hat er ‘JA’ gesagt.
 because he NEG other choice had has he yes said
 ‘He said “yes”, because he had no other choice.’
- (32) (Und) zumal er keine andere Wahl hatte, hat er ‘JA’ gesagt.
 (and) the.more.so.as he NEG other choice had has he yes said
 ‘He said “yes”, the more so as he had no other choice.’

Ellipsis of the matrix clause. Another typical characteristic of embedded clauses is that they can serve as an answer to a question without being combined with their matrix clause. For nonembedded *denn*-clauses this is not possible. *Zumal*-clauses sound odd without the matrix clause, but they are less ungrammatical than the nonembedded *denn*-clauses.

⁹ Nonembedded *denn*-clauses are not possible in the Spec C position of the matrix clause, as shown in (i). For *zumal*-clauses in Spec C position of the matrix clause, see §4.2.

- (i) *Denn er keine andere Wahl hatte, hat er ‘ja’ gesagt.
 since he no other choice had has he yes said
 ‘Since he had no other choice, he said “yes”.’

- (33) Warum rufst du Petra nicht an?
 why call you Petra NEG PTCL
 ‘Why don’t you call Petra?’
- a. Weil ich ihre Nummer verloren habe.
 because I her number lost have
 ‘Because I lost her number.’
- b. *Denn ich habe ihre Nummer verloren.
 since I have her number lost
 ‘Since I lost her number.’
- c. ?Zumal ich ihre Nummer verloren habe.
 the.more.so.as I her number lost have
 ‘The more so as I lost her number.’

Association with a correlative element within the matrix clause. Embedded clauses can also usually be associated with a correlative element, while nonembedded clauses cannot. Iatridou (1991) demonstrates the ungrammaticality of a correlative in English RELEVANCE CONDITIONALS as in 34, which have been shown to be nonintegrated or peripheral (cf. Haegeman 2003). Integrated conditionals can be associated with a correlative within the matrix clause (35).

- (34) If you’re thirsty (#then) there is a beer in the fridge. (Iatridou 1991:103)
 (35) If it rains then Peter takes the dog out. (Iatridou 1991:54)

A corresponding correlative element for causal clauses in German is *deswegen* ‘therefore’. Embedded clauses with *weil* ‘because’ can be associated with a correlative element, as shown in 36. Causal clauses with *denn* ‘since’ cannot be associated with a correlative element in the matrix clause, which shows that they are nonembedded.

- (36) Maria kann (deswegen) fließend Spanisch, weil ihre Mutter aus Peru
 Maria can therefore fluently Spanish because her mother from Peru
 kommt.
 comes
 ‘Maria (therefore) speaks Spanish fluently, because her mother is from Peru.’
- (37) Maria kann (*deswegen) fließend Spanisch, denn ihre Mutter kommt aus
 Maria can therefore fluently Spanish since her mother comes from
 Peru.
 Peru
 ‘Maria (therefore) speaks Spanish fluently, since her mother is from Peru.’

Our *zumal*-clauses behave in this respect just like causal nonembedded *denn*-clauses: no correlative is possible.

- (38) Maria kann (*deswegen) fließend Spanisch, zumal ihre Mutter
 Maria can therefore fluently Spanish the.more.so.as her mother
 aus Peru kommt.
 from Peru comes
 ‘Maria (therefore) speaks Spanish fluently, the more so as her mother is from Peru.’

DISCUSSION OF THE TEST RESULTS. The tests on internal and external syntactic features show that *zumal*-clauses exhibit certain similarities to embedded clauses but also to nonembedded clauses. We can see the patterns of behavior in Table 1.

INTEGRATION CRITERIA	<i>zumal</i>	EMBEDDED <i>weil</i>	<i>denn</i>
Verb position	final	final	second
Placement in the prefield/Spec C position of the matrix clause	+/?	+	–
Clause within the scope of matrix negation	–	+	–
Clause within the scope of matrix focus particle	–	+	–
Clause within the scope of matrix operator	–	+	–
Intonational integration following the matrix clause	–	+	–
Intonational integration in the Spec C of the matrix clause	+	+	*
Ellipsis of the matrix clause	–	+	–
Clause associated with a correlative within the matrix clause	–	+	–

TABLE 1. Integration of *zumal* clauses, in comparison with embedded *weil*-clauses and *denn*-clauses.

We can see that the majority of the tests indicate that *zumal*-clauses should be regarded as nonembedded clauses (no scope from the matrix clause, no intonational integration when following the matrix clause, and no ellipsis of the matrix clause). However, there are still three features that are specific to embedded adverbial clauses.

The first is verb position in the *zumal*-clause. This integration criterion should, however, be taken as merely showing a tendency toward subordination. Verb-final clauses in German tend to be embedded, but there are cases in which they are not embedded. The second criterion is the possible Spec C position in the matrix clause. This position is perhaps the most unequivocal feature of integration in German. The third criterion is the intonational integration when put in the Spec C position of the matrix clause. In this position, the *zumal*-clause and its matrix clause build one prosodic unit and one shared information structure. This is not possible in clear cases of nonintegration.

At first glance, the syntactic features of *zumal*-clauses seem to be random with regard to their integration status. The diachronic investigation, however, shows that the behavior of *zumal*-clauses is quite systematic. Their syntactic characteristics are not random but correspond to embedded adverbial clauses in the scope of a focus particle.

2.3. THE MEANING OF ZUMAL-CLAUSES. While the goal of the last section was to show the syntactic peculiarity of *zumal*-clauses, the main purpose of this section is to demonstrate that they feature a very special idiosyncrasy in their meaning. There is a very important meaning aspect triggered by *zumal* that is not possible for other German causal conjunctions—*weil* ‘because’, *da* ‘because’, and *denn* ‘since’. These contain a causal relation to the matrix clause, which is naturally also true for *zumal*, but *zumal*-clauses additionally presuppose further causal relations to the matrix sentence. We thus have implied multicausality, with a focusing on one particular cause of several possible ones. Thus, the Maria example, given here again as 39, presupposes that Maria’s Spanish knowledge comes partly from her Peruvian mother, but also from other factors, for example, her Spanish-speaking friends, her term abroad in Mexico, or her general interest in the language.

- (39) Maria kann fließend Spanisch, zumal ihre Mutter aus Peru
 Maria can fluently Spanish the.more.so.as her mother from Peru
 kommt.
 comes

‘Maria speaks Spanish fluently, the more so as her mother is from Peru.’

In 40 the same type of presupposition is triggered: the chocolate cake is not the only reason for the guests’ satisfaction. In fact, further causal relations are presumed to play

a role: they could be nice weather, good music, a comfortable house, well-chosen parlor games, and so on. The presupposition disappears when *zumal* is replaced by *weil* or *da*, as in 41.¹⁰

- (40) Die Gäste waren zufrieden, *zumal* sie wieder ihren besten
 the guests were satisfied the.more.so.as she again her best
 Schoko-Kuchen gebacken hatte.
 chocolate-cake baked had
 ‘The guests were satisfied, the more so as she had made her best chocolate cake.’

- (41) Die Gäste waren zufrieden, weil/da sie wieder ihren besten
 the guests were satisfied because she again her best
 Schoko-Kuchen gebacken hatte.
 chocolate-cake baked had
 ‘The guests were satisfied, because she had made her best chocolate cake.’

Such a meaning is in fact very unusual for causal conjunctions. In this case, *zumal* expresses the meaning that needs in other cases a more complex conjunction (such as *d’autant que* in French or *k tomu zhe* in Russian) or the addition of a focus particle to an embedded causal conjunction (as in English *particularly as*). After the unusual syntax of *zumal*-clauses, this is the second factor that hints at this conjunction having a generally idiosyncratic character. An explanation for the idiosyncrasy of *zumal* follows in the form of the diachronic hypothesis in the next section of the article. The subsequent section supports the hypothesis with the synchronic data.

3. DIACHRONIC DEVELOPMENT. As a basis for the diachronic study reported here, I compiled a corpus of historical texts. The corpus includes a wide variety of texts covering the entire period from Old High German (c. 750–1050) up to 1900, as well as data from already existing corpora such as MHDBDB for Middle High German (c. 1050–1350) and the Bonn Corpus of Early New High German (c. 1350–1650).

Classified according to time period, the corpus contains the numbers of *zumal* tokens given in Table 2.

TIME PERIOD	DATES	# OF TOKENS
Old High German (OHG)	–1050	1
Middle High German (MHG)	1050–1350	322
Early New High German (ENHG)	1350–1650	162
New High German (NHG)	1650–1900	204

TABLE 2. Numbers of *zumal* tokens in the corpus, classified by time period.¹¹

¹⁰ To clarify the meaning of *zumal*, examples of multiple translations into other languages are provided here. All of the examples come from the website Bab.la (<http://en.bab.la/dictionary>), which reports speeches from the European parliament.

- (i) Ich möchte nicht weiter in die Einzelheiten gehen, **zumal** meine Redezeit sehr kurz ist. (German)
 a. I do not want to go into details on this subject, **particularly as** I have very little time. (English)
 b. Jag skall inte bre ut mig i frågan, **särskilt** som jag inte har så mycket tid. (Swedish)
 c. Não vou alongar-me sobre este assunto, **tanto mais que** possuo muito pouco tempo. (Portuguese)
 d. Non voglio entrare nei dettagli, **tanto più che** ho pochissimo tempo. (Italian)
 e. Je ne veux pas m’être sur le sujet, **d’autant que** j’ai très peu de temps. (French)
 f. No deseo extenderme sobre el tema, **máxime cuando** dispongo de poco tiempo. (Spanish)

¹¹ The corpus parts are not equal in size. This does not affect the results, however, because there is no quantitative comparison between the different language stages.

In the following, I lay out the occurrence of the lexical item *zumal* in its various meanings, which I checked and refined with the help of etymological and historical dictionaries.

Etymologically, the word *zumal* derives from the connection of *zu*, which has two readings in Modern German: (i) a preposition ‘to, in, till’ and (ii) an intensifying particle ‘too, excessively’, with the noun *mal* ‘time, point’ (Kluge & Seebold 1995:916, Wackernagel 1971:191). Of the four major uses of *zumal* found in the corpus (temporal adverb, intensifying particle, focus particle, and conjunction), only the last two exist in present-day German. In the following, the four different readings of the word are described and exemplified.

3.1. TEMPORAL ADVERB. The use of *zumal* as a temporal adverb is the oldest and can already be attested in Old High German (750–1050). In this period, *zumal* has the meaning ‘at this point, at this time’.¹² Although only one example was found from this period, three important points can be made: (i) the oldest example of *zumal* that is found is of a temporal adverb; (ii) the word *zumal* goes back to a prepositional phrase *zu mâle*; and (iii) there is a rapidly increasing use of the word in the Middle High German period.¹³

- (42) Fône déro sêlo uernúmiste . íst nû **ze mâle** gnûge geságet.
 about this soul noblest is now **to time** enough said
 ‘**At this point**, enough has been said about the most noble soul.’

(Notker 1975:5; 10th c.)

Most of the instances of the adverb *zumal* are attested in the Middle High German period (1050–1350), when *zumal* developed into an adverb of simultaneousness, with the meanings ‘together (with), at once, at the same moment’.

- (43) do begunde sie zv betene. do vil der tempel dar nyder vn
 then began they to pray then fell the temple down and
 zvs luk den apgot **zvmale**.
 destroyed the idol **simultaneously**
 ‘Then they began to pray. The temple fell down and destroyed the idol **at the same moment**.’
 (Hermann von Fritzlar 93r; 14th c.)
- (44) ‘Was wolt ir thun, herre ritter?’ ... ‘wolt ir zwen ritter **zumal**
 what want you do Sir knight want you two knights **at once**
 bestan?’
 fight
 ‘“What is your plan?” ... “Do you want to fight against two knights **at once**?”’
 (*Lancelot und Ginover* vol. 1:442; 13th c.; from Steinhoff 1995a)
- (45) Der rieß hub synen kolben off und wolt den ritter dot slagen und
 the giant lifted his mace up and wanted the knight dead hit and
 syn roß **zumal**.
 his horse **simultaneously**
 ‘The giant lifted his mace and tried to slay the knight **together with** his horse.’
 (*Lancelot und Ginover* vol. 1:626; 13th c.; from Steinhoff 1995a)

¹² Also with the adverb *nû* ‘now’: *nû ze mâle* ‘at this point’.

¹³ As previously noted, the Old High German and Middle High German corpus parts differ in their size and text type. Nevertheless, the contrast in frequency seems to be a real one. The Middle High German authors used the word *zumal* quite often and willingly.

In Early New High German (c. 1350–1650) the adverbial use is on the decline. After 1650 it is found only sporadically (see 46, 47) and totally disappears after 1900.¹⁴

- (46) Zum andern / das jr gesagt / von der ewigen vnwandelbaren wahrheit
 to other that you spoke about the eternal immutable truth
 Gottes / nach deren ein ding **zumal** / nicht kann weiß
 god's according.to.which a thing **simultaneously** NEG can white
 vnd schwarz ja vnd nein sein.
 and black yes and no be
 ‘On the other hand, you spoke about God’s everlasting immutable truth according to which one thing cannot be **at the same time** white and black, or yes and no.’
 (Brenz 1565:95a,b)
- (47) Da beriet sich Belayens Sippenschaft, daß sie aus Loherangrin das
 then consulted REFL Belayen’s clanship that they of Loherangrin the
 Fleisch, womit allein Belayens Not gelindert werden könnte,
 flesh wherewith alone Belayen’s woe assuaged become could
 schneiden wollten; und als er eines Tages wieder auf die Jagd
 cut wanted and as he one day again on the hunt
 gegangen und entschlafen war, träumte ihm, tausend Schwerter
 went and asleep was dreamed him thousand swords
 stünden **zumal** ob seinem einzigen Haupt gezückt.
 stood **simultaneously** above his only head pulled.out
 ‘Belaye’s clanship decided then that they would cut off a piece of Loherangrin’s flesh, which was the only way to relieve Belaye’s distress; and as he [Loherangrin] went hunting once again and went to sleep [afterward] he dreamed that thousands of bared swords were stood above his head **at once**.’
 (Grimm & Grimm 1960 [1816]:543)

3.2. INTENSIFYING PARTICLE. From Middle High German until about the seventeenth century, *zumal* can also be found in the function of an intensifying particle. Just like the temporal adverb *zumal*, it is frequently attested in Middle High German but almost disappears in Early New High German (1350–1650). The intensifying particle *zumal* can be translated as ‘very’ or ‘extremely’ and can be associated with different types of phrases, for example, with adjective phrases as in 48, or with adverb phrases as in 49 and 50.

- (48) Und besunder sehs gesellen von den abenturen ... arbeyten sich
 and especially six knights of the quest exert themselves
 sere das sie den konig under syner ritterschaft vahn möchten,
 very that they the king under his knighthood capture wanted

¹⁴ In the Swabian dialect, *zumal* [t̥sm̥ɔ̃] still has a temporal meaning ‘at once’ or—today more common—‘suddenly’.

- (i) a. Will alles **zumal** zur Tür rein.
 ‘Everybody ran **at once** to the door.’ (Fischer & Taigel 1986:423)
 b. Er hat 2 Eheweiber gehapt **zumal**.
 ‘He had two wives **at once**.’ (Fischer 1924:1334)
- (ii) a. Des ka^{mn} **zumal** eⁱⁿ mal kommeⁿ.
 ‘This can **suddenly** happen once.’ (Fischer & Taigel 1986:423)
 b. **Zumal** kommt eⁱⁿ Wetter und verjächt die Leut^e.
 ‘The weather changes **suddenly** and scares the people away.’ (Fischer 1924:1335)

- wann man yn fur **zumal** kune hielt.
 because one him as **very** bold considered
 ‘And especially six of the knights on the quest ... strive to capture the king
 among his knights, because he was told to be **very** bold.’
 (*Lancelot und der Gral* vol. 2:288; 13th c.; from Steinhoff 1995b)
- (49) ‘Sicher,’ sprach er, ‘ich sehe yn **zumal** gern, umb zu wissen ob ich
 sure spoke he I see him **very** gladly to.know if I
 yn kente.’
 him knew
 ‘“Sure,” he said, “I would **very much** like to find him, in order to know if
 I knew him.”’ (*Lancelot und der Gral* vol. 1:406; 13th c.; from Steinhoff 1995b)
- (50) Di erste geben bose wider gut dise sint **zu male** bose. Di anderen
 the first give evil against good those are **very** evil the others
 geben bose vmme bose also di alte schft spricht ... Di
 give evil for evil as the old scripture speaks the
 vierten di sint **zu male** vollkumen die geben gut wider bose.
 fourth they are **very** perfect they give good against evil
 ‘The first pay with evil for good—those are **very** evil. The others pay with
 evil for evil—in the manner of the Old Testament. ... The fourth—they
 are **absolutely** perfect—they pay with good for evil.’
 (Hermann von Fritzlär 108v–109r; 14th c.)

3.3. FOCUS PARTICLE. From the sixteenth century onward, *zumal* develops a new use as an additive scalar focus particle with the meaning ‘especially’ (examples 51–53 show this reading in the different stages of its existence). This shift is a highly important step toward its appearance as a causal conjunction about 100 years later (more in §4.1). In its new function as a focus particle, *zumal* emphasizes a constituent, and by doing so, it relates the denotation of the focused constituent to a set of denotations that are not mentioned but implied (cf. Jacobs 1983). In 51, the recommendation is valid not only for the time of speech but also before and after it. In 52, the speaker is also refreshed at sleeping at the time of the bean blossom, but not just then. In 53, the set of contextually salient denotations includes not only the table but also other things that can be cleaned in the relevant area.

As a focus particle, *zumal* occurs with different types of associated phrases, for example, with an adverbial phrase in 51, with a prepositional phrase in 52, and with a noun phrase in 53.¹⁵

- (51) Ich rate es dem Herrn Secretarius nicht, daß er hingehet, und **zumal**
 I advise it the Mister secretary NEG that he goes.there and **especially**
 jetzo, da die ehrliche Frau sehr krank sein soll.
 now because the honest Lady very sick be should
 ‘I don’t recommend the secretary go there, **especially** now, when the hon-
 est lady is said to be very sick.’ (Reuter 1696:50296)
- (52) Mittagsschlaf ist die angenehmste Erquickung Alter Leut’ im Sommer,
 a.nap is the most.pleasant enlivener old people in summer
zumal in der Blüte der Bohnen.
especially in the bloom of beans
 ‘In summer, a nap is the most pleasant enlivener of old people, **especially**
 when beans are in bloom.’ (Voss 1784:89)

¹⁵ As a focus particle, *zumal* could and in fact still can be associated with all kinds of phrases that are available for an additive scalar focus particle. The chronology of the examples is random.

- (53) Will alles ordentlich, **zumal** die Tafel.
 want everything tidy **especially** the table
 ‘[I] want everything to be tidy, **especially** the table.’ (Grillparzer 1848:17585)

A further syntactic environment was the combination of *zumal* with adverbial subordinate clauses, such as conditional clauses (54) or temporal clauses (55). Its position is left-adjacent to the clause.

- (54) Unsere Kinder [frewen] sich ... auff jrer lieben Eltern zukunfft
 our children are.happy REFL about their dear parent’s arrival
 / **zumal** / wenn sie lang aussen gewesen.
especially if they long away were
 ‘Our children look forward to the arrival of their dear parents, especially if they were away for a long time.’ (Vischer 1576: Erste Predigt)
- (55) Was für Schrecken / Verstürzung und Sorgfalt dieses an dem ganzen
 what for fright confusion and diligence this at the whole
 Hof verursacht / **zumal** als Tags darauf sich die ordentlichen
 court caused **especially** as days hereafter REFL the proper
 Pocken oder Kinder-Blattern zeigten / ist leicht zu erachten.
 pox or variola appeared is easy to guess
 ‘It is easy to guess what fright/confusion and diligence were brought about at the court, **especially** as the proper pox or variola appeared the next day.’ (von Imhof 1735:315)

Causal clauses are the most frequent type of adverbial clause attested with the focus particle *zumal* (seventeen of forty-two examples; see §4.1 for the diachronic hypothesis). However, *zumal* only occurs with causal clauses that exhibit verb-final order, such as verb-final *weil* (56) and *da* (57, 58).¹⁶

- (56) ... sie zeugen kein Vieh, begehren auch der Fische nicht, **zumahl**
 they breed NEG cattle desire also the fishes NEG **especially**
 weil sie weit vom Meere wohnen.
 because they far from.the sea live
 ‘... they don’t breed animals, don’t desire fish, **especially** since they live far away from the sea.’ (Wunder der Natur 1690:349)

¹⁶ In Early New High German, the conjunction *denn* ‘because’ could introduce causal adverbial clauses with verb-final word order. In fact, our examples of *zumal denn*-clauses are ambiguous: it is not clear whether we are dealing here with causal *denn*-clauses in the scope of the focus particle *zumal* or with causal *zumal*-clauses with the temporal adverb *denn* ‘then’. This point is irrelevant for modern German, because the causal conjunction *denn* now triggers only verb-second word order and cannot therefore be in the scope of a focus particle (see §4.2).

- (i) Gleichwie nun diese *entreprise* viel geld gekostet / so ist es wol nicht anders / als daß die Französischen *Ministres* von den *financen* mühe genug haben werden / die nöthigen gelder zur *campagne* auszufinden. Aus diesem absehen sind sie auch auf ein mittel gefallen / daß der Adel sein geschlechte sollte einzeichnen lassen / und davor eine gewisse summa geldes bezahlen. Es hat aber dieses nicht wenig murren verursacht / **zumal denn** in Frankreich nicht wenig Edelleute sind / deren größtes *capital* der *degen* ist.

‘Regardless of how much this *entreprise* [enterprise] will cost, it is fairly clear that the French *ministres* [ministers] of *financen* [finance] will have enough troubles to find the necessary money for the *campagne* [campaign]. For this reason, they thought of a way, that the nobility should have its lineage recorded and, before doing so, they should pay a certain amount of money. It caused though nothing but grumbling, **especially since** in France there are many nobles whose rapier is their only capital.’ (Einleitung zur heutigen Historie aus denen täglich einlauffenden Zeitungen, 1708:696, my highlighting)

- (57) so könnte ich mich auch wohl zum Atheismus entschließen, **zumal**
 so can I REFL also perhaps to.the atheism determine **especially**
 da ich sähe, daß niemand recht wisse, was beide eigentlich
 because I see that nobody well know what both actually
 heißen solle.
 mean should
 ‘In this way I could go for atheism, **especially** since I can see that nobody
 knows exactly what either of them means.’ (Goethe 1986 [1830]:661)
- (58) ... so hoffte er, der Papst werde ihm die zweite Ehe einzugehen
 so hope he the Pope will him the second marriage celebrate
 bewilligen, **zumal** da die schöne Heidin gern bereit
 permit **especially** because the beautiful heathen gladly ready
 war, dem Grafen zuliebe eine Christin zu werden.
 was the earl.DAT sake a Christian to become
 ‘So he hoped that the Pope would permit his second marriage, **especially**
 since the beautiful heathen woman agreed to become Christian for the
 earl’s sake.’ (Bechstein 1853:498)

In the case of the focus particle, it is feasible to assume a direct development from intensifying to focus particle, because the function as a focus particle is a semantically natural further development of the intensifying use.

The focus particle *zumal* still exists in Modern German; however, it has developed a slightly archaic character and tends to be restricted to written language.

3.4. CAUSAL CONJUNCTION. From the end of the seventeenth century, *zumal* appears as a causal conjunction with the meaning ‘the more so as’, as extensively described in §2 of this article. The earliest example in my corpus is from 1680. From that time on, *zumal*-clauses spread rapidly in all kinds of written texts. In modern German, the conjunction *zumal* is mostly used in formal texts and speeches.

- (59) Antwort: Mein Handel / mein Wandel stund damal in immerwährender
 answer my action my change stood then in everlasting
 Forcht und Zittern / **zumal** dieses ganze Jahr eine blutige
 fear and shivering **the.more.so.as** that whole year a bloody
 Wolken ober meiner erschienen / welche deß künftigen Ubels
 cloud over my appeared which the.GEN future evil
 eine warhaffte Prophetin gewest ist.
 a true prophet been is
 ‘The answer: my deeds and my changes were at that time affected by ever-
 lasting fear and shivering / **the more so as** a bloody cloud appeared
 above me the whole year which was a real prophet of my future evil.’
 (Abraham 1680:14–15)
- (60) Man würde solche Stücke in Versen nicht mehr sehen wollen:
 one would such plays in rhyme NEG more see want
zumal sie gar zu ernsthaft wären, und keine lustige Person
the.more.so.as they very too serious were and NEG funny person
 in sich hätten.
 in itself had
 ‘They would not like to watch such rhyming plays any more: **the more so**
as those would be too serious and have no amusing characters.’
 (Gottsched 1732:13562)

3.5. SUMMARY. Table 3 and Figure 1 give an overview of the different stages of the development of *zumal* in German.

FUNCTION	ADVERB	INTENSIFYING PARTICLE	FOCUS PARTICLE	CAUSAL CONJUNCTION
MEANING	at this time, at once, simultaneously, together	very, extremely	especially, particularly	the more so as, especially since

TABLE 3. Meanings of the word *zumal*, from Old High German to today.

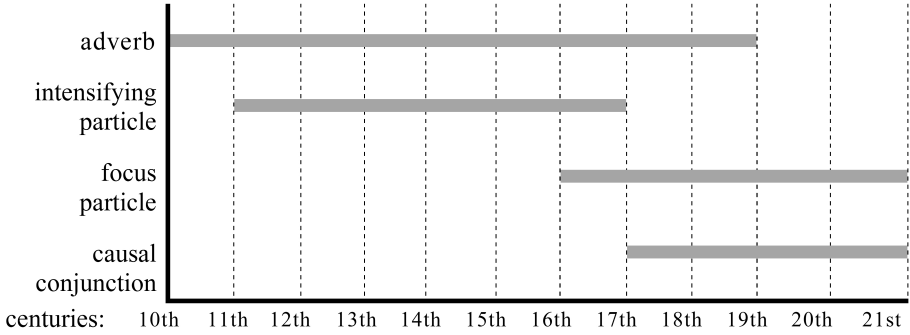


FIGURE 1. Development of different meanings of *zumal* over the centuries.

The development of the conjunction *zumal* is especially complex. In §4, I take a closer look at the quantitative data in my corpus concerning *zumal* as a focus particle. We will see that the spread of *zumal* as a focus particle has a direct connection to the appearance of the causal conjunction *zumal*.

4. DIACHRONIC EXPLANATION OF SYNCHRONIC DATA.

4.1. DIACHRONIC HYPOTHESIS. The most interesting data for my analysis come from the period before the conjunction *zumal* actually comes into existence. This period of German is traditionally referred to as Early New High German (ENHG) and covers the time span between 1350 and 1650. During this stage, the corpus contains attestations of *zumal* as a temporal adverb, as an intensifying particle, and as a focus particle. No use as a conjunction is yet found. In order to explain its (sudden) appearance as a causal conjunction at the end of the seventeenth century, let us first turn to the data concerning *zumal* as a focus particle.

In the ENHG part of the corpus, there are thirty-eight examples of *zumal* as a temporal adverb, eighty-two examples as an intensifying particle, and forty-two examples as a focus particle. It should be noted that the majority of the examples with this last reading belong to the time between 1550 and 1650, thus only the last third of the ENHG period. The corpus data therefore indicate that the focus particle *zumal* was quite rapidly established in this short time span. This presumably not only led to the disappearance of *zumal* as an intensifying particle, but probably also gave rise to a new causal conjunction.

A closer look into the ENHG data reveals the following distribution of the focus particle *zumal*:

- seventeen occurrences with subordinate clauses;
- twenty-five occurrences with other phrase types.

This evidence shows that in approximately 40% of its forty-two occurrences, the focus particle *zumal* is associated with a subordinate clause of some kind. Even more inter-

esting is the fact that thirteen of the associated clauses (about 30% of all forty-two examples) are causal clauses. The question that now arises is whether there is a connection between the frequent use of *zumal* with causal clauses and the new use as a causal conjunction in the late seventeenth century.

Indeed, the similarity in meaning in 61 and 62 corroborates the direct relation between causal clauses in the scope of a focus particle and *zumal*-clauses. In 61, *zumal* is a focus particle. Its associated phrase is a complementizer phrase (CP) *weil sie keine Tochter hatte* ‘because she had no daughter’. The causal meaning is directly achieved by the causal conjunction *weil*. In the constructed example 62, however, there is no focus particle. The clauses are combined by a bare conjunction *zumal*, which is the source of causality in this case.

- (61) Meine Muhme hatte mich sehr lieb, **zumal weil** sie keine Tochter
 my aunt had me very dear **especially because** she NEG daughter
 hatte . . .
 had
 ‘My aunt liked me very much, **especially since** she had no daughter.’
 (Gellert 1747:4)
- (62) Meine Muhme hatte mich sehr lieb, **zumal** sie keine Tochter
 my aunt had me very dear **the.more.so.as** she NEG daughter
 hatte.
 had
 ‘My aunt liked me very much, **the more so as** she had no daughter.’

Taking this into account I hypothesize that the structure in 61 serves as the antecedent structure for 62. My hypothesis can therefore be stated as in 63.

- (63) HYPOTHESIS: The causal conjunction *zumal* developed due to recategorization of the focus particle *zumal* and a causal conjunction, with the omission of the conjunction:
- (i) [*zumal*_{focus particle} [*weil/da*_{caus. conj.} [...]]]
 - (ii) [*zumal weil/da* [...]]
 - (iii) [*zumal*_{caus. conj.} [...]]

I argue that the frequent usage of *zumal* with subordinate causal clauses (as in (i)) led to a shift of the meaning: *zumal* gradually gained more and more characteristics of a causal expression in addition to its existing focus meaning. At a certain point, *zumal* became a new causality marker with the retained meaning component of a focus particle ((ii) shows a possible transitional stage with two elements in C⁰). After this happened, there was no longer any need for an extra causal marker, and the causal conjunctions *weil* and *da* were omitted (as in (iii)). From the seventeenth century on, *zumal* functions as a causal conjunction.

This approach not only explains the sudden appearance of a further causal conjunction in German,¹⁷ but also gives a reasonable account of the unusual syntactic status and meaning of *zumal*-clauses in German, as shown in the preceding section.

The formerly focusing element *zumal* is regrammaticalized as a subordinating causal and focusing conjunction, inheriting the causal meaning of *weil/da* ‘because’ and replacing the sequence *zumal weil/da* ‘especially because’. It is clearly not a case of ‘simple’ ellipsis of the conjunction. First, it is highly problematic to have ellipsis of a C⁰

¹⁷ At least three causal conjunctions exist at that time: *denn*, *weil*, and *da*.

element with specific lexical content.¹⁸ Second, if the ellipsis of causal conjunctions makes the preceding *zumal* causal, then the ellipsis of the temporal conjunction *wenn* ‘when’ as in 64 would make *zumal* temporal, and the ellipsis of the conditional conjunction *wenn* ‘if’ as in 65 would make *zumal* conditional. In effect, the omission of the conjunction in all modern German examples makes the subordinate clause into a causal one.

- (64) *Zahlreiche Touristen genießen Tübingen, zumal wenn einer der vielen berühmten Märkte stattfindet.*
 ‘Numerous tourists enjoy Tübingen, especially when one of the famous markets takes place.’
- (65) *Zahlreiche Touristen genießen Tübingen, zumal einer der vielen berühmten Märkte stattfindet.*
 ‘Numerous tourists enjoy Tübingen, the more so as one of the famous markets takes place.’
- (66) *Das ist inakzeptable, zumal wenn alle anderen dagegen sind.*
 ‘It is unacceptable, especially if all the rest are against it.’
- (67) *Das ist inakzeptable, zumal alle anderen dagegen sind.*
 ‘It is unacceptable, the more so as all the rest are against it.’

In order to support the diachronic hypothesis outlined above, I compare *zumal*-clauses and causal subordinate clauses in the scope of an additive scalar focus particle, first according to their syntactic properties (§4.2), and second according to their meaning (§4.3). If both of these clause types show identical syntactic and semantic behavior in modern German, this would provide corroborating evidence for the diachronic hypothesis that causal *zumal*-clauses developed out of a construction of the focus particle *zumal* plus a causal subordinate clause.

4.2. SYNTACTIC BEHAVIOR OF ZUMAL- AND BESONDERS WEIL-CLAUSES. The main aim of this section is to analyze the syntactic properties of embedded adverbial clauses when they are in the scope of a focus particle.

The following two clauses are compared: first, a *zumal*-clause as in 68, and second a *besonders weil* ‘especially because’ clause as in 69. The latter is introduced by a focus particle *besonders* ‘especially’ in combination with an embedded *weil*-clause.¹⁹ According to the diachronic hypothesis from §4.1, sentences such as 68 developed out of structures such as 69. The prediction is that the two structures have identical syntactic behavior.

- (68) *Wir gehen nach Hause, zumal es regnet.*
 we go to house the.more.so.as it rains
 ‘We are going home, the more so as it is raining.’
- (69) *Wir gehen nach Hause, besonders weil es regnet.*
 we go to house especially because it rains
 ‘We are going home, especially as it is raining.’

¹⁸ A C⁰ element with lexical content (causal, conditional, concessive, etc.) cannot be deleted without a loss of the lexical component (cf. Cocchi & Poletto 2002:72). Complementizer deletion/drop concerns mostly purely functional heads like *that* (cf. Doherty 1997, Pesetsky & Torrego 2001, Brovotto 2002).

¹⁹ Note that *zumal* can still be used as a focus particle in present-day German and it can still be used together with *weil*. As far as I can tell, there is hardly any difference between *zumal*- and *zumal weil*-clauses. We could therefore in theory use *zumal weil* as our comparison expression instead of *besonders weil*. In fact, I chose *besonders weil* for the tests for several reasons. First, because it is much more common in present-day German, but also because the inclusion of *zumal* in our comparison expression would yield a comparison with *zumal* on both sides. In addition, *besonders* is the best exponent of exactly the focusing content that should be exemplified.

INTERNAL SYNTAX: VERB POSITION WITHIN *ZUMAL*-CLAUSES. The finite verb in *besonders weil*-clauses occurs in verb-final position, just as in *zumal*-clauses (cf. 68 and 69). As we have seen in §2.2, verb position is one of just three features that *zumal*- (and *besonders weil*-) clauses share with canonical embedded clauses. In light of this, it is appropriate to ask why *zumal*-clauses have no verb movement to C^0 like typical non-embedded clauses do. The answer to this question has to do with the origin of *zumal*-clauses and with the hypothesis proposed in §4.1. Since the conjunction *zumal* developed out of the fusion of a focus particle with a subordinating causal conjunction, it naturally adopted the verb-final subcategorization of the subordinating conjunction.

The background to this is that focus particles can only scope over embedded clauses. In 70 and 71 we are dealing with two different types of *während* ‘while’/‘whereas’ clauses in German. Both examples are taken from the *Handbuch der deutschen Konnektoren* (Pasch et al. 2003). Both variants are combined here with the focus particle *sogar* ‘even’. Temporal *während* clauses as in 70 are embedded and can therefore combine with a focus particle. Adversative *während* clauses as in 71 are nonembedded and therefore cannot; they become ungrammatical when combined with a focus particle. The two examples are only superficially identical; underlyingly they are different. The embedded variant in 70 has a temporal reading, whereas the nonembedded variant in 71 has an adversative reading.

- (70) *Sogar während Peter fleißig ist, ist Paul faul.*
 even while Peter diligent is is Paul lazy
 ‘Even while Peter is diligent, Paul is lazy.’ (Pasch et al. 2003:50)

- (71) **Sogar während Peter fleißig ist, ist Paul faul.*
 even whereas Peter diligent is is Paul lazy
 ‘Even whereas Peter is diligent, Paul is lazy.’ (Pasch et al. 2003:50)

In the same manner, a focus particle can only scope over embedded causal clauses, as in 69, but not over nonembedded causal clauses, such as epistemic *weil*-clauses in 72 (cf. 73) with the finite verb in C^0 or *denn*-clauses, which are never embedded, in 74 (cf. 75).²⁰

- (72) *Sie schlafen nicht, weil das Licht ist noch an.*
 they sleep NEG because the light is still on
 ‘They are not sleeping, because the light is still on.’
- (73) **Sie schlafen nicht, besonders weil das Licht ist noch an.*
 they sleep NEG especially because the light is still on
 ‘They are not sleeping, especially because the light is still on.’
- (74) *Sie haben sich für ein Fertighaus entschieden, denn es ist günstig.*
 they have REFL for a prefab.house decided since it is cheap
 ‘They went for a prefabricated house, since it is cheap.’

²⁰ Note that a possible variant of 73 with a verb-final word order, as in (i), is still nonembedded and does not allow a focus particle, while the embedded variant of 75 with the conjunction *weil*, as in (ii), can be in the scope of a focus particle.

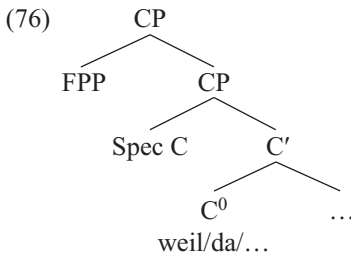
- (i) **Sie schlafen nicht, besonders weil das Licht noch an ist.*
 they sleep NEG especially because the light still on is
 ‘They are not sleeping, especially because the light is still on.’
- (ii) *Sie haben sich für ein Fertighaus entschieden, besonders weil es günstig ist.*
 they have REFL for a prefab.house decided especially because it cheap is
 ‘They went for a prefabricated house, especially because it is cheap.’

- (75) *Sie haben sich für ein Fertighaus entschieden, besonders denn es ist
 they have REFL for a prefab.house decided especially since it is
 günstig.
 cheap

‘They went for a prefabricated house, especially since it is cheap.’

Zumal could therefore only develop from the pattern *zumal*_{focus particle} + conjunction_{causal/embedded}. The pattern *zumal*_{focus particle} + conjunction_{causal/nonembedded} is ungrammatical. The verb-final position is thus the only possible position for *zumal*-clauses.²¹

The correct syntactic analysis of focus particles is very controversial (see Reis & Rosengren 1997). Büring and Hartmann (2001) have, for example, made a proposal for a structural analysis when they are associated with a CP, but this has been shown to be problematic in Reis 2005. In the following, I follow the analysis in Reis & Rosengren 1997:262, in which the focus particle is a head of a maximal (nonexpanding) focus phrase (FPP) and simply adjoins the CP (see 76).



EXTERNAL SYNTAX. In the following, *zumal*- and *besonders weil*-clauses are compared in their relation to the matrix clause.

Placement in the prefield/Spec C position of the matrix clause. If a clause can be located in Spec C of the matrix clause, this is usually taken as a clear sign of its embedded status. The situation is a little more complicated, however, with *zumal*- and *besonders weil*-clauses. Both variants sound more awkward than the embedded example in 77, yet they are not completely ungrammatical like the nonembedded clause in 78.²²

- (77) Weil sie kein Geld mehr hatten, sind sie wieder zurück nach
 because they NEG money more had are they again back to
 Hause gefahren.
 home gone
 ‘Because they had no money any more, they went back home.’

²¹ Let us note that there are occasional examples of *zumal* like the following.

(i) *Zumal*: Es ist ‘Ladies Day’.

‘Above all: it is “Ladies Day”.’

(COSMAS)

Here *zumal* is outside of the following sentence. I do not analyze *zumal* in such examples as a conjunction. The parallel to the examples with the discourse particle *vor allem* ‘above all’ is evident.

(ii) *Vor allem*: Es ist ‘Ladies Day’.

‘Above all: it is “Ladies Day”.’

The discourse particle *zumal* is not discussed in this article. At first glance, it behaves similarly to the discourse particles observed in the literature (cf. Gohl & Günthner 1999 for *weil*, Günthner 2001 for *wobei*, and Günthner 1999 for *obwohl*). *Zumal* as a discourse particle seems to be a further significant developmental stage of the word and needs a thorough analysis.

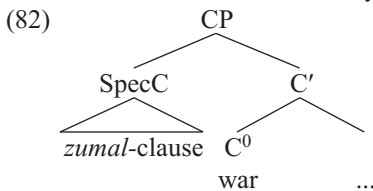
²² One can imagine that some pragmatic and information-structural factors play a role here in the ordering preference.

- (78) *Denn sie hatten kein Geld mehr, sind sie wieder zurück nach Hause gefahren.
 since they had NEG money more are they again back to home gone
 ‘Since they had no money any more, they went back home.’
- (79) ??Zumal sie kein Geld mehr hatten, sind sie wieder zurück nach Hause gefahren.
 the.more.so.as they NEG money more had are they again back to home gone
 ‘The more so as they had no money any more, they went back home.’
- (80) ?Besonders weil sie kein Geld mehr hatten, sind sie wieder zurück nach Hause gefahren.
 especially because they NEG money more had are they again back to home gone
 ‘Especially because they had no money any more, they went back home.’

Examples of *zumal*-clauses in the prefield are sporadically attested in modern German, and there are in fact certain contexts that favor this positioning. In the examples below, a *zumal*-clause is in the prefield/Spec C position of a matrix clause that is connected to the previous main clause by the conjunction *und* ‘and’. The relevant structure is: [S1], *und* [[*zumal*-clause] matrix clause S2].

In 81, a match between two villages Widnau and Altstaetten is described as being slow and boring. The main clauses are connected by the conjunction *und* ‘and’. The *zumal*-clause belongs to the second main clause, both because of the meaning and because of the syntactic structure. It is in the Spec C position of its matrix clause—in front of the finite verb *war* ‘was’ in C⁰, as in 82.

- (81) Widnau wollte nicht mehr, Altstätten konnte nicht mehr, **und** Widnau wollte NEG more Altstätten could NEG more and **zumal** auch das Thermometer nach oben ausschlug, war auf the.more.so.as also the thermometer upward went.up was on dem Spielfeld keine nennenswerte Aktion mehr zu verzeichnen. the field NEG noteworthy action more to observe
 ‘Widnau didn’t want to play any longer, Altstätten couldn’t play any longer, and especially since the thermometer was rising to high degrees, there was no noteworthy action on the field.’ (COSMAS, 2009)



There are also examples in German of embedded clauses in the scope of a focus particle in the Spec C position of the matrix clause.

- (83) **Besonders weil** Silber dazu neigt anzulaufen, ist der Umgang damit especially because silver to tend to.tarnish is the handling with.it oft mit einem gewissen Aufwand verbunden. often with a certain effort connected
 ‘The handling of silver involves a certain effort, especially because it tends to tarnish.’ (COSMAS, 2013)

With respect to the Spec C position, *zumal*-clauses and *besonders weil*-clauses show similar behavior: both are marginally possible in the prefield of a matrix clause.²³

Matrix negation scope. We previously noted that *zumal*-clauses do not allow matrix negation scope (example 19 is repeated as 84), just like nonembedded *denn* clauses.

- (84) Peter hat das Haus nicht verlassen, zumal es bereits dunkel war.
 Peter has the house NEG left the.more.so.as it already dark was
 ‘Peter didn’t leave the house, the more so as it was already dark.’

In the same manner, *besonders weil*-clauses cannot be in the scope of matrix negation. In both example 84 and example 85, the only possible meaning is that Peter did not leave the house.

- (85) Peter hat das Haus nicht verlassen, besonders weil es bereits dunkel war.
 Peter has the house NEG left especially because it already dark was
 was
 ‘Peter didn’t leave the house, especially because it was already dark.’

With respect to matrix negation, *zumal*- and *besonders weil*-clauses behave identically.

Matrix focus-particle scope. As we have seen, matrix focus particles can only scope over embedded clauses, never over nonembedded clauses. Neither *zumal*-clauses nor *besonders weil*-clauses can be in the scope of a focus particle in the matrix clause. In 86 there is only one possible reading: the focus particle *nur* ‘only’ scopes over the prepositional phrase *zu diesem Ergebnis* ‘to this conclusion’ and not over the adverbial *besonders weil*-clause. With reference to matrix focus-particle scope, therefore, both *zumal*- and *besonders weil*-clauses behave like nonembedded clauses.

- (86) Wir konnten nur zu diesem Ergebnis kommen, besonders weil wir nicht
 we could only to this result come especially since we NEG
 genug Fakten hatten.
 enough facts had
 ‘We could only arrive at this conclusion, especially since we did not have enough facts.’

Interrogative operator scope. Integrated adverbial clauses can be in the scope of a matrix question operator; see 25 above. Nonembedded clauses cannot become a part of the question preceding them, but rather function as an explanation for the question; see 26. The same holds true for *zumal* (27) and its equivalent with *besonders weil* (87).

- (87) Muss die Oma schon wieder backen, besonders weil sie letzte Woche
 must the granny again bake especially because she last week
 so krank war?
 so sick was
 ‘Does the granny have to make a cake again? Especially because she was so sick last week.’

Intonational integration. Unlike nonembedded structures, embedded adverbial clauses and their matrix clauses build one information-structural unit and therefore

²³ The infelicity of our examples in the prefield position can, first, have to do with the observation made in Frey 2006 that A-bar movement into the prefield position in German is often associated with a contrastive interpretation of the moved element. The contrast meaning as defined in 24, however, cannot be observed in *zumal*- and *besonders weil*-clauses. Second, a general pragmatic tendency of focused elements to follow non-focused elements in the normal course could play a role, as an anonymous referee pointed out.

have one prosodic structure, as in 88. However, the same adverbial clause has its own prosodic structure when in the scope of an additive scalar focus particle, as in 89.

- (88) Sie waren enttäuscht, weil der Clown schon gegangen war.
 they were disappointed because the clown already gone was
 ‘They were disappointed, because the clown had already gone.’
- (89) Sie waren enttäuscht, besonders weil der Clown schon gegangen
 they were disappointed especially because the clown already gone
 war.
 was
 ‘They were disappointed, especially because the clown had already gone.’

We can therefore state that *besonders weil*-clauses act like nonembedded clauses and are intonationally not integrated, just like *zumal*-clauses.

However, both *zumal*- and *besonders weil*-clauses are prosodically integrated when put in the Spec C position of the matrix clause. In this case, they have the same intonational structure as integrated verb-final *weil*-clauses in the same position; see 90 and 91.

- (90) Besonders weil der Clown schon gegangen war, waren sie
 especially because the clown already gone was were they
 enttäuscht.
 disappointed
 ‘They were disappointed, especially because the clown had already gone.’
- (91) (Und) zumal der Clown schon gegangen war, waren sie
 (and) the.more.so.as the clown already gone was were they
 enttäuscht.
 disappointed
 ‘They were disappointed, the more so as the clown had already gone.’

Prosodically, *zumal*- and *besonders weil*-clauses behave identically: depending on their position relative to the matrix clause, they have the intonational structure either of embedded or of nonembedded clauses. Even though these data confirm once again the diachronic hypothesis of this article, such a situation is not at all satisfactory for our general understanding of clause integration. Clauses within the scope of a focus particle appear to be intonationally unintegrated when following the associated clause and intonationally integrated when they linearly precede it. Syntactic theory would not predict this behavior.

Ellipsis of the matrix clause. While embedded clauses allow ellipsis of the matrix clauses and nonembedded clauses do not, both *zumal*- and *besonders weil*-clauses are marginally possible with an ellipsis of the matrix clause.²⁴

²⁴ Admittedly, there are contexts in which verb-final *weil*-clauses in the scope of a focus particle are not completely ungrammatical without the matrix clause. There is also grammatical gradation depending on the particle. A pitch accent on the particle makes the sentences sound better.

- (i) Warum willst du heute nicht zur Party kommen?
 why want you today NEG to.the party come
 ‘Why don’t you want to come to the party tonight?’
- a. ??Besonders weil dort immer schlechte Musik gespielt wird.
 especially because there always bad music played AUX
- b. ?NUR weil dort immer schlechte Musik gespielt wird.
 only because there always bad music played AUX
- c. Vor allem weil dort immer schlechte Musik gespielt wird.
 above all because there always bad music played AUX
 ‘Especially/Only/Above all because they always play bad music there.’

- (92) Warum hast du dich für die roten Schuhe entschieden?
 why have you REFL for the red shoes decided
 ‘Why did you go for the red shoes?’
 a. ?Zumal sie günstig waren.
 the.more.so.as they cheap were
 ‘The more so as they were cheap.’
 b. ?Besonders weil sie günstig waren.
 especially because they cheap were
 ‘Especially because they were cheap.’

Association with a correlative element within the matrix clause. Neither *zumal*- nor *besonders weil*-clauses allow a correlative element in the matrix clause; they behave in this respect like other nonembedded adverbial clauses.

- (93) Klara ist (*deswegen) glücklich, zumal Klaus zu Besuch kommt.
 Klara is therefore happy the.more.so.as Klaus to visit comes
 ‘Klara is (therefore) happy, the more so as Klaus is coming for a visit.’
- (94) Klara ist (*deswegen) glücklich, besonders weil Klaus zu Besuch kommt.
 Klara is therefore happy especially because Klaus to visit comes
 ‘Klara is (therefore) happy, especially because Klaus is coming for a visit.’

DISCUSSION OF THE TEST RESULTS. The correspondence between *zumal* and *besonders weil* is perfect; the two behave almost identically with respect to all of the tests.

The summary of the test results confirms our diachronic analysis. As can be seen in Table 4, the tests show that *zumal*- and *besonders weil*-clauses exhibit almost identical syntactic behavior. At the same time, they correspond neither to embedded *weil*-clauses nor to nonembedded *denn*-clauses. These facts underline the parallelism in the behavior of *zumal*-clauses and embedded adverbial clauses in the scope of a focus particle.

INTEGRATION CRITERIA	<i>zumal</i>	<i>besonders weil</i>	EMBEDDED <i>weil</i>	<i>denn</i>
Verb position	final	final	final	second
Placement in the prefix/Spec C position of the matrix clause	+/?	+/?	+	-
Clause within the scope of matrix negation	-	-	+	-
Clause within the scope of matrix focus particle	-	-	+	-
Clause within the scope of matrix operator	-	-	+	-
Intonational integration following the matrix clause	-	-	+	-
Intonational integration in the Spec C of the matrix clause	+	+	+	*
Ellipsis of the matrix clause	-	-	+	-
Clause associated with a correlative within the matrix clause	-	-	+	-

TABLE 4. Integration of *zumal* clauses, in comparison with *besonders weil*-clauses, embedded *weil*-clauses, and *denn*-clauses.

Note again that even if the test results might suggest that *zumal*-clauses are nonembedded, this is not the case. Syntactically they behave just like embedded adverbial clauses in the scope of an additive scalar focus particle.

4.3. THE MEANING OF ZUMAL- AND BESONDERS WEIL-CLAUSES. In this section I show that *zumal*- and *besonders weil*-clauses also share similar semantics. In this way I hope to support our diachronic hypothesis, but we will also see that this account offers an explanation for the rather unusual meaning of *zumal*, which triggers presuppositions.

In §2.3, we saw that *zumal* differs from the other causal conjunctions in German. In fact, it is the only conjunction that triggers presuppositions of further causal relations to the matrix clause.

Besonders weil-clauses have the same effect. Thus the examples in 95 (repeated from 39) and 96 presuppose that Maria's fluent Spanish is caused not only by her mother being from Peru, but also by other factors. The difference between these two examples is that a *zumal*-clause triggers both causal meaning and presuppositions; in a *besonders weil*-clause, however, the causal meaning comes from the conjunctive part *weil*, and the presuppositions are triggered by the focus particle *besonders*.

- (95) Maria kann fließend Spanisch, zumal ihre Mutter aus Peru
 Maria can fluently Spanish the.more.so.as her mother from Peru
 kommt.
 comes
 'Maria speaks Spanish fluently, the more so as her mother is from Peru.'
- (96) Maria kann fließend Spanisch, besonders weil ihre Mutter aus Peru
 Maria can fluently Spanish especially because her mother from Peru
 kommt.
 comes
 'Maria speaks Spanish fluently, especially because her mother is from Peru.'

Before going further, let us take a closer look at the semantics of focus in general. According to Rooth (1992), the ordinary semantic value $[a]^o$ differs from the focus semantic value $[a]^f$. The latter is a connection between the value of a focused element and a set of alternatives of the same type. Correspondingly, the focus semantic value of 97 is a set of propositions with an element $[\text{bananas}]^f$. All of these propositions have the structure 'the king likes x'.

- (97) The king likes BANANAS.
 $[[\text{BANANAS}]^f] = \{\text{apples, grapes, pears, ...}\}$

I have argued above that *zumal* is equivalent in meaning and syntactic behavior to *besonders weil* 'especially because', as it contributes a presuppositional and a causal meaning component. Example 97 can be extended into 98.

- (98) The king especially likes BANANAS.

In a simple case such as this, *especially* introduces a comparison set, the members of which are ordered on a contextually defined scale. In 98, the lexical item *especially* locates the bananas at the positive extreme of the scale of 'liked-ness'. A parallel effect is found with the complex expression *especially since* (99). In this case, the comparison set consists of potentially relevant causal factors; the scale expresses something like degrees of causality. Here again, *especially* yields the interpretive component that the causal factor mentioned (= her son is successful in his career) is at the positive extreme on the scale.

- (99) Mrs. Bucket is always proud, especially since her son is successful in his career.
 $[[\text{since her son is successful in his career}]^f] =$
 {since she has a pretty house,
 since she is the most important person in the village, ... }
 Mrs. Bucket is always proud [since her son is successful in his career].^o

We have noted the correspondence of German *zumal* and *besonders weil* (the equivalent of *especially since*). It is not surprising to find the same effect in 100, the German version of 99.

- (100) Frau Eimer ist immer stolz, zumal ihr Sohn Karriere gemacht hat.
 [[zumal/besonders weil ihr Sohn Karriere gemacht hat]]^f=
 {weil sie ein hübsches Haus hat,
 weil sie die wichtigste Person im Dorf ist, ... }

As was argued above, *zumal* contains both the scalar and causal meaning in a single lexeme. For the comparison set in 100 both the causal component and a focus element are required, both of which are inherent in *zumal*. In our discussion of the diachronic development of the conjunction *zumal*, I argued that it evolved in the context of the frequent combination of the focus particle *zumal* and a causal adverbial clause. The interpretive behavior of *zumal* in 100 is most naturally interpreted as a reflex of these diachronic facts. The similarity of *zumal*- and *besonders weil*-clauses indicates a direct relation between the two clause types. Thus the semantic analysis of their meanings supports the diachronic hypothesis according to which the conjunction *zumal* developed out of a combination of the focus particle *zumal* ‘especially’ and a causal conjunction *da* or *weil* ‘because’.

5. GRAMMATICALIZATION. The next question is whether the development of *zumal* into a conjunction²⁵ can be analyzed as a grammaticalization process similar to those previously described for several other conjunctions (Givón 1979, Ransom 1988, Harris & Campbell 1995, Heine & Kuteva 2002, Hopper & Traugott 2003, etc.). Most of those cases concern derivations from nouns, verbs (of saying), or pronouns: in the extensive typological study of Heine & Kuteva 2002, the path of ‘a focus particle to a complementizer’ is not attested. In fact, I do not consider the development of *zumal* to be a grammaticalization process, since it is a product of structural reanalysis at the syntactic level,²⁶ without a shift from the old to the new meaning.²⁷ None of the current criteria for grammaticalization seems to me to be fulfilled. Thus *zumal* has not developed ‘from discourse to syntax’ (Givón 1979) because—as has been noted—it does not have an underlying paratactic structure, but rather a clearly embedded adverbial clause in the scope of a focus particle. Nor has it developed from lexical to grammatical or from grammatical to more grammatical (cf. Lehmann 1986, 2002). Furthermore, *zumal* does not obviously show any subjectification or pragmatic enrichment²⁸ (Traugott 1982, Traugott & König 1993, Traugott & Dasher 2002). It has been subject to neither phonetic nor morphological attrition²⁹ (cf. Lehmann 1986, 2002). As to paradigmaticity (Lehmann 1986), the conjunction *zumal* does indeed belong to a closed class; however, the same is also true of the focus particle *zumal*. There is thus no paradigmaticity effect. Lastly, there is no additional restriction in syntactic position within the clause (cf. Lehmann 1986, 2002, Heine et al. 1991): although the complementizer is restricted to a preclausal position, the same is true for a focus particle scoping over a whole CP. In this

²⁵ An analysis of the previous stages of *zumal* is not trivial and would go beyond the bounds of this article. See similar cases in Eckardt 2001 and Autenrieth 2002.

²⁶ Cf. Roberts & Roussou 2003.

²⁷ As we have observed in §4, the conjunction *zumal* has developed from the combination of a focus particle with a causal embedding conjunction. The syntactic and semantic analyses clearly show that *zumal* still contains features of both of these underlying elements. The absorption of the meaning of additional material is, however, not characteristic of grammaticalization. There is therefore no apparent semantic bleaching, but rather structural change.

²⁸ The supposed development of *zumal* to a discourse particle could be a case of subjectification.

²⁹ The remark about semantic bleaching (n. 27) holds here too. In the case of *zumal* we are dealing with the structural omission of *weil/da* ‘because’, which is indeed different from the phonetic or morphological attrition found in the usual grammaticalization cases.

case, therefore, the relative position of the focus particle *zumal* is at least on the surface identical to that of the homonymic conjunction.³⁰

Thus *zumal* has not been subject to grammaticalization processes, but rather to a structural reanalysis, which has to be understood in broad terms.

6. CONCLUSION. This article contributes to the recent discussion of interclausal relations. To this end I have employed both diachronic and synchronic data, building a coherent account on the basis of the two. In this way, the complementarity of these very different data sources becomes apparent; each provides the other with missing components, and like two pieces of a puzzle, they show the stages of development of the present grammatical and interpretive behavior of *zumal*. The complete picture only becomes evident when we take into consideration both a detailed analysis of the conjunction in present-day German and the diachronic analysis of *zumal* as a focus particle.

On the basis of the traditional syntactic tests for embeddedness and the meaning analysis from present-day data, I noted that *zumal*-clauses share features of both embedded and nonembedded clause types.

The solution to this puzzle is to be found in the diachronic development of the word *zumal*. The investigation revealed that *zumal* changed its meaning from a temporal adverb or an intensifying particle in Middle High German to a focus particle and later to a causal conjunction in Early New High German. As a focus particle, *zumal* could be associated with different kinds of phrases, including subordinated CPs. Interestingly, the combination with a causal CP makes up about 30% of all its occurrences as a focus particle in the Early New High German part of the corpus. Precisely this piece of information led to the hypothesis that the conjunction *zumal* came into existence through the recategorization of the focus particle *zumal* and a causal conjunction.

The investigation of synchronic data made it clear that *zumal*-clauses behave in the same way as subordinate causal clauses in the scope of a focus particle. The synchronic analysis has therefore verified the originally diachronic hypothesis.

SOURCES

DICTIONARIES

- DUDEN. 2006. *Die Grammatik: Unentbehrlich für richtiges Deutsch*, ed. by Kathrin Kunkel-Razum and Franziska Münzberg. Mannheim: Dudenverlag.
- FISCHER, HERMANN. 1924. *Schwäbisches Wörterbuch: Auf Grund der von Adelbert v. Keller begonnenen Sammlungen und mit Unterstützung des württembergischen Staates. Vol. 6.1: U, W, X, Z*. Tübingen: Laupp.
- FISCHER, HERMANN, and HERMANN TAIGEL. 1986. *Schwäbisches Handwörterbuch: Auf der Grundlage des 'schwäbischen Wörterbuchs' von Hermann Fischer und Wilhelm Pfeiderer*. Tübingen: Laupp.
- KLUGE, FRIEDRICH, and ELMAR SEEBOLD. 1995. *Etymologisches Wörterbuch der deutschen Sprache*. 23rd edn. Berlin: De Gruyter.
- WACKERNAGEL, WILHELM. 1971. *Althochdeutsches Handwörterbuch*. Hildesheim, NY: Georg Olms.

CORPORA

- COSMAS I/II (Corpus Search, Management and Analysis System). 1991–2016. Institut für Deutsche Sprache, Mannheim. Online: <http://www.ids-mannheim.de/cosmas2/>.
- MHDBDB: *Die Mittelhochdeutsche Begriffsdatenbank*. University of Salzburg, Austria. Online: <http://mhdbdb.sbg.ac.at/index.html>.
- The Bonn corpus: Das Bonner Frühneuhochdeutsch-Korpus*. Online: <https://korpora.zim.uni-duisburg-essen.de/Fnhd/>.

³⁰ Structurally, a focus particle is adjoined to a complementizer phrase.

PRIMARY LITERATURE

- ABRAHAM [A SANCTA CLARA]. 1680. *Oesterreichisches Deo Gratias*. Vienna: Pet. Paul Vivian, Universität-Buchdrucker.
- BECHSTEIN, LUDWIG. 1853. *Deutsches Sagenbuch*. Leipzig: Georg Wigand.
- BECHSTEIN, LUDWIG. 1999. *Sämtliche Märchen*. 2nd edn. Düsseldorf: Artemis und Winkler.
- BRENTZ, JOHANNES (ed.) 1565. *Protocoll: Das ist, Acta oder Handlungen des Gesprechs zwischen den Pfälzischen und Wirtembergischen Theologen, von der Ubiquitet oder Allenthalbenheit des Leibs Christi und buchstäblichen verstand der wort Christi / das ist mein leib. Im April des Jars 1564. Zu Maulbrun gehalten*. Heidelberg: Mayer.
- Die verwüstete vnd verödete Schäferey*. 1642. Part 1. Bibliotheca Augustana. Online: http://www.hs-augsburg.de/~%20harsch/germanica/Chronologie/17Jh/Schaeferrei/sch_lp01.html.
- Einleitung zur heutigen Historie aus denen täglich einlaufenden Zeitungen*, vol. 8. 1708. Leipzig: Fritsch.
- GELLERT, CHRISTIAN F. 1747. *Das Leben der Schwedischen Gräfinn von G.****, vol. 1. Leipzig: Wendler. Online: http://www.deutschestextarchiv.de/book/show/gellert_leben01_1747.
- GOETHE, JOHANN W. 1986 [1830]. Aus meinem Leben: Dichtung und Wahrheit. *Johann Wolfgang Goethe: Sämtliche Werke: Briefe, Tagebücher und Gespräche*, ed. by Klaus-Detlef Müller, vol. 14. Frankfurt am Main: Deutscher Klassiker.
- GOTTSCHED, JOHANN CH. 2003. Der Sterbende Cato. *Deutsche Dramen von Hans Sachs bis Arthur Schnitzler*, ed. by Marcus Finkbeiner. CD-ROM. Berlin: Directmedia. [1st published, Leipzig: Teubners Buchladen, 1732.]
- GRILLPARZER, FRANZ. 2003. Libussa. *Deutsche Dramen von Hans Sachs bis Arthur Schnitzler*, ed. by Marcus Finkbeiner. CD-ROM. Berlin: Directmedia. [1st published, Stuttgart: Cotta, 1872; written 1848.]
- GRIMM, JACOB, and WILHELM GRIMM. 1960. *Deutsche Sagen*. Darmstadt: Wissenschaftliche Buchgesellschaft. [1st published 1816.]
- NOTKER DER DEUTSCHE. 1975. [MS 10th c.] *Boethius' bearbeitung von Aristoteles' Schrift 'De Interpretatione'*, ed. by James C. King. Tübingen: Niemeyer.
- REUTER, CHRISTIAN. 2003. Der ehrlichen Frau Schlampampe Krankheit und Tod. *Deutsche Dramen von Hans Sachs bis Arthur Schnitzler*, ed. by Marcus Finkbeiner. CD-ROM. Berlin: Directmedia. [1st published 1696.]
- STEINHOFF, HANS-HUGE (ed.) 1995a. *Lancelot und Ginover*. Frankfurt am Main: Deutscher Klassiker.
- STEINHOFF, HANS-HUGE (ed.) 1995b. *Lancelot und der Gral*. Frankfurt am Main: Deutscher Klassiker.
- VISCHER, CHRISTOPH. 1576. *Ausslegung der Evangelien, so man auff die Sontage in der Christlichen Kirchen zu handeln pfeget, Vom Advent biss auff Ostern / Darinnen ein jedes Euangelium in drey / bißweilen in vier Predigten verfasst ist*. Leipzig: Steinman.
- VON FRITZLAR, HERMANN. 14th c. *Heiligenleben*. Part 1. Manuscript: Cod. Pal. Germ. 113. Online: <http://digi.ub.uni-heidelberg.de/diglit/cpg113>.
- VON IMHOF, ANDREAS LAZARUS. 1735. *Neu-eröffneter Historischer Bilder-Saal*, vol. 9. Nürnberg: Buggel und Seitz.
- VOSS, JOHANN H. 1966 [1784]. *Luise. Voss: Werke in einem Band*, ed. by Hedwig Voegt. Berlin: Aufbau.
- Wunder der Natur nach der Menschen unterschiedlichen Beschaffenheit*. 1690. Frankfurt: Kästner.

REFERENCES

- ANTOMO, MAILIN. 2012. Interpreting embedded verb second: Causal modifiers in German. *Proceedings of ConSOLE 17*, 27–51. Online: <http://media.leidenuniv.nl/legacy/console17-antomo.pdf>.
- ANTOMO, MAILIN, and MARKUS STEINBACH. 2010. Desintegration und Interpretation: Weil-V2-Sätze an der Schnittstelle zwischen Syntax, Semantik und Pragmatik. *Zeitschrift für Sprachwissenschaft* 29.1–37. DOI: 10.1515/zfs.2010.001.
- AUTENRIETH, TANJA. 2002. *Heterosemie und Grammatikalisierung bei Modalpartikeln*. Tübingen: Max Niemeyer.

- AXEL, KATRIN, and ANGELIKA WÖLLSTEIN. 2009. German verb-first conditionals as unintegrated clauses: A case study in converging synchronic and diachronic evidence. *The fruits of empirical linguistics, vol. 2: Product*, ed. by Susanne Winkler and Sam Featherston, 1–35. Berlin: Mouton de Gruyter.
- BROVETTO, CLAUDIA. 2002. Spanish clauses without complementizer. *Current issues in Romance languages*, ed. by Teresa Satterfield, Christina Tortora, and Diana Cresti, 33–46. Amsterdam: John Benjamins.
- BÜRING, DANIEL, and KATHARINA HARTMANN. 2001. The syntax and semantics of focus-sensitive particles in German. *Natural Language and Linguistic Theory* 19.229–81. DOI: 10.1023/A:1010653115493.
- COCCHI, GLORIA, and CECILIA POLETO. 2002. Complementizer deletion in Florentine: The interaction between Merge and Move. *Romance languages and linguistic theory 2000: Selected papers from 'Going Romance' 2000, Utrecht, 30 November–2 December*, ed. by Claire Beyssade, Reineke Bok-Bennema, Frank Drijkoningen, and Paola Monachesi, 57–76. Amsterdam: John Benjamins.
- DOHERTY, CATHAL. 1997. Clauses without complementizers: Finite IP-complementation in English. *The Linguistic Review* 14.197–220. DOI: 10.1515/tlir.1997.14.3.197.
- ECKARDT, REGINE. 2001. Reanalyzing *selbst*. *Natural Language Semantics* 9.371–412. DOI: 10.1023/A:1014875209883.
- FREY, WERNER. 2006. Contrast and movement to the German prefield. *The architecture of focus*, ed. by Valéria Molnár and Susanne Winkler, 235–64. New York: De Gruyter.
- FREY, WERNER. 2011. Peripheral adverbial clauses, their licensing and the prefield in German. *Satzverknüpfung: Zur Interaktion von Form, Bedeutung und Diskursfunktion*, ed. by Eva Breindl, Gisella Ferraresi, and Anna Volodina, 41–77. Berlin: De Gruyter.
- GIVÓN, TALMY. 1979. *On understanding grammar*. New York: Academic Press.
- GOHL, CHRISTINE, and SUSANNE GÜNTHNER. 1999. Grammatikalisierung von *weil* als Diskursmarker in der gesprochenen Sprache. *Zeitschrift für Sprachwissenschaft* 18.39–75. DOI: 10.1515/zfsw.1999.18.1.39.
- GÜNTHNER, SUSANNE. 1993. '... weil—man kann es ja wissenschaftlich untersuchen': Diskurspragmatische Aspekte der Wortstellung in *Weil*-Sätzen. *Linguistische Berichte* 143.37–59.
- GÜNTHNER, SUSANNE. 1999. Entwickelt sich der Konzessivkonnektor *obwohl* zum Diskursmarker? Grammatikalisierungstendenzen im gesprochenen Deutsch. *Linguistische Berichte* 180.409–46.
- GÜNTHNER, SUSANNE. 2001. 'Wobei (.) es hat alles immer zwei seiten': Zur Verwendung von *wobei* im gesprochenen Deutsch. *Deutsche Sprache* 4.313–41.
- HAEGEMAN, LILIANE. 2003. Conditional clauses: External and internal syntax. *Mind & Language* 18.317–39. DOI: 10.1111/1468-0017.00230.
- HAIMAN, JOHN, and SANDRA A. THOMPSON. 1984. 'Subordination' in universal grammar. *Berkeley Linguistics Society* 10.510–23. DOI: 10.3765/bls.v10i0.1973.
- HARRIS, ALICE C., and LYLE CAMPBELL. 1995. *Historical syntax in cross-linguistic perspective*. Cambridge: Cambridge University Press.
- HEINE, BERND; ÜLRIKE CLAUDI; and FRIEDRIKE HÜNNEMEYER. 1991. *Grammaticalization: A conceptual framework*. Chicago: University of Chicago Press.
- HEINE, BERND, and TANIA KUTEVA. 2002. *World lexicon of grammaticalization*. Cambridge: Cambridge University Press.
- HOLLER, ANKE. 2008. German dependent clauses from a constraint-based perspective. 'Subordination' vs. 'coordination' in *sentence and text*, ed. by Cathrine Fabricius-Hansen and Wiebke Ramm, 187–216. Amsterdam: John Benjamins.
- HOPPER, PAUL J., and ELIZABETH CLOSS TRAUGOTT. 2003. *Grammaticalization*. 2nd edn. Cambridge: Cambridge University Press.
- IATRIDOU, SABINE. 1991. *Topics in conditionals*. Cambridge, MA: MIT dissertation.
- JACOBS, JOACHIM. 1983. *Fokus und Skalen: Zur Syntax und Semantik der Gradpartikeln im Deutschen*. Tübingen: Niemeyer.
- KELLER, RUDI. 1995. The epistemic *weil*. *Subjectivity and subjectivisation: Linguistic perspectives*, ed. by Dieter Stein, Susan Wright, and Edward Finegan, 16–30. Cambridge: Cambridge University Press.
- KÜPER, CHRISTOPH. 1991. Geht die Nebensatzstellung im Deutschen verloren? Zur pragmatischen Funktion der Wortstellung in Haupt- und Nebensätzen. *Deutsche Sprache* 19.133–58.

- LEHMANN, CHRISTIAN. 1986. On the typology of relative clauses. *Linguistics* 24.663–80. DOI: 10.1515/ling.1986.24.4.663.
- LEHMANN, CHRISTIAN. 2002. New reflections on grammaticalization and lexicalization. *New reflections on grammaticalization*, ed. by Ilse Wischer and Gabriele Diewald, 1–18. Amsterdam: John Benjamins.
- PASCH, RENATE. 1983. Untersuchungen zu den Gebrauchsbedingungen der deutschen Kausalkonjunktionen *da*, *denn* und *weil*. *Linguistische Studien des Zentralinstituts für Sprachwissenschaft A* 104.41–243.
- PASCH, RENATE. 1997. *Weil* mit Hauptsatz—Kuckucksei im *denn*-Nest. *Deutsche Sprache* 25.252–71.
- PASCH, RENATE; URSULA BRAUSSE; EVA BREINDL; and ULRICH H. WASSNER. 2003. *Handbuch der deutschen Konnektoren: Linguistische Grundlagen der Beschreibung und syntaktische Merkmale der deutschen Satzverknüpfers (Konjunktionen, Satzadverbien und Partikeln)*. Berlin: De Gruyter.
- PESETSKY, DAVID, and ESTHER TORREGO. 2001. T-to-C movement: Causes and consequences. *Ken Hale: A life in language*, ed. by Michael Kenstowicz, 355–426. Cambridge, MA: MIT Press.
- RANSOM, EVELYN N. 1988. The grammaticalization of complementizers. *Berkeley Linguistics Society* 14.364–74. DOI: 10.3765/bls.v14i0.1793.
- REIS, MARGA. 1997. Zum syntaktischen Status unselbständiger Verbzweit-Sätze. *Sprache im Fokus: Festschrift für Heinz Vater zum 65. Geburtstag*, ed. by Christa Dürscheid, Karl Heinz Ramers, and Monika Schwarz, 121–44. Tübingen: Niemeyer.
- REIS, MARGA. 2005. On the syntax of so-called focus particles in German: A reply to Büiring and Hartmann 2001. *Natural Language and Linguistic Theory* 23.459–83. DOI: 10.1007/s11049-004-0766-5.
- REIS, MARGA. 2013. *Weil*-V2'-Sätze und (k)ein Ende? Anmerkungen zur Analyse von Antomo & Steinbach (2010). *Zeitschrift für Sprachwissenschaft* 32.221–62. DOI: 10.1515/zfs-2013-0008.
- REIS, MARGA, and INGER ROSENGREN. 1997. A modular approach to the grammar of additive particles: The case of German *auch*. *Journal of Semantics* 14.237–309. DOI: 10.1093/jos/14.3.237.
- REIS, MARGA, and ANGELIKA WÖLLSTEIN. 2010. Zur Grammatik (vor allem) konditionaler V1-Gefüge im Deutschen. *Zeitschrift für Sprachwissenschaft* 29.111–79. DOI: 10.1515/zfsw.2010.004.
- ROBERTS, IAN, and ANNA ROUSSOU. 2003. *Syntactic change: A minimalist approach to grammaticalization*. Cambridge: Cambridge University Press.
- ROOTH, MATS. 1992. A theory of focus interpretation. *Natural Language Semantics* 1.75–116. DOI: 10.1007/BF02342617.
- SCHUTZ, HANNES. 1998. *Weil*-Sätze im gesprochenen Deutsch. *Beiträge zur Dialektologie des ostoberdeutschen Raumes*, ed. by Claus Jürgen Hutterer and Gertrude Pauritsch, 85–112. Göttingen: Kümmerle.
- SPEYER, AUGUSTIN. 2011. Zur Integriertheit kausaler (Neben-)Sätze im Frühneuhochdeutschen. *Sprachwissenschaft* 36.53–84.
- TRAUGOTT, ELIZABETH CLOSS. 1982. From prepositional to textual and expressive meanings: Some semantic-pragmatic aspects of grammaticalization. *Perspectives on historical linguistics*, ed. by Winfred P. Lehmann and Yakov Malkiel, 235–71. Amsterdam: John Benjamins.
- TRAUGOTT, ELIZABETH CLOSS, and RICHARD B. DASHER. 2002. *Regularity in semantic change*. Cambridge: Cambridge University Press.
- TRAUGOTT, ELIZABETH CLOSS, and EKKEHARD KÖNIG. 1993. The semantics-pragmatics of grammaticalization revisited. *Approaches to grammaticalization, vol. 1: Focus on theoretical and methodological issues*, ed. by Elizabeth Closs Traugott and Bernd Heine, 189–218. Amsterdam: John Benjamins.
- WEGENER, HEIDE. 1993. *Weil—das hat schon seinen Grund: Zur Verbstellung in Kausalsätzen mit weil im gegenwärtigen Deutsch*. *Deutsche Sprache* 21.289–305.