

## Research Article

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# The prosodic marking of discourse functions: German *genau* ‘exactly’ between confirming propositions and resuming actions

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**Abstract:** This article describes conversational functions of the turn-constructional-unit-initial (TCU-initial) German *genau* ‘exactly’ in relation to its prosodic realization. Prior research has shown that *genau* is prominently used as a confirming response particle or marker of reciprocity. In its confirmatory function, it may also occur as a sequence-structuring device in that it closes disaligned sequences in order to foster the transition to the main line of talk. Based on an interactional study of 113 instances of *genau* in a range of mundane and institutional contexts taken from the Research and Teaching Corpus of Spoken German (FOLK), this contribution shows that the confirmatory function of *genau* in contexts of sequential disruption may be shifted to using it as an initial discourse marker. In this use, *genau* does not confirm a proposition in question but connects a suspended sequential path to the upcoming line of talk. We show that this resumptive function of *genau* is transferred to sequential contexts where no side sequences occur, leading to a connective use of the element. This process of integration from a response particle to a TCU-initial discourse marker is linked to prosodic changes in the realization of *genau*: It will be shown that differences in the perceived prosodic (dis)integration reflect the speakers’ practices of signalling if *genau* should be understood as either confirming a prior turn or rather projecting the upcoming turn to be complementing an established path of action. Perceptual ambiguity and variation are discussed to be an integral part of participant-focused conceptions of prosodic units.

**Keywords:** response particle, turn-initial position, discourse marker, grammaticalization, prosody, German

## 1 Introduction

Many ways of using *genau* ‘exactly’ have been described in prior studies (Willkopp 1988, Werlen 2010, Oloff 2017, Auer 2021a). While the confirmatory function of *genau* in responsive or reactive turns seems to be prototypical for its use in talk-in-interaction, Oloff (2017) and Auer (2021a) have also indicated that *genau* (a) may occur turn-initially, not only in responsive but also in sequence-initial position, and (b) that it may also be used as a turn-internal discourse marker for structuring sequences as well as multi-unit turns.<sup>1</sup> Based on their observations, we describe uses of initial *genau* that exhibit a pragmatic shift from performing an autonomous responsive action to an initial discourse marker<sup>2</sup> that primarily resumes and connects spates of talk while not confirming a proposition.

<sup>1</sup> In this contribution, we focus on ‘dialogical’ uses of *genau* and will therefore not go into detail with prior descriptions of turn-internal uses of *genau* as an *autodialogical confirmation particle* (Auer 2021a).

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The following introductory example 1 gives an impression of this projective use of *genau*, which we will be focussing on in this study. In a multiparty interaction of a student theatre group, the interlocutors talk about the characters of their theatre play and how they relate to each other. After having finished talking about a male character (not shown), MA brings up the next character to discuss which is connected to the foregoing sequence by the initial resumptive *und* ‘and’ (l. 16). Having already displayed problems to recall the character’s name properly in line 16, MA then initiates a repair sequence (l. 19) and requests information on how they had decided to name the character (l. 21).<sup>3</sup>

**Ex.1: Cecilie, resumptive *genau*, FOLK\_E\_00330\_SE\_01\_T\_02 (54)<sup>4</sup>**

16 MA: und (.) hm zu: (.)ehm CEcedi?

**And ehm about ehm cecedi**

17 AD: ((clears her throat))

18 MA: wie (.)

**What**

19 [<p, all> tschuldigung;>]

**Sorry**

20 LP: [ ciCI] [lie, ]

**Cicilie**

21 MA: [<p> wie] ham wir uns  
entschieden wie die HEIßT,>

**How did we decide that she should be called**

22 (1.08)

23 MA: CID[di cis ] ci

**Ciddi cis ci**

24 LN: [ceCilia oder?]

**Cecilia wasn’t it**

((14 lines omitted))

<sup>2</sup> In its turn/turn-constructive-unit-initial (TCU-initial) use, we will refer to *genau* as a *discourse marker* (e.g., Auer and Günthner 2005), and thereby emphasize its action-projective function. However, we acknowledge that the terminology for turn-/TCU-initial elements varies across different research traditions. For a terminological discussion on (*discourse*) *particles*, *discourse markers*, *pragmatic markers*, and related concepts, see e.g. Beeching and Detges (2014, 5–8), Arens (2023), Fischer (2006), Heritage and Sorjonen (2018), Maschler and Schiffrin (2015).

<sup>3</sup> Transcripts were created following the GAT2 system (Selting et al. 2009). For multimodal transcription (Section 5), iconic signs of the Sutton Sign Writing System (e.g. Dix 2023) were combined with gaze transcription by Auer (2021b) and conventions by Mondada (2018) for depicting the temporal succession of gaze direction and body movements.

<sup>4</sup> All examples of the final data set are available via the following link: [https://dgd.ids-mannheim.de/DGD2Web/ExternalAccessServlet?command=displaySharedObject&shareID=M2C74z&objectType=kwic\\_1](https://dgd.ids-mannheim.de/DGD2Web/ExternalAccessServlet?command=displaySharedObject&shareID=M2C74z&objectType=kwic_1). The number in brackets refers to the number of the element in the collection. As the data are protected by rights, registration with the database for spoken German (DGD) is required in order to access the collection.

- 39 MA: CeCili okee.
- Cecili okay**
- 40 ((murmuring in the background))
- 41 -> °h ähm-
- > **Ehm**
- 42 -> (--)
- 43 -> genau wie wie Is das verhältnis zu IHR?
- > **PTC<sup>5</sup> how how is the relationship with her**
- 44 (---)
- 45 AH: <<len> ich hätt jetzt gesagt seine beste FREUNDin und  
ehm->
- I would have said now his best friend and ehm**
- 46 (2.0)
- 47 AH: geht durch dick und DÜNN- =
- 48 = seit\_em <<lachend> KINdergarten;>
- Going through thick and thin since the kindergarden**

After another unsuccessful attempt to articulate the name (l. 23) in overlap with a candidate response by LN in line 24, several interlocutors produce (humorous) variants of the name *Cecilie*, which we omitted here. MA then produces another modification (l. 39), whereafter the sequence comes to a closure. In line 41, MA again takes the turn while prefacing it with *ehm* and a pause (0.63 s, l. 42) and then produces a turn-constructional-unit-initial (TCU-initial) *genau* before requesting information about Cecilie’s relation to her male co-character (l. 43). We argue that *genau* is used here to reopen the abandoned activity of determining the characters’ relationships. *Genau* therefore adopts a sequence-structuring function but in a way that hasn’t been described in previous studies, as it occurs *after* the closure of the previous sequence, i.e. detached from a sequential requirement to perform a confirmatory move. *Genau* links the upcoming TCU(s) to the abandoned sequential path, i.e. re-initiates the action of finding out how Cecilie is related to the character they had talked about before and thereby exhibits a mainly prospective orientation. Regarding its prosodic design, MA’s *genau* is produced in a high speech rate, which contributes to the perception of prosodic integration with the rest of her turn (we refer to Section 6.2.3/Figure 7 for more details on the prosody of this example). This makes it accountable (Robinson 2016) to the interlocutors that *genau* is not used to perform a confirmatory response. However, a retrospective function persists in that the interlocutors treat the sequence as completed.

The above-described resumptive function of *genau* is exemplary for pragmatic developments of lexical elements that undergo a grammaticalization process of integration from a stand-alone response particle to a TCU-initial discourse marker (Auer 1996, 2021a, see also Mazeland and Huiskes 2001, for a resumptive function of Dutch *maar* ‘but’). As the central aims of this study are to trace pragmatic changes of *genau* as well as linking

<sup>5</sup> PTC will be used as an abbreviation for “particle”.

them to prosodic modifications in the production of the element, we first give a brief overview of prior research on pragmatic developments of conversational markers and on the role of prosody in distinguishing between different functions (Section 2). Against this background, the functions of *genau* as described in prior studies will be recalled in detail (Section 3) before giving a description of the data and methods used for this study (Section 4). We then turn to the results of our study, which are the projective, i.e. resumptive and connective, functions of *genau* (Section 5) and their relation to the perceived prosodic status of the element (Section 6). A summary and discussion is given in Section 7.

## 2 Grammaticalization of turn-initial lexical elements and their prosodic realization

In spoken interaction, the initial position in a turn is crucial for the organization of talk. It is the relevant position to signal connectivity to previous talk, as well as expectations for upcoming talk, to regulate turn-taking and other dimensions of interaction (Auer 1996, 310–12, Beeching and Detges 2014, 11–2, Fiehler et al. 2004, 261–8, Heritage and Sorjonen 2018, 1–6, Traugott 2014, 72–3). In many languages, specific particles and phrases have evolved to deal with these functions (e.g. English *actually*, *anyway*, *in fact*, *okay*, *well*/German *also*, *ja*, *jedenfalls*, *naja*, etc., see Mushin et al. 2023 for similar descriptions of Australian Aboriginal languages). Since about the 1980s, many studies have dealt with this phenomenon, e.g. under the term of discourse markers or pragmatic markers (Beeching and Detges 2014, 5–8). Often, these elements have homophones in other lexical classes from which they are supposed to derive. It is because of this connection to homophonous lexemes that discourse markers have been discussed in the context of grammaticalization or pragmaticalization (Auer and Günthner 2005, Traugott 1995), also in approaches of CA and IL (e.g. Auer and Günthner 2005, Barth-Weingarten and Couper-Kuhlen 2002). The connection of the latter to grammaticalization theory (e.g. the contribution by Barth-Weingarten and Couper-Kuhlen 2002 in Diewald and Wischer 2002) thereby builds on a concept of grammar that is extended to the domain of discourse. Following this view, grammaticalization is not only relevant for the development of grammatical morphemes (such as auxiliary verbs) but also for evolving discourse markers which likewise undergo processes of semantic bleaching and extension to other usage contexts (Auer and Günthner 2005, 354–6).

It is worth noting that the pragmatic shift of discourse markers goes along with a positional shift in terms of their utterance-based or turn-related position. In this regard, Auer (1996, 313) suggests two clines that capture two opposite directions of positional movement: For example, English *anyway* or German *jedenfalls* are adverbials in utterance medial or utterance final position. Used in TCU- or turn-initial position, however, they assume discourse structuring functions by indicating that the current speaker intends to take up a previously abandoned strand of talk (Bergmann 2024, Ferrara 1997). In cases as such, an integrated element within the inner sentence frame moves to the left periphery and becomes disintegrated in terms of syntax, which is well documented both synchronically and diachronically (Gohl and Günthner 1999, Lenker 2010, Mroczynski 2012, Traugott 2014, Traugott and Dasher 2001, 152–92).

A second cline, which will be relevant for *genau* ‘exactly’, takes the opposite course: Here, elements which perform an autonomous “sequential move” (Auer 1996, 313–7) become more dependent by developing from a stand-alone, disintegrated, into an integrated initial element prefacing a turn or TCU. The cases under this second positional shift therefore reveal a loss of autonomy which is one aspect of grammaticalization processes (Lehmann 2002): “Grammaticalization on the interaction-to-grammar cline is ... involved when structures typically used in conversation for responsive moves ... are re-categorized as projecting, pre-front field structures.” (Auer 1996, 315). Stand-alone responsive particles such as *yes*, *no*, *okay*, *gut* ‘good’, *sure* are a case in point that can adopt typical discourse marker functions of foreshadowing specific continuations. It is this second cline that becomes relevant for the functional variation we encounter in contemporary German *genau* ‘exactly’ as will be shown in Sections 3 and 5.

In our article, we take up the thought of (turn-initial) elements moving along these clines in the process of grammaticalization/pragmaticalization. We show how different functions of *genau* are linked to one another

forming intermediate stages between retrospective confirmation and prospective connection. In these intermediate stages, the sequential position, i.e. the context of *genau* gradually disfavours a reading of *genau* as backwardly oriented confirmation and emphasizes a projective reading instead. In this sense, we argue for a cline of several, related functions of *genau*. We then ask whether or how the prosodic realization of *genau* is related to the movement along the cline.

The general picture regarding the prosody of discourse markers in the context of grammaticalization is quite confusing. Some studies point to prosodic weakening of discourse markers (Arens 2023, Betz 2017, Dehé and Stathi 2016, Wichmann et al. 2010), others show prosodic strengthening (Auer 1996, Bergmann 2024, Barden et al. 2001, Fiehler et al. 2004, Ferrara 1997, Sohn and Kim 2014). Again, we apply the two clines introduced above to this unclear picture, and we suggest that the elements on the two clines behave differently in terms of their prosodic realization. For the second cline – from stand-alone to TCU-initial/turn-initial – we expect a loss in prosodic strength. This loss in prosodic strength for cline 2-elements is borne out by e.g. Arens (2023) on German *gut* ‘good’ or by Betz (2017) for a response particle similar to *genau*, i.e. German *ja* ‘yes’: While performing an affirmative move when being used responsively (e.g. Imo 2013), *ja* in its initial use only marks formal coherence to the foregoing conduct while primarily projecting a follow-up turn that is dispreferred or lies outside the expected responsive range of the question (Betz 2017, 183). Betz finds that the prospective, non-affirmative use of *ja* exhibits a loss of prosodic autonomy, i.e. it is realized as part of the following intonation unit. For respective functions of *genau*, Oloff (2017, 228) observes that “[t]he more *genau* is used for confirming responsively, the more it is pronounced with a clear accent on the 2nd syllable and a middle-falling intonation. The more *genau* is used for closing respectively structuring sequences, the more it is pronounced minimally, faster and with level intonation.” (translated by the authors) Results such as these are consistent with further studies that find prosodic weakening and prosodic integration of an element to be indicative of different discourse functions in general and of retro- vs prospective orientation in particular (Barden et al. 2001, Ford et al. 2004, Szczepek Reed 2015, Barth-Weingarten and Ogden 2021, Couper-Kuhlen 2021, Bergmann 2022, Arens 2023).

Against this backdrop, our study addresses the prosodic realization of *genau* along the cline of discourse functions from confirmatory responsive to turn-initial connective. To do so, our study takes into account prosodic characteristics of *genau* as well as boundary-marking phonetic parameters towards the subsequent syllables (Section 4). We find the prosodic design of *genau* to reveal an increasing and gradual loss of prosodic autonomy and integration into the following stretch of talk by the same speaker. Our analyses thereby acknowledge cases of ambiguity and doubt regarding the prosodic autonomy of *genau*, both in terms of individual perception and interrater agreement. It will be argued that prosodic ambiguity is systematically linked to the stepwise development of projective discourse functions of *genau*.

### 3 *Genau* for performing confirmations and structuring sequences

Before looking at uses of *genau* as (part of) a conversational action, we take a brief look at its fundamental structural characteristics, i.e. its sentence-based grammatical functions. Regarding this *genau* is considered an adjective: Like in the following noun phrase *das genaue Datum* ‘The exact date’, it can be inflected as well as put into comparative, like in *der genaueste Rechner* ‘the most exact calculator’. DUDEN online lists two lexical meanings of *genau*, being ‘thoroughly in detail’ and ‘consistent with a reference value’ (translated by the authors). The latter meaning is usually linked to its second grammatical function of a focus particle, as in *Genau so ist es* ‘That’s exactly how it is’ (DUDEN *Das große Wörterbuch der Deutschen Sprache*) (1999, 1453, see also Altmann 1978, 45) which already leads us to prototypical contexts of stand-alone *genau* in conversation: It prominently occurs within (the beginning of) responsive turns. In line with Altmann (1978) and König (1991), Werlen (2010) sees the development of the focus particle *genau* in clause-shaped utterances as a preconditional for developing its responsive use as a stand-alone confirmation particle, which is seen as an elliptical form of the former. While also a simple *ja* ‘yes’ can perform this function of a *Responsiv* (Zifonun et al. 1997; Ehlich 2009, 437), the use of *genau* is more constrained to requests for confirmations, informings or statements and less common in response to requests for information. *Genau* is further characterized by a

higher emphasis than a mere *ja*: By using *genau* the respondent displays strong agreement with the interlocutor's proposed state of affairs. The latter can be either a fact-alike *confirmable* (Betz et al. 2013, 138) or an opinion which the *genau*-speaker completely agrees with (see Willkop 1988; Oloff 2017, 210). In the case the *genau*-producer responds to informings or requests for confirmation, *genau* might indicate epistemic negotiations in that it confirms while claiming an at least equal, if not superior, epistemic access to the matter at hand.

Example 2 illustrates this prototypical confirming use of *genau* (for further examples in different sequence types see Oloff 2017, 215–8). The extract is taken from an interaction of two colleagues in kindergarten who reflect on how teachers can support the children's language development best possible. In line 0180, EV utters a *formulation* (Antaki 2008) that states what she has understood about AG's point of view (l. 0170-0175) and thereby requests confirmation about it.

**Ex.2: Complete sentences, confirming *genau*, FOLK\_E\_00414\_SE\_01\_T\_01 (65)**

0170 AG: jetzt gAnz oft beim MITtagessen fragen die kinder grad so;

***The children often ask at lunch***

0171 dArf ich NACHtisch.

***May I dessert***

0172 °hh [((laughs))]

0173 EV: [aha, ]

***I see***

0174 AG: <<laughing> dann geb ich ihnen KEInen nachtisch;> =

***Then I don't give them dessert***

0175 [weil] es war kein SATZ kein vollständiger.

***Because it was not a sentence not a complete one***

0176 EV: [ h°]

((three lines omitted))

0180 EV: das heißt du verTRITTST,

***This means you hold***

0181 AUCh die position:-

***Also the position***

0182 sprich in ganzen SÄTzen.

***Speak in complete sentences***

0183 AG:-> <<p> geNAU.> =

**PTC**

0184 = <<p> das [ISCH ] so.>

***That's how it is***

0185 EV: [okay.]

***Okay***

AG responds with *genau* (l. 0183) and reinforces this understanding by giving an elaborate confirmation with *das isch so* 'That's how it is'. EV then closes the sequence with *okay* (Mondada and Sorjonen 2021) in third position.

Based on this prototypical function of *genau* as a confirmation particle, Oloff (2017) describes uses of *genau* which occur in contexts of disaligned side sequences that interrupt an established main line of talk, e.g. tellings or explanations. In the second sequential position of these side sequences, *genau* still confirms in a responsive position but adopts an additional sequence structuring function as it closes the side sequence in order to lead back to the main sequential path. Example 3 illustrates this function of *genau*. The excerpt is part of a dyadic informal talk between female roommates. In the beginning of the example, AG continues a multi-unit turn in which she informs NR about how to drink a special kind of detox tea.

**Ex.3: Tea pyramids, confirming & sequence-structuring *genau*, FOLK\_E\_00225\_SE\_01\_T\_02**

(39)

0220 AG: des [is dann dieser DE]toxTEA- (-)

***This is then this detox tea***

0221 NR: [ach COO:L; ]

***Oh cool***

0222 AG: un da (.) kriegste dann halt so\_n PÄCKchen? (---)

***And you just get this package***

0223 AG: und ähm (---) da sind solche(.) kleinen TEEpyramiden drin,

***And ehm there are such small tea pyramids inside***

0224 (--)

0225 NR: ah un die kann man dann

***Ah and you can then***

0226 ja-

***Yes***

0227 KENN ich;

***I know this***

0228 AG: -> geNAU:;

**PTC**

0229 un dann trinkste halt eine tasse mOrgens eine tasse (--) Abends?

***And then you drink one cup in the morning one cup in the evening***

AG's information in line 0223 is a continuation of a multi-unit explanation about details of tea drinking. As AG uses rising final intonation, it projects the continuation of her turn. At this point, NR comes in with a particle-initiated (*ah*, see Betz and Golato 2008) assertion that documents sudden understanding and remembering of the explainable. While being affiliative in this respect, her move is nonetheless disaligned at this point, not only by its placement beyond a TRP but also in that NR claims pre-existing knowledge about the tea pyramids and therefore does not follow the proposed action of being informed. By referring to utilization options in a designedly incomplete way as she omits the grammatical object, NR draws upon common knowledge about what she hints at. AG responds with *genau* (l. 0228), thereby not only confirming the unformulated proposition but also aligning with the ascription of common ground regarding possible uses of the tea pyramids. Initiated with a resumptive *und* 'and' in line 0229, she then directly leads over to continuing her informing. In sum, *genau* confirms while closing the disaligned side sequence, so that the main sequential path can be resumed. Its prosodic design thereby contributes to making understandable to the interlocutor that *genau* performs a confirmatory move here: It is clearly realized as a separate intonation unit with high onset on the first syllable and final lengthening on the accented syllable 'nau'.

Oloff (2017, 224–6) views *genau* as offering the affordance to recognize disaligned turns as correct in terms of content while, at the same time, exhibiting a projective force in that it makes relevant the continuation of the interrupted line of action. We will show in Section 5 that this *pragmatic bleaching* of *genau* from performing an autonomous responsive action to being used for structuring sequences progresses in such a way that it occurs after turns which do not demand a confirmation as a type-fitted next anymore. Before that, our data and methodological procedure are presented in Section 4.

## 4 Data and methods

As a first step of selecting data for our study, a broad sample of instances of *genau* was searched using the FOLK corpus (FOLK = Forschungs- und Lehrkorpus Gesprochenes Deutsch, Schmidt 2014, Reineke et al. 2023). FOLK includes audio- and/or video recordings of 436 conversations that have been collected for linguistic research and language teaching. It includes mundane conversations, such as between friends, family conversations, as well as (semi-)institutional interaction in public spaces or team meetings. Since our analysis focuses on stand-alone occurrences vs (dis)integrated turn-initial occurrences, we made use of the turn position filters<sup>6</sup> available in FOLK for this initial sample, resulting in a total sample of  $N = 3,514$  instances. The manual deletion of false positives was the next necessary step (Bergmann 2022, 86–7). This broad sample formed the basis for extensive single case analyses in joint data sessions of both authors in order to identify the functional spectrum associated with *genau* in this sequential/TCU-related position (Sections 3 and 5). The functional analysis is based on the principles of Conversation Analysis and Interactional Linguistics (Couper-Kuhlen and Selting 2018, Sidnell 2011).

The functions (re-)identified were defined as follows and used for the following classification of cases within our broad sample:

- *Confirming* (Willkopp 1988, Werlen 2010, Oloff 2017, Auer 2021a, Section 3): *Genau* is clearly and primarily retrospectively oriented, a request for confirmation or a statement is confirmed. *Genau* may occur as a stand-alone element in this use, but may also be followed by response elaborations.
- *Sequence-Structuring* (Oloff 2017, Section 3): *Genau* closes disaligned side sequences and confirms a confirmable/statement; it operates primarily retrospectively (consistent to confirming) but also exhibits a prospective orientation in the sense that the *genau*-speaker aims at taking up the temporarily suspended path and regaining the right to speak.

<sup>6</sup> Note that turn-initial position includes all elements up to  $N = 3$  word tokens into a turn so that combinations with other discourse particles (especially: 'ja genau' 'yes exactly') were not prematurely excluded from the collection.

- *Resumptive* (Example 1, Section 5.1): *Genau* signals the overcoming of a progression barrier, it is a resumptive marker upon the completion of side sequences within a temporarily suspended main path of action. *Genau* in this function reactivates coherence and can be used both turn- and TCU-initially, depending on who has the last turn in the side sequence. Crucially, it does not confirm a proposition in this function, which sets it apart from the sequence-structuring function.
- *Connective* (Section 5.2): *Genau* aligns with and follows on from an overarching path of action, this may be done in first sequential position or in second position after foregoing actions that are not confirmables. *Genau* is retrospectively oriented in that it marks the connection to prior contributions within an ongoing main action path and takes them as a starting point. It is prospectively oriented in that it projects another contribution for the purpose of continuation.<sup>7</sup>

We then compiled the final collection of 113 instances of *genau*. Instances from non-native speakers of German and instances from parent–child interaction were discarded from the data set. There were no further exclusion criteria; the data entail tokens from private and institutional settings (e.g. staff meetings), from face-to-face interaction and video-mediated meetings alike. As our aim was to analyse the previously undescribed functions of *genau*, the compilation process began by collecting all candidates for resumptive and connective *genau* that we could find in the original data set. Following this step, instances for the other functions were selected on the basis of a preliminary functional analysis so as to yield a balanced data set. Since the total number of resumptive and connective *genau* is quite low, however, the other functions are still in the majority. After the initial compilation, each element was separately subjected to a detailed functional analysis by both authors and later discussed. After the discussion, each element was assigned a function. In addition, several ‘in-between’ cases were identified, where *genau* fulfilled more than one of the coded functions. These cases are referred to as ‘blends’. Table 1 shows the final distribution of *genau* across the functions in our data set.

**Table 1:** Distribution of functions of *genau* across the collection

| <i>N</i> total | Confirming<br>(Section 3) | Sequence-structuring<br>(Section 3) | Resumptive<br>(Section 5.1) | Connective<br>(Section 5.2) | Blends |
|----------------|---------------------------|-------------------------------------|-----------------------------|-----------------------------|--------|
| 113            | 37                        | 18                                  | 18                          | 9                           | 31     |

The final collection ( $n = 113$ ) was then coded comprehensively by both authors in terms of relevant prosodic parameters. For this formal analysis, the audio files were cut to the respective *genau*-instance within its immediate linguistic context (the foregoing and subsequent utterance). The prosodic coding involved prosodic and phonetic properties related to perceived prosodic (dis)integration of *genau* in both parametric and holistic ways. In the coding process, the functions identified for the single cases were hidden in the spreadsheet in order to minimize a functional bias on the perception of prosody.

First, both authors coded in a holistic manner, whether they perceived the element *genau* as a full and independent intonation unit or not.<sup>8</sup> The coding scheme includes three categories: ‘yes’ for clear cases of a full and independent intonation unit, ‘no’ for clear cases, where *genau* is not perceived as an intonation

<sup>7</sup> Besides these four functions, we (re-)identified two others as a turn-/TCU initial element which we neglect for the purpose of this article, i.e. *genau* as a *start signal* after explicit turn allocation (see Auer 2021a) and in the sequential context of embodied-instrumental performances, which are evaluated by *genau*.

<sup>8</sup> Both authors are experienced in transcribing spontaneous speech using the GAT 2 conventions, where the basic segment rests on the notion of the intonation unit (Selting et al. 2009). Furthermore, one author has a research background in intonation research (both from an interactional and phonological or autosegmental-metrical background). Thus, both authors are aware of the minimum properties that are typically associated with “full” intonation units, i.e. to have at least one focus accent and a cohesive intonation contour/pitch movement (Bergmann and Mertzluft 2009, Cruttenden 1997, Selting et al. 2009, Szczepek Reed 2010). The judgements are therefore not “naïve” perceptual judgements and they probably already draw on certain prosodic features.

unit of its own, and ‘doubt’ for unclear cases.<sup>9</sup> By including ‘doubt’ as a category, we bear witness to the fact that in spontaneous speech, it is not always the case that stretches of talk can be easily and unequivocally segmented and attributed intonation unit status. In addition, as we are dealing with a functional shift on a cline, we attribute theoretical relevance to the notion of ambiguity or doubt as was introduced in Section 2.

Second, both authors coded each item for the following prosodic–phonetic parameters: Prominence on *ge* (1 - 0), prominence on *nau* (1 - 0); high onset on *ge* (h - 0); final pitch movement (fall, fall-to-mid, level, rise, rise-fall); pitch jump to following syllable (up, down, no); change in speech rate to following syllable (up, down, no); change in perceived loudness to following syllable (up, down, no); pause after *genau* (yes, min (<0.2 s), no); glottalization in following syllable if V-initial, e.g. *genau ich*, *genau also* (yes, no, other, where other refers to audible constrictions or non-modal phonation other than glottal stop or glottalization). The coding of these parameters aims to capture gradient discontinuities between *genau* and the following stretch of talk (Barth-Weingarten and Ogden 2021; see also Ford et al. 2004; Pekarek Doehler 2021; Szczepek Reed and Cantarutti 2024 for similar approaches).

The phonetic–prosodic analyses were carried out in *Praat* (Boersma and Weenink 2024), mainly on an auditory basis. In cases of doubt for perceived loudness, intensity curves were taken into account; pauses were measured in cases of doubt regarding minimal (<0.2 s) or non-minimal pauses. Glottalization was checked by visual inspection of the spectrogram.

All coding (functional and prosodic) was recorded in a coding scheme that was jointly developed by the authors and updated as necessary. Interrater reliability was checked in R (R Core Team 2013–2024) with Cohen’s Kappa using the package *irr*, version 0.84.1 (Gamer et al. 2022).

## 5 Beyond confirming: TCU-initial *genau*

### 5.1 Resuming a main line of action after sequential perturbations

Starting from Oloff’s observations that *genau* adopts sequence-structuring functions following disruptions of the main line of action, we argue that these contexts occasion a pragmatic shift of *genau* from a turn-valued responsive element to an initial discourse marker that prospectively indicates the connection to or the resumption of a main line of talk without performing a confirmation anymore. The sequential perturbations as the *home environment* (Zinken and Ogiermann 2013) for this resuming *genau* can thereby take the form of a disaligned confirmable by the interlocutor (as we have seen in Example 3 for the sequence-structuring *genau* in the sense of Oloff 2017) or a side sequence which is due to repair or insertion sequences (Example 1) or ongoing efforts in performing bodily-instrumental actions (see Example 4). In any case, it is not necessarily the recipient that comes in with a disaligned statement or request for confirmation but the *genau*-speaker him-/herself who temporarily interrupts a main action in favour of something which is pending.

Example 4 illustrates how *genau* marks the resumption of a suspended line of action in the context of multimodal multi-activity (Haddington et al. 2014). The excerpt is taken out of an interaction with the physiotherapist in which MR (the physiotherapist) shows and explains to the patient TS what is wrong with one of her muscles, which MR touches at the same time (l. 0718–0725).

<sup>9</sup> Although coding conversational data is still controversial in CA/IL, it has become more common in the recent past. We refer to Stivers (2015) for a discussion on this issue.

**Ex.4: Chest muscle, resumptive *genau*, FOLK\_E\_00411\_SE\_01\_T\_01 (63)**

0718 MR: man SIEHT schon? (--)

***You can already see***

0719 SEHen se das?

***Can you see this***

0720 (--)

0721 TS: HM\_hm, =

***Hmhm***

0722 was-

***What***

0723 MR: dass äh norMalerweise der Ellenbogen aufn bOden müsste;

***That normally the elbow should be on the floor***

0724 TS: hm\_[HM, ]

0725 MR: [smacks] °h der<sup>#1</sup> hat hier vOrne zu viel (.) viel SPANnung.

***°h it has to much tension here in the front***

|               |      |  |
|---------------|------|--|
| MR<br>&<br>TS | gaze |  |
|               |      |  |

0726 (--)

|               |      |  |
|---------------|------|--|
| MR<br>&<br>TS | gaze |  |
|---------------|------|--|

0727 (ma kurz) (-)

***Quickly***

|               |      |       |
|---------------|------|-------|
| MR<br>&<br>TS | gaze | ----- |
|---------------|------|-------|

0728 #2 °hh das is jetzt net SCHÖN, #3

**°hh that is not nice now**

|                                                                                                                                                      |      |             |
|------------------------------------------------------------------------------------------------------------------------------------------------------|------|-------------|
| MR<br>&<br>TS                                                                                                                                        | gaze | #2 ----- #3 |
| <div style="display: flex; justify-content: space-around;">  </div> |      |             |

0729 (0.84)

0730 <<p> das wird n bisschen WEH tun.>

**This will hurt a bit**

0731 TS: <<p> hm\_hm:->

**Hm\_hm**

0732 MR:->((smacks)) °hh <<p> genau das is der (-)

der der eine KLEIne,> =

**PTC this is the (-) the the one little one**

0733 = mir haben ja den GROßEn brustmuskel,

**We have the large chest muscle**

0734 un unterm grOßEn s noch\_n KLEIner.

**And under the large one there is another small one**

From line 0728, MR lifts her knee onto the patient's arm on the treatment table and thereby initiates a special manual treatment after announcing it minimally in line 0727. So in contrast to the side sequence which we have seen in Example 3, here it is the speaker MR herself who suspends the main line of action (which is an informing about the patient's muscular problem) in favour of an announcement that the treatment will be unpleasant while applying it at the same time.

After that, MR produces the element *genau* before continuing the action of informing TS about her muscles (l. 0732-0734). Although *genau* occurs in a position in which it does not follow up on a confirmable, it is rather used by MR to structure her own turn. However, in contrast to the *Power Point-genau* (Auer 2021a), *genau* in

this function does not merely mark the transition to anything next within one multi-unit turn but rather more specifically to the taking up of the informing of the patient, which has been abandoned in favour of the therapeutic procedure that needed to be announced and conducted immediately.

In conclusion, what we can see here is that *genau* occurs in the context of a sequence which temporarily prevents a main line of action from progressing. The difference to its use as a sequence structuring confirmation particle (see Section 3) is (a) that it does not occur in a responsive position (in Example 4, it is the speaker herself who initiates the side sequence) and b) that *genau* does not confirm a proposition. However, among *genau* as a resumptive device, there remains a persisting retrospective function of tying back to the conversational context, this does not come to the fore. It rather adopts a mainly prospective orientation here in that it projects a specific continuation.

## 5.2 Connecting the upcoming turn to prior contributions within a main line of action

The next step within this pragmatic development of *genau* is that it connects an upcoming turn to a previous one while projecting the continuation of a main line of action. This function corresponds to its use for resuming an abandoned action, but differs in its sequential context as it lacks the marking of overcoming sequential perturbations. In other words, *genau* smoothly ties in with an ongoing main action, but the latter is not suspended in between.

Example 5 is taken from a computer-mediated interaction of two couples who play online games together and discuss travel options facing the corona-related restrictions (not shown and l. 912-915). In this context, AD suggests checking where there is no corona hotspot (l. 916). RD responds with an affirmative particle and assesses this (or: the situation of traveling in the pandemic) as difficult, which is followed by a soft laughter (l. 917).

### Ex.5: Threema, connective *genau*, FOLK\_E\_00451\_SE\_01\_T\_01 (82)

912 RD: ja GUT- =

**Well ok**

913 = ich mein es gibt es [gibt auch in] in mittelhessen und  
NORDhessen einiges was man sich Anschauen kann; =

**I mean there is also in middle hesse and north hesse a lot of things you can see**

914 BG: [norden; ]

**North**

915 = ja,

**Right**

916 AD: gUckst halt wo net grad n HOTspot is;

**(You) just check where is not a hotspot**

917 RD: ja (.) [s\_is halt] SCHWIERig; h° ((lacht leise))

**Yes that's just difficult ((laughs softly))**

918 BG: [geNAU. ]

**PTC**

919 (-)

920 -> °h genau da gibt\_s von THREEma jetzt ne app,

-> **PTC there is now an app from threema**

921 habt ihr THREEma? =

**Do you have threema**

922 = habt ihr doch AUCH;

**You have (that) too**

923 = oder?

**Don't you**

924 (-)

925 RD: [ja,]

**Yes**

926 AD: [ja:] ,

**Yes**

927 BG: habt ihr die schon AUSprobiert,

**Have you tried it out yet**

928 (---)

929 AD: nein.

**No**

((14 lines omitted))

944 BG: und dann? (.)

**And then**

945 sch sagen die di:r wie in deinem kreis grad die coROnazahlen  
sind.

**They tell you how high corona numbers are in your region**

Overlapping with the first part of RD’s response, also BG agrees to AD’s statement with *genau* (l. 918), which is prosodically designed with a clear falling intonation from a high onset. After RD’s laughter, a short pause and a pre-beginning inbreath, BG takes the turn (l. 920) with an initial *genau* which is produced in high speech rate, with no significant pitch movement and a seamless transition to an informing about a new app (Section 6.2.4 for a detailed prosodic analysis of this example). After an expanded insertion sequence, in which BG checks her interlocutors’ pre-existing knowledge on this app (l. 921-929), she informs them about it (lines omitted) and specifically about the corona-related feature that you can find out how high the corona numbers are for any place of interest (omitted and l. 944).

What we find crucial for our analytical claim here is that *genau* is not confirming a proposition on a denotative-referential level, as BG produces it after the closing of the previous sequence. Instead, we argue that the retrospective orientation of this initial *genau* is rather that it appreciates AD’s proposed action while putting emphasis on the projection of another contribution to it, i.e. taking into account the regional pandemic conditions when planning a trip. In other words, *genau* is clearly back-tying to the topic of traveling under pandemic conditions while bringing to the fore that the upcoming contribution will exactly tie in with this topic. The lexical semantics of *genau* ‘exactly’ therefore points to its interactional function as projecting an exact match of the current topic/path of action with the upcoming turn.

As a consequence of what we have described so far, we state the following: We see the development of *genau* as a process which is characterized by two different aspects which have been associated with grammaticalization processes in prior research. First, we see a change in its main reference direction. While the confirming as well as the sequence-structuring *genau* have a clear-cut and specific retrospective orientation as they constitute a type-fitted response to a confirmable, only the latter is able to also establish projective expectations in the form of continuing a main line of action (Oloff 2017). While the resumptive as well as the merely connective function of *genau* keep this narrower projective force, their retrospective orientation becomes blurry as they do not confirm a proposition anymore and, therefore, do not perform responses. Rather, the prospective function of *genau* comes to the fore, which is resumption and continuation. This loss of specificity in retrospective rebinding is, second, inextricably linked to a loss of pragmatic weight. In its confirming and sequence-structuring functions, *genau* performs its own conversational action, which is confirming in the first place and closing a disaligned side sequence in the second place. In contrast, in resumptive/connective uses *genau* is not able to occur as a stand-alone element, which is why we see such instances as characterized by what we call a *pragmatic bleaching* in that the conversational function is reduced from a full-fledged to a subsidiary action (see e.g. Auer 2010 for this distinction). The question, whether this is linked to prosodic bleaching in the proposed continuum of confirming to connective uses of *genau*, will be addressed in the following section.

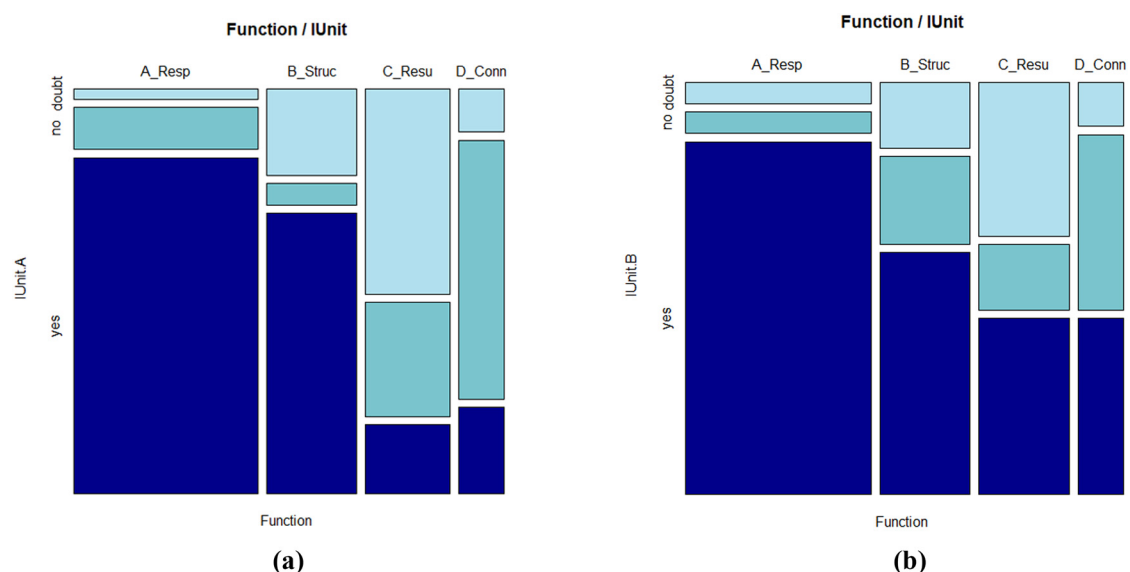
## 6 The prosodic marking of retrospective (confirming/sequence-structuring) and prospective (resumptive/connective) discourse functions of *genau*

### 6.1 Holistic perception of prosodic (dis)integration

This section starts with an overview of the holistic perception of *genau* as an autonomous intonation unit. As was explained in Section 4, both authors rated each element with respect to its intonational status as a separate intonation unit. Next to clear cases where *genau* is or is not perceived as a complete intonation unit (=‘yes’/‘no’), we included ‘doubt’ as a category. This was done in order to capture ambiguous cases which we deem typical for elements that shift functions along the clines introduced in Section 2. Thus, we deliberately did not aim to eliminate unclear cases, but view them as an essential step in the process of moving from a stand-alone responsive to a non-stand-alone turn-initial connective.

In the following, we argue that – from a holistic perspective – both ends of the clines are associated with a higher number of clear cases of independent or dependent intonational units, while the intermediate functions, i.e. sequence-structuring *genau* and resumptive *genau*, expose a higher number of unclear cases. Internal variation is higher in intermediate functions than in clear retrospectively oriented resp. clear prospectively oriented functions.

Figure 1 demonstrates the distribution of the intonational categories ‘yes’ (= dark blue), ‘no’ (= turquoise) and ‘doubt’ (= light blue) across the functions ‘Responsive’, ‘Structuring’, ‘Resumptive’ and ‘Connective’. The overall number of instances is  $n = 81$ . The functions are given in bars from left to right. The ratings of raters A and B are given in two separate plots (Figure 1a: Rater A, Figure 1b: Rater B). Interrater reliability reached a ‘fair’ value of 0.38 (Cohen’s Kappa).

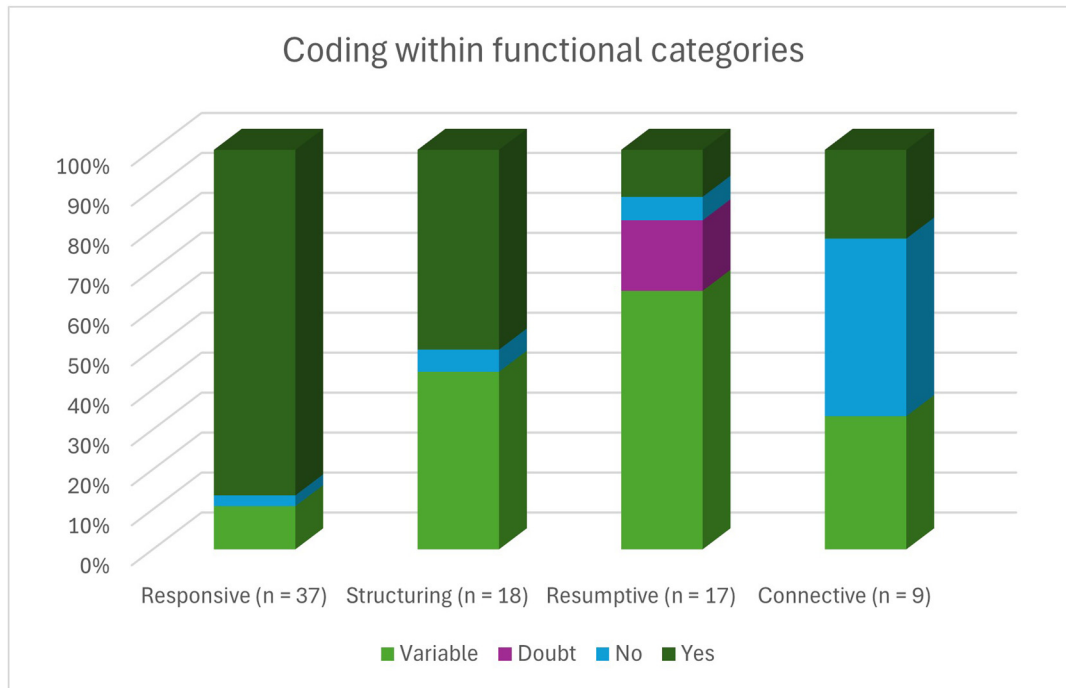


**Figure 1:** (a) Holistic perception of intonation units by rater A; (b) Holistic perception of intonation units by rater B.

Both distributions demonstrate a drop in perceived independent intonation units (‘yes’, dark blue) from the responsive elements (left-hand bar) to the connective elements (right-hand bar). This pattern is more pronounced in the ratings of rater A, who coded fewer ‘yes’-cases in both functions with a prospective orientation (i.e. resumptive and connective) than rater B. The remaining cases other than ‘yes’ are divided into the ‘no’-cases and the ‘doubt’-cases. Interestingly, most cases of doubt are attributed to the resumptive function by both raters. For this function, cases of doubt are more frequent than ‘no’-cases. On the contrary, in the connective function, ‘no’-cases gain the upper hand.

Figure 2 exemplifies the combined coding of both raters in the four functional categories. ‘Variable’ refers to elements that were coded differently by both raters (inter-rater variability). Across the categories, these include the following combinations: doubt – no ( $n = 11$ ), doubt – yes ( $n = 6$ ) and yes – no ( $n = 4$ ). The categories ‘Doubt’, ‘No’ and ‘Yes’ stand for elements with consistent codings by both raters.

The plot gives the distribution of perceived intonation units as a ratio of all elements in the category in percent. It has to be borne in mind that the absolute numbers in the functional categories are rather low. This is especially true for the ‘newer’, connective function ( $n = 9$ ). Still, the proportion of variable cases and unclear cases across the categories is quite striking: While variable coding between both raters is clearly in the minority in the cases where *genau* serves as a responsive ( $n = 4$ ), it is the majority of cases ( $n = 11$ ) when *genau* serves as a resumptive. In addition, there are three unclear cases in this group. This means that in the



**Figure 2:** Intonation units within functional categories.

resumptive function, only 3 out of 17 instances<sup>10</sup> are perceived as either ‘yes’ ( $n = 2$ ) or ‘no’ ( $n = 1$ ) by both raters alike. The degree of ambiguity – be it inter-rater variability or substantial doubt – decreases again in the next functional category, which is the connective use of *genau*. Here, elements perceived as non-intonation units form the majority ( $n = 4$ ). Although the numbers are low and statistical testing is not really a relevant option for this small data set, we consider this distribution more than a pure random distribution. In our view, it mirrors a process from prosodic disintegration to prosodic integration in accordance with the process of a functional shift from a retrospectively oriented responsive to a prospectively oriented connective.

## 6.2 Typical prosodic–phonetic design of the different functions of *genau*

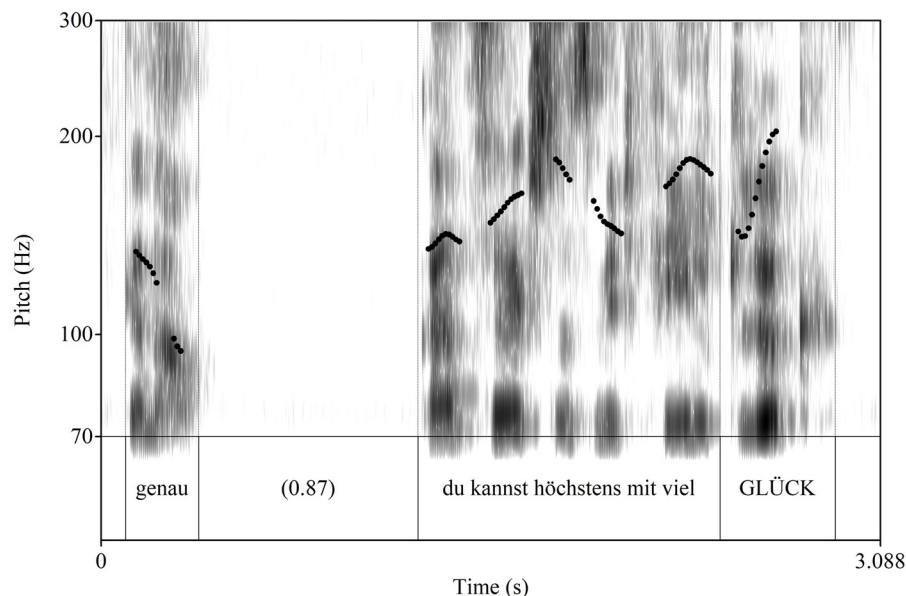
The remainder of this section presents exemplary cases for the different functions. By doing so, we introduce and discuss the relevant prosodic parameters and flesh out the perceptual holistic assessment given above with more prosodic detail.

### 6.2.1 Confirming *genau*

The first example demonstrates an instance of turn-initial responsive *genau*. *Genau* confirms a prior statement by the other speaker. The current speaker then goes on to underline the correctness of the prior speaker’s utterance with an elaboration. From a prosodic point of view, the example is prototypical for the responsive *genau* in our data set. It was consistently coded by both raters in all prosodic parameters except for ‘perceived prominence on ‘ge’’, where one rater chose ‘yes’, the other ‘no’.

<sup>10</sup> It should be noted that Table 1 shows 18 elements for the resumptive function, while Figure 2 only shows 17 elements in this group. This is due to the fact that one element in this group was classified by a rater as prosodically unanalysable for reasons related to sound quality, so that it was not included in the evaluation of the perceived intonation units.

Holistically, *genau* constitutes an intonation unit of its own. It is characterized by a falling pitch movement, and it is followed by a pause (0.87 s). After the silence, there is a pitch reset up to a higher intonation level (Figure 3). No changes in speech rate or loudness were perceived between *genau* and the following stretch of talk. Thus, thinking in terms of boundary marking, the prosodic discontinuities in this case refer to intonational means (falling movement and pitch reset) and silence.



**Figure 3:** Confirming *genau*, FOLK\_E\_00451\_SE\_01\_T\_06\_DF\_01\_c876 (95).

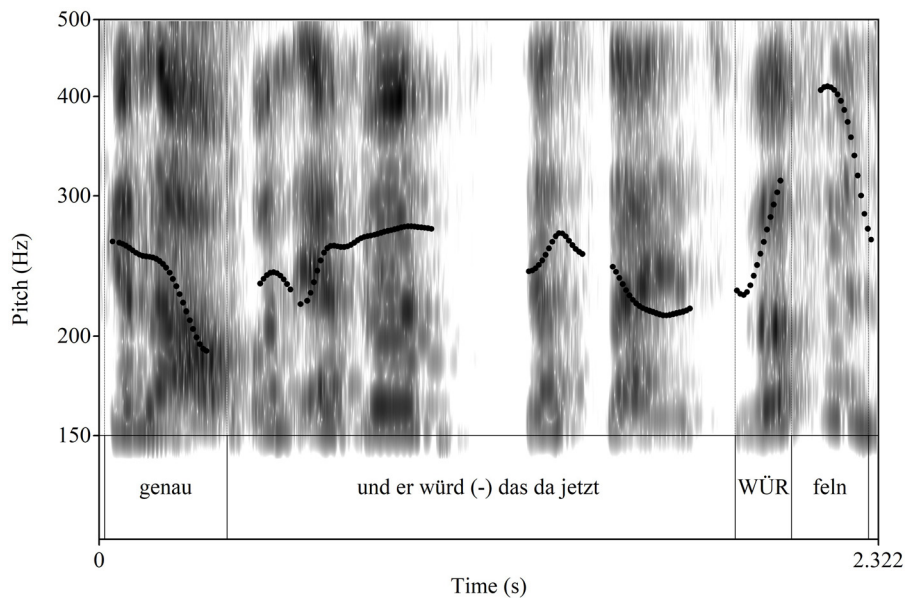
Out of 37 cases of responsive *genau*, 34 cases are characterized by a final fall (comprising fall, fall to mid, rise-fall), the majority of which are followed by a pitch reset ( $n = 27$ ) and a (sometimes minimal) pause ( $n = 15$ ). Only four responsive *genaus* have a final rising pattern. Three of these cases are perceived as non-independent intonation units or unclear cases in the holistic assessment of intonational units. None of these cases is followed by a pause, either. We could not discover a meaningful pattern for the other prosodic parameters we analysed in order to capture the notion of prosodic discontinuity (i.e. changes in speech rate and loudness). In many cases, no changes were perceived, but overall interrater reliability was low (0.13 for speech rate and 0.34 for loudness).

To summarize, responsive confirming *genau* is mostly realized with a falling intonation pattern, typically followed by a pitch reset and sometimes set apart from the following stretch by a pause or minimal pause. This corroborates the observations of Oloff (2017, 228, see also section 2).

### 6.2.2 Confirming and sequence-structuring *genau*

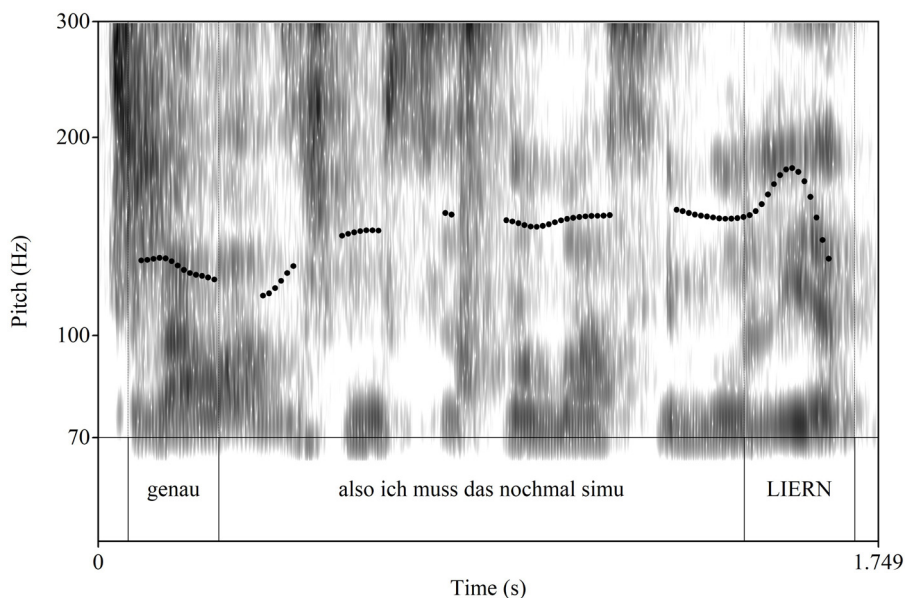
This section turns to the prosody of turn-initial *genau* with a structuring function as described by Oloff (2017). As was explained in Section 3, this function is characterized by a combination of retrospective confirmation with sequence structuring. *Genau* confirms and thereby ends a disaligned side sequence after which the current speaker continues with a previously abandoned sequence. Prosodically, this group is more diverse than the solely confirming occurrences of *genau* (see Figure 3 in Section 6.1). Half of the cases ( $n = 9/18$ ) are consistently perceived as independent intonation units (= ‘yes’), but nearly the other half is made up of variably coded cases, most of which include combinations of ‘doubt’ with ‘yes’ or ‘no’ ( $n = 7$ , yes – no  $n = 1$ ). One item was consistently perceived as a dependent intonation unit.

The instances that were coded as independent intonation units are very similar to those in the group of responses with a confirmatory function. Figure 4 exemplifies this similarity. *Genau* is realized with a pitch fall, and after a pause, there is a pitch reset to the following intonation unit beginning with *und er würd*. At the beginning of *und*, there is an audible glottalized onset. The non-modal phonation visible in the spectrogram between *genau* and *und*, however, is caused by overlapping laughter by another speaker. So this should not be confused with some kind of boundary marking between these elements. There are no perceptible changes in speech rate or loudness between *genau* and what follows.

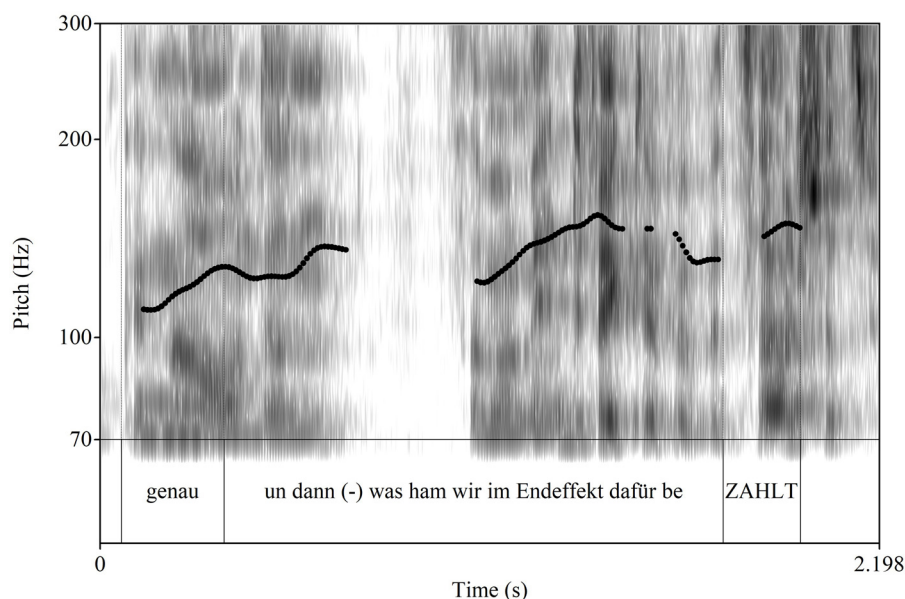


**Figure 4:** Confirming and sequence-structuring *genau*, FOLK\_E\_00451\_SE\_01\_T\_04\_DF\_01\_c131 (103).

In comparison to these cases with *genau* in a separate intonation unit, the following two examples are instances with variable coding for intonation unit status on the one hand (Figure 5) and with uniform coding as a dependent intonation unit on the other (Figure 6).



**Figure 5:** Confirming and sequence-structuring *genau*, FOLK\_E\_00451\_SE\_01\_T\_06\_DF\_01\_c651 (93).



**Figure 6:** Confirming and sequence-structuring *genau*, FOLK\_E\_00293\_SE\_01\_T\_01\_DF\_01\_c773 (43).

Variable coding in the first example (Figure 5) included one rating as a doubtful case and one rating as a dependent intonation unit. In comparison to the separate intonation units, the fall on *genau* is less steep, and there is no pitch reset to the immediately following syllable. There is no pause between *genau* and *also*. The initial vowel [a] in *also* is non-modal, which probably may be perceived as a kind of boundary marking.

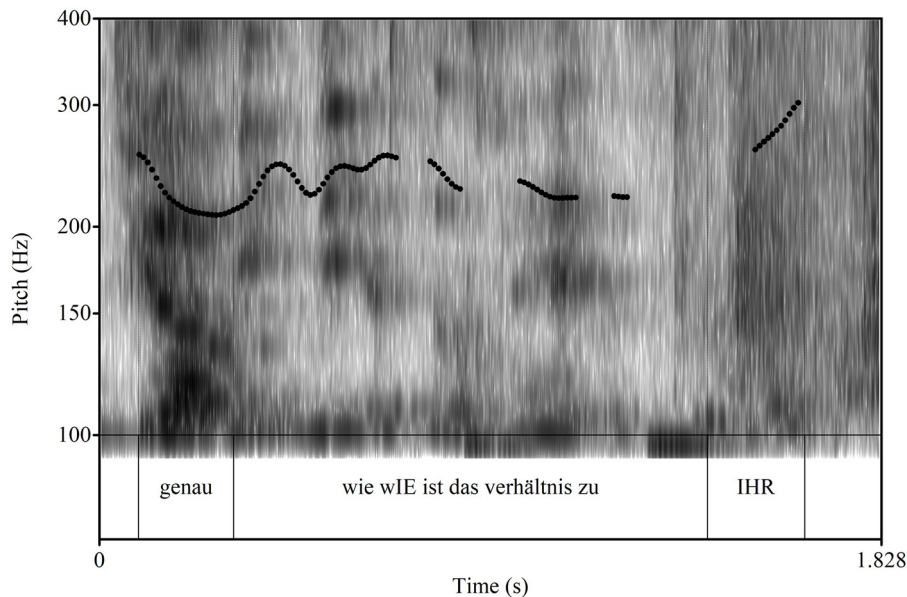
By way of comparison, consider the transition from *genau* to vowel-initial *un* (i.e. *und*/'and') in the next example (Figure 6), which is the only clear case of a dependent intonation phrase in the group of structuring *genau*. Here, there are no signs of non-modal discontinuity such as glottalization. Instead, the slightly rising intonation on *genau* continues through *un* until *dann* so that audibly, *genau un dann* forms one coherent stretch. After that, the speaker halts and starts a new intonation unit and syntactic unit *was ham wir im Endeffekt dafür bezahlt* ('what did we eventually pay for x').

To summarize, *genau* varies prosodically with respect to pitch movement, pitch reset, timing (pause), and (dis)continuous voicing in *genau* + V-initial combinations such as *genau und* or *genau also*. We want to argue that this degree of variation within one functional group is an indication of the function of prosodic means for contextualizing a more or less retrospective or prospective orientation of the confirming *genau*. As this function is characterized by the combination of confirming and sequence structuring, speakers probably have an option as to whether they want to highlight the backwardly oriented confirmational force of *genau* or the forwardly oriented structuring function that secures the uptake and continuation of their turn.

### 6.2.3 Resumptive *genau*

The next functional group, resumptive *genau*, differs from the others in that *genau* cannot confirm in the sequential position in which it occurs; i.e. it either occurs sequentially detached from the foregoing disaligned side sequence and/or the *genau*-speaker him-/herself closes the side sequence (Section 5). From a prosodic point of view, this group is the most 'chaotic' of the four functions as was described in Section 6.1. The majority of cases were not perceived consistently with respect to intonation unit status, and it is the only group where 'doubt' surfaces as a consistently coded category. Figure 7 is one such example rated as 'doubt' by both raters.

Despite the fact that there is a slight fall on *genau* with a perceived prominence on *nau* and a slight rise to the first syllable *wie* ('how'), *genau* does not clearly constitute an intonation unit of its own. The auditory impression of *genau* is shortened or speeded up compared to what follows. The low number of instances does not allow a real quantitative evaluation, but it seems that changes in speech rate are more frequent in this



**Figure 7:** Resumptive *genau*, FOLK\_E\_00330\_SE\_01\_T\_02\_DF\_01\_c801 (54), Example 1, Section 1.

group than in others, particularly than in the group with structuring *genau*: Of 18 items in the resumptive group, there are only six, where no speech rate changes were perceived by both raters as compared to 13 out of 18 cases in the structuring group. This may be seen as an indication that timing becomes more relevant in this function. It may also be seen as one cause for the ambiguous picture regarding intonation status: While all *genaus* are still perceived as carrying prominence on *genau*, and many are still associated with a falling pitch movement, including pitch reset, changes in speech rate and maybe also shortening of *genau* as well as a loss in phonetic substance contribute to an unclear impression regarding intonational independency. Neither the duration of *genau* nor its phonetic reduction was part of our study. However, these observations point to the fact that this may be a worthwhile undertaking in future research.

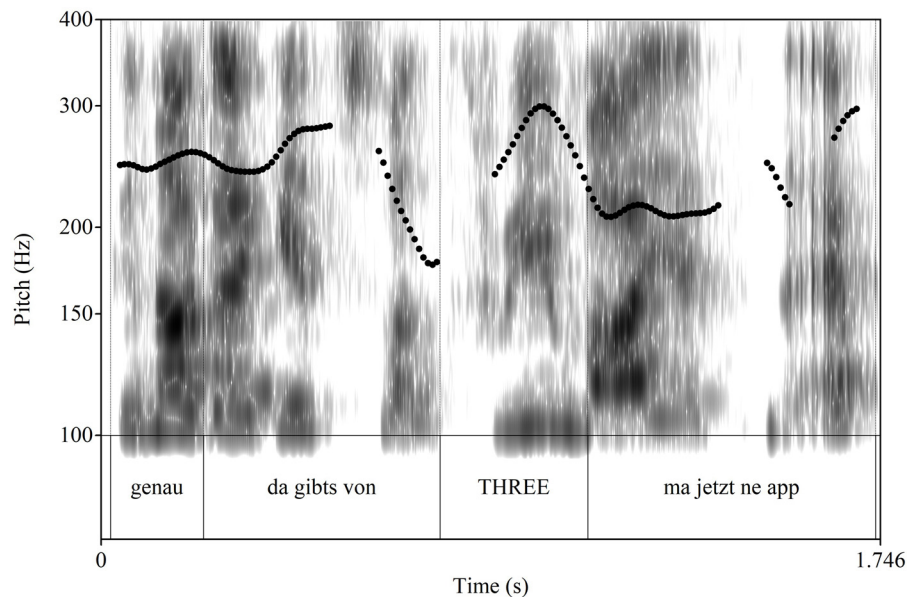
#### 6.2.4 Connective *genau*

Finally, we turn to connective *genau*. In these cases, *genau* can neither confirm a previous statement nor does it resume an earlier turn after a disaligned sequence. Instead, it connectively links the utterance to an already established trajectory (Section 5). This type of *genau* is the smallest group in our data set ( $n=9$ ). Prosodically, the group is less diverse than the resumptive cases of *genau*, as was described in Section 6.1. All clearly dependent intonation units ( $n=4$ ) are characterized by a level pitch movement that leads continuously to the rest of the utterance. This is exemplified by Figure 8.

In addition to the continuous pitch movement across *genau* and the subsequent syllable *da*, there are also no perceptible changes in speech rate or loudness. From a prosodic point of view, thus, *genau* is perfectly integrated into the intonation unit *genau da gibts von THREEma jetzt ne app* ('PTC there is now an app from threema').

To conclude the section, our results indicate that there is indeed a link between the prosodic realization of *genau* and the different functions of *genau* on a cline from stand-alone responsive with retrospective orientation to TCU-initial connective with prospective orientation.

- (1) Confirming *genau* is predominantly perceived as an independent intonation unit, characterized by a final falling intonation pattern and a pitch reset to the following syllable. On the other end of the cline, TCU-initial connective *genau* is predominantly perceived as prosodically dependent, with level intonation.
- (2) Unclear cases and variable coding of prosodic independence are most pervasive in the intermediate function of resumptive *genau*. This is also the group where prosodic changes in loudness and speech



**Figure 8:** Connective *genau*, FOLK\_E\_00451\_SE\_01\_T\_01\_DF\_01\_c918 (82), Example 5, Section 5.2.

rate occur most often (Section 6.2.3). Overall, there is an increase in unclear cases and variable coding from responsive via sequence structuring to resumptive *genau* and then again a decrease to connective *genau*.

(3) The intermediate function of sequence-structuring *genau* resembles the responsive *genau* in the realization of the clear independent intonation units. Cases of variable coding or coding as doubt are characterized by varying degrees of boundary strength (glottalization) to the following V-initial syllable.

Taking these observations together, we claim that the functional cline of *genau* is not only reflected in its clear prosodic differentiation of the opposite poles (1), but also in prosodic ambiguity regarding the independence of *genau* in the intermediate functions, where *genau* is neither clearly retrospectively oriented nor (not yet) clearly prospectively oriented (2). The prosodic parameters that we investigated as indicators of boundary strength do not yield a systematic picture along the cline. However, it is interesting to see that the intermediate function of resumptive *genau* makes most use of timing-related changes. We suggest that the perception of the shortening/higher speech rate of *genau* contributes to the perception of unclear intonation unit status. Prosodic marking seems to be incongruous in this group: Prominence on *nau*, falling pitch, and pitch reset co-occur with shortening and changes in speech rate, rendering the intonation unit status unclear to the listener. Likewise, the other ‘intermediate’ function sequence-structuring *genau* exposes interesting differences regarding the boundary strength to following V-initial onsets ((3), Section 6.2.2). We argue that in this function, the participants of an interaction can use changes in boundary strength to contextualize whether the forward-looking function of *genau* or the backward-looking function of *genau* should be foregrounded.<sup>11</sup>

<sup>11</sup> One reviewer raised the point whether regular co-occurrences with other discourse markers or connectives could be used to indicate different functions. It is indeed the case that the most frequent subsequent elements in our data are *und* (‘and’, additive connective or discourse marker,  $n = 18$  out of 113) and *also* (‘so’, consecutive connective or discourse marker,  $n = 10$ ), next to the definite article *der/die/das* (which of course are high-frequency elements anyway). Also, there seems to be a non-random distribution on the different functions: For example, *und* hardly ever occurs in the confirming group (2 out of 37), whereas one third of the structuring instances (6 out of 18) and one third of the connective instances (3 out of 9) are followed by *und*. Likewise, *also* does not seem to be randomly distributed and is most frequent in the blends. We believe that these co-occurrences can be an indicator for different functions and typical elaborations after *genau*. Including an in-depth analysis as such would have gone beyond the scope of this article. We think this is a worthwhile future research avenue to take in order to find out whether *genau* specializes for certain types of continuation (comparable to *gut + aber*, i.e. acknowledgement + objection (Arens 2023)).

## 7 Summary and conclusion

In this article, we have provided a CA and IL approach to identify conversational functions and prosodic forms of turn-/TCU initial *genau* ‘exactly’, occurring in German face-to-face and phone-call interactions. Starting from earlier descriptions of *genau* as a confirmation and sequence-structuring particle (Willkop 1988, Werlen 2010, Oloff 2017, Auer 2021a), the focus of the first part of our article was on the functional side of *genau*. We showed that it takes on ‘new’ prospective functions as an initial discourse marker. Specifically, *genau* may be used to resume a main line of action upon sequential perturbations and multiactivity (resumptive function) or to mark an upcoming turn as tying in with a main activity (connective function), which we see as a process exhibiting characteristics of grammaticalization. The specificity of the development of stand-alone *genau* to turn initial *genau* seems to be primarily characterized by a loss of pragmatic weight as the conversational functions of *genau* develop from performing a full-fledged action to performing a subsidiary action (Auer 2010). By adopting a concept of ‘intermediate functions’ on a cline from stand-alone responsive to turn-initial connective, we allude to the notion of *bridging contexts* according to Heine (2002, 86). However, in order to reveal the pragmatic shift in the development of discourse markers, it is crucial to go beyond the scope of a sentence and to take into account the sequential infrastructure of social interaction. In this sense, careful analysis of synchronic data can provide valuable insights into possible avenues of (micro-)diachronic change. Our approach of inferring a (micro-)diachronic development from analysing synchronic data is also in line with previous IL studies such as Barth-Weingarten and Couper-Kuhlen (2002, 353). Similarly to their take on final *though* in English, we thus see the existence of intermediate stages between mere confirmation and mere connection as an indirect indicator that *genau* is undergoing a process of change. Additional evidence comes from the frequency pattern of the different functions, with the arguably ‘newer’ connective use being much more infrequent than the ‘original’ stand-alone confirmatory responsive.

Against the background of controversial findings regarding the question of how grammaticalization processes of lexical or phrasal elements are reflected in their prosodic design, a second aim of this contribution was to shed light on the prosodic autonomy and (dis)integration of *genau* in its context of occurrence. Our analysis stood in the context of research highlighting the relevance of gradience in prosodic autonomy, particularly when dealing with the sedimentation of patterns in grammaticalization/pragmaticalization processes (cf. Barth-Weingarten and Ogden 2021, Pekarek Doehler 2021). Consequently, our analysis combined a holistic view of prosodic independence (i.e. holistic perception of *genau* as an intonation unit) with a parametric approach where several prosodic–phonetic markers of boundary strength between *genau* and the subsequent stretch of talk (pitch reset, pauses, changes in loudness, and others) were taken into account. In addition, we took seriously the notion of ‘ambiguity’ or ‘doubt’ regarding prosodic autonomy. Neither did we discard or force a choice on ratings where both raters did not agree on the prosodic autonomy of *genau* (i.e. interpersonal variation), nor did we force a choice on cases where we found perceptive doubt (i.e. intrapersonal ambiguity). Our approach is in line with former interactionally oriented conceptions of prosody that try to integrate incomplete units and fuzzy boundaries into participant-oriented conceptions of prosody. It presents an exemplary case for that it is worth considering the prosodic surface form not only in categorical terms of prosodic phrasing and accentuation but also in a more gradient manner, leaving space for non-exhaustive and non-discrete descriptions of prosodic units (Auer 2010).

Our results regarding the prosody of *genau* along the cline from stand-alone responsive to TCU- or turn-initial connective demonstrate that ambiguity with respect to prosodic autonomy is not distributed randomly across the different functions on the cline: While the extreme poles of the continuum are characterized by few ambiguous cases, it is the two intermediate functions that are characterized by a higher degree of interpersonal variation and intrapersonal ambiguity. Thus, the grammaticalization/pragmaticalization process of *genau* is characterized by a gradient, stepwise loss in prosodic autonomy that leads from prosodically independent, disintegrated elements in the retrospective confirmatory response to predominantly dependent, integrated elements in the prospective connective. Our study therefore is another contribution to underline the assumption that a continuous functional shift is or can be mirrored by prosodic gradience, i.e. a stepwise shift from prosodic autonomy to prosodic dependence. Consequently, our study fosters the view that incomplete intonation units and fuzzy boundaries can be seen as a source of informational richness, as was argued

before by previous studies on other languages than German as well (Barth-Weingarten and Ogden 2021, Pekarek Doehler 2021, Temer and Ogden 2021).

Another observation from our data is that the boundary marking phonetic–prosodic cues do not seem to play the same role in the different functional categories. Instead, changes in timing and different degrees of boundary strength to the element after *genau* were mainly observed in the intermediate functions, where there is room to negotiate the backward orientation or forward orientation of *genau*. We interpret this as an indication that the contextualizing function of these phonetic–prosodic cues is highly sensitive to the position in which they occur. This is in line with an earlier study on ‘getting past *no*’ by Ford et al. (2004, 263) who state that “[s]equence, action, and phonetics work together in projecting the trajectory and shape of a no-initiated turn.” In other words, the phonetic–prosodic realization of *genau* leads the recipient’s interpretation of its interactional meaning together with its placement within an ongoing activity and sequence. We believe that this positional sensitivity of phonetics in conversation is worth being addressed in more detail in future research.

Further investigation into the gradience of prosodic constituency in grammaticalization/pragmaticalization processes will bring to light more valuable insight into the role of prosody and phonetic–prosodic cues in the development of discourse markers, be it along the cline from stand-alone elements to initial elements or along the cline from an integrated to a more peripheral element.

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**Data availability statement:** The data that support the findings of this study are available from the DGD ([https://dgd.ids-mannheim.de/dgd/pragdb.dgd\\_extern.welcome](https://dgd.ids-mannheim.de/dgd/pragdb.dgd_extern.welcome)) but restrictions apply to the availability of these data, which were used under license for the current study. Registration with the database for spoken German (DGD) is required in order to access the collection.

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