CHAPTER 13

Adverbial Fronting Phenomena in German Learner Language
A Corpus-Based Study

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13.1 Introduction

Adverbials are by far the most diverse sentence constituents. Not only are they employed to fulfil various semantic functions – from the expression of time and place to that of manner, reason, contrast, or purpose – they also come in various shapes and sizes – from a phrase, constituting nothing but its head (e.g., *today*), to lengthy subordinate clauses, as exemplified in the construction below.

> Instead of writing a five-page-letter to your brother in San Francisco, waiting four weeks for the answer, where he writes that he didn't really understand what you wanted to ask him[A:cl_c] you can just go to this machine, that is not bigger than a shoe-box, press a certain sequence of buttons and then- hope that your brother is at home. <ICLE_GEAU1026>

This sentence-initial subordinate clause is, however, not simply remarkable for its syntactic complexity but also for its status as an optional adverbial, a type of constituent that has, due to its inherent flexibility, mostly been neglected in previous research (Callies 2009: 37). This holds true especially in relation to the topic of *fronting*,[1] commonly defined as the placement of core elements in sentence-initial position (Biber et al. 1999). This chapter intends to break with this habit. In the light of the two approaches to non-canonicity, namely the theory-based and the frequency-based approach, suggested in the Introduction to this volume, a distinction is proposed between two kinds of fronting phenomena, namely *fronting* (i.e., the initial placement of optional sentence constituents, enabling the consideration of

[1] It is common in linguistics for different terms to denote the same or comparable concepts. Hence, *fronting* is also known as *preposing* (Birner & Ward 1998; Huddleston & Pullum 2002), *Y-movement* (Weinert 1995), and *topicalization* (Lambrecht 1994).

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optional adverbials) and *preposing* (i.e., the initial placement of obligatory constituents). To exemplify this distinction, this chapter investigates the production of adverbial fronting phenomena in German learners of English.

While in Section 13.2 a theoretical basis will be established by discussing not only the structural and functional peculiarities of fronting phenomena in general and adverbial fronting in particular but also previous research endeavours into the topics, Section 13.3 is dedicated to the study itself. First, the research gaps and research questions as well as the databases and methodology are presented before a detailed account and discussion of the results. This is followed by a conclusion as well as an outlook in Section 13.4.

13.2 Taking a Closer Look at Fronting Phenomena

13.2.1 Defining (Adverbial) Fronting Phenomena

As a traditional, and, in fact, 'one of the most consistent rigid SVO [subject-verb-object] languages' (Givón 2001: 235), the canonical and thus standard syntactic structure of the English language involves a subject that precedes its verb and, depending on whether the latter is transitive or not, its object(s) (Givón 1993; de Bleser 2012: 426) as well as other obligatory or optional sentence elements, such as complements or adverbials (Biber et al. 1999: 899). In contrast, non-canonical sentence patterns, from the theory-based or structural perspective discussed in the Introduction to this volume, deviate from this S_n-V-X core structure.[2] One pattern that meets this structural criterion of non-canonicity and, as the following discussion will hopefully prove, simultaneously poses a very interesting case with regard to the frequency-based approach to non-canonicity as well, is fronting. It is commonly defined as 'the initial placement of core elements which are normally found in post-verbal position' (Quirk et al. 1985: 1377; Biber et al. 1999: 900). In fact, as the examples in (1) illustrate, in addition to the employment of the mentioned standard postverbal constituents as initial elements of a sentence, sometimes even the predication is affected (Greenbaum & Quirk 1990: 163):

[2] Note that S_n refers to the *notional* (i.e., 'semantically loaded') subject as opposed to the *grammatical* subject used for the sake of grammatical completeness. Hence, this definition is also applicable to structures like the introductory-*it* pattern (see Götz & Kircili, Chapter 12 in this volume), in which the dummy pronoun serves as a grammatical subject, followed by the verb, a complement, and the clausal notional subject: *It*[Sg] *is*[V] *nice*[Cs] *to see you.*[Sn]

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(1) a. $\underline{O_d}$-S-V
Whether I can attend, I don't know.[3] (preposed direct object)
b. $\underline{C_S}$-S-V
A strange person he is. (preposed subject complement)
c. $\underline{C_O}$-S-V-O_d
John they called the boy. (preposed object complement)
d. $\underline{V}$-O_d-Aux-S
Drawing a picture was the little girl. (preposed predication)
e. $\underline{A}$-S-V-O_d
On the table she put the book. (preposed obligatory adverbial)
f. $\underline{A}$-S-V-O_d
Last week I called him. (fronted optional adverbial)

In this chapter the focus is on the initial placement of one constituent in particular, namely the adverbial. While research has commonly focused on the discussion of instances like (1e) above, where a grammatically demanded adverbial is moved to the front, I propose an extension of the consideration of 'core' constituents to optional adverbials (as in (1f)), reserving the notion of *preposing* for the commonly *marked* movement of obligatory constituents and that of *fronting* for the common – and thus *unmarked* – sentence-initial placement of optional adverbials. It should be noted here that the term *markedness* is defined in various ways (see Haspelmath 2006 for an overview). In this chapter, and in line with the frequency-based approach to canonicity discussed in the Introduction to this volume, the term refers to the uncommonness or rarity of a feature in language use, as in this case, while the other approach to non-canonicity concerns the deviation from an expected theory-based or structural norm, as suggested by Halliday (1994) in relation to his *marked theme*. This makes the topic of this chapter all the more interesting because its focus on fronting phenomena implies that, if a given sentence contains a sentence-initial optional adverbial, it is unmarked or canonical from a frequency-based perspective while the deviation from the S-V-X norm makes it structurally non-canonical. In case of preposing, however, both characteristics of non-canonicity – the frequency-based and the theory-based – are met.

In fact, it has been stressed repeatedly in the literature that preposing (as opposed to fronting) is a comparatively rare pattern (Quirk et al. 1985; Sinclair 1990) while the optionality and innate flexibility of the majority of adverbials make them a fruitful but, in the context of non-canonicity, rarely discussed structure. The reason for the proposed extension is that

[3] All examples where no source is given are the author's.

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previous research has proven that there are (discourse-)pragmatic, (information-)structural, semantic, and cognitive effects associated with the allocation of an adverbial (be it optional or obligatory) to the first slot within a construction (Sinclair 1990; Diessel 2005; Wiechmann & Kerz 2013; Junge et al. 2015), and both preposing and fronting are subject to comparable if not identical (information-structural) implications, a topic that will be discussed later on in this section.

First, however, it is necessary to take a look at the diverse structural and functional peculiarities of adverbials in general. With regard to the former, as briefly indicated in the introduction, adverbials may be realised in various ways and in varying degrees of complexity, ranging from individual adverbs (such as *luckily*, *perhaps*, or *frankly* in (5a–c) below)[4] over adverb, noun, and prepositional phrases (such as *slowly but surely* in (3c), *last Monday* in (3a) or *on the table* in (3b) below) to different kinds of dependent clauses, illustrated under (2) (Biber et al. 1999: 767–8).

(2) a. Verbless: If in doubt, the example is out.
b. Finite: Although she likes Jon, she did not invite him.
c. Non-finite (*to*-inf.): To be honest, I don't know how to react.
d. Non-finite (*-ing*): Working tirelessly for hours, she immediately fell asleep.
e. Non-finite (*-ed*): Compared to last year, they did a good job.

As far as the functional characteristics are concerned, over the years, various classification schemes have been suggested, including Quirk et al.'s (1985) differentiation between *adjuncts*, *conjuncts*, *disjuncts*, and *subjuncts* or Halliday's (1994) and Huddleston and Pullum's (2002) distinction between different kinds of *adjuncts*. The taxonomy adopted here is that by Biber et al. (1999), who distinguish between so-called *circumstance*, *linking*, and *stance adverbials*. The former type is employed 'to add circumstantial information about the proposition in the clause' (1999: 762), which may be temporal or spatial in nature or provide details about the process or manner, contingency, the extent or degree, or the recipient (1999: 776–81). They are exemplified in (3):[5]

[4] Note that these items could still be considered phrases, given that, as an adverb, they constitute the head of their own phrase. Since the focus of this chapter is on structural complexity in the sense of syntactic/constituent weight, however, I will follow Biber et al.'s (1999) differentiation here.

[5] Note that, in this chapter, the focus is on the major categories (*circumstance*, *linking*, *stance*). The semantic subcategorisations exemplified here are of relevance to the upcoming discussion of the information-structural peculiarities associated with fronting phenomena in case of which the precise semantic purpose may have an effect on the placement of a given adverbial (Diessel 2005; Wiechmann & Kerz 2013; Junge et al. 2015).

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(3) Adverbials of circumstance
   a. Time: Last Monday she cancelled her meeting.
   b. Place: On the table she placed a heavy book.
   c. Process/manner: Slowly but surely, the project is evolving.
   d. Contingency: Because he lied repeatedly, he lost her trust.
   e. Extent/degree: To a certain degree, I think she is right.
   f. Recipient: For his family he would move mountains.

The second type, linking adverbials, is used to establish a connection between a given 'clause (or some part of it) ... [and] some other unit of discourse' (Biber et al. 1999: 762) and it therefore contributes significantly to the cohesion and coherence of a given output. Again, various subtypes, listed in (4), can be distinguished (Biber et al. 1999: 875):

(4) Linking adverbials
   a. Addition/enumeration: Firstly, I want to discuss the unemployment rate.
   b. Apposition: In other words, their conclusions were well-founded.
   c. Contrast/concession: However, this shouldn't stop you.
   d. Result/inference: Hence, you shouldn't rely on his help.
   e. Summation: All in all, the event was a success.
   f. Transition: Incidentally, you never know what life has in store for you.

Finally, stance adverbials express the speaker's or writer's attitude, point of view, or opinion as well as their assessment of, for example, the certainty or reliability of the proposition of a given message (Biber et al. 1999: 762). Three major subtypes, listed in (5), can be identified (Biber et al. 1999: 854):

(5) Adverbials of stance
   a. Attitude: Luckily, they returned home safe and sound.
   b. Epistemic: Perhaps, I should leave now.
   c. Style: Frankly, I don't give a damn.

The fact that adverbials are (more commonly than not) optional goes hand in hand with their flexibility, that is, with the possibility to employ the constituent in varying slots within a given sentence, ranging, according to Quirk et al. (1985: 490), from *Initial*, *Medial*, and *End* (for the first, post-operator, and final position) to four intermediate slots.

Which position is ultimately chosen may depend on both their structural make-up – with individual adverbs being considered particularly flexible (Quirk et al. 1985: 491) – and the semantic categories discussed above. While linking adverbials have been found to be most commonly used initially, stance and circumstance/place adverbials tend to be placed in medial or final position, respectively (Biber et al. 1999). The situation may differ, however, when several adverbials are used in juxtaposition.

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Hasselgård (2010), drawing on Quirk et al.'s (1985) distinction, investigated adjunct adverbials and their placement in British English and, in doing so, also took a look at common patterns of adverbial clustering in fronted position. She determined that a combination of two adjuncts, one of time and one of space, was by far the most frequent and that these two are generally the types that are most likely to be found in combinations with other adverbials. Focusing adverbs (e.g., *especially*), considered as subjuncts in Quirk et al.'s (1985) taxonomy, are also common, but, if they are used, they always appear in cluster-initial position, modifying the following adverbial (Hasselgård 2010: 92–3).

However, the semantic class poses just one factor that exerts an influence on the positioning of adverbials. Even greater is the influence of powerful mechanisms that are at play when structuring a message, namely those of *information structure* (Halliday 1967), defined as 'the complex interaction of numerous phenomena and principles that govern the organization of information in discourse' (Callies 2009: 10; see also Féry & Ishihara 2016). These involve aspects like the thematic structure, the information status progression, syntactic weight, focus placement, or other stylistic reasons, some of which will be briefly discussed in the following.

The thematic structure, as the first information-structural principle, is concerned with the organisation of a clause as a message (Halliday 1994: 37). From a Hallidayan perspective, the *theme*, as the starting point of the message, which is further developed in what follows (i.e., the *rheme*), commonly constitutes the subject. If this criterion is not met, however, and the position is occupied by a different constituent, the theme is inevitably marked and thus receives special attention or emphasis (1994: 44). This view is supported by numerous researchers, including Quirk et al. (1985), who consider the thematic constituent 'the first thing that strikes the speaker . . . [while] the rest is added as an afterthought' (1985: 1377) or Virtanen (2004: 81), who equates thematicity with informational foregrounding. This makes apparent the special status the first constituent occupies within a given sentence and thus provides evidence for the relevance of optional adverbials in relation to the topic of non-canonicity. Diessel (2005), in his investigation of different types of adverbial clauses, also recognises the importance of the first position and makes clear that adverbials can be particularly beneficial in that they may be 'used to organize the information flow in the ongoing discourse . . . [and] function to provide a thematic ground or orientation for subsequent clauses' (2005: 459).

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The topic of information flow directly leads to another important principle that is strongly affected by fronting phenomena, namely the information status progression. It is concerned with the *newness* and *givenness* of information (Clark & Haviland 1977; Prince 1981) and thus with facts which are 'new and at the centre of the ... communicative interest' (Bache & Davidsen-Nielsen 1997: 114) and those which are 'assume[d] to be known' (Bache & Davidsen-Nielsen 1997: 113) or are retrievable 'from the preceding discourse' (Biber et al. 1999: 896). In the English language, the so-called *given-new contract* is assumed to hold between interlocutors (Clark & Haviland 1977: 3), implying that the standard progression of the information status is from what is *known* to what is *newly introduced* to an interaction. As previous research has shown, this sequence may, in fact, be adhered to by means of both fronted and preposed adverbials. While this observation may seem natural, for example, for linking adverbials, which establish a connection between the previous and the upcoming discourse, it has also been confirmed for sentence-initial clausal adverbials which, according to Biber et al. (1999: 835), frequently entail known information and, in a way, prepare the recipient for the new information that is to follow in the remainder of the message.

Two major principles that are also frequently associated with discourse-new information are those of *end-focus* and *end-weight*. The former claims that special focus, and thus emphasis, is placed on the final 'lexical item of the last element in the clause' (Biber et al. 1999: 897), which commonly coincides with information that is newly introduced to the discourse. Likewise, new information is commonly provided in a 'longer, "heavier" structure' (Greenbaum & Quirk 1990: 398), which, in accordance with the principle of *end-weight* (Behaghel 1909: 139), is likely to be placed at the end of a sentence and after providing the necessary context. This reduces cognitive efforts on the part of both the producer and the recipient of a message, given that lengthy constituents do not have to be retained in the working memory until the point of grammatical completeness of a given construction is actually reached.

The way adverbials interact with these principles is twofold. On the one hand, researchers like Virtanen (2008) have found that adverbials of manner are, for example, frequently moved to the front in order to allow more complex constituents to be placed finally, thus enabling the adherence to the principle of end-weight. On the other hand, however, previous studies, in particular into the positioning of clauses, have determined that the clause semantics may, in fact, override (information-)structural as well as cognitive factors (Diessel 2005; Wiechmann & Kerz 2013), that is, that

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lengthier and more complex constituents, which naturally entail greater processing efforts, or those that contain discourse-new and focused information, are put first due to their semantic class. Diessel (2001) developed a sequence of adverbial clauses based on their likelihood to be encountered before or after their juxtaposed main clause. According to his findings, the most frequent fronted adverbial clauses (all of which are circumstance adverbials in Biber et al.'s 1999 framework) are conditionals, followed by temporal and causal clauses, while result and purpose clauses are least commonly found sentence-initially.

However, as has been established, such an intentional deviation from the canonical word order, and thus from common information-structural principles, brings with it the possibility to establish emphasis, which is also at play when dramatic or rhetoric effects are to be achieved (Quirk et al. 1985: 1378) or when, in line with Givón's (1985) principle of *task-urgency*, which highlights 'the main purpose of the utterance' (Biber et al. 1999: 904), the element that is placed initially is 'contextually most demanded' (Quirk et al. 1985: 1377).

The final two functions of fronting phenomena that will be discussed here are concerned with the relation between sentences in discourse. By using determiners or 'anaphoric deictic markers such as *this*, *that*, *these* and *such*' (Callies 2009: 39), by repeating given information (Callies 2009: 39), or by the use of particular types of linking adverbials, both preposing and fronting pose a fruitful means to establish cohesion or, as illustrated below in (6), to express a contrasting relationship between units of discourse:

(6) Sam thought speaking in front of many people would make her uncomfortable. However, she ultimately enjoyed it very much.

However is used here to mark the contrast between the expected experience expressed in the first and the actual experience referred to in the second sentence. As becomes clear, this is typically achieved by providing different alternatives that are contrasted by means of links acting as contrasting connectives (Biber et al. 1999: 900–1). In fact, according to Callies (2009: 39), this 'contrastive emphasis' is actually the most common function of fronting phenomena. However, the function of establishing cohesion and coherence is not exclusive to linking adverbials. As Hasselgård (1996) makes clear, both temporal and spatial adverbials may also contribute to cohesive discourse (cf. 1996: 110).

Having discussed the diverse structural and functional realisations of adverbials as well as the information-structural implications their initial

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placement may have, one final aspect that needs to be mentioned is that of inversion, without which, according to Biber et al. (1999: 900), a true understanding of fronting phenomena is not possible, since the preposing of certain elements, among them particular types of adverbials, triggers the phenomenon. This is illustrated in the examples under (7):

(7) a. [On the wall]^{A} [hung]^{V} [a nice picture.]^{S} (subject-verb inversion)
b. [Next]^{A} [came]^{V} [the Queen.]^{S} (subject-verb inversion)
c. [Rarely]^{A} [have]^{Aux} [I]^{S} [seen]^{V} [this.]^{O} (subject-operator inversion)

As indicated, the initial placement of various types of adverbials may lead to the inversion of the subject and the entire verb phrase or its operator. These include opening adverbials of place, as in (7a), or time, illustrated in (7b), as well as negative or restrictive elements such as *only*, *never*, *scarcely*, or, as in (7c), *rarely*.

13.2.2 Previous Research into Adverbial Fronting Phenomena in Learner Language

Previous research on fronting phenomena as such has been versatile. When it comes to preposing, quite a bit of research has been dedicated to both English as a Native Language and English as Second Language contexts (e.g., Quirk et al. 1985; Birner & Ward 1998; Biber et al. 1999; Esser 2002; Huddleston & Pullum 2002; Ward & Birner 2006 on ENL; Lange 2012; Winkle 2015; Götz 2017 on ESL, to name but a few),[6] all of which have greatly contributed to the understanding of the structure, its characteristics, and its underlying mechanisms, also discussed by Götz and Kircili (Chapter 12 in this volume).

Research into learner language, however, has been scarce, with two laudable exceptions being Plag and Zimmermann (1998) and Callies (2009), both of whom investigated German learners of English. Callies (2009), using a multi-method approach, investigated multiple non-canonical sentence patterns. His results on preposing confirm that learners, just like native and second-language speakers of English, rather shy away from employing the construction, with the corpus analysis yielding only five instances of preposing of an obligatory constituent, one of which had been produced by a native speaker and four by learners of English (2009: 194–5). In relation to the use of sentence-initial optional adverbials, Callies (2009: 178) remarks that they tend to be overrepresented in the

[6] Note that Götz (2017), too, takes account of both optional and obligatory sentence-initial elements.

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L2 output of German learners, which may be due to the fact that they are not familiar with the previously mentioned principles of end-weight or end-focus.

Other studies on the use of adverbials and adverbial fronting by learners have paid a lot of attention to the use of connectors/linking adverbials and, in this connection, especially their overrepresentation in learners from different L1 backgrounds, which is, in fact, so common that it has been referred to as a potential 'universal feature of interlanguage' (Gilquin et al. 2007: 328). Granger and Tyson (1996), for instance, compared their employment by native speakers with that by French learners. They determined that there is no general overrepresentation but solely an over- or underrepresentation of connectors with particular functions. An overrepresentation was determined, for example, for connectors that either corroborate and thus support the argument (e.g., *in fact*, *indeed*) or provide an example (e.g., *for instance*, *namely*) or additional information (e.g., *moreover*) (1996: 20). Connectors which serve to establish contrast (e.g., *though*, *however*) or cohesion (e.g., *thus*, *therefore*) were found to be less frequently used by learners. This implies that, while connector use for emphasis or exemplification seems common, using them to 'change the direction' of arguments or develop them logically does not (Granger & Tyson 1996: 20). Reasons include the insufficient knowledge of students concerning the semantic restrictions and the syntactic behaviour of individual adverbials as well as their 'inexperience in manipulating connectors within the sentence structure' (Granger & Tyson 1996: 25). They conclude that, instead of providing them with lists of words and phrases, students should learn to use them not as stylistic enhancers but as higher-level discourse units with a variety of semantic functions and a high degree of syntactic flexibility. This increased awareness of their semantic, stylistic, and syntactic properties, achieved, for instance, by studying authentic texts, might help students to attain the ultimate goal behind the use of connectives, namely cohesion in discourse (Granger & Tyson 1996: 25–6). In fact, this connection between curricula activities, designated teaching materials and learner productions has been proven in a number of studies; so much so that van Vuuren and Berns, in their 2018 study on Dutch and Francophone learners of English, referred to it as a 'teaching-induced interlanguage feature' (2018: 457) (see also Field & Oi 1992 on Cantonese; Altenberg & Trapper 1998 on Swedish; Milton 1998 on Chinese; or Leńko-Szymańska 2008 on Polish, Russian, Spanish, French, Swedish, Finnish, and German learners of English).

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Another common focus of previous research endeavours has been on transfer-related performances. For Dutch learners, for example, it has been found that they use more circumstantial and linking adverbials, while the number of stance adverbials in fronted position is smaller than that used by native writers. With increasing proficiency, learners' means develop in the direction of native writing, however. The only exception are, in fact, linking adverbials, in case of which the learners clearly exhibited a continuous overuse. This fact is attributed to both the teaching materials and language transfer (van Vuuren 2017; van Vuuren & Laskin 2017), given that linking adverbials (as well as local anchors) as cohesive devices were not only overrepresented in the English L2 output of their Dutch participants but also in their L1 writing (van Vuuren & de Vries 2017; see also Larsson 2017 on the use of *probably* and *possibly* by Swedish and Norwegian and of *maybe* and *perhaps* by Spanish learners of English in Larsson et al. 2020).

13.3 Adverbial Fronting Phenomena in Learner Language

13.3.1 Research Gaps and Research Questions

Following the account of previous research endeavours into the topic, two research gaps were identified:

(1) There is a lack of research into the formal and functional peculiarities of adverbial fronting phenomena in German learner language going beyond the consideration of particular kinds of adverbials.
(2) There is a lack of research involving predictive modelling that might contribute to the understanding of the use of the structures by learners of English.

Consequently, this study intends to answer the following research questions:

(1) Can significant differences be determined between the frequencies of the different semantic and/or syntactic types of adverbials in the native speaker vs. the learner data and/or do the findings support previous research (particularly on conjuncts/adjuncts)?
(2) Can information-structural variables (information status or the syntactic complexity of the initial element) be determined as predictors for the use of adverbial fronting in the two corpora?

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13.3.2 Databases and Methodology

This study makes use of the German sub-component of the *International Corpus of Learner English* (*ICLE*) and the *Louvain Corpus of Native English Essays* (*LOCNESS*; Granger 1998). *ICLE* is a corpus of argumentative essays produced by advanced (university-level) students of English, compiled with the aim of enabling the investigation of 'the interlanguage of advanced learners from various mother-tongue backgrounds' (Granger & Tyson 1996: 18). The version employed for this chapter contains a total number of approximately 3.7 million words from 16 different first-language backgrounds. The German component contains about 234,000 words (Granger et al. 2009).

LOCNESS was compiled at the Université catholique de Louvain in order to provide control data for *ICLE* (Granger & Tyson 1996: 19). The corpus contains approximately 320,000 words and it, too, is mostly made up of argumentative essays of 500+ words on a variety of topics, written by British A-level as well as British and American university students ('LOCNESS description' n.d.). For the present study, it was decided to use the American English argumentative essays in spite of the fact that the variety of instruction in Europe (and thus also in Germany) tends to be British English (Leńko-Szymańska 2008) because the former is commonly considered 'the most important and influential dialect' due to 'films, television, popular music, the Internet and the World Wide Web, air travel and control, commerce, scientific publications, economic and military assistance, and activities ... in world affairs' (Algeo 2010: 183; cf. also Schneider 2009). Consequently, the assumption is that the language of university students in their early twenties is likely to be shaped more by the continuous influence of and exposure to the language in these areas than by what they were taught at school and thus predominantly in the first years of language acquisition. Table 13.1 provides an overview of the material used.

As indicated in Table 13.1, 74 out of 437 *ICLE*-Germany essays were randomly selected and compared with 48 out of 188 American English argumentative essays from *LOCNESS*, with the topics ranging from experiences with friends, pros and cons of cars, and environmental issues (in *ICLE*) to important discoveries, capital punishment, or feminism (in *LOCNESS*). Although the difference in the number of essays is not ideal, it was deemed more important to have a comparable number of sentences and to analyse complete essays (as opposed to the consideration of, e.g., only a particular number of sentences per essay). This has the advantage that, for instance, summative linking adverbials, which are naturally used towards the end of a text, also feature in the analysis.

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Table 13.1 *Overview of the analysed data from* ICLE *and* LOCNESS

	ICLE	*LOCNESS*	TOTAL
Number of essays	74	48	122
Number of sentences	1,619	1,630	3,249
Excluded sentences	193	142	335
TOTAL	**1,426**	**1,488**	**2,914**

Table 13.2 *Annotation scheme used for the corpus analysis with explanations*

Category	Explanation
CORPUS	Construction at hand belongs to ICLE or LOCNESS
FILENAME	Filename of the essay the construction is taken from
C/CN	Sentence is canonical (C) or non-canonical (NC)
S_LENGTH	Number of words the sentence at hand consists of
FRONT_TF	Sentence-initial element constitutes subject (F) or any other sentence constituent (T)
GN	First element constitutes *given* or *inferable* (G) or *new* information (N)
A_FRONT_TF	First element constitutes adverbial (T) or not (F)
FRONT_EL	First element constitutes subject (S), object (O), complement (C), verb (V), or adverbial (A)
FRONT_FORM	Syntactic realisation as one-word expression (X), phrase (NP, PP, ADVP, ADJP) or clause (CL)
FRONT_FUNCTION	Semantic function of the adverbial – circumstance (C), stance (S), or linking (L)
FRONT_OBL_TF	Sentence-initial element is obligatory (T) or optional (F)
LENGTH_EL_I	Number of words the first element consists of
CLUST_TF	The sentence at hand begins with adverbial cluster (T) or not (F)

Turning to the annotation process itself, Table 13.2 shows the parameters for which each sentence was manually annotated. It is based on an annotation scheme used by Götz (2017) for her study on fronting phenomena in South Asian varieties of English, which was adopted with minor adjustments. Other than the *given-new* status (category GN) and the semantic function (FRONT_FUNCTION), the majority of variables are dedicated to the syntactic form and function of the first constituent of every sentence (e.g., FRONT_EL, FRONT_FORM, FRONT_OBL_TF). While the explanations provided in the table are sufficient for the majority of the individual categories, a more detailed discussion is in order when it comes to the given/new distinction. According to Prince's (1981) taxonomy of

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assumed familiarity, a threefold distinction can be made between *new* information, information that is *inferable*, or *evoked* (or *given*) information (see also Pham, Chapter 9 in this volume). In a first step of the analysis, this distinction was generally followed (with a slightly more extensive consideration of inferable entities than originally suggested in Prince's work) to be able to obtain a more fine-grained picture of the information status in the essays, but, for the sake of comparability with other studies, it was then decided to conflate the *inferable* and the *given* categories to be able to proceed with just a twofold distinction between *given* and *new* information. For the statistical evaluation, different statistical tests and methods were employed, including descriptive statistics, conditional inference trees (cf. Hothorn et al. 2006), and logistic regressions using the *R* package *dplyr* in *R Studio*.

13.3.3 Results and Discussion

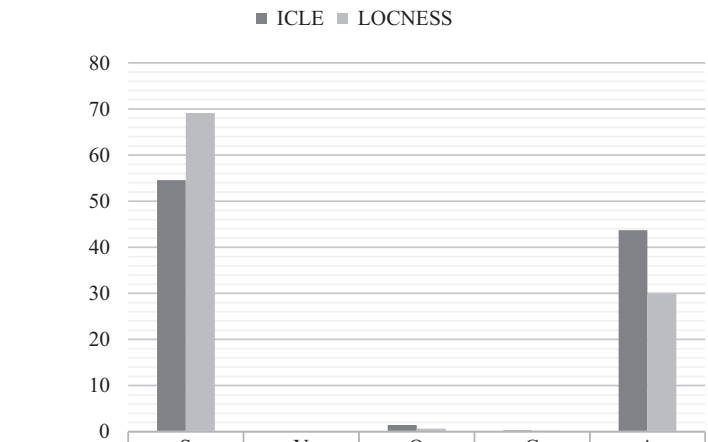
To establish a basis for the following results, Figure 13.1 provides an overview of the frequency distributions of the placement of different sentence elements in sentence-initial position.

As can be seen in Figure 13.1, objects, complements, and verbs were hardly found sentence-initially in the data, while the canonical subject was the most commonly chosen sentence-initial constituent in both populations, constituting 54.56% (n = 779) of the 1,426 sentences taken from *ICLE* and 69.15% (n = 1029) of the 1,488 sentences from *LOCNESS*. Consequently, adverbials were, in fact, the second most frequent sentence-initial element in both corpora, employed in 29.91% (n = 445) of the cases in *LOCNESS* compared to 43.69% (n = 622) in *ICLE*. Instances of adverbial preposing (and thus the use of obligatory adverbials as sentence-starters) were, as suggested by previous research, exceptionally rare, constituting only 2.02% (n = 9) of the instances identified in the native speaker and as little as 0.48% (n = 3) of the cases in the learner data. In both populations, see (8) and (9), it was either the use of negative or restrictive adverbs or the use of spatial references, both of which trigger inversion, that resulted in the employment of preposing:[7]

(8) Next door to me[A:NP_c] lives a typical representative of this kind. <ICLE_GEAU1044>

[7] The annotations provide information on the type of sentence constituent, its structural form as well as its semantic function. In this example, it reads as follows: **A:**(adverbial)**NP**(in the form of a noun phrase)_**c**(fulfilling the semantic function of a circumstance adverbial).

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	S	V	O	C	A
ICLE	54.56	0.00	1.47	0.28	43.69
LOCNESS	69.15	0.07	0.67	0.20	29.91

Figure 13.1 Frequency distribution of different sentence elements in fronted position (percentage)

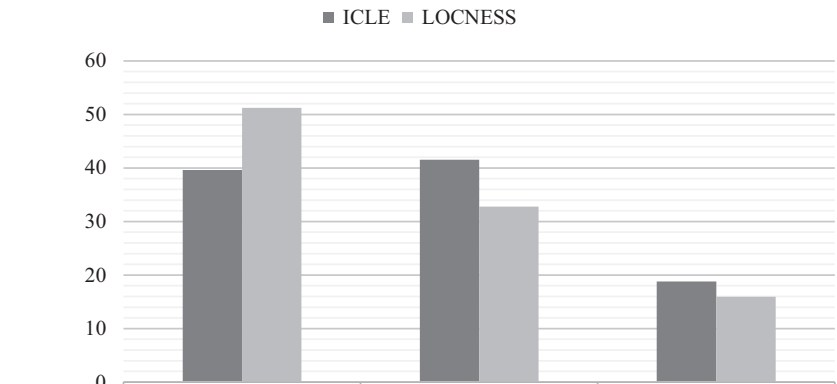
(9) Never at once[A:AdvP_c] in an article[A:PP_c] does it mention that euthanasia precedes some type of consequence. <ICLE-US-MRQ-0002.1>

This observation already illustrates the crucial role of adverbials in relation to fronting (as the initial placement of optional constituents) since they are, by far, the most common non-canonical fronted element.

Zooming in on their different functions, Figure 13.2 provides an overview of percentage distributions of the different semantic types (***c**ircumstance*, ***l**inking*, ***s**tance*) of adverbials in the two corpora.

Based on the percentages, we can derive clear preferences. While both groups least frequently opted for stance adverbials, circumstance and linking adverbials were preferred by native speakers and German learners, respectively, with both the stance and linking adverbials being significantly more frequently employed by the latter group (stance: $\chi^2 = 10.829$, $df = 1$, $p < 0.001$; linking: $\chi^2 = 31.05$, $df = 1$, $p < 0.001$). In particular the results concerning linking adverbials thus seem to confirm previous research in that these adverbials tend to be overrepresented in learner data. In fact, when taking a more qualitative approach and taking a closer look at individual concordance lines, it becomes apparent that the results corroborate some of the findings reported by Granger and Tyson (1996). Just like in their study on French learners, German students seem to rely on fronted

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	c	l	s
ICLE	39.65	41.57	18.78
LOCNESS	51.24	32.81	15.96

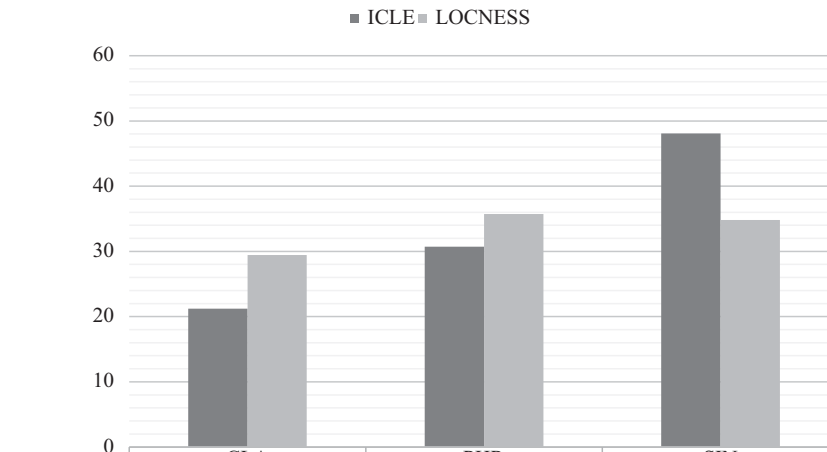
Figure 13.2 Frequency distribution of adverbial functions in *ICLE* and *LOCNESS* (percentage)

adverbials with a linking function to expand on information previously provided, using, for example, *moreover*, *therefore*, or *so*, but refraining from sentence-initial *also*, a potential false friend in German, which is found only twice in the learner but 16 times in the native speaker data. Interestingly, the establishment of contrast, commonly fulfilled, for example, by *however* in the American data, was, in fact, instead achieved by the use of the subordinating conjunction *but*, used as many as 81 times in *ICLE* (compared to 13 instances in *LOCNESS*). Given the fact that, even in their mother tongue, starting a sentence with *but* is considered stylistically rather clumsy, it is surprising that German learners still felt compelled to use the conjunction for this purpose in their L2 output. In both corpora, linking adverbials were also identified as the semantic type that was most commonly attested in adverbial clusters, as exemplified below. Both combinations, illustrated in (10) and (11), contain linking as well as circumstance adverbials (roughly corresponding to the adjunct category investigated by Hasselgård 1996).

(10) On the one hand[A:PP_l] in some cases[A:PP_c] the car is a really useful thing [. . .]. <ICLE_GEAU1039>

(11) However[A:Adv_l] if that person knew what he should do [. . .],[A:cl_c] he would not have erroneous answers. <ICLE-US-MICH-0001.1>

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	CLA	PHR	SIN
ICLE	21.22	30.71	48.07
LOCNESS	29.44	35.73	34.83

Figure 13.3 Frequency distribution of syntactic realisations in *ICLE* and *LOCNESS* (percentage)

Moving on to the structural distribution, Figure 13.3 shows the frequency of the structural realisations of sentence-initial adverbials (i.e., ***CLA****use*, ***PHR****ase*, ***SIN****gle adverb*) in percent.

What can be seen here is that the native speakers exhibited a tendency to use more complex syntactic realisations (i.e., phrases or clauses) more frequently, namely in 35.73% and 29.44% of the cases, while learners only used them in 30.71% and 21.22% of the instances, respectively. Still, the only statistically significant difference was, in fact, determined for single constituents ($\chi^2 = 45.674$, $df = 1$, $p < 0.001$), used in 48.07% (n = 299) of the learner and 34.83% (n = 155) of the native speaker cases. The tendency for the American students to express themselves in more complex structures is exemplified in (12) to (14) below. While the first two sentences contain phrasal structures that, in *ICLE*, would have predominantly been expressed using a single constituent (e.g., *therefore*), the third example is particularly interesting. The reason is that, as is frequently the case in this subcorpus, this participant fronts a dependent clause, obviously in order to particularly emphasise the reason behind the points that were made in the preceding discourse.

(12) For this reason[A:PP_I] people did not travel extremely long distances [. . .]. <ICLE-US-MICH-0032.1>

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(13) Because of this,[A:PP_l] it has been met with great opposition. <ICLE-US-MRQ-0021>

(14) In order for these people to be sure [. . .],[A:cl_c] they need to be assured that it is safe and more economical. <ICLE-US-MRQ-0006.1>

This final example is also indicative of the observations made for the syntactic preferences of each type of adverbial, with circumstance adverbials being the only case for which clauses were preferred by native speakers while learners rather opted for phrase structures. For each of the other semantic categories, the single-word expression was, in fact, the most commonly chosen alternative.

Regarding the second research question, enquiring whether certain information-structural variables can be identified as predictors for adverbial fronting, the ctree in Figure 13.4 already alludes to the fact that, overall, there are significant differences between the two corpora. Likewise, both the *given-new* variable and the sentence length proved to be of relevance to the nature of the constituent that is found in sentence-initial position.

In general, ctrees (Hothorn et al. 2006) are based on recursive partitioning algorithms, providing a means to meaningfully split the values or manifestations of the dependent variable based on the independent variables that are assumed to exert an influence. One major advantage is the fact that ctrees also detect behavioural patterns in fairly small datasets, making this method a perfect choice for the present chapter.

As can be seen, even though the first significant split separates the learner from the native speaker data, they also share certain behaviours, such as the fact that the next important splits (*Node2* ($p < 0.001$), if the left branch of the tree is followed, and *Node11* ($p < 0.001$), which is reached to the right) are both based on the length of the sentence at hand. Focusing on the learners, and thus on the right part of the tree, sentence-initial adverbials, compared to other sentence-initial constituents, are particularly commonly chosen in sentences that are longer than 22 words (cf. *Node15*). If they are shorter than that, the *given-new* distinction is of relevance (*Node12*; $p = 0.02$) and they are more frequently employed if they contain *given* information (*Node14*). When it comes to native speakers, and thus the left part of the tree, *Node2* separates sentences from each other that are either longer or shorter than 16 words and in both cases, the next important split is the *given-new* status of the first constituent (*Node6* ($p = 0.008$) for sentences that exceed 16 words, and *Node3* ($p = 0.034$) for those that are shorter). If the branches of *Node3* are followed, it can be seen that the percentages of canonical sentences (commencing with a subject) are much higher than those of sentence-

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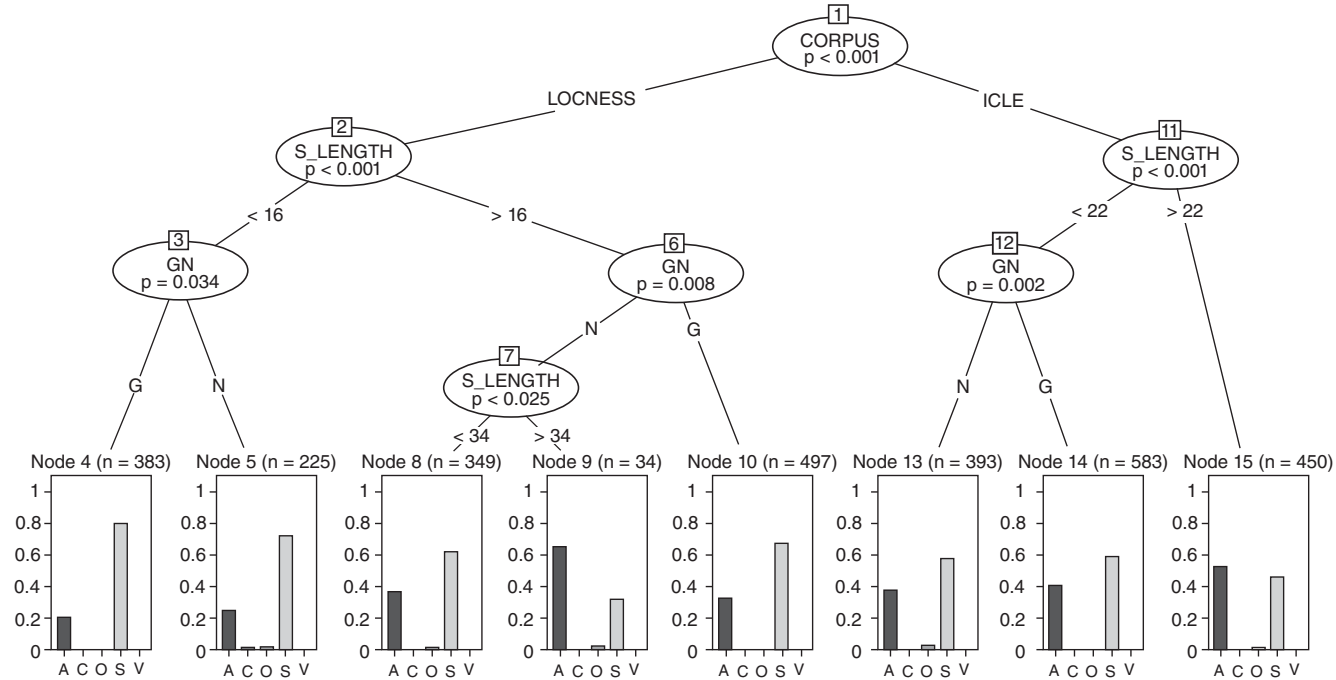


Figure 13.4 Ctree: Distribution of *FRONT_EL~CORPUS+S_LENGTH+GN*

initial adverbials (cf. *Node4* and *Node5*). Interestingly, in *Node5*, which provides the frequency distributions for *new* information, the percentage of fronted adverbials is slightly higher than when the information is *given* (visible in *Node4*). This is striking because, as mentioned previously, the standard progression of the information status in an English sentence would commence with *given* and proceed to *new* information. This observation also holds true for particularly long constructions. If the left branch of *Node6* is followed, which, again, refers to *new* information in sentence-initial position, there is another split (*Node7*; $p = 0.025$) between sentences that are up to 34 words long and those that exceed 34 words, with the percentage being particularly high for the latter instances (*Node9*; note, however, that this figure is only based on 34 cases).

However, to determine whether the three variables CORPUS, GN, and S_LENGTH also have a predictive power, the glm function (allowing for two-way interaction) was used and yielded the results depicted in Figure 13.5.

Even though the model 'only' explains 5.9% of the variance in the data ($R^2 = 0.059$) it turned out to be highly significant and to perform significantly better than the baseline model. As the effect plots in Figure 13.5 make clear, the observations made for the above ctree are, in a way, confirmed and the variable CORPUS was returned as a significant predictor ($p < 0.001$). The plot on the left indicates that, for both varieties, the likelihood for adverbial fronting to occur increases significantly with an increasing sentence length ($p < 0.001$), an observation that can be explained by the fact that additional/explicatory information or temporal references, as they are frequently provided by circumstantial adverbials, are commonly provided in longer structures as in (15):

(15) From the times of the Roman Empire, when, for the amusement of the multitude, dissenters and runaway slaves were torn to shreds by ferocious animals, to modern entertainment in the form of brandished baseball bats, hurled cobblestones and indiscriminating hooliganism at soccer matches,[A:cl_c] violence has always found some people to whom it appeals as an attractive pastime. <ICLE-GE-AUG-0027.3>

The plot on the right, on the other hand, implies that there is a significant interaction between the *given-new* structure and the corpus. While the learners show a tendency for adverbial fronting to occur when the constituent contains given information, in *LOCNESS* it is significantly more frequently used with new information ($p < 0.05$) as illustrated in (16) and (17).

(16) When the death penalty is requested as a sentence,[A:cl_c] it is usually based upon the rage of our society towards a criminal's violent act. <ICLE-US-MRQ-0003.1>

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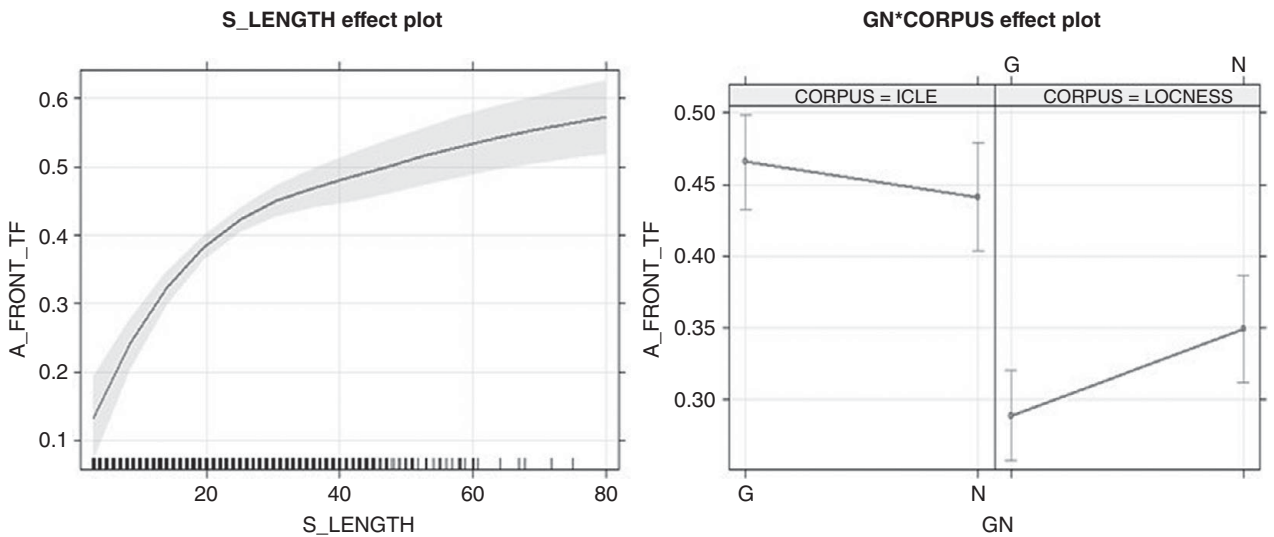


Figure 13.5 Effect plot of glm *A_FRONT_TF~LOG(S_LENGTH) +GN+CORPUS+GN:CORPUS*

(17) When my tea finally arrived,[A:cl_c] I had decided that I didn't want to drink it. <ICLE_GEAU1049>

At first sight, this seems like a surprising result given that it implies that, while German learners structure their sentences in conformity with the *given-new* contract, native speakers frequently opt to deviate from the standard progression when using sentence-initial adverbials. However, considering the suggestion made by Diessel (2005), the finding may confirm that, under certain circumstances, particular information-structural principles can override each other and that a deviation is acceptable, for example, to enable an adherence to the principles of end-weight or end-focus or in order to achieve balanced weight, as in (16) above, where the lengths of the preverbal and the postverbal constituents (in number of words) are roughly the same.

13.4 Conclusion and Outlook

The aim of this study was to provide a comprehensive overview of adverbial fronting in German learners as opposed to their American English peers. Likewise, it attests the justification and merit of the consideration of both approaches to non-canonicity, namely the theory-based and the frequency-based approach, in relation to adverbial fronting phenomena. The distinction proved particularly relevant also for the newly proposed approach to the investigation of adverbials that takes account of the fact that these sentence constituents play an important syntactic, pragmatic, and information-structural role, irrespective of whether they are obligatory or optional. Against this backdrop, the chapter gives an insight into the learners' use of a constituent that, due to its frequently flexible nature, is commonly overlooked in the context of non-canonical sentence patterns.

The corpus analysis was able to verify numerous findings that have been reported in previous research. First and foremost, and perhaps unsurprisingly, it is confirmed that preposing is a comparatively rare structure in both the native speaker and the learner data. Considering the fact that, if the pattern is used, it would commonly entail place references or negative or restrictive adverbials triggering inversion, the complex nature of the resulting construction may be difficult to master, particularly for learners of English. Other findings that match previous research results include the overrepresentation of (particular) connectors along with potential L1-transfer-realated choices. From a structural perspective, it was also found

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that German learners strongly prefer single-word adverbials to phrases and clauses (which are more frequently employed by native speakers), assuredly due to the fact that they are easier to acquire and to retrieve. The only type for which this did not hold true was the circumstance adverbial for which a clear preference of clauses (in *LOCNESS*) or phrases (in *ICLE*) could be determined, a fact which might be attributed to the element's common use to provide additional and/or explicatory information or to express time and/or place references by means of short and easy-to-use noun or prepositional phrases (e.g., *last Monday*, *in California*) and dependent clauses (e.g., *when I saw him*). Another important finding of the study is the correlation between the likelihood of encountering a fronted adverbial and the sentence length and, with regard to the native speaker data, the newness of information. While especially the latter finding seems surprising at first sight, it may prove the claim that some information-structural forces take precedence over others (Diessel 2005), although this is a claim that needs to be verified by further research.

Both the theoretical discussion and the findings, attesting this contrast in the employment of adverbials by native speakers and learners, prove the importance and justification of the consideration of adverbial fronting (as opposed to preposing) as part of the realm of non-canonical syntax. Naturally, however, with the consideration of a very limited number of explanatory variables, this study only provides a starting point for further research into the topic.

In addition, future studies should take account of other (information-) structural variables (e.g., *theme-rheme* or *focus* structure, constituent weight), learner context variables, and possibly also additional (interlanguage) varieties (see Kircili forthcoming) to increase the predictive power of a model and to thus provide a more detailed account of the mechanisms underlying the choice of adverbial fronting phenomena.

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