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There's life beyond ForceP: Mapping the cartography of the outer left periphery in German

Nicholas Catasso¹

catasso@uni-wuppertal.de

ABSTRACT: This paper examines the cartography of the so-called “outer left periphery” in contemporary German, namely the array of functional projections surfacing to the left of the highest clause-internal position, ForceP, in this language. The latter projection acts as a convergence point between the informational content of the proposition and discourse in that it specifies the clause type and links the syntactic structure to pragmatic and discourse-organizational aspects of language. It helps organize how different parts of a sentence relate to each other, ensuring that the sentence be interpreted correctly according to the speaker's intent. The functional projections to its left lexicalize discourse-related elements of various kinds that are not syntactically integrated, i.e., do not interact with the intrasentential computation (e.g., with the Verb-Second word order, the EPP feature in C, the Bottleneck Effect, etc.). An analysis of the possible serializations in this area of the utterance, supported by corpus data, reveals that the CP-external domain exhibits a fixed hierarchy of structural positions just as the other layers of the clause. The present investigation only considers data from German, but paves the way for further studies exploring the very structure of this underresearched area of the clause in German and in other languages.

KEYWORDS: Syntax; (Outer) Left Periphery; Cartography; German

1. Introduction

This paper focuses on the syntax of the left periphery of main clauses in German.² This topic is a long-burning issue in German(ic) linguistics, as the structure

¹ Dr. Habil., Bergische Universität Wuppertal (Germany).

² Preliminary parts of this paper were presented at the workshops “Sentence Grammar/Discourse Grammar” (Tübingen, July 2022), “Cracks in the Bottleneck: Verb-Third and the Polyoccupation of the Initial Slot in Verb-Second Languages – Insights from Germanic and Beyond” (Paris, February

of this sentence domain and many of the phenomena realized or licensed therein have given rise to controversial discussions and analyses over the decades. Although the internal structure of the CP has been the subject of numerous studies over the past 40 years, certain aspects of this topic remain disputed to this day (for an overview, see among the most recent works Lohnstein & Tsiknakis 2020; Woods & Wolfe 2020; Wegerhoff 2022; De Clercq et al. 2023). The existing studies have mainly concentrated on the clause-internal portion of the C-layer, i.e., on the area comprised between the highest position in the middle field and the leftmost specifier interacting with the syntactic computation of the sentence (Spec,CP in traditional terms, Spec,ForceP in cartographic studies). The determination of the internal makeup of this domain is particularly challenging in a language like German, which features a Verb-Second (henceforth: V2) syntax, and has for this reason sparked considerable debate in the literature even irrespective of the studies focusing on the left periphery in Romance or English.

In what follows, some complex questions regarding the composition and constitutive features of the *outer* left periphery are addressed adopting a cartographic approach, that is, through an analysis of the serializations allowed to the left of ForceP with particular attention to the specific positions dedicated to the single projections. In general, the extrasentential domain of the utterance and in particular the interaction of its projections have been dramatically neglected both in theoretically informed and in descriptive studies of the left periphery. However, the area above ForceP often comes into play – in light of its insensitivity to the operations carried out in the internal portion of the clause – as a “parking lot” for elements that do not seem to satisfy the formal requirements related to the internal portion of the clause and are therefore excluded from the analysis of the ForceP-FinP-system.

2023), as well as at FGLS 2024 (Cambridge, 2024). I am grateful to the audiences at these events for their constructive criticism and thought-provoking comments. I would also like to thank two anonymous reviewers for their feedback on an earlier version of this article. All shortcomings are my own.

The paper is structured as follows: Section 2 briefly presents some details concerning the syntax of the internal left periphery in German and the main problems related to its analysis in the existing studies; Section 3 introduces the notion of “outer periphery”, its functions and its problematic status as an extra layer in the computation of the utterance; in Section 4, a cartographic approach is adopted for the analysis of hitherto undiscussed data illustrating the interplay of multiple constructions surfacing above ForceP in German. The data are mainly drawn from a study of the corpora contained in the DWDS (*Digitales Wörterbuch der deutschen Sprache*, Berlin-Brandenburgischen Akademie der Wissenschaften)³ (collections of texts of different kinds and genres published in various online platforms), but the examples also include further sources (e.g., websites) and adapted versions of the corpus data modeled through introspection. The aim of this paper is not to present a quantitative study of pre-ForceP word orders, but to discuss critically the most natural linearizations involving such constructions and to test the spatial limits of this understudied domain of the utterance. This is, to the best of my knowledge, the first study in cartographic syntax explicitly focusing on the inner structure of the outer periphery of German by considering “multiply-filled” configurations in this area; Section 5 concludes.

2. The clause-internal left periphery of German

The internal structure and associated interpretive features of the left sentence periphery in German, i.e., the intrasentential sentence domain above the so-called “middle field”, have been the subject of numerous synchronic and diachronic studies, especially in generatively oriented literature, over the past decades.

Until the early 2000s, the prevailing view was that the sentence-internal area of the left sentence periphery in contemporary German consisted of only two structural positions, namely the left sentence bracket (LSB) (or in generative terminology: C°) and the prefield (or Spec,CP) hosting the finite verb in a main clause or a subjunction

³ <https://www.dwds.de/>.

in an introduced subordinate clause or a constituent preceding the finite verb (see, inter alia, Bierwisch 1963; Thiersch 1978 in formal syntactic literature). In the lower right sentence bracket (RSB) (roughly corresponding to the head of the IP in a non-Kaynian (1994) model), the finite verb appears in embedded clauses. The area of the sentence called “middle field” (including the IP and the VP) is the domain found between the left and the right sentence bracket:

- (1) a. [prefield [LSB [middle field [RSB]]]]
 b. [CP [C° [IP [VP [V°] [I°]]]]]

This assumption is based on the notion that contemporary German is considered an asymmetrical V2 system – a concept found not only in older generative grammar, but also in pre-theoretical non-transformational approaches (Fourquet 1957, 1970; Bach 1962; Drach 1963 [1937]; Reis 1974; den Besten 1983 [1977]; Höhle 1986). This means that: (i) the syntactic serialization of canonical declarative main clauses typically results from a combination of V-to-C movement of the inflected component of the predicate and the dislocation of a single full constituent generated in the IP/VP area to Spec,CP, whereas; (ii) subordinate clauses introduced by a complementizer exhibit obligatory verb-final word order, which is related to the presence of an overt element in C° blocking the raising of the finite verb and indirectly the topicalization of an XP merged in the IP/VP:

- (2) a. [CP *Hans* [C° **hat** [IP/VP *ein neues Auto gekauft*]]].
 Hans has a new car bought
 b. ...[C° *dass* [IP/VP *Hans ein neues Auto gekauft hat*]].
 that Hans a new car bought has
 ‘(...that) Hans bought a new car.’

Additionally, contemporary German is considered a strict V2 language (see, inter alia, Bidese & Tomaselli 2007; Grewendorf & Poletto 2011; Cognola 2013; Walkden 2017; Hsu 2017, 2021), in which the prefield can host only and at most one

full constituent. In this domain of the left periphery, constituents are hosted that are directly related to the internal syntax and the narrow semantic interpretation of the clause: e.g., fronted constituents of variable nature (Frames, Foci, Topics, etc.), resumptives in correlative constructions such as left dislocation, and expletives. This is exemplarily illustrated in (3): One full XP in Spec,CP interacts with V-to-C movement (3a)-(3c), while a structure like (3d), in which two phrases occupy the prefield simultaneously, is generally excluded (but see the data in Bunk 2020; Breitbarth 2022, 2023):

- (3) a. [*Hans*] *hat heute seinen Vortrag gehalten.*
 Hans has today his talk given
- b. [*Seinen Vortrag*] *hat Hans heute gehalten.*
 his talk has Hans today given
- c. [*Heute*] *hat Hans seinen Vortrag gehalten.*
 today has Hans his talk given
- d. **[Heute] [Hans] hat seinen Vortrag gehalten.*
 today Hans has his talk given
 ‘Hans gave his talk today.’

Although this model allows for correct predictions regarding the overt syntax of most possible sentences in German, questions regarding specific aspects and the operationalization of the above-mentioned model have emerged in formally oriented synchronic linguistics since the late 1990s and particularly since the development and establishment of the two most widely represented approaches or programs in generative grammar today, Minimalism (Chomsky 1995) and Cartography (Rizzi 1997, 2001; Cinque 1999; Belletti 2004, 2008; Cinque & Rizzi 2008), over which there is still no consensus.

In some synchronic studies, it is debated whether — and if so, to what extent — one may assume that only one preverbal position (Spec,CP) can encompass all the information-structural properties and grammatical-pragmatic functions that in other systems such as Romance and Slavic languages, according to Rizzi (1997, 2001), are

expressed through a cascade of functional projections. Principally, three options (in the following: O1, O2, and O3) are open in this regard which are illustrated in (4) below:

- O1: The lexicalization of the categories encoded by the CP is distributed across the two topological positions C° and Spec,CP – terminology varies from author to author – such that finiteness (the inflected verb in V2 sentences) and clause type (the complementizer) are realized in the head position, and information structure (topic and focus) and EPP in the specifier. This formalization, represented in the literature on contemporary German by Haider (1993), Lohnstein (2000), Frey (2000: 165f.) and Fuß (2008), implies an unspecified characterization of the Spec,CP position or the assumption that C° is equipped with multiple features (4a, also cf. (1) above);
- O2: The left periphery of German consists of several highly specialized projections, similar to those postulated in the cartographic approach for Romance or English (e.g., Rizzi 1997, 2001). Depending on how the constituent in the first sentence position is interpreted, a corresponding projection is activated, whose specifier is occupied. In the unmarked interpretation of a sentence like (3a), for instance, the nominal expression *Hans* would appear in the visible syntax in the specifier of a left-peripheral TopP projection due to the information-structural role of its referent ((4b) shows an exemplary simplified version of the model in Rizzi (1997: 297));
- O3: This clausal area in German consists of only one projection (a CP) with an arbitrary number of specifiers, which are hierarchically ordered based on the features they encode, so that this model potentially derives all left-peripheral word order patterns of a language. This is definitionally possible in Minimalism, provided the head C° possesses the necessary features to form these specifiers (Chomsky 1995, 2000; Bobaljik 1999; Richards 2001; Grewendorf 2002a, 2002b; Rezac 2004; Lahne 2009; G. Müller 2010) (4c):

- (4) a. [CP [C° [IP/VP ...]]]
 b. [ForceP [TopP* [FocP [TopP* [FinP [IP/VP ...]]]]]]
 c. [CP [CP ... [IP/VP]]]

Despite ongoing controversy, recent studies have increasingly adopted O2 (4b) or adapted versions of it for Germanic languages (Grewendorf 2002a; Haegeman 2002, 2006; Samo 2019; Greco & Haegeman 2020; Catasso 2021, to cite a few) not only because “the cartographic approach has [in general] shown great heuristic power in comparative syntax and typological research” (Shlonsky & Bocci 2019: Section 3), but also in light of the fact that even Germanic V2 languages exhibit surface phenomena that seem to imply multiple occupation of the left-peripheral area. For the details, the interested reader is referred to the above-mentioned literature.

For the sake of economy (and to capture the theoretical foundations of the generative enterprise in its cartographic declension), the terminology used in the present paper will – where possible – rest upon the notions introduced in the relevant literature with respect to the same items in different languages. Hence, before addressing the data in detail, the next sections will briefly introduce the notion of “outer left periphery” and overview the technicalities relative to the discussion of the syntax of the relevant categories found in this area of the clause in German.

3. The outer left periphery

The domain labeled “outer left periphery” (German: *Vorvorfeld* ‘pre-prefield’) in this work refers to the clause-external area of the sentence that is situated to the left of ForceP:

- (5) [outer left periphery [ForceP inner left periphery [FinP [IP/VP inflectional/lexical area]]]]

The outer left periphery can be conceived of as part of the utterance, but does not interact with the syntactic mechanisms leading to intrasentential word order and

typically includes discourse-related elements (cf., e.g., Auer 1997; Imo 2012, 2017). In German, the outer left periphery may basically contain six categories of items:

- hanging topics (3.1)
- irrelevance and biscuit conditionals (3.2)
- connective discourse markers (3.3)
- vocative expressions and hearer-oriented interjectional expressions (3.4) and speaker-oriented interjectional expressions (3.5)
- speech-act related adverb(ial)s (3.6)

With the exceptions of Wöllstein (2014) and Wegerhoff (2022), research on the left periphery of German has, to date, paid relatively little attention to the precise positioning of these elements within the extrasentential domain. In particular, there are no cartographic investigations addressing the syntactic mapping of the corresponding features and their co-occurrence in one and the same sentence. A closer look at the distribution of these items, however, reveals that they also adhere to a specific word order above ForceP.

In what follows, these restrictions will be discussed by considering the possible linearizations that can be generated in the outer left periphery of German.

3.1 Hanging topics

Hanging topics (Cinque 1977, 1979) are phrases surfacing in the extrasentential area of the clause (cf., among many others, Grohmann 2000; Benincà & Poletto 2004; Shaer & Frey 2004; Boeckx & Grohmann 2005; Catasso 2022; Villa-García 2023) whose reference is taken up by a co-indexed element in the C- or in the IP-/VP-layer (the area between the left and the right sentence bracket). From an information-structural point of view, hanging topics are used as markers for introducing a topic (in Krifka's 2008 sense) just as left-dislocated XPs, the latter also being resumed by a clause-internal element (Giorgi 2015). However, at least five features differentiate

these two categories: (i) hanging topics are non-inflected, viz., they exhibit default inflectional morphology (in German, surface nominative case), while the case of the resuming element depends on its syntactic function in the clause. This is not the case for left-dislocated topics, whose ϕ -features always match with those of the resumptive. In (6a), for instance, the uninflected (or default-case-marked) hanging topic *Hans* occupies the highest position in the sentence and does not agree in case with the dative-marked expression – the complement of a preposition – resuming it clause-internally. In (7a), instead, the DP in first position exhibits accusative morphology like the corresponding *d*-resumptive; (ii) left dislocation (but not hanging topicalization) shows binding effects, as illustrated in the contrasts in (6b)-(7b) (adapted from Frey 2004: 205); (iii) in left dislocation – but not in hanging topicalization –, Principle-C effects may be induced by an R-expression inside the dislocated phrase (6c)-(7b) (adapted from Frey 2004: 205); (iv) hanging topicalization is typically characterized by a phonological pause between the topic and the clause-internal area of the clause marking the boundary between the outer and the inner left periphery (Altmann 1981; Benincà 1988; Meinunger 2004; Frey 2004a, 2004b; Shaer & Frey 2004; Kempchinsky 2008; Fernández-Sánchez & Ott 2020); (v) left-dislocated phrases are only resumed by *d*-pronouns (as shown in all examples in (7)), while hanging topics can be resumed by a wider range of elements (e.g. demonstratives, personal pronouns or epithets, but also null resumptives) ((6a) and (6c)):

(6) a. **hanging topic**

(Der) *Hans*, mit dem / mit ihm / mit diesem

the.NOM Hans.NOM with that.DAT with he.DAT with this.DAT

Idioten habe ich nichts am Hut.

idiot.DAT have I nothing at-the hat

‘Hans – I want to have nothing to do with him/with that idiot.’

b. ***Seinen**_i **Doktorvater**, jeder Linguist_i verehrt ihn.

his.ACC supervisor.ACC every.NOM linguist admires he.ACC

(int.): ‘Every linguist admires their (own) supervisor.’

- c. **Den neuen Artikel von Peter**_i, *er*_i *will*
 the.ACC new.ACC article of Peter he.NOM wants
ihn in LI veröffentlichen.
 he.ACC in LI publish
 ‘Peter wants to publish his new article in *LI*.’

(7) a. **left dislocation**

(Den) Hans, *den mag ich gar nicht.*
 the.ACC Hans.ACC that.ACC like I at-all not
 ‘I don’t like Hans at all.’

- b. **Seinen**_i **Doktorvater**, *den verehrt jeder Linguist*_i.
 his.ACC supervisor.ACC RES.ACC admires every.NOM linguist
 ‘Every linguist admires their (own) supervisor.’

- c. ***Den neuen Artikel von Peter**_i, *den will er*_i
 the.ACC new.ACC article of Peter RES.ACC wants he.NOM
in LI veröffentlichen.
 in LI publish

(int.): ‘Peter wants to publish his new article in *LI*.’

Without going into the details of this intricate issue, I assume that hanging and left-dislocated topics differ syntactically in that the former are base-generated in the outer left periphery, the latter in the clause-internal area of the sentence (for diverging analyses, the reader is referred, e.g., to Zifonun et al. 1997; Haider 2010; Wöllstein 2014: 72).⁴ More detailed evidence for clause-external first merge of hanging topics is discussed in Section 4 below.

⁴ In particular, Haider (2010: 2) assumes that left-dislocated topics do not reach their surface position via movement, but are base-generated extrasententially: “The left-dislocated phrase precedes the XP position, is pre-adjoined to the clause, and is obligatorily associated with a resumptive element (R) that agrees with the left-dislocated constituent”. In the same vein, but from a non-generative perspective, Wöllstein (2014) elaborates on Zifonun et al.’s (1997) model and proposes a comprehensive (topologically-oriented) analysis of outer-left-peripheral elements in German in which hanging (in (i): FT) and left-dislocated (in (i): LT) topics occupy the same position:

Although hanging topics are often assumed to be exclusively realized by nominal expressions (cf. e.g. Belletti 2008), recent work has shown that other categories (PPs, CPs, etc.) are also compatible with this categorization, at least in German (Catasso 2022, Moroni & Bidese 2024):

- (8) *In den Niederlanden sind die Job-Perspektiven ... sehr gut.*
 in the Netherlands are the job-perspectives very good
 [**Bei uns in Deutschland hingegen**] – *was ist hier eigentlich los?*
 at us in Germany instead what is here actually up
 ‘In the Netherlands, the job opportunities are excellent. In Germany, instead – what is wrong with this country?’
 (adapted from: Catasso 2022: 22-23)

In other words, hanging topicalization can also realize frame-setting(-like) topics (with an aboutness or contrastive reading), as in (8), where the PP *bei uns in Deutschland (hingegen)* ‘here in Germany (instead)’ is clearly not syntactically integrated and corresponds to a contrastively interpreted adverbial with a framing function resumed middle-field-internally by a co-indexed adverb (*hier* ‘here’).⁵

Since most (cross-linguistic) works devoted to hanging topics do not specifically address their interaction with other outer-left-peripheral elements, but primarily discuss their detachment from the clause-internal domain, the

-
- (i) LT/FT PREFIELD ...
 a. **Den Hund**, *den kannst du mitbringen.*
 the.ACC dog.ACC that.ACC can you v.prt-bring
 ‘You can bring the dog.’
 b. **Der Hund**, *dem würde ich keinen Zucker geben.*
 the.NOM dog.NOM that.DAT would I no sugar give
 ‘The dog – I wouldn’t give him/her any sugar.’

(adapted from: Wöllstein 2014: 72, based on Zifonun et al. 1997: 1580)

⁵ For a fine-grained typology of hanging topics in the outer left periphery of the German clause, cf. Catasso (2022).

corresponding topological position (labeled “HT”) is generally represented as follows (Benincà 2001; Benincà & Poletto 2004; Wolfe 2018; Samo 2019):

(9) [HT [ForceP ...]]

In the next section, evidence will be presented that the projection hosting hanging topics is not the only one occupying the extrasentential area in German (as is arguably the case in other languages).

3.2 Irrelevance and biscuit conditionals

In the last decades, a substantial literature has been devoted to the distribution and structural position of clausal expressions that are generally taken to be syntactically non-integrated (for German(ic) cf., among many others, König & van der Auwera 1988; Peyer 1997; Pittner 1999, 2011; Günthner 1999; Auer 2000; Haegeman 2002, 2003; Bhatt & Pancheva 2006; Axel & Wöllstein 2009; Heldt 2010; Frey 2012; Rawlins 2013; Breithbart, Delva & Leuschner 2016), including structures such as those in (10) below. So-called “irrelevance” (d’Avis 2004) and “biscuit” (Austin 1956, Lycan 2001) conditionals are adverbials exhibiting the form of embedded clauses standardly introduced by the complementizer *ob*, *wenn* or *falls* (‘whether’/‘if’/‘in case’) which, however, do not introduce a condition on the interpretability of the main clause and are syntactically independent (at least at PF) and prosodically disintegrated (cf., e.g., Günthner 1999: 220).

The irrelevance and the biscuit conditional differ from each other semantically in the following way: the former is a specific type of conditional clause in which the condition expressed in the protasis is irrelevant to the truth of the main clause. This construction often uses markers of the *even-if-* or *whether-or-not-* type to indicate that the main clause holds true regardless of the condition (10a). The latter, instead, is a conditional clause in which the truth or relevance of the matrix is not directly dependent on the condition expressed in the *if*-clause (10b). In other words, a

conditional reading of (10b) is “implausible because of world knowledge” (Goebel 2020: 9). In this case, it is not generally the case that someone’s needing me may cause me to be next door:

(10) **irrelevance conditional**

- a. ***Ob du mitkommst oder nicht, wir fahren jetzt nach Köln.***
 whether you come or not we go now to
 Cologne

‘Whether you come or not, we are going to Cologne now.’

biscuit conditional

- b. ***Falls du mich brauchst, ich bin nebenan.***
 in-case you me need I am next-door
 ‘I’ll be next door if you need me.’⁶

In what follows, the umbrella term “unconditional” (Rawlins 2013) will be used to identify both categories irrespective of their interpretation. Where necessary, the specific attributes “irrelevance” and “biscuit” will be added to distinguish the corresponding phrases.

Syntactically, both types typically occur in a fronted position and are not compatible with a canonical V2 configuration (i.e., do not participate in the clause-internal syntactic computation), as illustrated in the following examples. Irrelevance conditionals may sometimes be spelled out in the prefield in spoken usage just as canonical adverbials, but their positioning in a clause-internal position is not perceived as natural:

⁶ In these examples, a comma has been used as a graphic device to mark the boundary between the *ob-/falls*-clause and the main clause for the sake of consistency (e.g., for better comparability with the examples in the following sections). Speakers familiar with the convention of separating embedded and main clauses with punctuation in present-day German tend to alternate between commas, en dashes, and colons for this function.

- (11) a. ??**Ob** **du** **mitkommst** **oder nicht**, *fahren wir jetzt nach Köln*
 whether you come or not go we now to Cologne
- b. ***Falls** **du** **mich** **brauchst**, *bin ich nebenan.*
 in-case you me need am I next-door

The syntactic and prosodic disintegration of such constituents (i.e., their natural occurrence, as seen in (10)) already suggests that they differ fundamentally from typical adverbials. Furthermore, building on the cartographic premise that left-peripheral adverbials occupy distinct structural positions depending on their interpretive features and degree of syntactic integration (cf. Haegeman 2003, 2010; Munaro 2005, 2010; Frey & Truckenbrodt 2015), and considering that the conditionality expressed by these constructions does not influence the truth value of the matrix clause, I propose that irrelevance and biscuit conditionals are positioned within an outer left-peripheral projection at PF (for technical details and distinctions between irrelevance and biscuit conditionals, cf. Catasso 2021).

This is likely the case because unconditionals have plausibly emerged from a biclausal structure in which a partly elided conditional – originally the final segment of a sentence preceding the informationally relevant utterance and adding specification regarding the speaker's participation in the speech act – is reanalyzed as part of the discourse domain of the subsequent clause, as exemplified for both unconditionals in the following. In (12a)-(12c), the three stages of this elliptical process are illustrated for irrelevance conditionals. All three stages still occur as well-formed structures in present-day German. The anaphoric pronoun *das* ('that') here refers to the content of the pre-context. In (13), the structural reanalysis of the *egal-ob*-construction is graphically represented: In Stages 2/3, the utterance-initial segment loses its clausal status and is reduced to a unit consisting of an adjective accompanied by an *ob*-clause (Stage 2) or of the same configuration with the adjective elided (Stage 3).

As expected from a semantic parsing in which the left-peripheral segment does not affect the truth value of the main clause, the latter can, of course, be uttered without the irrelevance conditional preceding it, leaving the speaker's stance implicit.

In the utterance, the claim is that a particular state of affairs holds, while the irrelevance conditional functions as a redundant explicit mention of a background assumption or shared knowledge that the consequent holds independently of the condition.

(12) **irrelevance conditional**

a. STAGE 1

Es ist egal, ob das stimmt oder nicht: Heute stehen
 it is irrelevant whether that is-true or NEG today stand
da vier gereifte Männer auf der Bühne, die ...
 there four mature men on the stage who

b. STAGE 2

~~*Es ist egal, ob das stimmt oder nicht:*~~ Heute stehen da vier gereifte
 Männer auf der Bühne, die ...

c. STAGE 3

~~*Es ist egal, ob das stimmt oder nicht:*~~ Heute stehen da vier gereifte
 Männer auf der Bühne, die ...

‘(It is irrelevant) whether that’s true or not: Today, there are four mature men
 standing on stage who...’

(version in (c) from: DWDS, Webkorpus, Apr. 29th, 2023)

(13) a. STAGE 1

[Utterance 1 *Es ist egal, ob das stimmt oder nicht*]

[Utterance 2 *Heute stehen da vier gereifte Männer, die ...*]

b. STAGE 2/3

[Utterance 1 ~~*Es ist*~~ ***(egal,) ob das stimmt oder nicht***]

⇓ REANALYSIS

[Utterance 2 *(Egal,) ob das stimmt oder nicht: Heute stehen da vier gereifte
 Männer, die ...*]

For biscuit conditionals, a similar path can be assumed, as shown in (14) and (15). In the initial structure, the *falls*-clause functions as a conditional modifying the predicate in Utterance 1 (14a)-(15a). This utterance loses its clausal status, the boundaries are reanalyzed, and the *falls*-segment is produced as part of Utterance 2 (14b)-(15b). Here too, the unconditional need not be overtly expressed, as it does not introduce a condition relevant to the interpretability of the main clause.

(14) **biscuit conditional**

a. STAGE 1

Ich sage das, falls du dich noch nicht so gut auskennst: Mit dieser Funktion markiert man, wer auf einem Foto zu sehen ist.
 I say this in-case you REFL still NEG so well
 are-familiar with this function tags one who on
 a photo to see is

‘I say this in case you’re not too familiar with it yet: With this function, you can tag who is visible in a photo.’

b. STAGE 2

~~*Ich sage das, falls du dich noch nicht so gut auskennst:*~~ *Mit dieser Funktion markiert man, wer auf einem Foto zu sehen ist.*

(15) a. STAGE 1

[Utterance 1 *Ich sage das, falls du dich noch nicht so gut auskennst*]

[Utterance 2 *Mit dieser Funktion markiert man, wer ...*]

b. STAGE 2

[Utterance 1 ~~*Ich sage das, falls du dich noch nicht so gut auskennst*~~]

⇓ REANALYSIS

[Utterance 2 *Falls du dich noch nicht so gut auskennst: Mit dieser Funktion markiert man, wer ...*]⁷

⁷ Also note that biscuit conditionals differ from canonical hypothetical conditionals in that they are incompatible with (optional) left-peripheral resumptive elements of the *then*-type, which typically

The integration of both types of unconditionals into Utterance 2, however, has not fully succeeded. This accounts for why the original structure remains possible and why unconditionals are typically positioned in a domain where they neither interact with clause-internal syntax nor affect the semantic interpretation of the sentence.

The specifics of their relative positioning in the outer left periphery of present-day German are discussed in Section 4.

3.3 Connective discourse markers

Connective discourse markers are another class of elements that is very productive in spoken German. In the corresponding position, elements are merged that do not cannot be interpreted as topics, do not exhibit a speech act-related interpretation that influences the syntactic computation of the sentence they linearly introduce, and fulfill a purely textual/discourse organizational function. Such expressions represent the result of a reanalysis process, thus constituting the pragmaticalized – and syntactically disintegrated, thus compatible with V2 positioning – version of so-called “(intrasentential) conjunctive adverbs” (German:

externalize the dependency of the main clause’s content on that of the preposed adverbial clause. This distinction is illustrated in the following examples (for (ii), the interpretation given in the translation is assumed):

(i) HYPOTHETICAL CONDITIONAL

Falls das passiert, (dann) hat Project1917 sein Ziel erreicht.
 In-case this happens then has Project1917 its goal achieved
 ‘If that happens, (then) Project1917 will have achieved its goal.’

(ii) BISCUIT CONDITIONAL

**Falls dich das interessiert, (dann) hat Project1917 sein Ziel erreicht.*
 in-case you this interests then has Project1917 its goal
 achieved

(int.): ‘In case you’re interested: Project1917 has achieved its goal.’

(example (i) from: deutschlandfunk.de, Apr. 04th, 2017)

intrasententiale Konjunktionaladverbien) (Zifonun et al. 1997; Eisenberg 1999: 227; Helbig & Buscha 2005: 308; Ferraresi 2008: 180; Duden 2009: 584). These are sentence-internal adverbs such as *außerdem* ‘furthermore’, *also* ‘thus’, *daher* ‘therefore’, *trotzdem* ‘nevertheless’, *insofern* ‘to that extent’, *jedenfalls/übrigens* ‘by the way’, etc., which have contextually reconstructable, clearly identifiable text-structuring functions and therefore are often found in the prefield, but – due to their intrasentential nature – can also occur in the middle field, and connect two units (sentences or sections) of a text by marking the logical relation between the two domains.

According to Roberts & Roussou’s (2003) and van Gelderen’s (e.g., 2004, 2008) Economy Principles, their grammaticalized/pragmaticalized status mandates their direct merger in the position where they appear at PF. Discourse markers base-generated sentence-externally, as often observed with disintegrated elements at the left edge of the clause, have at least potentially broader scope than the corresponding syntactically integrated (and homophonous) full adverbs: their secondary function, alongside their primary connective role, is not to modify the sentence-internal predicate or verbal complex, but rather to select the entire proposition, including the highest intrasentential projection ForceP, and to connect two speech acts. In the corpus examples in (12) (all from the DWDS newspaper corpora “*Berliner Zeitung (BZ) (1994-2005)*”, “*Tagesspiegel (TS) (since 1996)*”, and the *DWDS web corpus (WK)*), the distinction between sentence-internal conjunctive adverbs and extra-sentential discourse markers is illustrated using the element *deswegen* ‘for this reason’ (for a conversation-analytic treatment of *deswegen* as a discourse marker, see König 2012; Imo 2017):

- (16) a. *Kleinkinder* *verstehen* *viele* *verbale* *Zurechtweisungen*
 little-children understand many verbal reprimands
nicht. ***Deswegen*** *muss man aber* *nicht klapsen.*
 not for-this-reason must one however not spank
 ‘Young children do not understand many verbal reprimands. Nevertheless, one should not spank them.’

(DWDS, Berliner Zeitung, Nov. 21st, 2005)

- b. *Rafik war mit seiner Baufirma pleite. Deswegen wurde sein Konto geschlossen.*
 Rafik was with his construction-company broke for-this-reason
 was his account closed

‘Rafik was bankrupt with his construction company. Therefore, his account was closed.’

(DWDS, Tagesspiegelkorpus, Dec. 07th, 2004)

- c. *Unser Ziel muss weiterhin sein, die Infektionsraten zu reduzieren. Deswegen: Bitte tragen Sie alle eine Alltagsmaske, denn damit schützen Sie andere und tragen mit dazu bei, unser Gesundheitssystem weiter stabil zu halten.*
 our goal must furthermore be the infection-rates to
 reduce for-this-reason please wear you all a face-mask
 because with-it protect you others and contribute also to-it
 V.PRT our healthcare-system further stable to keep

‘Our goal must continue to be to reduce infection rates. Therefore, please all wear a face mask, because by doing so you protect others and contribute to maintaining the stability of our healthcare system.’

(DWDS, Webkorpus, Jul. 18th, 2020)

In (16a) and (16b), *deswegen* is a sentence-internal connective adverb that is raised from its base position in the middle field to a specifier position in the C-domain. In the former example, the original scope relation [NEG [*deswegen*]] is semantically evident: the meaning of this sentence, easily identified based on the given pre-context, is approximately ‘but this is *not a good reason* to hit’. In (16b), the scope relation is not as straightforward as in (16a), but it is clear that the adverb is merged in the middle field, where it can be reconstructed, and subsequently dislocated into the CP. In both sentences, the adverb is fronted because its linking function in the sentence-initial position, from which it interacts with the V2 syntax of the sentence, is most clearly recognizable. Conversely, the utterance in (16c), where

While in some approaches vocatives are regarded as completely unintegrated, “parenthetical-like” expressions that are not part of the clause even in languages in which they are case-marked (cf. e.g. Ashdowne 2002: 153), in more recent times it has been proposed that they at least interact with the syntactic computation of the utterance in which they appear, i.e. that they are merged in one of the “extra-sentential” layers above ForceP that still belong to the extended left periphery of the clause (cf., among many others, Lambrecht 1996: 267; Portner, 2004; Stavrou 2013; Haegeman & Hill 2013; Haegeman, 2014; Hill 2013, 2014). This entails that, even if they are base-generated clause-externally (thereby assuming that ForceP marks the line between the inner and the outer domain of the clause), they do not behave like parenthetical XPs in that they are not first-merged in a separate workspace and then spelt out in some position of the structure at PF, as is the case for pragmatically motivated expressions according to the Minimalist Program (Chomsky 1995 and much subsequent work); rather, they are presumably part of the structure already at LF.

Haegeman & Hill (2013), elaborating on Speas & Tenny (2003), propose, in a nutshell, that vocatives are generated as specifiers of a projection labeled “SAP” (big Speech Act Phrase), which dominates ForceP and is situated below another saP (little Speech Act Phrase). In this approach, SAP is responsible for the representation of the hearer in discourse – which is why vocatives are assumed to be merged in it –, whereas the higher saP encodes the coordinates relative to the speaker. The head of SAP hosts base-generated hearer-oriented particles which optionally (in some languages even obligatorily, cf. Hill 2013: 135) co-occur with the vocative noun. For German, one may think e.g. of *komm schon* (lit. ‘come.IMP + modal particle’), a pragmatized expression similar to English *come on* generally used to introduce an utterance in which the speaker tries to convince the hearer to do something, cf. e.g. Proske (2014) (cf. (18a)-(18c)); or *bitte*, which roughly corresponds to English *please* (cf. (19a)-(19c)). In languages like German, the vocative noun (which bears nominative, the unmarked case in this language) and the hearer-oriented particle can occur independently of the presence of the other element. If a vocative (here, with the

function of attracting the hearer’s attention) and *komm schon* or *bitte* co-occur, the most natural sequence is the one illustrated in (18c) and (19c), namely Vocative > Particle, which supports the idea that the underlying structure is as in (20a). In (20b), this is illustrated on the basis of the data in (18). To derive the sequence in which, instead, these elements are spelt out in the sequence particle > vocative noun, which is also possible although slightly less natural, Haegeman & Hill assume that the particle moves from the head position of SAP to the head sa° . Cf. (20c) (adapted for German from Haegeman & Hill 2013: 386):

- (18) a. **Komm schon,** *mach das Fenster zu!*
 come on close the window V.PRT
- b. **Hans,** *mach das Fenster zu!*
 Hans close the window V.PRT
- c. **Hans, komm schon,** *mach das Fenster zu!*
 Hans come on close the window V.PRT
 ‘Hans, come on, close the window!’

- (19) a. **Bitte,** *lass mich in Ruhe.*
 please leave me in peace
- b. **Maria,** *lass mich in Ruhe.*
 Maria leave me in peace
- c. **Maria, bitte,** *lass mich in Ruhe.*
 Maria please leave me in peace
 ‘Maria, please, leave me alone.’

- (20) a. [_{SAP} [_{sa°} [_{SAP} vocative [_{sa°} particle ... [_{ForceP} ...]]]]]
- b. [_{SAP} [_{sa°} [_{SAP} *Hans* [_{sa°} *komm schon/bitte* ... [_{ForceP} ...]]]]]
- c. [_{SAP} [_{sa°} *komm schon/bitte* [_{SAP} *Maria* [_{sa°} ~~*komm schon/bitte*~~ ... [_{ForceP} ...]]]]]

Given that in West Flemish and in Romanian two vocative particles may co-occur – this is also the case in German –, Haegeman & Hill (2013: 386) propose that

there are two saP/SAP complexes with specialized discourse functions, each dominating the other (21). The two possible positions of the vocative noun ([Spec,SAP1] and [Spec,SAP2]) are justified by the specific reading that this phrase receives: an attention-drawing interpretation is typically associated with the noun surfacing to the left of the particle(s) and thus with merging in the higher SAP specifier; a bonding interpretation of the vocative XP, instead, implies its base-generation in the lower [Spec,SAP].⁸ Note that the fact that such expressions can have an attention-drawing or a bonding function is in line with Zwicky's (1974) definition of "vocative" (see above). This analysis permits, in fact, to derive all possible vocative-particle combinations even when two hearer-oriented particles are involved. To exemplify this configuration in present-day German, cf. (22), where the two vocative particles *hey!* (performing an attention-seeking function) and *komm schon* are presented in different orderings:

- | ATTENTION-SEEKING | BONDING |
|--|----------------|
| (21) [saP1[sa°][SAP1 vocative [SA° particle]][saP2 [sa°] [SAP2 vocative [SA° particle]][ForceP]]]]]] | |
| (22) a. <i>Hey, komm schon, Hans, tu es doch!</i> | |
| hey come on | Hans do it PRT |

⁸ The distinction between attention-seeking and bonding vocative lies primarily in their communicative functions and the pragmatic purposes they fulfill in conversation. An attention-seeking vocative is primarily used to attract the hearer's attention. The speaker employs the vocative to ensure the listener is focused or to signal the start of an utterance directed at them before delivering the message. A bonding vocative, on the other hand, is used to create or strengthen a social bond between the speaker and the listener, serving as a marker of familiarity, affection, solidarity, or group identity, depending on the context. Consider the following two examples from English:

- (i) *John, could you please come here?*
 (ii) *Come on, John, don't be shy!*

In (i), a situation can be imagined in which the speaker and the hearer are in two different rooms. The speaker uses the DP *John* to draw the hearer's attention before making a request. In (ii), this cannot be the case. In a plausible scenario where this sentence is uttered, the speaker already has John's attention, and the vocative serves to signal emotional closeness.

- b. ***Hans, hey, komm schon, tu es doch!***
 Hans hey come on do it PRT
- c. ***Hey, Hans, komm schon, tu es doch!***
 hey Hans come on do it PRT
- ‘Hey, come on, Hans, just do it!’

The three possible word orders illustrated in (22) can be operationalized as in (23). In (22a), corresponding to (23a) below, the particle *hey!* is base-generated in the higher SA° and remains in that position at PF, while *komm schon*, which is first-merged in the lower SA°, is moved to the head of saP2. The vocative noun *Hans* does not leave its base-generation position in [Spec,SAP2]. In (22b) ((23b) below), the vocative phrase *Hans* is attention-drawing and is merged in the higher [Spec,SAP]. The particle *hey!* is generated in the corresponding head, and *komm schon* in the lower SAP head. In (22c) ((23c) below), instead, the vocative noun, which has a bonding and not an attention-seeking reading, surfaces between the two particles: in this case, the same configuration can be assumed as in (22b)/(23b) with respect to the particles, with the difference that *Hans* is base-generated (and spelled out) in the lower SAP specifier:

- (23) a. [_{saP1} [_{sa°}] [_{SAP1} [_{SA°} *hey*] [_{saP2} [_{sa°} *komm schon*] [_{SAP2} *Hans* [_{SA°} ~~*komm schon*~~] [_{ForceP} ...]]]]]]
- b. [_{saP1} [_{sa°}] [_{SAP1} *Hans* [_{SA°} *hey*] [_{saP2} [_{sa°}] [_{SAP2} [_{SA°} *komm schon*] [_{ForceP} ...]]]]]]
- c. [_{saP1} [_{sa°}] [_{SAP1} [_{SA°} *hey*] [_{saP2} [_{sa°}] [_{SAP2} *Hans* [_{SA°} *komm schon*] [_{ForceP} ...]]]]]]

Note that the assumption that *hey!* (parallel to Haegeman & Hill’s Flemish *wè* ‘you know’ and Romanian *hai* ‘really’) is first-merged in the higher and not in the lower SAP head is not of postulative nature: this particle is, indeed, associated with an attention-drawing rather than with a bonding reading. Evidence for this comes from the data in (24), which show that in the same structure, the positioning of *hey!* in the lower SA° leads to severe degradation:

- (24) a. ?**Hans, komm schon, hey, tu es doch!*
 b. ?**Komm schon, Hans, hey, tu es doch!*

The analysis sketched here will also be adopted to account for the data discussed in the next sections of this paper.

3.5 Speaker-oriented interjectional expressions

Interjections are a complex class of conventionalized vocal gestures (Ameka 1992) performing different discourse-related functions: they typically express a more or less spontaneous feeling or reaction (*Ouch!*, *Oh no!*, *Oh my God!*), but they can also play a crucial role in sustaining the flow of an (especially spoken) conversation (Crystal 2003). Some elements considered in 3.4 among the vocative expressions, such as *hey!*, are also commonly regarded as (hearer-oriented) interjections.

In this subsection, items are examined that can be assumed to be *speaker-oriented* in the sense that they lexicalize some judgment, reaction or mental state of the speaker with respect to the situation described in the main clause. Three outer-peripheral interjectional expressions performing this function in German exclamative clauses are given in (25). The interjections in (25a)-(25c) contribute to the interpretation of the corresponding utterance in similar ways (and all have counterparts in other languages, cf. the translations into English). They differ, however, in the kind of attitude that the speaker holds towards the content addressed in the sentence. *O Mann* (25a) expresses the speaker's (overwhelming) sense of surprise towards the situation making her queasy. *Ach* (25b) reinforces (here) a counterfactual desire ("be with one's family again") and stresses the speaker's nostalgic attitude to the non-realizability of this content. *Mist* (25c) expresses annoyance, parallel to *damn* in English:

- (25) a. ***O Mann***, *da wird einem ja schwindlig!*
 oh boy there become one PRT dizzy
 'Oh boy, that makes me really queasy!'

- b. **Ach**, *es wäre so schön, wieder bei meiner Familie zu sein!*
 alas it would-be so nice again at my family to be
 ‘Alas, it would be so nice to be with my family again!’
- c. **Mist**, *Hans hat uns gesehen!*
 damn Hans has us seen
 ‘Damn, Hans has seen us!’

Given that such expressions must occur in a linear v3 order in which the prefield is occupied by a clause-internal element (an expletive like in (25a)-(25b) or an argument of the verb like in (25c)) and the interjection is obligatorily separated from the ForceP-area by means of a prosodic break, it is evident that they are first-merged extrasententially just as the other items considered above.

In what follows, speaker-oriented interjections will be integrated into Haegeman & Hill’s (2013) saP/SAP framework, which is optimally designed for the representation of both hearer- and speaker-oriented expressions.

3.6 Speech-act related adverb(ial)s

Further phenomena to be considered here are expressions base-generated in the outer left periphery that are not situated at the propositional level, but rather modify or evaluate the entire illocution of the utterance. As a consequence of this, these expressions preferably or exclusively occupy sentence-external positions, viz., they are much less naturally found in the prefield. It is quite plausible, therefore, that such elements, which are also separated from the rest of the utterance by a phonological boundary, are merged in the area to the left of ForceP. This category is exemplified in the sentences in (26):

- (26) a. **Ehrlich**, *mir reicht’s.*
 honestly to-me is-enough-it
 ‘Honestly, I’ve had enough.’
 (K. Müller 2022: 83)

b. **Ganz offen**, ich bin von dir total enttäuscht.

quite openly I am of you totally disappointed

‘Quite frankly, I’m totally disappointed in you.’

(Meinunger 2009: 116)

c. **Unter uns**, wir hatten nie ein besonders inniges Verhältnis.

between us we had never a particularly close relationship

‘Between us, we never had a particularly close relationship.’

(adapted from: Schalowski 2015: 63)

It is assumed here that the base-generation site of these elements – if they appear in the *Vorvorfeld* – must be a projection placed above the highest CP-internal specifier. Some of the expressions that fall into this category also have counterparts that, under certain conditions (and without forcing a manner interpretation), can occur within the middle field or at the end of the utterance. To explain this, Meinunger (2004, 2009: 120f.) proposes the hypothesis that short forms like those in (26), which are not accompanied by a participle (cf., e.g., the also possible forms *ehrlich gesagt*, lit. ‘honestly said’, *(ganz) offen gestanden*, lit. ‘quite openly confessed’, *unter uns gesagt*, lit. ‘said between us’ etc.), due to their potential semantic ambiguity between literal and utterance-related interpretation, must occupy an identifiable topological position (i.e., one that is associated with only one possible interpretation) in overt syntax. According to Meinunger’s approach, the system disambiguates the reading of these expressions either semanto-syntactically (by the non-ellipsis of the lexical component of the participle, which includes the performative character of the utterance and is thus recognizable in the prefield or middle field) or purely topologically (based on a particularly salient surface position, namely the pre-prefield).

The occurrence of the short form in the prefield or middle field does not always result in ungrammaticality, but, according to Meinunger (2009) and K. Müller (2022), it is considered at least less acceptable than the corresponding long form. This is indicated in (27) with the symbol "??". It is also possible to redundantly realize

this feature, allowing for the combination of the long form and the pre-prefield positioning, as illustrated in (27c):

- (27) a. *Das ist ganz ehrlich ??(gesagt) zu viel.*
 this is quite honestly said too much
 (explicit form in the middle field)
- b. *Ganz ehrlich ??(gesagt) ist das zu viel.*
 quite honestly said is this too much
 (explicit form in the prefield)
- c. *Ganz ehrlich ^{OK}(gesagt), das ist zu viel.*
 quite honestly said this is too much
 (implicit/explicit form in the pre-prefield)
- (int. :) ‘Honestly, this is too much.’

Also in this case, the combination of an extrasentential and an intrasentential XP in the left-peripheral area of the clause produces a linear V3 word order.

4. Interplay of outer left-peripheral items

In this paper, it is argued that the outer-left-peripheral categories discussed above adhere to linearization principles akin to those governing clause-internal items and can be systematically analyzed using cartographic methods. The hypothesis of a formal and topological differentiation of extrasentential projections suggests the following: (i) multiple elements from the respective categories (disintegrated connectors, hanging topics, speaker- and hearer-oriented expressions, and speech-act-related adverbials) can co-occur within a single utterance; (ii) these elements predominantly appear in a specific order; and (iii) any variation in their order must be derivable within the same configuration.

In light of the aforementioned discussion on the formal and topological differentiation of extrasentential projections, this paper proposes the linearization in (28), to be elucidated in the following paragraphs. In (28), “ConnectP” refers to

disintegrated connective discourse markers of the *deswegen*-type illustrated in 3.3; the speech-act related (saP/SAP) shell consists of two layers, the higher one (saP1/SAP1) associated with an attention-seeking function, the lower one (saP2/SAP2) fulfilling a consolidating/bonding role; the label “icP/bcP” identifies irrelevance conditionals and biscuit conditionals, which are taken to occupy the same position in the structure; “HT” stands for “hanging topic”:

(28) ConnectP > saP1 > SAP1 > saP2 > SAP2 > icP/bcP > HT (> ForceP) ...

In (28), the projection hosting connective discourse markers occupies the leftmost position in the hierarchy. The corresponding elements must indeed linearly precede all other categories, as exemplarily shown in (29). Note that the orderings presented in these examples represent the only (natural) options in which the relevant elements can co-occur in the pre-ForceP area:

(29) a. connective adverb > vocative

Jedenfalls, lieber Frühling: wir freuen uns, dass
 anyway dear Spring we are-glad REFL that
du da bist ...
 you there are

‘Anyway, dear Spring: we are glad that you are here ...’

(DWDS, Webkorpus, Mar. 23rd, 2016)

b. connective adverb > irrelevance conditional

Also, egal, was kommt: Ich habe das Gefühl, ich
 so unimportant what comes I have the feeling I
bin bereit.
 am ready

‘So, no matter what comes: I have the feeling that I am ready.’

(DWDS, Webkorpus, May 25th, 2019)

c. connective adverb > biscuit conditional

Übrigens, falls du jetzt denkst 10 Verdoppelungen

by-the-way in-case you now think 10 doublings
reichen, mit der Rendite wäre ich auch zufrieden.
 suffice with the return would-be I also satisfied
 ‘By the way, if you think that ten doublings are enough, I would also be happy with that return.’

(DWDS, Webkorpus, Jan. 01st, 2023 [punctuation unmodified])

d. connective adverb > speech-act related adverb > hanging topic

Aber **trotzdem**, ganz ehrlich, jede Fotografie sammeln, die
 but still quite honestly every photograph collect that
man findet – nicht mal ICH bin so ein Messie!
 one finds not even I am so a hoarder
 ‘But still, honestly, collecting every photograph you find – even I am not that much of a hoarder!’

(holymfruitsalad.blogspot.com (blog), Sept. 19th, 2008)

In (29a), the connective discourse marker appears to the left of a vocative, which is hosted, according to Haegeman & Hill (2013), in one of the two clause-external SAPs. In this case, the vocative phrase arguably performs a bonding rather than an attention-seeking function and can be thus assumed to surface in the lower hearer-oriented (SAP) specifier:

(30) [_{ConnectP} *jedenfalls* [_{saP1} [_{SAP1} [_{saP2} [_{SAP2} *lieber Frühling...* [_{ForceP} *wir freuen ...*]]]]]]]

Irrelevance and biscuit conditionals must occupy the same structural position, since they cannot co-occur in the same sentence due to the fact that they both realize non-canonical conditionality. For this reason, in (28) they are merged into one projection. In (29b) and (29c), the discourse marker precedes the unconditional. The reverse word order would lead to ungrammaticality. This example shows that irrespective of the interaction of connective markers with the other categories, the former must be base-generated in a higher position than icP/bcP:

(31) [ConnectP *also/übrigens* [icP/bcP *egal-clause/falls-clause...* [ForceP]]]

In (29d), three items simultaneously surface in the outer left periphery: the connective adverb *trotzdem*, a speech-act related adverbial and a hanging topic. While the position of the discourse marker and that of the hanging topic directly follow from the structure in (28), the question comes up as to which intermediate position the phrase *ganz ehrlich* may occupy in (29d). Such expressions being speech-act related, it is compelling to assume that they should also be part of the saP/SAP shell, given that this complex encodes features that determine the way in which the content of the utterance is to be interpreted. For *ganz ehrlich* in (29d), I suggest that this element is speaker-oriented (Ernst 2009, K. Müller 2022: 82f.) and has a consolidating function. Its merge position is therefore the lower Spec,saP:

(32) [ConnectP *trotzdem* [saP1 [SAP1 [saP2 *ganz ehrlich* [SAP2 ... [HT *jede Fotografie sammeln...* [ForceP *nicht mal ICH bin so ein Messie!*]]]]]]]

Consider that the speech-act related adverbial can, in principle, be preceded or followed by a vocative, depending on the attention-seeking or bonding character of the latter. In (33a), the vocative serves the purpose of capturing the hearer's attention, whereas in (33b), its lower position suggests that it has a bonding function. The attention-seeking function of a vocative manifests when it is employed to directly address and draw the listener's focus to a specific entity or individual within the discourse context. This function is characterized by its ability to interrupt ongoing discourse and establish a direct communicative link, thereby foregrounding the addressee and signaling imminent interaction or directive intent. In (33a), the vocative is thus first-merged in the higher Spec,SAP (SAP1 in the structure). Conversely, the bonding/consolidating function which is at stake in (33b) pertains to its use in reinforcing interpersonal relationships and fostering solidarity between interlocutors. By invoking this type of vocative, the speakers can express intimacy, respect, or camaraderie, thereby enhancing interpersonal rapport and cohesion. In

any case, in a sentence like (33b) the speaker can be assumed to already have captured the hearer's attention. Hence, the vocative is generated in the lower Spec,SAP (SAP2 in the structure):

- (33) a. *Aber* [_{ConnectP} *trotzdem* [_{sapP1} [_{SAP1} *Hans* [_{saP2} *ganz ehrlich ...* [_{ForceP} *nicht mal ich bin so ein Messie!*]]]]]]
- b. *Aber* [_{ConnectP} *trotzdem* [_{sapP1} [_{SAP1} [_{saP2} *ganz ehrlich* [_{SAP2} *Hans...* [_{ForceP} *nicht mal ich bin so ein Messie!*]]]]]]]]
- 'But still, (Hans,) honestly (, Hans): even I am not such a hoarder!'

With respect to the interplay between unconditionals and speech-act related adverbials on the one hand and hanging topics on the other hand, between which the projection icP/bcP is assumed to be sandwiched, the only natural relative order of these elements is saP2 > SAP2 > icP/bcP > HT, as shown in (34a) and (35a). In (34b) and (35b), the corresponding structures are illustrated:

- (34) a. speech-act related adverbial > irrelevance conditional

<i>Doch</i>	<i>ganz ehrlich,</i>	<i>ob</i>	<i>es</i>	<i>regnet,</i>	<i>stürmt</i>		
but	quite honestly	whether	it	rains	storms		
<i>oder</i>	<i>schneit,</i>	<i>an</i>	<i>Ihrem</i>	<i>Hochzeitstag</i>	<i>strahlen</i>	<i>Sie</i>	
or	snows	on	your	wedding-day	shine	you	
<i>selbst</i>	<i>so</i>	<i>sehr, dass</i>	<i>es</i>	<i>auf</i>	<i>das</i>	<i>Wetter</i>	<i>gar nicht</i>
yourself	so	much that	it	on	the	weather	at-all not

ankommt.

depends

'But honestly, whether it rains, storms, or snows, on your wedding day, you shine so brightly that the weather doesn't matter at all.'

(DWDS, Webkorpus, Jan. 01st, 2014)

- b. [_{sapP1} [_{SAP1} [_{saP2} *ganz ehrlich* [_{SAP2} [_{icP} *ob*-clause [_{ForceP} *an Ihrem Hochzeit strahlen Sie selbst so sehr ...*]]]]]]]]

(35) a. irrelevance conditional > HT

Egal, was du denkst: Solche Menschen, man sollte
 unimportant what you think such people one should
sie bis zum Sankt Nimmerleinstag wegsperren.
 them until to-the saint never-day lock-away

‘Regardless of what you think: people like that should be locked away forever.’

(trennungsschmerzen.de, online forum, Jul. 08th, 2024)

- b. [_{sapP1} [_{SAP1} [_{saP2} ganz ehrlich [_{SAP2} ... [_{HT} Solche Menschen [_{ForceP} man sollte sie bis zum Sankt Nimmerleinstag wegsperren]]]]]]]

Expectedly, in the very same sentences, a connective discourse marker and/or a vocative could be added. Also in this case, the vocative could appear to the left of to the right of the speech-act related adverbial, depending on its attention-seeking or bonding function. In order to illustrate this, the outer-left-peripheral material from some of the sentences discussed above is exemplarily modified in (36):

(36) a. vocative > speech-act related adverbial > irrelevance conditional

Hans, ganz ehrlich, ob es regnet, stürmt
 Hans quite honestly whether it rains storms
oder schneit, wir fahren nach Köln.
 or snows we go to Cologne

‘Hans, honestly, whether it rains, storms, or snows, we’re going to Cologne.’

- b. speech-act related adverbial > vocative > irrelevance conditional

Ganz ehrlich, Hans, ob es regnet, stürmt
 quite honestly Hans whether it rains storms
oder schneit, wir fahren nach Köln.
 or snows we go to Cologne

‘Honestly, Hans, whether it rains, storms, or snows, we’re going to Cologne.’

In (37a), it is demonstrated that the projection generating hanging topics must be located to the right of the one in which speech-act related adverbials are first-merged. The analysis is given in (37b):

- (37) a. *Und, mal ehrlich, das mit den Greisen in den Aufsichtsräten, wer denkt da nicht an Ackermann, VW & Co.?*
 and PRT honestly that with the elderly in the supervisory-boards who thinks there not of Ackermann VW & Co.
 ‘And, honestly, when it comes to the elderly in supervisory boards, who doesn't think of Ackermann, VW, and the like?’
 (DWDS, Webkorpus, Aug. 09th, 2005)
- b. [_{sapP1} [_{SAP1} [_{saP2} *mal ehrlich* [_{SAP2} [_{HT} *das mit den Greisen in den Aufsichtsräten* [_{ForceP} *wer denkt da nicht an Ackermann ...?*]]]]]]]]

Assuming an attention-seeking interpretation of the vocative phrase *Hans* forcing its merger in SAP1, example (38a), adapted from (35), shows that in one and the same utterance, a vocative, a speech-act related adverbial, an irrelevance conditional and a hanging topic can co-occur. The corresponding structure is given in (38b):

- (38) a. vocative > speech-act related adverbial > irrelevance conditional > hanging topic
Hans, ganz ehrlich, egal, was du denkst: Solche Menschen, man sollte sie ... wegsperren.
 Hans quite honestly unimportant what you think such people one should them lock-away
 ‘Hans, honestly, regardless of what you think: people like that should be locked away.’

- b. [_{sapP1} [_{SAP1} *Hans* [_{saP2} *ganz ehrlich* [_{SAP2} [_{icP/bcP} *egal, was du denkst* [_{HT} *solche Menschen* [_{ForceP} *man sollte sie wegsperren*]]]]]]]]⁹

Any other order of these elements would result in an extremely unnatural structure, as demonstrated in (39) (on the basis of (36)) and (40) (adapted from (38)), where, respectively, the linearization irrelevance conditional > vocative > speech-act related adverbial and the order hanging topic > speech-act related adverbial > vocative > irrelevance conditional can be observed:

- (39) ??*Ob es regnet, stürmt oder schneit, Hans, ganz ehrlich: wir fahren nach Köln.*
 whether it rains storms or snows Hans
 quite honestly we go to Cologne

(int.): ‘Hans, honestly, whether it rains, storms, or snows, we’re going to Cologne.’

- (40) **Solche Menschen, ganz ehrlich, Hans, egal, was du denkst: man sollte sie ... wegsperren.*
 such people quite honestly Hans unimportant what you
 think

(int.): ‘Hans, honestly, regardless of what you think: people like that should be locked away.’¹⁰

⁹ It goes without saying that the very same configuration is possible if the vocative has a bonding function:

- (i) *Ganz ehrlich, Hans, egal, was du denkst: Solche Menschen, man sollte sie ... wegsperren.*
 quite honestly Hans unimportant what you think such
 people one should them lock-away

‘Hans, honestly, regardless of what you think: people like that should be locked away.’

¹⁰ Given that none of the elements examined in this study are part of the intrasentential domain of the utterance (which is governed by stricter syntactic constraints) and that all items serve a discourse-related function, one might infer that reversing the order of these elements may render the sentence less natural, though not necessarily grammatically unacceptable. Despite the fact that the grammatical

Let us now turn to the syntactization of speaker- and hearer-oriented interjectional expressions and their interaction with the other outer-left-peripheral items. In 3.4 and 3.5, particle-like elements of the speaker-oriented and of the hearer-oriented subclasses were distinguished according to Haegeman & Hill's (2013) model. The notions of "speaker-oriented" and "hearer-oriented" particles play a crucial role in understanding the pragmatic dynamics of interjectional expressions. Speaker-oriented particles, such as *meine Güte!* ('my goodness!'), *Mensch!* ('oh man!'), *verdammt!* ('damn!'), *ach!* ('oh!'), *puh!* ('phew!'), etc., primarily reflect the speaker's attitudes, emotions, or intentions, often serving to express urgency, encouragement, or frustration. These particles are intrinsically tied to the speaker's subjective perspective and emphasize their communicative stance within the discourse. On the other hand, originally hearer-oriented particles like *hey!* ('hey!') and *hallo!* ('hello!') are fundamentally designed to capture the hearer's attention, initiate interaction, or facilitate engagement. They function to direct the hearer's focus and prompt a response, thereby actively shaping the interactive flow between the interlocutors. The syntactization of these particles, particularly their integration into the outer left periphery, illuminates their pivotal role in demarcating the relation between the speech act realized by the utterance and the structure of discourse (including the verbalization of the speaker's intentions, their reactions to other speakers' contributions, etc.). By examining the distribution and function of speaker- and hearer-oriented particles, we gain deeper insights into the interaction between syntax and pragmatics, revealing how linguistic elements are strategically employed to negotiate social interaction and convey nuanced communicative intents.

Upon examining the data, it becomes apparent that the most natural word orders align well with Haegeman & Hill's (2013) saP/SAP-shell model. In (41), we

sequences discussed above unquestionably represent the only natural options, the linearizations deemed 'unnatural' or 'ungrammatical' in this analysis do not appear in the corpora consulted for this study.

find in the extrasentential area: a subject-oriented interjection (*ach* ‘oh!’), a hearer-oriented particle (*du*, lit. ‘you’) and a vocative (*meine liebe Evelin* ‘my dear Evelin’):

(41) subject-oriented particle > hearer-oriented particle > vocative

Ach ***du***, ***meine liebe Evelin***, *vergib mir, dass ich*
oh you my dear Evelin forgive me that I
in dieser Nacht nicht immer bei dir war.
in this night not always with you was

‘Oh my dear Evelin, forgive me for not being with you throughout this night.’

(DWDS, Webkorpus, Apr. 26th, 2020)

In German, the item *du* (not to be confused with the personal pronoun of the 2nd person singular from which it has been pragmaticalized) functions as a particle that specifically emphasizes direct address to the interlocutor. It marks the beginning of an utterance with an informal, colloquial tone, signaling a personal or intimate interaction between the speaker and the addressee. In particular, *du* acts as a vocative particle, drawing attention to the person being addressed (Evelin in this case) and establishing a direct communicative link. This vocative use of *du* serves as a pragmatic marker that initiates or intensifies the personal connection between the speaker and the listener. Syntactically, *du* must be treated as an independent item, distinct from the nominal vocative, as it can also appear in isolation, as demonstrated in (38):

(42) ***Du***, *ich habe gerade wieder gemerkt, wie schön ein*
you I have just again realized how beautiful an
Abendspaziergang am Main ist!
evening-stroll at-the Main is

‘Hey, I just realized again how beautiful an evening stroll along the Main River is!’

(DWDS, Webkorpus, Jun. 30th, 2023)

In (41), the particle *du* can be assumed to lexicalize the head position of SAP1, while the vocative phrase serves a bonding function and is situated in the specifier of the lower SAP (Spec,SAP2). This assumption is not speculative, but grounded in the idea that the function of *meine liebe Evelin* here is not to capture the hearer's attention. The inner structure of the pre-ForceP domain in (41) can be analyzed as in (43):

(43) [_{sapP1} [_{sa1°} *ach*] [_{SAP1} [_{SA1°} *du*] [_{saP2} [_{SAP2} *meine liebe Evelin* [_{ForceP} *vergib mir, dass...*]]]]]]

The same sentence can be adapted to show that this configuration can also host a speech-act related adverbial between the saP/SAP shell and the lower outer-left peripheral projections. In (44a), *ganz ehrlich* ('honestly') expectedly surfaces in the specifier of the lower saP: it is speaker-oriented and has a consolidating function. The vocative phrase *meine liebe Evelin* ('my dear Evelin') appears in Spec,SAP2, since it evidently serves a bonding purpose in this sentence. This complex is followed in the extrasentential domain by an irrelevance conditional. In (44b), the higher part of the structure is similar to that of (44a), but the rightmost outer-left-peripheral constituent is a hanging topic. (44c) illustrates the same utterance, in which both an unconditional and a hanging topic occupy the lower part of the extrasentential portion of structure:

- (44) a. subject-oriented particle (attention-seeking) > vocative particle (attention-seeking) > speech-act related adverbial > vocative (bonding) > unconditional
 [_{sapP1} [_{sa1°} *ach*] [_{SAP1} [_{SA1°} *du*] [_{saP2} *ganz ehrlich* [_{SAP2} *meine liebe Evelin* [_{icP/bcP} *egal, was du denkst* [_{ForceP} *vergib mir, dass...*]]]]]]]]
- b. subject-oriented particle (attention-seeking) > vocative particle (attention-seeking) > speech-act related adverbial > vocative (bonding) > HT
 [_{sapP1} [_{sa1°} *ach*] [_{SAP1} [_{SA1°} *du*] [_{saP2} *ganz ehrlich* [_{SAP2} *meine liebe Evelin* [_{HT} *solche Menschen* [_{ForceP} *man sollte sie ... wegsperren*]]]]]]]]

c. subject-oriented particle (attention-seeking) > vocative particle (attention-seeking) > speech-act related adverbial > vocative (bonding) > unconditional > HT

[_{sapP1} [_{sa1°} *ach*] [_{SAP1} [_{SA1°} *du*] [_{saP2} *ganz ehrlich*] [_{SAP2} *meine liebe Evelin*] [_{icP/bcP} *egal, was du denkst*] [_{HT} *solche Menschen*] [_{ForceP} *man sollte sie ... wegsperren*]]]]]]¹¹

However, depending on the context, the particle *du* – just as vocative phrases in general, as we have seen in reference to Haegeman & Hill’s (2013) model – can also occupy the lower (bonding) SAP position. In cases in which a hearer-oriented particle co-occurs with a vocative and *du* (and these elements are separate syntactic objects, see below), the former clearly performs an attention-seeking function, while the vocative and *du* are consolidating elements. Consider, e.g., (45), which features the order (attention-seeking) hearer-oriented particle > vocative > particle *du*:

(45) **Hey, Hans, du**, *ich wollte dich fragen, ob du dich an Marias Geschenk beteiligen möchtest.*
 hey Hans you I wanted you ask if you REFL at
 Maria’s present contribute would-like
 ‘Hey, Hans, I wanted to ask you if you’d like to contribute to Maria’s gift.’

¹¹ To be sure, it is not necessarily the case that the item *du* acts as a vocative particle in sequences of the type *du* > nominal expression. Such orders can also realize a configuration in which, for instance, the nominal expression is to be analyzed as an apposition of *du*, which is, in turn, a genuine deictic pronoun, as in (i). In this case, *du, Maria Müller* forms a complex constituent that is placed in the specifier position of the higher (attention-seeking) SAP1:

(i) **Du, Maria Müller** – *willst du den hier anwesenden Hans Weber zu deinem Mann nehmen, bis dass der Tod euch scheidet?*
 you Maria Müller want you the here present Hans Weber to
 your husband take until that the death you separates
 ‘You, Maria Müller – do you want to take Hans Weber, who is present here, as your husband until death do you part?’

This in line with the fact that the hearer's attention is supposed to be captured only once in the standard case. The particle *hey* is used primarily to capture the listener's attention. It signals the start of a communication and ensures that the listener is prepared to receive the upcoming message. This is particularly useful in informal contexts where the speaker needs to quickly and effectively gain the listener's focus. In other words, using *hey*, the speaker creates an auditory cue that prompts the listener to direct their attention towards the speaker. The use of the vocative *Hans* follows attention-getting *hey* and serves a different purpose. Since the listener's attention has already been secured, the vocative is not primarily about attracting attention but about reinforcing the connection between the speaker and the listener. It personalizes the message, establishing a direct and personal interaction. This can help to create a sense of intimacy, solidarity, or social bonding. By addressing the listener by name, the speaker acknowledges the listener's identity, making the interaction more engaging and friendly. Additionally, using the listener's name can emphasize the importance of the message, indicating that it is specifically intended for them, which can enhance the listener's receptiveness and responsiveness.

The particle *du* is also part of the bonding segment of the saP/SAP shell: it reinforces the personal address initiated by the vocative. This layering of address (vocative + personal pronoun) helps to maintain the listener's engagement and ensures clarity in communication. The use of *du* contributes to creating a friendly and interactive tone. In this context, it can also be assumed to help mitigate the directness of the request. By preceding the actual question with *du* the speaker can soften the imposition, making the interaction feel less abrupt and more considerate.

For these reasons, I propose that (45) can be analyzed as in (46), with the vocative and the particle *du* lexicalizing, respectively, the specifier and the head of bonding SAP2:

(46) [_{sapP1} [_{SAP1} [_{SA1°} *hey*] [_{saP2} [_{SAP2} *Hans* [_{SA°} *du*] [_{ForceP} *ich wollte dich fragen ...*]]]]]]]

Building on the premise that the speech-act related domain of the outer left periphery consists of an upper attention-capturing and a lower consolidating domain, it is intuitively evident that certain items strategically employed to capture the interlocutor's attention can be internally more complex and, especially in colloquial contexts, include a combination of a particle and a vocative-like expression, thereby generating an expression interpreted as a cohesive unit (for instance, *hey du, na du* 'hey you', *hi Leute* 'hi people', etc.). If a particle and a vocative both have an attention-seeking purpose, as in (47a), I assume the two elements to undergo fusion and be realized as one unit (i.e., merged into one XP) in the higher SAP (47b). In other words, a linear sequence of the type "attention-seeking particle > vocative" can correspond to two different syntactic configurations depending on the function of the vocative phrase. If the vocative has a bonding function, the particle and the nominal expression are separate syntactic objects; that is, the particle is merged in the head of SA1, while the vocative lexicalizes the specifier of SAP2. However, if both the particle and the vocative – redundantly – conspire to draw the listener's attention, they merge into one and the same constituent. This hypothesis aligns, *in nuce*, with analyses independently proposed for other languages, such as Espinal (2013) for Catalan and Corr (2022) for Italo-Romance.

After all, the model must also account for instances where attention-seeking elements may be redundant, which is often the case in spoken discourse. As (48a) shows, three formally distinct expressions are employed for addressing the hearer. In these instances, all three occupy the same position (the higher SA°), functioning as a redundant greeting formula (48b):

- (47) a. **Hey du / hey Leute / hey Hans**, ganz ehrlich, das war
 hey you hey people hey Hans quite honestly this was
doch alles echt abzusehen!
 PRT all really to-foresee
 'Hey you/hey everyone/hey Hans, honestly, this was all really predictable!'
 (version with *hey du* adapted from: DWDS, Webkorpus, Aug. 22nd, 2014)

- b. [_{sapP1} [_{SAP1} *hey du* [_{saP2} *ganz ehrlich* [_{SAP2} [_{ForceP} *das war doch alles echt abzusehen ...*]]]]]]¹²

(48) a. **Hi, hallo, guten Tag, ich habe gerade ein Thema eingestellt.**

hi hello good day I have just a topic posted

‘Hi, hello, good day, I’ve just posted a topic.’

(DWDS, Webkorpus, Jun. 6th, 2012)

- b. [_{sapP1} [_{SAP1} [_{SA1°} *hi, hallo, guten Tag*] ... [_{ForceP} *ich habe gerade ein Thema eingestellt*]]]]]

¹² The focus of this paper is, evidently, the *external* syntax of outer-left-peripheral elements. However, as far as the question of the internal makeup of such a constituent is concerned, the following can be assumed, drawing (at least partially) on the literature mentioned above. Vocatives occurring in isolation of the type in (i) are nominal expressions that exhibit the basic structure illustrated in (ii), where the (pro)nominal element denoting the addressee is moved from its base-generation site in N° to D° to acquire its deictically-anchored features, and further raised to Voc° in order for the individual identified by the noun to be designated as the addressee (Corr 2022: 21). VocP can be taken to be the highest DP-internal projection:

- (i) **Hans/du**[+ attention-seeking], *komm her!*
 Hans/you come V.PRT
 ‘Hans/you, come here!’
- (ii) [VocP *Hans/du* [DP ~~*Hans/du*~~ [NP ~~*Hans/du*~~]]]
 (adapted from Corr 2022: 20)

If the vocative noun in an attention-seeking function appears alongside a particle fulfilling the same role, as assumed for example (iii) and the examples cited above, the particle is merged into the highest projection of this phrase, leaving the (pro)noun in the DP, as shown in the simplified derivation in (iv):

- (iii) **Hey Hans**[+attention-seeking], *komm her!*
 hey Hans come V.PRT
- (iv) [VocP *hey* [DP *Hans/du* [NP ~~*Hans*~~]]]

This analysis diverges from that proposed by Espinal and/or Corr in two fundamental details: (i) it does not posit that the noun moves to the highest position when a vocative particle is generated there, stemming from my treatment of particles as heads rather than specifiers; (ii) it differs from Espinal's (2013: 116) proposal in not supporting the idea that a complex like *hey Hans!* in (iii) is merged in Spec,ForceP. However, the examination of these additional issues is beyond the scope of this paper and will be reserved for future research.

Given that the elements integrated into such formulas do not exhibit distinct features but redundantly fulfill the same function of initiating communication and establishing social connections, it would be both inelegant and inefficient to posit a duplication of the corresponding projection. A greeting formula — whether comprising a particle-like element alongside a vocative phrase or multiple conventionally equivalent expressions — can always exhibit varying levels of complexity.

5. Conclusion

This paper has explored the intricate structure of the outer left periphery in contemporary German, focusing on the array of functional projections that surface to the left of the highest clause-internal position, ForceP. Through a detailed analysis supported by corpus data, I exemplarily demonstrate that the CP-external domain, much like other layers of the clause, exhibits a fixed hierarchy of structural positions. This study has highlighted the essential role of the outer left periphery in organizing discourse-related elements that do not syntactically interact with the intrasentential computation, thereby providing a nuanced understanding of their placement and function.

The findings underscore the significance of cartographic syntax in elucidating how different parts of a sentence relate to each other, ensuring accurate interpretation in line with the speaker's intent.

While the present investigation is limited to German, it sets the stage for further research into the structure of this underexplored area across various languages, promising to deepen our comprehension of the interplay between syntax and discourse.

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