

Extrapolation and Prosodic Monsters in German

Caroline Féry

Abstract In this chapter, the implications of extrapolation for syntax–prosody interface are examined in a recursive theory of prosodic structure. It is shown that extrapolation in German often improves the prosodic structure of a sentence. The prosodic grammar has its own rules and constraints, which can have an impact on syntax in the following way: If two syntactic structures are in competition for expressing the same content, and at the same time one of them is clearly preferred in terms of prosodic structure, the latter one is chosen. Only a theory allowing recursivity on a regular basis can reveal the formal influence of prosody on syntax. If entire syntactic constituents are parsed in entire prosodic constituents, a clause located in the middle field violates *Layeredness* and *Equal Sisters*. Such a constellation is called a “prosodic monster.” In the case of prepositional phrases (PP) extrapolation, recursion of prosodic domains is avoided, but no prosodic monster is at play. Extrapolation is not always available: it is blocked by an accented constituent intervening between the antecedent or reconstructed position and the extrapolated constituent. In the last part of the chapter, an optimality-theoretic approach is proposed that accounts for extrapolation as a prosody-driven operation.

Keywords Syntax–prosody interface · Extrapolation · Optimality theory · Recursivity in prosodic structure

1 Introduction

This chapter explores Fodor’s insight that prosody plays a crucial role in language processing. It is assumed here that the role of prosody in processing reflects its role in grammar. It focuses on extrapolation in German, which presents a clear application of this insight. In a version of grammar inherited from the T-model of grammar (see, for instance, Chomsky 1981), phonology cannot influence syntax. According to this model, the interpretation of a sentence should derive from the lexicon and the syntactic structure, and prosody should only redundantly interpret the established

C. Féry (✉)

Institute of Linguistics, Goethe University Frankfurt, Frankfurt am Main, Germany
e-mail: caroline.fery@gmail.com

meaning. Chomsky and Halle (1968) initiated a line of research in which morpho-syntactic constituents are mapped into prosodic domains in a cyclic way. Lexical phonology (Kiparsky 1982) distinguishes between lexical and postlexical phonology, and the creation of phonological domains proceeds from small to large. Within each cycle, morphosyntax affects phonology but not vice versa. Nearly all models investigating the syntax–prosody interface have done so by choosing a specific syntactic structure and showing how prosody is mapped to it, avoiding in this way the question of how prosody can shape syntax. Early syntax–prosody-mapping models like Nespor and Vogel’s (1986) relation-based account also allow only one direction of mapping, and the so-called readjustment rules or rhythmic rules are strongly limited by syntax. Similarly, edge-based models (Selkirk 1986) do not allow a symmetric interaction between syntax and prosody. Prosodic domains are created from syntactic inputs. In accounts using syntax–phonology-mapping constraints like *Align* and *Wrap* (Truckenbrodt 1995a), readjustment and variation are not easy to handle; as a consequence of the evaluation, there is one optimal candidate that cannot be changed. Information structure is shown to play a role, but mostly in respecting the prosodic domains created by syntax: Focus and givenness can only delete existing prosodic domains or create additional ones. As a result, the unique function of prosody is to represent and interpret sentence structure. If this view is correct, it is unexpected that prosody may influence one or the other reading of an ambiguous sentence or that it could influence syntax at all.

In important studies on syntactic parsing in reading, Fodor (1998, 2002a, b) refutes the view that prosody is limited to interpretation of the syntax, even in silent reading. She discusses concrete examples showing how “implicit” prosody affects syntactic decisions. In the implicit prosody hypothesis (IPH), a reader projects a prosodic structure onto what is read silently. This hypothesis claims that the projected prosodic structure may affect the interpretation of a sentence. Fodor (2002b) gives the following example: “A reader may create a boundary for one reason (e.g., optimal phrase length), but the boundary may be understood as present for another reason (e.g., alignment with syntax). Under the latter construal, the prosodic break can be relevant to syntactic structure assignment: it can bias the resolution of a syntactic ambiguity just as a prosodic break in a spoken sentence does.” An area of application of this hypothesis concerns ambiguous attachment of relative clauses, as for example in the sentence *Mary met the friend of the actress who was drinking tea*, where the relative clause can be attached to *friend* (high attachment) or to *actress* (low attachment). A prosodic break between *actress* and the relative clause increases the probability of high attachment. If a specific language assigns a left boundary at the beginning of a relative clause for reasons other than for disambiguation, then the preference will be for high attachment in general. This is because in many languages, the presence of a prosodic break in this position correlates with a high attachment preference.

Fodor and Nickels (2011) examine cases of “heavily nested” syntactic structure in two center-embedded relative clauses, like *The elegant woman that the man I love met lives in Barcelona*. They propose that such sentences can be adjusted to create a flat structure for prosody. Where phrase length cooperates with syntactic

alignment, no mismatch takes place, and comprehension is facilitated. This is what they call “productive interaction between syntax and prosody online.” Problems appear when phrase lengths induce a prosodic structure that mismatches the syntactic structure. Fodor (2002b) suggests that the *AlignR XP* constraint in English (Selkirk 2000) is an instance of a more general right-alignment phenomenon sensitive to the number of right-edge syntactic brackets between adjacent words. She interprets this constraint as a graded constraint that reflects the configurational relations in the syntactic tree: “the pressure to insert a prosodic break (and perhaps the intensity of the acoustic realization of the break) is greater where the structural discontinuity in the tree is greater (i.e., more right brackets together).”

Some aspects of Fodor’s IPH are straightforwardly adopted in the remainder of the chapter. Additionally, it will be shown that syntax can be modeled by prosody, in the same way as prosody is modeled by syntax. There is thus a shift in perspective between Fodor’s main interest and the point of view of the major part of the literature concerning the role of prosody in grammar on the one hand, and the role of prosody in the elaboration of syntactic structures as it is examined in the present chapter on the other hand. It will be shown with extraposition in German that prosody not only has an effect in the processing of sentences, ambiguous or not, but that it also influences syntax in production. If a constituent may be optionally extraposed, prosody is often the motor behind the decision to extrapose. Not extraposed (“in-situ” or “intraposed”) embedded clauses create prosodic structures that mismatch the syntactic structure, such as those described by Fodor. Extraposition is applied to avoid such mismatches, in which case prosody acts as a facilitating factor for a syntactic operation. This can be compared on the one hand to the example discussed by Fodor in which the presence of a prosodic boundary before a relative clause facilitates high attachment (a syntactic structure), and on the other hand with Fodor and Nickels’ center-embedded examples which may cause disruption between syntax and prosody. In both cases, the interface between syntax and the formation of prosodic domains has a role to play and this interface between syntax and prosody may be facilitated or disrupted.

Despite extensive evidence to the contrary (see, for instance, Ladd 1990; Ishihara 2003; Féry 2011), non-recursivity has been a guiding theme in mainstream prosody research. Due to the fact that prosody is realized in real time and that the speech stream cannot easily represent hierarchical structure, it has been assumed that prosodic structures cannot be recursive. This assumption is a consequence of the fact that most of the data considered for the creation of syntax–prosody interaction are structurally very simple. Once it is recognized that recursion is a feature of prosody, the similarity between recursion in syntax and in prosody becomes obvious and possible interactions between the two can no longer be denied; see, for instance, Kentner (2012) and Kentner and Féry (2013) for subtle interactions between syntax and prosody.

The present chapter is dedicated to the role of prosody in extraposition. Studies investigating the choice between extraposition and in-situ position in German have been heavily influenced by the work of Hawkins (1994), who shows that in English the distance between the head of a relative clause and the relative clause

itself plays a more important role than the length of the relative clause.¹ This result was reproduced for German by Uszkoreit et al. (1998), who verify Hawkins' locality-based prediction by analyzing relative clauses in two written corpora. They demonstrate that the probability that the relative clause is in-situ increases when the distance between the head and the relative clause increases. Uszkoreit et al. (1998) and Konieczny (2000) show that speakers nevertheless prefer in-situ relative clauses, even when extraposition only crosses one word (a participle). This result may be due to the fact that perception of the sentences investigated in the form of spoken speech was not involved. Speakers had to judge written sentences, and normative factors may have played a role. Once spoken data are involved, extraposed relative clauses are often judged better than non-extraposed ones (see Poschmann and Wagner 2014).

The prosodic theory developed in this chapter locates itself in approaches seeking to replace performance accounts based on length by more detailed models that allow different grammatical factors to figure into the preference for extraposition over in-situ position. Further factors, not investigated in detail here, are information structure, the difference between restrictive and nonrestrictive relative clauses, more precisely the question of how the relative clause is related to the at-issueness of the main clause, and the syntactic relation between the main verb and the head of the relative clause.

In Section 2, it is shown that clause extraposition may be (partly) interpreted as a prosody-driven syntactic effect repairing a less than perfect syntax–prosody interface. In the version of the syntax–prosody interface used in the present chapter, that is, recursively embedded prosodic domains corresponding one-to-one to syntactic constituents, an in-situ clause triggers a prosodic structure in which an intonation phrase (i-phrase) is embedded into a lower prosodic constituent, a prosodic phrase (Φ-phrase). The result is an ill-formed prosodic structure called a “prosodic monster.” One way of resolving the problematic structure explored in this chapter is to extrapose the embedded clause. However, if the prosodic structure of a sentence with an in-situ clause does not contain a prosodic monster, there is no pressure to extrapose the clause, or the pressure decreases. This happens when the final portion of the main clause, located after the embedded clause, is heavy enough to form a Φ-phrase all by itself. A further factor acting on the decision whether to extrapose or not is the need to keep an embedded clause adjacent to its antecedent. This applies to relative clauses, or to complement clauses with a nominal antecedent, but not to complement clauses, which can be located before or after the verb: they are adjacent to the verb in both cases.

Section 3 examines extraposition of prepositional phrases (PP), an optional operation. When the PP is a possessive attributive or an argument, *Non-Recursivity*, another well-formedness constraint on the prosodic structure, is violated in the case

¹ I do not dwell on proposals for English, since extraposition in German is truly different from extraposition in English, due to the verb-final properties of German. Uszkoreit et al. (1998) observe that most German extraposed relative clauses are separated from their antecedent by the verb only. In English, extraposition usually crosses an adverb, like *yesterday*. The kinds of constituents that can be extraposed also differ in the two languages.

of in-situ location of the PP, causing a mild pressure to extrapose. The pressure to extrapose is even milder when the PP is an adjunct.

If extraposition delivers better prosodic patterns than in-situ position, this option should be allowed on a principled basis. But this is not what is observed. In many cases, extraposition produces a structure that is less acceptable than the in-situ one. In Section 4, the limit of extraposition is addressed. It is shown that an accented noun intervening between a relative clause and its antecedent or between a PP and its reconstructed position heavily degrades the structure. The data discussed in Section 4 demonstrate that prosody can also have a blocking influence on a syntactic operation. If extraposition renders parsing more difficult than non-extraposition, or if its application degrades the prosodic structure, extraposition does not apply.

Section 5 returns to the original question, namely whether prosody merely serves an interpretative function or whether it can generate structure independently. In a first step, it is shown that purely syntactic accounts, which assume either movement from a preverbal underlying position, or base generation in the postverbal position in all cases, are largely inconclusive. A plausible alternative approach allows relative clauses and complement clauses to be generated in different positions in the sentence, in which case several options as to the linearization of constituents may be considered as equivalent from the point of view of syntax. In a second step, an optimality-theoretic (OT) account is proposed: *Match* constraints regulate the syntax–prosody interface, and a number of well-formedness constraints further act on the prosodic structure. In short, prosody plays an important role in grammar and is integrated as an active component of grammar.

The language investigated is German, because of word order issues that render extraposition particularly productive and interesting in this language. Some of the generalizations are relevant for English grammar, too, but others do not hold in English, see footnote 1.

2 Extraposition of Clauses and Prosody

Before showing the prosodic role of extraposition, it is important to make a strict distinction between three kinds of postfield positions in German, because extraposition is only one of them. Altmann (1981); Averintseva-Klishch (2006) and Ott and de Vries (to appear) distinguish between extraposition, right dislocation, and afterthought, in German and in other Germanic languages, and show how they differ in their syntactic and prosodic properties. Of the three constructions, only extraposition is described by these authors as being a true constituent of the main clause. It is intonationally integrated into its host sentence, i.e., it continues the tone movement of the host sentence. Neither right dislocation nor afterthought is part of the intonation contour of the main clause. Both of them build a separate prosodic unit (optionally separated from the clause by a pause). A right-dislocated constituent may have a clause-like accent of its own, or not, and it often triggers clitic-doubling. An afterthought always has an accent of its own. A further important difference

between extraposition and the other two constructions is that in the latter cases an adverb like *nämlich* “namely,” *also* “well,” or *ich meine* “I mean” can be inserted after the main clause, whereas this insertion is not possible in extraposition. In the following, we are only concerned with extraposition. The constituents that can be extraposed are extremely limited: Clausal complementizer phrases (CP) and PP can easily be extraposed, but nominal, adjectival, and verbal phrases (DPs, APs, and VPs) cannot, or only exceptionally.²

The examples in (1) show that a sentence containing a *dass*-complement clause is much more acceptable when the complement clause is postverbal, as in (1a), than when it is in-situ, as in (1b). An in-situ clausal complement is often heavily degraded as compared to its extraposed version (but see Sternefeld 2008 and Section 5 for examples of in-situ complement sentences that are acceptable).

- (1) a. Sie hat niemandem erzählt, dass sie an dem Tag spät nach Hause kam.
 she has nobody told that she on that day late to home came
 “*She didn’t tell anybody that she came home late on that day.*”
 b. *?Sie hat niemandem, dass sie spät nach Hause kam, erzählt.

In (3), the same sentences as in (1) are provided with prosodic structure, assuming that syntactic and prosodic constituents are subject to a strict one-to-one mapping, as proposed by Féry (2011) for German. In the following, the *Match* constraints proposed by Selkirk (2011) are used for demonstrating the prosodic properties of clause extraposition. These constraints are used because of their simplicity and straightforwardness. The *Match* constraints are formulated in (2). They assume that a grammatical word, a syntactic phrase and a clause roughly correspond to the three higher prosodic constituents, prosodic word (ω), prosodic phrase (Φ), and intonation-phrase (ι), respectively.

(2) Match Constraints (Selkirk 2011, p. 439)

a. *Match Clause*

A clause in syntactic constituent structure must be matched by a corresponding prosodic constituent, call it ι , in phonological representation.

b. *Match Phrase*

A phrase in syntactic constituent structure must be matched by a corresponding prosodic constituent, call it Φ , in phonological representation.

c. *Match Word*

A word in syntactic constituent structure must be matched by a corresponding prosodic constituent, call it ω , in phonological representation.

Match Phrase requires a constituent formed by a predicate and its arguments (the VP) to be phrased in a prosodic phrase (Φ -phrase). However, in (3b), this Φ -phrase partly consists of the complement clause, itself an intonation phrase (ι -phrase) by

² An example of an exceptional DP extraposition appears in (12) below.

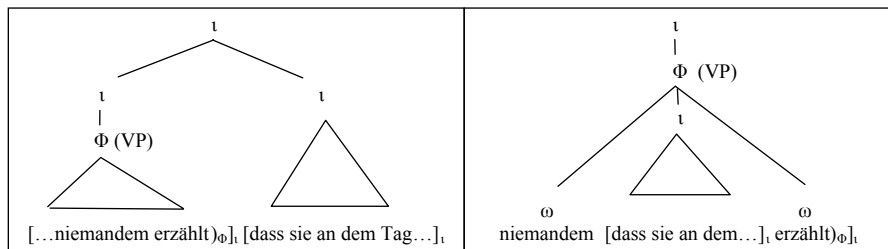


Fig. 1 Extraposition as avoidance of a prosodic monster (*dass*-complement)

virtue of *Match Clause*.³ As a result, a hierarchically higher prosodic constituent is embedded in and dominated by a lower level constituent. It should be noticed that the function words *sie* and *hat* are too light to form their own Φ -phrase and are included in the adjacent Φ -phrase.

- (3) a. $[(\text{Sie hat niemandem } t_i \text{ erzhlt})_{\Phi,t}] [\text{dass sie an dem Tag spt nach Hause kam}]_t$,
 she has nobody told that she on that day late to home came
 “She didn’t tell anybody that she came home late on that day.”
 b. $*^?[(\text{Sie hat niemandem})_{\Phi}, [\text{dass sie spt nach Hause kam}]_t \text{ erzhlt}_{\omega}]_{\Phi,t}$.

Figure 1 illustrates how the prosodic structure favors extraposition of complement clauses: When the *dass*-clause is extraposed, as in (3a) and Fig. 1 left panel, the main clause and the embedded clause each form their own t -phrase. They project t -phrases at the higher level of the hierarchy by virtue of being clauses.⁴ The sequence of two t -phrases itself forms a larger recursive t -phrase. However, when the complement clause is in-situ as in (3b) and the right panel of Fig. 1, the Φ -phrase formed on the VP *niemandem erzhlt* “told nobody” is interrupted by the t -phrase formed by the complement clause. The verb does not form a Φ -phrase by itself; it is only a ω -word. In this case, besides the Φ -phrase on the object, the Φ -phrase mapped to the VP dominates a ω -word and an t -phrase. In her paper on extraposition in German, Hartmann (2013) shows with numerous naturally occurring examples that sentences like (3b) are avoided in German. She assumes that a final single ω -word cannot be parsed into the preceding prosodic constituent, and that it does not form a Φ -phrase all by itself.⁵ These assumptions are taken for granted here. In the present proposal, the verb is parsed into a larger Φ -phrase. The ungrammaticality is a result of the prosodic imbalance between the prosodic constituents and the way they are layered. In particular, a constraint called *LAYEREDNESS* (from Selkirk

³ Selkirk (2011, p. 453) makes a distinction between *Match* (illocutionary clause, t) and the more general *Match* (clause, t). In the following, the distinction between the two doesn’t play any role and is ignored in the remainder of the chapter.

⁴ This differs from many accounts in the literature in which the apprehension of prosodic constituents is guided by the phonetic cues associated with them (see Schubö 2010; Elfner 2012; Myrberg 2013, etc.).

⁵ However, it is not clear in her approach why the same structure does not lead to ungrammaticality in the case of relative clauses.

1996), prohibiting a category of a certain level to dominate a higher category, is violated. Moreover, an additional constraint called *EQUALSISTERS* (from Myrberg 2013) is also violated in this configuration. *EQUALSISTERS* requires that the prosodic constituents dominated by a higher constituent are at the same level; see Section 5 for formal definitions and further illustrations.

The examples in (4) show that a relative clause can also appear in-situ, i.e., right after its antecedent, or be extraposed, in which case it is postverbal. Both the extraposed and the in-situ locations are felicitous in German, even though the in-situ version (4b) is degraded as compared to the extraposed variant (4a). Due to *Match Phrase*, the object of the main verb and the relative clause form an additional Φ -phrase by virtue of being a DP, albeit a complex one.

- (4) a. [[[Sie hat ihre Mutter getroffen] _{Φ}] [die an dem Tag mit Freunden unterwegs war]_i]_i
 she has her mother met who on that day with friends out was
 ‘‘She met her mother who was out with friends on that day.’’
 b.[?][[[Sie hat ((ihre Mutter) ^{Φ}] [die an dem Tag mit Freunden unterwegs war]_i] _{Φ}]_i
 getroffen) _{Φ}]_i

Figure 2 illustrates the difference in prosodic structure between the two versions of (4). In the left panel, the relative clause is extraposed, and the Φ -phrase formed by the object and the transitive verb is not interrupted. As before, both the main clause and the embedded clause project τ -phrases at the higher level of the hierarchy. But when the relative clause is in-situ, as in the right panel of Fig. 2, *LAYEREDNESS* is violated in the DP. The object of *getroffen*, thus *ihre Mutter*, forms a Φ -phrase because of *Match Phrase*, and the relative clause forms an τ -phrase because of *Match Clause*. Additionally, the DP plus the relative clause also form a Φ -phrase.⁶ The verb by contrast does not form a Φ -phrase by itself. *Equal Sisters* is violated twice, in the Φ -phrase formed by the DP and in the Φ -phrase formed by the VP.

Comparing extraposition of a sentential complement with extraposition of a relative clause, it is striking that extraposition improves the acceptability of sentences with a sentential complement much more than in the case of a relative clause. There is a difference in acceptability between the two versions of (1), which is absent in (4). Extraposition of a relative clause is never obligatory: A preverbal relative clause may be degraded but is always acceptable. Besides the difference in prosodic structure, to which we return in Section 5, it must also be noticed that the relative clause has an antecedent, as opposed to a complement clause, which has none. The presence of an antecedent provides a strong syntactic motivation for a

⁶ In the example, the relative clause is nonrestrictive because of the antecedent *Mutter* ‘‘mother,’’ denoting a unique person, and I assume that, in this case, *ihre Mutter* ‘‘her mother’’ is a Φ -phrase mapped to the DP to which the relative clause is adjoined. A restrictive relative clause would be attached to the N *Mutter*, forming a prosodic monster one level down the hierarchy. It is sometimes assumed that a restrictive relative clause extraposes more easily than a non-restrictive relative clause. This may be due to the difference in the level at which the prosodic monster is formed (see also Section 4 for some comments on the influence of accent structure, definiteness and restrictivity on extraposition).

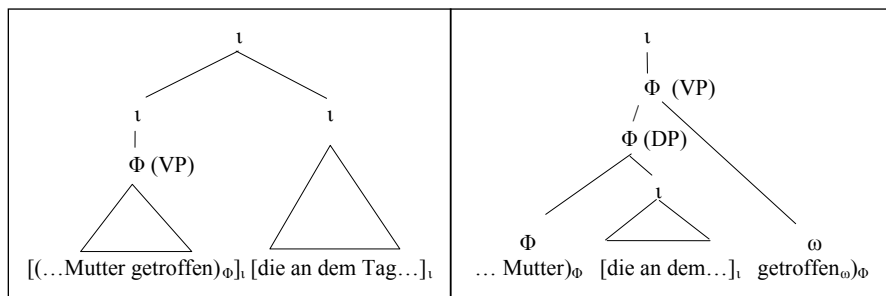


Fig. 2 Extraposition as avoidance of a prosodic monster (relative clause)

relative clause to be adjacent to its antecedent. The antecedent anchors the entire object with its relative clause in the preverbal position, as they form a syntactic and a prosodic constituent together, as shown in Fig. 2. This constituent is lacking in the case of a complement clause. In the OT account in Section 5, the preference for a relative clause and its antecedent to be adjacent is captured by a constraint called *ADJACENCY*, formulated in (27).

That this analysis is on the right track is further confirmed by the following observation. A *dass*-complement can follow a noun, a demonstrative or a quantifier, as shown in (5) with a noun. In this case, the complement clause behaves like a relative clause and can remain head-adjacent, even if the part of the main clause following the complement clause is very short and consists of only one ω -word. The embedded clause is thus quite acceptable in the preverbal position. The extraposed version is of course even better; see (5b).

- (5) a. ?[Anna hat (die Behauptung, [dass sie in der Nacht ihre Mutter im
 Anna has the claim that she in the night her mother on.the
 Treppenhaus gesehen hat] _{Φ}], bestritten) _{Φ}],
 staircase seen has denied
 “Anna denied the claim that she met her mother on the staircase that night.”
 b. [Anna hat (die Behauptung bestritten) _{Φ}], [dass sie in der Nacht ihre Mutter im
 Treppenhaus gesehen hat] _{Φ}].

In further cases, the in-situ version of sentences with embedded clauses sounds at least as good or even better than the extraposed version. Consider (6), in which the final part of the main clause consists of two words, *nicht erzählt* “not told,” instead of just one. Augmenting the verb with an adverb improves the in-situ variant of this sentence. This is because now the adverb plus the verb form a Φ -phrase. In (6) and Fig. 3, the relative clause is inserted *between* two Φ -phrases. The adverb carries the nuclear stress of the main sentence, which is then adjacent to the verb. The top Φ dominates two lower Φ -phrases and an I , and a prosodic monster is avoided. Additionally *MINIMALBINARITY* (*MINBIN*) is fulfilled, a constraint to the effect that a Φ -phrase needs at least two ω -words to be well formed (Ghini 1993; Selkirk 2000). It is fulfilled in Fig. 3 by *nicht erzählt*. See Section 5 for a formal demonstration.

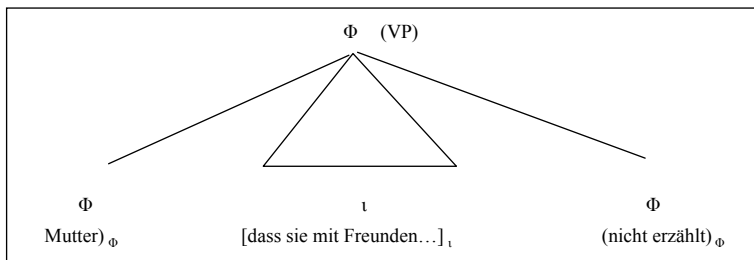


Fig. 3 No prosodic monster in a *dass* complement with nominal antecedent: *MinBin* is fulfilled

- (6) [(Sie hat ihrer Mutter)_Φ ([dass sie mit Freunden unterwegs war]_t (nicht erzählt)_Φ)_Φ]_t
 she has her mother that she with friends out was not told
 “She did not tell her mother that she was out with friends.”

It has been shown in this section that a prosodic account of extraposition can explain the difference between nearly obligatory extraposition of complement clauses and optional extraposition of relative clauses. Extraposition is nearly obligatory when an embedded structure creates a prosodic monster. In the case of a relative clause, extraposition is optional because extraposition destroys the preferred adjacency between the antecedent and the relative clause. In this case, the need for continuous constituents conflicts with the need to avoid prosodic monsters.

3 The Prosodic Structure of PP Extraposition

As in the case of clauses, extraposition of prepositional phrases improves the prosodic structure of the sentence as a whole. However, it is rarely obligatory, and only rarely preferred. The prosodic structure of the in-situ versions of PPs involves a Φ -phrase mapped to the PP and often embedded into a larger Φ -phrase, depending on the syntactic role of the PP. Recursion of Φ -phrases is often found in German and does not lead to ungrammaticality by itself. Nevertheless, a PP readily extraposes, creating in this way a prosodically balanced structure, as shown below.

In illustrating PP extraposition, a syntactic distinction will be adopted from Frey (2012), who distinguishes between attributive, argumental, and adverbial PPs. Both syntactic and prosodic structures differ between these three kinds of PP. We start with attributive PPs, as in *von ihrer Mutter* “of her mother” in (7). The attributive PP is part of the DP whose head it characterizes, and it is embedded into the larger DP when it is in-situ. Such a PP can be extraposed, as in (7a), or in-situ, as in (7b); there is not much difference in acceptability.

- (7) a. [(Maria)_Φ(wollte (das Kleid)_Φ tragen)_Φ (von ihrer Mutter)_Φ]_t
 Maria wanted the dress wear of her mother
 “Maria wanted to wear her mother’s dress.”
 b. [(Maria)_Φ(wollte (das Kleid (von ihrer Mutter)_Φ) tragen)_Φ]_t

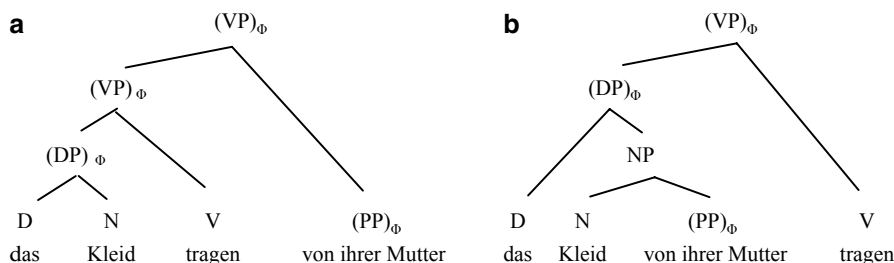


Fig. 4 Extraposition of an attributive PP

Compare Fig. 4 illustrating the prosodic structure of the two versions with the syntactic structure added. In the case of PP extraposition (left panel and (7a)), there is a lower segment of the VP consisting of the head of the object and the verb, thus *das Kleid tragen*, allowing them to build a Φ -phrase to the exclusion of the attributive PP. Even if *Kleid* “dress,” the head of the argument noun phrase, does not carry the nuclear accent in this case, it has a special role in being preverbal: it is the head of the argument-predicate complex. The higher VP segment includes both the lower VP and the attributive PP. In the in-situ case (right panel and (7b)), the entire argument is immediately preverbal. The VP is complete with the PP intervening between the noun *Kleid* “dress” and the verb. As a result, the head noun *Kleid* is separated from the verb by the possessive attributive, which carries the default nuclear accent. In this case, the PP *von ihrer Mutter* “of her mother” is a Φ -phrase, embedded in the Φ -phrase of the entire object, which is itself embedded into the Φ -phrase of the VP. In both cases, recursion of the Φ -phrase applies, although in different ways. Both before and after extraposition, the PP is a subpart of the prosodic constituent from which it originates, i.e., the Φ -phrase matching the higher VP segment. However, it is recursively embedded in the case of preverbal location and juxtaposed in the case of extraposition.

The first version contains two more or less equally balanced Φ -phrases (the VP and the PP), but the PP is separated from the noun it modifies; see Section 5 for a more formal analysis. The second version contains one long recursive Φ -phrase (the VP). The two versions elicit subtle differences in meaning. When the attributive is discourse-given, (7a) is much better; (7b) is avoided when both the attributive and the final verb are unaccented. If the attributive PP is new, both versions are fine.⁷

If the possessive attributive constituent is a genitive DP as in (8), extraposition is ungrammatical.

⁷ In the example (i) from Haider (2010, quoted from Max Frisch), the extraposed PP is unaccented, and thus potentially right dislocated.

(i) (Sie will (nichts mehr)_Φ wissen)_Φ(davon)_Φ
 she wants nothing more know it-of
 “She does not want to know anymore about this.”

Explicit and Implicit Prosody in Sentence Processing

Studies in Honor of Janet Dean Fodor

Frazier, L.; Gibson, E. (Eds.)

2015, X, 307 p. 67 illus., 17 illus. in color., Hardcover

ISBN: 978-3-319-12960-0