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## Case and Ordering in Prepositional Phrases in German

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**ABSTRACT.** This paper deals with some of the morphosyntactic properties of prepositions and of prepositional phrases in German. Based on the assumption that word order patterns are determined by prosody, I first show that the (mostly) prepositional structure of the German PPs can be derived from the stress pattern in German together with some universal principles on stress location. The analysis also captures the existence of postpositions in German that tend to have different prosodic characterization from that of prepositions. The proposal here can further be extended to the contraction of prepositions and definite articles, on the one hand, and to prepositional adverbs, on the other. An apparent problem for the prosody-based approach advocated here is the correlation between the position of the P-head and the Case it assigns to its DP-complement. This can, however, be deduced from other independent principles.\*

**Keywords:** word order, stress pattern, prepositions, prepositional phrases, postpositions, contraction, prepositional adverbs, Case

### 1. Introduction

In my previous paper (Inaba, to appear), I argued that the ordering patterns in adpositional phrases (PPs) and some properties concerning adpositions in German can be derived from prosody (cf. also Inaba & Tokizaki 2018). Starting from the assumption that the word stress in German is placed on the first stem morpheme (cf. Wurzel 1980, etc.), which is then passed on to phrases, the proposal accounted for some of the word order patterns or the head parameter values. The assumption on stress location (cf. i.a. Cinque 1993) and universal principles on rhythm (cf. i.a. Selkirk 1984) also played a role there. Based on these, I gave an explanation for (1) the mostly prepositional structure of the German PPs, (2) the existence of some postpositions, (3) the contraction consisting of prepositions and definite articles, and (4) the prepositional adverbs:

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\* This is an extended version of my paper (Inaba, to appear), which is based on the talk given at the 8th Workshop on Phonological Externalization of Morphosyntactic Structure: Universals and Variables (Phex8) held at Tohoku Gakuin University (13. February 2019). I am grateful to the participants there for their comments. This work was supported by the JSPS KAKENHI Grant (15H03213).

- (1) mit dem Fahrrad  
with the bicycle
- (2) dem Bahnhof gegenüber  
the station<sub>Dat</sub> across-from
- (3) zu der Arbeit > zur Arbeit  
to the work > to-the work
- (4) damit  
there-with ‘with it’

In the present paper, I would like to turn to some remaining issues that might have raised during the discussion. Among others, there are cases that apparently point to the correlation between the position of the P-head and the Case it assigns. For this phenomenon, I will try to provide an independent account derived from other principles of grammar.

The present paper is organized as follows: In section 2, I recapitulate some basic observations on stress already made in the literature. Section 3 reviews the investigation of PPs in German; after laying out basic preliminaries on prepositions in German, I demonstrate how the constituent ordering within the PPs can be derived from prosody. I further show that the prosody-based approach is capable of accounting for some of their morphosyntactic properties, as were mentioned above, in a uniform way. The next section deals with some remaining problems. Section 5 gives a brief summary of this paper. In the ensuing discussion, I use the word “preposition” sometimes as a cover term including prepositions, postpositions, circumpositions, etc., i.e. in the sense of adposition due to the commonness of the word. The translation of texts originally in German is by the author of the present paper.

## 2. Stress in words and phrases in German

In this section, I recapitulate some of the findings from Inaba & Tokizaki (2018) on stress and word order patterns in German. I first introduce the assumption that word stress in German falls in principle on the first base morpheme (cf. Wurzel 1980, etc.). I then present the idea, on the one hand, that the basic word stress pattern in the language is passed on to the phrasal stress pattern and, on the other, that there are universal constraints on stress location within a certain prosodic domain. These assumptions will serve as a basis for the analysis that tries to derive ordering patterns from prosody in the following section.

## 2.1. Stress in words and phrases

In this subsection, I first present some of the previous research that deals with word stress in German. For native German words, Wurzel (1980: 301f) observes the following word stress patterns and gives some corresponding examples:

- (5) The main stress on the (first) vowel of the base morpheme and no secondary stress:  
'Garten, 'finster, Be'richt, etc.
- (6) The main stress on the (first) vowel of the base morpheme and a secondary stress after that:  
'Ameise, 'Hündin, 'Schreibung, etc.
- (7) The main stress on the (first) vowel of the base morpheme and a secondary stress on the (first) vowel of the prefix:  
ent'scheiden, Er'zählung, etc.
- (8) The main stress on the vowel of the prefix and a secondary stress on the (first) vowel of the following base morpheme:  
'unglücklich, 'Mißgunst, 'Urmensch, etc.

These stress patterns result from a group of stress rules proposed by Wurzel (1980: 302f), which include the following rule as the most basic one:

- (9) In native base morphemes, the vowel of the first syllable gets a main stress.

The above observations show that apart from a small number of stressable prefixes (cf. (8)), the word stress typically falls on the first vowel of the base morpheme in German,<sup>1</sup> as represented in the schema below:

- (10) [word (prefix) [stem ...  
           (σ)       σ       σ       ...  
           (weak) strong weak ...

I would like to adopt this idea as a prerequisite for the analysis put forward in the next section. As for the older stage of the language, Halle & Keyser (1971: 88) and Lahiri et al. (1999: 336),

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<sup>1</sup> There are some exceptions like *Hor'nisse*, *Ho'lunder*, *Fo'relle*, etc. (cf. Boor & Wisniewski 1998: 27, etc.). These words, however, had an initial accent in the Middle High German period.

among others, speak for stem-initial stress in the history of Germanic languages. Along with Wurzel (1980: 302), Benware (1980: 299, 1987: 113), Féry (1986: 28), Boor & Wisniewski (1998: 27), Fuß & Geipel (2018: Sec.5.1.1), I follow the idea that German still preserves Germanic stem-initial stress, especially in native words. It is true that some authors (e.g. Jessen 1999, Goedemans & van der Hulst 2013) argue that German has right-oriented stress (i.e. antepenult, penult or ultimate stress). However, the alleged right-hand stress in German is, I presume, due to borrowing from Romance languages. I thus maintain that German still keeps stem-initial stress as the unmarked stress location for words, which often corresponds to penult or antepenult stress in a short word consisting of two or three syllables.

After surveying the stress location in words,<sup>2</sup> I now turn to the stress location in phrases in German. We can observe that the main stress falls on the complement rather than on the head:

- (11) a. [PP nach 'Frankfurt]  
       [PP to Frankfurt]  
       b. [DP das 'Haus]  
       [DP the house]  
       c. [VP 'Bücher lesen]  
       [VP books read]   ‘(to) read books’

Stress location in phrases can be captured by a rule which assigns the main stress to a non-head (Duanmu 1990)<sup>3</sup> or to the most deeply embedded element in the syntactic structure (Cinque 1993).

Now, in the holistic approach to language typology (see, among others, Plank 1998 and the literature cited therein), it has been argued that the stress location in words parallels that in phrases, and that stress location correlates with the order of head and complement. Bally (1944: sec.315ff) observes that in German stress falls on the initial position of words and phrases, while in French stress falls on the final position of these categories. He argues that German has anticipatory rhythm (strong-weak) and head-final order (e.g. adjective-noun, genitive-noun, OV), whereas French has progressive rhythm (weak-strong) and head-initial order (e.g. noun-adjective, noun-genitive, VO).

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<sup>2</sup> Stress in compound words is usually located on the first component word (cf. Wiese 1996: 296), which I do not discuss further in this paper.

<sup>3</sup> Cf. Duanmu's (1990: 142) "non-head stress rule": "In a head-nonhead structure, stress the nonhead."

I regard Bally's claim as insightful in that he correlates the initial stress and the head-final order in German. I would also like to follow the idea that stress location in words is inherited onto higher level categories like phrases (see above), which is a theoretically desirable conjecture (see, however, Wiese 2000: 97f for a different view).

## 2.2. Rhythmic constraints

Before discussing the stress and word order in German, let us review rhythmic constraints in languages. Selkirk (1984: 52), for example, proposes the Principle of Rhythmic Alternation:

### (12) The Principle of Rhythmic Alternation

- a. Every strong position on a metrical level  $n$  should be followed by at least one weak position on that level.
- b. Any weak position on a metrical level  $n$  may be preceded by at most one weak position on that level.

Following the terminologies and the formulations by Kager (2007: 199), let us put forward the two constraints, \*Clash and \*Lapse:<sup>4</sup>

- (13) a. \*Clash: \*... s s ...  
 b. \*Lapse: \*... w w ... (or \*... w w w ...)

\*Clash (13a) bans adjacent stressed syllables. \*Lapse (13b) may have variation in its strictness; it bans a sequence of two or three weak syllables. We could also account for the degrees of violation of \*Lapse if we count the number of syllables violating it. For example, “w w w” is worse than “w w” and better than “w w w w”. In this sense, I would have to admit, these constraints might have an optimality-theoretic flair. This need not come as a surprise, considering the fact that the optimality theory has gained sufficient success especially in the field of phonology, which is regulated in the PF- or post-syntactic component, and the assumption that word order is determined also outside the syntactic component (cf. Inaba, to appear, and the literature cited therein).

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<sup>4</sup> I use “s” for strong and “w” for weak. I also differentiate “s”, which represents word stress, from “S” for phrasal stress (see e.g. (25), which contains both of these). I further mark cases of reduced vowels or schwas as “(w)” (cf. Zimmerer & Reetz 2011, Augustin 2018: 107f).

### 3. Prepositions and prepositional phrases in German

After laying out the ground for the discussion, I now come to the main topics to be considered; the prepositions in German. I first present some descriptive aspects of prepositions. I then show that the proposal in the previous section is capable of capturing not only the basic ordering pattern in PPs, the prepositional structure, but also the existence of postpositions in the language. The next subsections demonstrate that the analysis can be extended to contractions of prepositions and definite articles, on the one hand, and to prepositional adverbs, on the other.

#### 3.1. Types of prepositions

As a starting point, let us first make clear the target of our investigation here. Although prepositions are generally regarded as closed class words, it is not always clear whether certain words are to be classified as prepositions, as discussed by Lindqvist (1994), Diewald (1997: Ch.4.1), Di Meola (2000), Breindl (2006), etc. In order to set the stage for the ensuing discussion, let us begin with a classification of elements subsumed under prepositions in the broad sense.

Helbig & Buscha (1991: 402f) propose to “distinguish between primary and secondary prepositions on the basis of the word structure”. Their definitions and (some of) the examples given are summarized as (14) and (15) below. The prepositions *während* (‘during’) and *wegen* (‘because of’) were listed as primary ones by Helbig & Buscha (1991: 402), but due to the reason that will soon become clear, I deleted them from the list and would rather like to regard them as belonging to the class of secondary prepositions:

(14) Primary prepositions:

not recognizable as derivatives or compositions of words of other word classes, form a relatively closed word class;

e.g.: an, auf, aus, bei, durch, neben, ohne, über, (see (16) below).

(15) Secondary prepositions:

a. derivatives of words of other word classes or words of other word classes unchanged in their word structure;

e.g.: angesichts (‘in the face of’), abzüglich (‘less’), dank (‘thanks to’), etc.

b. compositions and phrases from preposition + noun;

e.g.: anhand (‘with the help of’), im Laufe (‘in the course of’), zuliebe (‘for the sake of’), etc.

According to Helbig & Buscha (1991: 402f), primary prepositions usually govern dative or accusative (or both), while most of the secondary prepositions assign genitive. I also accept their idea of classifying prepositions into primary and secondary ones (cf. also Diewald 1990: 65ff, Breindl 2006, etc.). It should, however, be pointed out that *während* and *wegen*, which were included in group (14) by Helbig & Buscha (1991: 402), do not do justice to the very definition the authors themselves give; *während* is actually the present participial form of the verb *währen* ('to last/continue') (cf. Lehmann 2015:111, Di Meola 2000: 98ff, Duden 2001a: 908, etc.), and *wegen*<sup>5</sup> stems from the dative plural form of the noun *Weg* ('way') (cf. Paul 1916: 43, Di Meola 2000: 126, 161, etc.). Lehmann (2015: 144) points out that these prepositions are being in the process of grammaticalization, i.e., from the original secondary class, taking genitive, toward the primary class, taking dative (see also Diewald 1997: 66f). Also considering the classification of *wegen* as an instance of "secondary prepositions" by Lehmann (2015: 176), it seems safe to exclude these prepositions from the list of the primary prepositions.

Retaining in principle the above introduced terminologies by Helbig & Buscha (1991), I would now like to summarize the school- or reference-grammatic description of prepositions on the basis of Duden (1998). According to Duden (1998: 383), "the number of prepositions varies considerably, from 50 to far more than 100". This uncertainty about the classification is related to whether some borderline cases are treated as prepositions or not, as mentioned above. Duden (1998: 383) points out that there are "only about 20 prepositions that frequently appear", as listed below:

- (16) an ('at'), auf ('on'), aus ('from'), bei ('by'), bis ('till'), durch ('through'), für ('for'), gegen ('against'), hinter ('behind'), in ('in'), mit ('with'), nach ('after'), neben ('beside'), über ('over'), um ('around'), unter ('under'), von ('of'), vor ('before'), zu ('to'), zwischen ('between')

These correspond, for the most part, to the primary prepositions in the sense of Helbig & Buscha (1991), or, in the words of Lindqvist (1994), to prepositions of a higher prepositionality grade, i.e., prototypical instances of the prepositions. With the exception of *nach* in its modal use (see below), e.g., their occurrence is restricted to the prenominal position.

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<sup>5</sup> This preposition has grown out of *von --- wegen* in the Middle High German by way of shortening (cf. Paul 1916: 43, Duden 2001a: 918, Lindqvist 1994: 118). That is, *wegen* started as a postposition rather than a preposition, which also disqualifies it from the class of primary prepositions.

While German is thus generally classified as a prepositional language (cf. also Dryer 2013), Duden (1998: 829f) points out that the prepositions in (17) can also occur postnominally. The preposition *nach* ('after') can be used as a postposition only in the modal usage ('according to'). Listed in (18) are postpositions which cannot precede but only follow a nominal (Duden 1998: 830, cf. also Helbig & Buscha 1991: 407):

- (17) entgegen ('toward'), entlang ('along'), gegenüber ('across from'), gemäß ('according to'), unbeschadet ('regardless of'), ungeachtet ('regardless of'), wegen ('because of'), zufolge ('as a result of'), zugunsten ('in favor of'), zunächst ('nearest'), zuungunsten ('to the disadvantage of')
- (18) halber ('for the sake of'), zuwider ('contrary to')

Concerning some of the prepositions that can also appear postnominally, semantic differences are reported to exist between the prepositional and the postpositional use (cf. Wunderlich 1984: 89, Lindqvist 1994: 113ff, Di Meola 2003: sec.5, etc.), which I do not discuss in this paper. Pure postpositions (18) as well as circumpositions (cf. Duden 1998: 385, Helbig & Buscha 1991: 407, Riemsdijk 1990, Di Meola 2000: 114ff, etc.) will also not be dealt with any further.

Now, some of the relevant data are given below:

- (19) a. in Frankfurt  
 b. \*Frankfurt in
- (20) a. gegenüber dem Bahnhof  
 across-from the station  
 b. dem Bahnhof gegenüber

We can safely say that German PPs are basically head-initial, with a limited number of postpositions.

### 3.2. Stress and order in PPs

Let us now demonstrate how word order patterns in German PPs can be derived from the language-specific and universal properties of stress location as posited in section 2. The basic assumption I would like to build my analysis upon is that the stress location in a phrase correlates with that in a word. We should also recall that word stress in German falls on the first syllable of the stem morpheme in principle. Combined with the mechanism advocated by Cinque (1993), according to which the stress should be placed on the most deeply embedded



element, we can now derive the word order patterns, here specifically for prepositions, from the prosodic properties. In most of the cases, i.e. with “canonical” prepositions, the order is fixed to P > DP:

- (21) a. in Frankfurt  
       w S w  
       b. \*Frankfurt in  
           S w w (\*Lapse violation)
- (22) a. mit dem Fahrrad  
       with the bicycle  
       w (w) S w  
       b. \*dem Fahrrad mit  
           (w) S w w (\*Lapse violation)

The prepositions here, which are in principle not stressed, function phonologically like a prefix. The stress patterns represented above show that the prepositional structure in (21a/22a) matches the stress pattern canonical in German (cf. (10)) better than the postpositional one in (21b/22b).

We saw in the previous subsection that there are prepositions that can occur also postnominally. List (17) above from Duden (1998) as well as the pair in (20) are repeated below:

- (23) entgegen, entlang, gegenüber, gemäß, unbeschadet, ungeachtet, wegen, zufolge, zugunsten, zunächst, zuungunsten
- (24) a. gegenüber dem Bahnhof  
       b. dem Bahnhof gegenüber

One might notice here in passing that the prepositions in (23) are to be regarded as secondary in the sense of Helbig & Buscha (1991), i.e. as “(derivatives of) words of other word classes” (cf. (15)). I would now like to ascribe the well-formedness of (24) to the assumption that the preposition here can constitute an independent prosodic word separate from the complement DP. This should lead to the presence of a prosodic boundary between P and DP, which exempts (24) from the violation of \*Lapse; let us note that the constraint in question is valid only in a certain prosodic domain (cf. Inaba & Tokizaki 2018):

- (25) a. gegenüber dem Bahnhof  
           w (w) s w / (w) S w  
       b. dem Bahnhof gegenüber  
           (w) S w / w (w) s w

We see that most of the prepositions in (23) are polymorphemic, i.e. heavy enough to build an independent prosodic word; “light” prepositions (cf. (16)) are excluded from this option.<sup>6</sup>

Let us note in passing that the headedness of German Ps matches the general tendency in the language: We already know that, in German, Ds and Cs are uncontroversially head-initial, whereas Vs and As are generally regarded as head-final (cf. e.g. Grewendorf 1988). Now, as for Ps, primary prepositions are like function words in that they belong to a closed class, and they are basically head-initial. Along with them, there are also postpositions, almost all of which are morphologically complex and basically derivatives of other word classes such as nouns, verbs, adjectives, etc., which belong to the class of content words. Putting aside nominals, whose headedness seems to be murky (cf. Inaba, to appear, sec.4.1), we now obtain the following picture:

- (26) a. head-initial: D, C, P; function words  
       b. head-final: V, A, P (derived from V, A); content words

We can derive the generalization that head-initial categories are function words, which are usually unstressed, while head-final structures are found with content words bearing word stress. This has played an important role in our explanation of the relevant data in the present subsection. We have also seen that Ps, which are usually grouped together with Vs, Ns and As, all being lexical categories in the generative paradigm, behave rather like functional categories in the relevant respect, as already posited in the literature (cf. Bayer & Bader 2007, etc.).

### 3.3. Contraction

In German, there are prepositions that can be contracted with definite articles (cf. (3)). According to Duden (1998: 323), they are those in (27). Eisenberg’s (1994: 267) “enumeration of the total stock of contraction” is given in (28) (cf. (16) in sec.3.1):

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<sup>6</sup> The postposition *nach* in the modal interpretation appears to be an exception. As synonyms for it, Zifonun et al. (1998: 2084) give *entsprechend* und *gemäß*. In addition to these two, Duden (2002: 639) also lists *laut* and *zufolge*. Out of these four adpositions, all but *laut* can be postposed. It might be speculated that the availability of *nach* as a postposition is related to the analogy from this fact.

- (27) an, auf, außer, bei, durch, für, hinter, in, neben, über, um, unter, von, vor, zu  
 (28) am, beim, hinterm, überm, unterm, im, vom, vorm, zum; hintern, übern, untern; ans, aufs, durchs, fürs, hinters, ins, übers, ums, unters, vors; zur

Contracted forms with some of these prepositions are regarded as colloquial, although the borderline between standard language and colloquial speech is blurred (cf. Duden 1998: 325, Nübling 1998: 275ff, Augustin 2018). It is interesting to note that the PPs with a contracted form, rather than a non-contracted form, better correspond to the stress pattern canonical in German:

- (29) a. zu der Arbeit  
           w (w) S w  
       b. zur Arbeit  
           w S w

It rather seems to be the case that the contracted variant is, at least phonologically, an unmarked option. This might as well comply with the description in Duden (1998: 324) that “in many cases, the break-up of the (historically developed and now lexicalized) contraction is not possible any more” (cf. also Löbner 1985: 312, Helbig & Buscha 1991: 387f, Lehmann 2015: 89):

- (30) {\*zu der / zur} See fahren  
       {\*to the / to-the} sea go  
       ‘go to sea’  
 (31) a. Er muss {\*in das / ins} Krankenhaus.  
       he must {\*in the / in-the} hospital  
       ‘He must go to hospital.’  
       b. Sie will mit ihm {\*zu dem / zum} Standesamt gehen.  
       she wants with him {\*to the / to-the} register-office go  
       ‘She wants to go to the registrar's office with him.’

Put another way, the contraction of prepositions and definite articles, which is triggered by the avoidance of \*Lapse violation, better matches the canonical stress pattern in German (cf. (10)).

This reasoning should lead to the prediction that contraction is only possible with “light” prepositions, which is actually born out. Those prepositions that are “heavy” enough to function also as postpositions (cf. (23)) cannot be contracted in the above sense.<sup>7</sup> Here the preposition *gegenüber* can offer an exemplary case: While Augustin (2018: 131) notes that enclitic forms with *gegenüber* (e.g. *\*gegenüberm*) could not be attested in his corpus analysis, the occurrence of *überm* is confirmed (p.125, etc.) (see also (28) above):

- (32) a. gegenüber dem N > *\*gegenüberm* N  
 b. über dem N > *überm* N

The possibility of (32b) indicates that the combination of *über* and *dem* per se is not prohibited. The absence of (32a) is rather neatly subsumed under our approach; there is no need to build a contracted form because that would not contribute to the amelioration of the \*Lapse violation as was the case in (29) (cf. also the discussion for (25) above).

Also relevant is the description in Helbig & Buscha (1991: 389) that the contraction does not take place when the definite article is stressed:

- (33) Gerade an dem (= diesem) Montag war ich nicht zu Hause(, obwohl ich montags immer zu Hause bin).  
 just on the (= that) Monday was I not to house(, although I on-Mondays always to house am).  
 ‘Just on that Monday, I was not at home(, although I am always at home on Mondays).’

Because of the presence of a stressed or strong syllable, the violations of \*Lapse, which should cause contraction, does not arise in the first place.

### 3.4. Prepositional adverbs

Let us remember that German allows for building pronominal or prepositional adverbs (Duden 1998: 372f), consisting of adverbs such as *da(r)*<sup>8</sup> and prepositions, e.g. *da + mit = damit*. What appears remarkable regarding this phenomenon in general is, on the one hand, that the position of the preposition and that of its complement are reversed (i.e. *damit* instead of *\*mitda*) and,

<sup>7</sup> Diewald (1997: 69) also says that “fusions are not possible with secondary prepositions”.

<sup>8</sup> See Paul (1916: 355f) and Bayer & Bader (2007: fn.2) for the /r/ here. As for the derivation of the prepositional adverbs, which I do not go into in this paper, Bayer & Bader (2007) postulate the movement of *da(r)*- from the original complement position into the SpecPP position, where P, being “(at least) partially a functional category”, acts as a probe in the process of feature checking.

on the other hand, that the stress is placed, in unmarked cases, on the preposition rather than on its complement (e.g. *da'mit*). As for the former point, Müller (2000: 158f) hints at two possible solutions, one morphological and the other (OT-)syntactic. According to his morphological solution, which seems more straightforward to us, the prepositional adverb is one complex word and the head of words must in principle be located to the right in German (cf. also Williams 1981). I will shortly come back to the second observation mentioned above, i.e. the stress position within the prepositional adverb, which Müller (2000) does not discuss.

According to Zifonun et al. (1998: 2085), “one motive for the formation of prepositional adverbs may be that a clash of the proclitic preposition and the unstressable (enclitic) anaphor *es* [‘it’] should be avoided. Instead of *für es* [‘for it’] e.g. it must be *dafür* [ ... ].” This observation seems to be in the same spirit as one of our prosodic constraints, \*Lapse (13a), in its strict form.

Now, according to Duden (1998: 373), the prepositions in (34) can be combined with *da(r)*.<sup>9</sup> Examples with the relevant stress patterns are given in (35):

(34) an, auf, aus, bei, durch, für, gegen, hinter, in, mit, nach, neben, über, um, unter, von, vor, zu, zwischen.

(35) a. dabei                                      b. dagegen  
       w s    w s (w)

All the prepositions in (34) have a stress on the first syllable, mostly trivially. This gives rise to the stress pattern as in (35), where the adverbial is now functioning like an unstressed prefix. If the preposition has a stress on the second or the third syllable, the resulting prepositional adverb should have a stress pattern not preferred in German. In fact, such prepositional adverbs are not attested:

(36) a. \*darentlang                              b. \*dagegenüber  
       w w s    w w (w) s w

Let us notice that all the prepositions listed in (23), again secondary prepositions in our sense, are resistant to be constructed into prepositional adverbs. Many are ruled out because the stress is not placed on the leftmost syllable, on a par with (36). Or we could also recur to the

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<sup>9</sup> The prepositions *ob* and *wider* are left out of the list, as Duden (1998: 373) itself mentions that the forms *darob* and *dawider* seldom show up. Furthermore, they cannot be combined with *hier-* and *wo(r)-*, which is available for all the prepositions listed in (34).

motivation for the formation of the prepositional adverbs proposed by Zifonun et al. (1998), as indicated above: We have established in section 3.2 that the prepositions in (23) are “heavy” enough to build a prosodic word of their own. They are, namely, too “heavy” to procliticize to the following complement, and the problematic “clash”, as pointed out by Zifonun et al. (1998), does not arise in the first place.

Let us note in passing that our proposal on stress distribution is also capable of accounting for the observation that the stress in the prepositional adverbs is usually placed on the prepositional part rather than on *da(r)*, as mentioned at the beginning of this subsection. Although monosyllabic prepositions are not very revealing in this respect, disyllabic ones, which surely are small in number, give us some clue: If the stress is placed on the adverbial, we would have (37) instead of (35b):

(37) 'dagegen  
s w (w)

When we compare (35b) and (37), the former apparently better matches the canonical stress pattern in German (cf. (10)). This can now be, I presume, extended to other cases of prepositional adverbs, i.e. to those like (35a). The stress distribution in (37) is, however, neither completely unattested nor prohibited. The opposite stress pattern, as represented in *'dagegen* or *'damit*, is, therefore, also permitted where contextually necessary.

#### 4. Case and Order in PPs

In section 3.2 above, I tried to derive the position of the P-head with respect to its complement from prosody. This approach may turn out to be problematic if morphosyntactic rather than prosodic properties are crucial for the determination of the ordering within PPs. Actually, it has often been pointed out in the literature that there is a correlation between the position of the P-head and the Case it assigns to its complement; cf. Lehmann (2015: 144), Wunderlich (1984: 89f), Diewald (1997: 67), Lindqvist (1994: Ch.4.2.2), Zifonun et al. (1998: 2084), etc. In this section, I turn to this problem and try to provide an explanation for it.

Specifically, taking up the prepositions *entgegen*, *nahe*, *entsprechend* und *gemäß* (cf. (17)), all of which can also be used postpositionally, Di Meola (1999: 345) claims, based on his corpus research, that the Case properties are closely related to the positioning of the P-head: Used postpositionally (39), these adpositions can only govern dative, while in the prepositional use (40), they can in addition govern genitive. We would thus obtain the following picture:

- |      |   |      |  |
|------|---|------|--|
| (39) | a. [dem Wind] entgegen<br>[the wind] <sub>Dat</sub> against   | (40) | a. entgegen [dem Wind]<br>against [the wind] <sub>Dat</sub>  |
|      | b. *[des Winds] entgegen<br>[the wind] <sub>Gen</sub> against |      | b. entgegen [des Winds]<br>against [the wind] <sub>Gen</sub> |

Di Meola (1999) describes this state of affairs as a process of grammaticalization: Each of the relevant Ps started as a postposition governing dative (cf. (39a)). It then began to be used also as a preposition (cf. (40a)). Finally, genitive licensing also became an option (cf. (40b)). As a general rule of grammaticalization, the relevant P should have become more “functional”, which corresponds to the generalization that function words in German are head-initial (cf. sec.3.2).

In the case of the above-mentioned prepositions, Di Meola (1999) thus reports the change in which beside the original dative, genitive has also come to be used. What now appears to be confusing is that concerning the preposition *wegen*, the opposite Case alternation is observed:

- |      |  |      |  |
|------|--|------|--|
| (41) | a. [ihres Geldes] wegen<br>[her money] <sub>Gen</sub> because-of | (42) | a. wegen [ihres Geldes]<br>because-of [her money] <sub>Gen</sub> |
|      | b. *[ihrem Geld] wegen<br>[her money] <sub>Dat</sub> because-of  |      | b. wegen [ihrem Geld]<br>because-of [her money] <sub>Dat</sub>   |

Di Meola (2003: 207) maintains that “[41a)] exemplifies original postposing, [(42a)] 'new' preposing with 'old' genitive government, and [(42b)] 'new' preposing with 'new' dative government.” In this case, in addition to the original genitive, dative has also become an option. According to Di Meola (2003: 213), among the prepositions that started as postpositions, *wegen* is exceptional: “There is only one genitive-postposition which takes a 'new' dative: *wegen* [ ... ]. In all other cases, a dative-postposition (in pre-posed position) comes to govern a 'new' genitive”. When we limit ourselves to prepositions, however, there are more cases in which the original genitive-prepositions have acquired the property of also governing dative than the other way round (Di Meola 1999: 349).<sup>10</sup>

The above observations show that there does not seem to be uniformity with respect to which of the Cases, dative or genitive, should be regarded as a result of grammaticalization.

<sup>10</sup> According to Di Meola (1999: 349), the original dative-prepositions that have also come to govern genitive are *trotz*, *dank*, *inmitten*, *binnen*, *samt*, *mitsamt*. There are much more instances of prepositions that have acquired the property of governing dative beside the original genitive (see Di Meola 1999: 349).

However, we find here a certain generalization: The alternation of Cases is only possible when the PP is head-initial<sup>11</sup> (cf. also Di Meola 2003: 213), whether the “new” genitive arises in addition to the “old” dative (cf. (39/40)), or the “new” dative becomes an option beside the “old” genitive (cf. (41/42)). Let us try to provide an explanation for this state of affairs.

Tokizaki (2008, etc.) argues in a series of his works that the juncture between constituents in left-branching structures (cf. (43a)) is shorter than in right-branching structures (cf. (43b)). For the sake of clarity, I depict his proposal schematically as follows (see, among others, Tokizaki 2011 for the discussion how this asymmetry can be derived from independent principles):

- (43) a. YP+X  
       b. X // YP

The claim here is that this asymmetry in juncture is reflected in phonological, morphological, and syntactic phenomena. Tokizaki (2011) now further maintains that the juncture in (43a) is so strong that the whole structure, “YP+X”, can be regarded as a (quasi-compound) word. When the head-final structure is so firmly “fixed” as it is in a word, compared to the head-initial structures, there should then be less freedom in (43a) than in the phrase (43b), here specifically with respect to their morphosyntactic properties. This may now lead to the observation that there is less flexibility in head-final structures than in head-initial structures. In our case at hand, Case alteration is ruled out in (43a).

This reasoning is in line with the observation made by Di Meola (2003: sec.5.4) concerning adpositions that can be used both prepositionally and postpositionally. He claims that “there is a general tendency for postposing in the case of idiomatic expressions or in the case of other more or less fixed units” (p.217). This corresponds to our assumption above that head-final structures are more “fixed” than the head-initial structures.

If our discussion here is on the right track, the correlation between the position of the P-head and the Case it licenses need not be regarded as a problem for our prosody-based approach for the constituent ordering within PPs. The observed phenomena should rather be explained by means of other independently motivated principles.

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<sup>11</sup> As for the cases like (39/40), cf. Di Meola (1999: 345): “Die Rektionseigenschaften hängen eng mit der Stellung der betreffenden Adposition zusammen. In Poststellung findet sich stets Dativrektion, in Prästellung darüber hinaus Genitivrektion. Kasusvariation ist somit auf den strukturellen Kontext der Prästellung beschränkt.”



## 5. Concluding Remarks

In this paper, I have tried to explain some of the morphosyntactic properties of prepositions in German by means of prosody. I started from the assumption that ordering patterns between constituents or the head parameter values can be derived from the stress location in the language together with the universal constraints on stress distribution. I have demonstrated that the stress pattern canonical in German captures the relevant phenomena concerning prepositions in a uniform way; instances of postpositions, contracted forms consisting of preposition and article, and prepositional adverbs. The correlation between the position of the P-head and the Case it licenses, which appears to be problematic for the present approach, can be derived from other independent principles.

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