

## Inflectional Parallelism With German Adjectives<sup>1</sup>

**ABSTRACT:** When adjectives co-occur in pre-nominal position, they typically exhibit the same inflection. In German, there is one much-discussed exception to this. In the dative masculine/neuter, a strong adjective may be followed by either a strong or a weak adjective: ‘with good red wine’ may appear as (A) *mit gut-em rot-em Wein* or (B) *mit gut-em rot-en Wein*. This paper reviews some of the literature on this phenomenon and points out that there are actually three dialects: (i) either both (A) and (B) are equally fine; (ii) (A) is preferred over (B); or (iii) (B) is better than (A). After critiquing Schlenker’s (1999) morphological account, it is proposed that this alternation is due to a phonological rule. This discussion is then extended to indefinite pronoun constructions like *mit jemandem anderem* ‘with somebody different’, which also show a lot of variation. It is suggested that the variation on the adjective also follows from this phonological rule but that the variation on the pronoun is a reflex of *jemand* belonging to three different inflectional paradigms in the contemporary language. One of the main conclusions of the paper is that the strong/weak alternation in German is a reflex of several mechanisms.

### 1. Introduction

Noun phrases exhibit a phenomenon, often called ‘concord’, where the relevant elements share agreement features in case, number and gender (and perhaps person). While this is a wide-spread phenomenon in the world’s languages, it manifests itself in slightly different ways cross-linguistically. This becomes clear when one compares the inflections on elements of certain lexical categories. For instance, while some languages make a morphological difference between determiners and adjectives, other languages do not. Compare the following dative noun phrases, where German has different endings but Russian does not:

- |     |    |                                |           |
|-----|----|--------------------------------|-----------|
| (1) | a. | dies-em gut-en teur-en Wein    | (German)  |
|     |    | this good expensive wine       |           |
|     |    | ‘this good expensive wine’     |           |
|     | b. | èt-omu dobr-omu dorog-omu vinu | (Russian) |
|     |    | this good expensive wine       |           |

However, what these languages, including the German and Russian examples in (1), have in common is that co-occurring adjectives have the same inflections. I refer to this generalization as ‘inflectional parallelism’.<sup>2</sup>

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<sup>2</sup> This restriction seems to be language-specific. For instance, under certain conditions, Bosnian allows two adjectives with different endings (see Leko 1996: 153):

- (2) *I. Inflectional Parallelism of Adjectives*  
Structurally related adjectives exhibit the same endings.

For present purposes, I interpret the term ‘structurally related’ as referring to two, non-coordinated adjectives in pre-nominal position. From this perspective, I will discuss a case in German where the endings on co-occurring, that is, structurally related, adjectives differ.

Among others (see below), Demske (2001: 53) provides the following inflectional patterns for garden-variety noun phrases containing two adjectives: with the discussion of (1) in mind, the expected pattern is provided in (3a) and the unexpected pattern in (3b) (unless indicated otherwise, the data are provided with their original judgments throughout the paper):

- (3) a. mit frisch-em schwarz-em Kaffee  
with fresh black coffee  
‘with fresh black coffee’  
b. mit frisch-em schwarz-en Kaffee  
with fresh black coffee

Comparing the differing inflections on the first two elements in (3b) to those in (1a), one might feel tempted to suggest that the adjectives in (3b) are of a different kind, perhaps of different lexical categories (for such a case, see footnote 13). However, I will demonstrate that, on the one hand, this alternation is very restricted in that it only involves nasal sounds and that, on the other, this alternation is more general in that it also occurs in other nominal constructions; for instance, in indefinite pronoun constructions.

I argue that there are (at least) two mechanisms that shape the distribution of inflections in the German noun phrase: one mechanism involves a structural component (e.g., Roehrs under review) and the other is a post-lexical phonological rule. The application of the latter is “constrained”, presumably by language-processing factors. Interpreting the alternation in (3) as a post-lexical, that is, lower-level process will allow us to keep the generalization of inflectional parallelism within the category of adjectives. To the extent this generalization is correct, it can be used as a probative means to identify different lexical categories. To be clear, then, the two main findings of this paper are: (i) there is inflectional parallelism with German adjectives and, consequently, adjectives are clearly of a different lexical category than determiners, and (ii) the distribution of endings in German is a reflex of several mechanisms.

The paper is organized as follows: in section 2, I discuss the type and distribution of inflections on determiners and adjectives in German. Against this background, the (apparent) exception illustrated above is discussed in more detail in section 3. Sections 4 and 5 discuss the questions of how general this diverging pattern is and what the nature of this phenomenon is. In sections 6 and 7, I provide the bipartite proposal. After the discussion of a different type of nasal alternation in section 8, the paper is summarized in the conclusion. In the appendix, I tentatively suggest a possible extension of the proposal to morphological alternations in pseudo-partitives and certain *als*-adjuncts in German.

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(i) nov, crveni stroj (Bosnian)  
new-INDEF red-DEF machine  
‘the red machine, which is new’

## 2. General Background

In the German noun phrase, there are two much-discussed generalizations involving the alternation of certain endings (for general background, see Duden 1995: 277-9, 306-7; for critical discussion and references, see Roehrs 2006, under review). One generalization deals with the different types of endings, the other with the distribution of these endings. Let us consider each in turn. This section provides the necessary background for the discussion to follow.

### 2.1. Types of endings

Going back to Jacob Grimm (1870: 718-756), there are two sets of endings: the ‘strong’ and the ‘weak’ paradigms. Turning to the strong set first, compare tables 1 and 2 below. One can see that the strong adjective has the same number and tabular distribution of endings as the determiner.<sup>3</sup> The only exception is in the masculine and neuter genitive (see footnote 4). This difference is marked in bold print in table 2:

Table 1: Inflections on the Demonstrative

Case\Gender	Masculine	Neuter	Feminine	Plural
Nominative	dies-e-r	dies-e-s	dies-e	dies-e
Accusative	dies-e-n	dies-e-s	dies-e	dies-e
Dative	dies-e-m	dies-e-m	dies-e-r	dies-e-n
Genitive	dies-e-s	dies-e-s	dies-e-r	dies-e-r

Table 2: Strong Adjectival Inflections

Case\Gender	Masculine	Neuter	Feminine	Plural
Nominative	gut-e-r	gut-e-s	gut-e	gut-e
Accusative	gut-e-n	gut-e-s	gut-e	gut-e
Dative	gut-e-m	gut-e-m	gut-e-r	gut-e-n
Genitive	<b>gut-e-n</b>	<b>gut-e-n</b>	gut-e-r	gut-e-r

In more detail, the strong paradigm has five different endings (*-r*, *-s*, *-m*, *-n*, *-e*), and considering table 3 below, the weak one has just two (*-n*, *-e*). One can state that, on the one hand, the strong set of endings has more exponents than the weak one but that, on the other, the weak endings form a proper subset of the strong endings. Furthermore, while ten (out of sixteen) cells are different (marked in bold print in table 3), there is also some inter-paradigmatic syncretism and at least one cell is identical with the strong and weak endings in each of the different morphological cases, genders, and the plural.

<sup>3</sup> There are some apparent exceptions to this: (i) *ein* ‘a/one’, *kein* ‘no’, and possessive elements such as *mein* ‘my’ as well as a co-occurring “mixed” adjective differ in three cases (nominative masculine and nominative/accusative neuter), and (ii) unlike with the other determiners, the final *-e* on the definite article *die* ‘the’ and the personal pronoun *sie* ‘she/they’ is not pronounced as schwa but as (part of the) long [i:] (see Wiese 1988). For the discussion of these issues, see Roehrs (under review).

Table 3: Weak Adjectival Inflections

Case\Gender	Masculine	Neuter	Feminine	Plural
Nominative	<b>gut-e</b>	<b>gut-e</b>	gut-e	<b>gut-e-n</b>
Accusative	gut-e-n	<b>gut-e</b>	gut-e	<b>gut-e-n</b>
Dative	<b>gut-e-n</b>	<b>gut-e-n</b>	<b>gut-e-n</b>	gut-e-n
Genitive	gut-e-n	gut-e-n	<b>gut-e-n</b>	<b>gut-e-n</b>

This discussion can be summarized as the following first generalization:

(4) *II. (Non-)Identity*

- a. The ending on the determiner = the strong ending on the adjective.
- b. The strong ending on the adjective  $\neq$  the weak ending on the adjective.

To be more precise about the equal sign in (4a), I assume that the null hypothesis is that, unless there is strong evidence to the contrary, the strong endings on the two different types of lexical elements are not only simply homonymous but, in fact, identical in nature. Below, we will see that there is no strong, convincing evidence against this assumption. If so, then there are two sets of endings: the strong and the weak types of inflections. Furthermore, these endings are, to some extent, independent of lexical category: while the strong ending can be on the determiner or the adjective, the weak ending can occur on the adjective only. Consider the distribution of the strong and weak inflections in more detail.

2.2. *Distribution of endings*

As can be seen in (5), the strong ending precedes the weak one:

- (5)
- a.      der                      gute                      Wein  
the(NOM.STRONG) good(WEAK) wine(MASC)  
‘the good wine’
  - b.      dieser                      gute                      Wein  
this(NOM.STRONG) good(WEAK) wine(MASC)  
‘this good wine’
  - c.      jeder                      gute                      Wein  
every(NOM.STRONG) good(WEAK) wine(MASC)  
‘every good wine’

However, assuming a null (mass) determiner for (6a), we notice that the distribution of the weak endings has nothing to do with the presence of a determiner *per se* but rather with the presence of a strong ending on the determiner:

- (6)
- a.      guter                      Wein  
good(NOM.STRONG) wine(MASC)  
‘good wine’

- b.      ein guter                                  Wein  
           a    good(NOM.STRONG) wine(MASC)  
           'a good wine'
- c.      Peters guter                                Wein  
           Peter's good(NOM.STRONG) wine(MASC)  
           'Peter's good wine'

I will call the different endings on the adjective in (5) and (6) the 'strong/weak alternation'. Furthermore, what these examples have in common is that a strong ending appears in each noun phrase. For current purposes, the second generalization can now be stated as a set of entailments (for more detailed discussion, see Roehrs under review):

(7)      *III. Asymmetry*

- a. A weak ending on an adjective → a strong ending on a determiner.
- b. A strong ending on an adjective → no ending on the determiner.

As determiners syntactically precede adjectives in German, we establish a sequence of endings that shows a left-to-right asymmetry: determiners with strong endings precede weak adjectives and determiners without inflection precede strong adjectives. In contrast to section 2.1, then, the distribution of endings, but not the type of ending *per se*, is dependent on the lexical category. Rendering (7a-b) more abstract, we obtain (8a-b), respectively, where precedence is marked by <. Generalizing further, the distribution of inflections depends on the presence of different lexical categories, marked by  $\alpha$ ,  $\beta$ , and  $\gamma$  in (8c), where  $\alpha \neq \beta \neq \gamma$  and each variable may, in principle, but constrained by the syntax, range over determiner and adjective:<sup>4</sup>

- (8)      a.       $\text{STRONG}_{\text{Det}} < \text{WEAK}_{\text{Adj}}$
- b.       $\emptyset_{\text{Det}} < \text{STRONG}_{\text{Adj}}$
- c.       $\emptyset_{\alpha} < \text{STRONG}_{\beta} < \text{WEAK}_{\gamma}$

We may say that a weak ending is parasitic on the presence of a strong inflection and that precedence, as understood here, coincides with a change in lexical category.

In what follows, I investigate if the generalization of inflectional parallelism of adjectives and its two ancillaries in (4) and (7) are correct. In other words, I will not attempt to explain in this paper why the strong ending generally precedes the weak one (and not the other way around, but see Roehrs 2006, under review and references cited therein) but concentrate on the few diverging cases with regard to this general picture.

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<sup>4</sup> Adjective-noun combinations in the genitive masculine (and neuter), as in (i), seem to present problems for generalizations II and III: on the one hand, an (apparent) *weak* inflection is on an adjective in a "strong" context; on the other, an (apparent) strong ending on a noun *follows* a weak inflection on an adjective:

- (i)      guten                                  Weins  
           good(GEN.WEAK) wine(MASC.GEN)  
           '(of) good wine'

For discussion, see Roehrs under review, Section 9.2.

### 3. An Alleged Case of Inflectional Alternation Within One and the Same Category

Support for generalization III in section 2 comes from the inflectional behavior of co-occurring adjectives. As can be seen in (9) through (11), all co-occurring adjectives have identical endings:

- (9) a. der gute süße Wein  
the(NOM.STRONG) good(WEAK) sweet(WEAK) wine(MASC)  
'the good sweet wine'
- b. der guten süßen Milch  
the(DAT.STRONG) good(WEAK) sweet(WEAK) milk(FEM)  
'the good sweet milk'
- (10) a. guter süßer Wein  
good(NOM.STRONG) sweet(NOM.STRONG) wine(MASC)  
'good sweet wine'
- b. guter süßer Milch  
good(DAT.STRONG) sweet(DAT.STRONG) milk(FEM)  
'good sweet milk'
- (11) a. ein guter süßer Wein  
a good(NOM.STRONG) sweet(NOM.STRONG) wine(MASC)  
'a good sweet wine'
- b. einer guten süßen Milch  
a(DAT.STRONG) good(WEAK) sweet(WEAK) milk(FEM)  
'a good sweet milk'

As can easily be verified, these distributional patterns do not cause a problem for generalization III as the same endings on different adjectives have just one and the same entailment statement for a determiner. If this generalization is correct, then we predict that different endings on co-occurring adjectives should not be possible.

Proceeding in more schematic terms (for concrete examples, see section 4), two structurally related adjectives with *different* endings have contradictory entailment statements for a *single* determiner. To be concrete, the schematic examples in (12a-b) would cause a problem for generalization IIIb (i.e., a strong adjective entails no ending on a determiner) and the schematic examples in (12c-d) would present a problem for generalization IIIa (i.e., a weak adjective entails the presence of a strong ending on a determiner):

- (12) a. \*  $\text{STRONG}_{\text{Det}} < \text{STRONG}_{\text{Adj}} \quad \text{WEAK}_{\text{Adj}}$   
b. \*  $\text{STRONG}_{\text{Det}} < \text{WEAK}_{\text{Adj}} \quad \text{STRONG}_{\text{Adj}}$   
c. \*  $\emptyset_{\text{Det}} < \text{STRONG}_{\text{Adj}} \quad \text{WEAK}_{\text{Adj}}$   
d. \*  $\emptyset_{\text{Det}} < \text{WEAK}_{\text{Adj}} \quad \text{STRONG}_{\text{Adj}}$

With one exception (see momentarily), we will see in section 4 that all the schematic cases in (12) are ungrammatical.<sup>5</sup> If this is so, then it seems to be desirable to keep generalization III and cases diverging from it should be examined with care.

As already briefly discussed in the introduction, Demske (2001: 53) provides the inflectional patterns in (13a-c) for garden-variety noun phrases with two adjectives. While Demske's work is partially based on Gallmann (1996: 296; see also more recently 2004: 156), the latter provides (13d). This completes the data set. Note that Müller (2002b: 139) marks an example like (13b) with one question mark put in square brackets:<sup>6</sup>

- (13) a. mit frischem schwarzem Kaffee  
with fresh(STRONG) black(STRONG) coffee(MASC)  
'with fresh black coffee'
- b. [?] mit frischem schwarzen Kaffee  
with fresh(STRONG) black(WEAK) coffee(MASC)
- c. \* mit frischen schwarzem Kaffee  
with fresh(WEAK) black(STRONG) coffee(MASC)
- d. \* nach langen schweren Leiden  
after long(WEAK) hard(WEAK) suffering(NEUT)  
'after long hard suffering'

Starting with the ungrammatical cases in (13c-d), they are captured by generalization IIIa as there is no (strongly inflected) determiner present. Turning to the grammatical instances in (13a-b), the first example is expected but the second one is not as the adjectives *frisch* 'fresh' and *schwarz* 'black' have different inflections. At face value, then, the strong/weak alternation in (13b) is like the schematic case in (12c) above and presents a problem for generalization III. While we will return in section 7 to the grammatical status of (13c) and (13d), that is, to the degree of their ungrammaticality, let us first ascertain how general this pattern is.

#### 4. Question I: Is this Alternation more General?

In the previous section, we saw that a weak adjective can follow a strong one. In this section, we investigate the question of how general this phenomenon is. As such, this section deals with a data question. If it were to turn out that the above-mentioned alternation within the category of adjective were more wide-spread, then one could suggest a different generalization dealing with the distribution of endings. On a surface level, one could state this as in (14). Unlike the above generalization, here the strong/weak alternation could also occur within the same lexical category. To be clear, what is at stake here is the question of whether or not the distribution of endings is independent of the lexical categories involved:

<sup>5</sup> This is not surprising from a learnability perspective, according to which one might expect to find parallelism within category as that would make it easier for the learner to acquire the words and their relevant morphological, syntactic, and semantic properties.

<sup>6</sup> It is sometimes claimed that there are certain semantic conditions on this alternation. For instance, Duden (2007: 39) states that the weak ending is used especially if the adjective and the noun make up a complex term together ("Gesamtbegriff"). Note, however, that besides these – often called – referential adjectives, garden-variety adjectives such as *black*, (13b), also undergo this alternation. As far as I can see, then, such a semantic characterization does not capture this alternation adequately.

- (14) *III'. Asymmetry (more general, but not correct)*  
A weak ending *follows* a strong ending.

Although this generalization is, in certain ways, more general, it will become clear in this section that generalization III' does not capture the cases correctly but that generalization III from above does. To see this, we consider other sequences of two adjectives.

As already illustrated above, there is one scenario where we find a strong ending on adjectives, namely where the determiner itself, overt or null, does not exhibit a strong ending. As a way of presenting the data, I arranged them by the complexity (i.e., weight) of their final rhyme, that is, by the number of segments in the nucleus and coda of the final syllable. We will see that the strong/weak alternation in these cases is not a reflex of such a phonological factor and, consequently, the presence of a weak ending can not be the result of some economy in speech that might favor the occurrence of fewer segments.<sup>7</sup>

4.1. *The strong ending is heavier/more complex:  $|NC|_{ST} > |N|_{WK}$*

Starting with the nominative and accusative neuter, we observe that, despite the fact that the weak ending is lighter, (15b, d), only the heavier strong ending is possible on the second adjective, (15a, c):<sup>8</sup>

- (15) a. ein kleines rotes Auto  
a small(NOM/ACC.STRONG) red(STRONG) car(NEUT)  
'a small red car'
- b. \* ein kleines rote Auto  
a small(NOM/ACC.STRONG) red(WEAK) car(NEUT)
- c. frisches kaltes Bier  
fresh(NOM/ACC.STRONG) cold(STRONG) beer(NEUT)  
'fresh cold beer'
- d. \* frisches kalte Bier  
fresh(NOM/ACC.STRONG) cold(WEAK) beer(NEUT)

#### 4.2. The strong ending is as heavy/complex: $|V|_{\text{ST}} = |V|_{\text{WK}}$

When both endings are of similar complexity, we also find the distribution of two strong inflections.<sup>9</sup>

<sup>7</sup> There are a number of instances where the weak and the strong endings are identical and thus not telling. This is so in the accusative masculine, the nominative and accusative feminine, the genitive masculine and neuter, and the dative plural (these are the cases in regular print in table 3 above).

<sup>8</sup> For some speakers, the judgments seem to be clearest when an overt determiner like *ein* 'a' is present, that is, the contrast between (15a) and (15b) is sharper for some speakers than that between (15c) and (15d). However, it is clear that these nuances are quite different from the dative masculine/neuter alternation in (13a-b).

<sup>9</sup> Note that final <er> is pronounced as a vowel-like element, often transcribed as upside down ‘a’. Wiese (1996: pp. 252) argues that this is a case of *r*-vocalization, where this vowel is derived from underlying /R/, resulting in a sound closer to [a] than [ə]. Note that in Roehrs under review, I follow Wiese (1988) in arguing that all schwas on determiners and adjectives are due to an insertion rule; that is, cases of “bare” schwa as in *dies-e* ‘this’ actually have no inflectional exponent. If we follow that analysis here, then the cases in (16) are more like the ones in 4.1.



- (16) a. ein kleiner                      roter                      Wagen  
           a small(NOM.STRONG) red(STRONG) car(MASC)  
           ‘a small red car’  
       b. \* ein kleiner                      rote                      Wagen  
           a small(NOM.STRONG) red(WEAK) car(MASC)  
       c. frischer                      schwarzer                      Kaffee  
           fresh(NOM.STRONG) black(STRONG) coffee(MASC)  
           ‘fresh black coffee’  
       d. \* frischer                      schwarze                      Kaffee  
           fresh(NOM.STRONG) black(WEAK) coffee(MASC)

4.3. *The strong ending is less heavy/complex: /V/ST < /VC/WK*

Finally and perhaps unsurprisingly, when the weak ending is more complex, only the strong ending is grammatical on the second adjective. Again, we find two strong inflections – this time in the dative and genitive feminine and the genitive plural, as illustrated in (17) and (18), and in the nominative and accusative plural, as shown in (19):

- (17) a. frischer                      süßer                      Milch  
           fresh(DAT/GEN.STRONG) sweet(STRONG) milk(FEM)  
           ‘fresh sweet milk’  
       b. \* frischer                      süßen                      Milch  
           fresh(DAT/GEN.STRONG) sweet(WEAK) milk(FEM)
- (18) a. kleiner                      roter                      Autos  
           small(GEN.STRONG) red(STRONG) cars  
           ‘small red cars’  
       b. \* kleiner                      roten                      Autos  
           small(GEN.STRONG) red(WEAK) cars
- (19) a. kleine                      rote                      Autos  
           small(NOM/ACC.STRONG) red(STRONG) cars  
           ‘small red cars’  
       b. \* kleine                      roten                      Autos  
           small(NOM/ACC.STRONG) red(WEAK) cars

To summarize these sets of data, with the one exception discussed in section 3 (cf. (13b)), the weak ending on the second adjective is always ungrammatical, independent of the phonological complexity of the final rhyme. As such, the alternation in (13b) is very restricted and should be treated with care. Furthermore, as can easily be verified, generalization III' cannot be correct. Having disproved this hypothetic claim about the generality of the data, we turn to the nature of the alternation in (13b).

## 5. Question II: Is this Alternation a Morphological Phenomenon?

This section is dedicated to the question of how to deal with the data. In other words, we seek to determine what kind of proposal is most likely to be correct for the alternation in (13a-b).

Interestingly, unlike Demske, Gallmann, and Müller, Schlenker (1999: 119) reports that some speakers do not allow two identical strong endings in the masculine (and neuter) dative, as illustrated in (20a), but that most speakers accept the weak ending on the second adjective, as shown in (20b). In keeping with the data in section 4 and the claims made by the other authors, Schlenker states that this alternation is not possible in any of the other cases, illustrated by him with a feminine example:

- (20) a. ??<sup>OK</sup> mit gutem rotem Wein  
           with good(STRONG) red(STRONG) wine(MASC)  
           ‘with good red wine’  
       b. mit gutem roten Wein  
           with good(STRONG) red(WEAK) wine(MASC)  
       c. mit guter roter Sauce  
           with good(STRONG) red(STRONG) sauce(FEM)  
           ‘with good red sauce’  
       d. \* mit guter roten Sauce  
           with good(STRONG) red(WEAK) sauce(FEM)

In order to account for these data, Schlenker (1999) employs the morphological mechanism of Fission (for details, see Halle and Marantz 1994).<sup>10</sup> In particular, Schlenker (1999: 124) makes the following claims about the relevant inflections:

- (21) a. endings on the determiners are [+Fission]  
       b. endings on the adjectives are [-Fission], except for (21c)  
       c. the adjectival ending *-em* is [+Fission], which, at least for some speakers, is an optional feature (cf. (20a-b))

To see how this works, let us briefly look at his interpretation of Fission.

Schlenker proposes that sub-trees come with fully specified feature bundles. Lexical elements are merged as terminal nodes and can, depending on their specifications, reduce the feature composition of that sub-tree. In the resultant, impoverished environments, only elements of appropriate (e.g., with fewer) specifications can be merged. Interpreting strong endings as fully specified and weak endings as less specified, a top-down derivation guarantees that the merge of an element with a strong ending marked for Fission will reduce the feature bundle of the sub-tree. This, in turn, allows only elements with a weak or no ending to be merged further down in the tree.

Returning to (21), with determiner endings marked [+Fission], they trigger Fission and Schlenker’s proposal can explain the weak endings on adjectives following determiners. With the exception of one case, adjective endings do not trigger such an operation and, thus, they do not cause an alternation. This essentially derives inflectional parallelism with adjectives.

<sup>10</sup> A number of people have pointed out to me that the operation that Schlenker has in mind is closer in nature to the mechanism *impoverization*. However, I will continue to use his terminology.

However, the presence of adjectival *–em*, marked as [+Fission] by stipulation, does result in an alternation. These assumptions, then, account for generalization III and the data in (20).

Some support for this morphological proposal can arguably derived from the fact that failure of Fission triggered by the determiner ending *–em* leads to stronger ungrammaticality (i.e., “\*”) than that triggered by the adjectival *–em* (i.e., “??”). This implies that Fission must be category-specific and, considering that this is a morphological operation, this might not be surprising. However, we will see that a morphological account is not the correct way to explain the exceptional data.<sup>11</sup>

Let us step back and briefly review the entire data. Starting with (20c-d), these data are expected from our perspective and exhibit very sharp judgments. Turning to (20a-b), what is surprising about this set is that the expected pattern of two strong endings is marked for some speakers (cf. “??”) and the unexpected pattern is fine for most. In other words, not only are the patterns in (20a-b) “reversed” and thus unexpected, the judgments are also more diverse and less sharp. In fact, we have seen above that there are also other sets of judgments reported in the literature, which are summarized in table 4 below. To be clear, there seem to be three – what I will call – ‘dialects’ for the dative masculine/neuter: dialect 1 is described by Demske (2001), Gallmann (1996, 2004), and Schlenker (1999); dialect 2 is provided by Müller (2002b); dialect 3 is given in Schlenker (1999); dialect 4 does, to the best of my knowledge, not exist, that is, all speakers allow at least one of the two adjectival patterns.<sup>12</sup>

Table 4: Different Sets of Judgments in the Dative Masculine/Neuter

	Dialect 1 (De., Ga., Schle.)	Dialect 2 (Müller)	Dialect 3 (Schlenker)	Dialect 4
Adj+m Adj+m	√	√	??	??
Adj+m Adj+n	√	?	√	??

While the contrasts in the judgments between the two adjective patterns seem to be fairly subtle in dialects 2 and 3, the very existence of three different dialects should make us pause. Before we proceed, let us point out some important questions left open by Schlenker’s proposal.

For instance, there is an issue about quantity: why is *–em* the only adjectival ending marked [+Fission] and not, e.g., also plural *–e*: *gute rote(\*n) Weine* ‘good red wines’? Furthermore, there is a question about quality: why is it *–em* that has this marking and not, e.g., *–er* instead: *guter rote?\*(r) Wein*? And most importantly, beside these potential quantitative and qualitative issues, Schlenker’s proposal seems to give up generalization II, according to which the strong endings on determiners and adjectives are not only homonymous but, in fact, identical:

<sup>11</sup> As mentioned above, one of the conclusions explicitly stated by Schlenker is that syntactic trees must be built from top to bottom. While this is against current standard assumptions, where bottom-up derivations derive syntactic constituency and semantic composition straightforwardly (e.g., S[VO] vs. \*[SV]O; D[AN] vs. \*[DA]N), the mechanism of Fission can still be employed under bottom-up assumptions if one assumes that determiners raise in a stepwise fashion from a position below adjectives (in Roehrs under review, I combine Fission and determiner movement to account for the strong/weak alternation). To be clear, although I disagree with some of the details of Schlenker’s analysis, I believe that the basic proposal involving the mechanism Fission is on the right track.

<sup>12</sup> Sternefeld (2004: 288) only discusses the pattern “Adj+m Adj+n” and it is not clear to me if he describes dialect 1 or 3. He provides a syntactic account proposing a recursive DP-level.

rather than one type of strong ending, we have three on his account: determiner endings, adjectival endings (except *-em*), and the adjectival ending *-em*.<sup>13</sup>

It is interesting to note that inflectional parallelism may go beyond the same lexical category. In particular, there are actually three types of elements that take part in the strong/weak alternation: besides determiners and adjectives, quantifiers like *wenige* ‘few’ may also exhibit these inflections:

- (22) a.        die                    wenigen        netten        Leute  
               the(STRONG) few(WEAK) nice(WEAK) people  
               ‘the few nice students’  
       b.        wenige                nette                Leute  
               few(STRONG) nice(STRONG) people  
               ‘few nice students’

To be clear, then, similar to the Russian case in the introduction (cf. (1b)), elements of different lexical categories may share the same inflections. In other words, identical inflections do not indicate identical lexical categories but different inflections imply different lexical categories. If so, then the lack of inflectional parallelism within one and the same lexical category (especially with only some exponents but not others, as in Schlenker 1999), would be completely surprising. I take this as another argument against Schlenker’s proposal. In what follows, I argue that this is not a morphological but post-lexical phonological phenomenon.

## 6. Proposal I: The Alternation is a “Lowest-level” Phenomenon

In order to explain the data summarized in table 4 above, while keeping both generalizations from section 2 intact, I propose a phonological account. Note that strong *-m* and weak *-n* are the only co-occurring inflections of the strong/weak alternation that basically share all the phonological features except place of articulation.<sup>14</sup> In view of this fact, I propose the following phonological rule (A = adjective):<sup>15</sup>

<sup>13</sup> Interestingly, a few adjectives trigger a strong/weak alternation, schematically similar to the one case discussed in the main text. Consider (ia). However, there is independent evidence that these adjectives are determiner-like in that they can, by themselves, license singular countable nouns. Compare (ia) to (ib):

- (i) a.        folgendes                neue                Beispiel  
               following(STRONG) new(WEAK) example  
               ‘the following new example’  
       b.        \*(dieses)                neue                Beispiel  
               this(STRONG) new(WEAK) example  
               ‘this new example’

For discussion, see Roehrs under review, Section 10.

<sup>14</sup> Upon closer inspection, there is another potential case where under certain assumptions, two co-occurring inflections are similar. Compare text case in (ia) to another potential instance in (ib) (see (16) for concrete examples):

- (i) a.        *-m*        *-m*        *->*        *-m*        *-n*  
       b.        *-(e)r*        *-e*        *->*        vocalic ‘r’    *-schwa*

Note first that, although we could say that the ‘r’ in (ib) is already underlyingly vocalic, this would disregard a general phonological rule of German (but even then, vocalic ‘r’ and *-e* are different). Furthermore, while the underlying elements are the same in (ia) but different in (ib), the resultant surface alternations are of a different type such that the relevant processes bring about “dissimilation” in (ia) but “assimilation” in (ib). Be that as it may, if

(23) R<sub>1</sub>: m -> n / [...]<sub>A</sub> +ə \_\_\_\_ #

In words, rule R<sub>1</sub> applies to certain nasal inflections on adjectives, where R<sub>1</sub> is obligatory for some speakers (cf. “??” in (20a)), optional for others (cf. “OK” in (20a)), and “costly” for yet another group of speakers (cf. “?” in (13b)). This phonological proposal, then, not only explains the restrictedness to *-m*, but also the change to *-n*, which involves a less marked place of articulation, namely a change in place of articulation from labial to (the less marked) coronal.<sup>16</sup> Put differently, this is an alternation involving nasal sounds and as such, this phenomenon is a lower-level, or rather “lowest-level” process. One could make this part of the proposal more formal; for instance, in the framework of Optimality Theory (for discussion of some of the cases in table 4 in this framework, see Gallmann 2004: 156-7, who bars sequences of schwa and *-m* by a phonological constraint). To be clear, then, the weak ending on the second adjective is a strong ending in “disguise” and strong morpho-syntactic conclusions such as the assumption of top-down derivations (Schlenker) or recursive DP-levels (Sternefeld) should not be based on these data.

## 7. Proposal II: Several Mechanisms

If the rule in section 6 were the only mechanism, we would also expect an adjective in *-n*, derived by the free application of the rule, to be followed by an adjective in *-m* or in *-n*, the latter another application of the rule. Considering (24a-b), this is not the case:

- (24) a. ?? mit starken obergärigem Bier  
           with strong(WEAK) top fermented(STRONG) beer  
           ‘with strong top fermented beer’  
       b. ?? mit starken obergärigen Bier  
           with strong(WEAK) top fermented(WEAK) beer

Note first that the judgments in (24) contrast with those given in (13c-d) in that they indicate less strong ungrammaticalities. Furthermore, as already seen in (20) above, nasal inflections, once again, have less sharp judgments than non-nasal endings. Compare (24) and (25):

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“bare” schwa is not an inflectional exponent to begin with (as claimed in Roehrs under review and briefly mentioned in footnote 9), then this second case is simply not relevant here at all.

<sup>15</sup> As pointed out to me by Tracy A. Hall (p.c.), this must be a post-lexical rule as it applies after the insertion of lexical items. With the reference to adjective, (23) is not a proto-typical post-lexical rule. However, another possible instance of this kind of rule is schwa-insertion in German, where, when inflected, adjectives must have a schwa inserted, but typical disyllabic nouns must not:

- (i) a. Das hier ist wirklich ein schöner-\*(e)s Haus als das da.  
           ‘This here is really a prettier(NEUT) house that that there.’  
       b. Ich erinnere mich des Lehrer-\*(e)s  
           I remember REFL of.the teacher(GEN)  
           ‘I remember the teacher.’

(For more detailed discussion of these differences between nouns, adjectives, and verbs, see Wiese 1996: section 4.3; for more general discussion of the interaction between phonology and syntax, see Kaisse 1985.)

<sup>16</sup> Note in this regard that Wiese (1996: 165, 219) formulates rules where coronal is the default value.

- (25) a. \* starke obergäriges Bier  
 strong(WEAK) top fermented(STRONG) beer  
 ‘strong top fermented beer’  
 b. \* starke obergärige Bier  
 strong(WEAK) top fermented(WEAK) beer

Contrasting (20) to (24), it appears, then, as if the strong ending has to come first and that the phonological rule only applies to the second adjective. This, in turn, might imply a proposal involving a certain structural component (and not a phonological rule). Interestingly, nominals with a syntactic structure that is quite different from garden-variety noun phrases exhibit a similar phenomenon. Consider the indefinite pronoun constructions in (26) (for discussion, see below and especially Leu 2005, Roehrs 2008). However, in this case, it is the (first) adjective that exhibits the alternation:<sup>17</sup>

- (26) a. (?) mit jemandem anderem  
 with somebody(STRONG) different(STRONG)  
 ‘with somebody different’  
 b. mit jemandem anderen  
 with somebody(STRONG) different(WEAK)

Below I demonstrate that *jemand* ‘somebody’ is not an adjective (see section 8, where also cases like *mit jemanden* and *mit jemand* are discussed). As might be expected by now, non-nasal endings exhibit sharper judgments:

- (27) a. etwas anderes  
 something different(STRONG)  
 ‘something different’  
 b. \* etwas andere  
 something different(WEAK)  
 c. mit etwas anderem  
 with something different(STRONG)  
 ‘with something different’  
 d. ?\*/?? mit etwas anderen  
 with something different(WEAK)

<sup>17</sup> While a *google*-search has revealed that there is enormous variation here, I have not been able to establish if there are three corresponding dialects in these cases as well and I simply provide my own judgments (note that only a large-scale survey contrasting judgments from (13) and (26) could establish that). If it turns out that speakers group in different ways with regard to this construction, then the rule in (23) may have to be refined in its context of application for some speakers.

Note also that cases involving personal pronouns are different: besides the masculine dative, these constructions also have variation in the feminine dative (and other morphological cases; see Duden 2007: 39; % indicates dialectal variation):

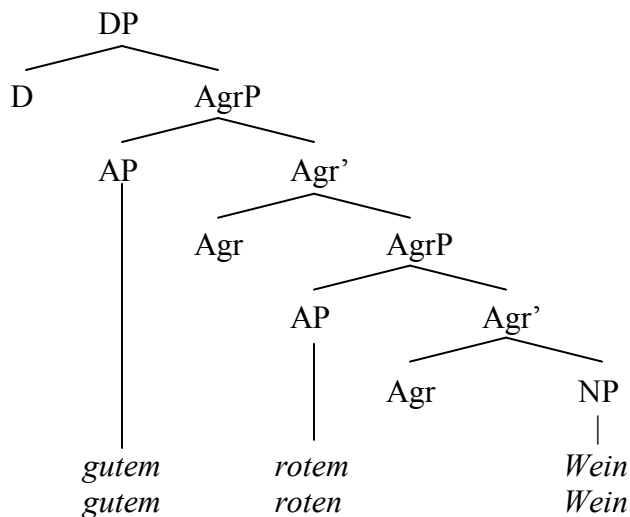
- (i) a. mir {großem / %großen} Esel  
 me great(STRONG/WEAK) donkey(MASC)  
 ‘me stupid idiot’  
 b. mir {%großer / großen} Gans  
 me great(STRONG/WEAK) goose(FEM)

(For an account involving a simple DP, see Roehrs 2005.)

What these nasal alternations have in common is that they manifest themselves on the second element: either on the second adjective, as seen in garden-variety noun phrases above, or on the (first) adjective, as just seen in indefinite pronoun constructions. Let us consider the individual structures assumed for garden-variety nouns phrases and indefinite pronoun constructions.

Starting with simple DPs, I follow Abney (1987) in that determiners project their own phrase (DP) and Cinque (1994) in that adjectives are located in Specifiers of a recursive AgrP. The data in (28a-b) are analyzed as in (28c) (here % indicates the variation in judgments summarized in table 4 above):

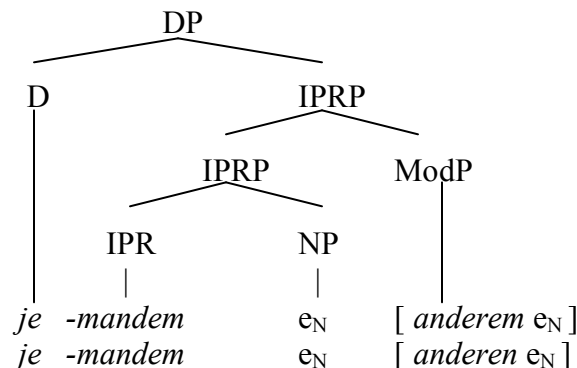
- (28) a. % mit gutem rotem Wein  
with good(STRONG) red(STRONG) wine(MASC)  
b. % mit gutem roten Wein  
with good(STRONG) red(WEAK) wine(MASC)  
c. *Simple DP*



Unlike run-of-the-mill DPs, indefinite pronoun constructions (at least, of this type; see Roehrs 2008) involve bi-nominal structures where the pronoun and the adjective are in different nominals. Each of these nominals is headed by a null noun ( $e_N$ ). The pronoun nominal contains an indefinite pronoun restrictor projecting its own phrase (IPRP) and the adjectival nominal is adjoined to the IPRP by means of a Modifier Phrase (ModP). The data in (29a-b) are analyzed as in (29c):

- (29) a. % mit jemandem anderem  
with somebody(STRONG) different(STRONG)  
b. % mit jemandem anderen  
with somebody(STRONG) different(WEAK)

c. *Indefinite pronoun construction*



If this is on the right track, then we are faced with an (apparent) paradox: although there is a left-to-right asymmetry with regard to the strong/weak alternation (i.e., general precedence of the strong ending), the phenomenon is independent of a common syntactic structure as it appears on the second adjective in a simple DP and on the first adjective in a complex DP. I conclude that this alternation is not a syntactic phenomenon but a phonological one, as proposed above. Now, in order to avoid over-generation, the application of the phonological rule in (23) must be “constrained”.

I propose that there are two mechanisms accounting for generalization III: in general, the left-to-right distribution of strong and weak inflections follows from a structural proposal that brings about a strong ending on the “highest” appropriate lexical category inside the relevant, perhaps embedded, nominal (e.g., see Roehrs under review, who modifies Schlenker’s proposal). Consider the three main cases: (i) for cases such as *mit der guten Sauce* ‘with the(STRONG) good(WEAK) sauce’, this structural proposal brings about different endings on the determiner and adjective (due to Fission triggered by the determiner); (ii) as to *mit guter roter Sauce* ‘with good(STRONG) red(STRONG) sauce’, it allows for the same endings on co-occurring adjectives (there is no determiner and Fission does not occur); and (iii) as for *mit etwas anderem* ‘with something different(STRONG)’, it explains how the adjective surfaces with a strong ending despite the presence of a determiner-like element (as both elements are in different nominals). This explains the sharp judgments for non-nasal inflections.

The less sharp judgments for the nasal endings are also due to this structural account but are “masked/weakened” by an additional mechanism, namely the phonological rule in (23). In particular, recalling table 4 (for the discussion of the indefinite pronoun construction, see the next section), dialect 1 employs the rule optionally; in dialect 2 (i.e., *?gutem roten*), the application of the rule is somewhat “costly”; and dialect 3 (i.e., *??gutem rotem*) uses the rule obligatorily. Furthermore, the application of the rule is “constrained” by a presumably non-linguistic component (in a narrow sense) that allows for more effective processing if the disambiguating strong ending, or disambiguation in general (see below), appears earliest in the noun phrase (e.g., *??guten rotem/roten*).<sup>18</sup> Note in particular that with regard to case, *–m* is disambiguously dative but *–n* is not: as a strong ending, *–n* indicates accusative masculine and

<sup>18</sup> Matthias Schlesewsky (p.c.) informs me that this is consonant with work by John Hawkins. In particular, Hawkins (1994: 404-5; 2004: 49, 92-3) explains the general left-to-right asymmetry in (8) in German by general processing advantages (for an early intuition in this regard, see Esau 1973: 139).



dative plural. To be clear, then, the left-to-right asymmetry of generalization III has two overlapping mechanisms, however, of a different kind.<sup>19</sup>

Proposing two types of mechanisms where one of them is “optional”, this analysis not only straightforwardly accounts for the judgments between different types of data (dative feminine “\*” vs. dative masculine/neuter “OK/?/??”) but also for the three dialects within the same type of data (“OK” vs. “?” vs. “??”). Second and more importantly, generalization II can be left unchanged as (strong) endings on determiners and adjectives are exactly the same and are distributed in a certain, but *non*-inflection-specific, way. In other words, certain instances of these types of inflection do not have to be marked for category and application of a morphological operation as in Schlenker (1999). More generally, we can maintain that the distribution of the strong/weak alternation is dependent on lexical categories. If so, divergences in inflectional parallelism can be used as a probe for differences in lexical categories (see Roehrs 2007a).

## 8. A Nasal Alternation of a Different Kind

The way the phonological rule in (23) is set up, it does not apply to determiners (or numerals or nouns, which do not have *–em* as an inflection anyway):

- (30) a. mit {dem / diesem / einem} Auto  
           ‘with the / this / a car’  
       b. \* mit {den / diesen / einen} Auto  
           with the / this / a car  
       c. mit ihm  
           ‘with him’  
       d. \* mit ihn  
           with him

However, indefinite pronouns such as *jemand* ‘somebody’ do have different forms. To the paradigm in (26) repeated here as (31), we add the other remaining options of the pronoun *jemand* in the dative case. Consider (32). Interestingly enough, although it is the first element in the noun phrase, this pronoun has an *m~n* alternation and there are also some inflectionless instances:

- (31) a. (?) mit jemandem                    anderem  
           with somebody(STRONG) different(STRONG)  
       b. mit jemandem                    anderen  
           with somebody(STRONG) different(WEAK)

<sup>19</sup> In fact, one might speculate that, considering the transition from a system where strong and weak endings indicated the (in-)definiteness of a noun phrase in earlier varieties of German (Demske 2001) to today’s “economical” strong/weak asymmetry, this processing requirement may have been “grammaticalized” (i.e., “structuralized”) over time. This would mean that this processing requirement has a long visible history and is still detectable today.

- (32) a. (?) mit jemanden                      anderem  
               with somebody(WEAK) different(STRONG)  
       b. (?) mit jemanden                      anderen  
               with somebody(WEAK) different(WEAK)  
       c.     mit jemand     anderem  
               with somebody different(STRONG)  
       d. (?) mit jemand     anderen  
               with somebody different(WEAK)

With the above discussion in mind, the inflectional alternation of the pronoun in (31) and (32a-b), on the one hand, and the complete lack of inflection on it in (32c-d), on the other, are surprising. Turning to the adjectives in (32), note that they still show an alternation despite the fact that the pronoun does not have *-m* as an ending. How do we relate these data to the previous discussion?

Starting with (32c-d), it is clear that the pronoun is of a different lexical category than the adjective as the former, unlike the latter, can appear without any inflection whatsoever. In fact, it is well-known that indefinite pronouns have been undergoing a change in their morphology. In view of this fact, I argue that the alternation on the pronoun in (32a-b) vs. (31) is not due to the above phonological rule but to the fact that *jemand* belongs to three different morphological paradigms in the contemporary language.

In more detail, Schmidt *et al* (2000: 289) state that *jemand* used to decline like a strong noun. Paul *et al* (1989: 233) observe that, from the 18<sup>th</sup> century on, *jemand* became inflectionally similar to strong adjectives. With the one exception in the genitive noted in tables 1 and 2 above (i.e., adjective: *-n* vs. determiner: *-s*), this inflectional pattern is identical to that of determiners. Interestingly, a *google*-search has revealed that examples with a genitive form are rare and seem to be avoided:

- (33) a.       jemand(e)s Auto  
               ‘somebody’s car’  
       b.       aus / in jemanden     Auto  
               ‘from / in somebody’s car’

According to my own judgments, the genitive *-s* on the pronoun is still dominating and less marked but genitive *-n* is, to different degrees, possible:

- (34) a.       Ich erinnere mich jemanden                      ?Netten / \*Nettes  
               I    remember REFL somebody(GEN) nice(“WEAK”/“STRONG”)  
               ‘I remember somebody nice.’  
       b.       Ich erinnere mich jemanden                      ??Netten / ?(?)Nettes  
               I    remember REFL somebody(GEN) nice(“WEAK”/“STRONG”)
- (35) a.       anstatt jemanden                      ?Netten / \*Nettes  
               instead of somebody(GEN) nice(“WEAK”/“STRONG”)  
               ‘instead of somebody nice’  
       b.       anstatt jemanden                      ??Netten / ?Nettes  
               instead of somebody(GEN) nice(“WEAK”/“STRONG”)

Interestingly, Demske (2001: pp. 84) reports that *-n* is a fairly old genitive ending for adjectives, starting to spread in the 15<sup>th</sup> century. In view of the fact that *-n* is, despite its long history, still more marked than *-s*, I assume that *jemand* is a determiner (rather than an adjective). We arrive then at the conclusion that *jemand* declines both as a strong noun and a determiner. Consider table 5 below. Besides these two old paradigms, there seems to be a new, third pattern in the process of developing. In particular, considering the fact that *-n* is, with restrictions, possible in the genitive and that it is basically unmarked in the dative, as seen in (32a-b), I propose that *jemand*, or rather the (classifier-like) part IPR (cf. (29c)), is in the process of becoming a weak masculine noun, where *-n* is generalized throughout the non-nominative cases.<sup>20</sup> Column four in table 5 shows the most recent paradigm:<sup>21</sup>

Table 5: Different Contemporary Paradigms of the Indefinite Pronoun *jemand*

	strong noun	(strong) determiner	weak noun
nominative	jemand	jemand (/wer)	jemand
accusative	jemand	jemanden	jemanden
dative	jemand	jemandem	jemanden
genitive	jemands	jemand(e)s	jemanden

This change in morphology of the pronoun is not surprising: weak nouns are masculine in Modern German and refer to human beings and certain animals. As Eisenberg and Sayatz (2004: 99) note, this inflectional pattern has become productive, especially with loan words referring to human beings. With the pronoun *jemand* being masculine and referring to human beings, I claim that its inflectional behavior is extended to that of weak nouns. I summarize the main findings.

## 9. Conclusion

In this paper, I discussed the strong/weak alternations of adjectival endings in the German noun phrase. I argued that, while this alternation is a regular feature with the combination “definite determiner + adjective”, it is not with two co-occurring adjectives. Demonstrating that there is only one case that shows this property with adjectives, I critiqued Schlenker’s interesting

<sup>20</sup> Note that Duden (2007: 491) claims that the *-n* on the dative pronoun is not part of the standard language. However, it is clear that it is being used. Furthermore, one might speculate that the two nasal alternations (the one involving the adjective and the other the pronoun) are, in some way, related. I will not investigate this issue here. Finally, above we mentioned that the first element must have the disambiguating ending. Note now that *jemand* has three different paradigms where each form is possible. For instance, in the dative we find *jemand*, *jemandem*, and *jemanden*. Of these forms, only *jemandem* is disambiguous. If this is true, then the processing requirement mentioned above must work within different paradigms and not across them (as otherwise we would expect only *jemandem* to occur).

<sup>21</sup> A remark is in order for table 5. The lack of schwa in the genitive form of the strong noun and its optional presence in that of the determiner was assumed on the basis of the facts that disyllabic nouns can not have a schwa before the inflection (cf. footnote 15) but certain determiners, used as “pronominal” elements in a split NP, may have an optional schwa (for some discussion, see Roehrs 2007b):

(i) Mädchens erinnere ich mich kein-(e)s.  
girl(GEN) remember I REFL none  
‘As for a girl, I don’t remember one.’

If this is so, then the genitive form *jemandes*, which has a schwa, is disambiguously a (complex) determiner.

proposal, concluding that he proposes a morphological solution to a phonological problem. I argued for a bipartite proposal, where one of the two mechanisms involves a structural component (e.g., Roehrs under review) and the other a phonological rule that is “constrained”, presumably by language-processing factors. Interpreted this way, this nasal alternation with adjectives is a lowest-level phenomenon and strong morpho-syntactic conclusions should not be based on these data. Put differently, nasal inflections in German should be treated with care.

As a consequence of the discussion, we may maintain the generalization that adjectives exhibit inflectional parallelism where the distribution of endings is dependent on lexical category and, more generally, we may conclude that the strong/weak alternation of endings in German is a reflex of several mechanisms.<sup>22</sup> Against this background, other alternations are becoming more intriguing: the different endings on indefinite pronouns, as discussed above, and the different morphological realizations on pseudo-partitives and *als*-adjuncts, to which I turn in the following appendix.

## Appendix: Explaining the Accusative in Certain Pseudo-partitives and *als*-adjuncts

Pseudo-partitives are complex noun phrases where two nominals stand in a certain relation. Schematically, let us represent these constructions as “N1 + N2”, where N1 precedes N2. These nominal combinations have a number of interesting properties in German. Among others, while the entire complex noun phrase can be in one morphological case, for instance, N1 is in the accusative in (36), the case on N2 can, with minor variations, be of the entire spectrum available in German (i.e., nominative, accusative, dative, or genitive):<sup>23</sup>

- (36) a. (?) Ich komme ohne die drei Liter roter Wein. (nominative)  
           I come without the three liters red wine  
           ‘I am coming without the three liters of red wine.’  
       b. Ich komme ohne die drei Liter roten Wein. (accusative)  
       c. ? Ich komme ohne die drei Liter rotem Wein. (dative)  
       d. (?) Ich komme ohne die drei Liter roten Weines. (genitive)

<sup>22</sup> In fact, there may be other mechanisms in German that determine the inflectional shape of the noun phrase. Consider the following paradigm (adopted from Müller 2002a: 91, going back to Gallmann 1996: 284; also Haider 1992: 330):

- (i) a. Orchester ohne dies-en / eigen-en Dirigent-\*(en)  
           orchestra without this / own conductor  
           ‘orchestra without this / its own conductor’  
       b. Orchester ohne Dirigent-(\*en)  
           orchestra without conductor  
           ‘orchestra without conductor’

Here, an ending on the head noun must be licensed by adjectival inflection on a second element and vice versa. This condition is sometimes referred to as “double or nothing”. Note that unlike the alternation in the main text, here it is the noun that is affected.

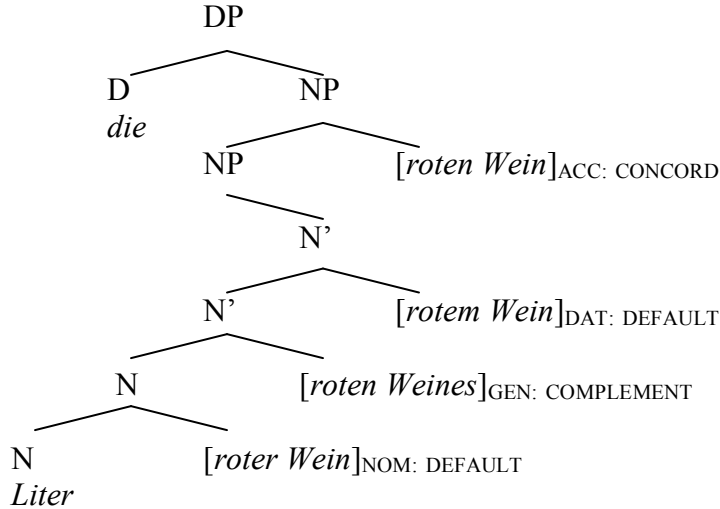
<sup>23</sup> The examples are provided in the masculine, which distinguishes four different forms when a noun is added (cf. table 2). The neuter and plural have three different forms (NOM = ACC) and the feminine has only two (NOM = ACC, DAT = GEN).

Different case realizations are also familiar from other complex nominals. For instance, Roehrs (2008) argues that indefinite pronoun constructions such as (37a) exhibit concord. Cases such as (37b) illustrate familiar cases of genitive assignment in the noun phrase. Furthermore, van Riemsdijk (1983: pp. 245) discusses cases where – what is traditionally called – “loose” appositions appear in the dative although the antecedent is of a different case (37c). Similarly, one can observe that “close” appositions appear in the nominative although their antecedent is of a different case (37d). Note that proper names in “close” appositions may be fairly complex:

- In order to explain all these case possibilities, let us assume that concord in features is brought about by adjunction to a phrase (in this case, NP) and that genitive is assigned to the complement of a noun (cf. the discussion in Roehrs 2008). Furthermore, I assume that “loose” appositions are syntactically represented as adjunction to N’ and “close” appositions are adjoined to N. As adjuncts to X’ and X do not receive case in a straightforward way, I assume that “loose” appositives get the dative case by default and “close” appositives, which are in a different structural constellation, receive nominative case by default. To be clear, I suggest that, depending on the type of (caseless) structural relation, a different default mechanism applies to supply case.

<sup>24</sup> There is an issue here. There seem to be two differences with regard to the cases in the dative: (i) van Riemsdijk (1983) argues that the dative is the unmarked case for noun phrases in the oblique (i.e., non-structural) cases (note that Leirbukt 1978: 6 concedes some possible exceptions to the generalization involving only oblique cases), and (ii) unlike “loose” appositions, there is no appositional intonation with pseudo-partitives. For the cases under discussion, I will simply assume that the licensing of dative is more general (see also the *als*-adjuncts below).

(38)



With this in mind, consider a paradigm where N1 has dative case but the case on N2 varies as above (the data are slightly adapted from Löbel 1989: 145, again with original judgments; cf. also Gallmann 1996: 307):

- |      |    |   |              |
|------|----|---|--------------|
| (39) | a. | Wir kommen mit den drei Litern roter Wein.<br>we come with the three liters red wine<br>'We are bringing the three liters of red wine.' | (nominative) |
|      | b. | Wir kommen mit den drei Litern roten Wein.  | (accusative) |
|      | c. | Wir kommen mit den drei Litern rotem Wein.  | (dative)     |
|      | d. | Wir kommen mit den drei Litern roten Weines.  | (genitive)   |

Basically the same morphological realizations on N2 are possible, when N1 is in the nominative or genitive.<sup>25</sup> What is interesting about all these cases is that the nominative on N2 follows from adjunction to N, the dative on N2 derives from adjunction to N', and the genitive on N2 results from complementation to N. This leaves the accusative to be explained. Although we could account for this in (36b) above by assuming concord with N1, this is not possible for the dative in (39b) and cases in the nominative and genitive.

With the exception of the ending on the adjectives, pseudo-possessive noun phrases in the dative singular are homophonous to those in the accusative (cf. (39b, c)). Interestingly, these differing inflections on the adjective show nasal sounds: *-m* for the dative and *-n* for the accusative. This is reminiscent of alternations discussed in the first part of the paper. I will make the tentative claim, then, that these instances of accusative case can also be explained by the rule in (23). The preceding discussion is summarized in table 6, where clear cases of the application of this phonological rule are underlined:

<sup>25</sup> While more empirical work is certainly needed here, an initial investigation has revealed that different cases on N1 do, with minor variation and some degree of instability of judgments, not seem to have an impact on the case-realizations on N2. In other words, independent of the case on N1, all cases on N2 are in principle possible.

Table 6: Independent Case Licensing on N2

	nominative N1	accusative N1	dative N1	genitive N1
nominative N2	Concord, default (close adjunction)	Default (close adjunction)	Default (close adjunction)	Default (close adjunction)
accusative N2	<u>Phonological Rule</u>	Concord, phonological Rule	<u>Phonological Rule</u>	<u>Phonological Rule</u>
dative N2	Default (loose adjunction)	Default (loose adjunction)	Concord, default (loose adjunction)	Default (loose adjunction)
genitive N2	Complement	Complement	Complement	Concord, complement

If this turns out to be tenable, then we have an (at least partial) account for the case variation in German pseudo-partitives. This discussion can be extended to *als*-adjuncts in German.

Gallmann (1996: 307) provides the following paradigm, often witnessed in every-day speech:

- (40) a. die Verhaftung des Generals als dem Drahtzieher der Palastrevolution.  
the arrest of the general as the(DAT) wire-puller of the palace revolution  
‘the arrest of the general as the mastermind of the Palace revolution’  
b. die Verhaftung des Generals als bekanntem Drahtzieher der Palastrevolution.  
c. die Verhaftung des Generals als bekannten Drahtzieher der Palastrevolution.

Similar to the cases discussed by Riemsdijk (1983), the adjunct is in the dative case (see also Leirbukt 1978). Interestingly, when the determiner is exchanged by an adjective (*bekannt*-‘known’), two endings are possible: *-m* and *-n*. Again, I suggest that *-n* is due to the phonological rule.

Finally, note that, as seen with *jemand* ‘somebody’ of the weak and strong masculine paradigms (cf. (32)), the application of the phonological rule in (39b) and (40c) has nothing to do with the presence of a preceding *-m* but rather with the early morphological disambiguation of the hosting noun phrase, a notion that needs to be made more precise in future work.

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