

## Feminine bleeds dative: The syntax of a syncretism pattern

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*In this paper I present a novel view of the German dative and genitive morphs  $m$ ,  $r$ , and  $s$  as contextual allomorphs of a single morpheme, call it OK (oblique kase). OK, I claim, is categorially distinct from nominative and accusative determiner / adjective agreement. I discuss six syntactic contrasts supporting this claim. The consequences are important: (i) the superficial syncretism pattern in German oblique case marking is epiphenomenal and hence resolved without reference to morphological means such as underspecification, and (ii) the distribution of dative and genitive morphology does not inform an analysis of the German weak / strong adjectival declension alternation, the two being separate phenomena.*

### 1 Introduction

Case is a noun phrase internal reflex of (aspects of) the noun phrase's external environment (i.e. of its syntactic position). The reflex may consist (among other things) of a morphological cue. In German, the main (though not the only) reflex of Case is typically visible as a suffix on the definite article (if present). Consider (1). These examples illustrate the German four-way case distinction between nominative, accusative, dative, and genitive.

- (1)
- |    |   |        |
|----|---|--------|
| a. | Nominative:<br><b>Der</b> <b>Fisch</b> schwimmt davon.<br>the.NOM fish swims away   | German |
| b. | Accusative:<br>Nico hat <b>den</b> <b>Fisch</b> gesehen.<br>Nico has the.ACC fish seen  |        |
| c. | Dative:<br>Nico hat mit <b>dem</b> <b>Fisch</b> gespielt.<br>Nico has with the.DAT fish played  |        |
| d. | Genitive:<br>Nico hat <b>des</b> <b>Fisches</b> wegen die Schule geschwänzt.<br>Nico has the.GEN fish.GEN because.of the school skipped |        |

The bold-faced definite article has distinct inflectional endings in the (tensed) subject position, the direct object position, as the complement of the preposition *mit*, and as the complement of the post-position *wegen*.

The shape of the case morpheme is not only sensitive to the external environment, but also to other factors, including the grammatical gender of the head noun.<sup>1</sup> The four-way case contrast of German is overt only with masculine nouns. With neuter nouns and with feminine nouns, there is some degree of syncretism and possibly accidental homophony.

<sup>1</sup>It is also sensitive to number. I will set plural noun phrases aside for this discussion, focusing on singulars.

The singular (main) case/agreement markers, i.e. those that are suffixed to the definite article in plain definite noun phrases, are given in the table in (2).

- (2) Singular case marker exponents of German determiners (the traditional picture):

	MASCULINE	NEUTER	FEMININE
NOM	r	s	Ø
ACC	n	s	Ø
DAT	m	m	r
GEN	s	s	r

This table is traditionally thought to represent a morphological paradigm, i.e. a featurally diverse collection of categorially identical elements. The criticism I will put forward applies independently of whether the paradigm is taken to be part of the grammar (as, e.g., in Zwicky (1985); Williams (1994)) or epiphenomenal, as in Distributed Morphology (Halle and Marantz, 1993; Bobaljik, 2002). For concreteness, let me illustrate the backdrop of my criticism in the DM analysis of (2) from McFadden (2004). McFadden (2004, ch.6.4) proposes that the syncretisms in (2) be captured in terms of underspecification of the relevant Vocabulary Items (VI) as in (3). Note that the cases are decomposed into features:<sup>2</sup>

- (3) Upper half of (2):

- a. [+case ; -fem, -neu]  $\Rightarrow$  /-r/
- b. [+case, +inferior ; -fem, -neu]  $\Rightarrow$  /-n/
- c. [+case ; -fem, +neu]  $\Rightarrow$  /-s/
- d. [+case ; +fem, -neu]  $\Rightarrow$  /ø/

Lower half of (2):

- e. [+case, +oblique, +inferior ; -fem]  $\Rightarrow$  /-m/
- f. [+case, +oblique, +inferior, +genitive ; -fem]  $\Rightarrow$  /-s/
- g. [+case, +oblique, +inferior ; +fem, -neu]  $\Rightarrow$  /-r/

(3e) derives the masculine-neuter syncretic *m* in datives, and (3f) derives the masculine-neuter syncretic *s* in genitives. But there is nothing in the system that would relate these two syncretisms and thus capture the metasyncretism of masculine-neuter in oblique environments.

(3g) derives the dative-genitive syncretic *r* for feminines. But there isn't nor could there be anything in the system that relates the syncretism captured by (3g) to the above mentioned metasyncretism.

The two halves of the table in (2) are distinguished by means of a feature [+oblique], a stipulation that is necessary, but lies largely fallow, being tied to the post-syntactic component.

Let me, in part following Bayer et al. (2001), locate this necessary stipulation in the syntax, by hypothesizing that the node in which nominative and accusative case (and agreement) are realized is categorially distinct from the node in which dative and genitive are realized, i.e. they are not simply featural variants of one another.

The lack of any syncretism spanning across (parts of) both halves is an initial motivation for this idea. But the crucial evidence for the categorial contrast is syntactic. The elements in the upper half of the

<sup>2</sup>(3) is a simplified representation of McFadden's proposal, ignoring vocalic material.

table and those in the lower half have a distinct (noun phrase internal) syntactic distribution. An initial piece of syntactic evidence is visible once we shift from plain definite noun phrases to modified indefinite (singular count) noun phrases. Consider (4). In noun phrases like (4), the dative and genitive exponents *m*, *s*, and *r* (4b) systematically appear in a higher position than the nominative and accusative exponents *r* and *s* (4a). The former are suffixed to the indefinite article, the latter to the adjective, in (4).

- (4) a. ein gut-**er** Wein / ein gut-**es** Müsli German  
       a good-NOM wine / a good-NOM/ACC muesli  
       b. ein-**em** gut-en Wein / ein-**es** gut-en Weins / ein-**er** gut-en Suppe  
       a-DAT good-INFL wine / a-GEN good-INFL wine / a-FEM.DAT good-INFL soup

This fundamental distributional discrepancy between nominative and accusative morphology, on the one hand, and dative and genitive morphology, on the other, is usually dealt with by dramatically complicating the analysis of adjectival and determiner agreement (cf. Zwicky, 1986; Roehrs, 2006, among many others). I take it, instead, to reveal, syntactically, the categorial distinction between the elements in the upper half of table (2) and the ones in the lower half.

In agreement with the proposal by Bayer (2002), that “inherent Cases must supply their own functional structure [...] the exponent of the dative’s functional structure is its overt Case morphology KASE,” I propose that dative (and genitive) morphology corresponds to pieces of syntactic structure beyond what we find in a non-oblique noun phrase, and hence that dative morphology and the category on which structural case is realized, namely adjectival/determiner inflection AGRA, do not belong in one and the same paradigm.<sup>3</sup> I will refer to the class of principal dative and genitive case marker morphs (*m*, *r*, and *s*) as OK, for ‘oblique kase marker.’ The reason it sometimes looks as if dative and genitive OK (1c,d) were in complementary distribution with nominative and accusative AGRA<sup>4</sup> (1a,b) is, I claim, that in the context [\_\_\_\_ OK], AGRA remains unpronounced (cf. also Pesetsky (2010) on Russian).

In the remainder of the paper, sections 2-6, I will discuss the following five contexts in which the oblique case markers *s*, *m*, and *r* contrast syntactically both with adjectival agreement and among each other, concluding that the morphological divisions are syntactically grounded.

- |   |                       |
|---|-----------------------|
| A) <b>Inflectional Parallelism</b> violation by <i>m</i>                      | German                |
| B) <b>Indefinite article</b> distinct positions for <i>m</i> and <i>r</i>     | Swiss German          |
| C) <b>Possessive determiners</b> distinct positions for <i>m</i> and <i>r</i> | German / Swiss German |
| D) <b>PD-contraction</b> with <i>m</i> but not <i>r</i>                       | German / Swiss        |
| E) <b>Genitive s</b> failure to occur on adjectives                           | German                |

In each of these contexts, one OK exponent contrasts syntactically both from another OK exponent and from AGRA. I will suggest that the five a priori surprising observations (A-E) are a unified phenomenon, and that, especially given the nature of (C), the phenomenon is syntactic. Hence there is a principled form-syntax correspondence  $s > m > r$  which suggests a treatment of the OK exponents *s*, *m*, and *r* as

<sup>3</sup>See Caha (2009) for detailed discussion of the idea that some cases contain others, in a nanosyntactic framework.

<sup>4</sup>Strong adjectival/determiner agreement

contextual allomorphs.<sup>5</sup> In fact, the additional functional oblique case structure consists of elements that are merged discontinuously, in a way reminiscent of a *wh*-morpheme in a *wh*-noun phrase and the [+wh] in  $C^0$  that licenses it.

## 2 Violation of “Parallel Inflection”

Let us start with a contrast that has recently been discussed in some detail by Roehrs (2009b). Dative *m* disrespects a most fundamental constraint on adjectival agreement, which I interpret as suggesting that dative *m* is not an instance of adjectival agreement.

### 2.1 The problem

In German, adjectives inflect according to one of two paradigms (“weak” and “strong,” so named after the degree of paradigmatic contrasts). The choice of declension paradigm is correlated with the choice of determiner. For example, in (5a), after the demonstrative *dieser* ‘this’, the adjectives exhibit weak inflection. In (5b), after the indefinite article, the adjectives exhibit strong inflection (cf. Bierwisch, 1967; Milner and Milner, 1972; Zwicky, 1986; Gallmann, 1996, 2004; Schlenker, 1999; Müller, 2002; Roehrs, 2006, 2009a; Leu, 2008; Schoorlemmer, 2009, among others).

- |     |    |   |        |
|-----|----|---|--------|
| (5) | a. | dieser gut- <b>e</b> frisch- <b>e</b> Wein  | German |
|     |    | this    good-WK fresh-WK wine               |        |
|     | b. | (ein) gut- <b>er</b> frisch- <b>er</b> Wein |        |
|     |    | (a)    good-STR fresh-STR wine              |        |

In a sequence of two (or more) adjectives that modify the same noun within a DP, the adjectives carry identical inflection, i.e. either both are weak or both are strong, but no mixing. This is well known. Milner and Milner (1972, p.42) consider such a generalization a plausible universal. The generalization has different names in the literature. Müller (2002) calls it the “Adjective Correspondence” constraint; Gallmann (2004) the “Parallel (NP, A-Infl)” constraint; and Roehrs (2009b) the “Inflectional parallelism generalization.” I will call it *Parallel Inflection*.

Crucially, there should be (according to Parallel Inflection) no possible choice of noun and/or determiner and/or external environment such that the two adjectives would exhibit an inflection distinct from one another.<sup>6</sup> However, there are two environments, which have been discussed in the literature, in which Parallel Inflection seems to be violated: masculine dative singular bare nominals and neuter dative singular bare nominals.

Consider the three examples of modified dative singular bare nominals in (6). Parallel Inflection is obligatorily respected in the feminine example in (6a). But in the masculine example (6b) and in the neuter example (6c) two variants are fairly acceptable, one of which violates Parallel Inflection.

- |     |    |  |        |
|-----|----|--|--------|
| (6) | a. | FEMININE:  |        |
|     |    | mit [gut- <b>er</b> ]      [frisch*- <b>en/-er</b> ] Milch | German |
|     |    | with good-DAT.F fresh-WK/DAT.F milk                        |        |

<sup>5</sup>See Parrott (2009) for a recent proposal of English and Danish pronominal case variation in terms of contextual allomorphy (based, in part, on Emonds (1986)).

<sup>6</sup>Setting aside instances of modifiers that do not exhibit any inflection in the first place.

- b. MASCULINE:  
mit [gut-**em**] [frisch-**en**/**-em**] Wein  
with good-DAT fresh-WK/DAT wine
- c. NEUTER:  
mit [gut-**em**] [frisch-**en**/**-em**] Wasser  
with good-DAT fresh-WK/DAT water

The relative judgments reported in the literature for the two variants in (6b) and in (6c) vary (see Roehrs (2009b)). But everybody prefers either variant in (6b) and (6c) to the non-parallel variant in (6a).

Notice that the case (and agreement) morphology in the two contexts which allow a violation of Parallel Inflection is syncretic. Hence, the unruly behavior vis-à-vis Parallel Inflection should presumably not be allowed twice, once for masculine singular bare nominal datives and once for neuter singular bare nominal datives, but only once: for the dative element *m*. This seems uncontroversial in the literature. But where, in the grammar, the contrast between (6a) and (6b.c) is situated is debated.

## 2.2 Previous proposals

There have been a number of reactions to the sort of surprising facts in (6). Let me mention three kinds.

### 2.2.1 Phonological account

One kind of reaction is to try and mobilize phonology. Gallmann (2004, p.156), for instance, proposes a phonological constraint “\*SCHWA-m,” which says that German word forms do not end in schwa + /m/. Since OT constraints can be violated, that does not mean that there are no German words ending in  $\partial m$ . But all else being equal,  $\partial n\#$  would be preferable to  $\partial m\#$ . No such restriction figures for words ending in  $\partial r$ .<sup>7</sup> If this is combined with a requirement that (certain) features (e.g. dative) must be expressed at least once in a DP (in the relevant configuration), the contrast in (6) can be accounted for. Hence for Gallmann the contrast is phonologically grounded and bound to word-final position.

In a similar spirit Roehrs (2009b) formulates the phonological rule

$$(7) \quad m \rightarrow n / [\dots]_{A+\Theta} \_\#$$

which explicitly mentions adjectives. Roehrs hence also views the contrast in (6) as phonological and word-final, and furthermore as bound to the category of adjectives. Sensitivity to word-finality seems natural for a phonological constraint / rule, and so does substitution of a more marked phonetic feature by a less marked one. But if it turns out, as I will argue, that the relevant contrast is not restricted to word-final position, and that the contrast does not (need to) result in such substitution but may result in a contrast in linear order, the two phonological accounts are seriously challenged.

Independently of the line of argument I'm developing in this paper, a phonological proposal, such as Gallmann (2004) or Roehrs (2009b), must restrict the application of the relevant constraint or rule, in order to allow the obligatoriness of an *m* ending on the first adjective (8a) as well as on single adjectives (8b).

<sup>7</sup>Perhaps rather than saying no such restriction exists for  $\varphi r$ , I should say, no such restriction against  $\varphi r$  seems to ever play a role in choosing the winning candidate in the relevant contexts.



From an explanatory adequacy point of view, the question arises of how this contrast is acquired. On Schlenker's (1999) view, the contrast is only ever manifested in examples like (6b,c), in modified bare nominals with two non-coordinated adjectives. It is not obvious that there is much evidence in that regard which every child is guaranteed to come across. But more importantly, there is a no negative evidence issue here. If the contrast between *m* and *r* in (6) is arbitrary and entirely disconnected from anything else, the absence, as far as I know, of any speaker accepting a non-parallel example with *r* would be surprising. This is especially acute for speakers who allow both variants with *m* (which seem to be numerous, cf. Roehrs (2009b)). Hence, it seems to me that if the only observable evidence that the child has access to comes from that rare kind of example, the sharp contrast between *m* and *r* in (6) is unexpected.

### 2.2.3 Questioning the seriousness of the issue

A third kind of reaction is that of Müller (2002, p.24). Müller notes that "It seems preferable to classify [the non-parallel variant of (6b,c)] as not resulting from the core system of nominal inflection in present-day German."

The status of such unexpected yet subtle contrasts as in (6) may indeed be up for discussion, as is the status of notions such as "core system." It seems clear that grammatical peripheralization of the (6b,c) phenomenon is (possibly) plausible to the extent that it is an isolated phenomenon. If, on the other hand, further contexts can be identified (ideally high frequency cases) in which a syntactic *m*>*r* contrast is easily observable, from which deeper grammatical properties associated with *m* and *r* are inferable, the acquisition problem will be solvable, but the theory will, of course, have to step up and take the contrast seriously.

In what follows I will show that a contrast between *m* and *r*, such that *r* occurs further to the right than *m*, is also observed in environments to which the rules and mechanisms mentioned above cannot apply (or where an application thereof would not have the desired effect). To the extent that the contrast in (6) and the ones discussed below are likely to be related, the proposals for (6) mentioned above are strongly misguided.<sup>10</sup>

## 3 Swiss German indefinite article

A simpler, though less widely known case in which dative *m* and feminine *r* contrast in their positional distribution is in the context of the indefinite article in Swiss German. The "indefinite article" in Swiss German dative DPs is (at least) tri-morphemic.

- |     |   |              |
|-----|---|--------------|
| (9) | uf əm ən ä bārg<br>on DAT STEM INFL mountain<br>'on a mountain' | Swiss German |
|-----|---|--------------|

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<sup>10</sup>I will, unfortunately, not present a worked out counterproposal for (6b,c). Accounting for (6b,c) would involve a number of unknown analytic variables to do with the syntactic representation of multiple adjectives, which is likely more complex than is usually assumed. I hope though that the arguments for the need of a syntactic account are nevertheless convincing.

The element  $\text{en}$ , which I gloss STEM, can sometimes remain unpronounced, especially in feminine contexts.<sup>11</sup> In addition to the STEM there is an invariant ending  $\ddot{a}$ , and an OK (dative case) marker,  $m$  in the context of masculine and neuter nouns (9);  $r$  in the context of feminine nouns. I take the invariant ending  $\ddot{a}$  to be an inflectional element, presently without discussion.

Interesting in the present context is the fact that the choice of OK ( $m$  versus  $r$ ) correlates with a positional contrast of OK. Whereas  $m$  precedes the STEM, the feminine OK  $r$  surfaces between the STEM and the invariant ending  $\ddot{a}$ .<sup>12,13</sup>

- (10)    a.        uf **ə**m        [-ən-        ]-ä    bārg<sub>mas</sub>        (on a mountain)  
           b.        uf        [-ən- **-ər** ]-ä    bluāmā<sub>fem</sub>        (on a flower)  
                          on DAT.M/N STEM DAT.F AGR N

Notice that none of the proposals mentioned in section 2.2 extends to (10). Schlenker's (1999) morphological approach, first of all, cannot displace  $m$  or  $r$ , and secondly, it only effects a contrast at a possible second occurrence of the relevant feature(s). But since there is only one occurrence in (10) no contrast is expected.

The phonological proposals by Gallmann (2004) and Roehrs (2009b) are limited to word-final elements, which  $r$  and  $m$  in (10) do not qualify as, nor is it in (10) a matter of pronouncing an original  $m$  as  $n$  where an original  $r$  remains untouched. Hence the proposals in the literature that were designed to capture the contrast between  $m$  and  $r$  in (6) are profoundly malsuited for an explanation of the contrast between  $m$  and  $r$  in (10). Finally, regarding the position that the non-parallel variant of (6b,c) is not part of the core-grammar, it is not clear what that would mean for (10).

It is, of course, logically possible that (10) is due to yet another phonological rule (Studler, 2001), a sort of metathesis, and hence (10) and (6) are unrelated. A more interesting hypothesis, however, is that (10) and (6) are related, and hence any account of one must, at least in principle, be able to extend to the other. I conclude that to the extent that (10) and (6) are related, the proposals in 2.2 are incorrect.

As an alternative to the morphological and phonological proposals for (6), and importantly taking into account (10), I suspect that the contrast is syntactic. Concretely, I propose that the dative exponent  $m$  is in a different syntactic position from the feminine oblique case marker  $r$ . More specifically, the syntactic position of  $m$  is higher than that of  $r$ .<sup>14</sup>

- (11)    [        ...m        [        ...r        ] ]

It is this structural contrast that should be cashed out in an account of (6). I will, however, not propose an explicit account of (6), but focus instead on the syntactic contrast between  $m$  and  $r$  per se, which is

<sup>11</sup>Cf. Weber (1964, p.105) for Zürich German, Fischer (1960, p.187ff.) for Lucerne German, Marti (1985, p.79) for Bern German, and Bossard (1962, p.45) for Zug German.

<sup>12</sup>For Basel German, Suter (1976, p.75) notes the additional possibility of leaving  $m$  in post-stem position. But pre-stem  $r$  remains excluded. This may be related to the note in Marti (1985, p.75) that the  $n$ , which I call STEM, is historically related to the Middle High German cognate of the German indefinite article *ein*, which (still in contemporary Standard German) precedes both dative  $m$  and feminine  $r$ .

<sup>13</sup>Fischer (1960, p.187/8) notes (in footnotes and in addition to the variants above, which he gives in the main text) the possibility in Lucerne German of  $r$  preceding  $n$ , as in *of er(n)e Matte* 'on a mat', as well as forms with two instances of  $r$ , as in *met erere Chue* 'with a cow'.

<sup>14</sup>(11) is not a partial representation of an actual example, but rather an abstract juxtaposition of the members of a minimal pair contrasting on the (non-)feminine dimension.



epistemologically prior.

As a segue to the next section, let me state the second important aspect of my proposal. On the grounds of the relative syntactic independence of *m*, and given the fact that it violates an (otherwise) valid constraint on adjectival inflection, I propose, following Bayer (2002), that *m* is not on a par with adjectival / determiner agreement (AGRA), but instead it is the realization of a chunk of syntax that constitutes “oblique case.” This chunk of syntax is, as we will see instantly, to an astonishing degree analogous to that involved in possessive determiners.

## 4 Possessive pronouns / determiners

The syntactic contrast between dative *m* and feminine oblique *r*, which is sometimes surface apparent, also marks a morphosyntactic contrast in the domain of possessive determiners / pronouns in German and Swiss German. In this domain the surface effect is so blatant that it is traditionally understood as a lexical contrast, and is, hence, typically being set aside as idiosyncratic. I break with this tradition, proposing that it is an instantiation of (11).

### 4.1 Swiss German

To begin, consider the Swiss German singular possessive determiners.

- |      |           |        |       |        |      |      |              |
|------|-----------|--------|-------|--------|------|------|--------------|
| (12) | mis / dis | / (im) | sis   | / irəs | piär |      | Swiss German |
|      | my        | your   | (him) | self’s | her  | beer |              |

With a first or second person possessor (13), the overt elements are three in number, from left to right: a possessor person morpheme, a vocalic element *i*, which I gloss as STEM, and an agreement ending *s*, reflecting the grammatical gender of the possessee. This agreement *s* corresponds to strong adjectival agreement (AGRA).<sup>15</sup>

- |      |      |      |      |      |  |                        |
|------|------|------|------|------|--|------------------------|
| (13) | m-   | i    | -s   | piär |  | ( <i>‘my beer’</i> )   |
|      | d-   | i    | -s   | piär |  | ( <i>‘your beer’</i> ) |
|      | PERS | STEM | AGRA | beer |  |                        |

Given the possessor marking in (13), *m* and *d*, the Indoeuropean *m-t-s* paradigm (Benveniste, 1966; Kayne, 2000b) raises the correct expectation that the corresponding third person possessor determiner is *sis*.

- |      |      |      |     |      |  |                       |
|------|------|------|-----|------|--|-----------------------|
| (14) | s-   | i    | -s  | piär |  | ( <i>‘his beer’</i> ) |
|      | PERS | STEM | AGR | beer |  |                       |

There are two extremely interesting caveats to (14). First of all, the possessor is “optionally” doubled, in that a pronominal *im* ‘him’ (or full dative DP) possessor optionally precedes *sis* ‘his’.

- |      |     |     |      |  |                       |
|------|-----|-----|------|--|-----------------------|
| (15) | im  | sis | piär |  | ( <i>‘his beer’</i> ) |
|      | him | his | beer |  |                       |

<sup>15</sup>There are a number of complications here, which I am setting aside. These include dialectal variation as well as some amount of paradigmatic “irregularity” with regard to the overt expression of AGRA with possessive determiners.

And secondly, while the first and second person possessor forms (13) have no restrictions on the grammatical gender of the possessor, (14) is incompatible with a grammatically feminine gender possessor. For feminine possessors the corresponding determiner is *ires* ‘her’.

- (16)            *irəs*                      *piär*                      (*her beer*)  
                  her                      beer

This is entirely unexpected. Note that it is not the “third person” *s-* that is incompatible with feminine.

- (17)    a.    *Sie / er / es hat sich umgedreht.*                      German  
                  She / he / it has S.self around.turncd  
              b.    *Elle s’ est retournée.*                                      French  
                  she s is around.turncd

So, what is it about (14) that makes it incompatible with a feminine possessor?

In order to answer this important question, let us contrast the feminine and the non-feminine possessor determiners in more detail, including the pronominal possessor double *im* ‘him’.

- (18)    a.    **im** s- [-i-                      ]-s    *piär*    (*his beer*)  
              b.                      [-i-    **-r**    ]-əs    *piär*    (*her beer*)  
                  DAT    STEM FEM AGRA beer

The right edge morpheme is the same in (18a) and (18b): strong adjectival agreement AGRA. In the non-feminine variant (18a), the AGRA morpheme is immediately preceded by the stem *i*. This contrasts with the feminine possessor variant (18b), in which the feminine oblique case marker *r* intervenes. But even though in (18a) the non-feminine dative morph *m* does not intervene between the suffixal AGRA and the STEM *i*, it is (“optionally”) present in a left peripheral position, as part of the possessor doubling element *im* ‘him’.

The fact, now, that *sis piär* ‘his beer’ is incompatible with a feminine possessor even without overt possessor doubling suggests that (*i*)*m* is syntactically present also when it is not pronounced, in a way that recalls topic drop (at least loosely, though cf. Haegeman (2004)).<sup>16</sup>

The function of *m* in (18a) and that of *r* in (18b) are identical in marking the possessor. Furthermore, it is impossible to substitute *r* for *m* in (18a) or vice versa in (18b). Furthermore, and as we know, cf. table 2, non-feminine dative *m* and feminine dative *r* are paradigmatic variants of the OK (oblique case)

<sup>16</sup> Note that *r* is obligatory in (18b). This very fact as well as the interpretive restrictions on *sis* ‘his’ strongly suggest that *m* is syntactically obligatory in (14). What ever it is that makes the syntactic expression of the possessor by means of *r* and (optionally unpronounced) *m* obligatory in (18a,b) should, ceteris paribus, be expected to also require an analogous possessor marker in (13). We can, without pursuing this line further here, follow an idea by Gisbert Fanselow (noted as p.c. in Olsen (1989)) that first and second person possessor determiners syntactically involve an initial possessor element. Note in this context also the North-Western Norwegian innovation of first person and second person possessor doubling, reported in Vangsnes (2006).

- i.    *mitt sitt hus*  
       ‘my house’  
 ii. *ditt sitt hus*  
       ‘your house’

marker elsewhere (too). Given these considerations, I propose that the left peripheral *m* and the post-STEM *r* in (18) originate in the same position, and that their contrasting in surface position is due to syntactic movement. I.e. the two morphs are affected by partly distinct sets of displacement operations. Let me, at this point, bring in Hungarian.

## 4.2 Hungarian

The proposal of two distinct (noun phrase internal) positions for the possessor is strongly reminiscent of Hungarian, as discussed in Szabolcsi (1983/84, 1994). Hungarian has more than one possessor position. Possessors either surface in a low position, to the right of the definite article (19a), or in a higher position, to the left of the definite article (19b). In the high position, the possessor is marked for dative. In the lower position it is not dative marked.

- (19) a. (a) Mari kalap-ja Hungarian  
the Mary.NOM hat-POSS.3SG
- b. Mari-nak a t kalap-ja  
Mary-DAT the hat-POSS.3SG

Szabolcsi argues that the position of the possessor in (19b) is the result of syntactic movement.<sup>17</sup> She notes that dative marked possessors can extract from their noun phrase, while ones that are not dative marked cannot. This leads her to analyze the left-peripheral position of *Mari-nak* in (19b) as escape hatch, analogous to Spec,CP in the clause.

It is worth noting that the parallel between Hungarian and Germanic extends to possessor extraction in that some Germanic languages, including Swiss German (20a), allow possessor extraction to a limited degree. Interestingly, the extracted (pronominal) possessor must contain an *m* dative marker. Related is the fact that a noun phrase internal pronominal *wh*-possessor also is obligatorily *m* dative marked, and necessarily occurs at the left edge (20b), rather than to the right of the STEM (20c).<sup>18</sup>

- (20) a. We-m isch das sini Schrift? Swiss German  
who-DAT is this his handwriting
- b. We-m sis piär isch das?  
who-DAT his beer is this
- c. \*I-we-r-əs piär isch das?  
STEM-who.FEM-AGRA beer is this

## 4.3 A short stop-over

Let me briefly stop here, and propose that we think of the similarity of (18) and (10) as not accidental, and that the unified underlying contrast is the result of phrasal movement of *m*. Both the parallel with Hungarian as well as the case-syncretism of *r* across dative / genitive suggests that *m* is the true dative

<sup>17</sup>In German, (overt) first and second person possessor doubling is strongly degraded (but cf. note 16). This could now be related to the fact that in Hungarian pronominal possessors are hardly acceptable in the dative position (Szabolcsi, 1994, p.188), raising the question of why *ihm* ‘him’ is different.

<sup>18</sup>This is plausibly close to the fact that *wh*-possessive pronouns cannot express feminine gender of the possessor.

marker, where dative-marking is the morphological interpretation of the combined properties of having certain features (those of OK) and being in a certain position. Note furthermore, that in the case of the Swiss German possessive determiners, (13) and (14), it is immediately obvious that the OK elements *m* and *r* co-occur with strong adjectival / determiner agreement AGRA, implying that they are of distinct categories.

Secondly, let me point out that the proposals discussed in section 2.2 are entirely impotent vis-à-vis the contrast in (18) (and the one in (10)). Of course, the authors never intended their proposals to be applicable to this contrast, but only to the one in (6). However, their viability even for (6) hinges on this being unrelated to (18) and (10). Recalling my remarks in sections 2.2.2 and 2.2.3, however, we do expect the contrast in (6) to be related to some surface contrast with a higher profile. Notice that possessive determiners (18) and indefinite articles (10) are high frequency expressions, and are hence likely to be abundantly present in the child's input.<sup>19</sup> Given that in both cases we're concerned with a syntactic(-looking) contrast between the non-feminine dative marker *m* and the feminine dative marker *r*, it is likely that those surface contrasts are related, and connected to properties of the functional sequence of heads in the syntactic spine.

## 5 P-D-contraction

Another set of high frequency cases which expose a syntactic(-looking) contrast between dative *m* and feminine *r* are the so-called P-D-contraction (or: 'clipping') contexts. Descriptively speaking, when a definite DP is embedded under certain dative prepositions the masculine / neuter dative marker *m* amalgamates with the preposition and the definite article *d-* remains unpronounced (21).

- (21)      a.      vo-m      Baum      German  
                  from-DAT tree  
                  'from the tree'  
             b.      a-m      Baum  
                  on-DAT tree  
                  'on the tree'

In the feminine counterparts of (21), the feminine OK *r*, in contrast, does not amalgamate with the preposition, and the definite marker *d-* is overt, linearly intervening between the preposition and the case marker *r* (22).<sup>20</sup>

- (22)      a.      von d-er      Blume      German  
                  from the-FEM flower  
             b.      an d-er      Blume  
                  on the-FEM flower

<sup>19</sup>While the considerations from acquisition argue in favor of the idea that the different surface contrasts in question are related, the relation cannot be trivial, given that Swiss German does not have the contrast in (6), whereas German does not have the one in (10). Both sets of varieties of Germanic have the contrast in (18), however, as well as the one concerning PD-contraction discussed in the next section.

<sup>20</sup>There is one exceptional preposition, *zu* 'to', which also *r* contracts with, and the definite marker remains silent: *zu-r Blume* 'to the flower'. This is puzzling.

Van Riemsdijk (1998) proposes a basically phonological analysis. However, thinking of the previous discussion, specifically the fact that in Hungarian the dative possessor (cf. German *m*) precedes the definite article associated with the possessed noun (Szabolcsi, 1994, p.200) while the nominative possessor (cf. German *r*) follows it, it seems plausible that the contrast between (21) and (22) is syntactic.

I propose that in (21) the OK *m* has moved to a left peripheral position within its containing DP, a position that precedes that of the definite article. Perhaps somewhat, simplified we can think of *m* as having moved to Spec,DP.<sup>21</sup> The feminine OK *r*, on the other hand, has not moved to the DP-left periphery, but remains in a lower position, to the right of the definite article.

## 6 Genitive *s*

Let us, finally, turn to the *s* exponent in the OK paradigm. Just like dative *m*, genitive *s* is oblivious to the masculine / neuter distinction; and just like dative *m*, genitive *s* contrasts with feminine *r* (morphologically and syntactically); and just like dative *m*, genitive *s* has a morphosyntactic property that militates against its being of the same category as strong adjectival agreement AGRA, which is this: OK *s* never occurs on adjectives. Consider (23).

(23)	MASCULINE/NEUTER				
a.	wegen	d-es	gut-en	Wetter-s	German
	because.of	the-GEN	good-WK	weather-GEN	
b.	wegen		gut *-es / -en	Wetter-s	
	because.of		good -GEN / -WK	weather-GEN	

When a definite article is present, OK *s* suffixes to the article, as do dative *m*, feminine *r*, and AGRA. In addition, *s* suffixes to the noun (except with the so-called masculine weak nouns), or perhaps more accurately to the entire projection, as a phrasal affix (cf. Anderson, 2005, chapter 4, on English *s*). But when the leftmost element in the noun phrase is a (modifying) adjective, OK *s* refuses to suffix to that adjective (23b), contrary to OK *m* and *r*, and also contrary to adjectival agreement AGRA. This strongly suggests that it is not an instance of adjectival agreement. In other words, it is categorially distinct from AGRA.

If it is correct that genitive *s* is categorially identical to the feminine oblique case marker *r*, and to dative *m*, it follows that the latter two are also distinct from AGRA, as I have been arguing above on independent grounds.<sup>22</sup>

OK *s* is an unambiguous marker of genitive (with masculine nouns), and it is the only case marker that can occur on determiners but not on adjectives.<sup>23</sup> This contrasts with the feminine OK *r*, which can occur on both determiners and adjectives, and which is ambiguous between dative and genitive, both with regard to its form and its position.

<sup>21</sup>Let us assume that *m* in that higher position licenses the non-pronunciation of the definite article *d-* to its immediate right.

<sup>22</sup>NB: On my account, the fact that OK *m* and *r* have the same suffix-host as AGRA in bare modified noun phrases is in some sense accidental and does not imply categorial identity.

<sup>23</sup>This property of genitive *s* raises non-trivial questions with regard to the idea that determiners, other than the articles, are adjectival phrases (Leu, 2008). I will set this question aside for the present discussion.

(24) FEMININE (Dative = Genitive)

a.	wegen	d- <b>er</b>	gut- <b>en</b>	Sicht	German
	because.of	the-GEN/DAT	good-WK	sight	
b.	wegen		gut - <b>er</b>	/ *- <b>en</b>	Sicht
	because.of		good -GEN/DAT	/ -WK	sight

This is important. OK *r* is keyed to a feminine gender, and it is oblivious to the dative / genitive contrast, while OK *s* is keyed to genitive, and oblivious to the masculine / neuter contrast, and *ok m* is keyed to dative and oblivious to the masculine / neuter contrast.

## 7 A grammatical sketch

We are now in a position to state some important properties an adequate analysis of German case morphology must have.

### 7.1 Genitive *s*

We observed that both OK *s* and OK *m* exhibit gender syncretism, spanning across neuter and masculine, in contrast to feminine *r*. Genitive *s* contrasts with dative *m* in the following respects.

I OK *s* and OK *m* occur in different sets of DPs relative to the DP's external distribution (i.e. *s* unlike *m* occurs in DPs that are "assigned genitive case").

II OK *s* and OK *m* have different phonological / phonetic properties.

III OK *s* and OK *m* have a distinct positional distribution inside their containing DPs.

While usually property (I) is said to be related to a featural contrast in the DP which is directly exploited by the morphology delivering property (II), this traditional view fails to take property (III) into account. In distinction to this, I propose that property (I) is due to a syntactic contrast in the DP. I.e. genitive DPs and dative DPs are syntactically distinct. Let us think of the notion of "oblique case assignment" in terms of categorial selection, such that a genitive environment (e.g. a genitive preposition) selects a GenP, while a dative environment (e.g. a dative preposition) selects a DatP. Hence we can represent the contrast by postulating a Gen<sup>0</sup> head versus no Gen<sup>0</sup> head.<sup>24</sup>

The presence of Gen<sup>0</sup> in genitive environments is now responsible for property (III), assuming Gen<sup>0</sup> is an attractor and hence effects a movement operation, relocating a phrase, call it PoP, which (by stipulation) contains OK (or a trace thereof). The position of OK in(side) Spec,GenP (25a) is exploited by the morphology as in (25b), delivering property (II), i.e. *s*.

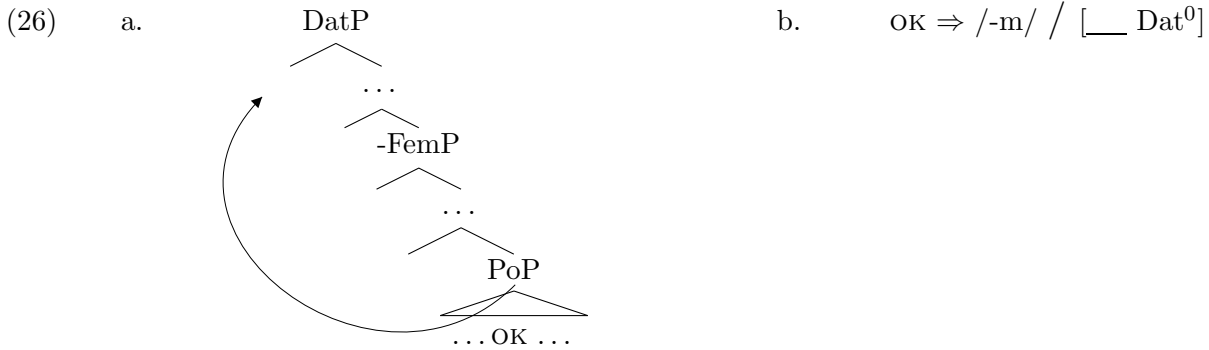
(25)	a.	$  \begin{array}{c}  \text{GenP} \\  \swarrow \quad \searrow \\  \text{PoP} \quad \text{Gen} \quad \dots \\  \wedge \\  \text{OK}  \end{array}  $	b.	OK $\Rightarrow$ /-s/ / [___ Gen <sup>0</sup> ]
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<sup>24</sup>Possibly Gen<sup>0</sup> immediately embeds DatP.

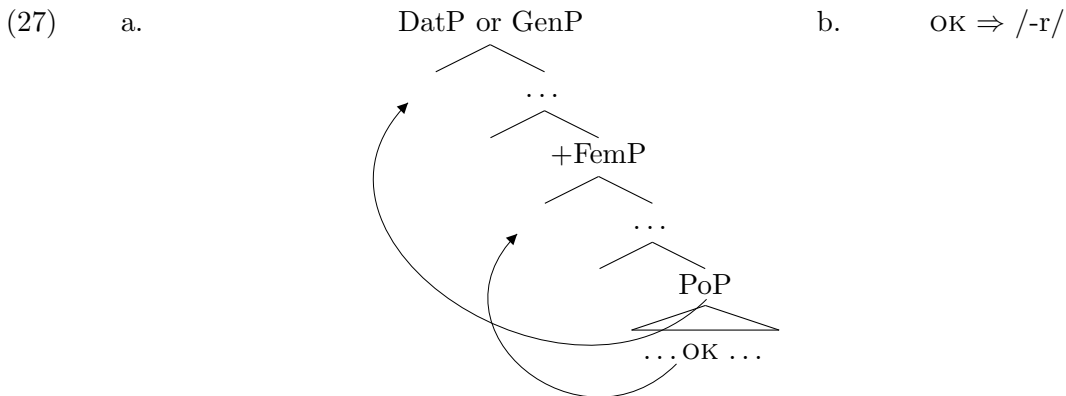
## 7.2 Dative *m* and feminine *r*

There are two scenarios on which an OK in a DP does not end up in Spec,GenP: one derives OK *m*, the other one OK *r*.

On the first such scenario, Gen<sup>0</sup> is not merged, in which case the relevant DP is not a possible genitive DP, but must be a dative DP.<sup>25</sup> Let us assume that dative DPs are DatPs, with a Dat<sup>0</sup> head at their left-periphery into whose Spec PoP moves (26a). The position of OK in(side) Spec,DatP is exploited by the morphology as in (26b), delivering property (II), i.e. *m*.



On the second scenario, OK extracts from PoP prior to PoP-movement to Spec,GenP (or Spec,DatP). Since this is correlated with feminine nouns, let me stipulate a Fem<sup>0</sup> attractor of OK. This second scenario, I claim, describes the case of feminine *r*. Note that extraction of OK out of PoP prevents OK from participating in PoP movement both to Spec,GenP and to Spec,DatP, correctly predicting that the *s* - *r* contrast and the *m* - *r* contrast are parallel. I.e. *r* is correctly predicted to be oblivious to the contrast between dative and genitive, both in its morphology (27b), and in its syntax (27a).



This proposal also correctly derives the fact that the positions of OK *m* and of OK *s* are syntactically higher than that of OK *r*. In order to account for the syntactic contrast between OK *m* and OK *s* something more will have to be said, presumably relating to the fact that genitive *s* also occurs at the very right edge of a genitive noun phrase, unlike dative *m*, which in turn should be related to its incapability of occurring at the level of embedding at which it could attach to an adjective in German.

<sup>25</sup>PoP requires the presence of either Gen<sup>0</sup> or Dat<sup>0</sup>, in a way that is comparable to *wh*- requiring C<sup>0</sup><sub>+wh</sub>, or nominative requiring finite T on some approaches.

## 8 Conclusion

I have discussed a fundamental split right through the middle of the traditional German determiner / adjective agreement paradigm, arguing that dative and genitive morphology is categorially distinct from nominative and accusative morphology. I adduced six syntactic contexts in which the dative / genitive morphs *m*, *r*, and *s* contrast syntactically with strong adjectival agreement and/or with one another.

The literature on German determiner and adjective inflection typically takes as the baseline for an analysis sets of examples in which the syntactic contrasts between the different morphs happen to be invisible, such as (1), and subsequently attempts to fit increasingly more deviant patterns into the picture. I suggest that we should, instead, start from generalizations based on visible systematic contrasts between the morphs, and worry later about the cases in which the contrasts are not surface apparent.

While I have not given detailed explicit analyses of the phenomena I discussed, I have, I hope convincingly, shown that an adequate analysis of German dative and genitive morphology must relate the syncretism pattern (table 2) to the syntactic distribution of the morphs in question (sections 2-6), along the lines of the proposal sketched in section 7.

An important consequence of this conclusion is that dative and genitive morphology is categorially distinct from (nominative and accusative) strong adjectival and determiner agreement; and that therefore the correct analysis of adjectival agreement, notably of the so-called weak / strong adjectival declension alternation, can and must be investigated independently of the distribution of dative and genitive morphology (cf. Leu (2008, 2009)).

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