

**The internal syntax of possessive determiners
and
The syntactic source of a stem suppletion**

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ABSTRACT: This short paper argues for the relatedness of (i) the stem suppletion in the German possessive determiner *ihr* ‘her’ relative to the *ein*-words *mein* ‘my’, *dein* ‘your’, and *sein* ‘his’, and (ii) the availability of two DP-internal possessor positions in Hungarian.

The three empirical links between German morphology and Hungarian syntax are (i) the fact that *ihr* has all the hallmarks of an *ein*-word, other than overt *ein*; (ii) Possessor Doubling, which exposes a Hungarian-looking syntactic contrast between *ihr* ‘her’ and *sein* ‘his’; and (iii) Swiss German, whose possessive determiners exhibit the same syntactic contrast independently of *ein*-word formation.

The significance of the discussion is (A) that it uncovers a considerable amount of syntactic structure inside of possessive determiners, and, by doing so, (B) that it unmasks a stem suppletion as an epiphenomenal matter, a side effect of a basically syntactic contrast.

1 Introduction

In German, the possessive determiner for a third person feminine possessor, *ihr* ‘her’, looks strange, relative to the other singular possessive determiners *mein* ‘my’, *dein* ‘your’, and *sein* ‘his’. The latter are so-called “*ein*-words,” so-named after one of their morphological formatives, the indefinite article *ein*. Beyond having the formative *ein*, *ein*-words are also characterized by a certain inflectional paradigm, distinct from both adjectival and (other) determiner inflection. While *ihr* has the same peculiar inflectional properties as *ein*-words, it does not have (overt) *-ein*.

- (1) a. *mein / dein / sein* Buch
 my your his book
- b. *ihr* Buch
 her book

I claim that (1a) and (1b) contrast syntactically, and that the lack of overt *ein* with *ihr* is epiphenomenal. This is surprising from a traditional point of view. If correct, it should leave us wondering, how much syntax there is lurking behind other seemingly purely lexical/morphological facts.

The argument is based on a comparative view involving Swiss German and Hungarian, and has three parts. Section 2 shows that *ein*-word formation systematically contrasts with strong adjectival forms, and that this contrast forms an isogloss between German and Swiss German in the case of possessive determiners. Section 3 anatomizes the possessive determiners into their component parts, showing that Swiss German and German are analogous with regard to basic properties of the contrast in (1). Section 4, bringing Possessor Doubling into the picture, pin-points down the contrast between feminine and non-feminine to the syntactic behavior of one morpheme, and suggests that this contrast is analogous to that between a nominative and a dative possessor in Hungarian. Section 5 finally concludes that it is this syntactic contrast that must account for the fact that *ihr* has no overt *ein*, in spite of having undergone “*ein*-word formation.”

2 Formation of *ein*-words

At first glance, the stem suppletion in (1b) suggests that *ihr* is not an *ein*-word, contrary to the forms in (1a). But this is misleading.

2.1 Properties of *ein*-words

Apart from featuring overt *ein*, *ein*-words are characterized by a peculiar inflectional paradigm (cf. table 1). While such a paradigm need not be a grammatical primitive, it is a descriptive reality which can track categorial identity of elements at a certain level. With regard to its inflectional paradigm, *ihr* is identical to *ein*-words.

Secondly, when an *ein*-word is followed by an adjective, that adjective inflects strongly in the nominative and accusative, and weakly in the dative and genitive. With regard to this property as well, *ihr* behaves like an *ein*-word.

Table 1: Inflectional paradigm of *ein*-words in German

	MAS	NEU	FEM	PLU
NOM	mein	mein	mein-e	mein-e
ACC	mein-en	mein	mein-e	mein-e
DAT	mein-em	mein-em	mein-er	mein-en
GEN	mein-es	mein-es	mein-er	mein-er

Third, *ihr*, as opposed to the forms in (1a), has an *r* to the immediate left of the inflectional suffix, and it lacks a person morpheme. These exact two contrasts between the 3sg feminine and the other singular possessive determiners are replicated in the Swiss German possessive determiners (2), which, importantly, are all categorically not *ein*-words, and contrast with *ein*-words with regards to the two characteristics mentioned above.

- (2) a. mi-s / di-s / si-s schönä buäch
 my-AGRA your-AGRA his-AGRA pretty.WK book
- b. ir-əs schönä buäch
 her-AGRA pretty.WK book

We will come back to the composition of these determiners. But first, let us take a closer look at *ein*-words.

2.2 INV **versus** ADJ

Determiners (other than the articles) are basically left peripheral adjectival projections (Leu, to appear), notably exhibiting strong adjectival inflection, AgrA.¹ Compare (3a,b) and the strong adjective (3c), from German.

- (3) a. welch-es schöne Buch
 which-AGRA pretty.WK book
- b. dies-es schöne.WK Buch
 this-AGRA pretty book
- c. ein schön-es Buch
 a pretty-AGRA book

Certain ones of these determiners also have a related *ein*-word variant (4a). That variant does, as I mentioned, not exhibit strong adjectival inflection, and it loses its ability to determine weak inflection on a following adjective.

- (4) a. *welch ein schön-es* Buch!
 what a pretty-AGRA book
- b. **dies ein schön-es* Buch
 this a pretty-AGRA book
- c. **schön ein Buch*
 pretty a book

Since it looks like *welch* in (4a) inverted with *ein*, relative to the position of *ein* and the inflected adjective in (3c), and also in view of English

- (5) [how nice] a book

I refer to (4a) as the INV variant, and to (3a) as the ADJ variant. This contrast between the two variants sometimes correlates with a semantic contrast. In other instances it (also) correlates with a dialectal/cross-linguistic contrast, i.e. the contrast between INV and ADJ can constitute an isogloss. Such is the case for instance with regard to *was für* which in Swiss German can be adjectival (6a) (as well as INV), whereas in German there is only the *ein*-word (6b), i.e. INV variant, cf. Leu (2008).

- (6) a. *was fürig-s* *piär wotsch?*
 what for.ADJ-AGRA beer want.you
- b. *was für ein Bier willst du?*
 what for a beer want you

Hence *ein*-word formation is a grammatical operation (INV) that applies (sometimes obligatorily) to certain otherwise adjectival constituents. Perhaps the most striking case of the INV/ADJ distinction as an isoglossic contrast is that of the singular possessive determiners in German and Swiss German, which is discussed in the next section.

3 Person and gender of the possessor

We have seen above that in German possessive determiners are *ein*-words (7b). This contrasts with Swiss German, where possessive determiners are not *ein*-words (7a).

- (7) a. **mi -s** / t-s / *əs schön-ä buäch
my AGRA / the-AGRA a pretty-WK book ‘my pretty book’
- b. **m-** ein / *das / ein schön-es Buch
1st a the.AGRA a pretty-AGRA book ‘my pretty book’

Swiss German possessive determiners are adjectival (ADJ), in the sense that they inflect like strong adjectives / determiners,^{2,3} whereas German possessive determiners have undergone INV and exhibit the peculiar inflectional pattern shared with other *ein*-words. Swiss German possessive determiners are like the definite article in preceding weakly inflected (i.e. definite) adjectives, cf. (7a), whereas German possessive determiners are like the indefinite article in preceding strongly inflected (i.e. non-definite) adjectives in (7b).⁴

The second person singular forms differ from the first person ones only with regard to the leftmost morpheme, the possessor person marker, cf. (7) and (8).

- (8) a. **d-** i -s buäch
2nd STEM AGRA book ‘your book’
- b. **d-** ein Buch
2nd a book ‘your book’

Given the familiar Indo-European *-m-*, *-t-*, *-s-* paradigm (Benveniste, 1966; Kayne, 2000b), the 3sg forms are unsurprising (9).

- (9) a. **s-** i -s buäch
3rd STEM AGRA book ‘his book’
- b. **s-** ein Buch
3rd a book ‘his book’

However, (9) is, somewhat surprisingly, and unlike (7) and (8), limited to non-feminine possessors. The 3sg possessive determiner for feminine possessors looks different.

- (10) a. ir-əs buäch
her-AGRA book

- b. *ihr* Buch
 her book

But it inflects like the other possessive determiners, and it determines the same declension class on a following adjective as the regular singular forms.

To be sure, the restriction to non-feminine is not a property of *s-* in (9), cf. (11c).

- (11) a. Ich habe **mich** erinnert.
 I have M.self remembered
- b. Du hast **dich** erinnert.
 you have T.self remembered
- c. Er / sie hat **sich** erinnert.
 he / she has S.self remembered

So why is (9) restricted to non-feminine? - An initial reflex might be to invoke wholesale idiosyncrasy and blocking of a feminine interpretation of *sein* by the existence of the more specific *ihr*. While this would follow a familiar reasoning in generative grammar, such an answer is largely delinked from the actual forms of the competing elements. I will, instead, try to relate the interpretive restrictions to the forms of the elements, i.e. to the differences between *sein* and *ihr* in terms of their morphological subcomponents and internal structure.

4 What's non-feminine about *sein*?

The fact that *sein* cannot have a feminine possessor interpretation is puzzling. It is not a property of *s-*, as we have seen, nor is it a likely property of *-ein*, especially given that *mein* and *dein* are compatible with a feminine possessor.

Below I argue that the morpheme *r* in *ihr* has a non-feminine counterpart *m* (often non-overt) in *sein*, and that these elements are directly responsible for the interpretive restriction (section 4.1). This morphemic contrast correlates with a syntactic contrast (section 4.2), which in turn, I suggest, seems to correlate with the overt presence / absence of *ein*.

4.1 The morphemic contrast

Let us look at the forms of the possessive determiners in some more detail. Regarding the internal composition of the 1st, 2nd, and 3rd person possessive determiners, we have seen that we

can isolate a person morpheme, on the left edge, and an inflectional suffix on the right edge.

- (12) {*m-*, *d-*, *s-*} + *-ein-* + INFL

In Swiss German (13), it is clear that the suffixal *-s*, in e.g. (9), is an instance of strong adjectival agreement, AgrA. And the person morphemes are purely consonantal, as in German.⁵ That leaves a stem *-i-*.

- (13) {*m-*, *d-*, *s-*} + *-i-* + AGRA

The feminine forms, *ihr* / *irəs* differ from the forms in (12) and (13) in not showing any overt person morpheme, and in obligatorily having an *-r-*. What is this *-r-*? I would like to suggest that it is the same *-r-* that is usually identified as the dative case marker in feminine contexts. Consider Swiss German (14) and German (15).

- (14) a. Das ghört **im** / **irä**.
that belongs 3sg.m.DAT / 3sg.f.DAT
- b. Ich han **əm** / **ərä** das ggä.
I have 3sg.m.DAT / 3sg.f.DAT this given
- (15) a. Das gehört **ihm** / **ihr**.
that belongs 3sg.m.DAT / 3sg.f.DAT
- b. Ich habe **ihm** / **ihr** das gegeben.
I have 3sg.m.DAT / 3sg.f.DAT this given

These examples show that *-m* and *-r* mark a gender contrast of non-feminine versus feminine. Given this contrast, I will assume that the *-r-* in the possessive determiner *ihr* / *irəs* ‘her’ marks a feminine possessor. This, of course, gives rise to the expectation that the non-feminine possessive determiner *sein* / *sis* ‘his’ has an *-m-*.

The expectation is borne out, even though not always surface apparent. Consider the so-called possessor doubling construction (16). In that construction, the 3rd person possessive determiner also features a gender-sensitive possessor marker, and not surprisingly it has the form *-m-*.

- (16) (im) s i s buäch
 (him) 3rd STEM AGRA book 'his book'

In more traditional terms, the 3rd person possessive determiner is optionally preceded by a possessor element in the dative case, e.g. the pronominal form *im*.⁶ With this in mind, consider the interpretively minimal pair in (17).

- (17) a. (im) s i s buäch
 (m.DAT) 3rd STEM AGRA book
 'his book'
- b. i rə s buäch
 STEM f.DAT AGRA book
 'her book'

I would like to suggest that *-r* in (17b) represents the possessor in the same way *-m* does in (17a). However, since it is in a different position, we arrive at the conjecture that there are two possessor positions. One possessor position is located in the left periphery, i.e. to the left of the person morpheme and the STEM (17a). This may be a DP-internal topic position (cf. Aboh (2004)) as argued in Giusti (1996), in which case the overt optionality of *im* may be an instance of topic drop.⁷ The other possessor position is to the right of the STEM (17b). In this lower position, the possessor must be overt.⁸

4.2 The syntactic contrast

The proposal of two possessor positions within the possessive noun phrase is, of course, familiar from Szabolcsi's work on Hungarian (Szabolcsi, 1983/84, 1994). In Hungarian the choice of position correlates with a distinct case marking of the possessor. Possessors can remain to the right of the position of the definite article (18a), or they can move to the left periphery (18b). In the left-peripheral position, the possessor must be dative marked (18b). In the lower position it has the form of a nominative (18a).

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

Transposing Szabolcsi's proposal for Hungarian to Swiss German (19) and German, I propose that *-m* in (19a) is the (Swiss) German counterpart of the high, dative possessor in Hungarian, and the *-r* in (19b) is the (Swiss) German counterpart of the low, nominative possessor in Hungarian.

- (19) a. **im** s- [-i-]-s piär (*his beer*)
 b. [-i- **-r**]-əs piär (*her beer*)
 DAT STEM POSS AGR beer
 ▲

Regarding the question this section set out with, I propose that it is the optionally unpronounced possessor pronoun *im*, to the left of *sein* that contrasts with the feminine possessor marker *r*, and is responsible for the impossibility of a feminine possessor interpretation of *sein* / *sis* 'his'.

5 *Ihr* as an *ein*-word

Returning to our initial question, it seems that *ein*-word formation is orthogonal to the relevant morphosyntactic and interpretive contrasts between feminine (*ihr* 'her') and non-feminine (*sein* 'his') singular possessive determiners. I have shown that the true contrast between possessive *sein* 'his' and *ihr* 'her' lies in the position of the possessor morpheme, a contrasts that obtain in analogous fashion in Swiss German, where no *ein*-word formation is involved. And secondly, *ihr* behaves exactly like an *ein*-word, except for the overt presence of *ein*. Hence the presence of overt *ein* looks entirely superficial. We can think of this superficial contrast in one of at least two ways, the choice between which I will defer to future work.

Silent *EIN* It is possible to speculate that the failure of possessor fronting in *ihr* prevents *ein* of *ein*-word formation from being phonetically realized. I.e. there is a sense in which *ihr* is really *ihrEIN* (with unpronounced *EIN*).

Support-*ein* Alternatively, it is possible that *ein* is a support element, that is inserted in certain contexts if an affix needs a host. Under dative fronting (i.e. *m*-movement) there are two affixal elements that would appear orphaned: *s*- and the inflectional suffix. Insertion of *ein* provides a host. In the absence of dative fronting (i.e. in *ihr*) there is no *s*- that would need a host,⁹ and the inflection can be hosted by the un-fronted *-r*.

6 Conclusion

I conclude that the stem alternation between third person feminine *ihr* ‘her’ and the regular forms *mein* ‘my,’ *dein* ‘your,’ and *sein* ‘his’ of the German possessor determiners is a surface reflex of a contrast in the syntactic position of the possessor marker *r*, on the one hand, and *m* on the other (for third person).

The importance of this short reflection is that it brings to light a considerable depth of syntactic complexity within possessive determiners, and that it partly unravels the enigmatic nature of the “suppletive stem” by reference to the syntactic derivation.

References

- Aboh, Enoch Olade. 2004. Topic and Focus within D. In *Linguistics in the Netherlands*, ed. Leonie Cornips and Jenny Doetjes, volume 21, 1–12. John Benjamins.
- Alexiadou, Artemis, Liliane Haegeman, and Melita Stavrou. 2007. *Noun phrase in the generative perspective*. Berlin: Walter De Gruyter.
- Benveniste, Emile. 1966. *Problèmes de linguistique générale*. Paris: Gallimard.
- Corver, Norbert. 1990. The Syntax of the Left Branch Extraction. Doctoral Dissertation, Tilburg.
- Giusti, Giuliana. 1996. Is there a TopP and a FocP in the noun phrase? *University of Venice Working Papers in Linguistics* 6:105–128.
- Haegeman, Liliane. 2004. DP-periphery and clausal periphery: Possessor doubling in West Flemish. In *Peripheries, syntactic edges, and their effects*, ed. David Adger, Cécile de Cat, and Georges Tsoulas, 211–240. Dordrecht: Kluwer.
- Kayne, Richard S. 2000a. *Parameters and universals*. Oxford: Oxford University Press.
- Kayne, Richard S. 2000b. Person morphemes and reflexives in Italian, French, and related languages. In *Kayne 2000a*, chapter 8, 131–162.
- Legate, Julie Anne. 2001. The configurational structure of a nonconfigurational language. *Linguistic Variation Yearbook* 63–99.
- Leu, Thomas. 2008. ‘What for’ internally. *Syntax* 11:1–25.
- Leu, Thomas. to appear. The internal syntax of *jeder* ‘every’. *Linguistic Variation Yearbook* 9.
- Szabolcsi, Anna. 1983/84. The possessor that ran away from home. *The Linguistic Review* 3:89–102.
- Szabolcsi, Anna. 1994. The noun phrase. In *Syntax and Semantics 27: The syntactic structure of Hungarian*, ed. Ference Kiefer and Katalin Kiss, 179–274. San Diego: Academic Press.

Notes

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¹The masculine and neuter genitive forms have special properties which presently need not disturb us.

²So-called strong inflection is glossed AGRA. Weak inflection is glossed WK.

³The person forms in Swiss German superficially lack the strong agreement suffix in masculine contexts.

i. mi guät wi	ii. dr guät wi	iii. ä guät-ä wi
my good wine	the good wine	a good-AGRA wine

I will assume that this is a separate effect and that underlyingly the strong agreement suffix is present also with masculine possessors.

⁴In dative and genitive contexts, *ein*words, including *mein*, *dein*, *sein* and *ihr* behave inflectionally like definites.

⁵This is clear from the dative weak pronouns *mr* ‘to me’, *dr* ‘to you’. Interestingly there is no **sr* for ‘to him’, instead the accusative-looking form *sich* must be used. This may be related to the incompatibility of reflexive-marking and the ERG-DAT-ABS frame in Warlpiri (Legate, 2001).

⁶This possessor, which can be a full DP, has been argued to occupy Spec,DP (Corver, 1990). See also Haegeman (2004) for possessor doubling in West Flemish, and Alexiadou et al. (2007) for recent overview.

⁷I assume that first and second person possessors obligatorily front and topic-drop.

⁸Strictly speaking, it must be overt if it is the highest link in the (movement) chain. Possessor doubling is also possible with feminine possessors. However, the lower *r* must remain overt, suggesting that it involves base-generation of the left-peripheral possessor.

⁹The overt appearance of a person marker correlating with possessor movement to the DP-left periphery has been analyzed as resumption (Giusti, 1996). We may think of it as a sort of clitic doubling.