No possessor inversion in German PPs

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1 Introduction

German allows the inversion of prepositional possessors, as seen in (1-a). This inversion is banned inside the complement of PPs (see (1-b)), which contrasts prepositional possessors with other kinds of possessors in German which can be inversed (see (1-c)).

(1)   a.   *Von Conny der   Hund heißt   Motte.*
           of   Conny the.NOM dog   is.named Motte
           'Conny's dog is called Motte.'

      b.   **Ohne   von Conny den   Hund ist es langweilig.*
           without of   Conny the.ACC dog   is it boring
           'It is boring without Conny's dog.'

      c.   *Ohne   Conny-s   Hund ist es langweilig.'*
           without Conny-GEN dog   is it boring
           'It is boring without Conny's dog.'

In the following paper, we will show that this restriction follows directly in an analysis based on feature-driven Merge in a Minimalist framework. As the universal constraint Merge-before-Move (Frampton & Gutmann 1999; Castillo et al. 1999; Chomsky 2000; Müller & Sternefeld 2001; Hornstein 2001, 2009; Boeckx et al. 2010; Drummond 2011; Weisser 2015) enforces the higher P head to check the structure-buildung [•P•] feature, movement of the possessor-PP is blocked. This paper is structured as follows. The relevant data is presented in section 2. In section 3, we propose a new analysis. Before concluding in section 6, we discuss further issues of our proposal in section 5.

2 Data

In a number of German dialects, possessee and possessor are allowed to swap their positions, as seen in (2). The order of possessee and *von*-possessor in (2-a) is the standard word order, which is widely accepted among German native speakers. In (2-b), however, the constituents appear in reverse order.

(2)   a.   *Die   Frau von Max hat einen Film   gesehen.*
             the.NOM wife of   Max has a   movie seen

        b.   *Von Max die   Frau hat einen Film   gesehen.*
             of   Max the.NOM wife has a   movie seen
             'Max' wife has seen a movie.'

A small-scale grammaticality judgment task in which we asked 49 native speakers of German to rate sentences from 1 (perfectly grammatical) to 6 (ungrammatical) showed that the inverse order seems to be far more restricted in its distribution than the standard order. First, it confirms the observation by Gallmann & Lindauer (1994) that the inversion cannot take place if the DP is in the complement of a PP, as seen in (3-b).

(3)   a.   *Ohne   die   Frau von Max bin ich ins Kino   gegangen.*
             without the.ACC wife of   Max am I   to   cinema gone

        b.   **Ohne   von Max die   Frau bin ich ins Kino   gegangen.*
             without of   Max the.ACC wife am I   to   cinema gone
             'I went to the cinema without Max' wife.'

Second, while the construction allows the possessee to bear accusative case (see (4-a)), dative possessees lead to ungrammaticality, as seen in (4-b)-(4-d). Note that this restriction is independent of the position of the constituent (prefield in

(4-c) vs. midfield in (4-d)) or the status of the dative (lexical dative in (4-b) vs. structural dative in (4-c)).

(4) a. *Ich habe von Maria den   Freund im Kino   getroffen.*
         I   have of   Mary the.ACC friend in cinema met
         'I met Mary's boyfriend in cinema.'

     b. **Von Hans der   Frau habe ich geholfen.*
         of   Hans the.DAT wife have I   helped
         'I helped Hans' wife.'

     c. **Von Hans der   Frau habe ich mein Auto geliehen.*
         of   Hans the.DAT wife have I   my   car   lent
         'I have lent my car to Hans' wife.'

     d. *Ich habe von Hans der   Frau mein Auto geliehen.*
         I   have of   Hans the.DAT wife my   car   lent
         'I have lent my car to Hans' wife.'

Other prepositional modifiers may also appear in a prenominal possition. Crucially, they appear to show the same restrictions as possessive prepositional modifiers, as shown in (5).

(5) a. *Mit dem Hund die   Frau   ist umgezogen.*
         with the dog   the.NOM woman is moved
         'The woman with the dog has moved.'

     b. **Ich habe mit   dem Hund der   Frau   geholfen.*
         I   have with the dog   the.DAT woman helped
         'I helped the woman with the dog.'

     c. **Ich habe gestern   gegen   mit   dem   Hund die Frau   verloren.*
         I   have yesterday against with the.ACC dog   the woman lost.'
         'Yesterday, I lost against the woman with the dog.'

From the data we have seen in this section, we can draw the generalization that the the inversion of prepositional modifiers is constrained as it is ungrammatical PP-internally, as previously observed by Gallmann & Lindauer (1994), as

well as with dative possessees. As Gallmann & Lindauer (1994) pointed out, these restrictions are not captured by previous analyses of this phenomenon, such as Bhatt (1990) or Fortmann (1996). Even though they suggest movement analyses within a Government and Binding framework, they fail to derive the blocking effect in the complement of PPs since the trigger for movement within G&B does not arise from features but from the relation of a moved XP and its trace. Hence, the goal of this paper is to present an analysis of German PP-inversion that can account for the restrictions that this construction is imposed on. In the following section, we will show that our proposal analyzes the ban on PP-internal PP-movement as an instance of a more general constraint on movement, the Internal Inversion Constraint, which arises from the constraint known as Merge-before-Move (Frampton & Gutmann 1999; Castillo et al. 1999; Chomsky 2000; Müller & Sternefeld 2001; Hornstein 2001, 2009; Boeckx et al. 2010; Drummond 2011; Weisser 2015).

3 Proposal

For the following analysis, we will adopt a Minimalist framework with feature-driven Merge, i.e. Merge and Move (or: base-Merge and re-Merge) can only take place if they are triggered by a feature, e.g. a structure-building feature [•X•] or a Probe feature [⋆X⋆] (Chomsky 2000, 2001). This assumption is based on the last resort condition given in (6).
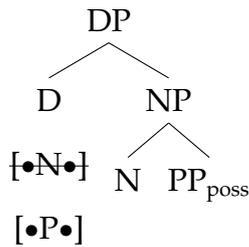
(6)   *Last Resort* (Abels 2003)

A constituent α may only be merged, i.e. base-merge or re-merged, if that leads to the immediate satisfaction of a previously unsatisfiable feature.
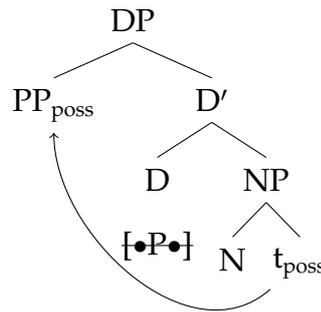
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Another assumption made her, is that the inversion is triggered by a feature [•P•] which is the lowest feature in an ordered feature bundle as proposed by Georgi & Müller (2010). In this analysis, this feature bundle is on D, such that D has the featural specification [•N• > •P•]. The feature introduces a prepositional modifier and triggers movement of a PP to SpecDP. If the DP is not embeddded in a PP, the derivation thus proceeds as follows. In the first step, D satisfies its [•N•] feature by merging with the NP. At this point of the derivation (see (6-a)), the remaining [•P•] feature on D has not been satisfied. This can now be achieved ONLY by moving the possessor PP to SpecDP, as seen in (7).

(7)   Inversion of prepositional possessors

a.

$$
\begin{array}{c}
\text{DP} \\
\diagdown \\
\text{D} \quad\quad \text{NP} \\
\text{[•N•]} \quad \text{N} \quad \text{PP}_\text{poss} \\
\text{[•P•]}
\end{array}
$$

b.

$$
\begin{array}{c}
\text{DP} \\
\diagup \diagdown \\
\text{PP}_\text{poss} \quad\quad \text{D}' \\
\diagup \diagdown \\
\text{D} \quad\quad \text{NP} \\
\text{[•P•]} \quad \text{N} \quad \text{t}_\text{poss}
\end{array}
$$

In the next step, we will see that this inversion cannot take place in the complement of PPs. Let us assume that we are at the point of the derivation where a complex NP has been merged with D. The next feature to be satisfied is the [•P•] feature on D. If the next head in the numeration is also a P head, [•P•] on D can be satisfied **either** by moving the possessor PP to SpecDP **or** by merging the next head in the numeration. Due to the constraint *Merge-before-Move* in (8) (Frampton & Gutmann 1999; Castillo et al. 1999; Chomsky 2000; Müller & Sternefeld 2001; Hornstein 2001, 2009; Boeckx et al. 2010; Drummond 2011; Weisser 2015), the next head of the numeration is merged which bleeds the
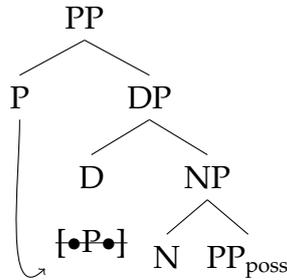
movement of the possessor PP to SpecDP as the movement trigger has already been checked.
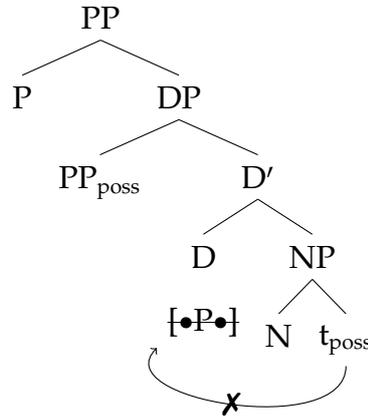
(8) *Merge before Move*

Suppose that the derivation has reached stage Σ_n, and Σ_{n+1} is a legitimate instance of Merge, and Σ'_{n+1} is a legitimate instance of Move. Then, Σ_{n+1} is to be preferred over Σ'_{n+1}.

(9) No PP-internal PP-inversion

a.

```
        PP
       /  \
      P    DP
      |   /  \
     [•P•] D   NP
           |  /  \
          [•P•] N  PP_poss
```

b.

```
         PP
        /  \
       P    DP
           /  \
      PP_poss  D′
              /  \
             D    NP
             |   /  \
           [•P•] N   t_poss
```

The constraint on movement that is responsible for the blocking effect that arises PP-internally is summarized in (10) as the *Internal Inversion Constraint.*

(10) *Internal Inversion Constraint*

If a YP_1 directly dominates an XP which in turn dominates another YP_2, movement of YP_2 into SpecXP is banned.

In this section, we have seen that the restrictions of prenominal possessors follow automatically due to a [•P•] feature on D and the constraint *Merge-before-Move*. Moreover, it can easily be explained why only prepositional modifiers

are subject to this restriction. The competition between the embedded PP and the next head in the numeration only arises as they are of the same lexical category. Since other kinds of possessors are non-prepositional, no blocking effect is expected.

4 Discussion

In this section, we want to discuss a rather unconventional issue of the otherwise simple account that we want to forward in this paper. As the D head bears a [•P•] feature and the next higher P head bears a [•D•] feature, our approach presupposes reciprocal subcategorization. This automatically leads to the question which of the two heads projects. Chomsky (2013) proposes a Labeling algorithm (see (11)) that allows a head to project if it merges with a phrase. In his view, a head is not defined as a constituent that subcategorizes but negatively as a syntactic object that is **not** the result of Merge. In our analysis, it thus follows that P would still be the projecting head which clearly solves the problem of reciprocal subcategorization.[1]

(11)   Labeling algorithm (LA)   (Chomsky 2013)

    a.   Suppose a syntactic object SO = {H, XP}, H is a head and XP is not
        a head. Then LA will select H as a label.

    b.   A head is a syntactic object that is not of the form {X, Y} and thus
        not constructed by Merge.

In contrast to the the previous analyses by Bhatt (1990); Fortmann (1996) and Georgi & Müller (2010), our approach makes reference to categorical features,

thus explaining the PP-internal blocking effect. However, this assumption predicts that the inversion of prepositional modifiers should be subject to case restrictions, as it is often assumed that datives are actually PPs with a silent P head (Bayer et al. 2001; Rezac 2008). As we pointed out in section 2, the examples in (4), here repeated as (12), show that this prediction is borne out, as accusative possessors may precede the possessee, as shown in (12-a), whereas the inversion of both lexical and structural datives leads to ungrammaticality (see (12-b) and (12-c)).

(12) a. *Von Maria den Bruder habe ich in der Stadt gesehen.*
          of Mary the.ACC brother have I in the town seen
          'I saw my Mary's brother in town.'

      b. **Von Hans der Frau habe ich geholfen.*
          of Hans the.DAT wife have I helped
          'I helped Hans' wife.

      c. **Von Hans der Frau habe ich mein Auto geliehen.*
          of Hans the.DAT wife have I my car lent
          'I have lent my car to Hans' wife.'

In section 3, we proposed a constraint on movement that can be generalized as the Internal Inversion Constraint, here repeated in (13).

(13) *Internal Inversion Constraint*
      If a YP_1 directly dominates an XP which in turn dominates another YP_2, movement of YP_2 into SpecXP is banned.

This constraint follows directly from the basic assumptions of feature-driven syntax and Merge-before-Move (Frampton & Gutmann 1999; Castillo et al. 1999; Chomsky 2000; Müller & Sternefeld 2001; Hornstein 2001, 2009; Boeckx et al.

2010; Drummond 2011; Weisser 2015). If the Internal Inversion Constraint holds for all categories, we should expect similar blocking phenomena in other languages. Even though the distribution of similar blocking effects exceeds the scope of this article, we want to mention two possible instances of the *Internal Inversion Constraint* in other language.

As Lötscher (1997) and Dürscheid & Hefti (2006) point out, one remarkable property of Swiss German syntax are embedded V1-clauses usually being headed by predicative adjectives or nouns (see (14)). The frequency of V1-clauses headed by verbs remains unclear in the literature, however, Lötscher (1997) mentions that the acceptability of V1-clauses strongly increases if they are headed by adjectives. This can be explained by means of the *Internal Inversion Constraint* such that V-to-C movement is blocked in clauses that are embedded under verbs but not under adjectives and nouns.

(14) *S'isch schaad,   isch es scho   Friitig. (Lötscher 1997)*
      it.is   unfortunate is   it already Friday
      lit: 'It is unfortunate that it is already Friday.'

Another possible instance of the *Internal Inversion Constraint* is found in Archi (Nakh-Dagestanian, Russia). In this language, scrambling is allowed in main clauses, but not in nominalized clauses (Bond et al. 2016). They note that '*[t]he genitive possessor [...] can appear only in the very beginning or the very end of the clause, but not between the absolutive and the verb (whereas the ergative can take this position).*' (Bond et al. 2016, p. 66). This blocking effect can be explained in terms of the *Internal Inversion Constraint* under the assumption that nominalized clauses are headed by a silent D head which blocks movement of a DP to a higher position.

5 Conclusion

In this paper, we proposed an analysis of the inversion of prepositional modifiers in German. We have shown that the restriction against PP-internal PP-inversion follows from two basic assumptions of feature-driven syntax, namely the Last Resort condition and Merge-before-Move. If a head in the numeration and a lower phrase compete to check a structure-building feature, Merge will always be preferred, which leads to a blocking effect. This effect can be generalized as the Internal Inversion Constraint which makes clear and falsifiable predictions for other domains in syntax.

References

Abels, Klaus. 2003. *Successive cyclicity, anti-locality, and adposition stranding*. University of Connecticut Storrs, CT.

Bayer, Josef, Markus Bader & Michael Meng. 2001. Morphological underspecification meets oblique case: Syntactic and processing effects in German. *Lingua* 111(4-7). 465–514.

Bhatt, Christa. 1990. *Die syntaktische Struktur der Nominalphrase im Deutschen*, vol. 38. Narr Tübingen.

Boeckx, Cedric, Norbert Hornstein & Jairo Nunes. 2010. *Control as movement*, vol. 126. Cambridge University Press.

Bond, Oliver, Greville G Corbett, Marina Chumakina & Dunstan Brown. 2016. *Archi: Complexities of agreement in cross-theoretical perspective*, vol. 4. Oxford University Press.

Castillo, Juan Carlos, John Drury & Kleanthes K Grohmann. 1999. Merge over

move and the extended projection principle. *University of Maryland working papers in linguistics* 8(63). 103.

Chomsky, Noam. 2000. Minimalist inquiries: the framework. In R. Martin, D. Michaels & J. Uriagereka (eds.), *Step by step*, 89–156. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In M. Kenstowicz (ed.), *Ken hale: A life in language*, 1–52. Cambridge, Mass.: MIT Press.

Chomsky, Noam. 2013. Problems of projection. *Lingua* 130. 33–49.

Drummond, Alex. 2011. Merge over move and Romance obviation effects .

Dürscheid, Christa & Inga Hefti. 2006. Syntaktische Merkmale des Schweizer Standarddeutsch. *Schweizer Standarddeutsch. Beiträge zur Varietätenlinguistik* 131–161.

Fortmann, Christian. 1996. *Konstituentenbewegung in der DP-Struktur: Zur funktionalen Analyse der Nominalphrase im Deutschen*. Tübingen: Max Niemeyer Verlag.

Frampton, John & Sam Gutmann. 1999. Cyclic computation. *Syntax* 2(1). 1–27.

Gallmann, Peter & Thomas Lindauer. 1994. Funktionale Kategorien in Nominalphrasen. *Beiträge zur Geschichte der deutschen Sprache und Literatur (PBB)* 116(1). 1–27.

Georgi, Doreen & Gereon Müller. 2010. Noun-phrase Structure by Reprojection. *Syntax* 13(1). 1–36.

Hornstein, Norbert. 2001. *Move*. Oxford: Blackwell.

Hornstein, Norbert. 2009. *A theory of syntax: Minimal operations and Universal Grammar*. Cambridge: Cambridge University Press.

Lötscher, Andreas. 1997. *Guet sind Si doo*–Verbstellungsprobleme bei Ergänzungssätzen im Schweizerdeutschen. *Syntax und Stilistik der Alltagssprache. Beiträge der* 12. 85–95.

Müller, Gereon & Wolfgang Sternefeld. 2001. The rise of competition in syntax: A synopsis. *Competition in syntax* 1–68.

Rezac, Milan. 2008. Phi-agree and theta-related case. *Phi theory: Phi-features across interfaces and modules* 83–129.

Sternefeld, Wolfgang. 2006. *Syntax: eine morphologisch motivierte generative Beschreibung des Deutschen* (Stauffenburg Linguistik Bd. 1). Stauffenburg. https://books.google.de/books?id=_QtXngEACAAJ.

Weisser, Philipp. 2015. *Derived coordination: A minimalist perspective on clause chains, converbs and asymmetric coordination*, vol. 561. Walter de Gruyter GmbH & Co KG.

Notes

[1]Reciprocal subcategorization is not unheard of in Germanic linguistics. Sternefeld (2006) discusses auxiliary selection as a potential example of reciprocal subcategorization. The auxiliary selects for the morphological form of the verb, namely the participle, while the verb has idiosyncratic lexical information about the auxiliary that is selected.