A Topological Schema for Noun Phrases in German

Pawel Karnowski & Jürgen Pafel*

1. Introduction

In syntax, topology is a descriptive account of word order phenomena. Phrases are described as instances of schemata, with a schema being a continuous succession of a certain number of slots, i.e., fields or positions. A slot is defined by the restrictions the expressions filling the slot have to comply with. On the basis of topological schemata, a topological theory makes predictions concerning the word order of phrases.

Topology forces one to tackle very elementary questions. With respect to the syntax of noun phrases, these include: What is a determiner? What kinds of determiners can be distinguished? What is a pronoun? What kinds of pronouns can be distinguished? Are there expressions of the syntactic category Q(uantifier) and/or Num(ber)? How many different syntactic uses do expressions like *ein* (‘a’, ‘one’), *viel* (‘much’) or *alle* (‘all’) have? What does the system of articles look like? Which syntactic features have to be assumed in the noun phrase? Etc., etc.

We do not conceive of topology as a rival to constituent structure, but as a chance to discuss elementary questions without committing ourselves (too much) to a certain syntactic framework. It seems to us that the unsettledness of these very elementary questions is one reason for the lack of unanimity among researchers concerning the constituent structure of noun phrases in German.

The following paper is structured as follows. After introducing the

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topological schema and the three outstanding generalizations it is based on, we discuss three slots of the schema in some detail: the initial field, the position of the elements marking the noun phrase as definite or indefinite, and the position of the central noun in the noun phrase.

2. The Topological Schema and its Restrictions

In topological schema (1), we distinguish two kinds of slots: fields and positions. A position is filled by one and only one simple or complex syntactic word (X\(^0\)-element), whereas a field can filled by one or more syntactic phrases (XP-elements).

1. Topological schema of German noun phrases

<table>
<thead>
<tr>
<th>Z</th>
<th>Def</th>
<th>X</th>
<th>Nom</th>
<th>Y</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z-field: n-many XPs (n≥0) out of the set:</td>
<td>Definiteness position: one X(^0)-element out of the set:</td>
<td>X-field: n-many APs (n≥0)</td>
<td>Nominal position: one noun and optionally left or right narrow appositions</td>
<td>Y-field: n-many XPs (n≥0) out of the set:</td>
</tr>
<tr>
<td>focus particle, negation particle, adverb, (a certain use of) all-, PP, deren, ...</td>
<td>article, demonstrative, possessive, interrogative, quantity expression, prenominal genitive, combinations of article and adjective or of two determiners, demonstrative pronoun der, possessive pronoun meiner, deiner, etc., indefinite pronoun einer, ...</td>
<td></td>
<td>genitive phrase, PP, AdvP, diverse types of embedded clauses, ...</td>
<td></td>
</tr>
</tbody>
</table>

As mentioned before, the nature of the slots in a topological schema is determined by the restrictions the elements filling the slots have to comply with. These restrictions determine the number and nature of the schema’s slots. We will discuss in detail the restrictions concerning Z, Def, and Nom, which are formulated as three generalizations (see page 164).
3. **Z-Field**

As indicated, focus and negation particles can be located in Z. They can be simple like nur ("only"), sogar ("even"), or nicht ("not") (see (4-a)) or complex like nicht einmal ("not even"), nicht nur ("not only"), or selbst nicht ("not even") (see (4-b)).

(4) a. nur (sogar, nicht, ...) der Autor
   ‘only (even, not, ...) the author’

b. nicht einmal (nicht nur, selbst nicht, ...) ein Gerhard Schröder
   ‘not even (not only, not even, ...) a Gerhard Schröder’

The quantity expression alle (‘all’) is located in Z if it is used as in (4-cd), where a demonstrative or a possessive follows the quantity expression. Compare this to Reis & Vater (1980), where alle is located in the “pre-Det position”. (For further uses of alle, see below.)

(4) c. alle diese Politiker ‘all these politicians’

  d. alle unsere Freunde ‘all our friends’

The aforementioned particles and the quantity expression alle are the stylistically unmarked Z-elements. As a stylistically marked option, attributive PPs and adverbs can be located in Z:

(4) e. vom Fritz der Bruder ‘Fritz’s brother’

f. aus Porzellan eine Vase ‘a vase (made of china)’

g. dort der Herr ‘the gentleman over there’

A further interesting case is (4-h), deren viele, as it occurs in a sentence like Es gibt deren viele (‘There are many of this kind’). Here deren viele means something like “many of such and such a kind”.

(4) h. deren viele ‘many of this kind’

*Der* is not a prenominal genitive as in *Deren Geduld möchte ich haben* (‘I would like to have their patience’). Firstly, deren viele is an indefinite noun phrase, while deren Geduld is a definite one. Secondly, the prenominal genitive cannot be separated from the noun, as seen in (5) and (6).

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1"*" means precedence, "**" means n-many (n≥0), and "(in)varians" means that the noun or adjective is (not) inflected.

2Z-elements can be iterated: selbst nicht einmal Kanzler Schröder (‘Not even Chancellor Schröder’), selbst alle diese Politiker (‘even all these politicians’), nur dort das Haus (‘only the house there’).

(6) a. Deren viele gibt es nicht.
   b. Deren gibt es nicht viele.

For the elements in Z, we propose the following generalization:

(7) Generalization 1:
The Z-field is filled by syntactic phrases which can be dislocated from the rest of the noun phrase.

See (8) to (10), where the two sentences can have the same (focus) reading:

(8) a. Nur der Autor kann das wissen.
   b. Der Autor kann das nur wissen.
   ‘Only the author can know that.’

(9) a. Alle diese Politiker sind unfähig.
   b. Diese Politiker sind alle unfähig.
   ‘These politicians are all incompetent.’

(10) a. Vom Fritz der Bruder ist da.
   b. Vom Fritz ist der Bruder da.
   ‘Fritz’s brother is here.’

The dislocation of the unmarked Z-elements seems to be quite unrestricted. Quantifier floating as in (9-b), for instance, is known to be much less restricted than NP and was für split (cf. Pafel (1995)). The dislocation of the marked Z-elements, however, is severely restricted.

There is a challenge to this view on Z-elements, however. Jacobs (1983) argues that the strings at the beginning of the sentences in (11) are not complex noun phrases introduced by a focus particle, because basically these strings cannot occur as the complement of a preposition, as can be observed in (12).

   ‘Only Gerda appears in Peter’s dreams.’
   ‘Only beautiful women appear in Peter’s dreams.’
   ‘Only power and wealth appear worth striving for to Peter.’

(12) Peter träumt von nur Gerda (/schönen Frauen, Macht und Reichtum)
   ‘Peter dreams only of Gerda (/beautiful women, power and wealth).’

But Jacobs admits that there are noun phrases introduced by focus particles, as in (13-ab). It seems that this primarily occurs when a cardinal is narrowly focussed. He assumes that in this instance the focus particle is adjoined to the cardinal (but not adjoined to the noun phrase as such – see the topological description in (14)).

(13) a. von nur einem Täter
   b. von nur zwei (/wenigen) Tätern
   c. ?von nur einem Tätern
   d. *von nur dem Täter
   e. *von nur beiden Tätern
   (Jacobs (1983, 69f.))
   ‘of only one (/two, few, some, the, both) culprit(s)’

(14) von nur zwei Tätern
    Def Nom

If Jacobs is right, it is surprising that in these cases the focus particle can be dislocated from the noun phrase as in (15-b) (cf. (8)) or in nur von Elnen Täter, since it seems unlikely that a subpart of a complex determiner can be extracted (cf. section 4.2, where we will see true complex determiners, whose components cannot be separated from one another).

   b. ZWEI Täter hat er nur geschnappt.
   ‘He has caught only two culprits.’

Thus, scepticism seems warranted. What is most puzzling about Jacobs’s view is that according to him, one would have to analyze the sentences in (11) as V3-sentences, not as V2-sentences. Instead of modifying the topological theory of sentences by admitting V3-sentences, one could try to explain the ungrammaticality of (12) by relying on the conditions internal to PPs. Further evidence against Jacobs’s view comes from the fact that nur-phrases behave like (negative) quantifiers – they are sensitive to negation, as quantifiers typically are, and show regular relative and absolute scope behavior (there is a long tradition starting with Geach [1962]; (1980) which takes only-phrases to be (negative) quantifiers). The sentences in (16) are not logically
equivalent with respect to the statement made, which clearly indicates that the *nur*-phrase is a quantifier.

(16) a. Von uns war nur Moritz nicht da.
   ‘Of us, only Moritz was not here.’
   Statement: Except for Moritz, everyone of us was here.
   Presupposition: Moritz was not here.

b. Es ist nicht der Fall, dass von uns nur Moritz da war.
   ‘It is not the case that of us only Moritz was here.’
   Statement: Besides Moritz, someone else of us was here.
   Presupposition: Moritz was here.

For an illustration of the relative scope behavior of *nur*-phrases, see the sentences in (17). Whereas (17-a) is unambiguous with wide scope of the *nur*-phrase, sentence (17-b) is ambiguous: Besides the wide-scope reading of the universal quantifier (‘Every problem is such that only Mary could solve it’), which one gets only with some effort, it exhibits the reading with wide scope of the *nur*-phrase (‘Only Mary is such that she could solve every problem’).

(17) a. Nur die Marie hat jede Aufgabe lösen können.
   ‘Only Mary could solve every problem.’

b. Jede Aufgabe hat nur die Marie lösen können.
   ‘Every problem, only Mary could solve.’

Looking at *nur*-phrases in more detail, it becomes obvious that their scope behavior can be predicted quite accurately if one regards them as negative existential quantifiers (see Pafel forthcoming: section 2.6.2).

4. Definiteness Position

As for the definiteness position, we propose the following generalization:

(18) *Generalization II:*
   The definiteness position (Def) is filled by one simple or complex determiner which marks the noun phrase with ±DEFINITE.

In order to work with Generalization II, we have to know, above all, what determiners are. There seems to be no agreed upon answer to this question; assumptions concerning the extension of the class of determiners vary considerably. We attempt to single out determiners with the help of two criteria:

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a topological and a morphological one. On the one hand, determiners follow the elements in Z and precede the elements in X (the topological criterion); on the other hand, determiners exhibit a certain inflection pattern – modulo irregularities (the morphological criterion).

4.1. Determiner Inflection

The paradigm of determiner inflection is as follows:

(19) *Determiner inflection*

<table>
<thead>
<tr>
<th></th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>masc/neut/fem</td>
<td>masc/neut/fem</td>
</tr>
<tr>
<td>nom</td>
<td>-er</td>
<td>-es</td>
</tr>
<tr>
<td>acc</td>
<td>-en</td>
<td>-es</td>
</tr>
<tr>
<td>dat</td>
<td>-em</td>
<td>-en</td>
</tr>
<tr>
<td>gen</td>
<td>-es</td>
<td>-es</td>
</tr>
</tbody>
</table>

This is the paradigm of inflectional suffixes of *dieser* (‘this’), *jener* (‘that’), *jeder* (‘every’), *alle* (‘all’), *mancher* (‘many a’, ‘some’), *welcher* (‘which’), as well as the indefinite pronoun *einer* (‘someone’) and the possessive pronoun *meiner* (‘mine’), *deiner* (‘yours’), etc. With the exception of the GEN.SING.MASC and GEN.SING.NEUT suffix -es, this paradigm is identical to the strong inflection of adjectives (we will come back to these similarities in section 4.2).

As *<e>* in the paradigm of determiner inflection (19) corresponds to schwä, it is a small step to assume that all occurrences of schwä followed by a consonant in (19) are due to schwä epenthesis. In these cases, it is the consonant alone which is the proper inflectional suffix (cf. Bierwisch 1967, 2002).

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3In some cases (GEN.SING.MASC/NEUT of *dieser*, *jener*, and *jeder*) the genitive suffix -es can be replaced by -en:

(i) ein Haus *diesen* Typs / im Sommer *diesen* Jahres
(ii) in Dezember *jenes* Jahres (only NEUT)
(iii) der Inhalt *jeden* Behälters / das Recht *jedem* Volkes
Thus, we get the following paradigm of determinative inflectional morphemes:

### (20) Determinative inflectional morphemes

<table>
<thead>
<tr>
<th>Case</th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom</td>
<td>-r</td>
<td>-e</td>
</tr>
<tr>
<td>acc</td>
<td>-n</td>
<td>-e</td>
</tr>
<tr>
<td>dat</td>
<td>-m</td>
<td>-e</td>
</tr>
<tr>
<td>gen</td>
<td>-s</td>
<td>-r</td>
</tr>
</tbody>
</table>

The definite and indefinite article, as well as the possessive, follow the pattern in (19) and (20) only up to a point. The obvious deviations are to be found in the nominative and accusative forms. We will interpret these deviations as irregularities supported by the fact that these words are expressions with a high token-frequency, which typically exhibit idiosyncrasies; frequently used expressions are stored as complete inflected word forms in the lexicon, and are thus not composed with the help of general inflectional rules (see Werner (1987a;b), Nübling (2000)). Let us take a look at the definite article first. It exhibits the regular inflectional morphemes – except for NOM/ACC.SING.FEM and NOM/ACC.PLU (phonologically, die (/diː/) does not end in a schwa).

### (21) Definite article

<table>
<thead>
<tr>
<th>Case</th>
<th>singular</th>
<th>plural</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom</td>
<td>der</td>
<td>die</td>
</tr>
<tr>
<td>acc</td>
<td>den</td>
<td>die</td>
</tr>
<tr>
<td>dat</td>
<td>dem</td>
<td>die</td>
</tr>
<tr>
<td>gen</td>
<td>des</td>
<td>der</td>
</tr>
</tbody>
</table>

The indefinite article ein ('a') and the possessive mein ('my') follow the pattern of determiner inflection – apart from three forms. These irregular forms (NOM.SING.MASC/NEUT and ACC.SING.NEUT) carry no inflectional ending.

### (22) Indefinite article and possessive

<table>
<thead>
<tr>
<th>Case</th>
<th>singular</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom</td>
<td>ein, ein, ein-e</td>
</tr>
<tr>
<td>acc</td>
<td>ein-en, ein, ein-e</td>
</tr>
<tr>
<td>dat</td>
<td>ein-em, ein-em, ein-er</td>
</tr>
<tr>
<td>gen</td>
<td>ein-es, ein-es, ein-er</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Case</th>
<th>singular</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom</td>
<td>sein, sein, sein-e</td>
</tr>
<tr>
<td>acc</td>
<td>sein-en, sein, sein-e</td>
</tr>
<tr>
<td>dat</td>
<td>sein-em, sein-em, sein-er</td>
</tr>
<tr>
<td>gen</td>
<td>sein-es, sein-es, sein-er</td>
</tr>
</tbody>
</table>

The existence of these forms can most likely be partially diachronically explained. In Old High German ein and the so-called possessive pronouns min, din, sin, etc., possessed two variants of these forms – an inflected one and an uninflected one. The paradigm of the inflectional endings for the strong adjectival declension, the indefinite pronoun ein and the possessive pronouns in OHG is:

### (23) Possessive

<table>
<thead>
<tr>
<th>Case</th>
<th>singular</th>
</tr>
</thead>
<tbody>
<tr>
<td>nom</td>
<td>-φ, -er</td>
</tr>
<tr>
<td>acc</td>
<td>-an</td>
</tr>
<tr>
<td>dat</td>
<td>-emu, -emo, -emu, -emo</td>
</tr>
<tr>
<td>gen</td>
<td>-es, -es</td>
</tr>
</tbody>
</table>

As already mentioned, the pronominal counterparts of the indefinite article and the possessives in Modern German – i.e., the indefinite pronoun einer and the possessive pronouns meiner, deiner, etc. – follow the pattern in (19) exactly.

Incidentally, we make a terminological distinction between the possessive, which cannot constitute a noun phrase on its own, and the possessive pronoun, which can (cf. (24)). We take them to be two distinct determiners, which differ not only in inflection, but also syntactically. The possessive must be accompanied by an adjective and/or noun (in X/Nom), whereas the possessive pronoun does not allow such (overt) elements.

### (24) Possessive vs. possessive pronoun

a. Mein Exemplar ist verschlossen. (possessive)
b. *Mein ist verschlossen. (possessive pronoun)
c. Meines ist verschlossen. (possessive pronoun)
d. *Meines Exemplar ist verschlossen. (possessive pronoun)

'My copy is worn.'
Our approach, then, does not distinguish articles and pronouns as two kinds of syntactic categories, but distinguishes them as two kinds of determiners (see section 4.4 below for further discussion on pronouns). Consequently, there is no need for a distinction between pronominal inflection and article (or determiner) inflection as, e.g., in Eisenberg (1998).

4.2. Simple and Complex Determiners

Besides the simple determiners we have discussed above, there are also complex ones of which two types can be distinguished. The first type consists of a determiner and an adjective, e.g., das selbe (‘the same’), das gleiche (‘the same’), die meisten (‘most’), ein jeder (‘every’). The first part is nothing more than the definite or indefinite article, the second part is an adjective inflecting in a fully regular manner. This is true even for jeder (‘every’) in combination with ein (‘a’); jeder does not conform to the determiner pattern here – other than the simple determiner jeder (see (25)).

(25) a. der Wunsch eines jeden (/*jedes) Genossen
    b. der Wunsch jedes (/*jedem) Genossen

‘the wish of every comrade’

These complex determiners have the following structure (Pafel (1994)):

(26) \[
\begin{array}{c}
  D A \\
  \text{das selbe} \\
  \text{die meisten} \\
  \text{eine jede}
\end{array}
\]

The second type of complex determiner consists of two determiners, e.g., welch ein (‘what a’), solch ein (‘such a’), all das (‘all that’), alle beide (‘both’), diese meine (‘these my’).

(27) \[
\begin{array}{c}
  D \\
  \text{welch ein} \\
  \text{all das} \\
  \text{alle beide} \\
  \text{diese meine}
\end{array}
\]

Thus we get the following picture:

(28) simple D: der, dieser, sein, jeder, welcher, dieser, seiner, einer, ...
    complex D of type D+A: das selbe, das gleiche, die meisten, ein jeder, ...
    complex D of type D+D: welch ein, solch ein, all das, alle beide, diese meine, ...

Let us take a step back for a moment. We have mentioned that the pattern of determiner inflection is quite similar to the declension of strong adjectives apart from the ending in the GEN.SING.MASC and GEN.SING.NEUT. So why not take “determiners” to be adjectives following the strong declension pattern (cf. Gallmann (1990; 1996))? Now, if we take them to be adjectives, we must regard their ending in the GEN.SING.MASC/NEUT as irregular. Their topological behavior becomes irregular too, in comparison with the behavior of true adjectives. In addition, we must take the behavior of jeder in (25) as idiosyncratic. All these irregularities and idiosyncrasies can be dropped completely if we take “determiners” to really be determiners that follow the inflectional pattern in (19) and (20). This is ample reason to adopt the syntactic category D.

A clear distinction between determiners and adjectives contributes to a better account for some puzzling cases. Viele (‘many’, ‘much’) has two uses:

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5Relying on the observation that the determiner jed- can bear the -en-suffix in the genitive if the noun is marked as genitive (e.g. der Wunsch jeden Mannes), one might think that the ungrammaticality of *der Wunsch eines jedes Genossen is due to the fact that the noun phrase is marked as genitive by the indefinite article eines. But there is no constraint which prohibits more than one genitive marking in the noun phrase: der Wunsch eines Mannes, der Wunsch jedes Mannes. Thus, the reason for the ungrammaticality of *der Wunsch eines jedes Genossen is nothing but the adjectival character of jed- in this usage.

6The highly idiomatic expression unser aller as in unser aller Leben (‘the life of us all’/‘all of our lives’) might be a complex determiner too. It seems that neither part of this expression can be inflected.
It can be a quantificational determiner or an adjective. As a quantificational
determiner, it carries no inflectional endings in the singular:

(29) a. Es ist viel von dem eingetreten, was sie vorhergesagt haben.
    ‘Much of what they predicted eventually happened.’
b. Sie haben viel von dem erreicht, was sie sich vorgenommen haben.
    ‘They have accomplished much of what they set out to do.’

That we have a quantificational use of viel- here is shown by the fact that the
viel-phrase is sensitive to negation, coordination and quantifier interaction
(see Pafel (1994)). Here, we will demonstrate only its sensitivity to negation.
Sentence (30-a), on the one hand, and sentences (30-b) and (30-c), on the
other, are not logically equivalent.

(30) a. Doch ist viel von dem, was sie vorhergesagt haben, nicht eingetreten.
    ‘Yet much of what they predicted did not actually happen.’
b. Es ist nicht der Fall, dass viel von dem eingetreten ist, was sie
    vorhergesagt haben.
    ‘It is not the case that much of what they predicted actually
    happened.’
c. Es ist nicht viel von dem eingetreten, was sie vorhergesagt haben.
    ‘Not much of what they predicted actually happened.’

This becomes obvious if one takes a situation in which some of the things
predicted eventually happened, but also in which some of them did not happen.
In such a situation, (a) is true, but (b) and (c) are false.

As an adjective, viel- is located in the canonical adjectival position in the
X-field, exhibits regular adjectival inflection (in plural and singular) and is
not part of a quantificational phrase in phrases like dieses viele Geld.

Even more interesting is the case of ein. It seems that we have to distin-
guish three different uses:

(31) a. the indefinite article ein, which can be criticized (‘ne Frau ‘a
    woman’), but not stressed;\(^{7}\)
b. the quantificational determiner ein, which cannot be criticized
    (‘ne von euch ‘one of you’), but can be stressed (Elne von euch,
    Elna Frau);
c. the adjective ein, which cannot be criticized (‘die ne Frau ‘the
    one woman’), but can be stressed (die Elne Frau), inflects like an
    adjective, and is located in the canonical adjectival position in the
    X-field.

A noun phrase introduced by the indefinite article does not behave like an
ordinary quantifier, in contrast to a noun phrase introduced by the quantific-
ational determiner ein. See, for instance, their differing sensitivity to negation;
the sentences in (32) are logically equivalent, in striking contrast to the sen-
tences in (33):

(32) a. ’ne Frage hat sie nicht gestellt. (~\(\exists\))
    ‘A question, she didn’t pose.’
b. Es ist nicht der Fall, dass sie ’ne Frage gestellt hat. (~\(\exists\))
    ‘It is not the case that she posed a question.’
(33) a. Eine von den Fragen hat sie nicht gestellt. (\(\exists\))
    ‘One of the questions, she didn’t pose.’
b. Es ist nicht der Fall, dass sie eine von den Fragen gestellt hat.
    ‘It is not the case that she posed one of the questions.’ (~\(\exists\))

The matter is more complicated than we can argue here (see Pafel (1998,
sections 2.5, 6.2; forthcoming: section 4)). It goes without saying that the
semantic type of a noun phrase containing the adjective ein does not depend
directly on this adjective (cf. the case of the adjective viele).\(^{8}\)

A further interesting case is the different uses of alle. We have already dis-
cussed the alle in the Z-field, i.e., alle- preceding a demonstrative, possessive,
etc. It seems that the same kind of alle can also be located in the Y-field if it
is combined with certain pronouns.\(^{9}\)

(34) \(Z/Y\)-alle
    a. alle diese Bücher ‘all these books’
b. alles das (das alles) ‘all that’
c. ihr alle ‘you all’

\(^{7}\)Apart from an emphatic use of ein.

\(^{8}\)In several German dialects, the indefinite article is phonologically distinguished from the
quantity expression one – in Swabian, e.g., the indefinite article is a, whereas the translation
of one is oin (East-Swabian) or aä (West-Swabian).

\(^{9}\)The use of alles in wh-clauses as in (i) shows similarities to the \(Z/Y\)-alle; it is located in
Y and can easily be dislocated from the wh-phrase (cf. Pafel (1991, section 5.4), Reis (1992)).

(i) Wen alles hast du dort besucht? ‘Who all did you visit there?’
(ii) Wen hast du dort alles besucht?
The second use of *alle* is as an inflected quantificational determiner in Def:

(35) Def-alle
   a. *alle* Bücher ‘all books’
   b. *alle* ‘all’

Thirdly, there is the uninflected quantificational *all* that is part of a complex
determiner as in:

(36) Def-all
   a. *all* diese Bücher ‘all these books’
   b. *all* das Geld ‘all that money’
   c. *all* das ‘all that’

We note in passing that only Z/Y-alle allows quantifier floating:

(37) a. Diese Bücher habe ich *alle* gelesen.  [Z/Y-alle]
    b. *Bücher* habe ich *alle* gelesen.  [Def-alle]
    c. *Diese* Bücher habe ich *alle* gelesen.  [Def-all]

It has been argued that quantificational elements are of a peculiar syntactic
category, Q(uantifier) – see, for German, Vater (1986) and Giusti (1991)
among others. Our discussion of simple and complex determiners and of the
quantificational and non-quantificational uses of *ein* and *viele* make it clear
that it is unnecessary to introduce into syntax the syntactic category Q –
D and A are sufficient. It seems especially needless to assume with Vater
(1986) that quantificational elements form a syntactic category of their own,
i.e., Q(quantifier), despite the fact that they differ in their position in the noun
phrase and in their inflectional and semantic properties.

4.3. Definiteness

We characterized all the elements in the Def-position as elements which
mark the noun phrase as ±DEFINITE. We take the noun phrases in (38) to
be +DEFINITE and the ones in (39) to be −DEFINITE: (the element in Def is
in italics and it is underlined if the head-element is covert)

(38) Definite noun phrases
   a. *der* bunte Schmetterling
      ‘the colorful butterfly’
   b. *dieser* komische Kauz
      ‘this strange guy’
   c. *_* Augustus
      ‘Augustus’
   d. *der* weise Augustus
      ‘(the) wise Augustus’
   e. *Prosperos* wertvolle Bücher
      ‘Prospero’s valuable books’
   f. *seine* wertvollen Bücher
      ‘his valuable books’
   g. *mancher* bunte Vogel
      ‘many a colorful bird’
   h. *jeder* bunte Vogel
      ‘every colorful bird’
   i. *beide* römischen Feldherren
      ‘both Roman commanders’
   j. *alle* römischen Feldherren
      ‘all Roman commanders’
   k. *welches* wertvolle Buch
      ‘which valuable book’
   l. *der* selbe bunte Schmetterling
      ‘the same colorful butterfly’
   m. *die meisten* bunten Luftballons
      ‘most colorful balloons’
   n. *diese* meine ersten beiden Bücher
      ‘my first two books here’

(39) Indefinite noun phrases
   a. *ein* bunter Luftballon
      ‘a colorful balloon’
   b. *kein* bunter Luftballon
      ‘no colorful balloon’
   c. *_* süßer Honig
      ‘sweet honey’
   d. *_* bunter Vogel [gen.]
      ‘of colorful birds’
   e. *vieler* römischer, skrupelloser Feldherren [gen.]
      ‘of many unscrupulous Roman commanders’
   f. *einiger* römischer, skrupelloser Feldherren [gen.]
      ‘of some unscrupulous Roman commanders’
   g. *wie* *vieler* wertvoller Bücher [gen.]
      ‘of how many valuable books’
   h. *_* war für wertvoller Bücher [gen.]
      ‘of what kind of valuable books’

We take definiteness to be a syntactic feature which has no immediate semantic
or pragmatic interpretation. Looking at the two groups, we see that the defi-
nite as well as the indefinite group contain referential as well as quantifica-
tional phrases, and discourse-bound as well as non-discourse-bound phrases.
Thus, it is questionable whether the two groups can be distinguished on a
purely semantic or pragmatic basis (cf. Pafel (1994), Lyons (1999)).

The strongest evidence for assuming syntactic definiteness in (38) and
(39) is the fact that the determination of the strong/weak alternation of ad-
jectives can be explained, to a certain degree, by the fact that the elements in
Def are definite or indefinite. See the generalization in (40) proposed in Pafel
(1994):

10See Pafel (1996) for arguments that there is an empty D-head in *was für* phrases.
(40) a. If Def is [+DEFINITE], then A is weak.
   *der, dieser, jener, jeder, alle, beide, mancher [SING],
   welcher, die meisten, ... 

b. If Def is [−DEFINITE], then A is strong.
   *viele, wenige, einige, mehrere, etliche, manche [PLU], ...

Compare (38-ab), with the weak masculine nominative singular suffix -e, to (39-ab), with the strong one -er. Here the relation between definiteness and strong/weak seems obvious. In other cases in (38) and (39), this relation is more interesting and significant. But the reality is not as neat as the two generalizations suggest; the behavior of the adjectives following ein, kein, and the possessives is more complicated and contradicts the generalizations in (40). Here one speaks of mixed adjectival inflection. Looking at strong/weak from the perspective of ein, kein, and the possessives, the adjective’s declension seems to be determined “morphologically”: If the determiner has a strong suffix, the adjective is weak, if the determiner has a weak suffix, the adjective is strong (cf. Demske (2001, section 2.1.2)). If these generalizations are adopted, the behavior of adjectives following indefinite determiners (40-b) becomes idiosyncratic. As it seems impossible to have both sets of generalizations, it appears to be more appropriate to locate the idiosyncrasies with ein, kein and the possessives: Expressions which have a high token-frequency are sensitive to idiosyncrasies (see above; cf. Pafel 1994).

4.4. Pronouns

We will divide the pronouns into three classes – D-pronouns, N-pronouns, and D/N-pronouns. Inflection and distribution are the two criteria which this classification is based on. The prototypical D-pronoun exhibits determiner inflection and allows no overt D-, A-, or N-element. The prototypical N-pronoun is uninflated and allows no overt D-, A-, or N-element. The prototypical D/N-pronoun can, but must not exhibit determiner inflection, and can allow overt adjectives, but neither an overt D- nor an N-element. Let us look at these classes one by one.

We have taken the indefinite pronoun einer and the possessive pronouns meiner etc. to be determiners, as they satisfy the morphological criterion of a determiner, i.e., the pattern of determiner inflection. These pronouns cannot be combined with D-, A- and N-elements, but with elements in Z and

Y (nur einer, einer von uns). Thus, the topological criterion of a determiner is not applicable. But minimizing the difference between indefinite and possesive pronouns, on the one hand, and their non-pronominal counterparts, on the other, suggests that the former are D-elements occupying DEF. If the topological schema is suitable for both non-pronominal and pronominal noun phrases, filling X and Nom with overt material must be prohibited. One way to do this is to assume that there is a covert noun located in Nom, which prohibits the insertion of an overt noun. Independent evidence for a covert noun are expressions of the type pronom-genitive (e.g., einer unserer Freunde (‘one of our friends’)), as it is common to assume that the genitive is assigned by an adjacent N. 11

The demonstrative pronoun der/das/die, which differs from the article der/das/die with respect to the dative plural form and the genitive forms, is a D-pronoun too. The forms of the interrogative and indefinite pronoun wer (wen, wem, wessen) are similar to the demonstrative pronoun der; therefore wer will be classified as a D-pronoun.

A more controversial topic is that of the personal pronouns. Regarding the personal deictics – ich, du, wir, ihr, Sie – it has been argued convincingly (e.g., by Lawrenz (1993, section 6)) that they can have overt X- and Nom-elements (wir begeisterten Bachfans (‘we enthusiastic Bach fans’), ich dummer Idiot (‘I stupid idiot’)). It seems that ich and du and their plurals can have a covert noun or an “emotionally marked” noun in Nom, whereas wir and ihr additionally allow neutral nouns.

(41) a. wir
   b. wir dummens Idioten
   c. wir begeisterten Bachfans

(42) a. ich
   b. ich dummer Idiot
   c. *ich begeisterten Bachfan

These pronouns’ syntactic behavior and their form, which at least partially conforms to the determiner inflection, leads us to the conclusion that the per-

11There are clear differences between partitive genitive noun phrases (unserer Freunde) and partitive von-PPs (von unseren Freunden). The von-PP can be quite freely extracted and extraposed, whereas the genitive noun phrase cannot be extracted and can hardly be extraposed (cf. Pafel (1995), where it is argued that this difference can be explained by assuming that the genitive noun phrase is the complement of N and the von-PP is adjoined to DP).
sonal deictics are D-pronouns. Finally, the anaphoric pronouns (er/sie, sie) bear some relation to the determiner inflection too, but do not allow any overt Nom-element.

N-pronouns show no variation in form and allow no overt D-, A-, or N-element. This class contains the interrogative pronoun was, the reflexive pronoun sich and the reciprocal pronoun einander. Therefore, we hesitate to locate them in Def. Before we proceed, we must add that the case of was is controversial. Often it is assumed that the paradigm of was is was (nom), was (acc), wem (dat), wessen (gen) (cf. Eisenberg (1980, 65; 1986, 333)). But it is obvious that there is also a dative was (at least in colloquial speech):

(43) Vor was für dich? ‘What are you afraid of?’

The case of the genitive was is more difficult. But sentences like (44) seem to show that was can be a genitive form too:

(44) a. [genitive Was für eines Verbrechens] wird er beschuldigt? ‘What kind of crime is he being charged with?’
b. [genitive Aufgrund was für eines Vorfalls] ist er verhindert? ‘Because of what kind of incident is he absent?’

In Pafel (1996, section 4.3), there is an elaborate argument to the effect that the properties of was für-phrases can be best accounted for if was is viewed as an N-element (the extraction behavior of was being the decisive piece of evidence). Thus, we propose that the interrogative pronoun was, the reflexive pronoun sich, and the reciprocal pronoun einander be analyzed as pronouns located in Nom.

The third class of pronouns is the D/N-pronouns. Their characteristic feature is their ability to be combined with a so-called substantivized adjective. This class contains jemand, niemand, etwas, nichts, alles, and the indefinite was.

(45) a. Jemand Neues (ist gekommen). ‘Someone new (came).’
b. Nichts Aufregendes (ist passiert). ‘Nothing exciting (happened).’
c. Was Neues (gibt es nicht zu berichten). ‘Something new (cannot be reported).’

The adjectives that these pronouns can be combined with are true adjectives (the orthographic convention of capitalizing them is deceptive), since they can be iterated and modified like adjectives and are inflected like adjectives. However, the adjective cannot be combined with a noun (*Jemand Neues Person ist gekommen). These properties can be accounted for if one assumes that we are dealing here with an instance of an N-to-D-movement of the pronoun, as has been argued by Haider (1992, 319) and Pafel (1995, 174, note 23) (cf. Kishimoto (2000) for English).

4.5. Prepositional Genitive and Prepositional Dative

There are several kinds of possessive constructions in German:

(46) a. Seine Kantaten sind weltberühmelt. [bare possessive]
b. Die Kantaten von Bach sind weltberühmelt. [von-PP]
c. Die Kantaten Bachs sind weltberühmelt. [postnominal genitive]
d. Bachs Kantaten sind weltberühmelt. [prepositional genitive]
e. Dem Bach seine Kantaten sind weltberühmelt. [prepositional dative plus possessive]

‘Bach’s (his) cantatas are world-famous.’

The topological analysis of the first three is straightforward. The constructions in (46-de), however, are more interesting. The prepositional dative construction is wide-spread in German dialects and colloquial German. One might suppose that the dative is located in the Z-field. But this cannot be right if one takes Generalization I into account: The dative cannot be dislocated from the rest of the noun phrase.


These sentences are unacceptable taking the dative as a possessor, i.e., in the reading of (46-e). If the dative is not a Z-element, it must be part of Def — together with the possessive seine. This follows the logic of the proposed topo-

12 During the federal elections in Germany in 2002, a slogan which attained some popularity was based on a double prepositional DP plus possessive construction:

(i) Ich wähle Doris ihrem Mann seine Partei.
   ’I’m voting for Doris’s husband’s party.’

(ii) (DP (DP Doris [ihr] Mann) seine) Partei
logical account if the possessive is an element of Def. Furthermore, according to Generalization II, the dative and possessive should form a determiner together. The possessive would be the head of the complex determiner with the dative adjoined to it.\(^{13}\)

(48)

\[
\begin{array}{c}
D \\
\text{DP} \\
\text{dem Bach} \\
\text{seine}
\end{array}
\]

This is not a standard structure as usually words adjoin to words (\(X^0\) to \(Y^0\)) and phrases adjoin to phrases (XP to YP). It is obvious that the dative in this kind of construction cannot be assigned in a canonical way like the postnominal definite. It is idiosyncratic to this construction.

In this construction, there is a transparent distribution between the possessor, i.e., the dative DP, which is a referential expression and can be assigned a thematic role, and the possessive description operator, i.e., the possessive, which makes the headed DP into a definite description. The “agreement” between the dative and the possessive in number, gender, and person should not be implemented by agreement between the features of the dative and the possessive, as this would result in feature clashes (\(\text{seine}\) in (46-e) would be plural as well as singular). It seems more reasonable to treat the “agreement” as a selection requirement on number, gender, and person which is imposed on the dative by the possessive.

A similar account may be given of the prenominal genitive. It cannot occupy the Z-field, as it cannot be dislocated. Since it is not adjectival in character,\(^{14}\) it cannot be located in the X-field either. Therefore, it must be located in Def. One might take a prenominal genitive like \(\text{Bachs}\) to be a determiner (cf. Lattewitz (1994)), but, firstly, it does not show any indication of determiner inflection, and, secondly, the “determiner” \(\text{Bachs}\) would have to be plural in \(\text{Bachs Kantaten}\) in order to agree with the noun. It seems more sensible to stipulate an empty determiner that the genitive is adjoined to.

(49)

\[
\begin{array}{c}
D \\
\text{DP} \\
\text{Bachs} \\
\text{∅}
\end{array}
\]

The genitive is the possessor and the empty definite \(D\) is the possessive description operator, which carries the noun phrase-internal agreement features. The genitive can be regarded as idiosyncratic to this construction or as a requirement of the empty \(D\) on the possessor. The restriction to proper names in the genitive is another peculiarity of this construction.

Incidentally, with the help of the superlative construction, it can be shown that the prenominal genitive has the status of a determiner. See the following pattern of acceptable and unacceptable phrases:

(50)

a. \(\text{der beste Freund der Marie}\)  'Mary’s best friend'

b. \(\text{ihr bester Freund}\)  'her best friend'

c. \(\text{Maries bester Freund}\)  'Mary’s best friend'

d. \(\text{*bester Freund (von Marie)}\)  'Mary’s best friend’

e. \(\text{*von Marie bester Freund}\)  'Mary’s best friend’

This pattern suggests that an overt definite determiner must accompany the superlative. But if that is the case, the prenominal genitive must have the status of a definite determiner. Alternatively, one might divide the genitive into the noun stem as constituting the DP and the genitive -\(s\) as the determiner (cf. Olsen 1991). However, such a violation of the integrity of words in syntax seems unnecessary.

Looking from this perspective at the bare possessive construction, an analysis in accordance with the prenominal dative and prenominal genitive construction presents itself.

\(^{13}\)Because uninflected \(\text{all}\) is part of a complex determiner (see above), the following quite acceptable noun phrase indicates that dative plus possessive does indeed have determiner status:

(i) \(\text{all dem Bach seine Kantaten (cf. all seine Kantaten, *all Bachs Kantaten)}\)

The reason for the ungrammaticality of \(\text{all Bachs Kantaten}\) might be that \(\text{all}\) as an uninflected element can only be combined with determiners exhibiting determiner inflection.

\(^{14}\)For the following reasons: (i) \(\text{APs}\) cannot precede the genitive; (ii) the genitive cannot be modified like an adjective; (iii) there are genitive phrases which definitely are not adjectives (e.g., \(\text{des Kaisers (neue Kleider)}\) ("the emperor’s new clothes"); (iv) the genitive does not exhibit strong/weak alternation; and (v) there is no evidence for -\(s\) being an adjectivizing suffix (pace Gallmann (1997)).
(51)  
\[ \text{DP} \quad \text{D} \quad \emptyset \quad \text{seine} \]

Here we also have a complex determiner, consisting of an empty pronoun as the possessor, and the overt possessive as the possessive description operator. The empty pronoun behaves just like an overt pronoun: It can be either a referential term (co-referential with its antecedent) or a variable.

5. Nominal Position

Not only a simple N⁰-constituent can be located in the nominal position (Nom), but a complex N⁰-constituent can as well. An example of a complex N⁰ is Herrn Prof. Dr. Johann Sebastian Bach, as in (52).

(52) Wir alle kennen [den berühmten Herrn Prof. Dr. Johann Sebastian Bach]  
    Def X Nom  
    ‘We all know the famous Mr. Prof. Dr. Johann Sebastian Bach.’

The nouns Herr, Professor, Doktor, as well as the first names Johann and Sebastian, can be analyzed as enlargement nouns, as narrow appositions. The succession of these expressions is determined by a relatively strict rule expressed in Generalization III:

(53) Generalization III:  
The nominal position (Nom) is filled by one simple or complex nominal  
X⁰-constituent with linear precedence inside this constituent being as follows:  
nomen varians* > nomen invariants* > N > nomen (/adjectivum) invariants*  

The structure of Nom in (52) is as follows:

(54)  
\[ \text{Nom} \quad \text{DP} \quad \text{D} \quad \emptyset \quad \text{seine} \]

5. Usually narrow appositions remain uninflected (“invariants”), but there are some exceptions, i.e., “nomina varians”, like Herr (’Mr.’), Genosse (’comrade’), Kollege (’colleague’, ’coworker’). It seems obvious that these nouns are not situated in the X-field, since they are not adjectival in character and cannot be located in front of an attributive adjective:

(55) *Wir alle kennen den Herrn Prof. Dr. Johann Sebastian berühmten Bach

Additionally, elements in the X-field are inflected if possible, but as we have just mentioned, enlargement nouns are often uninflected. Narrow appositions can also be postponed. Here only the uninflected form is possible. Cf. (56):

(56) Wir alle kennen den Kirchenmusiker Johann Sebastian Bach  
    ‘We all know the clerical musician Johann Sebastian Bach.’

(57) Kirchenmusiker Johann Sebastian Bach  
    N N_invariant N_invariant N_invariant

That in (56) Johann Sebastian Bach is the apposition and not Kirchenmusiker is obvious in Standard German, as the article is not only possible, but obligatory.


This is expected if the singular count noun Kirchenmusiker is the head noun, because an overt determiner must introduce singular count nouns in argument positions, but not proper names.

(59) a. *Wir alle kennen Kirchenmusiker_{singular}  
    b. Wir alle kennen Johann Sebastian Bach.

If, in addition, the nominal element is genitive, the head noun, but not the narrow apposition is inflected:

(60) a. die Beförderung [des Kirchenmusikers J.S. Bach]  
    b. *die Beförderung [des Kirchenmusiker J.S. Bachs]  
    ‘the promotion of the clerical musician J.S. Bach’

A further type of narrow apposition occurs with uninflected adjectives as in

(61) a. Forelle blau  
    b. Wahlkampf pur
We consider narrow appositions to represent $X^0$-elements which adjoining to an $N^0$-constituent (cf. Gallmann (1999), Dürscheid (2002)).

### 6. Final Remarks

The topological theory for noun phrases in German can be formulated as follows: A noun phrase in German is well formed with respect to word order if it is constructed in accordance with schema (1) and its restrictions. In this paper, we have discussed the restrictions for the Z-field, Deposition, and Nom-position in some detail, without going into the word order restrictions for the X- and Y-field. But of course, in order to make the theory descriptively more adequate, the topological schema must be supplemented with the suitable restrictions for X and Y.

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