

GERMAN PRENOMINAL MODIFIERS*

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This paper examines the syntactic structure of prenominal modifiers in German to determine just how large or small they are. Since there is never overt tense, auxiliaries, modals or agent arguments, I argue that German prenominal constructions never contain a CP, IP or *v*P projection. Rather, they are maximally VP.

1. Introduction

In German, it is possible to modify nouns either postnominally with a relative clause (1a), or prenominally (1b).¹ Unlike English, prenominal modifiers in German can be very long indeed, as illustrated by (1c), due to Franz Kafka. A lot of lexical material can be stuffed between the initial determiner and the final head noun!

- (1) a. der Mann der im Stuhl sitzt
 det head det relative clause
 d.masc man d.masc in.masc chair sits
 ‘the man that sits/is sitting in the chair’
- b. der [im Stuhl sitzende] Mann
 det [prenominal modifier] head
 d.masc in.masc chair sitting man
 ‘the in the chair sitting man’
- c. ein zu diesem dicken Körper gar nicht passendes
 a to this thick body completely not fitting
 trockenes knöchiges Gesicht
 dry bony face
 “a dry, bony face that did not at all fit to this thick body”
 (Kafka, *Der Process*)

* I thank Henry Davis, Martina Wiltschko, Bryan Gick, Jeff Mühlbauer Andrea Wilhelm, the audience at CLA in Winnipeg, and the graduate students at UBC for helpful commentary and feedback. All errors are my own.

¹ Unless otherwise noted, all data in this paper was elicited from two adult speakers (one male, one female) of southern German origin (Bavaria and Schwarzwald, respectively). For these speakers, prenominal modifiers consisting of more than one verb or adjective are not normally employed in casual speech. Lengthy prenominal modifiers are most common in written language or formal registers. Thus, elicited examples would often be followed by comments such as “Well, no one would actually say it that way, but you *could*. In writing, sure.” However, the consultants gave very clear judgements on which prenominal modifiers are acceptable.

A tense reading can be forced in a prenominal modifier through a temporal adjunct. In (6), *gerade* ‘just now’ forces a present tense interpretation of the prenominal verb *sitzenden* ‘sitting.’ In contrast, a past tense interpretation is forced for prenominal *sitzend* in (7) through the presence of *vor einer Stunde* ‘one hour ago.’

- (6) Ich habe mit dem [gerade im Stuhl sitzenden]
Mann gesprochen.
I have with d.masc [just now in.det chair sitting]
man spoke
‘I spoke with the man who is (*was) at this moment sitting in the chair.’
- (7) Ich habe mit dem [vor einer Stunde im Stuhl
sitzenden] Mann gesprochen.
I have with d.masc [before one hour in.det chair
sitting] man spoke
‘I spoke with the man who was (*is) sitting in the chair an hour ago.’

Example (8b) shows that it is ungrammatical to have tense marking in a prenominal modifier; compare the grammatical, smaller form in (8a). In addition to tense, aspectual markers (8c-d), auxiliaries (9b) and modals (10b) are also not permitted in prenominal modifiers. The reader is invited to contrast the illicit forms with the grammatical (a) forms in each example: (9a) shows a licit matrix clause, while (10a) gives a grammatical postnominal relative clause.

- (8) a. Ich spreche mit dem [fliegenden] Papagei.
I speak with d.masc [flying] parrot
‘I am speaking with the parrot that is flying.’
- b. *Ich spreche mit dem [ist geflogenen] Papagei
I speak with det [is flown] parrot
intended: ‘I’m speaking with the parrot that has flown/was flying.’
- c. *Ich spreche mit dem [ist fliegenden] Papagei
I speak with det [is flying] parrot
intended: ‘I’m speaking with the parrot that is flying.’
- d. *Ich spreche mit dem [wäre geflogenen] Papagei
I speak with det [would.have flown] parrot
intended: ‘I’m speaking with the parrot that would have flown.’
- (9) a. Der Mann ist schon lange Doktor
d.masc man is already long doctor
‘The man has been a doctor for a long time.’
- b. *der [lange Doktor seihende] Mann
d.masc [long doctor being] man
intended: ‘the man that has been a doctor for a long time’

- (10) a. der Tiger [den ich kaufen wollte]
 d.masc tiger [d.masc I to.buy wanted]
 ‘the tiger that I wanted to buy’
- b. *der [von mir kaufen gewollte] Tiger
 d.masc [by me to.buy wanted] tiger

I conclude that there is no IP or CP projection in prenominal modifiers.

2.2 No ν P

The head noun (the one being modified) must be the subject of the prenominal modifier (Keenan & Comrie 1977 and Keenan 1986). A prenominal modifier for which the head noun is an object (11b) or an indirect object (12b) is not possible. Again, compare the grammatical postnominal relative clauses in the (a) examples.

- (11) a. die Gedanken [die er in das Buch schreibt]
 d.pl thoughts [d.pl he in d.neut book writes]
 ‘the thoughts that he writes in the book’
- b. *die [er in das Buch schreibende] Gedanken
 d.pl [he in d.neut book writes] thoughts
- (12) a. das Buch [in das er seine Gedanken schreibt]
 d.neut book [in d.neut he his thoughts writes]
 ‘the book in which he writes his thoughts’
- b. *das [in das (*er) seine Gedanken schreibende] Buch
 d.neut [in d.neut (*he) his thoughts writing] book
 consultant comment: ‘the problem here is that there are two subjects (“he” and “book”)’

Thus, only prenominal modifiers whose modified noun is their subject are possible. This subject can be either an agent (as in 1b) or a patient. If the head noun is a patient, then the agent of the prenominal verb can be optionally introduced in a by-phrase. Crucially, the agent may not appear as a regular DP argument. This is shown in (13).

- (13) a. die (von mir / *Ich) gesehene Dame
 d.fem (by me / *I) seen lady
 ‘the lady that was seen by me’ (literally ‘the by me seen lady’)
- b. das (vom Vogel / *der Vogel) attackierte Kind
 d.neut (by.det bird / *d.masc bird) attacked child
 ‘the child that was attacked by a/the bird’
 (literally ‘the by a/the bird attacked child’)

The examples in (13) look like passive constructions, where passive morphology absorbs the agent theta role; but the agent can still be realized as a by-phrase adjunct (Chomsky 1981; Baker, Johnson & Roberts 1989; Radford 1997). Assuming that the agent is introduced in ν P (or voice phrase - Kratzer 1996), I conclude that there is no ν P projection in prenominal modifiers.

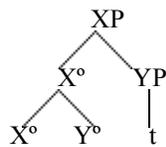
2.3 Not Merely Head-adjunction

So far, I've argued that German prenominals do not contain CP, IP or ν P. So just how small are they? The position adopted by Van Riemsdijk (1998) based on data from Dutch prenominal modifiers is that these are a V° or Adj°/AP with possible adjuncts. Van Riemsdijk (1998) notes that the prenominal modifier (verb or adjective) must appear immediately next to the head noun which it modifies. Compare grammatical (14a), where *sitzende* and *Prinzessin* are adjacent, with its illicit, non-adjacent counterpart in (14b). This is part of a larger cross-linguistic generalization known as the "same-side filter" (Ross 1973).

- (14) a. die am Tisch sitzend-e Prinzessin
 d.fem at.masc table sitting-agr princess
 'the at the table sitting princess'
- b. *die sitzend-e am Tisch Prinzessin
 d.fem sitting-agr at.masc table princess
 * 'the sitting at the table princess'

For Van Riemsdijk (1998), this same-side effect arises because the AP must agree with the noun, and adjoins to N° to do so. He adopts the head adjunction model in (15), applied to nouns and adjectives as in (16).

- (15) Head adjunction of Y° to X° (from Roberts, 1992; see Van Riemsdijk, 1998: 635; also Baker 1988)



- (16) [N' ... [AP ... [A' ... A°] $_{[a^\circ \phi\text{-features}]}$] N°] (Van Riemsdijk, 1998: 675)³

However, this is not strictly speaking head adjunction, since AP adjoins to N° here, and hence violates basic assumptions that XPs adjoin to XPs, and heads adjoin to heads (Chomsky, 1986). I assume that head adjunction is possible with a slight modification:

³ Van Riemsdijk assumes an adjectival agreement head a° in final position in the AP (1998: 675, footnote 57).

- (17) a. $[N^\circ \dots [A^\circ \dots [\dots A^\circ] [a^\circ \phi\text{-features}]] N^\circ]$
 b. $[N^\circ \dots [V^\circ \dots [\dots V^\circ] [v^\circ \phi\text{-features}]] N^\circ]$

However, we have already seen that German pronominals are larger than V° . Recall that theme arguments of pronominal verbs can be realized as full argument DPs (2, repeated below as 18b). This fact suggests that German pronominal modifiers are VPs; assuming that heads go to head positions and phrases to phrasal positions, this suggests adjunction to the NP of the head noun. Further examples of full DP themes in pronominal modifiers are given in (18).

- (18) a. der [einen Vogel fütternde] Mann
 d.masc [a.masc bird feeding] man
 ‘The man that feeds a bird’ (literally ‘the a bird feeding man’)
- b. der [jeden Morgen den grössten Vogel fütternde] Mann⁴
 d.masc [each morning d.masc biggest bird feeding] man
 ‘the man that feeds the biggest bird every morning’
 (literally ‘the every morning the biggest bird feeding man’)
- c. *? der [den Vogel fütternde] Mann
 d.masc [d.masc bird feeding] man
- d. der [seinen Vogel fütternde] Mann
 d.masc [his bird feeding] man
 ‘the man that feeds his bird’ (literally ‘the his bird feeding man’)

Example (18c), in which two d-word determiners (after Wiltschko, 1998) are linearly adjacent, is ungrammatical for some speakers (including my consultants - but see Fanselow 1986, who gives similar examples as grammatical). This may be due to a processing effect, caused by the two determiners being of the same type. It is not the determiner per se, since the phrase is licit when the two determiners are separated by an adverb phrase (18b) or the second determiner is different (indefinite or possessive (18a,d)). In any case, the presence of overt argument DPs indicates that the pronominal sphere in German admits structures larger than V° .

A possible solution, from Van Riemsdijk’s point of view, is that we motivate movement of the pronominal V° head to adjoin to N° , to give a structure as in (17b). Indeed, for Van Riemsdijk, movement is motivated for agreement. A further problem, however, is that in German, agreement appearing on pronominal verbs and adjectives is not strictly gender agreement with the head noun, but also marks the syntactic position of the entire containing DP. For example, for a definite DP with a masculine head noun, the pronominal verb takes *-e* agreement if the entire DP is a subject, but *-en* agreement if the DP is an object or indirect object. Feminine and neuter nouns force *-e* agreement on their pronominal verbs if they are in definite subject or object DPs, but *-en*

⁴ I thank Martina Wiltschko for the suggestion of introducing more context into these examples, such as (18b).

agreement if they are definite indirect objects (table 1). Since the prenominal verb cannot be head adjoined to both the head noun and its determiner, the motivation for the head adjunction analysis is further weakened.

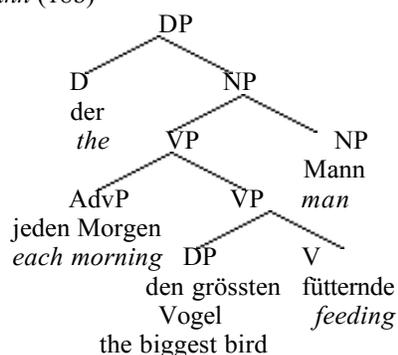
Table 1: Prenominal agreement by gender and syntactic position (definite DPs)

DP position	SUBJECT	OBJECT	INDIRECT OBJECT
masculine	-e	-en	-en
feminine	-e	-e	-en
neuter	-e	-e	-en

2.4 German Prenominal Modifiers are VP

We can account for the above facts if prenominal modifiers are a canonical non-matrix VP. I assume that the theme argument is generated as sister to V° (inside VP), and that the agent is generated outside of VP (Kratzer, 1996). A structure for the example in (2) is given below.

- (19) Prenominal modifier structure of *der jeden Morgen den grössten Vogel fütternde Mann* (18b)

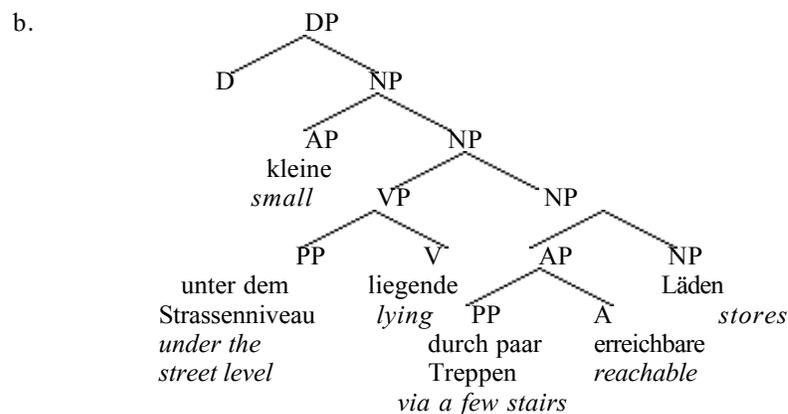


3. Predictions

The VP account predicts that a prenominal verb can assign a theme θ -role and generate a full DP theme. In addition, agents may appear in prenominal modifiers only as by-phrase adjuncts since no ν P licenses agent arguments. Thirdly, adjuncts may appear in prenominal modifiers, simply by adjoining to VP. Moreover, no tense, aspect, auxiliary or modal markers may appear in prenominals. As we saw in section 2, all of these predictions are borne out.

A final prediction is that we should be able to stack prenominal VPs and APs through multiple adjunctions to the NP of the head noun. This is, indeed, also possible. Another suitably long example from Kafka illustrates:

- (20) a. kleine unter dem Strassenniveau liegende, durch paar
 small under the street-level lying, through a few
 Treppen erreichbare Läden
 stairs reachable stores
 "small stores that lie below the level of the street that are reachable
 by (walking down) a few stairs" (Kafka, *Der Process*)



4. 'Noun-incorporating' Prenominals: A Case for Adjunction to N°

Having argued in the previous sections that prenominal modifiers are VPs adjoined to NP, rather than heads adjoined to N°, I now wish to point out that certain prenominals are different. For those with a bare noun theme argument, also possible in English, the consultant insisted that the theme noun and prenominal verb be linked orthographically with a hyphen 'because they were close together.' (21) shows some German examples, and (22) gives English forms as well.

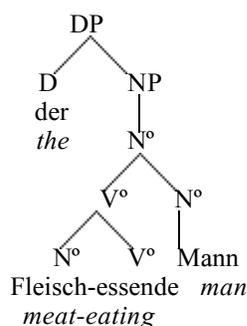
- (21) a. der Vogel-fuetternde Mann
 d.masc bird-feeding man
 'the man that feeds/is feeding birds'
- b. die Knoedel-kochende Grossmutter
 d.fem dumpling-cooking grandmother
 'the grandmother that cooks/is cooking dumplings'
- c. das Klavier-spielende Kind
 d.neut piano-playing child
 'the child that plays/is playing piano'
- (22) a. the meat-eating man
 b. the bus-driving teacher
 c. the soup-making mother
 d. the table-making carpenter

These constructions also behave differently with respect to the head noun. When a second prenominal modifier with its own adjunct is introduced, the bare noun prenominal preferably stays next to the head noun. Thus, (23a) is preferred to the (23b) (though (23b) is quite comprehensible).

- (23) a. das im Dorf wohnende Klavier-spielende Kind
 d.neut in.det town living piano-playing child
 ‘the piano-playing child that lives in the town’
 (literally ‘the in the town living piano-playing child’)
- b. # das Klavier-spielende im Dorf wohnende Kind
 d.neut piano-playing in.det town living child
 (literally ‘the piano-playing in the town living child’)

The ‘noun-incorporated’ analysis would explain these ordering effects. The bare noun is incorporated to the verb at V^o, and this V^o then adjoins to N^o. Larger VP prenominals are free to adjoin higher up the tree, to NP. The basic structure for a bare-noun prenominal is given below.

- (24) Structure of *der Fleisch-essende Mann* (‘the meat-eating man’)



This also explains why these ‘noun-incorporated’ prenominal forms are possible in English, but larger prenominals are not: English allows only V^o prenominal, while German allows both V^o and VP.

5. Conclusion

In this paper, I have argued that German prenominal modifiers are not as large as full relative clauses, nor as small as mere adjunction to N^o of the head noun they modify. I concluded that they are maximally VPs. This captures the generalizations. Prenominal modifiers cannot contain tense, aspect, auxiliaries or modals. They can not have agent arguments; agents appear only as by-phrases. On the other hand, prenominals can contain full theme arguments DPs. They can also stack, to form DPs with multiple VP prenominals adjoined to NP

I have tried to be as restrictive as possible, positing only structure for what is overtly attested in prenominal modifiers. Thus, though these structures may seem to take an interminably long time to finally get to the noun they

describe⁵ (especially to non-German students of German literature!), prenominal modifiers are syntactically quite restricted. It remains to be seen whether this structure is compatible with a compositional semantic account of prenominal modifiers. I am cautiously optimistic on this front.

In addition, I argued that German prenominal modifiers with bare noun theme arguments may be as small as V^o, and may fall under Van Riemsdijk's (1998) head adjunction analysis. This explains why such forms are also permitted in English, which would allow V^o prenominals but not larger VP structures. German thus fits somewhere in the middle of what languages allow in a prenominal sphere, since some languages permit full CP relative clauses prenominally (Wiltschko 2002 on Halkomelem Salish, Davis 2002, 2004 on St'at'imcets). I hope that this paper has contributed to the characterization of what language permits in the prenominal sphere.

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⁵ As the Kafka examples in (1c) and (20) demonstrate nicely.