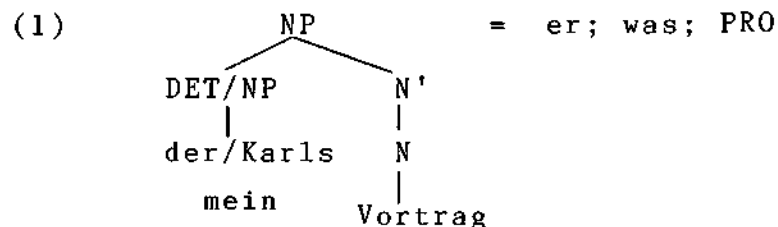# THE "POSSESSIVE" PRONOUN IN GERMAN

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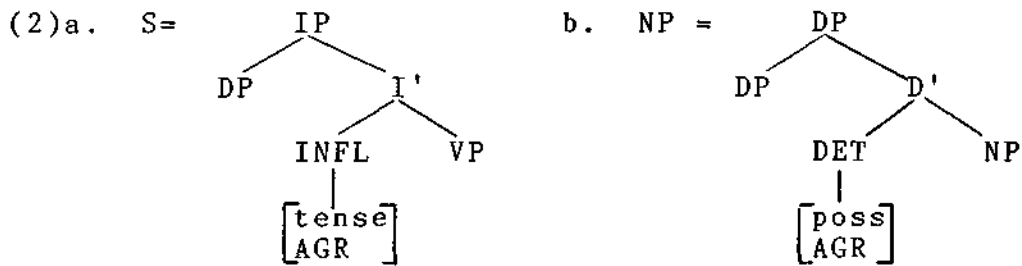
1. Introduction

1.1 The Noun Phrase as a Determiner Phrase

In the traditional analysis of the noun phrase, pronouns and determiners were seen as belonging to different categories.

(1)

```
              NP              =  er; was; PRO
           /      \
      DET/NP       N'
        |          |
     der/Karls     N
       mein        |
                Vortrag
```

A determiner like <u>der</u> 'the', <u>dieser</u> 'this', <u>jener</u> 'that' or <u>jeder</u> 'each' was considered to be a specifier of the head noun and therefore placed under the maximal expansion of N (= NP). Its categorial node was labeled "DET". The category DET shared this position in the noun phrase with full possessor phrases like <u>Karls</u> 'Charles'',<u>Deutschlands</u> 'Germany's', <u>Omas</u> 'grandma's' etc. A pronoun on the other hand was assumed to represent the entire NP. Examples are the personal and anaphoric pronouns, relatives, interrogatives as well as the empty categories PRO and pro. Possessives such as <u>mein</u> 'my', <u>dein</u> 'your', <u>sein</u> 'his' etc. were also viewed as specifiers to N. As specifiers they shared a common function with possessor phrases like <u>Karls</u>. However, they were most often assigned to the category DET in this position rather than considered to be pronominal representatives of the NP; that is, they were classified as determiners and not pronouns. This classification was undertaken due to the morphological properties of the German possessives — they, like other determiners, inflect strongly in all cases except masculine and neuter nominative singular and neuter accusative singular, where they show no inflection. This latter inflectional idiosyncracy is also shared by two other determiners, <u>ein</u> 'a' and <u>kein</u> 'no'.

A new conception of the noun phrase as a functionally headed determiner phrase has been developed in a recent dissertation by Steven Abney (1987) with the intention of capturing the structural parallelism which he carefully documents between sentences and noun phrases in several languages. In his analysis both sentences and noun phrases are assigned a uniform mode of projection.

(2)a. S= IP
        /\
     DP   I'
          /\
       INFL VP
        |
       $\begin{bmatrix} \text{tense} \\ \text{AGR} \end{bmatrix}$

b. NP = DP
         /\
        DP   D'
            /\
          DET NP
          |
         $\begin{bmatrix} \text{poss} \\ \text{AGR} \end{bmatrix}$

In the determiner phrase (= DP) shown in (2b), the category DET appears, not as a specifier to N as in (1), but as the functional head of the phrase, parallel to the role of INFL in the sentential structure of (2a). DET - like INFL - selects a lexical phrase as its complement. Furthermore, under both functional heads, an AGR(eement) element is generated which serves as the source of the verbal or nominal inflection of the phrase. These grammatical features are realized in the unmarked case as syntactically dependent elements (i.e. affixes) that must be attached to the lexical head of the complement VP or NP, cf. (<u>Er) komm+t</u> '(he) come+s'. In addition to this, the functional heads INFL and DET, by virtue of their feature structure,license the realization of a specifier by assigning it Case. The subject of a sentence receives nominative from a finite INFL (i.e. when INFL contains the feature [+tense]), whereas the possessor of a noun phrase obtains its genitive Case from a DET carrying the feature [poss], cf. <u>Der Bischof (predigt)</u> 'the bishop (preaches)' and <u>Sigrids (Auto)</u> 'Sigrid's (car)'.
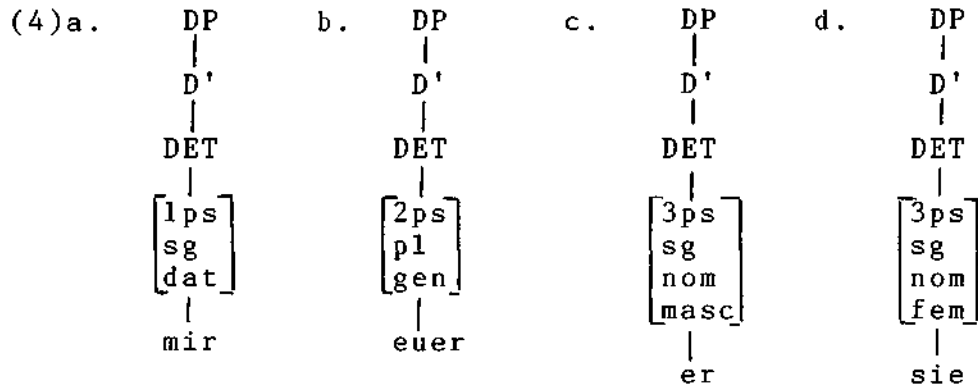
The phonological realization of a functional head doesn't always occur in affixal form. English, for example, has a class of INFL elements which occur as grammatical words rather than as verbal affixes. These are the modal verbs. In a finite sentence, modal verbs alternate with the set of tense suffixes. This complementary distribution (shown in (3)) together with their similar function justifies including them in the same category (= INFL).

(3)a. They [$_{INFL}$ -ed] laugh   (= laugh+ed)

   b. They [$_{INFL}$ should] laugh

Abney considers determiners as well as pronouns to be independent elements of the functional category DET much in the same way the modals are independent lexical realizations of INFL. This assumption consists in a break with the traditional view of pronouns in which pronouns were considered to represent the lexical category NP. Under Abney's suggestion, pronouns are now considered grammatical words, i.e. phonological representations of the feature structure of an intransitive DET. Determiners are their transitive counterparts in that they always select an NP complement (cf. <u>sie</u> 'they' vs. <u>die Linguisten</u> 'the linguists').
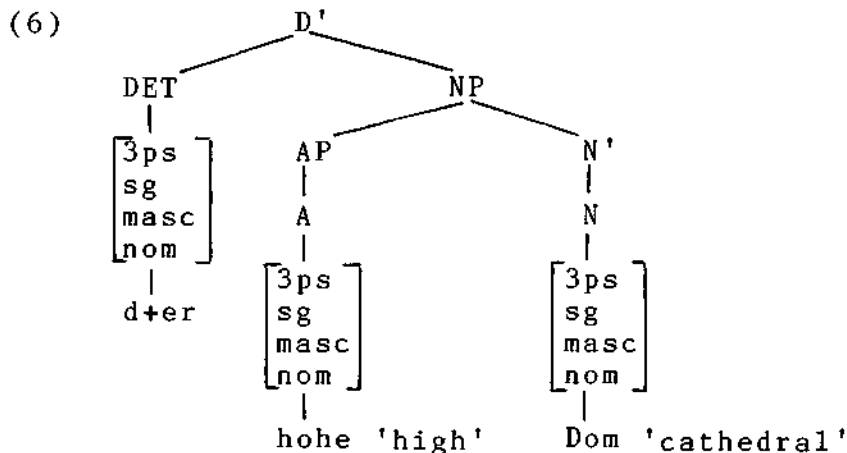
1.2 The Structure of DET

The AGR bundle under DET in German contains the grammatical features person, number, Case and gender. Gender is relevant only in the third person singular. Pronouns of the first and second person realize arbitrary combinations of these first three features with their stem form alone, as shown in (4a) and (4b). In the third person singular where the feature gender becomes relevant, the pronominal forms inflect with variant endings in each Case (nom. er-sie-es; dat. ihm-ihr-ihm; acc. ihn-sie-es).

(4)a.
```
        DP          b.      DP          c.      DP          d.      DP
        |                   |                   |                   |
        D'                  D'                  D'                  D'
        |                   |                   |                   |
        DET                 DET                 DET                 DET
        |                   |                   |                   |
      ⌈1ps⌉               ⌈2ps⌉               ⌈3ps⌉               ⌈3ps⌉
      |sg |               |pl |               |sg  |              |sg  |
      ⌊dat⌋               ⌊gen⌋               |nom |              |nom |
        |                   |                 ⌊masc⌋              ⌊fem ⌋
       mir                euer                  |                   |
                                               er                  sie
```

Pronouns realize in this fashion an independent AGR element. The feature structure of determiners, on the other hand, - due to the selectional properties of these transitive elements - is subject to certain restrictions which the pronouns - by virtue of their intransitivity - avoid. Since the nouns of the language are always marked for third person, the determiners which select them will also be limited to this value for the feature person. Determiners also agree with their nominal complement in number, Case and gender as documented in (5).

(5)a. d+er   Mist   [3ps sg nom masc]

   b. dies+em Leid   [3ps sg dat neut]

   c. jen+en Nächten   [3ps pl dat fem]

The phrases in (5) show furthermore that simultaneously with the projection of the AGR features under DET as in (4), the grammatical (and lexical) features that characterize the noun will be projected out of the lexicon yielding two congruent sets of grammatical features - under DET and under N. Haider (1988:26) proposes to explain this agreement phenomenon by appealing to the selectional properties of determiners - functional heads select the features which they themselves are specified for: This agreement phenomenon includes, besides DET and the projection line of N, any intervening adjective phrases as well.

(6)

```
                    D'
          ┌─────────┴───────┐
        DET                 NP
         |            ┌──────┴──────┐
     ┌─3ps─┐         AP            N'
     │ sg  │          |             |
     │ masc│          A             N
     └─nom─┘          |             |
         |        ┌─3ps─┐       ┌─3ps─┐
        d+er      │ sg  │       │ sg  │
                  │ masc│       │ masc│
                  └─nom─┘       └─nom─┘
                      |             |
                  hohe 'high'   Dom 'cathedral'
```

If modification is construed as the identification of the external argument of the modifier with that of the modified element as indicated in (7),

(7) $\hat{x}$ (Ax ∧ Bx)   (= $\hat{x}$ (hoch(x) ∧ Dom (x))

it will follow that both the adjective and noun must carry equivalent grammatical features, otherwise their external arguments won't be able to denote the same object (i.e. be identified).

The determiner in (6) consists of a lexical stem as well as an isolatable suffix that indicates its AGR structure. Like the third person pronouns, singular determiners also form, on the basis of this AGR suffix, an inflectional paradigm that varies according to the combination of grammatical features present (des-der-des in genitive, for instance).

1.3 The Agreement Chain

There is an obvious regularity in the German DP that only one of the congruent feature bundles under DET, A and N can take on strong inflectional form. The strong ending generally occurs under DET. Because of its phonological similarity with the form of the anaphoric pronoun, which is also a DET element, as well as for reasons of its preferred placement under DET, we assume here that this strong inflectional affix incorporates the expression of the AGR features of the functional head.

(8)a. der hohe Dom

   b. jeder hohe Dom

Interestingly, the AGR suffix isn't restricted solely to the DET position of the phrase. If a lexical determiner stem doesn't appear in the structure (or if a determiner stem occurs that isn't inflectable in certain Cases (cf. 9b)), the strong ending appears on the adjective which otherwise would take weak inflectional endings.[1]

(9)a. Ø hohe Dome

   b. einØ hoher Dom

Emonds (1985:ch.5) has developed a theory of inflection which provides us with the tools for viewing the alternating strong

and weak suffixes of the agreement chain in the German DP as a regular phenomenon. The D-structural representation of a phrase contains according to him only lexical material. (Chomsky (1985:ch.3) also considers D-structure to be a pure representation of theta structure with functional elements lacking.) Inflectional suffixes which realize the grammatical structure of closed categories[2] are then introduced into the structure by late syntactic "transformations" in accordance with the following principle.

(10) The Invisible Category Principle

An obligatory closed category B ... with a feature C may remain empty throughout a derivation if C is morphologically transparent in a phrasal sister of B.

(Emonds 1985:227)

This principle has much in common with the most accepted version of the pro drop parameter. It actually extends the strategy for licensing an empty category to functional X^0 categories, which have been represented above with the symbol "∅".

According to the analysis of the pro drop phenomenon in Chomsky (1982:85), a category can remain empty if its feature structure can be identified. The features of the empty anaphoric categories PRO and trace are identified by their antecedents with which they are coindexed or else the category (in this case, PRO) refers freely. The identification of a non-anaphoric pronominal (= pro) which doesn't necessarily have a coindexed antecedent is subject to the more stringent licensing condition that its features be locally recoverable (i.e. by its governor). The Empty Category Principle in (10) specifies the same local licensing requirement for an empty closed (or functional) category. Applied to our case, Emonds' principle states that inflectional features under a functional head do not have to be realized phonologically in this position if they are represented elsewhere within the lexical complement to this head. In other words, the absence of a strong AGR suffix under DET in (9) is licensed by the strong inflectional ending on the adjective which reflects the structure of DET. The adjective - cf. structure (6) - falls within the governing domain of DET: DET governs its complement as well as the head and specifier of this complement according to the definition of government in Chomsky (1985:162). The licensing of an empty DET by means of strong inflection on the adjective is therefore a local phenomenon since the adjective functions as a specifier to the head N. The phrases in (11) show the alternating positions of the strong AGR suffix predicted by Emonds' Empty Category Principle.

(11)a. manch∅ hoher Dom   'many a high cathedral'

 b. mancher hohe Dom

 c. welch∅ hoher Dom   'what a high cathedral'

 d. welcher hohe Dom

1.4 The Problem

The phonological shape of the agreement chain in the German DP is regulated then by the presence or absence of an inflecting determiner at the head of the phrase in accordance with Emonds' principle in (10). In the preceding discussion the domain of agreement within the DP has been equated with the selectional domain of the head, i.e. DET and its complement NP. The specifier of DET appears upon first glance to be exempted from this agreement phenomenon as the phrases in (12) illustrate, although the specifier is governed by DET.[3]

(12)a.   Kölns Ø neugestalteter Ring

'Cologne's newly structured Ring'

   b.   Heikes Ø kleines Söhnchen

'Heike's small son'

The specifier of the DP represents a maximal DP itself with its own head and complement. In this case the minimality condition of Chomsky (1986:ch.8) will guarantee that the matrix DET cannot govern into the domain of this second DET:[4] the projection of the specifier DET (D' or perhaps DP) will erect a barrier between the matrix DET and the NP complement in the specifier so that it will be protected by its own governor from government outside of its governing category. The consequence of minimality is that <u>Köln</u> will not inflect to agree with the head noun <u>Ring</u> in (12a).

There is a class of specifiers, however, which seems to run counter to condition - namely the possessives.
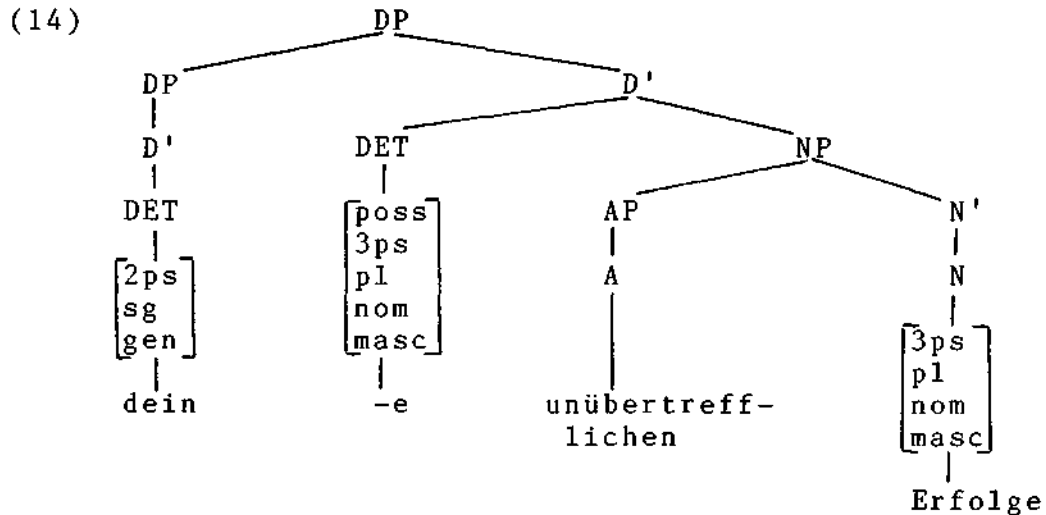
(13)a. (neben) unser<u>em</u> Ø hohen Dom

'(next to) our high cathedral'

   b.   dein<u>e</u> Ø unübertrefflichen Erfolge

'your insurmountable successes'

In the next section we will present reasons for considering the possessives to be pronouns and not determiners. This categorial assignment ensures their status as specifiers of the DP. As clear as these two premises appear to be, there remains a problem, touched upon in (13), with their acceptance: these pronouns inflect. That is to say, they take over the AGR suffix normally realized under DET, or at least within the matrix DP. This is, of course, the reason why they have traditionally within generative grammar been classified as determiners and why traditional grammar considered them adjectives (or "pronominal adjectives"). Determiners and adjectives form the two classes of inflectable modifiers of N. Pronouns represent, on the other hand, a complete noun phrase (or here a DP) and for this reason shouldn't inflect in this manner, cf. <u>ich</u> 'I', <u>mir</u> 'me' etc.[5]

2. The Possessive
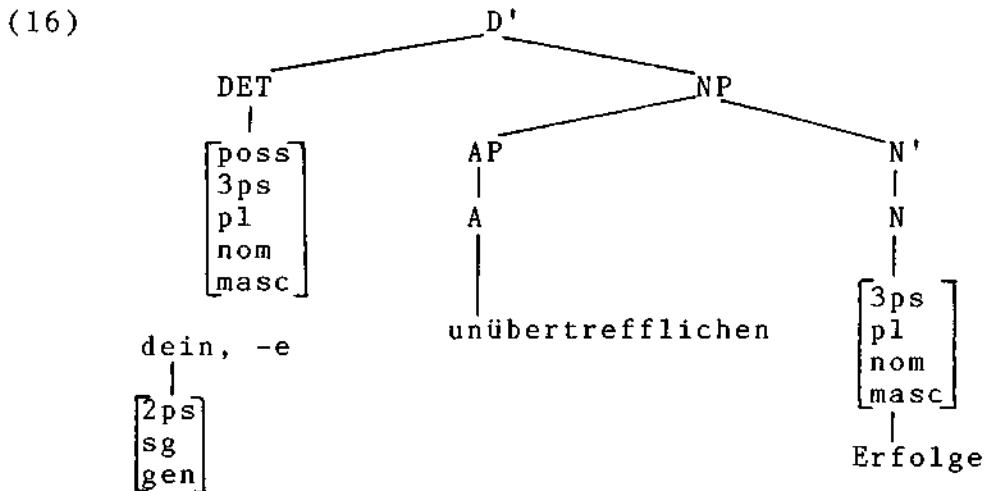
2.1 The Possessive as a Pronoun

The structure we assign to a DP with a possessive is given in (14).

(14)
```
                           DP
          ┌─────────────────┴──────────┐
         DP                            D'
          |                    ┌────────┴──────────┐
         D'                   DET                  NP
          |                    |            ┌───────┴─────┐
        DET                 ⎡poss⎤         AP            N'
          |                 ⎢3ps ⎥          |             |
        ⎡2ps⎤               ⎢pl  ⎥          A             N
        ⎢sg ⎥               ⎢nom ⎥          |             |
        ⎣gen⎦               ⎣masc⎦          |          ⎡3ps ⎤
          |                    |            |          ⎢pl  ⎥
        dein                  -e        unübertreff-   ⎢nom ⎥
                                          lichen       ⎣masc⎦
                                                          |
                                                       Erfolge
```

The possessive <u>dein</u> has been depicted here as a pronoun, that is, an intransitive DP which is - independently of the matrix DET - specified for grammatical features under its own head. As the representative of a specifier DP, it can receive Case (= genitive) as well as a theta role from the possessive feature under the matrix DET just as other non-pronominal specifiers do, such as those in (12).[6] That the possessive in fact does carry a theta role like other DPs can be seen from the following examples in which an array of different roles are assigned to the possessor, be it a pronoun (= possessive) or a full noun phrase (= DP).

(15)a. deine/Achims Beleidigung des Oberarztes   (agent)
         'your/Achim's insult of the doctor'

    b. deine/Achims Versetzung   (patient)
         'your/Achim's transferal'

    c. deine/Achims Größe   (theme)
         'your/Achim's size'

    d. deine/Achims Freude   (experiencer)
         'your/Achim's joy'

    e. deine/Achims Söhne/Begabung/Wohnung   (possession)
         'your/Achim's sons/talent/apartment'

If, on the other hand, the possessive is treated not as a pronoun (i.e. an intransitive DP) but as a determiner and consequently placed under the matrix DET, the following configuration arises.

(16)

```
                              D'
              DET                          NP
               |                 AP                  N'
            ┌poss ┐              |                    |
            │3ps  │              A                    N
            │pl   │              |                 ┌3ps ┐
            │nom  │                               │pl   │
            └masc ┘                               │nom  │
                                                  └masc ┘
          dein, -e          unübertrefflichen
               |                                   Erfolge
            ┌2ps┐
            │sg │
            └gen┘
```

This structure is intolerable for the following reasons.
First of all, the relation of possession (in the broadest
meaning of the word, cf. Anderson (1984)) is not represent-
ed properly. Case and a theta role are ascribed in (16)
to a functional X^o category (i.e. DET). These, however, are
both properties of referential expresssions, i.e. X^{max} cate-
gories. In order to receive a theta role, therefore, dein
must represent a maximal projection, which would be a DP
and not DET. Secondly, the DET node in (16) is carrying
contradictory grammatical features. It is marked for both
second and third person - it derives the value second person
from dein and third person from the head noun Erfolge. But
it is also marked for singular and plural - singular because
of dein and plural because Erfolge denotes a plural entity.
Furthermore, if dein is to be considered Case-marked (i.e.
genitive) for the Theta Criterion, then DET is also carrying
two Case features, genitive and nominative, since the matrix
DP is specified for nominative.

All these difficulties can be avoided if the possessive is
considered a pronoun (more precisely, an intransitive DP)
rather than a determiner (a transitive DET). This conclusion
is plausible for other reasons. Possessives refer in the
same manner that personal pronouns do.

(17)a. Karl$_i$ berichtete Peter$_j$, daß sein$_{i/j/k}$ Auto

        kaputt ist.

        'Carl reported to Peter that his car is not running.

    b. [Karls$_i$ Vater]$_j$ ist älter, als er$_{i/j/k}$ zugibt.
        'Carl's father is older than he admits.'

Sein in (17a) can be coindexed with Karl or Peter, or it can
refer to a third person (= k). It therefore displays the same
the same range of referential possibilities as the pronoun
er in (17b).

The possessive can be coordinated with full possessor phrases
as (18) demonstrates but not with ordinary (unstressed)
determiners, cf. (19).

(18)a. Sie treffen sich in <u>deiner und Karls</u> Lieblings-
kneipe.

'They are meeting in your and Carl's favorite pub.'

b. Ohne <u>seines Vaters und meinen</u> Rat sollte er nichts
unternehmen.

'Without his father's and my advice, he shouldn't
undertake anything.'

(19)a. *Ich wasche <u>deinen und den</u> Wagen.

'I will wash your and the car.'

b. *Karl repariert <u>weder das noch mein</u> Telefon.

'Carl will repair neither the nor your telephone.'

These coordination tests indicate that the possessive is of
the same category type (= X^{max}) as <u>Karls</u> but of a different
category type from a determiner (which is a X^0 category).

The facts discussed above point strongly towards the con-
clusion that the possessive is a genitive-marked pronoun.
The difference between a personal pronoun in the genitive
(=(20a)) and a possessive pronoun (=(20b)) is that the pos-
sessive in German is capable of inflection.

(20)a. Er spottet <u>deiner</u>.

'He is ridiculing you.'

b. Deiner Katze/deinem Hund schmeckt das Futter nicht.

'The food doesn't taste good to your cat/dog.'

The personal pronoun <u>deiner</u> in (20a) receives its Case and
theta role from the verb <u>spotten</u>. The governor of the pos-
sessive <u>deiner/deinem</u> in (20b) is the DET of the matrix DP.
It is from this category that the possessive receives its
Case and theta role. Whereas the genitive form of the per-
sonal pronoun <u>deiner</u> is invariable, the genitive stem <u>dein</u>-
of the possessive inflects to agree with the feature struc-
ture of its matrix DET. This difference in form of the two
pronoun types must be reducible in some way to the content
of the respective governor. The possessive is governed by a
functional category containing grammatical features which -
as opposed to a lexical verb - are capable of triggering
overt morphological agreement. Before we develop this idea
more fully, it should be pointed out that there must be more
involved in the explanation of the inflecting possessive than
merely the content of its governor. INFL as well carries
nominal AGR features without triggering morphological agree-
ment on its pronominal specifier.

(21)a. Du lügst.   vs. *dein Lüge

'You are lying'   'your lie'

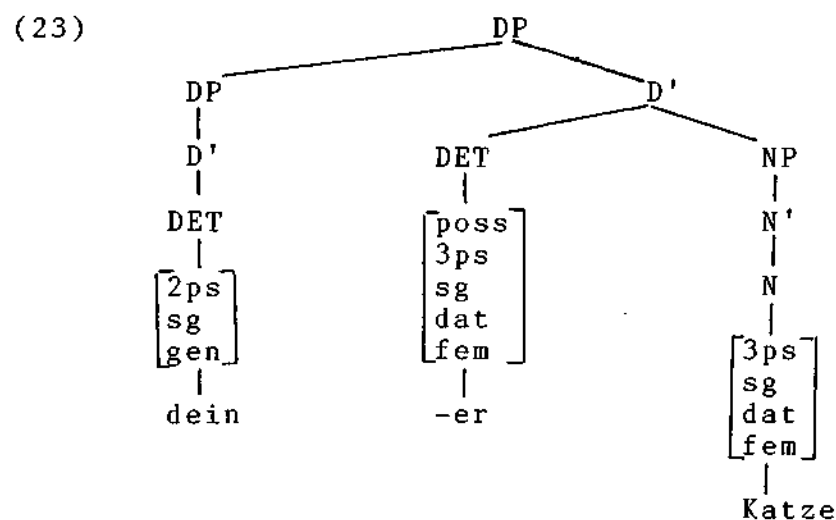b. *Du+AGR lügst   vs.   dein<u>e</u> Lüge

Let us therefore take a more careful look at the two func-
tional categories that carry an AGR element - DET and INFL -
and compare them in their roles as the functional head of
the phrase.

2.2 DP and IP in German

The INFL node in (22) generates a tense suffix and a per-
sonal suffix, the latter being a copy of the relevant fea-
tures of its specifier. Both suffixes will be affixed to
the verb.

(22)

```
                            IP
               ┌─────────────┴──────────┐
              DP                         I'
               |                   ┌──────┴──────┐
              D'                  VP            INFL
               |                   |              |
             DET                  V'           ⎡tense⎤
               |                   |            ⎢2ps  ⎥
            ⎡2ps⎤                  V            ⎣sg   ⎦
            ⎢sg ⎥                  |              |
            ⎣nom⎦                lüg-          -t, -est
               |
              du
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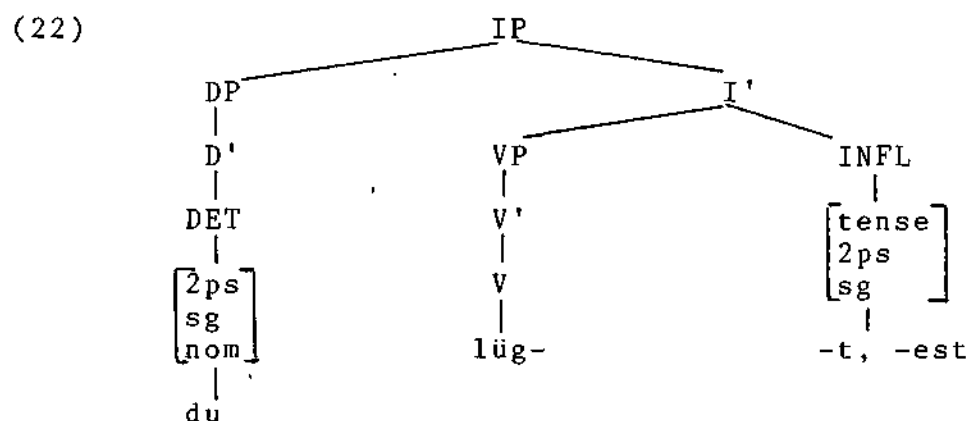
The DP in (23) has another type of functional structure.

(23)

```
                            DP
               ┌─────────────┴──────────┐
              DP                         D'
               |                   ┌──────┴──────┐
              D'                  DET            NP
               |                   |              |
             DET                ⎡poss⎤           N'
               |                 ⎢3ps ⎥           |
            ⎡2ps⎤                ⎢sg  ⎥           N
            ⎢sg ⎥                ⎢dat ⎥           |
            ⎣gen⎦                ⎣fem ⎦         ⎡3ps⎤
               |                   |            ⎢sg ⎥
             dein                 -er           ⎢dat⎥
                                                ⎣fem⎦
                                                  |
                                                Katze
```

The German INFL incorporates inflectional suffixes which
will ultimately be realized on the verb and therefore en-
code the grammatical structure of the verb's specifier. The
grammatical structure of the DET node on the other hand, is
congruent with the grammatical features of the noun in its
complement and produces an inflectional copy of this struc-
ture. This copy of the inherent nominal features will not,
of course, be expressed again on the noun - as the inflec-
tional suffix under the INFL node in (22) will be on the
verb -, but rather is realized independently of the noun in
situ at the head of the phrase, cf. die Katze 'the cat'
(that is, apart from those cases where Emonds' principle in
(10) takes effect).

While INFL plays a role in determining the time reference
of the event expressed by the verbal predicate, DET is tied
up functionally with determining the reference of its nominal
complement.[7] In a complex DP, therefore, there are two re-

ferents that must be determined – that of the matrix noun and the object referred to by its specifier. The inflectional congruence of a pronominal specifier with the matrix DET has the unusual effect of encoding properties concerning both referents onto the specifier – the possessive denotes an object by virtue of its stem form and at the same time carries an inflectional suffix that belongs to the matrix DP. How can such a situation arise? A closer comparison of the two types of specifiers – pronominal and nominal – may lead us to a possible answer to this question. In (24) the AGR suffix has been underlined.

(24)a. dein+e Ø pfiffige Frisur   'your smart hair-do'

b. Oma+s Ø pfiffige Frisur

The possessive dein- in (24a) is an intransitive DP that consists only of a DET node with the functional structure [2ps sg gen]. The grammatical features of possessive (and personal) pronouns, it will be recalled, are not expressed by an overt affix but are lexically incorporated in the stem of the pronoun. The nominal specifier Omas, on the other hand, represents more structure than just a functional DET alone. This DP contains an empty DET as well as its lexical NP complement. Furthermore, the lexical head of this complement is marked with an overt inflectional affix, the genitive -s, which it receives from its governor (DET). The morphologically complex form Oma+s cannot accept an additional inflectional suffix from the matrix DET which encodes Case, number and gender of another noun. Such a situation is precluded by the minimality condition (cf. footnote 4). This condition doesn't apply to the pronominal specifier dein, however. The matrix DET governs its specifier and the head position of the specifier. This is a case of normal head-to-head government. Dein-, therefore, – as opposed to Oma – is governed by the matrix DET and is also apparently, due to the special morphological shape of its stem, inflectable. Its grammatical features are not already expressed by an inflectional affix but are inherent to the lexical stem. The different behavior of the two types of specifier can be seen as a function of their syntactic position as well as their morphematic structure. A pronominal specifier is governed by the matrix DET and is – as a simple stem form – susceptible to its inflectional influence. A nominal specifier, however, is protected via minimality from government by an element outside the domain of its own governor and therefore immune to the internal make-up of the matrix DP.

This analysis also offers an account of the difference between a possessive and "normal" genitive marked personal pronoun. Both pronominal forms stem from a basic genitive (dein), but only the possessive is governed by a functional category.

Present Day German doesn't have a lexical-determiner that can lexicalize a DET node with possessive structure.

(25)a. *dein die Frisur

   b. *Omas die Frisur

The AGR suffix therefore cannot be realized under DET as
the examples in (25) show. In this case, the strong in-
flectional ending appears on the pronominal specifier as
in (24a) or on the adjective as in (24b), whichever offers
the first possibility. Emonds' Invisible Category Principle
in (10) will therefore have to be revised to include the
possibility that an empty functional head can also be licen-
sed by the specifier. That is, local licensing of an empty
head can take place anywhere within the governing domain of
this head and not just from within the complement. Linearity,
however, seems to play a crucial role - the head apparently
must be licensed by the first inflectable category within
its governing range. In (10') we reformulate Emonds' prin-
ciple using the notion governing domain.

(10') Revised Empty Category Principle

> The AGR features of a functional head may remain
> unexpressed in this position if they are identified
> elsewhere within the governing domain of this head.

The linearity condition has not been formulated into (10')
since it may be derivable from perceptual conditions which
dictate that licensing must occur at the first possible op-
portunity.

2.3 The Synthetic DP in Hungarian

Taking a synthetic DP with a pronominal specifier in Hun-
garian as an example, it immediately become obvious that this
DP shares similarities, not with the German DP, but with the
German IP.

(26) a   te-∅   vendég-e-d   'your guest'

      the you-nom guest-poss-2sg   (Szabolcsi 1983:89)

(27)

```
                              DP
                  _____
              DP                         D'
              |                     _____
              D'              DET             NP
              |               |               |
           ┌2ps┐           ┌poss┐            N'
           │sg │           │2ps │            |
           └nom┘           └sg  ┘            N
              |               |              |
             te            -e-, -d        ┌3ps  ┐
                                          │sg   │
                                          │masc │
                                          └nom  ┘
                                             |
                                          vendég-
```
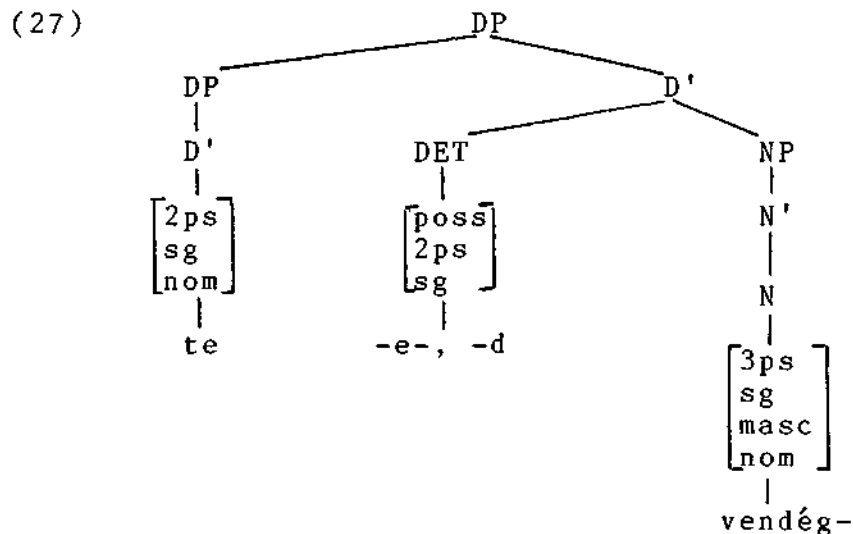
As under the German INFL in (22), the feature structure of
DET in Hungarian in (27) is mainly a copy of the features of

x

The personal suffix on the noun which is generated in the DET position ("null" in the case of the third person, but cf. example (27)) identifies the grammatical content of the empty pronoun.

2.4 Pro Drop in the German DP

In an attempt to avoid the consequences sketched in the analysis given in sections 2.1 and 2.2 of the inflectability of a pronoun (i.e. a maximal (intransitive) DP), Gisbert Fanselow[9] has suggested the following alternative analysis to me:

(30) [DP pro [D' [D deine[i]][NP Bücher]]]

The possessive DP in (30) contains an empty pronominal in the specifier position (= pro) and at the same time a possessive form (dein-) within DET which could function to license the empty specifier under the pro drop strategy of Chomsky (1982) discussed briefly in section 1.3. The advantage of this analysis is that pro, representing a maximal projection, can accept Case and a theta role form DET while the possessive itself – now analyzed as a determiner stem – will carry the AGR suffix. Our problem of section 2.2 – the phenomenon of an inflecting pronoun – has been alleviated here by the assumption of a more complex structure in which the two properties – inflection plus pronoun, problematic when taken together (i.e. assigned to one category) – have been divided now among two positions, each capable of expressing one of the properties: pro accepts Case and a theta role and the possessive stem (considered a determiner) realizes the AGR element under DET.

Fanselow points out that (30) allows us to maintain a simpler generalization concerning the placement of the strong inflection. The AGR affix originates under the head of the phrase and is realized either there or on the adjective according to the Invisible Category Principle. The analysis provided in section 2.2 allows for the additional possibility that the AGR suffix can also occur on a pronominal specifier. A second advantage of (30) is that we now have an explanation for the non-occurrence of the sequence possessive + determiner (*deine die Frisur, cf. (25)). Both "determiner" types vie for the position of DET resulting in their complementarity. The possessive occurs when DET is marked with the feature "poss", in which case no further determiner may arise. Thirdly, under the assumptions of (30), we now have the structural basis of accounting for the alternation possessive construction in (31).

(31) dem Vater sein Haus

If sein occupies DET, then dem Vater can assume the specifier position of the DP. Finally, the fact that the quantifier alle can precede the determiners die and diese in (32b) and (32c) but does not precede the possessor Peters in (32d) seems to point to the determiner status for the possessive in (32a). Alle apparently can take scope over a D' configuration but not over the entire DP structure in (32d).

(32)a. alle meine Bücher   c. alle diese Bücher

b. alle die Bücher   d. *alle Peters Bücher

Although this analysis of the possessives appears upon first glance to smooth several rough edges left by the analysis in section 2.2, it in the end runs into the same difficulties that the structure in (6) produces where the possessive is also portrayed as a determiner rather than a pronoun. In order to identify the grammatical content of the empty category pro, the "determiner" dein in (30) will have to be specified with the features [2ps sg gen]. In order to see this clearly, let us briefly examine the structure underlying the classic pro drop case in the Italian sentence parla '(he) speaks' taken from Chomsky (1982:162)

(33)   pro^i $\begin{bmatrix} nom \\ 3ps \\ sg \end{bmatrix}$ [INFL AGR^i]   parl-

In a sentential pro drop construction like (33), AGR itself is specified within INFL for grammatical features congruent with its specifier, the subject of the sentence. These features will ultimately be realized phonologically as an inflectional suffix on the verb parl+a. From their position within INFL, they govern pro and therefore identify its content locally, thus licensing the empty subject.

The difference between (33) and (30) is that the analytical DET in German, as opposed to the synthetic INFL in Italian, is not specified for the AGR features of its specifier, but for those of its complement (cf. (23)). Because the determiner in German agrees in features with its complement, any attempt to treat the possessives as elements of this class will always result in the contradictory double specification of feature values seen in (16). Moreover, the analysis in (30) leaves open the categorial status of non-inflecting possessives in languages like English. Should my in my books be treated as a pronoun as in (34a) or as a determiner as in (34b) once we accept the assumptions entailed in (30)?

(34)a. [DP my [D' [D Ø][NP books]]]

b. [DP pro^i [D' [D my^i][NP books]]]

In a language like Swedish - cf. example (39) in the next section - the possessives would be divided among both categories DET and DP which are not equal in status, DET belongs to the X0 level, whereas DP represents a maximal projection. The inflecting possessives of the first and second persons in Swedish (cf. (39a)) would have to be placed under DET, while the non-inflecting third person possessives (=(39b)) would have to be placed under the specifier DP (accompanying an empty DET) since they don't differ in any way from the genitive form of the personal pronoun. A further difficulty of the pro drop analysis in (30) lies in the fact that, whereas it can predict the obligatory absence of a determiner in a possessive DP with a pronominal specifier in (35a), it says nothing about the necessary absence of the determiner

in an equivalent structure with a nominal specifier as
in (35b).

(35)a. *dein die Frisur

b. *Omas die Frisur

The structures in (35), however, are certainly reflexes
of one and the same phenomenon and should therefore reduce
to the same prohibiting factor. As a matter of fact, con-
figurations like those ruled bad in (35) do occur in a
number of languages indicating that it is wrong to rule
out (35a) for principled reasons. In Italian as well as
in several of the older Germanic dialects - Old English,
Gothic and Old High German (cf. (36)) - the possessive
does cooccur with an article.[9]

(36)a. il suo gatto   It. 'his/her cat'

b. seo hire gebyrd   OE'her birth' (Kellner 1974:138)

c. thata vaúrd theinata Got.'thy word'' (Grimm 1898:463)

d. thiu sîn giwalt   OHG 'his force' (Grimm 1989:474)

What needs to be explained in these examples is the reverse
order of the possessive and the determiner, not the cate-
gorial status of the possessive.

The problems pointed out by Fanselow in (31) and (32) re-
main unsolved for the time being under our classification
of the possessive as a pronoun in sections 2.1 and 2.2.
Nevertheless, upon the background of the discussion above,
it appears that (14) as opposed to (30) does indeed represent
the more adequate solution to our problem of the categorial
status of the possessive. Possessives are pronouns and not
determiners.

2.4 Summary

Where the traditional analysis of the noun phrase provided
only one structural specifier position inside NP that was
shared by the categories DET and NP (cf. diagram (1) above),
the DP analysis clearly differentiates between two structural
pre-NP positions - the DET position as the functional head
position of the phrase (a X^0 category) and its specifier posi-
tion which contains a X^{max} category (= DP). The DP analysis
furthermore presents a new conception of the category pronoun.
Treating pronouns as elements of the category DET, it pre-
dicts the formal and functional similarity actually found in
German between pronouns and determiners. They are intransi-
tive and transitive realizations of this functional cate-
gory.[10] In figures (14) and (23), the possessive has been
portrayed as a genitive marked pronoun. It differs in one
aspect from the other personal pronouns - it encodes the
grammatical features of its governor in the form of a strong
inflectional ending which we have termed the AGR suffix. This
agreement between the pronominal specifier and the matrix
DET is a reflex not only of its structural position, but also
of its special morphematic structure. The possessive pronoun

falls within the governing domain of an analytic DET and
as a morphologically non-complex stem form it is suscep-
tible to inflection. The possessive can therefore serve
as a host for the strong AGR suffix in the obligatory ab-
sence of a lexical determiner stem under a DET with the
feature "poss", licensing in this manner under principle
(10') the phonologically empty head position.

Particularly interesting in this connection are the posses-
sive stem forms of the third person in Modern German.

(37)a. mein- dein- unser- euer-

    b. sein- ihr-

Sein- is not native to this paradigm, but was taken over
into it from the paradigm of reflexive forms during the
Old High German period. Due to its unanalyzable stem form,
sein is inflectable in the same sense as the other stems
of (37a). Let us suppose for the sake of argument that this
diachronic change had not happened and that in its position
the older genitive form es that was eventually suppressed
by sein but that existed side-by-side with sein in OHG and
MHG11 still existed in the modern language. The hypothesis
developed in section 2.2 makes the prognosis that this geni-
tive form - just like the genitive form Oma+s - could not
take on a second inflectional suffix.

(38)a. *Oma+s+e Frisur

    b. *es+e Frisur   = 'his hair style'

Even more interesting is the feminine (and plural) form ihr.
It represents the genitive of the corresponding anaphoric
pronoun and originally behaved differently from the other
possessives. Kienle (1969:208) reports that, whereas in-
flection was common for the other possessives during Gothic,
Old Saxon and Old High German times, ir didn't begin to in-
flect at all until Middle High German and that its inflec-
tion really first became regular in New High German. It ap-
pears that the ending -r was still analyzed as a sign of the
genitive during Middle High German - perhaps supported by
the association of ihr with the genitive form of the article
der. An analyzable genitive suffix would render the form in-
capable of taking the AGR suffix under the assumptions dis-
cussed here until the suffixal -r in ihr was reinterpreted,
as indeed it must have been in New High German, resulting in
ihr being perceived as a simple stem. At this point ihr
could then take on the inflection typical of its paradigm-
mates. This is a plausible assumption since the main sign
of a prenominal genitive in the modern language is the s-
suffix.

Every personal pronoun in German has a non-inflecting geni-
tive form as well as an inflecting genitive form (i.e. the
possessive). This distribution of personal genitive and "pos-
sessive" forms is not always this neat in other languages.
As we have seen in the discussion above, it arose in German
through the reorganization of the third person. Sin/sein re-
placed es in the masculine and neuter and ir/ihr of the fe-
minine and plural was reanalyzed as a pure stem form. As a

result the newly structured stem became inflectable.[12]

Seppänen (1980) reports that Swedish has possessive (i.e. inflecting) forms for the first and second person and for the reflexive pronoun. When non-reflexive reference is intended, the third person pronouns are selected.

(39) Swedish

    a. min- din- vår- er- sin-

    b. han<u>s</u> henn<u>es</u>   (Seppänen 1980:8)

It is obvious from an examination of the third person pronominal forms in (39b) - i.e. the ones that don't inflect along with the others - that they can be clearly analyzed into a stem and a genitive suffix - the latter being the factor prohibiting further inflection. The forms of the first and second person are pure stems without such an overt genitive marking. These are the only forms that carry agreement marking with the matrix noun and therefore the only forms termed "possessive", although - according to our hypothesis - all of the forms in (39) (like the German forms of (37)) occur in the same position and function as the specifier of the DP. The same distribution of forms could be found in Old English. In attributive position, the first and second personal pronouns - but not the genitive-marked forms of the third person - inflected until within the course of Middle English morphological congruence disappeared almost completely from the language.

(40) Old English

    a. mīn- þīn- ure- euwer- sīn

    b. hi<u>s</u> hi<u>re</u> hi<u>ra</u>   (Williams 1975:242-246)

As a result of this historical development, English is no longer in possession of "possessive" forms. The attributively used forms developed into pure personal (genitive) pronouns (i.e. <u>my</u>, <u>your</u>, <u>his</u>, <u>her</u>, <u>its</u>, <u>our</u>, <u>their</u>) by dropping their inflectional ending.

Latin displays a series of inflecting possessives and, in addition, a series of invariant personal pronouns in the genitive:

(41) Latin

    a. me- tu- noster- voster- su-

    b. me<u>ī</u> tu<u>ī</u> nostr<u>ī</u>/nostr<u>um</u>   vestr<u>ī</u>/vestr<u>um</u>

       ei<u>us</u> eor<u>um</u> ear<u>um</u> su<u>ī</u> (Kühner/Stegmann I 1912: 576, 583 & 588)

The possessive of the third person (i.e. <u>suus</u>, a reflexive stem) can only be used with reflexive reference. When non-reflexive, anaphoric reference is intended, a third person genitive form must be selected. Thus the pronominal specifier alternates in form between "possessive" and "pronominal" (<u>suus</u> and <u>eius</u> etc.), depending on the type of reference intended.

(42)a. Omitto Isocratem, discipulos eius, Ephorum et
        Naucratem.

    b. Isocratem cum discipulis suis

                        (Kühner/Stegmann II 1912:600-607)

In (42a) we find on the one hand - as is the case in ge-
neral in English - a genitive, non-inflecting personal pro-
noun as the specifier with pure anaphoric reference not
limited to the denotation of the same object as its closest
subject. In reflexive meaning (i.e. reference to the imme-
diate subject) as in (42b) an inflecting reflexive stem oc-
curs - as is the case everywhere in German. English and Ger-
man have not preserved this clear distribution of form and
meaning found in Latin, but have generalized one particular
structural form to cover both reflexive and pronominal re-
ference.

3. Genitive-marked Relative and Interrogative Pronouns

The conclusion of the previous sections is further sub-
stantiated by the syntactic and morphological behavior of
other pronominaler specifier types. In addition to the per-
sonal pronoun, the relative and interrogative pronouns may
occur as complements of verbs, adjectives and prepositions
which assign genitive Case.

(43)a. der Lehrer, <u>dessen</u> die Kinder spotten

        'the teacher whom(gen) the children ridicule'

    b. <u>Wessen</u> ist er überdrüssig?

        'Who(gen) is he tired of?'

    c. Anstatt <u>seiner</u> kam ein Unbekannter.

        'Instead of him(gen) a stranger came.'

These genitive forms of the differentpronouns occur in Mo-
dern German with an inflectionally inert final syllable -<u>en</u>
(or -<u>er</u>).[13] We also find this ending on the relative and in-
terrogative specifier to a noun as shown in (44a) and (44b).

(44)a. der Nachbar(in), [<u>dessen/deren</u> Katze] Joschi ver-
        trieben hat

        'the neighbor whose(masc/fem) cat Joe chased away'

    b. [<u>Wessen</u> Katze] hat Joschi vertrieben?

        'Whose cat did Joe chase away?'

    c. Anstatt [<u>seines</u> Vaters] kam ein Unbekannter.

        'Instead of his father(gen) a stranger came.'

It is only the personal pronoun occurring in this specifier
position that doesn't exhibit this invariant final syllable,
as can be seen in (44c). Instead, the personal specifier
takes on the AGR suffix as we have discussed in length in

section 2.2. It is this fact which has lead traditional grammarians to classify the genitive personal specifier apart from other personal pronouns as a "possessive" pronoun or even a "pronominal adjective". Now it is a fact that the pronominal forms of (44a) and (44b) in the same syntactic environment as the "possessive" - i.e. governed by the functional category DET - are invariant. The question arises then as to why there is not unity in morphological behavior in this position.

A solution presents itself immediately by considering the morphological form of the relative and interrogative pronouns. Inspite of the fact that they now end in a semantically empty, invariant -en, it is nevertheless clear that they consist of a stem and a genitive suffix (like Oma+s but opposed to dein) that is morphologically recognizable.

(45)a. des(s)+en   der+en

b. wes(s)+en

Older forms still occur inthe language as remnants of this original structure.

(46) Wes Brot ich esse, des Lied ich singe.

'Whose bread I eat, that person's song I sing.'

Here one can clearly see that these pronouns (or more precisely: "intransitive DPs") realize the grammatical AGR make-up of their head inflectionally and are therefore incapable of adopting an inflectional suffix from their matrix DET.

Given the different morphological shape of the relative and interrogative vs. personal pronoun illustrated by the paradigm in (44), we can find structurally dissimilar, but semantically equivalent alternatives in the specifier-adjective relation like the following.

(47) Wir sind Karl und a) dessen Ø attraktiver

b) seiner Ø attraktiven

Freundin in der Stadt begegnet.

'We met Karl and his attractive girl friend in the city.'

The relative/demonstrative pronoun dessen in (47a) can be used as an alternative means of expressing reference between the specifier of N and another noun in the sentence. In fact, the reference to Karl in (47) is clearer when dessen is chosen in (47a) than when the actual "possessive" specifier is used in (47b). This may be connected to the fact that relative pronouns function to set up a relation to another N in the immediate structure while (possessive) pronouns have a broader range of referential possibilities. What interests us in this connection, however, is that dessen as opposed to sein is (due to its morphological shape) invariant in form, so that the adjective takes on the strong AGR suffix

of the matrix DET in accordance with our revised version of Emonds' Invisible Category Principle. In (47b) the inflectable form <u>sein</u>- takes over the function of licensing the empty head position.

The data in (47) again substantiate the regularity we have found within the German DP: a pronominal specifier falling within the governing domain of an analytic DET with the appropriate AGR features may, by virtue of a) the head-to-head relation in such a configuration and b) the morphematic structure of the pronoun (it is a simple stem), actually take part in the congruence phenomenon initiated by the functional head. In (47a) it is the strong adjective ending that in accordance with principle (10') serves to license the empty functional head. In (47b), however, - due to the modus of the historical stem formation in the case of the personal pronoun - the pronominal specifier takes on this function.

Notes

0 This article is a revised version of a lecture I held during the GGS meeting in Vienna mid-October 1988 on this topic. I would like to single out Gisbert Fanselow and Peter Staudacher and express my gratitude to them for their valuable comments and criticisms in the aftermath of the meeting. I am also extremely indebted to the Alexander von Humboldt Foundation in Bonn for financial support during this academic year (1988-1989) which has enabled me to engage in the research reported on here.
A German version of this article will be appearing shortly in the next volume of <u>Linguistische Berichte</u>.

1 For a more detailed discussion of the inflectional properties of the German DP, cf. Olsen (1988).

2 Emonds (1985) was not written within the newer conception of X-bar syntax being discussed here in which functional heads (e.g. DET, INFL and COMP) have been integrated into the X-bar projection mechanism. Nevertheless, Emonds' model can be easily translated into this new framework by understanding his "closed categories" (here he is referring to the specifiers of N, V and A - i.e. DET, INFL and DEG) as "functional heads".

3 The definition of government assumed here is that of Chomsky (1981). A lexical (or functional) X^0 element (or head) governs the phrases within its maximal projection.

4 Chomsky (1986:42) defines the Minimality Condition on the basis of the following configuration.

(i) $\ldots \alpha \ldots [_\gamma \ldots \delta \ldots \beta \ldots]$

α does not govern β in (i), if γ is a projection of δ which excludes α. For our purposes, α = the matrix DET, δ = the DET

of the specifier and α= NP. In other words, the projection (D' or DP) of the specifier DP prohibits the matrix DET from governing the complement NP of the specifier.

5 All three of these different classifications can be found in the various grammars of Modern German. Curme (1964:165) terms the possessives adjectives; for Eisenberg (1986:153) they are articles,while Erben (1972:233) calls them pronouns. Heidolph et al. (1981:640) differentiates three types of pronouns: substantival (ich,etwas, wer,...), adjectival (einige, mehrere, derartige...), and article-like pronouns (der, dieser, alle, kein,...). The possessives are classified with the article-like forms. Duden (1984:313) puts the word classes article and pronoun together to form the larger class of "Begleiter und Stellvertreter des Substantivs". This grammar then treats the possessives together with the articles and apart from the pronouns.

6 I assume here following a suggestion from Szabolcsi (1987:179) that a possessive DET can assign an arbitrary theta role to its specifier. This is the role that Anderson (1984) terms "possession in the broadest sense" and is represented in example (15e). When the deverbal noun has a specific theta role to assign to an external argument, this role can be discharged to DET once all obligatory internal roles have been discharged. From DET it will be assigned to the specifier. A specific theta role in a theta grid will always have priority over the general possessive relation. When no specific theta role like agent, patient, theme etc. is present, DET can assign the "possession" relation.

7 This idea was developed in Higginbotham (1985) and was adopted by Abney in his analysis.

8 I owe the analysis to be discussed here to Gisbert Fanselow who took great pains to comment extensively in both oral and written form on the ideas I presented in Vienna.

9 In a lecture at the same meeting, G.Longobardi and A. Giorgi argued in detail that a subject PRO in an Italian noun phrase can occur in a postpposed position (i.e. after the lexical head) in a similar fashion to the postposed subject in a sentence. The result of this permutation in the DP is the order DET-Specifier which we observe in (36a). The relevance of this presentation for my topic became clear to me afterwards in a discussion with Peter Staudacher.

10 Transitive DETs (i.e. determiners) can be detransitivized and hence appear in apparent pronominal usage.

(i)a. Schau dir diesen Mann an. Der hat vielleicht Nerven.

'Look at that man. The (=he) has nerves.'

b. Die sind alle verdorben.

'The (=they) are all spoiled.'

It is difficult at times to decide whether we are deal-
ing with a true pronoun or with a transitive determiner
being used elliptically. It may therefore be justified
to provide a dual status for forms like das, dies as both
pronouns and determiners.

(ii)a. Die Katastrophe von Ramstein löste Protest in der
Bevölkerung aus. Dies wurde überall spürbar.

'The catastrophy at Ramstein triggered protest
in the population. This was felt everywhere.'

b. Höflich sein? Das kann er nicht.

'Be polite? He can't do that.'

11 According to Kienle (1969:186), es was the regular form
of the neuter gen.sg. pronoun in OHG (it is not attested
in the masc. in OHG). In MHG, es occurs along with sîn
in the neuter and masculine (although rarely in the latter).

12 The long and short forms mine, thine vs. my, thy were
originally phonological variants: the ending -n was pro-
nounced before vowels. The shorter forms began to take
over attributive usage during the 18th century with the
consequence that the longer n-forms became associated with
pronominal use. In analogy to the long forms mine etc.,
the other forms (cf. yours, hers, ours and theirs) took on
an additional formative, namely -s, according to Williams
(1975:247) to signal pronominal usage.

13 The ending -en was originally (i.e. in the 16th and 17th
centuries) found in both attributive and substantive (=
pronominal) use. During the 18th century it was retained
in pronominal forms but fell out of use in attributive
positions according to Kienle (1969:192-193). This enabled
the ending -en to become a sign of intransitivity and thus
differentiate these pronouns from the transitive determiners
(dessen vs. des). At about the same time (Kienle (1969:
181)) the -er ending of the plural personal pronoun stems
unser, iuwer was added onto the singular forms miner, diner,
sîner and then later also taken over by ihr.

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