1

Case in German – Towards an HPSG Analysis

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1.1 Introduction

In the following paper I will provide an approach to case assignment in German that builds on work done by Heinz and Matiasek (1994). Some shortcomings of their approach will be pointed out and the case principle will be adapted in a way that case assignment in coherent constructions[1] can be handled properly. Furthermore, it will be shown that elements which do not surface bear case, and a proper treatment of this phenomenon will be provided.

The type hierarchy Heinz and Matiasek proposed is neither sufficient for handling case assignment in copula constructions, nor is it suited to describe a phenomenon called *Kongruenzkasus*. A new feature geometry for the *case* feature will be developed that overcomes these shortcomings.

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[1]Coherent constructions differ from incoherent ones in that they allow complements of the heads involved in the coherent construction to scramble. Furthermore, adverbial phrases may scope over all heads in a coherent construction. See (Bech 1955) for an extensive discussion of data and several tests to distinguish between the two constructions.

In most HPSG analyses coherent constructions are analyzed as complex predicates, i.e. the head attracts all arguments of the embedded element. In incoherent constructions, the head is combined with an XP. For a justification of this analysis see (Kiss 1995). The analysis will be discussed in section 1.3 in further detail.

1.2 The Phenomena

1.2.1 Lexical vs. Structural Case

In the GB framework it is common to differentiate between structural
and lexical case.[2] Elements the case of which varies according to their
syntactic environment are said to bear structural case. If the case does
not change, the case is said to be lexical.

(1) a. Der Installateur kommt.
   the plumber$_{nom}$ comes

   'The plumber is coming.'

   b. Der Mann sieht den Installateur kommen.
   the man   sees the plumber$_{acc}$ come

   'The man can see the plumber coming.'

   c. das Kommen des Installateurs
   the coming   the plumber$_{gen}$

   'the coming of the plumber'

In (1), the case of *der Installateur* is different in all sentences. In (1a) *der
Installateur* is the subject and bears nominative. In (1b) *der Installateur*
is the object of the AcI-verb *sehen* and gets accusative, and in (1c) it
is a complement of a noun and gets genitive. Nominative, genitive and
accusative can be assigned structurally.

   Another construction where a change of structural case takes place
is passivization.

(2) a. Der Mann   hat den Hund getreten.
   the man$_{nom}$ has the dog$_{acc}$ kicked

   'The man kicked the dog.'

   b. Der Hund   wurde (von dem Mann) getreten.
   the dog$_{nom}$ was   by   the man   kicked

   'The dog was kicked (by the man).'

If the case of the object is dative, no change takes place.

(3) a. Der Mann hat mir   geholfen.
   the man   has me$_{dat}$ helped

   'The man helped me.'

   b. Mir   wird geholfen.
   me$_{dat}$ was helped

   'Somebody is helping me.'

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[2]See for instance (Haider 1985).

This is usually explained by a object-to-subject-raising analysis of passivization.[3] The subject of a finite sentence receives nominative and the object accusative if its case is structural. In (2b), the object of the verb *geschlagen* is raised to subject of the passive auxiliary *werden* and therefore receives nominative. If the case of the object is dative, i.e. lexical, it does not change during passivization.

There is a longstandig debate whether the dative should be treated as a structural case (Fanselow 1987; Czepluch 1988; Wegener 1990; Molnárfi 1998) or as a lexical case (Haider 1985; Haider 1986; Heinz and Matiasek 1994; Pollard 1994; Meurers 1999b).

The argument for the structural dative is basically the dative passive that is possible with the verbs *bekommen*, *erhalten*, *kriegen*.

(4) a. Der   Mann hat den   Ball dem   Jungen geschenkt.
       the$_{nom}$ man   has the$_{acc}$ ball the$_{dat}$ boy   given
       'The man gave the ball to the boy.'

   b. Der   Junge bekam den   Ball geschenkt.
       the$_{nom}$ ball   got   the$_{acc}$ ball given
       'The ball was given to the boy.'

Some of the proponents of lexical dative assume a special process that converts the dative NP into an NP with structural case (1986, Section 4.11994, p. 228; 1999a, p.).

If dative is a lexical case the examples in (5) can be explained easily.[4]

(5) a.   Er streichelt den Hund.
         he strokes   the dog$_{acc}$

   b.   Der Hund   wurde gestreichelt.
         the dog$_{nom}$ was   stroken

   c.   sein Streicheln des   Hundes
         his stroking   of.the$_{gen}$ dog

   d.   Er hilft den Kindern.
         he helps the children

   e.   Den Kindern   wurde geholfen.
         the children$_{dat}$ was   helped

   f.   das Helfen der   Kinder
         his helping of.the$_{gen}$ children

   g. * sein Helfen der   Kinder
         his   helping of.the$_{gen}$ children

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[3]Throughout this paper, I assume a variant of Pollard's (1994) theory.
[4]See also (Haider 1986, p. 20) on this point.

streicheln takes an accusative object that can be realized as nominative in passive constructions, i.e., an NP complement with structural case. The genitive NP in (5c) expresses the object of the nominalized verb. Dative NPs on the other hand cannot surface as genitive complements in nominalizations. The genitive NP in (5f) refers to the agent of *helfen*. The agent of *helfen* has structural case and can therefore surface as genitve in a nominal environment. If the subject role is filled by a possesive as in (5g), the phrase gets ungrammatical. It is hard to imagine how the contrasts in (5) can be explained with the dative as structural case.

Another problematic point of the structural dative is, that it cannot be distinguished from accusatives in the context of a transitive verb. For ditransitive verbs one can say that the subject gets nominative, the direct object gets accusative and the indirect object gets dative. But with transitive verbs the distinction cannot be made. *treten* in (2a) and *helfen* in (3a) are both transitive and yet one object has accusative and the other one has dative. Authors who see the structural/lexical case issue from a semantic point of view (1995, p. 12Kaufmann; 1996, p. 21–26Stiebels; 1997, p. 313Olsen) therefore assume that the dative of transitive verbs is a lexical dative (1996, p. 22Stiebels). This predicts that the dative passive is not possible with transitive verbs. It is true that dative passives with transitive verbs are not very frequent (Hentschel and Weydt 1995)HentschelWeydt, but Wegener (1990, p. 75) explains this with the low frequency of transitive verbs that take a dative object and are non-ergative. Examples like (6) are possible.

(6) a. Er kriegte von vielen geholfen / gratuliert   / apllaudiert.
        he got   by many helped   congratulated applauded

        'Many helped congratulated applauded him.'

     b. Man kriegt täglich gedankt.
        one gets   daily   thanked

So, I assume that the dative is always lexical.

Prenominal participles behave like verbal elements. Case is assigned in the same way case is assigned in environments with non-finite verbs.

(7) a. Der [alles bestimmen wollende] Apparat hat schon seit Jahren
        initiativreiche Kräfte abgestoßen, reproduziert sich aus ange-
        paßter Mittelmäßigkeit und erstickt jegliche Initiative außer-
        halb seines begrenzten Realitätsbezuges.[5]

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[5]taz-berlin, 10.19.89, p. 11. The *taz* is a newspaper that appears nation-wide in Germany (http://www.taz.de). Most of the real-world examples given throughout this paper are take from this newspaper.

'The machine which wants to control all the decisions has be-
en repelling personnel with initiative for years; it reproduces
itself with conformist mediocrity and stifles any initiative out-
side its own narrow-minded sense of reality.'

b. Den [Gesellschaft verändern wollenden] Impuls glaube ich da-
bei nicht.[6]

'I do not believe the impulse to want to change society in this
context.'

c. die [das „Andere der Vernunft" befreien wollenden] Brüder
Böhme[7]

'the brothers Böhme, who want to liberate „the other side of
reason"'

In (7) the verbs embedded under *wollende* form a complex with the
matrix adjective. This is completely analogous to the treatment of the
verbal complex proposed by Hinrichs and Nakazawa (1989). As has been
shown in (Müller 1999a), adjectives take part in complex formation in
the very same way as verbs do. There is evidence for this from scope
facts, from linearization facts and from complex fronting data.[8]

(8) weil   ihr der Mann immer treu   sein wollte.
    because her the man   always faithful be   wants.to

    'The man wanted to be faithful to her.'

In (8), the adverb can scope over the adjective and the verb *wollte*.
In addition, the complement of the adjective appears to the left of the
subject of *wollte*. While scope and word order phenomena constitute the
classical tests for coherent constructions developed by Bech (1955), the
possibility of fronting of partial projections can be seen as a coherence
test too.

(9) Treu   will   Karl seiner Frau sein.
    faithful wants Karl his   wife be

    'Karl wants to be faithful to his wife.'

As was shown in (Müller 1997b), the fronting of partial adjective phrases
is completely analogous to the partial verb phrase examples cited in the
literature.[9]

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[6]taz, 08.05.88, p. 16
[7]taz, 07.01.88, p. 15
[8]See (Müller 1997b) for other examples of partial adjective phrase fronting.
[9]Cf. (Haftka 1981).

So, if in (7a) *bestimmen wollende* is a complex and the argument of *bestimmen* is raised by *wollende*, the complex has to assign case to *alles*. This shows that structural case must also be assigned by participles in adjectival environments.

Lexical case can be assigned by verbs (10), adjectives (11), and prepositions (12). Genitive, dative and accusative can be assigned lexically.

(10) a. Wir gedenken   der Opfer.
        we   commemorate the victims$_{gen}$

    b. Der Opfer   wird gedacht.
        the victims$_{gen}$ were commemorated

        'The victims are being commemorated.'

    c. Er hilft   ihm.
        he helps him$_{dat}$

    d. Ihm   wird geholfen.
        him$_{dat}$ was   helped

        'He is being given help.'

(11) a. Er war sich   dessen sicher.
        he was REFL it$_{gen}$ sure

        'He was sure of it.'

    b. Sie ist ihm   treu.
        she is   him$_{dat}$ faithful

        'She is faithful to him.'

(12) a. wegen   des Installateurs
        because.of the plumber$_{gen}$

    b. mit   dem Installateur
        with the   plumber$_{dat}$

    c. auf den Installateur
        for the plumber$_{acc}$

Haider (1985, p. 82) assumes that the case of complement prepositions is assigned structurally. He claims that this assumption is supported by the fact that prepositions that allow for both accusative and dative NPs never appear with a dative, if they are realized as complements. But as the following data by Eisenberg (1994, p. 78) show, complement prepositions can govern both dative and accusative NPs.

(13) a. Sie hängt an ihrer elektrischen Eisenbahn.
        she hangs on her   electric   railway$_{dat}$

        'She is very attached to her train set.'

b. Sie denkt an ihre Vergangenheit.
   she thinks of her past$_{acc}$
   'She is thinking about her past.'

Since the case of NP complements of prepositions does not depend on the syntactic environment the PP is realized in, I treat the case of NPs of complement and adjunct PPs in a uniform way, namely as lexical case.

In addition to genitive, dative, and accusative, the data in (14) – (15) suggest that nominative has to be assigned lexically.

(14) a. Er beschloß, ein Linguist zu werden.[10]
        he decided a linguist$_{nom}$ to become
        'He decided to become a linguist.'

     b. Ich bin dein Tanzpartner.
        I am your dancing.partner$_{nom}$

(15) a. Baby, laß mich dein Tanzpartner sein.[11]
        baby let me$_{acc}$ your dancing.partner$_{nom}$ be
        'Baby, let me be your dancing partner.'

     b. Laß den wüsten Kerl [. . .] ihr Komplize sein.[12]
        let the brutal guy her accomplice be
        'Let the brutal guy be her accomplice.'

     c. Laß mich dein treuer Herold sein.
        let me your faithful herald be
        'Let me be your faithful herald.'

Although the predicate in copula constructions is nominative, this case does not change in AcI-constructions. The case that is assigned to objects with structural case is accusative. As the case of *Linguist* in (14a) is nominative, it must be lexical.[13] Sentences like (16) seem to be counterevidence against the assumption of lexical nominative.

(16) a. Er läßt den lieben Gott 'n frommen Mann sein.
        he lets the dear Lord a religious man$_{acc}$ be
        'He takes things as they come.'

     b. * Er läßt den lieben Gott 'n frommer Mann sein.
        he lets the dear Lord a religious man$_{nom}$ be

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[10] (Oppenrieder 1991, p. 216)
[11] Funny van Dannen, Benno-Ohnesorg-Theater, Berlin, Volksbühne, 10.11.95
[12] (15b) and (15c) are taken form the Duden (1973, § 1473).
[13] The idea of lexical nominative can be found in (Thiersch 1978, p. 54) already.

However, the construction in (16a) is an idiomatic phrase. The Duden
(1973, § 1473) regards this construction as archaic. On the other hand
the Duden (1995, § 1259) claims that such sentences are standard in
Swiss-German and some German dialects. For such variants of German
it can be assumed that the case of the predicate in a copula construction
is identical to the case of the subject of the predicate. For those dialects
the case assignment in copula constructions then is another instance of
Kongruenzkasus discussed in the next section.

1.2.2 *Kongruenzkasus*

There are some German verbs that take two arguments with the same
case independent of their syntactic function in the sentence.

(17) a. Sie nannte ihn   einen Lügner.
       she called him_{acc} a $liar_{acc}$

    b. Er   wurde ein Lügner genannt.
       he_{nom} was   a $liar_{nom}$ called

       'He was called a liar.'

The case of *ihn* and *einen Lügner* is accusative in (17a) and nominative
in (17b). The change of *ihn* to *er* after passivization is expected. The
object *ein Lügner* has the same case as *er/ihn* has. This phenomenon
is called *Kongruenzkasus*. (18) is also an instance of this phenomenon:
the case of the prepositional phrase has to be identical with the case of
the underlying first object of *ansehen*.[14,15]

(18) a. Er   gilt   als großer Künstler.
       he_{nom} is.regarded as great $artist_{nom}$

       'He is regarded as a great artist.'

    b. Man läßt ihn   als großen Künstler gelten.
       one lets him_{acc} as great $artist_{acc}$ be.regarded

       'He is accepted as a great artist.'

(19) a. Ich sehe ihn   als meinen Freund   an.
       I   see him_{acc} as my $friend_{acc}$ PART

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[14] *als*- and *wie*-phrases are called prepositional phrases by many authors. Heringer
(1973, p.173, fn 4, p.204–205) criticizes this and suggests the term *Identifikations-*
translativ (Identification Translative), since *als*- and *wie* also appear with adjectives.
The *Handwörterbuch der deutschen Gegenwartssprache* (Kempcke 1984) calls these
elements coordinating conjunctions. Since *als*- and *wie* + NP complement behave
like PPs in many respects, I will follow Wunderlich (1984, p.73) and Fanselow (1986,
p.361) and treat them as PPs.

[15] (18) is taken from (Heringer 1973, p.203–204) and (19) from (von Stechow and
Sternefeld 1988, p.154).

'I regard him as my friend.'

b. Er   wird als mein Freund   angesehen.
   he$_{nom}$ is   as my   friend$_{nom}$ seen

'He is regarded as a friend of mine.'

Note that the elements in such constructions do not have to agree in number, person, and gender as is claimed by von Stechow and Sternefeld (1988, p. 154) for instance.

(20) a. Er empfand diese Anschuldigungen als große Beleidigung.
         He took   these accusations$_{fem,pl}$ as great insult$_{fem,sg}$.

      'He took these accusations as a great insult.'

      b. Er nannte diese Behauptungen einen Schmarrn.
         he called these claims$_{fem,pl}$ a   rubbish$_{mas,sg}$

      c. Er nannte diese Frau   ein Genie.
         he called this woman$_{fem}$ a   genius$_{mas}$

See section 1.6.2 for similar phenomena in copula constructions.

1.2.3   The Case of Non-realized Dependents

Höhle (1983, Chapter 6) provided a test that makes it possible to determine the case of non-realized dependents. The adverbial phrase *ein-nach d- ander-* refers to a plural antecedent. The phrase has to agree with its antecedent in gender and case.

(21) a. [Die Türen$_{nom,fem,pl}$]$_i$ sind [eine$_{nom,fem}$ nach der$_{dat,fem}$ anderen]$_i$ kaputt gegangen.

      'The doors broke one after another.'

      b. [Einer$_{nom,mas}$ nach dem$_{dat,mas}$ anderen]$_i$ haben wir$_i$ die Burschen runtergeputzt.

      'We took turns in bringing the lads down a peg or two.'

      c. [Einen$_{acc,mas}$ nach dem$_{dat,mas}$ anderen]$_i$ haben wir [die Burschen$_{acc,mas,pl}$]$_i$ runtergeputzt.

      'One after the other, we brought the lads down a peg or two.'

      d. Ich ließ [die Burschen$_{acc,mas,pl}$]$_i$ [einen$_{acc,mas}$ nach dem$_{dat,mas}$ anderen]$_i$ einsteigen.

      'I let the lads get in (get started) one after the other.'

      e. [Uns$_{dat}$]$_i$ wurde [einer$_{dat,fem}$ nach der$_{dat,fem}$ anderen]$_i$ der Stuhl vor die Tür gesetzt.

      'We were given the sack one after the other.'

(22) a. Er hat uns gedroht, [die Burschen$_{acc,mas,pl}$]$_i$ demnächst [einen$_{acc,mas}$ nach dem$_{dat,mas}$ anderen]$_i$ wegzuschicken.

'He threatened us that soon he would send the lads away one after the other.'

b. Er hat angekündigt, [uns$_{dat}$]$_i$ dann [einer$_{dat,fem}$ nach der$_{dat,fem}$ anderen]$_i$ den Stuhl vor die Tür zu setzen.

'He announced that he would then sack us one after the other.'

c. Es ist nötig, [die Fenster$_{acc,neu,pl}$]$_i$, sobald es geht, [eins$_{acc,neu}$ nach dem$_{dat,neu}$ anderen]$_i$ auszutauschen.

'It is necessary the exchange the windows one after the other as soon as possible.'

(23) a. Ich habe [den Burschen$_{dat,mas,pl}$]$_i$ geraten, im Abstand von wenigen Tagen [einer$_{nom,mas}$ nach dem$_{dat,mas}$ anderen]$_i$ zu kündigen.

'I advised the lads to hand in their notice one after the other at intervals of a few days.'

b. [Die Türen$_{nom,fem,pl}$]$_i$ sind viel zu wertvoll, um [eine$_{nom,fem}$ nach der$_{dat,fem}$ anderen]$_i$ verheizt zu werden.

'The doors are much too precious to be burnt one after the other.'

c. [Wir$_{nom}$]$_i$ sind es leid, [eine$_{nom,fem}$ nach der$_{dat,fem}$ anderen]$_i$ den Stuhl vor die Tür gesetzt zu kriegen.

'We are tired of being given the sack one after the other.'

In (23), the *ein- nach d- ander-* phrase is not the subject, as the subject is never realized as a dependent of a verb in infinitive form. But *ein- nach d- ander-* refers to the subject of the infinitive. The subject of the infinitive is controlled by the matrix verb and the referential index of the object of the matrix verb—in (23a) the object is *den Burschen*—is identical to the referential index of the subject of the *zu* infinitive.[16] The case, however, is not. The case of *den Burschen* is dative while the case of the controlled subject of the *zu* infinitive is nominative, as can be inferred from the case of *einer nach dem anderen*.[17]

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[16] For an explanation of the control theory assumed in HPSG see (Pollard and Sag 1994, Chapter 3.5). For control and raising in German see (Kiss 1994; Kiss 1995).

[17] Adam Przepiórkowski informed me that in Polish there is a class of 'case agreeing' elements which take the instrumental case when they refer to unrealized subjects, but there are other 'case agreeing' elements which take dative in such cases. So, if these elements were used to determine the case of the unexpressed subject we would end up with the conclusion that unexpressed subjects are both instrumental and dative

Höhle provided the examples (21) – (23), but of course a completely analogous example with adjectival participle heads can be constructed.

(24) a. die [eines   nach dem   anderen]$_i$ einschlafenden
 the one$_{nom,neu}$ after the$_{dat,neu}$ other   nodding.off
 Kinder$_i$
 children
 'the children who were nodding off one after the other'

b. die [einer   nach dem   anderen]$_i$ durchstartenden
 the one$_{nom,mas}$ after the$_{dat,mas}$ other   revving
 Halbstarken$_i$
 hooligans
 'the hooligans who were revving one after the other'

c. die [eine   nach der   anderen]$_i$ loskichernden
 the one$_{nom,fem}$ after the$_{dat,fem}$ other   starting.to.giggle
 Frauen$_i$
 women
 'the women who were starting to giggle one after the other'

In (24a) and (24c), the *ein- nach d- ander-* phrase is ambiguous in case. The case form is *nom* ∨ *acc*. But (24b) suggests that the subject of the adjectival participle is nominative. Note that the NP *die einer nach dem anderen durchstartenden Halbstarken* in (24b) can function as subject and as object in a higher clause since the case of the modified noun is independent from the case of the subject of the adjectival participle.

1.3   The Predicate Complex

Hinrichs and Nakazawa (1989) introduced the notion of argument attraction into the HPSG framework. They argued that it is reasonable to combine the verbs in a verbal complex before complements are saturated. The passive analysis of Pollard (1994) builds on those insights.

in Polish. One could argue on the basis of the Polish data that unexpressed subjects are caseless and that the adverbial phrases are nominative (for German) or dative or instrumental (for Polish) when they refer to a caseless NP.

Hennis (1989) discusses data from Malayalam, which is a language with both nominative and dative subjects. Sentences where a VP with nominative subject is coordinated with a VP with dative subject, are ungrammatical. She concludes from this that the unexpressed subject must have case. Adam Przepiórkowski informed me that this does not hold for Polish, i.e. one can coordinate a VP with an adverbial phrase in the instrumental with a VP with an adverbial phrase in the dative.

This seems to indicate that languages differ in the way they assign case to their (unexpressed) subjects. Since I do not know of any further tests that could be applied for German, I stick with the assumption that unexpressed subjects have nominative case.

Without giving a detailed explanation of the analysis, I will show example lexical entries which will be sufficient to explain the interaction with case phenomena.

I assume the following lexical entry for the perfect auxiliaries *haben* and *sein*.[18]

(25) *haben/sein* (*have/be* perfect auxiliaries):

$$
\begin{bmatrix}
cat \\
\text{HEAD} & \begin{bmatrix} verb \\ \text{SUBJ} & \boxed{1} \end{bmatrix} \\
\text{SUBCAT} & \boxed{2} \\
\text{VCOMP} & \left\langle V[\text{LEX}+, ppp, \text{SUBJ } \boxed{1}, \text{SUBCAT } \boxed{2}, \text{VCOMP } \langle\rangle] \right\rangle
\end{bmatrix}
$$

The finite form of those lexical entries lists the value of SUBJ on its subcat list. The reason for this is that subjects of finite verbs in German can be extracted in the same way as objects or other complements can. So it is reasonable to list them on one list to which extraction applies.

(26) *hat/ist* (*has/is* perfect auxiliaries):

$$
\begin{bmatrix}
cat \\
\text{HEAD} & \begin{bmatrix} verb \\ \text{SUBJ} & \langle\rangle \end{bmatrix} \\
\text{SUBCAT} & \boxed{1} \oplus \boxed{2} \\
\text{VCOMP} & \left\langle V[\text{LEX}+, ppp, \text{SUBJ } \boxed{1}, \text{SUBCAT } \boxed{2}, \text{VCOMP } \langle\rangle] \right\rangle
\end{bmatrix}
$$

The lexical entries of modals are similar to the entries for *haben/sein*. I assume that lexical entries for adjectival participles are produced by a lexical rule that produces the following output:

(27) *wollend-* (adjectival participle *like*):

$$
\begin{bmatrix}
cat \\
\text{HEAD} & \begin{bmatrix} adj \\ \text{SUBJ} & \boxed{1} \langle NP[str]_{\boxed{2}}\rangle \\ \text{MOD} & \overline{N}_{\boxed{2}} \end{bmatrix} \\
\text{SUBCAT} & \boxed{3} \\
\text{VCOMP} & \left\langle V[\text{LEX}+, ppp, \text{SUBJ } \boxed{1}, \text{SUBCAT } \boxed{3}, \text{VCOMP } \langle\rangle] \right\rangle
\end{bmatrix}
$$

str stands for structural case.

Pollard (1994) assumes a feature ERG that singles out the subject or object with accusative properties in addition to valence features. For so-called ergative verbs[19], the ERG value is identical to the subject, for

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[18] Note that verbal complements are selected via VCOMP instead of SUBCAT. This was argued for by Chung (1993) and by Rentier (1994). Verbal complexes are licensed by a special schema, i.e. they are not head complement structures.

[19] Cf. (Grewendorf 1989; Fanselow 1992).

non-ergative verbs it is identical to the accusative object, if there is one. If there is no accusative object, the ERG value is the empty list. (28) shows the entry for the non-ergative verb *reparieren*.[20]

(28) *reparieren* (*repair*):

$$
\begin{bmatrix}
cat \\
\text{HEAD} \quad
\begin{bmatrix}
verb \\
\text{SUBJ} \ \langle \text{NP}[str] \rangle \\
\text{ERG} \ \langle \boxed{1} \rangle
\end{bmatrix} \\
\text{SUBCAT} \ \langle \boxed{1} \ \text{NP}[str] \rangle
\end{bmatrix}
$$

The lexical entry for the passive auxiliary *werden* has the form shown in (29).

(29) *werden* (passive auxiliary):

$$
\begin{bmatrix}
cat \\
\text{HEAD} \quad
\begin{bmatrix}
verb \\
\text{SUBJ} \ \boxed{1} \\
\text{ERG} \ \boxed{1}
\end{bmatrix} \\
\text{SUBCAT} \ \boxed{2} \oplus \langle (\text{PP}[von]_{\boxed{3}}) \rangle \\
\text{VCOMP} \ \langle \text{V}[\text{LEX}+, \ ppp, \ \text{SUBJ} \ \langle \text{NP}[str]_{\boxed{3}ref} \rangle, \ \text{ERG} \ \boxed{1}, \\
\qquad\qquad \text{SUBCAT} \ \boxed{1} \oplus \boxed{2}, \ \text{VCOMP} \ \langle \rangle \rangle
\end{bmatrix}
$$

Werden raises the element with accusative properties to subject if it is a complement. The subject of the embedded verb can be realized as a prepositional phrase.

For the coherent version of *versuchen* Pollard assumes an entry which

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[20] From looking at Pollard's (1994) entries it is not clear where the feature ERG is located. As he lists HEAD features and as ERG is at the same level like COMPS, it seems to be the case that Pollard assumes the path SYNSEM|LOC|CAT for ERG. However, the analysis for remote passive suggested by Pollard only works if ERG is a head feature.

is similar to (30).[21]

(30) *versuchen* (*try* subject control verb, coherent version):

$$
\begin{bmatrix}
cat \\
\text{HEAD} \quad
\begin{bmatrix}
verb \\
\text{SUBJ} \; \langle \text{NP}[str]_{\boxed{1}} \rangle \\
\text{ERG} \; \boxed{2}
\end{bmatrix} \\
\text{SUBCAT} \; \boxed{3} \\
\text{VCOMP} \; \langle \text{V}[inf, \text{LEX}+, \text{SUBJ} \; \langle \text{NP}[str]_{\boxed{1}} \rangle, \text{ERG} \; \boxed{2}, \text{SUBCAT} \; \boxed{3}, \text{VCOMP} \; \langle \rangle] \rangle
\end{bmatrix}
$$

With such a lexical entry it is possible to analyse the sentence in (31b), which is an instance of the so-called remote passive.

(31) a. daß Karl den Wagen zu reparieren versucht hat.
        that Karl the car$_{acc}$ to repair   tried   has

     'that Karl promised him he would fix his car'

  b. weil   der Wagen oft   zu reparieren versucht wurde.
     because the car$_{nom}$ often to repair   tried   was

     'because many attempts were made to fix the car'

  c. weil   oft   versucht wurde, den Wagen zu reparieren.
     because often tried   was   the car$_{acc}$ to repair

     'because it was frequently attempted to fix the car'

In (31b) the accusative object of *zu reparieren* is realized as nominative. With (30) the sentence (31b) can be analyzed as follows: the verb *versucht* is combined with *zu reparieren*. The index of the subject of *versucht* is structure shared with the index of the subject of the embedded verb, the complements and the ERG value of the embedded verb are raised. The resulting verbal complex is embedded under *werden*. The ERG value of *zu reparieren versucht* which is the object of *reparieren*, i.e. *der Wagen*, becomes the subject of the resulting verbal complex.[22] In (31c)

---

[21] The entry differs from the one given by Pollard in that the ERG value is not identical with the first element on the subcat list of the embedded verb. Pollard's entry would predict that ergative verbs cannot be embedded in coherent constructions with *versuchen*, which is wrong.

  (i) weil Karl der Frau nicht aufzufallen versucht.

    'because Karl tries not to be noticed by the woman.' or
    'because Karl does not try to be noticed by the woman.'

[22] Note, that it is also possible to analyze the remote passive with lexical rules. For details see (Müller, To Appear). The analysis presented in this paper also makes the distinctoin between structural and lexical case.

we have the incoherent construction. The NP *den Wagen* is realized as object in the VP *den Wagen zu reparieren*.

Note that in entries of control verbs like (30) just the index of the controller and the controllee are shared. This especially is important for object control verbs like *erlauben*. The entry for *erlauben* is shown in (32).

(32) *erlauben* (*permit* object control verb, incoherent version):

$$
\begin{bmatrix}
cat \\
\text{HEAD} \quad \begin{bmatrix} verb \\ \text{SUBJ} \ \langle \text{NP}[str] \rangle \\ \text{ERG} \ \langle \rangle \end{bmatrix} \\
\text{SUBCAT} \ \langle \text{NP}[dat]_{\boxed{1}} \rangle \oplus \\
\qquad \langle \text{VP}[inf, \text{LEX}-, \text{SUBJ} \ \langle \text{NP}[str]_{\boxed{1}} \rangle, \text{SUBCAT} \ \langle \rangle] \rangle \\
\text{VCOMP} \ \langle \rangle
\end{bmatrix}
$$

With such an entry, it can be explained why the case of the dative object and the controlled subject differs.

(33) weil   ich den Männern erlaubt habe, einer   nach dem
     because I   the men$_{dat}$ allowed have one$_{nom,mas}$ after the
     anderen wegzulaufen.
     other   to.run.away

     'because I allowed the men to run away one after the other.'

If the object of *erlauben* were identical to the subject of *weglaufen*, sentences like (33) would be ruled out.

Finally, let us consider the entry for an AcI verb.

(34) *sieht* (*see* AcI verb) :

$$
\begin{bmatrix}
cat \\
\text{HEAD} \quad \begin{bmatrix} verb \\ \text{SUBJ} \ \langle \rangle \end{bmatrix} \\
\text{SUBCAT} \ \text{NP}[str] \oplus \boxed{2} \oplus \boxed{3} \\
\text{VCOMP} \ \langle \text{V}[bse, \text{LEX}+, \text{SUBJ} \ \boxed{2}, \text{SUBCAT} \ \boxed{3}, \text{VCOMP} \ \langle \rangle] \rangle
\end{bmatrix}
$$

Sehen does not assign a role to the subject it raises. The embedding of impersonal constructions is possible.[23]

---

[23] The impossibility of the embedding of passive structures is not due to the absence of a subject in the embedded verbal complex as (i.a) might suggest.

(i) a. * Er sah geschlampt werden.
        Intended: 'He saw sloppy work being done.'

     b. * Er sah die Frau geliebt werden.
        Intended: 'He saw the woman being loved.'

(35) a. ? Ich sah ihm   schlecht werden.[24]
I   saw him$_{dat}$ feel.sick become

'I saw him getting sick.'

b. Ich sah es regnen.
I   saw it rain

The entry in (34) admits the sentences in (35). In (35a) the value of
SUBJ is the empty list. In (35b) it is the expletive. But, as there are no
restrictions on the SUBJ value, both values are fine. This entry is more
general than the entry Heinz and Matiasek (1994, p. 231) give. Their ent-
ry embeds a verb phrase with a subject. While Heinz and Matiasek can,
in principle, assume a second entry for *sehen*, I think the entry in (34)
captures the generalization about the subject of the embedded verbal
complex in a more direct way. Another difference from the lexical entry
of Heinz and Matiasek is that I treat AcI verbs as verbs that construct
coherently.[25] So, all arguments of the verbal complex embedded under
a AcI verb are realized by the matrix verb. In (36), *den Mann* and *den
Wagen* are raised from *reparieren*.

(36) Er sieht den Mann   den Wagen reparieren.
he sees   the man$_{acc}$ the car$_{acc}$ repair

'He sees the man repairing the car.'

As the case of *den Wagen* cannot be assigned lexically, since then remote
passive could not be accounted for, it has to be assigned by the finite
verb *sieht*. This means that the case principle has to assign structural
accusative to all dependents of a verb or adjective that are different from
the subject.

Note that the lexical entry for *sehen* correctly predicts the ungram-
maticality of (37b).[26]

(37) a.   Der Wächter sah die Männer einen nach dem anderen
the guardian saw the men$_{acc}$ one$_{acc}$ after the other

See (Höhle 1978, p. 172) for other examples.

[24] Cf. (Reis 1976, p. 66) and (Höhle 1978, p. 70).

[25] See (Bech 1955) for evidence for this assumption.

[26] As Kordula De Kuthy has pointed out to me, the sentence seems to improve if a
pronoun is used.

(i) ?* Der Wächter sah sie$_i$ [einer   nach dem anderen]$_i$ weglaufen.
the guardian saw them$_{acc}$ one$_{nom}$ after the   other   run.away

The pronoun is morphologically underspecified for case. For some speakers the no-
minative is also possible with full NPs that are unambiguously specified for case.

weglaufen.

run.away

'The guardian saw the men run away one after the other.

b. * Der Wächter sah die Männer einer   nach dem anderen

the guardian saw the men$_{acc}$ one$_{nom}$ after the   other

weglaufen.

run.away

As the object of *sehen* and the subject of *weglaufen* are structure shared, the subject of *weglaufen* has the same case as the object of *sehen*, namely accusative. It is therefore correctly predicted that it is not possible to refer with *einer nach dem anderen* to a nominative subject of *weglaufen*.

1.4   The Case Principle

For the feature case, I assume the internal structure shown in (38).[27]

$$(38) \quad \begin{bmatrix} case \\ \text{CASE-TYPE} & case\text{-}type \\ \text{SYN-CASE} & syn\text{-}case \end{bmatrix}$$

case-type is partitioned in *structural* (*str*) and *lexical* (*lex*). The type *syn-case* is partitioned into the four morphological cases nominative, genitive, dative, and accusative.

I use abbreviations like the following to refer to various combinations of CASE-TYPE and SYN-CASE values.

$$(39) \quad snom = \begin{bmatrix} \text{CASE-TYPE} & structural \\ \text{SYN-CASE} & nom \end{bmatrix}$$

$$(40) \quad ldat = \begin{bmatrix} \text{CASE-TYPE} & lexical \\ \text{SYN-CASE} & dat \end{bmatrix}$$

---

[27] In (Müller 1999b), I assume an additional feature MORPH-CASE which is used to describe case phenomena in free relatives. I omit this feature here because it is irrelevant to the present discussion.

Abb (1994, p. 49) also assumes a separate feature for the case type. But he gives no explanation for this and does not relate it to the *Kongruenzkasus* phenomenon.

The following principle can account for the data presented in section 1.2.[28,29]

Principle 1 (Case Principle)

$$
a \begin{bmatrix} \text{SYNSEM} & \left[\text{LOC}\,|\,\text{CAT}\,|\,\text{HEAD} \begin{bmatrix} verb \\ \text{VFORM} & fin \end{bmatrix}\right] \\ \text{DTRS} & \begin{bmatrix} head\text{-}comp\text{-}structure \\ \text{H-DTR}\,|\,\text{SYNSEM}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \left\langle \text{NP}[str]\right\rangle \oplus \boxed{1} \end{bmatrix} \end{bmatrix} \rightarrow
$$

$$
\begin{bmatrix} \text{DTRS}\,|\,\text{H-DTR}\,|\,\text{SYNSEM}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \left\langle \text{NP}[snom]\right\rangle \oplus \boxed{1} \end{bmatrix}
$$

$$
b \begin{bmatrix} \text{SYNSEM} & \left[\text{LOC}\,|\,\text{CAT}\,|\,\text{HEAD} \begin{bmatrix} verb \\ \text{VFORM} & fin \end{bmatrix}\right] \\ \text{DTRS} & \begin{bmatrix} head\text{-}comp\text{-}structure \\ \text{H-DTR}\,|\,\text{SYNSEM}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \left\langle [synsem] \right\rangle \oplus \boxed{1} \oplus \\ & \left\langle \text{NP}[str] \right\rangle \oplus \boxed{2} \end{bmatrix} \end{bmatrix} \rightarrow
$$

$$
\begin{bmatrix} \text{DTRS}\,|\,\text{H-DTR}\,|\,\text{SYNSEM}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \left\langle [synsem] \right\rangle \oplus \boxed{1} \oplus \\ & \left\langle \text{NP}[sacc] \right\rangle \oplus \boxed{2} \end{bmatrix}
$$

$$
c \begin{bmatrix} \text{SYNSEM} & \left[\text{LOC}\,|\,\text{CAT}\,|\,\text{HEAD} \begin{bmatrix} \text{VERBAL} & + \\ \text{SUBJ} & \left\langle [synsem] \right\rangle \end{bmatrix}\right] \\ \text{DTRS} & \left[head\text{-}comp\text{-}structure \right] \end{bmatrix} \rightarrow
$$

$$
\begin{bmatrix} \text{SYNSEM} & \left[\text{LOC}\,|\,\text{CAT}\,|\,\text{HEAD}\,|\,\text{SUBJ} & \left\langle \text{NP}[snom] \right\rangle \right] \end{bmatrix}
$$

---

[28] This principle can be simplified if case is assigned on ARG-S (see (Müller 1997a)). ARG-S stands for argument structure. The value of ARG-S is the concatenation of the SUBJ and the COMPS or SUBCAT value. Argument attraction would then have to take place on SUBCAT and on ARG-S. Nominative is assigned to an element at the first position of ARG-S if the element has structural case. Accusative is assigned to all other elements that have structural case. I did not follow this approach in this paper for reasons of readability: the argument attraction with both subcat and ARG-S list is hardly readable.

For a different proposal for case assignment on ARG-S see (Przepiórkowski 1999).

[29] Inside the GB framework, Thiersch (1978, p. 54) formulated a similar case principle for verbal environments. His case principle assigned nominative to a noun phrase with structural case that was marked by its position and accusative to all other noun phrases with structural case.

$$d\begin{bmatrix} \text{SYNSEM} & \begin{bmatrix} \text{LOC}\,|\,\text{CAT}\,|\,\text{HEAD} & \begin{bmatrix} \text{VERBAL} & + \\ \text{SUBJ} & \langle[synsem]\rangle \end{bmatrix} \end{bmatrix} \\ \text{DTRS} & \begin{bmatrix} \textit{head-comp-structure} \\ \text{H-DTR}\,|\,\text{SYNSEM}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \boxed{1} \oplus \langle \text{NP}[str]\rangle \oplus \boxed{2} \end{bmatrix} \end{bmatrix} \rightarrow$$

$$\begin{bmatrix} \text{DTRS} & \begin{bmatrix} \text{H-DTR}\,|\,\text{SYNSEM}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \boxed{1} \oplus \langle \text{NP}[sacc]\rangle \oplus \boxed{2} \end{bmatrix} \end{bmatrix}$$

$$e\begin{bmatrix} \text{SYNSEM} & \begin{bmatrix} \text{LOC}\,|\,\text{CAT}\,|\,\text{HEAD} & \begin{bmatrix} \text{NOUN} \end{bmatrix} \end{bmatrix} \\ \text{DTRS} & \begin{bmatrix} \textit{head-comp-structure} \\ \text{H-DTR}\,|\,\text{SS}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \langle [synsem], \text{NP}[str]\rangle \oplus \boxed{1} \end{bmatrix} \end{bmatrix} \rightarrow$$

$$\begin{bmatrix} \text{DTRS}\,|\,\text{H-DTR}\,|\,\text{SYNSEM}\,|\,\text{LOC}\,|\,\text{CAT}\,|\,\text{SC} & \langle [synsem], \text{NP}[sgen]\rangle \oplus \boxed{1} \end{bmatrix}$$

The implication a assigns nominative to the subject of finite verbs. Implication b assigns accusative to all non-subject elements of the subcat list of a finite verb that have structural case. Implication c assigns case to subjects if the head is a verbal element, i.e. an adjectival participle or an non-finite verb. Implication d assigns case to objects if the head is verbal. Note that the implications above handle the case assignment in AcI constructions in the right way. So in the analysis of (36) both accusative NPs are raised to objects of the finite verb and receive case by implication b. The approach of Heinz and Matiasek does not assign case to the second raised object and therefore ungrammatical sentences would be permitted by their analysis. The implication e assigns case in nominal environments.[30]

The lexical entry for *nennen* that can explain the data presented in section 1.2.2 is shown in (41).[31]

---

[30]Note that this formulation of the principle assumes an NP analysis. For bare plurals like (i) there must be a determiner on the subcat list for the case principle to work.

(i) Bombardierungen verschiedener deutscher Städte
    bombings   several   German   cities
    'bombings of several German cities'

This could be changed easily if determiners were selected via SPR as suggested by Pollard and Sag (1994, Chapter 9). This would make an additional schema for head specifier structures necessary that is not needed elsewhere in the German grammar.

[31]It would be good to have a single lexical entry for all predicates that can be embedded under *nennen*.

(i) Er nannte ihn blöd.
    He called him stupid

(41) *nennen (call)*:

$$
\begin{bmatrix}
cat \\
\text{HEAD} \quad \begin{bmatrix} verb \\ \text{SUBJ} \ \langle \text{NP}[str] \rangle \\ \text{ERG} \ \langle \boxed{1} \rangle \end{bmatrix} \\
\text{SUBCAT} \ \langle \boxed{1} \ \text{NP}[str, \text{SYN-CASE} \ \boxed{2}], \ \text{NP}[lex, \text{SYN-CASE} \ \boxed{2}] \rangle
\end{bmatrix}
$$

The subcat list of the finite verb in the sentence (17a) has the form in (42a) and the subcat list of the passive sentence (17b) has the form in (42b).

(42) a. < NP[str], NP[str, SYN-CASE $\boxed{2}$], NP[lex, SYN-CASE $\boxed{2}$]>

In (i) the adjective is a predicative complement of *nennen*. The subject of the adjective is raised to the object of *nennen*. If one would specify the entry for *nennen* in a way that allows for the embedding of arbitrary predicates one were forced to assume that the predicate always agrees with its subject which is contradicted by the AcI examples in (15) on page 7. Evidence against the specification of case agreement between subject and predicate in the lexicon is also provided by sentences like (ii).

(ii) a. Das Problem ist, daß sich   der Senator   selbst für einen
           the problem is   that self$_{acc}$ the senator$_{nom}$ self   for an
           Kunstexperten hält. (taz, 04.16.1999, p.19)
           art.expert$_{acc}$ takes
           'The problem is that the senator considers himself to be an art expert.'

      b. Man   hält den Senator   für einen Kunstexperten.
           one$_{nom}$ takes the senator$_{acc}$ for an   art.expert$_{acc}$
           'One considers the senator to be an art expert.'

      c. Der Senator   wird für einen Kunstexperten gehalten.
           the senator$_{nom}$ is   for an   art.expert$_{acc}$ taken
           'The senator is considered to be an art expert.'

The preposition *für* differs from *als* in that it always assigns accusative. If the predicate gets accusative by the preposition and the subject of the predicate gets automatically accusative by case agreement it would not be possible to assume that the subject of the predicate is raised to the object of *halten*, since in (ii.c) the subject of the predicate *einen Kunstexperten* is nominative instead of the expected accusative. To save the analysis that assumes a lexically fixed case agreement between subject and predicate one could assume a control analysis where just indices are shared and the case values are not taken over. However, to assume a control analysis for such cases of predication is not adequate since expletive predicates may be embedded under *halten* which shows that the matrix predicate does not assign a semantic role to the subject of the embedded predicate.

(iii) Karl hält   es   für zu   warm.
        Karl takes it$_{expl}$ for too warm
        'Karl considers it to be too warm.'

Note that the AcI sentences and the example in (ii.c) are two opposite cases: In (15) the predicate is nominative although its subject is accusative and in (ii.c) the predicate is accusative although the subject is nominative.

b. < NP[*str*, SYN-CASE 2], NP[*lex*, SYN-CASE 2]>

During the analysis of (17a), the first element of the subcat lists gets nominative and the second one accusative. As the third element has lexical case, it does not receive case by the case principle. Via structure sharing it is ensured that the third element agrees with the second element in case. The analysis of (17b) is similar. The first element receives nominative and the second element agrees with the first. Note that a structure sharing of the complete case values would rule out (17b), since then the second element would have structural case and the case principle assigned accusative, which would lead to a unification failure.

An interesting interaction of the proposed case principle with *Kongruenzkasus* can be observed with sentences like (43).[32]

(43) a.   Er bat   ihn, ein Held   genannt zu werden.
           he asked him a   hero$_{nom}$ called   to be

           'He asked him to be called a hero.'

      b. * Er bat   ihn, einen Held   genannt zu werden.
           he asked him a   hero$_{acc}$ called   to be

Under certain thematic conditions passive sentences can be embedded under control verbs (Růžička 1983), (Wunderlich 1985, p. 212–213). (43) provides further evidence that the subject in infinitive VPs is nominative.

Adam Przepiórkowski suggested treating all predicative phrases as exempt from structural case assignment. Then, of course, the complete case values can be shared. The reason why I do not want to adopt this approach is that I want to treat the sentences in (18), (19), (43) and (44) in a uniform way.

(44) a. Als der Vorsitzende   der SPD kritisiert Brandt die
         as the chairman$_{nom}$ the SPD criticizes Brandt the
         Bundesregierung.
         federal.government

      b. Wir kritisieren den Bundeskanzler als einen Versager.
         we criticize   the chancellor   as a   failure$_{acc}$

In general the case of appositional phrases with *als* has to agree with the case of the NP it refers to, as the examples in (44) which are quoted from (Fanselow 1986, p. 361) show. In (44a) genitive, dative, and accusative were ungrammatical. In (44b) nominative, genitive, and dative are

---

[32]See also (Haider 1985, p. 99).

impossible. But there are exceptions like the one in (45b) where the apposition refers to a genitive complement of a noun. In this case the NP in *als*-phrase has to be nominative. Heidolph (1979) claims that both the genitive and the nominative are possible in such constructions and gives the following examples:

(45) a. * die Verwendung dieses Kunstharzes   als eines
          the use   of.the synthetic.resin as a
          Bindemittels
          binder$_{gen}$

      b.   die Verwendung dieses Kunstharzes   als ein Bindemittel
           the use   of.the synthetic.resin as a   binder$_{nom}$

I agree with the judgement of Jung (1967, p. 69), who judges NPs like the one in (45a) ungrammatical.[33] Heidolph claims that the two different cases in (45) can be explained by relating them to two different verbal structures.

---

[33] However, examples like (45a) can be found in texts:

(i) Unter Rekurs auf Marantz' (1981) Nachweis der asymmetrischen Zuweisung thematischer Rollen zu (konfigurationellen) Objekten und Subjekten kann es als die wesentliche Eigenschaft des Passivs als eines lexikalischen Prozesses angesehen werden, daß [...] (In the main text of (Grewendorf 1983, p. 143))

Data like (i) and the judgements of such constructions in the literature are evidence for the instability of the case assignments in appositions. Note, that the judgments are clear for cases like those in (ii).

(ii) a.   die Anstellung   meines Bruders   als Finanzsekretär
          the employment my   brother$_{gen}$ as financial.secretary$_{nom}$
          (Duden 1966, § 5795)

          'the employment of my brother as secretary for finances'

     b. * die Anstellung   meines Bruders   als Finanzsekretärs
          the employment my   brother$_{gen}$ as financial.secretary$_{gen}$

     c.   die   [...] deshalb   eine Abstraktion der   Objektgestalt als linearer
          which   therefore an   abstraction of.the object.form   as linear
          Weg   erlaubt. (In the main text of (Kaufmann 1995, p. 60))
          path$_{nom}$ permits

          'which therefore permit an abstraction of the object form as a linear path.'

     d. * eine Abstraktion der   Objektgestalt als linearen Wegs
          an   abstraction of.the object.form   as linear   path$_{gen}$

(ii.b) and (ii.d) are totally out. For (ii.c), the accusative seems to be also possible. In (ii.a,c) the *als*-phrase is a complement. With the dative in (ii.c), I get only the apposition reading. I have no explanation for the fact that predicative *als*-phrases have to be nominative when appearing with a nominalized verb instead of genitive as is predicted by the case agreeing analysis.

(46) a. Dieses Kunstharz als ein Bindemittel wird zu X verwendet.

'This synthetic resin, which is a binder, is used as X.'

   b. Dieses Kunstharz wird als ein Bindemittel verwendet.

'This synthetic resin is used as a binder.'

He claims that (46a) is the source for (45a) and that (46b) is the source for (45b), respectively. This argumentation, however, is not valid, since the sentences in (46) are passive already. (46b) corresponds to the active form in (47).

(47) Er verwendet dieses Kunstharz   als ein Bindemittel.
      he uses   this   synthetic.resin$_{acc}$ as a   binder$_{acc}$

(47) is ambiguous between the aposition reading and the reading where the *als*-phrase is a complement of *verwenden*. The ambiguity is avoided in (48). Furthermore, I changed the nouns to make their case visible.

(48) Diesen Schraubenzieher hat er als einen Hebel   verwendet.
      this   screw.driver$_{acc}$ has he as a   lever$_{acc}$ used
      'He used this screw driver as a lever.'

What the sentences in (46) – (48) show is that *verwenden* is a verb that has a case agreeing *als*-phrase as complement. If this case agreement property is preserved under nominalization, one would expect the NP complement of *als* to appear as genitive. So, both structures that can be related to (46) have to have a *als*-phrase with a genitive complement.

The conclusion one has to draw from this is that the nominative in (45b) is an idiosyncrasie. In fact there are other cases where appositions do not agree in case in current German (see (Leirbukt 1978) and (Wegener 1985, Chapter 4.1.3) and the references cited there). In (49) the apposition appears in the dative although it refers to a genitive NP.

(49) Die Delegierten des Landesausschusses als dem entscheidenden
      Gremium sind an diese Voten jedoch nicht gebunden.

'However, the delegates of the regional committee, the decisive body in this case, are not bound by these votes.' [34]

These idiosyncrasies can only be captured, if it is assumed that the case of the NP complement of *als* is determined lexically.

Leirbukt (1978) gives examples with prepositions that govern the accusative where the apposition to the accusative NP has dative case. In (50) the apposition in the dative case referes to an NP in the genitive.

---

[34] Der Tagesspiegel, 16.12.83, p. 1. Quoted from (Wegener 1985, p. 159).

(50) Am   6. Januar   berichtete jedoch   eine Studie des
at.the 6 January reported   however a   study of.the
Europäischen Parlaments von einem entsprechenden
European   Parliament of   a   according
Abhörsystem   der   NSA,   einem US-Geheimdienst.[35]
bugging.system of.the NSA$_{gen}$ a   US.secret.service$_{dat}$

'However, at January the 6th a study of the European Parliament
reported about such a bugging system of the NSA, a US-based
secret service.'

In (51) the appositional genitive NP referes to an dative NP.

(51) Sie   forderten die Freilassung von José Bove,   des Führers
they requested the release   of   José Bove$_{dat}$ the leader$_{gen}$
der   Bauernvereinigung.[36]
of.the farmers.union

Note that the example in (51) shows that Riemsdijk's (1983, p. 245)
claim that the dative is the unmarked case which is always used when
the apposition does not have the same case as the antecedent noun is
wrong. According to Riemsijk's theory the case of the apposition in (51)
should be dative.

Haider (1985, p. 80–82) showed that the case of adverbial NPs is
determined by their thematic function, i.e. the case of adverbial NPs is
lexical. I assume that case is determined lexically for all adjuncts. The
case of appositions containing *als* or *wie* is lexical as well, but it is a
property of some instances of these appositions to agree in case with the
NP they refer to.

1.5   Case Assignment and Extraction

The lexical analysis for extraction that was proposed by Pollard and
Sag (1994, Chapter 9) is incompatible with the case assignment approach
presented here. This was noted in (Müller 1994). In (Müller 1997a), I de-
veloped an approach for case assignment on argument structure (ARG-S).
The argument attraction that takes place in the lexical entries for passi-
ve and perfect auxiliaries then takes place both on subcat and on ARG-S.
Przepiórkowski (1999) made a similar proposal but he used an additional
feature REALIZED to distinguish realized from non-realized constituents.
If a complement is realized in the syntactic environment of a head, the
complement gets case in this environment.

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[35] c't, 5/98, p. 90
[36] taz, 06.09.99, p. 5

In general, I believe that lexical rules should be used if morphological changes on the element the rule is applied to can be seen. All other phenomena should be treated by the syntax proper and should be handled by dominance schemata.

Therefore I assume that nonlocal dependencies are not introduced by a lexical rule but rather by a unary branching schema. This schema is a part of the syntactic component of a grammar. Complements are extracted after the formation of the verbal complex. Therefore it is clear in which particular syntactic environment they surface and which case has to be assigned to them.

1.6 Alternatives

1.6.1 Heinz and Matiasek (1994)

With a feature geometry for the feature CASE like the one suggested in section 1.4, it is possible to specify case identity via structure sharing of the SYN-CASE features. Such a structure sharing does not imply that the case type is identical. If one were to assume a single case feature and an integration of the case type in the type hierarchy like Heinz and Matiasek (1994) did, a structure sharing would enforce the identity of both the case value and the case type. With a type hierarchy like
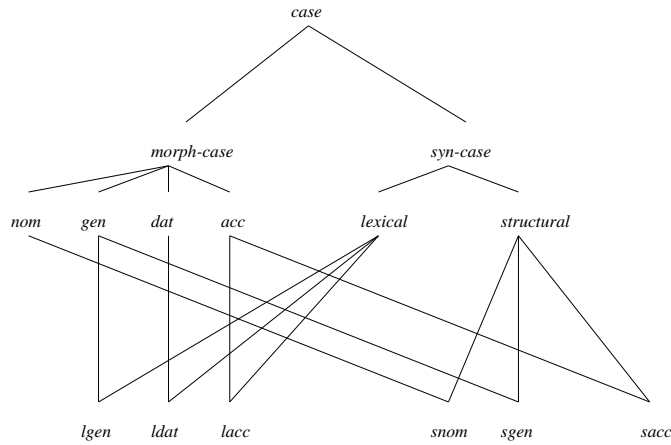

FIGURE 1 Subtypes of the Type *case* following Heinz and Matiasek (1994)

the one shown in figure 1 it is impossible to express the generalization that the prepositional complement in (19)—repeated here as (52) for convenience—is identical to the case of the nominal object, since the case of prepositions is always lexical.

(52) a. Ich sehe ihn   als meinen Freund   an.
     I   see him_{acc} as a $friend_{acc}$ PART
     'I regard him as my friend.'

   b. Er   wird als mein Freund   angesehen.
     he_{nom} is   as my $friend_{nom}$ seen
     'He is regarded as a friend of mine.'

The case principle of Heinz and Matiasek differs in two respects from
the one given above. First, they do not make a distinction between the
subject of finite verbs and the subject of non-finite verbs: both subjects
appear on the subcat list. There case principle therefore can be formula-
ted with three implications. However, without using a SUBJ feature one
has to treat verb phrases as partly saturated projections. Generalizations
with regard to modification and extraposition cannot be expressed easily
anymore without a proper notion of phrase. Like verb phrases adjective
phrases will not be maximal projections. Therefore one has to distin-
guish between saturated modifiers like relative clauses and unsaturated
modifiers like adjectives.[37]

Case Principle of Heinz and Matiasek (1994)[38]

$$
a \begin{bmatrix} \text{SYNSEM} & \begin{bmatrix} \text{LOC} \mid \text{CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} verb \\ \text{VFORM} \; fin \end{bmatrix} \\ \text{SUBCAT} \; \langle \rangle \end{bmatrix} \end{bmatrix} \\ \text{DTRS} & \begin{bmatrix} head\text{-}comp\text{-}structure \\ \text{H-DTR} \mid \text{SYNSEM} \mid \text{LOC} \mid \text{CAT} \mid \text{SC} \; \langle \text{NP}[str], \dots \rangle \end{bmatrix} \end{bmatrix} \Rightarrow
$$

$$
\begin{bmatrix} \text{DTRS} \mid \text{H-DTR} \mid \text{SYNSEM} \mid \text{LOC} \mid \text{CAT} \mid \text{SC} \; \langle \text{NP}[snom], \dots \rangle \end{bmatrix}
$$

$$
b \begin{bmatrix} \text{SYNSEM} & \begin{bmatrix} \text{LOC} \mid \text{CAT} & \begin{bmatrix} \text{HEAD} & \begin{bmatrix} verb \end{bmatrix} \\ \text{SUBCAT} \; \langle \rangle \vee \langle [synsem] \rangle \end{bmatrix} \end{bmatrix} \\ \text{DTRS} & \begin{bmatrix} head\text{-}comp\text{-}structure \\ \text{H-DTR} \mid \text{SS} \mid \text{LOC} \mid \text{CAT} \mid \text{SC} \; \langle [synsem], \text{NP}[str], \dots \rangle \end{bmatrix} \end{bmatrix} \Rightarrow
$$

$$
\begin{bmatrix} \text{DTRS} \mid \text{H-DTR} \mid \text{SYNSEM} \mid \text{LOC} \mid \text{CAT} \mid \text{SC} \; \langle [synsem], \text{NP}[sacc], \dots \rangle \end{bmatrix}
$$

Another difference is that the case principle of Heinz and Matiasek can-
not handle the case assignment in AcI constructions in the right way.
The only way that the second accusative in (36) can get case in their

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[37] See (Kiss 1995, Chapter 3.2.4) for a detailed discussion of the advantages of the
SUBJ feature.

[38] Their implication for nominal environments is not given here. It is identical to
the implication e as stated above.

analysis would be to assume that *sehen* (*see*) takes a VP complement which leaves scrambling data unexplained that can be explained with the verbal complex analysis.[39] The implications above fail to assign structural accusative in coherent constructions that contain two objects with structural case as only elements at the second position of the subcat list get accusative.

1.6.2 Lebeth (1994a)

Lebeth (1994a, p. 114) gives a case principle that assigns nominative to a complement if it is in an agreement relation with the verb. He stipulates an agreement feature for verbs that has as part of its value the index of the element that is in agreement with the verb or *non-ref* if it is an impersonal construction. In a verb complement structure nominative is assigned to a NP with structural case iff the REFO value of the complement unifies with or is identical to the specified element in the agreement value of the verb (see figure 2). If the index of the complement does not unify or is not identical, accusative is assigned (see figure 3).[40] This case principle clearly fails on sentences like (53).
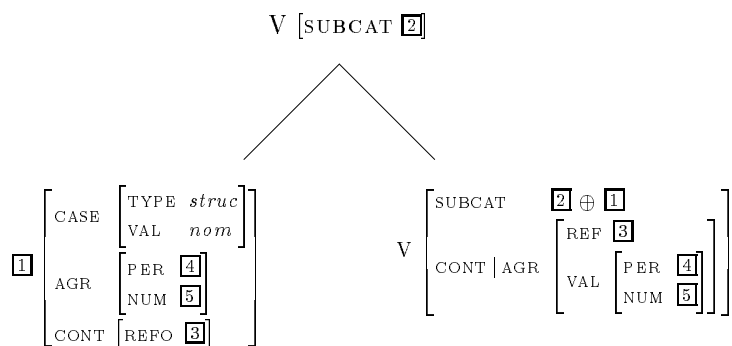
$$V\ [\text{SUBCAT}\ \boxed{2}]$$

FIGURE 2 Nominative Assignment following Lebeth (1994a)

(53) Karl$_i$ kennt sich$_i$.
      Karl knows himself$_{acc}$

Both complements of *kennen* (*know*) have structural case. The indices of both noun phrases are identical. If the above principle is applied both

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[39] For a detailed discussion of predicate complexes in general and AcI constructions in particular see (Müller, In Preparation).

[40] In figure 3, I left out the specification of AGR in $\boxed{1}$ and AGR—VAL in the structure for V that is given in Lebeth's formulation since the values of these features are irrelevant.

$$V\ [\text{SUBCAT}\ \boxed{2}]$$

$$\boxed{1}\begin{bmatrix}\text{CASE} & \begin{bmatrix}\text{TYPE} & struc \\ \text{VAL} & acc\end{bmatrix} \\ \text{CONT} & \begin{bmatrix}\text{REFO} & \boxed{3}\end{bmatrix}\end{bmatrix} \qquad V\begin{bmatrix}\text{SUBCAT} & \boxed{2} \oplus \boxed{1} \\ \text{CONT | AGR} & \begin{bmatrix}\text{REF} & not(\boxed{3})\end{bmatrix}\end{bmatrix}$$
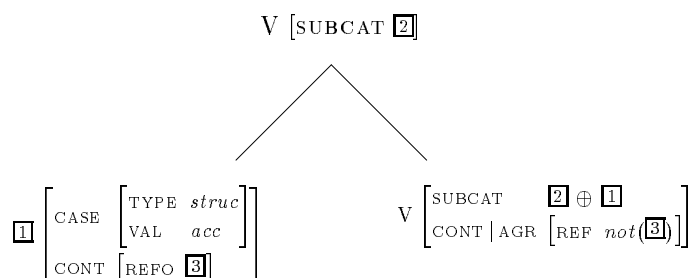
FIGURE 3 Accusative Assignment following Lebeth (1994a)

phrases receive nominative and (53) would be ruled out.

Lebeth claims that the nominative in sentences like (14) is structural and that his case principle assigns the right case since the copula enforces a structure sharing of the REFO values (a feature that refers to the discourse referent) of the two nominative NPs. Such a lexical entry for a copula would not be appropriate for sentences like (54).

(54) a. Karl behauptet, daß Peter der neue Hausmeister ist.

   'Karl claims that Peter is the new caretaker.'

   b. Daß Peter der neue Hausmeister ist, ist nicht wahr.

   'That Peter is the new caretaker is not true.'

   c. Peter behauptet, der neue Hausmeister zu sein.

   'Peter claims to be the new caretaker.'

The identity relation is part of the semantic contribution of the copula and can be embedded under intentional predicates or be negated. If the copula enforced the structure sharing, there would be no way to get a well-formed semantic representation for sentences like (54).

Apart from that Lebeth's assumption (Lebeth 1994a, p. 119) that the copula always agrees with the predicate is wrong as was shown by Jung (1967, p. 138), Duden (1966, § 6920), Reis (1982, p. 197), and Eisenberg (1994, p. 95).

(55) a. Unsere Bobfahrer   sind der Stolz   der Nation.
       our   bobbers$_{mas,pl}$ are   the pride$_{mas,sg}$ the nation

   'Our bobbers are the pride of the nation.'

   b. Die Frau   ist ein Genie.
      the woman$_{fem,sg}$ is a   genius$_{mas,sg}$

c. Die Hooligans sind eine Schande.
   the hooligans$_{mas,pl}$ are a shame$_{fem,sg}$

d. Das sind Tatsachen.
   these are facts

e. Du bist der Mörder.
   you are the killer

As the data in (55) show the agreement in copula constructions depends on the type of the subject. It is not the case that subject and predicate have to have the same number (55a,c) or the same gender (55b–c). In (55b–c) the copula agrees with the subject and in (55d) and (56), which was given by Lebeth, the predicate agrees with the copula.

(56) Das sind schwere Zeiten.
     this$_{sg}$ are difficult times$_{pl}$

These idiosyncraties can be handled lexically in the entry for the copula.

1.7 Complex Fronting

A problem that was already mentioned in (Müller 1997b) is the case assignment in sentences like (57).

(57) a. ? Den Sänger jodeln läßt der König.[42]
        the singer$_{acc}$ yodel lets the king$_{nom}$

        'The king lets the singer yodel.'

     b. * Der Sänger jodeln läßt der König.
        the singer$_{nom}$ yodel lets the king$_{nom}$

The fronting of the subject together with the non-finite verb could be explained if one assumes—as for instance Kathol (1995) does—that the subject is listed on the subcat list of both finite and non-finite verbs. However, this is not sufficient to explain why the subject in (57) has accusative case.

Note, that Lebeth's case principle incidently assigns the right case in (57). This, however, is not an argument for Lebeth's approach since it fails on parallel examples like (58) (although Lebeth (1994b) explicitly claims that his case principle is appropriate to handle such cases).

(58) [Zwei Männer erschossen] wurden während des Wochenendes.[43]
     two men$_{nom}$ shot were during the weekend

     'Two men were shot during the weekend.'

---

[42] (Oppenrieder 1991, p. 57)
[43] (Webelhuth 1985, p. 210)

In (58) *zwei Männer* is an argument of the verb *erschossen*. Since *zwei Männer* does not agree with *erschießen* but with *werden*, it would get accusative in Lebeth's approach. Even if it would be stipulated that every verb agrees with its subject, Lebeth's account would fail, since it is the governing verb that is crucial as (59) shows.

(59) a. Ein Witz   erzählt wurde.
     a   joke$_{nom}$ told   was

     'A joke was told.'

   b. Einen Witz   erzählt hat er dann.
     a   joke$_{acc}$ told   has he then

     'Then he told a joke.'

The case assignment cannot be done locally in the projection *ein Witz erzählt* since it depends on the construction being active or passive.

Although the case assignment on ARG-S solves one of the problems related to sentences like (57) – (59), the grammar nevertheless fails to provide an analysis for them. The reason is that in (57) *den Sänger* is the subject of *jodeln*. Therefore it cannot be combined with the verb. The same is true for the passive sentences. Even if it is assumed that subjects of ergative verbs and of participles are treated as underlying objects and that they are selected via subcat as is done by Lebeth (1994b), Baker (1994), and Pollard (1994, p. 273, Fn. 2) the problem is not solved. The situation gets even worse since we get conflicts because of interactions with other parts of the grammar.

(60) *werden* (following (Lebeth 1994b)):

$$\begin{bmatrix} cat \\ \text{SUBJ} \quad \langle\rangle \\ \text{SUBCAT} \;\boxed{2}\; \oplus \; P2\begin{bmatrix} \text{SUBCAT} \;\boxed{2} \end{bmatrix} \end{bmatrix}$$

P2 stands for participle. This lexical entry can explain sentences like (58) but fails to provide an explanation for others. The complementizer *um* embeds maximal projections with a non-empty SUBJ value.

(61) a.   Karl kam, um   dem Vater zu helfen.
     Karl came COMP the   father to help

     'Karl came to help the father.'

   b. * Die Prüfungen   wurden erfunden, um   den Studenten
     the examinations were   invited   COMP the students
     vor   ihnen zu grauen.
     before them to frighten

     Intended: 'The examinations were set up, to frighten the students.'

    c. * Der Vater kommt, um   geholfen zu werden.
       the father comes   COMP helped   to were

       Intended: 'The father comes to get help.'

The embedding of impersonal predicates (61b) or impersonal passives
(61c) is impossible. If one follows Lebeth's approach, in (62) *gebrochen
zu werden* would be a non-maximal projection without subject.

(62) Diese Regeln wurden ausgedacht, um   gebrochen zu werden.
       these rules   were   up.thought COMP broken   to were

       'These rules were made to be broken.'

The same problem exists for the treatment of ergative verbs. If the sub-
ject of these predicates is listed on subcat, sentences like (63) cannot be
accounted for.

(63) weil   die Frau   mir aufzufallen   versucht.
       because the woman me to.attract.attention tries

       'because the woman tries to attract my attention.'

Control verbs select for a verbal projection with a filled SUBJ feature
(see the lexical entry for *erlauben* on page 15).

    The consequence is that either all subjects have to appear on subcat
(as suggested by Kathol (1995)) or none. Since treating VPs as maximal
projections, i.e. phrasal signs with an empty subcat list is well motivated
(Kiss 1995), the account with a separate subject is to be favored. Even
if one would choose to select all subjects and complements via subcat,
sentences like (58) cannot be explained by Pollard's passive analysis. The
reason is that Pollard's passive analysis tries to subtract the object (ERG
value) of a participle from the subcat list and raise it to subject. But in
(58) the object is saturated already. The ERG value remains unchanged
and cannot be subtracted form the subcat list. The analysis of (58)
therefore fails.

    The sentence in (64) shows that examples like (57) – (59) are instan-
ces of a more general problem related to partial verb phrase fronting.

(64) Von Grammatikern angeführt werden auch Fälle mit dem
       by   grammarians   referred.to are   also cases with the
       Partizip   intransitiver Verben [...][44]
       participle intransitive verbs

       'Grammarians also refer to cases with the participle of
       intransitive verbs.'

---

[44] I found the sentence in the main text (i.e. not as an example) of (Askedal 1984,
p. 28).

In (64) the *von*-PP appears together with the verb *angeführt* in fronted position. In a object-to-subject-raising analysis the *von*-PP is an argument of *werden* and not of *angeführt*. So it seems to be the case that in the sentences (57) – (59) and (64) an argument of the matrix verb is fronted together with a verbal complement of the matrix verb. If, however, the fronted NPs in (57) – (59) are complements of the matrix verb, then their case is explained by the analysis argued for in this paper without any further assumptions.

The data in (57) – (59) and (64) seems to constitute evidence for a lexical rule based account to passive. If we have two different forms of *erzählt*, then (59) is no problem. As has been mentioned in section 1.2.1 the lexical rule based approach cannot account for the remote passive easily.

I leave the problem of cases like (57) – (59) and (64) for further research.

1.8 Problems

1.8.1 Case Assignment to Subjects of Intransitive Verbs

The case assignment to non-realized dependents of intransitive verbs and adjectives that do not take complements is not explained yet. Case is assigned in head complement structures. If an intransitive verb is seen as a saturated verb phrase it can be embedded without any head complement projection.

(65) Die Männer haben versucht, einer   nach dem anderen
     the men   have   tried one_{nom} after the   other
     wegzulaufen.
     to.run.away

     'The men tried to run away one after the other.'

To solve this problem, one could assume a unary projection like the one proposed by Pollard and Sag (1994, p. 32, fn. 32) that projects saturated lexical items to phrases. An alternative would be to assume an empty element that is saturated by adjectives and infinitives.

It was shown in the sections 1.2.1 and 1.3 that the case cannot be assigned to all subjects lexically since then the change of case in AcI constructions could not be accounted for. AcI verbs raise the subject of the embedded verb (if present) and if the subject would be nominative, the assignment of structural accusative would fail.

Another option were to let the matrix verb in incoherent constructions assign the case to the subject.

(66) Karl sah die Männer anfangen zu schießen.
Karl saw the men   start   to shoot

'Karl saw how the man started to shoot.'

This is impossible because of incoherent verbs that are raising verbs
(Kiss 1995, p. 18). In (66) *anfangen* raises the subject of *schießen*. The
subject of *anfangen zu schießen* is raised to the object of *sehen* and
sehen assigns accusative to it.

For the same reason the nominative of subjects of adjectives cannot
be assigned lexically.

(67) a. Der Mond   wurde kleiner.
the moon$_{acc}$ got   smaller

b. Karl sah den Mond   kleiner werden.
Karl saw the moon$_{acc}$ smaller become

'Karl saw how the moon got smaller.'

In (67) the subject of *kleiner* is raised by the copula *werden*. The argu-
ments of *kleiner werden* then are attracted by *sah*. As an object of *sah*
the noun phrase *the moon* gets accusative.

The case with adjectival participles is not that clear since they do
not appear in copula constructions as Haider (1985, p. 86) noted.

(68) a.   seine mich beleidigenden Worte
his   me   insulting   words

'his words that were insulting me'

b. * Die Worte waren mich beleidigend.
the words were   me   insulting

Intended: 'The words were insulting me.'

c.   Die Worte waren beleidigend.
the words were   insulting

In (68b) the participle is present and in (68c) a homonymous adjective.

1.8.2   Case Assignment to Subjects in Coherent Constructions

Subjects in coherent constructions of control verbs constitute a problem
for the case theory proposed in this paper. They do not get case. Alt-
hough this is often denied (Zifonun 1997, p. 1803) adverbial elements can
refer to subjects even if they are not expressed on the surface.

(69) a. Er las   das Buch nackt.
he read the book naked

    b. Das Buch wurde nackt gelesen.
       the book was   naked read

      'The book was read naked.'

    c. Das Buch ist nackt zu lesen!
       the book is naked to read

      'The book must be read naked.'

Zifonun claims that sentences like (69) are impossible. She gives the examples in (70).

(70) Die Äpfel wurden ungewaschen in   den Keller   getragen.
      the apples were   unwashed   into the basement carried

     'The apples were carried into the basement unwashed.'

Here of course the preferences for the reading where the apples are unwashed is so high that the other reading seems to be completely suppressed.

    The modification of an unexpressed subject is possible with *einer nach dem anderen*, too.[45],[46]

(71) ? Es   wird einer   nach dem   anderen losgelaufen!
      it_{expl} was $\text{one}_{nom,mas}$ after $\text{the}_{dat,mas}$ other   started.to.run

     'You shall start to run one after the other.'

As *wird losgelaufen* is a coherent construction, the subject of *loslaufen* does not have case. Sentences like (72) are admitted by the grammar presented above.

(72) * Es   wird einen   nach dem   anderen losgelaufen!
      it_{expl} was $\text{one}_{acc,mas}$ after $\text{the}_{dat,mas}$ other   started.to.run

The coherent constructions could be handled with a unary projection as well. Well-formed utterances and embedded sentences can be required to be phrasal and the quasi lexical coherent constructions then had to project via the unary schema. The problem with this approach is that a unary rule that projects from a lexical to a phrasal constituent without any argument cancelation interacts with the rest of the grammar in many unwanted ways.

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[45]Note, that (71) shows that the subject of the main verb is still referential. It is therefore not valid to assume that the subject is by default 3rd sg, as was suggested by Kathol (1994, p. 253).

[46]Fanselow (1986, p. 365) judges an example with a similar syntactic structure ungrammatical. In a footnote, he mentions that Marga Reis and Peter Eisenberg accepted his example as well-formed.

(73) Schlafen will   Maria.
     sleep   wants Maria

     'Maria wants to sleep.'

To give one example, take the sentence (73). If one assumes an analysis for complex fronting like the one suggested by Müller (1997b) and Meurers (1999a), one gets spurious ambiguities for sentences like (73). The reason for this is, that *will* selects for a LEX+ complement. This selection is not present in the information that is shared in nonlocal dependencies. Therefore the filler *schlafen* is unconstrained in respect to its LEX value. Both the lexical *schlafen* and the phrasal one can function as a filler in (73).

Another problem is that the case principle as formulated in this paper assigns case to all complements of a phrase as soon as the head of the phrase enters a head complement relation. This makes wrong predictions in cases like (74).

(74) Das Bild   zeigen ließ der Chef ihn   der Frau.
     the picture show   let   the boss him_{acc} the woman

     'The boss let him show the picture to the woman.'

The verb *zeigen* is combined with *das Bild*. At this point the subject of *zeigen* gets nominative. As the subject is raised by *lassen*, this leads to a contradiction since *ihn* gets accusative as it is the object of *lassen*.

The right generalization about the data presented so far seems to be that the distinction of complex predicates vs. head complement structure is not sufficient and that the assignment of case depends on whether an element is raised or not independently from being involved in a certain structure. Such an approach was suggested by Meurers (1999b) The problem that I see with Meurers' approach is its nonlocality. Since it cannot be checked locally whether an element is raised or not, Meurers assigns case after the complete structure of an utterance is built.

1.9   Conclusion

The case theory of Heinz and Matiasek (1994) has been improved. The value of the feature CASE is assumed to be a complex feature structure instead of an atomic one in order to handle the *Kongruenzkasus* phenomenon. Evidence for the existence of lexical nominative has been provided. The case principle has been extended and generalized in such a way that the assignment of case in coherent constructions and the case assignment in structures with adjectival participles works properly. The assignment of case to non-realized dependents has been integrated into the principle.

The analysis is part of an implemented fragment of German (Müller 1996).[47]

Acknowledgements

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[47] http://www.dfki.de/~stefan/Babel/

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