Case and Passive in Head-Driven Phrase Structure Grammar

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Outline

• Case
  • The Phenomenon
  • The Analysis

• Passive
Case and Case Principles

- What kind of cases are there?
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- What kind of cases are there?
- How does case depend on the syntactic environment?
Case and Case Principles

• What kind of cases are there?
• How does case depend on the syntactic environment?
• Until now case was maximally specified in valency lists, if we now the principles of case assignment, this is unnecessary.

We capture generalizations and reduce the number of lexical entries for verbs like lesen (‘read’) in (1):

(1) a. Er möchte das Buch lesen.
    he-NOM wants the book read
    ‘He wants to read the book.’

b. Ich sah ihn das Buch lesen.
    I saw him-ACC the book read
    ‘I saw him read the book.’

The case of the subject (and the object) is assigned by a principle.
Structural and Lexical Case

- If the case of an argument depends on the syntactic environment, the case is called structural case. Otherwise the argument has lexical case.
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      the plumber-*NOM* comes
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\[(2)\]

a. Der Installateur kommt.
   the plumber-\text{NOM} comes

b. Der Mann läßt den Installateur kommen.
   the man-\text{NOM} lets the plumber-\text{ACC} come
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  a. Der Installateur kommt.  
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  b. Der Mann läßt den Installateur kommen.  
      the man-NOM lets the plumber-ACC come
  
  c. das Kommen des Installateurs  
      the coming of the plumber-GEN
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  b. Der Mann läßt den Installateur kommen.
     the man-NOM lets the plumber-ACC come

  c. das Kommen des Installateurs
     the coming of the plumber-GEN

• In (2) we have a subject that changes case, in (3) it is the object:

(3)  a. Karl schlägt den Hund.
     Karl beats the dog-ACC

  b. Der Hund wird geschlagen.
     the dog is beaten
Lexical Case

- Genitive that depends on a verb is a lexical case:
  The case of the genetive object does not change in passives.

(4)  
a. Wir gedenken der Opfer.  
we-NOM remember the victims-GEN
b. Der Opfer wird gedacht.  
the victims-GEN is remembered
c. *Die Opfer wird/werden gedacht.  
the victims-NOM is/are remembered
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    the victims-NOM is/are remembered

(4b) = impersonal passiv, there is no subject
Is the Dative a Lexical Case?

- No change with dative objects:

  (5)  a. Der Mann hat ihm geholfen.
      the man has him-DAT helped

  b. Ihm wird geholfen.
      him-DAT was helped
Is the Dative a Lexical Case?

• No change with dative objects:

(5)  a. Der Mann hat ihn geholfen.
    the man has him-DAT helped

    b. Ihm wird geholfen.
    him-DAT was helped

• But what about (6)?

(6)  a. Der Mann hat den Ball dem Jungen geschenkt.
    the man-NOM has the ball-ACC the boy-DAT given
    ‘The man gave the ball to the boy as a present.’

    b. Der Junge bekam den Ball geschenkt.
    the boy-NOM became the ball-ACC given
Is the Dative a Lexical Case?

- The status of the dative is still a controversial issue. Three possibilities for dative arguments:
  1. All datives are lexical.
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Dative as a Lexical Case

- If we treat dative as a lexical case, we have to assume that lexical case can be changed into structural case in the dative passive.
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- If we treat dative as a lexical case, we have to assume that lexical case can be changed into structural case in the dative passive.
- With lexical dative Haider’s examples in (7) and (8) are explained (Haider, 1986, p. 20):

(7)  a. Er streicht den Hund.
     he-NOM strokes the dog-ACC

    b. Der Hund wurde gestreichelt.
       the dog-NOM was stroked

    c. sein Streicheln des Hundes
       his stroking of the dog-GEN

(8)  a. Er hilft den Kindern.
     he-NOM helps the children-DAT

    b. Den Kindern wurde geholfen.
       the children-DAT was helped
       ‘The children were helped.’

    c. das Helfen der Kinder
       the helping of the children-GEN

    d. * sein Helfen der Kinder
       his helping of the children-GEN
Structural Case and Bivalent Verbs

- If the only difference between *helfen* and *unterstützen* is the case, one of the cases has to be lexical.

(9)  a. Er hilft ihm.
     he-NOM helps him-DAT

   b. Er unterstützt ihn.
     he-NOM supports him-ACC

Von Stechow and Sternefeld (1988) and von Stechow (1990) and authors who see the structural/lexical case issue from a semantic point of view (Kaufmann, 1995; Stiebels, 1996; Olsen, 1997; Rapp, 1997) therefore assume that the dative of bivalent verbs is a lexical dative.
Dative Passive with Bivalent Verbs

- The case of ditransitive verbs can be derived by principles, but this is impossible with bivalent verbs (unless one has complex semantic stories).
  → Dative with *helfen* is said to be lexical.
Prediction: dative passive is impossible with such verbs.
Dative Passive with Bivalent Verbs

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   → Dative with *helfen* is said to be lexical.
   Prediction: dative passive is impossible with such verbs.

• Wegener (1985; 1990) provides the examples in (10):

  (10) a. Er kriegte von vielen geholfen / gratuliert / applaudiert.
      he got by many helped congratulated applauded
      ‘Many helped / congratulated / applauded him.’

  b. Man kriegt täglich gedankt.
      one gets daily thanked
      ‘One is thanked on a daily basis.’
Dative Passive with Bivalent Verbs (Corpus Examples)

(11) a. „Da kriegen ich geholfen.“
    there get I helped
    ‘Somebody helps me there.’

b. „Klärle“ hätte es wirklich mehr als verdient, auch mal zu einem Klärle had it really more than deserved also once to a „unrunden“ Geburtstag gratuliert zu bekommen."
    insignificant birthday congratulated to get
    ‘Klärle would have more than deserved to be wished a happy birthday, even an insignificant birthday.’

c. Mit dem alten Titel von Elvis Presley […] bekam Kassier Markus Reiß with the old song by Elvis Presley got cashier Markus Riss zum Geburtstag gratuliert, […]
    to.the birthday congratulated
    ‘The cashier Markus Riss was wished a happy birthday with the old Elvis Presley song […].’


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Accusative

We already saw structural accusatives, but there is also lexical accusative:

\[(12)\]

a. \( \text{ihn} \) dürrstet.
   \( \text{him-ACC is.thirsty} \)

b. Die Mutter lehrte \( \text{ihre Tochter} \) ein neues Lied.
   \( \text{the mother taught her daughter-ACC a new song-ACC} \)
Lexical Case in Adjectival Environments (I)

The case of objects that depend on adjectives does not change. Adjectives may assign genitive and dative:

(13)  
   a. Ich war mir dessen sicher.  
       I was me-DAT that-GEN sure  
       ‘I was sure of this.’  
   b. Sie ist ihm treu.  
       she is him-DAT faithful  
       ‘She is faithful to him.’
Lexical Case in Adjectival Environments (II)

Accusative is also possible, but not so frequent (Haider, 1985):

(14)  a. Das ist **diesen Preis** nicht wert.
     this is this price not worth
     ‘This is not worth this price.’

     b. Der Student ist **das Leben im Wohnheim** nicht gewohnt.4
     the student is the live in the dormitory not used
     ‘The student is not used to the live in the dormitory.’

     c. Du bist mir **eine Erklärung schuldig**.5
     you are me an explanation owe
     ‘You owe me an explanation.’

4 (Helbig and Buscha, 1972)
5 (Heidolph et al., 1981)
The case of the subject of an adjective depends on the syntactic environment (Wunderlich, 1984):

(15)  a. Der Mond wurde kleiner.
     the moon-NOM got smaller

    b. Er sah den Mond kleiner werden.
       he saw the moon-ACC smaller get

   ‘He saw how the moon got smaller.’
Höhle (1983, Chapter 6):
The case of elements that do not surface can be determined.

*ein- nach d- ander-* (‘one after the other’) may refer to constituents with plural reference.

Case and gender has to agree with the antecedent phrase.
The Case of Unrealized Subjects (II)

We have reference to subjects and objects in (16):

(16) a. [Die Türen]; sind [eine nach der anderen]; kaputt gegangen.
   the doors-NOM-PL-FEM are one-NOM-FEM after the-DAT-FEM other broke went
   ‘The doors broke one after another.’

b. [Einer nach dem anderen]; haben wir; die Burschen runtergeputzt.
   one-NOM-MAS after the-DAT-MAS other have we-NOM the lads-ACC down.cleaned
   ‘We took turns in bringing the lads down a peg or two.’

c. [Einen nach dem anderen]; haben wir [die Burschen]; runtergeputzt.
   one-ACC-MAS after the-DAT-MAS other have we-NOM the lads-ACC-PL-MAS down.cleaned
   ‘One after the other, we brought the lads down a peg or two.’

d. Ich ließ [die Burschen]; [einen nach dem anderen]; einsteigen.
   I let the lads-ACC-PL-MAS one-ACC-MAS after the-DAT-MAS other enter
   ‘I let the lads get in (get started) one after the other.’

e. [Uns]; wurde [einer nach der anderen]; der Stuhl vor die Tür gesetzt.
   us-DAT was one-DAT-FEM after the-DAT-FEM other the chair before the door set
   ‘We were given the sack one after the other.’
The Case of Unrealized Subjects (III)

In (17) we have reference to dative or accusative objects of embedded infinitives:

(17) a. Er hat uns gedroht, [die Burschen]; demnächst [einen nach dem anderen]; weg zuschicken.

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

b. Er hat angekündigt, [uns]; dann [einer nach der anderen]; 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]; sobald es geht, [eins nach dem anderen]; auszutauschen.

‘It is necessary to exchange the windows one after the other, as soon as possible.’
The Case of Unrealized Subjects (IV)

Reference to the subject of the infinitival VP:

(18) a. Ich habe [den Burschen]; geraten, im Abstand von wenigen Tagen
lads-DAT-PL-MAS advised in the distance of few days
[einer nach dem anderen]; zu kündigen.
one-NOM-MAS after the-DAT-MAS other to hand in their notice
‘I advised the lads to hand in their notice one after the other, at intervals of a few days.’

b. [Die Türen]; sind viel zu wertvoll, um [eine nach der anderen]; verheizt zu werden.
doors-NOM-PL-FEM are much too precious COMPL one-NOM-FEM after the-DAT-FEM other burnt to be
‘The doors are much too precious to be burnt one after the other.’

c. [Wir]; sind es leid, [eine nach der anderen]; den Stuhl
we-NOM-PL are tired one-NOM-FEM after the-DAT-FEM other the chair
vor die Tür gesetzt zu kriegen.
before the door set to get
‘We are tired of being given the sack one after the other.’

ein- nach d- ander- is nominative → Subjects are nominative as well.
The Case of Unrealized Subjects (V)

We have to make sure that non-realized subjects get case. If the case of the subject would be left unspecified, sentences like (19) would get a wrong reading:

(19) # Ich habe den Burschen geraten, im Abstand von wenigen Tagen einen nach dem anderen zu kündigen.

‘I advised the lads to fire (them) one after the other, at intervals of a few days.’

einen nach dem anderen is the object of kündigen and cannot refer to the subject of the infinitive, which is coreferential with den Burschen.
Outline

- Case
  - The Phenomenon
  - The Analysis
- Passive
The Case Principle (I)

- Dative is treated as a lexical case.
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- ditransitive verbs like *geben* (‘give’) have the following *subcat* value:

\[
(20) \quad \langle \text{NP}[\text{str}], \text{NP}[\text{str}], \text{NP}[\text{ldat}] \rangle
\]

\(str = \) structural case, \(ldat = \) lexical dative.
The Case Principle (I)

- Dative is treated as a lexical case.
- ditransitive verbs like *geben* (‘give’) have the following `subcat` value:

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\]

\(str\) = structural case, \(ldat\) = lexical dative.

- The assignment of structural case is done via the following principle (Przepiórkowski, 1999b; Meurers, 1999):

**Case Principle:**

- In a list that contains both the subject and the complements of a verbal head, the least oblique element with structural case gets nominative, unless it is raised by a higher head.
- All other elements that have structural case and are not raised get accusative.
- In nominal environments, elements with structural case get genitive.
The Case Principle (II)

- This principle is similar to the one by Yip, Maling and Jackendoff (1987) and therefore can explain the case facts of the languages that were discussed by these authors, in particular the complicated case system of Icelandic.
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- An important difference is that the principle above is monotonic, i.e. case that was assigned cannot be changed by a higher predicate.
Active

prototypical valency lists:

(21)  a. schläft (‘sleeps’): \text{SUBCAT} \langle \text{NP}[str]_j \rangle
b. unterstützt (‘supports’): \text{SUBCAT} \langle \text{NP}[str]_j, \text{NP}[str]_k \rangle
c. hilft (‘helps’): \text{SUBCAT} \langle \text{NP}[str]_j, \text{NP}[ldat]_k \rangle
d. schenkt (‘gives as . . . ’): \text{SUBCAT} \langle \text{NP}[str]_j, \text{NP}[str]_k, \text{NP}[ldat]_l \rangle
prototypical valency lists:

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a. *schläft* (‘sleeps’): \( \text{SUBCAT} \langle \text{NP}[\text{str}]_j \rangle \)  
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c. *hilft* (‘helps’): \( \text{SUBCAT} \langle \text{NP}[\text{str}]_j, \text{NP}[\text{ldat}]_k \rangle \)  
d. *schenkt* (‘gives as . . . ’): \( \text{SUBCAT} \langle \text{NP}[\text{str}]_j, \text{NP}[\text{str}]_k, \text{NP}[\text{ldat}]_l \rangle \)  

The first element in the \text{SUBCAT}-Liste gets nominative.  
All other elements with structural case get accusative.
Passive

The Analysis

- Passive
  - Agentive Passive

(a) schläft (‘sleeps’): 
  `SUBCAT ⟨ NP[str]j ⟩`

(b) unterstützt (‘supports’): 
  `SUBCAT ⟨ NP[str]j, NP[str]k ⟩`

(c) hilft (‘helps’): 
  `SUBCAT ⟨ NP[str]j, NP[ldat]k ⟩`

(d) schenkt (‘gives as . . . ’): 

When these verbs get passivized, we get the following `SUBCAT` lists:

(a) geschlafen wird: 
  `SUBCAT ⟨ ⟩`

(b) unterstützt wird: 
  `SUBCAT ⟨ NP[str]k ⟩`

(c) geholfen wird: 
  `SUBCAT ⟨ NP[ldat]k ⟩`

(d) geschenkt wird: 
  `SUBCAT ⟨ NP[str]k, NP[ldat]l ⟩`

The first position is occupied by a different NP in (23).
If this NP has structural case, it gets nominative,
if it has not (as in (23c)) the case remains the way it is, namely lexically specified.
Dative Passive

(24)  c. hilft (‘helps’): \[ \text{SUBCAT } \langle \text{NP}[str]_j, \text{NP}[ldat]_k \rangle \]
d. schenkt (‘gives as . . . ’): \[ \text{SUBCAT } \langle \text{NP}[str]_j, \text{NP}[str]_k, \text{NP}[ldat]_l \rangle \]

The dative argument becomes the first argument and the lexical dative of the embedded verb is turned into a structural case:

(25)  a. geholfen bekommt: \[ \text{SUBCAT } \langle \text{NP}[str]_k \rangle \]
b. geschenkt bekommt: \[ \text{SUBCAT } \langle \text{NP}[str]_l, \text{NP}[str]_k \rangle \]

The former dative argument is now in first position. Since it has structural case, it gets assigned nominative.

In (25b), the second element (the direct object) gets accusative.

This change of lexical case into structural case is not nice, but there seems to be no better way.
The Acl Construction (I)

(26) a. schläft (‘sleeps’): \[ \text{SUBCAT} \langle \text{NP}[str]_j \rangle \]
    b. unterstützt (‘supports’): \[ \text{SUBCAT} \langle \text{NP}[str]_j, \text{NP}[str]_k \rangle \]
    c. hilft (‘helps’): \[ \text{SUBCAT} \langle \text{NP}[str]_j, \text{NP}[ldat]_k \rangle \]
    d. schenkt (‘gives as . . . ’): \[ \text{SUBCAT} \langle \text{NP}[str]_j, \text{NP}[str]_k, \text{NP}[ldat]_l \rangle \]

The Acl Construction is analyzed as argument composition: the arguments of the embedded verb become arguments of the Acl verb:

(27) a. schlafen läßt: \[ \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j \rangle \]
    b. unterstützen läßt: \[ \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j, \text{NP}[str]_k \rangle \]
    c. helfen läßt: \[ \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j, \text{NP}[ldat]_k \rangle \]
    d. schenken läßt: \[ \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j, \text{NP}[str]_k, \text{NP}[ldat]_l \rangle \]

\text{NP}[str]_i \] stands for the subject of the Acl verb.
\text{NP}[str]_j, \text{NP}[str]_k and \text{NP}[ldat]_l \] are the arguments of the embedded verbs.
The Acl Construction (II)

(28) a. schlafen läßt: \( \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j \rangle \)
    b. unterstützen läßt: \( \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j, \text{NP}[str]_k \rangle \)
    c. helfen läßt: \( \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j, \text{NP}[ldat]_k \rangle \)
    d. schenken läßt: \( \text{SUBCAT} \langle \text{NP}[str]_i, \text{NP}[str]_j, \text{NP}[str]_k, \text{NP}[ldat]_l \rangle \)

Only the valency lists in (28) are relevant for case assignment.

The elements in the valency representations of the base verbs are irrelevant, since the case principle does not assign case to elements that are raised.

The first element in the lists in (28) gets nominative, the remaining elements with structural case get accusative.

Hence, the logical subjects of the embedded Vs get realized in accusative.
Subjects of Adjectives

The case assignment to the subject of adjectives work analogously.

The copula is combined with the adjective and we get a valency list that contains the arguments of the adjective (29a).

If such a complex is embedded under an Acl verb we get (29b):

(29)  
a. *kleiner werden:*  SUBCAT ⟨ NP[\textit{str}]_j ⟩  
‘smaller become’  
b. *kleiner werden sah:*  SUBCAT ⟨ NP[\textit{str}]_i, NP[\textit{str}]_j ⟩  
‘smaller become saw’

The first NP gets nominative, the second one accusative.
Intermediate Summary

- Case is assigned on a valence representation (here `SUBCAT`, in other HPSG publications `ARG-ST`).
Intermediate Summary

- Case is assigned on a valence representation (here SUBCAT, in other HPSG publications ARG-ST).
- There is no zero case for non-realized subjects, these elements get case according to the normal principles.
Outline

• Case

• Passive
  • The Phenomenon
  • The Analysis
    • Preliminaries (the Verbal Complex)
    • Unaccusativity
    • The Actual Analysis
Agentive Passive

“personal” passive:

(30)  a. weil Karl den Schrank öffnet
      because Karl-NOM the cupboard-ACC opens

     b. weil der Schrank geöffnet wird.
      because the cupboard-NOM opened  is
     ‘because the cupboard is opened.’
Agentive Passive

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because Karl-NOM the cupboard-ACC opens
b. weil der Schrank geöffnet wird.
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“impersonal” passive:

(31) a. weil Karl arbeitet
because Karl-NOM works
b. weil gearbeitet wird.
because worked is
‘because it is worked.’
Dative Passive

(32) a. weil Peter dem Jungen den Ball wegnimmt
   because Peter-NOM the boy-DAT the ball-ACC away.take
   ‘Peter takes away the ball from the boy.’

b. weil der Junge den Ball weggenommen bekommt
   because the boy-NOM the ball-ACC away.taken gets
   ‘The ball is taken away from the boy.’
lassen Passive

(33) a. weil er einen Fachmann den Wagen reparieren läßt
   because he-NOM an expert-ACC the car-ACC repair lets
   ‘because he has an expert repair the car.’

b. weil er den Wagen (von einem Fachmann) reparieren läßt
   because he-NOM the car-ACC by an expert repair lets
   ‘because he has an expert repair the car.’
(34) a. weil ihr den Aufsatz zu schreiben habt
   because you-NOM the paper-ACC to write have
   ‘because you have to write the paper.’

b. weil der Aufsatz (von euch) zu schreiben ist
   because the paper-NOM by you to write is
   ‘because the paper is to be written by you.’
Morphological Identity of Forms (Participle)

The form of the participle is the same in the perfect, the agentive passive, the dative passive:

a. Der Mann hat den Ball dem Jungen geschenkt.
   the man-NOM has the ball-ACC the boy-DAT given
   ‘The man gave the ball to the boy.’

b. Der Ball wurde dem Jungen geschenkt.
   the ball-NOM was the boy-DAT given
   ‘The ball was given to the boy.’

c. Der Junge bekam den Ball geschenkt.
   the boy-NOM got the ball-ACC given
   ‘The boy got the ball as a present.’
Morphological Identity of Forms (Bare Infinitive)

The form of the bare infinitive is the same in the future, Acl, *lassen* passive, and middle constructions:

(36)  a. weil ein Mechaniker den Wagen reparieren wird.
     because a mechanic-NOM the car-ACC repair will
     ‘because the mechanic will repair the car.’

b. weil Karl einen Mechaniker den Wagen reparieren läßt.
   because Karl-NOM a mechanic-ACC the car-ACC repair lets
   ‘because Karl has the mechanic repair the car.’

c. weil Karl den Wagen (von einem Mechaniker) reparieren läßt.
   because Karl-NOM the car-ACC by a mechanic repair lets
   ‘because Karl has somebody / the mechanic repair the car.’

d. weil sich der Wagen nicht reparieren läßt.
   because self the car-NOM not repair lets
   ‘because it is impossible to repair the car.’
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    because Karl-NOM a mechanic-ACC the car-ACC repair lets  
    ‘because Karl has the mechanic repair the car.’

c. weil Karl den Wagen (von einem Mechaniker) reparieren läßt.  
    because Karl-NOM the car-ACC by a mechanic repair lets  
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d. weil sich der Wagen nicht reparieren läßt.  
    because self the car-NOM not repair lets  
    ‘because it is impossible to repair the car.’

For zu infinitives, we also have two modal infinitive constructions with different argument realizations.
Unaccusativity: Passivizability

Although certain intransitive verbs allow passivization, there are others that do not allow the passive.

(37) a. daß der Zug ankam
    that the train arrived

b. * Dort wurde angekommen.
    there was arrived

c. daß der Mann ihr auffiel
    the the man her noticed
    ‘She noticed the man.’

d. * Ihr wurde aufgefallen.
    her-DAT was noticed
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     ‘She noticed the man.’
(d) * Ihr wurde aufgefallen.
     her-DAT was noticed

Caution:
Not all verbs that cannot be passivized belong to the same class!
Adjectival Participles

Such verbs can be used as prenominal adjectival participles:

(38)  a. der angekommene Zug
       the arrived train

       b. dem Regime aufgefallene „Vaterlandsverräter“
       the regime-DAT PART.fell traitors.to.their.country
       ‘the “traitors to their country” noticed by the regime’

The subject role of the participle is filled be the modified noun.

\[^{6}\text{Die Zeit, 26.04.1985, p. 3.}\]
Adjectival Participles (II)

Transitive verbs are different:
The object role of the participle is filled by the modified noun:

(39)  a. die geliebte Frau
       the loved woman

       b. der geschlagene Hund
       the beaten dog
Adjectival Participles (II)

Transitive verbs are different:
The object role of the participle is filled by the modified noun:

(39)  
   a. die geliebte Frau  
       the loved  woman  
   b. der geschlagene Hund  
       the beaten  dog  

Verbs that do not have an accusative object usually do not allow for adjectival participles:

(40)  
   a. * der getanzte Mann  
       the danced  man  
   b. * der (ihm) geholfene Mann  
       the  him  helped man
Nominatives with Object Properties (I)

- Arguments of certain verbs that are nominative in active sentences have object properties.
Nominatives with Object Properties (I)

• Arguments of certain verbs that are nominative in active sentences have object properties.
• Such verbs are called unaccusative (Perlmutter, 1978) or ergative (see for instance Grewendorf, 1989).
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• Despite this big number of test researchers do not agree which verbs should be treated as unaccusative.

• Some tests produce contradicting results (Müller, 2002, In Preparation).

• Kaufmann (1995): Many differences between unacc and trans/unerg verbs can be explained differently.
Nominatives with Object Properties (II)

- Data is explained if one assumes, that the subject of unaccusative verbs is an underlying object:
  Passive = Suppression of the subject. No subject present →
  passivization of *ankommen* and *auffallen* impossible
Nominatives with Object Properties (II)

- Data is explained if one assumes, that the subject of unaccusative verbs is an underlying object:
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Nominatives with Object Properties (II)

- Data is explained if one assumes, that the subject of unaccusative verbs is an underlying object:
  Passive = Suppression of the subject. No subject present → passivization of *ankommen* and *auffallen* impossible
- The formation of adjectival participles is possible, if there is an element with accusative object properties.
- Since the subjects of *ankommen* a. *auffallen* are underlying objects, the well-formedness of the phrases in (41) is explained.

(41) a. der angekommene Zug
    the arrived train

b. dem Regime aufgefallene „Vaterlandsverräter“
    the regime-[DAT PART.fell] traitors.to.their.country
    ‘the “traitors to their country” noticed by the regime’

\(^7\) Die Zeit, 26.04.1985, p. 3.
Resultative Constructions: Verb + Accusative + Predicate (Wunderlich, 1997; Müller, 2002, Chapter 5):

\[(42) \text{ weil niemand den Teich leer fischt }\]

because nobody-NOM the pond-ACC empty fishes

‘because nobody fishes the pond empty’

If the verbs are unergative, the resultative predicate predicates over the accusative.
Resultative Constructions with Unaccusative Verbs

Resultative predicate predicates over the subject of the verb:

(43) a. […] und im Winter froz sein Wasser zu Eis.\(^8\)
    and in the winter froze its water to ice
    ‘and in the winter its water froze to ice.

b. den Tonbändern im Archiv, die in der tropischen Hitze zu einer
   the tapes in the archive which in the tropical heat to a
   schwarzen Masse schmolzen.\(^9\)
   black mass melted

Data are explained,
if the result predicate predicates over the element with object properties.

Subjects in (43) are not normal subjects but underlying objects.

\(^8\)Frankfurter Rundschau, 16.09.1999, p. 3.
\(^9\)Frankfurter Rundschau, 05.08.1997, p. 3.
Outline

- Case
- Passive
  - The Phenomenon
    - Various Types of the Passive
    - Morphological Identity of Forms
    - Unaccusativity
  - The Analysis
    - Preliminaries (the Verbal Complex)
    - Unaccusativity
    - The Actual Analysis
Two Strategies

- In principle, there are two strategies for tackling the passive problem:
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• Solution 1: Lexical rules that map active to passive forms or stems to various participles.
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Two Strategies

- In principle, there are two strategies for tackling the passive problem:

- Solution 1: Lexical rules that map active to passive forms or stems to various participles.
- Solution 2: Argument Attraction: The auxiliary determines which arguments of the embedded verb are realized and determines the form.
- Argument for 2: No variation in morphological form.
The Subject of Non-Finite Verbs

- Subject of non-finite verbs is not represented in the \textsc{subcat}-Liste, but under \textsc{subj} (Borsley, 1989; Pollard, 1996; Kiss, 1992, 1995)

- VPs are maximal projections (uniform treatment of extraposition): A necessary condition for extraposition is maximality.

- The lexicon contains stems that have all their arguments on \textsc{subcat}. The stem is mapped onto inflected forms and the subject of infinitives with and without \textit{zu} is not represented in the \textsc{subcat} of the output, but under \textsc{subj}.
The Verbal Complex

• I assume that auxiliaries and embedded verb form a complex.
• The embedding verb takes over all arguments from the embedded verb.
• More motivation tomorrow.
Lexical Entry for the Future Auxiliary

- *werden* selects a verb in *bse* form, that is an infinitive without *zu*.

\[(44) \quad \text{wird (Futur Auxiliary):} \]

\[
\begin{cases}
\text{HEAD} & \text{verb} \\
\text{SUBCAT} & 1 \oplus 2 \oplus \langle V[bse, \text{SUBJ} 1, \text{SUBCAT} 2]\rangle \\
\text{cat}
\end{cases}
\]
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- *werden* selects a verb in *bse* form, that is an infinitive without *zu*.

  \[
  \text{(44) } \text{wird (Futur Auxiliary):} \quad \begin{cases} \text{HEAD } \text{verb} \\ \text{SUBCAT } 1 \oplus 2 \oplus \langle \text{V[bse, subj 1, subcat 2]} \rangle \end{cases} \text{cat}
  \]

- *wird* takes over the description of the arguments of *helfen* (*Karl, mir*):

  \[
  \text{(45) } \text{daß Karl mir helfen wird} \\
  \text{that Karl me help will} \\
  \text{‘that Karl will help me’}
  \]

  The *SUBCAT*-Liste of *helfen wird* has the same form as the one of *hilft*.
Lexical Entry for the Future Auxiliary

- *werden* selects a verb in *bse* form, that is an infinitive without *zu*.

  (44) *wird* (Futur Auxiliary):
  
  \[
  \begin{array}{l}
  \text{HEAD} \quad \text{verb} \\
  \text{SUBCAT} [1 \oplus 2 \oplus \langle V[bse, \text{SUBJ} [1], \text{SUBCAT} [2] \rangle] \\
  \text{cat}
  \end{array}
  \]

- *wird* takes over the description of the arguments of *helfen* (*Karl, mir*):

  (45) daß Karl mir helfen wird
  
  that Karl me help will
  
  ‘that Karl will help me’

  The *SUBCAT*-Liste of *helfen wird* has the same form as the one of *hilft*.

- The auxiliary *attracts* the arguments of the embedded verb.

  (argument attraction, argument composition)
Analysis of *helfen wird* (‘help will’)

```
[HEAD 1
 SUBCAT 2 ⊕ 3]
```

```
CL

 LOC

[HEAD

 SUBJ 2 ⟨ NP[nom] ⟩

 VFORM bse

 verb

 SUBCAT 3 ⟨ NP[dat] ⟩

][HEAD 1

 VFORM fin

 verb

 SUBCAT 2 ⊕ 3 ⊕ ⟨ 4 ⟩

 помощи]

 helfen

 wird
```
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Unaccusative, Unergative, and Transitive Verbs

- Haider (1986): Argument with subject properties (the designated argument) is marked in the argument structure of the verb.
Unaccusative, Unergative, and Transitive Verbs

- Haider (1986): Argument with subject properties (the designated argument) is marked in the argument structure of the verb.
- The subject of unergative and transitive verbs is the designated argument. Unaccusative verbs do not have a designated argument.
Unaccusative, Unergative, and Transitive Verbs

- Haider (1986): Argument with subject properties (the designated argument) is marked in the argument structure of the verb.
- The subject of unergative and transitive verbs is the designated argument. Unaccusative verbs do not have a designated argument.
- Heinz and Matiasek (1994) and Lebeth (1994) use a list-valued feature DA for the representation of the designated argument.

If there is a designated argument, it is a member of both the DA and the SUBCAT-Liste:

<table>
<thead>
<tr>
<th>Verb</th>
<th>DA</th>
<th>SUBCAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>ankommen</td>
<td>⟨⟩</td>
<td>⟨NP[\textit{str}]⟩</td>
</tr>
<tr>
<td>tanzen</td>
<td>⟨1 NP[\textit{str}]⟩</td>
<td>⟨1⟩</td>
</tr>
<tr>
<td>auffallen</td>
<td>⟨⟩</td>
<td>⟨NP[\textit{str}], NP[\textit{ldat}]⟩</td>
</tr>
<tr>
<td>lieben</td>
<td>⟨1 NP[\textit{str}]⟩</td>
<td>⟨1, NP[\textit{str}]⟩</td>
</tr>
<tr>
<td>schenken</td>
<td>⟨1 NP[\textit{str}]⟩</td>
<td>⟨1, NP[\textit{str}], NP[\textit{ldat}]⟩</td>
</tr>
<tr>
<td>helfen</td>
<td>⟨1 NP[\textit{str}]⟩</td>
<td>⟨1, NP[\textit{ldat}]⟩</td>
</tr>
</tbody>
</table>
Agentive Passive

- Haider: The designated argument of the participle is blocked.
Agentive Passive

- Haider: The designated argument of the participle is blocked.
- If the participle is used in the passive, the designated argument remains blocked. If the participle is used in the perfect, the perfect auxiliary deblocks the blocked element.

<table>
<thead>
<tr>
<th>SUBJ</th>
<th>SUBCAT</th>
</tr>
</thead>
<tbody>
<tr>
<td>angekommen (unaccusative):</td>
<td>⟨⟩                  ⟨NP[str]⟩</td>
</tr>
<tr>
<td>getanzt (unergative):</td>
<td>⟨NP[str]⟩             ⟨⟩</td>
</tr>
<tr>
<td>aufgefallen (unaccusative):</td>
<td>⟨⟩                  ⟨NP[str], NP[ldat]⟩</td>
</tr>
<tr>
<td>geliebt (transitive):</td>
<td>⟨NP[str]⟩             ⟨NP[str]⟩</td>
</tr>
<tr>
<td>geschenkt (ditransitive):</td>
<td>⟨NP[str]⟩             ⟨NP[str], NP[ldat]⟩</td>
</tr>
<tr>
<td>geholfen (unergative):</td>
<td>⟨NP[str]⟩             ⟨NP[ldat]⟩</td>
</tr>
</tbody>
</table>
Argument Blocking Lexical Rule for Particples

- Argument blocking lexical rule for participles:

  \[
  \begin{array}{c}
  \ldots \left[ \begin{array}{c}
    \text{HEAD}
    \\
    \text{SUBCAT} \quad \begin{array}{c}
      \text{DA} \quad \begin{array}{c}
        1
        \\
        \text{verb}
      \end{array}
      \\
      \oplus \quad 2
    \end{array}
  \end{array}\right]\end{array}
  \mapsto \begin{array}{c}
  \ldots \left[ \begin{array}{c}
    \text{HEAD}
    \\
    \text{SUBCAT} \quad \begin{array}{c}
      \text{VFORM} \quad \begin{array}{c}
        ppp
        \\
        \text{subj}
      \end{array}
      \\
      \text{verb}
    \end{array}
  \end{array}\right]\end{array}
  \end{array}
  \]

- The LR brackets the \text{SUBCAT}-Liste of the input into two parts: The part that corresponds to the \text{DA} list and a rest.
Argument Blocking Lexical Rule for Participles

- Argument blocking lexical rule for participles:

\[
\begin{align*}
\text{[stem]} & \quad \begin{array}{c}
\text{HEAD} \\
\text{SUBCAT} \\
\end{array} \\
\ldots & \quad \begin{array}{c}
\text{DA [1]} \\
\text{verb} \\
\end{array} \\
\text{[1] } \oplus [2] & \quad \rightarrow \\
\text{word} & \quad \begin{array}{c}
\text{HEAD} \\
\text{SUBCAT} \\
\end{array} \\
\ldots & \quad \begin{array}{c}
\text{VFORM ppp} \\
\text{SUBJ [1]} \\
\text{verb} \\
\end{array} \\
\text{[2]} & \quad \end{align*}
\]

- The LR brackets the SUBCAT-Liste of the input into two parts: The part that corresponds to the DA list and a rest.
- Only the rest is represented as the SUBCAT value of the output. The DA list is identified with the SUBJ-Liste of the output verb.
The Passive Auxiliary (I)

- *werden* (Passive Auxiliary):

\[
\left[
\begin{array}{c}
\text{DA} & \langle \rangle \\
\text{SUBCAT} & \left[ \text{1} \oplus \langle V[ppp, \text{SUBCAT} \left[ \text{1} \right]\rangle \right]
\end{array}
\right]
\]

The passive auxiliary selects a participle and attracts its arguments. (The logical subject of the participle is blocked)
The Passive Auxiliary (I)

- *werden* (Passive Auxiliary):

```
[ DA ⟨⟩
  SUBCAT 1 ⊕ ⟨ V[ppp, DA ⟨ NP ⟩, SUBCAT 1] ⟩ ]
```

The passive auxiliary selects a participle and attracts its arguments.
(The logical subject of the participle is blocked)

- Auxiliary requires the participle to have a designated argument
  (an element in the DA-Liste).
  This excludes passivization of unaccusative verbs,
  since these do not have anything in DA.
The Passive Auxiliary (II)

- The entry explains both the personal and the impersonal passive:

\[
\begin{align*}
\text{DA} & \quad \langle \rangle \\
\text{SUBCATE} & \quad \langle V[ppp], \text{DA} \langle \text{NP} \rangle, \text{SUBCATE} \rangle
\end{align*}
\]

The following \text{SUBCATE} lists result after verb complex formation:

- \textit{geschlafen wird}: \text{SUBCATE} \langle \rangle
- \textit{unterstützt wird}: \text{SUBCATE} \langle \text{NP}[str]_k \rangle
- \textit{geholfen wird}: \text{SUBCATE} \langle \text{NP}[ldat]_k \rangle
- \textit{geschenkt wird}: \text{SUBCATE} \langle \text{NP}[str]_k, \text{NP}[ldat]_l \rangle
The Passive Auxiliary (II)

• The entry explains both the personal and the impersonal passive:

\[
\begin{align*}
\text{DA} & \quad \langle \rangle \\
\text{SUBCAT} & \quad \langle \text{V[ppp]}, \text{DA} \langle \text{NP} \rangle, \text{SUBCAT} \rangle \rangle
\end{align*}
\]

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- \textit{unterstützt wird}: \text{SUBCAT} \langle \text{NP[str]}_k \rangle
- \textit{geholfen wird}: \text{SUBCAT} \langle \text{NP[ldat]}_k \rangle
- \textit{geschenkt wird}: \text{SUBCAT} \langle \text{NP[str]}_k, \text{NP[ldat]}_l \rangle

• The case principle takes care of the correct case assignment.
Exclusion of Double Passives

Without restrictions one could form a passive from (46b), which would be the impersonal passive in (46c).

(46)  a. weil sie den Mann liebt
      because she the movie loves

      b. weil der Mann geliebt wurde
          because the man loved was

      c. * weil geliebt worden wurde
          because loved been was
Exclusion of Double Passives

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\[(46)\]
\[
\begin{align*}
\text{a. weil sie den Mann liebt} & \quad \text{because she the movie loves} \\
\text{b. weil der Mann geliebt wurde} & \quad \text{because the man loved was} \\
\text{c. * weil geliebt worden wurde} & \quad \text{because loved been was}
\end{align*}
\]

The DA value of the passive auxiliary is the empty list.

Therefore the combination of the auxiliary and the participle is parallel to unaccusative simplex verbs.

Since the passive auxiliary does not allow for the embedding of unaccusatives, *geliebt worden* cannot be embedded under *wurde* in (46c).
Perfect

• The perfect auxiliary deblocks the designated argument.

*haben* (Perfect Auxiliary):

\[
\left[ \text{SUBCAT 1} \oplus \text{SUBCAT 2} \oplus \left\langle V[ppp, \text{SUBJ 1}, \text{SUBCAT 2}] \right\rangle \right]
\]
Perfect

- The perfect auxiliary deblocks the designated argument.

  \[ \text{haben (Perfect Auxiliary):} \]
  \[
  \left[ \text{SUBCAT } 1 \oplus 2 \oplus \langle V[ppp, \text{SUBJ } 1, \text{SUBCAT } 2] \rangle \right]
  \]

- It attracts the concatenation of the \text{SUBJ} value and the \text{SUBCAT-Liste} of the embedded verb.
Perfect

- The perfect auxiliary deblocks the designated argument.

\textit{haben} (Perfect Auxiliary):

\[
\left[ \text{SUBCAT} \ 1 \bigoplus 2 \bigoplus \langle \ V[p, \ \text{SUBJ} \ 1, \ \text{SUBCAT} \ 2] \ \rangle \right]
\]

- It attracts the concatenation of the \textit{SUBJ} value and the \textit{SUBCAT-Liste} of the embedded verb.

- The blocked designated argument is reintroduced into the \textit{SUBCAT-Liste} by the auxiliary.
The Perfect Auxiliary *sein*

- Similar to *haben*, but does not deblock the designated argument of the embedded participle:

\[(47) \quad \text{*sein* (Perfect Auxiliary)}:
\[
\left[\text{SUBCAT} \ 1 \oplus \langle \ V[ppp, \ \text{SUBCAT} \ 1] \ \rangle\right]
\]

Since nothing was blocked during the formation of participles of verbs like *angekommen* and *aufgefallen*, nothing has to be deblocked for the perfect.
The Dative Passive

becommen (Dative Passive Auxiliary):

\[
\begin{align*}
\text{DA} & \quad \langle \ \rangle \\
\text{SUBCAT} & \quad \langle 1 \text{ NP}[str]_2 \rangle \oplus 3 \oplus 4 \oplus \langle V[ppp, \text{DA} \langle \text{NP} \rangle, \\
& \text{SUBCAT} 3 \oplus \langle \text{NP}[ldat]_2 \rangle \oplus 4 \rangle
\end{align*}
\]

- The embedded verb has to have an element in DA.
The Dative Passive

*bekommen* (Dative Passive Auxiliary):

\[
\begin{align*}
\text{DA} & \quad \langle \rangle \\
\text{SUBCAT} & \quad \langle \mathbf{1} \text{ NP}[str][2] \rangle \oplus 3 \oplus 4 \oplus \langle V[ppp, \text{DA} \langle \text{NP} \rangle], \\
& \quad \text{SUBCAT} [3] \oplus \langle \text{NP}[ldat][2] \rangle \oplus 4 \rangle
\end{align*}
\]

- The embedded verb has to have an element in DA.
- All non-blocked arguments except the dative are directly raised.
The Dative Passive

*bekommen* (Dative Passive Auxiliary):

\[
\begin{align*}
\text{DA} & \quad \langle \rangle \\
\text{SUBCAT} & \quad \langle 1 \text{ NP}[str][2] \rangle \oplus 3 \oplus 4 \oplus \langle V[ppp, \text{DA} \langle \text{NP} \rangle, \\
& \quad \text{SUBCAT} 3 \oplus \langle \text{NP}[ldat][2] \rangle \oplus 4] \rangle
\end{align*}
\]

- The embedded verb has to have an element in DA.
- All non-blocked arguments except the dative are directly raised.
- The dative element is coindexed with an NP with structural case.
Modal Infinitives

I follow Haider in assuming that infinitives differ from participles in that the logical subject rather than the designated argument is blocked.

<table>
<thead>
<tr>
<th>DA</th>
<th>SUBCAT</th>
<th>SUBJ</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>anzukommen (unaccusative):</td>
<td>⟨⟩</td>
</tr>
<tr>
<td>b</td>
<td>zu tanzen (unergative):</td>
<td>⟨\textbf{1}⟩ NP[\textit{str}]</td>
</tr>
<tr>
<td>c</td>
<td>aufzufallen (unaccusative):</td>
<td>⟨⟩</td>
</tr>
<tr>
<td>d</td>
<td>zu lieben (transitive):</td>
<td>⟨\textbf{1}⟩ NP[\textit{str}]</td>
</tr>
<tr>
<td>e</td>
<td>zu schenken (ditransitive):</td>
<td>⟨\textbf{1}⟩ NP[\textit{str}]</td>
</tr>
<tr>
<td>f</td>
<td>zu helfen (unergative):</td>
<td>⟨\textbf{1}⟩ NP[\textit{str}]</td>
</tr>
</tbody>
</table>
The Argument Blocking Lexical Rule

(48) Argument blocking lexical rule for infinitives with and without *zu*:

\[
\begin{align*}
\ldots \left[ \begin{array}{c}
\text{HEAD} \\
\text{ver} \\
\text{SUBCAT} \ [1] \\
\text{stem} \\
\text{word} \\
\end{array} \right] & \rightarrow \ldots \left[ \begin{array}{c}
\text{HEAD} \\
\text{VFORM inf-or-bse} \\
\text{SUBJ} \ [2] \\
\text{verb} \\
\text{SUBCAT} \ [3] \\
\end{array} \right] \\
\wedge \text{first-np-str}(1, 2, 3)
\end{align*}
\]

The subject is not directly marked in the lexicon by a feature.
The element that is represented under \text{SUBJ}
is the first NP in the \text{SUBCAT-Liste} that has structural case.
The Auxiliaries

The auxiliaries are parallel to what we saw for the perfect: *haben* deblocks the element in *subj*, *sein* leaves blocked elements untouched.

(49) a. weil ihr den Aufsatz zu schreiben habt
   because you-[NOM] the paper-[ACC] to write have
   ‘because you have to write the paper.’
   
   b. weil der Aufsatz (von euch) zu schreiben ist
   because the paper-[NOM] by you to write is
   ‘because the paper is to be written by you.’
The *lassen* Passive

*lass*- (Passive Version):

\[
\begin{align*}
\text{HEAD} & | \text{DA} \left\langle \text{1} \right\rangle \\
\text{SUBCAT} & \left\langle \text{1 NP}[\text{str}] \right\rangle \oplus \text{2} \oplus \left\langle V[\text{bse}, \text{DA} \left\langle \text{NP} \right\rangle, \text{SUBCAT} \text{2}] \right\rangle
\end{align*}
\]

- *lassen* requires the embedded verb to have a DA.
The *lassen* Passive

\[ lass- \text{ (Passive Version):} \]

\[
\begin{align*}
&\text{HEAD|DA } \langle 1 \rangle \\
&\text{SUBCAT } \langle 1 \text{ NP}[str] \rangle \oplus 2 \oplus \langle V[bse, DA \langle NP \rangle, \text{SUBCAT}[2]\rangle \\
\end{align*}
\]

- *lassen* requires the embedded verb to have a DA.
- It raises all arguments that are not blocked.
The lassen Passive

lass- (Passive Version):

\[
\begin{align*}
\text{HEAD|DA} & \langle \mathbf{1} \rangle \\
\text{SUBCAT} & \langle \mathbf{1} \text{ NP}[str] \rangle \oplus \mathbf{2} \oplus \langle V[bse, DA \langle \text{NP} \rangle, \text{SUBCAT} \mathbf{2}] \rangle
\end{align*}
\]

- 
lassen requires the embedded verb to have a DA.
- It raises all arguments that are not blocked.
- It introduces its own argument.
The *lassen* Passive

*lass*- (Passive Version):

\[
\begin{align*}
\text{HEAD} &| \text{DA} \langle 1 \rangle \\
\text{SUBCAT} &\langle 1 \text{ NP}[str] \rangle \oplus 2 \oplus \langle V[bse, \text{ DA} \langle \text{ NP} \rangle, \text{ SUBCAT} 2] \rangle
\end{align*}
\]

- *lassen* requires the embedded verb to have a DA.
- It raises all arguments that are not blocked.
- It introduces its own argument.
- The case principle does the rest.
Adjectival Participles

Adjective Derivation Rule for Participles:

\[
\begin{align*}
\text{HEAD} & \left[ \text{VFORM } ppp \right] \\
\text{verb} & \\
\text{SUBCAT} & \left[ \text{NP} [\text{str}] \oplus \text{2} \right]
\end{align*}
\]

\[
\begin{align*}
\text{word} & \rightarrow \\
\text{stem} & \\
\text{SUBCAT} & \text{2}
\end{align*}
\]

- The lexical rule maps a participle onto an adjective stem.
- The designated argument of the participle is blocked, if there is any.
- Therefore the element at the first position of the \text{SUBCAT}-Liste is the element with object properties (the direct object of transitive verbs and the subject of unaccusative verbs).
Adjectival Participles: The Data

Analysis makes correct predictions for our examples:

(50)  a. der angekommene Zug
      the arrived train

b. dem Regime aufgefallene „Vaterlandsverräter“
   the regime-DAT PART.fell traitors.to.their.country
   ‘the “traitors to their country” noticed by the regime’

(51)  a. die geliebte Frau
      the loved woman

b. der geschlagene Hund
   the beaten dog

(52)  a. * der getanzte Mann
      the danced man

b. * der (ihm) geholfene Mann
   the him helped man
Further Constraints on the Modal Passive

subjectless verbs like *grauen* (‘to dread’) do neither have a syntactic subject nor a designated argument:

```
SUBJ DA  SUBCAT
```

a. gegraut (unerg):  ⟨⟩  ⟨⟩  ⟨NP[ldat], PP[ldat]⟩
b. zu grauen (unacc):  ⟨⟩  ⟨⟩  ⟨NP[ldat], PP[ldat]⟩

They have to be excluded in passive or passive-like constructions:

(53)  a. *Dem Student wird (vom Professor) vor der Prüfung gegraut.

Intended: ‘(The professor is threatening so that) the student dreads the exam.’
Adjectival Participles

The participle is mapped to an adjectival stem. After inflection this can be used in syntax:

\[
\begin{align*}
\text{HEAD} & \quad \left[ \begin{array}{c}
\text{VFORM} \, ppp \\
\text{verb}
\end{array} \right] \\
\text{SUBCAT} & \quad \left[ \begin{array}{c}
1 \, \text{NP}[str] \\ 
\oplus \\ 
2
\end{array} \right]
\end{align*}
\quad \mapsto 
\begin{align*}
\text{HEAD} & \quad \left[ \begin{array}{c}
\text{SUBJ} \, \langle 1 \rangle
\end{array} \right] \\
\text{SUBCAT} & \quad \langle 2 \rangle
\end{align*}
\]
Kathol (1994, Chapter 7.3.3)

a. angekommen (arrived, unacc):
   \[\langle 1 \text{ NP}[nom] \rangle \langle 1 \rangle \langle 1 \rangle\]

b. geschlafen (slept, unerg):
   \[\langle \text{NP}[nom] \rangle \langle 1 \rangle \langle 1 \rangle\]

c. geliebt (loved, unerg):
   \[\langle \text{NP}[nom] \rangle \langle \text{NP}[acc] \rangle \langle 1 \rangle\]

\textit{haben} (Perfect Auxiliary)

\[\text{SUBJ} 3\]
\[\text{COMPS} 2 \oplus 1 \oplus \langle V[\text{SUBJ} 2, \text{EXT} 3, \text{SUBCAT} 1] \rangle\]
\[\land 2 \neq 3\]

\textit{sein} (Perfect Auxiliary)

\[\text{SUBJ} 2\]
\[\text{COMPS} 1 \oplus \langle V[\text{SUBJ} 2, \text{EXT} 2, \text{SUBCAT} 1] \rangle\]

\textit{werden} (Passive Auxiliary)

\[\text{COMPS} 1 \oplus \langle V[\text{SUBJ} \langle \text{NP}[acc] 2 \rangle, \text{SUBCAT} 1] \rangle\]
\[\langle \text{NP}[nom] \rangle\]
Problems

Both subj and ext are deblocked by the auxiliary.

(54) Seine Frau geliebt hat er nie.
       his wife loved has he never
‘He never loved his wife.’

The phrase seine Frau has to be analyzed as an argument of the auxiliary. This does not explain why the NP can be fronted together with the participle.
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Subjectless verbs are not compatible with the perfect auxiliaries, since they take \textit{haben}.

(55) a. Dem Student hat vor der Prüfung gegraut.
    the student-DAT has before the exam dreaded
    ‘The student dreaded the exam.’

b. gegraut (unerg):
Problems

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b. gegraut (unerg):
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- Case is assigned on the valence list (\textit{SUBCAT} or \textit{ARG-ST}).
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References


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