

## The Short Life Cycle of External Arguments in Passive Derivations

Gereon Müller (Universität Leipzig)

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### 1. Prelude

*Claim:*

“In a syntacticocentric theory of morphology, the addition of morphological material cannot produce the deletion of extant syntactic structure and thus explain the absence of the external argument.” (Harley (2013, 34))

*Question:*

Why should this be the case?

### 2. An Empirical Generalization

#### 2.1. Downward Accessibility

*Background:*

There is evidence

- against a lexical approach to passive (as in Höhle (1978), Chomsky (1981), Bresnan (1982), Wunderlich (1993), Müller (2007), Kiparsky (2013)), and
- against a syntactic approach to passive where the external argument is not accessible at any point (as in Bruening (2012), Hole (2014))
- in support of a syntactic approach to passive where the external argument is accessible (as in Chomsky (1957), Perlmutter and Postal (1983), Baker et al. (1989), Sternefeld (1995), Collins (2005), Schäfer (2012b), Alexiadou and Doron (2013), Harley (2013), Merchant (2013), Georgi (2014b)).

The evidence comes from constructions that show that the external argument is syntactically accessible (see Roberts (1987), among others). (The external argument is rendered as  $DP_{ext}$  in what follows.)

#### 2.1.1. Control by $DP_{ext}$ , 1: Purpose Clauses

##### (1) Control into purpose clauses:

- Das Schiff wurde  $DP_{ext_1}$  versenkt [<sub>CP</sub> PRO<sub>1</sub> um die Versicherung zu  
the ship was sunk in order the insurance to  
kassieren ] ]  
collect
- Der Reifen wurde  $DP_{ext_1}$  aufgepumpt [<sub>CP</sub> PRO<sub>1</sub> um die Fahrt  
the tire was inflated in order the journey  
fortzusetzen ]  
to continue



#### 2.1.2. Control by $DP_{ext}$ , 2: Secondary Predicates

##### (2) Subject-oriented secondary predicates:

- Die Daten wurden  $DP_{ext_1}$  [<sub>SC</sub> PRO<sub>1</sub> nackt ] analysiert  
the data were naked analyzed
- Das Handout wurde  $DP_{ext_1}$  [<sub>SC</sub> PRO<sub>1</sub> übermüdet ] verfasst  
the handout was tired written
- Es wurde [<sub>SC</sub> PRO<sub>1</sub> absichtlich ] ein Fehler gemacht  
it was deliberately a mistake made
- Dort wird [<sub>SC</sub> PRO<sub>1</sub> freiwillig ] gearbeitet  
there is voluntarily worked

#### 2.1.3. Binding Theory

##### (3) Principle A:

- Hier wurde  $DP_{ext_1}$  sich<sub>1</sub> nicht geprügelt  
here was REFL not hit
- Es wurde  $DP_{ext_1}$  einander<sub>1</sub> gedankt  
it was each other thanked

##### (4) Principle C:

- \*Gestern wurde  $DP_{ext_1}$  Fritz<sub>1</sub> eingeladen  
yesterday was Fritz invited  
*intended reading:* ‘Yesterday, Fritz invited himself.’
- ??Gestern wurde  $DP_{ext_1}$  Fritz<sub>1</sub> [<sub>PP</sub> von sich<sub>1</sub> ] (selbst) geschlagen  
yesterday was Fritz by himself self invited

*Side remark:*

The English analogues of (4-ab) are both excluded as Strong Crossover violations in Baker et al. (1989).

##### (5) Strong Crossover:

- \*They<sub>1</sub> were kill-PASS<sub>1</sub> t<sub>1</sub>
- \*They<sub>1</sub> were kill-PASS<sub>1</sub> t<sub>1</sub> [<sub>PP</sub> by themselves<sub>1</sub> ]

*Assumption in Baker et al. (1989):*

Strong crossover effects can be derived from the constraints on chain formation in Rizzi (1986). However, strong crossover cannot be involved in (4-a) because German can assign nominative case into the VP, and does not have obligatory case- or EPP-driven subject raising (see Grewendorf (1989), and below).

#### 2.1.4. Generalization

*Conclusion:*

Assuming the external argument in passive constructions to show up in Specv, the effects in (1)–(4) suggest the following generalization.

- (6) *Downward Accessibility Generalization:*  
 The external argument in passive constructions ( $DP_{ext}$ ) is accessible for items below  $v'$ .

## 2.2. Upward Inaccessibility

*Observation:*

A question that does not seem to have been widely pursued is whether the external argument in passive constructions is also accessible for higher items. (Notational convention:  $\overline{DP}_{ext}$  means that  $DP_{ext}$  seems to be inaccessible.)

### 2.2.1. Bound Variable Interpretation

- (7) *Unavailability of binding in impersonal passives:*
- \*Kein Student<sub>1</sub> glaubt [<sub>CP</sub> dass  $\overline{DP}_{ext1}$  gut gearbeitet wird ]  
 no student believes that well worked is
  - Kein Student<sub>1</sub> glaubt [<sub>CP</sub> dass  $\overline{DP}_{ext1}$  [<sub>PP</sub> von ihm<sub>1</sub> ] gut gearbeitet wird ]  
 no student believes that by him well worked is
- (8) *Unavailability of binding in personal passives:*
- \*Er hat den meisten Lehrern<sub>1</sub> erzählt [<sub>CP</sub> dass  $\overline{DP}_{ext1}$  der Maria  
 he has the most teachers<sub>dat</sub> told that the Maria<sub>dat</sub>  
 Bücher geschenkt werden sollen ]  
 books<sub>nom</sub> given are should
  - Er hat den meisten Lehrern<sub>1</sub> erzählt [<sub>CP</sub> dass [<sub>PP</sub> von ihnen<sub>1</sub> ]  $\overline{DP}_{ext1}$   
 he has the most teachers<sub>dat</sub> told that by themselves  
 der Maria Bücher geschenkt werden sollen ]  
 the Maria<sub>dat</sub> books<sub>nom</sub> given are should

*Note:*

Assuming extremely local existential binding of external arguments in passive contexts would do the job here, but this would be just a restatement of the facts: Locality of existential binding follows from nothing, and given optional *by*-phrases, existential binding cannot be obligatory either. As a matter of fact, approaches that build existential binding deeply into the working of passivization (rather than treating it as a default interpretation procedure) invariably need *two* lexical entries for what is clearly one and the same passive morpheme: one for *by*-phrases, and one for existential binding (see, e.g., Bruening (2012)).

### 2.2.2. Criterial Movement

*Note:*

Non-overt material can satisfy criterial movement constraints in German.

- (9) *Non-overt material and movement:*
- Wer<sub>1</sub> glaubst du [<sub>CP</sub> – hat Recht ] ?  
 who<sub>nom</sub> think you is right
  - habe ich schon gesehen heute  
 (her) have I already seen today

- (10) *Unavailability of movement of  $DP_{ext}$  in passive constructions:*
- \*Ich denke [<sub>CP</sub>  $\overline{DP}_{ext1}$  ist gut gearbeitet worden ]  
 I think is well worked been
  - Ich denke [<sub>CP</sub> [<sub>PP</sub> von ihr<sub>1</sub> ] ist gut gearbeitet worden ]  
 I think by her is well worked been
  - Ich denke [<sub>CP</sub> es ist  $\overline{DP}_{ext1}$  gut gearbeitet worden ]  
 I think it is well worked been

### 2.2.3. Control of $DP_{ext}$

*Observation* (Stechow and Sternefeld (1988, 447-451), Wunderlich (1989), von Stechow (1989)):

Control infinitives must have an accessible subject argument.

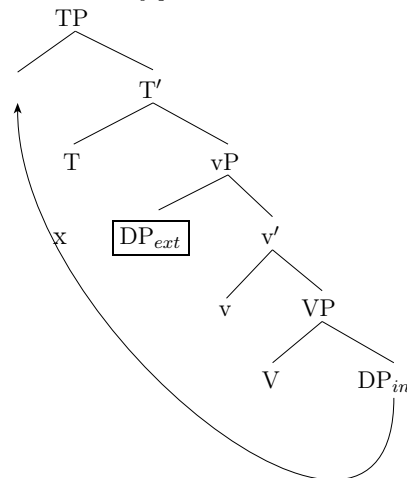
- (11) *Unavailability of control into impersonal passives:*
- \*Er versucht [<sub>CP</sub>  $\overline{DP}_{ext}$  gearbeitet zu werden ]  
 he tries worked to be
  - \*weil [<sub>CP</sub> bald  $\overline{DP}_{ext}$  geschlafen zu werden ] gewünscht wird  
 because soon slept to be wished is

### 2.2.4. Minimality

*Observation* (Collins (2005)):

If the external argument is structurally represented in passive constructions, it is unclear why movement of the internal argument to subject position can take place, given the Minimality Condition:  $DP_{ext}$  in SpecV is invariably closer to SpecT than  $DP_{int}$  in VP.

- (12) *The Minimality problem with movement to subject position:*



*However:*

$DP_{int}$  moves to SpecT in English passive constructions; and  $DP_{int}$  can also move to SpecT in German passive constructions where such movement is optional.

- (13) *Subject movement in passive constructions in English:*  
 [TP John<sub>2</sub> was [vP  $\overline{\text{DP}}_{\text{ext},\text{T}}$  [v' v [VP killed t<sub>2</sub> ]]]]

A test for optional movement to SpecT in German (Müller (2001)):

- (i) Only a nominative subject argument DP can precede unstressed pronouns and at the same time follow C elements; object DPs cannot do so.  
 (ii) Unstressed pronouns move to a domain that precedes the landing sites for scrambling (specifiers of vP) and follows SpecT (this rules out (14-c)).  
 (iii) Subject DPs can optionally move to some designated position in front of unstressed pronouns: SpecT.

- (14) *Optional subject movement in active constructions in German:*

- a. dass es<sub>3</sub> [vP der Fritz<sub>1</sub> dem Karl<sub>3</sub> t<sub>2</sub> gegeben ] hat  
 that it<sub>acc</sub> the Fritz<sub>nom</sub> the Karl<sub>dat</sub> given has  
 b. dass der Fritz<sub>1</sub> es<sub>3</sub> [vP t<sub>1</sub> dem Karl<sub>3</sub> t<sub>2</sub> gegeben ] hat  
 that the Fritz<sub>nom</sub> it<sub>acc</sub> the Karl<sub>dat</sub> given has  
 c. \*dass der Fritz<sub>1</sub> dem Karl<sub>3</sub> es<sub>2</sub> [vP t<sub>1</sub> t<sub>3</sub> t<sub>2</sub> gegeben ] hat  
 that the Fritz<sub>nom</sub> the Karl<sub>dat</sub> it<sub>acc</sub> given has  
 d. \*dass dem Karl<sub>3</sub> der Fritz<sub>1</sub> es<sub>2</sub> [vP t<sub>1</sub> t<sub>3</sub> t<sub>2</sub> gegeben ] hat  
 that the Karl<sub>dat</sub> the Fritz<sub>nom</sub> it<sub>acc</sub> given has

- (15) *Optional subject movement in passive constructions in German:*

- a. dass der Karl<sub>2</sub> ihr<sub>3</sub> [vP  $\overline{\text{DP}}_{\text{ext},\text{T}}$  [v' [VP t<sub>3</sub> t<sub>2</sub> vorgestellt ] v ]] wurde  
 that the Karl<sub>nom</sub> her<sub>dat</sub> introduced was  
 b. dass ihr<sub>3</sub> [vP  $\overline{\text{DP}}_{\text{ext},\text{T}}$  [v' [VP t<sub>3</sub> der Karl<sub>2</sub> vorgestellt ] v ]] wurde  
 that her<sub>dat</sub> the Karl<sub>nom</sub> introduced was

Note:

This presupposes that DP arguments that themselves have to undergo movement do not give rise to intervention effects via the Minimality Condition; only DP arguments that stay in situ can do so. Also, it presupposes that movement operations like scrambling and unstressed pronoun fronting have a way to circumvent Minimality effects.

Collins's (2005) proposal:

Smuggling: A constituent including DP<sub>int</sub> and V (the PartP, alternatively: VP) moves to a higher position (SpecVoice), across DP<sub>ext</sub>, and DP<sub>int</sub> then undergoes extraction from the moved VP (PartP), in violation of Freezing.

Problems with smuggling:

Smuggling is incompatible with several constituency tests (given that a *by*-phrase is assumed to have *by* in Voice, and DP<sub>ext</sub> to be realizable overtly as the DP that gets case from *by*).

- (16) *Constituency in double object constructions → intraposition:*

- a. [DP<sub>2</sub> The book ] was given by John to Mary ←

- b. [VoiceP [Voice by ] [vP John [v' v [VP the book [V' given [PP to Mary ]]]]]]

- (17) *Non-constituent movement with 'by'-phrases* ('it can optionally pied-pipe a preceding preposition'):

- a. By [ whom ] was the book given to Mary ?  
 b. \*[ By whom to Mary ] was the book given ?

### 2.2.5. Anaphoric Binding

Observation (Pitteroff (2014)):

DP<sub>ext</sub> does not block *anaphoric binding* from above in passive constructions, in contrast to other external arguments in German that act as interveners; cf. the passive/active pair in an AcI construction with *lassen* in (18) (Pitteroff (2014)). (German AcI constructions sometimes permit long-distance reflexivization, but this effect only shows up with PPs; cf. Reis (1976), Gunkel (2003), Barnickel (2014). Also, binding by the matrix subject in (18-c-i) cannot be due to raising of *sich* to the matrix clause because *sich* can participate in VP topicalization.)

- (18) a. Der König<sub>1</sub> lässt [pass  $\overline{\text{DP}}_{\text{ext},\text{T}}$  sich<sub>1/2</sub> rasieren ]  
 the king<sub>nom</sub> lets REFL shave  
 b. Der König<sub>1</sub> lässt [act die Diener<sub>2</sub> sich<sub>\*1/2</sub> rasieren ]}  
 the king<sub>nom</sub> lets the servants REFL shave

### 2.2.6. Higher Adjunct Clauses

- (19) *Unavailability of control into adjunct clauses that are higher than purpose clauses* (McCawley (1984), Chomsky (1986) vs. Roberts (1987)):

- a. \*Sophia Loren<sub>2</sub> was  $\overline{\text{DP}}_{\text{ext},\text{T}}$  seen [CP while PRO<sub>1</sub> enjoying oneself<sub>1</sub> ]  
 b. Sophia Loren<sub>2</sub> was DP<sub>ext,1</sub> seen [CP while PRO<sub>2</sub> enjoying herself<sub>2</sub> ]

Note:

Movement of DP<sub>ext</sub> might make control into non-c-commanded domains possible but seems to be systematically unavailable.

### 2.2.7. Generalization

Conclusion:

Assuming again that the external argument in passive constructions would show up in Specv, the effects in (8), (10), (19) and (11) suggest the following generalization.

- (20) *Upward Accessibility Generalization:*

The external argument in passive constructions (DP<sub>ext</sub>) is *not* accessible for items above v'.

Combining the two generalizations, the Accessibility Generalization in (21) emerges.

- (21) *Accessibility Generalization:*

DP<sub>ext</sub> in passive constructions in accessible from below and inaccessible from above.

*Note:*

This does not follow under any syntactic approach without further stipulations.

### 3. A Conceptual Consideration

*Assumption* (Epstein and Seely (2002), Müller (2011)):

In a strictly local derivational approach with cyclic LF and PF spellout, there are neither syntactic reasons for postulating traces/copies/occurrences (they would not be accessible by syntactic constraints anyway), nor semantic reasons for postulating traces/copies/occurrences (semantic interpretation also applies cyclically).

*Consequence:*

Movement leaves nothing in the original position, and tree pruning applies (see Ross (1967)). From this perspective, it becomes necessary to postulate an operation Cut that takes an item out of the structure before it remerges it at the root. (Cf. the first step of sideward movement in Nunes (2004), Hornstein (2009).)

(22) *A typology of structure-manipulating operations:*

- a. Merge
- b. Cut
- c. Move = Cut + Merge

*Prediction:*

There should be instances of bare structure-removing Cut; this operation is the mirror image of bare structure-building Merge (Chomsky (2001; 2008)).

*Question:*

Would removing existing structure not violate many fundamental constraints?

*Answer:*

The only relevant constraint that it must violate is the *Projection Principle* (see Chomsky (1981)). However:

- (a) There is no room for the Projection Principle in current minimalist analyses anymore.
- (b) The Projection Principle has always been a conceptually unattractive constraint since it qualifies as *global* in Lakoff's (1971) sense. (A global constraint applies to a whole derivation; it correlates non-adjacent steps in the derivation.)

(23) *Projection Principle:*

- a. If A selects B as a lexical property, then A selects B in C at level  $L_i$ .
- b. If A selects B in C at level  $L_i$ , then A selects B in C at level  $L_j$ .

(24) *A consequence of the Projection Principle:*

- a. What<sub>1</sub> did John [<sub>VP</sub> see what<sub>1</sub> ]?
- b. \*What<sub>1</sub> did John [<sub>VP</sub> see ]?

*Note:*

To find out whether the Projection Principle is violated, it does not suffice to simply look at a level of representation, or at a step in the derivation – to show that (24-b) is an impossible S-structure representation, we have to know that there is an object DP within VP at an earlier derivational stage.

*Suggestion:*

Passive is brought about by syntactic Cut operations.

*Side remark:*

(i) Standard cases of ellipsis presumably do not involve Cut operations since there is typically evidence for the existence of syntactic structure here; Cut removes such structure.

(ii) Potential instances of Cut operation: grammatical-function changing, reanalysis phenomena

*Background assumptions* (see Heck and Müller (2007), Müller (2011), Georgi (2014a), among others):

(i) *All syntactic operations are feature-driven*

(25) *Four types of features that drive operations:*

- |  |       |
|--|-------|
| a. Pure structure-building: Merge                  | [•F•] |
| b. Pure structure-removal: Cut                     | [-F-] |
| c. Structure-removal plus structure-building: Move | [•F•] |
| d. Probe features: Agree:                          | [*F*] |

(ii) *Features on lexical items are ordered*

(26) *Structure-building features of v:*

[•V•] > [•D•]

(27) *Last Resort:*

- a. Every syntactic operation must discharge (and delete, or render inaccessible) either [ $\alpha$ F $\alpha$ ] (where  $\alpha$  ranges over •, -, and •) or [ $*F*$ ].
- b. Only features at the top of a feature list are accessible.

## 4. The Passive

### 4.1. Analysis

*Proposal:*

- Passive is triggered by the optional addition of a [-D-] feature to v in the numeration (i.e., to the very same head that introduces the external argument DP).
- [-D-] on v will remove an existing DP specifier of v.

- The system is myopic and exerts instantaneous repair: Removal of an argument DP immediately triggers removal of the next case feature from v.

(28) *Transitive passive constructions:*

- das DP<sub>ext1</sub> das Buch<sub>2</sub> gelesen wurde  
that the book<sub>nom</sub> read was
- Lexicon: v:[•V•] > [•D•] > [\*acc\*]
- Numeration: v:[•V•] > [•D•] > [-D-] > [\*acc\*]

(29) *Scarcity of case features:*

A head assumes that the number of DPs and case features is balanced; undoing the effect of a [•D•] feature by discharging a [-D-] feature therefore invariably implies removal of a [\*case\*] feature on a head in the syntax (if such a feature is present).

*Note:*

This implies that probes can be deleted when the need arises (see Preminger (2011)).

(30) *A passive derivation:*

- v:[•V•] > [•D•] > [-D-] > [\*acc\*], [VP das Buch gelesen ]
- [v' v:[•D•] > [-D-] > [\*acc\*] [VP das Buch gelesen ]]
- [vP DP<sub>ext</sub> [v' v:[-D-] > [\*acc\*] [VP das Buch gelesen ]]]
- Syntactic activity of DP<sub>ext</sub>**: a short life cycle in which control and binding of c-commanded items can be accomplished
- [vP v:[\*acc\*] [VP das Buch gelesen ]]
- [vP v [VP das Buch gelesen ]]

*Note:*

An alternative option may be to insert [-D-] *below* the case feature on v's feature stack. In that case, transitive passives can arise, as in languages like Ukrainian, Northern Russian varieties, and Czech, where passivization does not imply absorption of structural accusative case. The reason is that DP removal comes too late to be able to induce case probe deletion on v: There is no case feature left at this point.

(31) *Transitive passives in Ukrainian:*

- Cerkv-a bul-a zbudova-n-a v 1640 roc'i  
church-NOM/FEM was-FEM build-PASS-FEM in year 1640  
'The church was built in 1640.'
- Cerkv-u bul-o zbudova-n-o v 1640 roc'i  
church-AKK/FEM was-NEUT build-PASS-NEUT in year 1640  
'The church was built in 1640.'

#### 4.2. Life

(32) *Control:*

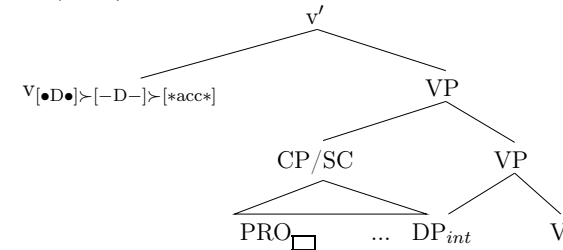
- Das Schiff wurde DP<sub>ext1</sub> versenkt [CP PRO<sub>1</sub> um die Versicherung zu  
the ship was sunk in order the insurance to

kassieren ] ]  
collect

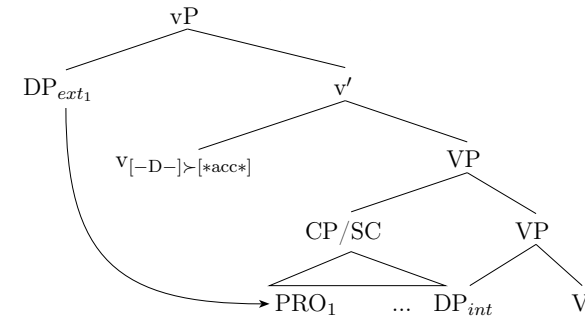
- Die Daten wurden DP<sub>ext1</sub> [SC PRO<sub>1</sub> nackt ] analysiert  
the data were naked analyzed

(33) *Control in passive derivations*

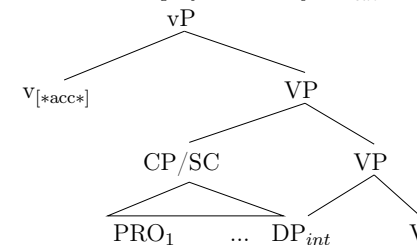
- Merge(v, VP)*



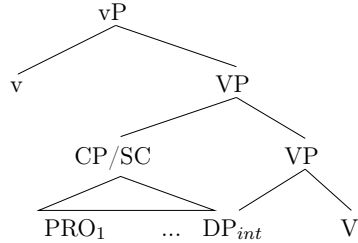
- Control by DP<sub>ext</sub>: Merge(DP<sub>ext</sub>, v')*



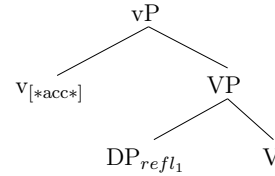
- Counter-Bleeding of control by DP<sub>ext</sub>: Cut(DP<sub>ext</sub>, v')*



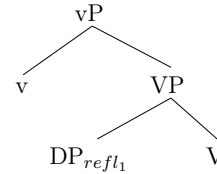
d. *Case probe removal*



c. *Counter-bleeding of reflexivization: Cut(DP<sub>ext</sub>, v')*



d. *Case probe removal*



Note:

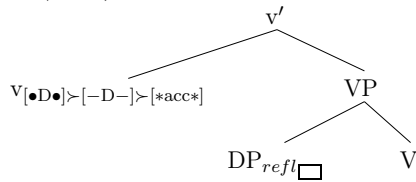
Cut would bleed control (because it removes the context in which control can apply) but comes too late to actually do so – control has already applied. Thus, opaque rule interaction results: *counter-bleeding* (see Chomsky (1951), Kiparsky (1973)). The output representation is opaque because it is not clear how control can have applied successfully – there is no controller left at this point.

(34) *Binding:*

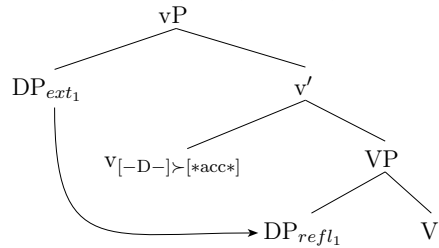
- a. Hier wurde DP<sub>ext1</sub> sich<sub>1</sub> nicht geprügelt  
here was REFL not hit
- b. \*Gestern wurde DP<sub>ext1</sub> Fritz<sub>1</sub> eingeladen  
yesterday was Fritz invited  
*intended reading:* ‘Yesterday, Fritz invited himself.’

(35) *Binding in passive derivations*

a. *Merge(v, VP)*



b. *Reflexivization: Merge(DP<sub>ext</sub>, v')*



Note:

Principle A (more generally, whatever brings about reflexivization) is an Anywhere Principle (see Belletti and Rizzi (1988), Epstein et al. (1998)).

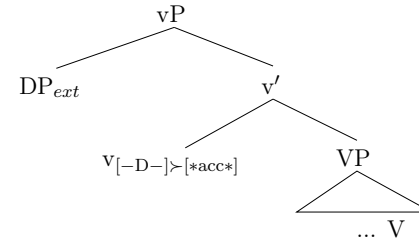
4.3. *Death*

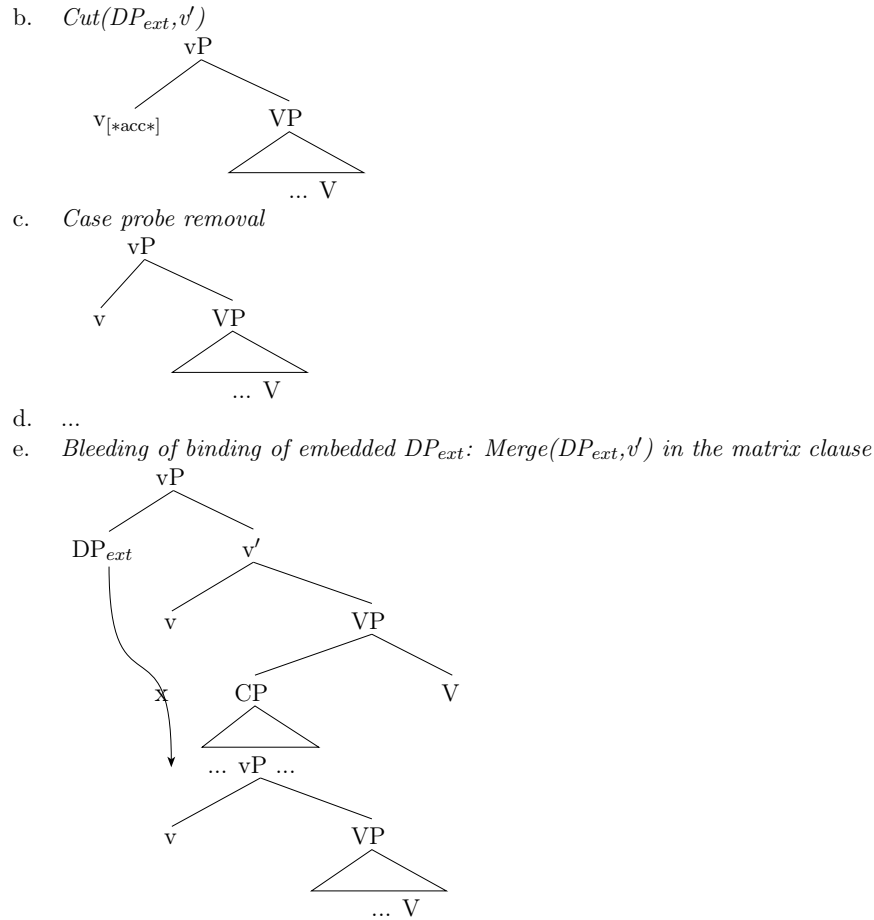
(36) *Binding from above:*

- a. \*Kein Student<sub>1</sub> glaubt [CP dass ~~DP<sub>ext1</sub>~~ gut gearbeitet wird ]  
no student believes that well worked is
- b. \*Er hat den meisten Lehrern<sub>1</sub> erzählt [CP dass ~~DP<sub>ext1</sub>~~ der Maria  
he has the most teachers<sub>dat</sub> told that the Maria<sub>dat</sub>  
Bücher geschenkt werden sollen ]  
books<sub>nom</sub> given are should

(37) *Bound variable interpretation in passive derivations*

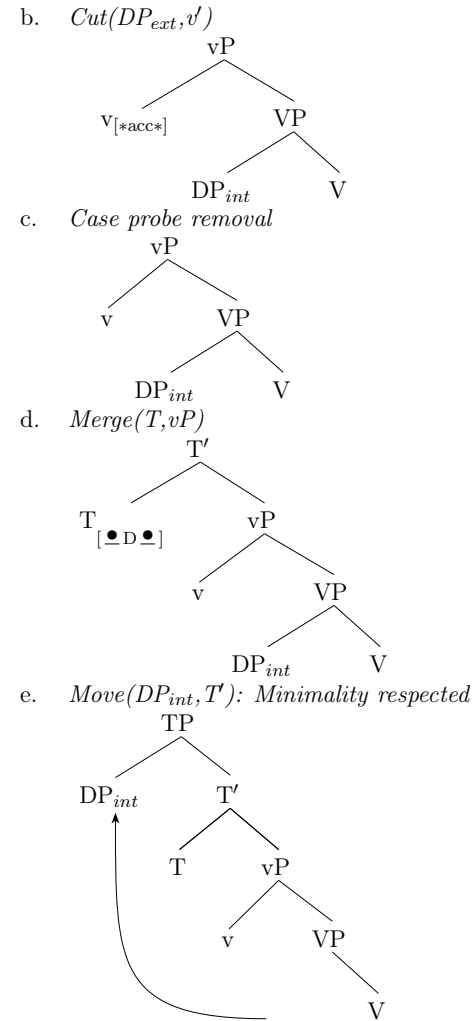
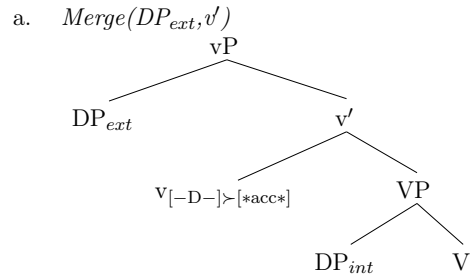
a. *Merge(DP<sub>ext</sub>, v')*





(38) *Subject raising respects Minimality:*  
 $[_{TP} \text{John}_2 \text{ was } [_{vP} \overline{DP_{ext,T}} [_{v'} v [_{VP} \text{killed } t_2 ]]]]$

(39) *Minimality in passive derivations*



#### 4.4. Voice and $v$

*Side remark:*

It would in principle be possible to attribute the syntactic argument reduction effect to an additional Voice head that takes  $vP$  as a complement; however, in that case a look-ahead problem would arise (given that  $v$  rather than Voice assigns objective case) that can only be solved by ad-hoc stipulations (e.g., concerning the optionality of case features on  $v$ ), or by adopting a non-local approach to syntax (such that case assignment by  $v$  can be effected counter-cyclically on the VoiceP level), or by invoking a theory of structural object case that does not involve  $v$  (cf. McFadden (2004), Schäfer (2012a), Alexiadou

et al. (2014)).

*Note:*

This implies that arguments for a simultaneous presence of VoiceP and vP in passive constructions have to be re-evaluated. This includes:

- morphological evidence based on affix order (and the Mirror Principle) in Hiaki (Harley (2013)) and Tamil (Sundaresan and McFadden (2014))
- syntactic evidence based on ellipsis of verbal categories under identity (Merchant (2013))

(40) *Reanalysis of Merchant’s data: VP ellipsis rather than vP ellipsis* (incl. lexical analysis of middles):

- a. (i) This problem was to have been looked into, but obviously nobody did  
(ii) [<sub>vP</sub> v<sub>pass</sub> [VP look-into this problem ]]  
          [<sub>vP</sub> v<sub>act</sub> [VP look-into this problem ]]
- b. (i) \*They sell Hyundais in Greece because Hondas don’t  
(ii) [<sub>vP</sub> v<sub>act</sub> [VP sell Huyndais ]]  
          [<sub>vP</sub> v<sub>middle</sub> [VP sell ]]

*Plus:*

In Merchant’s vP ellipsis analysis, it is not quite clear how the two vPs can qualify as sufficiently identical in (40-a), given that DP<sub>ext</sub> is a variable bound by *nobody* in one case, and a variable that is existentially bound in the other case.

## 5. Consequences

### 5.1. Double Object Constructions

*Note:*

There are two verbal passives in German, one with the passive auxiliary *werden* and one with the passive auxiliary *bekommen* (*kriegen*) (also cf. *get*-passives in English). The second type of passive is sometimes called “recipient passive”. It mainly shows up in double object constructions.

(41) *Recipient passive in German:*

- a. dass der Fritz der Maria das Buch geschenkt hat.  
    that the Fritz<sub>nom</sub> the Maria<sub>dat</sub> the book<sub>acc</sub> given has
- b. dass die Maria das Buch geschenkt bekommt (kriegt).  
    that the Maria<sub>nom</sub> the book<sub>acc</sub> given gets
- c. dass der Maria das Buch geschenkt wird.  
    that the Maria<sub>dat</sub> the book<sub>nom</sub> given is
- d. \*dass der Maria das Buch geschenkt bekommt (kriegt).  
    that the Maria<sub>dat</sub> the book<sub>nom</sub> given gets
- e. \*dass die Maria das Buch geschenkt wird.  
    that the Maria<sub>nom</sub> the book<sub>acc</sub> given is

(42) *Recipient passive without recipients:*

- a. dass man der Maria das Fahrrad geklaut hat  
    that one<sub>nom</sub> the Maria<sub>dat</sub> the bike<sub>acc</sub> stolen has
- b. dass die Maria das Fahrrad geklaut gekriegt hat  
    that the Maria<sub>nom</sub> the bike<sub>acc</sub> stolen gotten has

(43) *Intransitive contexts with a lexical dative:*

- a. Hier wird keinem geholfen.  
    here is no-one<sub>dat</sub> helped
- b. ?Hier kriegt keiner geholfen.  
    here gets no-one<sub>nom</sub> helped
- c. \*Hier wird keiner geholfen.  
    here is no-one<sub>nom</sub> helped

*Analysis:*

In typical double object constructions, v has *two* structural cases to assign to VP-internal DPs: dative and accusative.

(44) *Features of v for double object contexts:*

v:[•V•] > [•D•] > [\*dat\*] > [\*acc\*]

*Proposal:*

- In German, [–D–] may either be inserted directly above [\*dat\*], or it may be inserted directly above [\*acc\*].
- In the first case, a recipient passive construction results (dative cannot be assigned anymore).
- In the second case, a standard passive construction results (accusative case cannot be assigned anymore).

(45) *Features of passive v for double object contexts:*

- a. v:[•V•] > [•D•] > [–D–] > [\*dat\*] > [\*acc\*]
- b. v:[•V•] > [•D•] > [\*dat\*] > [–D–] > [\*acc\*]

*Note:*

In order to correctly determine passive auxiliary selection (*bekommen* selects a vP headed by (45-a); *werden* selects a vP headed by (45-b)), the simplest solution would be to assume that discharged features are still in some way visible from outside; this way the two vPs can be distinguished without introducing diacritics.



## 5.2. Intransitive Constructions

### (46) Impersonal passive in German:

- a. *Unergative verbs:*
  - (i) Hier wird jetzt gearbeitet  
here is now worked
  - (ii) Getanzt wurde nicht  
danced was not
- b. *Unaccusative verbs:*
  - (i) \*Hier wird jetzt gefallen  
here is now pleased
  - (ii) \*Es wurde angekommen  
it was arrived

#### Observation:

[−D−] on *v* does not intrinsically stipulate that it is the external argument  $DP_{ext}$  that is removed as a consequence of Cut, rather than some VP-internal object DP. This effect follows from the Strict Cycle Condition: Structure-building and structure-removal can only take place at the root (there is no counter-cyclic Merge into embedded domains).

### (47) Strict Cycle Condition (Chomsky (1973)):

Within the current XP  $\alpha$ , a syntactic operation may not exclusively target a position that is included within another XP  $\beta$  that is dominated by  $\alpha$ .

#### Consequence:

- The sole DP argument of an unergative verb can be removed via [−D−] on *v* since it is located in Spec $v$ , and execution of Cut does not violate the Strict Cycle Condition.
- The sole DP argument of an unaccusative verb cannot be removed via [−D−] on *v* since it is located within VP, and execution of Cut would violate the Strict Cycle Condition.

## 6. The External Argument: Resurrection

#### Note:

So far, nothing has been said about what  $DP_{ext}$  looks like in passive constructions.

#### Null hypothesis:

$DP_{ext}$  can be anything: A referential expression, a pronoun, a DP without phonological features, even perhaps an empty category like *pro*: Even though argument *pro* is not licensed in German (and theories that postulate it for passive constructions in this language are in danger of stipulating construction-specific empty categories), this is unproblematic if it is deleted before cyclic spellout (assuming that this is where argumental *pro* must be licensed by some means like rich inflection).

#### By-phrases:

1.  $DP_{ext}$  is removed from the structure via [−D−], and placed in the workspace.
2.  $DP_{ext}$  is remerged into the structure in the only way that is available without structure-building features, viz., as an adjunct.

#### Note:

The *by*-phrase does not intervene (for the purposes of the Minimality Condition) either because it is a PP (not a DP) after all; or (and this is somewhat more interesting) it is merged *after* movement of  $DP_{int}$  to either an intermediate or a final position (cf. Epstein et al. (1998); this latter option would presuppose counter-cyclic merge of adjuncts; possibly this would account for why the target position can be quite low, next to the verb).

## 7. A Conclusion

Modelling passive by Cut operations in a local derivational approach accounts for the variable syntactic accessibility of external arguments in passive derivations:

- Argument removal triggered by [−D−] gives rise to *counter-bleeding* with operations involving structurally *lower* items.
- Argument removal triggered by [−D−] gives rise to *bleeding* with operations involving structurally *higher* items.

On this approach, external arguments are indeed present in German passive constructions, but they have a very short life cycle in which they can be syntactically active: the period between discharge of [•D•] and discharge of [−D−] on one and the same head.

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