Opaque Intervention

Anke Assmann & Fabian Heck
anke.assmann@uni-leipzig.de heck@uni-leipzig.de

Claims:

- Arguments differ in their capacities to function as antecedents for certain associates (floating quantifier, parasitic gaps, predicate nominals). These differences cannot always be read off the argument's surface position but are sometimes opaque.
- Intervention effects can be traced back to a stage of the derivation where the arguments appear in their base order. An argument can become an antecedent if no other argument intervenes. Later stages of the derivation may alter the relative order of arguments but not their licensing capacities.
- Intervention effects can be derived derivationally. Thus, there is no need for representational devices such as copies/traces or constraints on representations like the MLC.

1 Data

Three empirical phenomena (FQ association, PN case agreement, PG binding), all of which instantiate the following structural condition:

(1) *Intervention Condition for Arguments*
An associate α which needs to relate to a potential antecedent β, can only do so, if
a. β linearly precedes α and
b. there is no argument γ which also precedes α and which is lower on the argument hierarchy $nom > dat > acc$ than β.

1. β follows γ, β is lower on the argument hierarchy than γ
Feeding: $\gamma > \beta$ feeds association of β and α

(2) $\gamma \ldots \beta \ldots \alpha$

2. β precedes γ, β is higher on the argument hierarchy than γ
Bleeding: $\beta > \gamma$ bleeds association of γ and α

(3) $\beta \ldots \gamma \ldots \alpha$

3. β follows γ, β is higher on the argument hierarchy than γ
   Counter-Feeding: $\gamma > \beta$ does not feed association of β and α

   (4) $\gamma \ldots \beta \ldots \alpha$

4. β precedes γ, β is lower on the argument hierarchy than γ
   Counter-Bleeding: $\beta > \gamma$ does not bleed association of β and α

   (5) $\beta \ldots \gamma \ldots \alpha$

Conclusion:
Intervention effects of this kind are not subject to linear order but only to the hierarchy $nom > dat > acc$.

1.1 Floating Quantifier *alles* ("all")

- The floating quantifier (FQ) *alles* in German obligatorily associates with a *wh*-phrase, independent of its grammatical function (6), (8)-(9) (Pafel 1991; Reis 1992).
- Intervention effects occur when an indefinite non-*wh*-argument that is lower on the argument hierarchy than β precedes *alles* (7) vs. (8).
- Definite arguments never intervene (6), (9)

(6) Wer_1 hat euch alles_1 geholfen?
who$_{nom}$ has you all helped
"Who all helped you?"

(7) a.*Wer_1 hat einem Professor alles_1 gedankt?
who$_{nom}$ has a professor$_{dat}$ all thanked
"Who all thanked a professor?"
b.*Wer_1 hat einen Professor alles_1 kennen gelernt?
who$_{nom}$ has a professor$_{acc}$ all met
"Who all met a professor?"
c.*Wem_1 hat sie einen Professor alles_1 vorgestellt?
who$_{dat}$ has she a professor$_{acc}$ all introduced
"To whom all did she introduce a professor?"

(8) a. Wem_1 hat ein Professor alles_1 geholfen?
who$_{dat}$ has a professor$_{nom}$ all helped
"Who all did a professor help?"
b. Wen_1 hat ein Professor alles_1 beleidigt?
who$_{acc}$ has a professor$_{nom}$ all insulted
"Who all did a professor insult?"

c. ?Wen$_1$ hat sie einem Professor alles$_1$ vorgestellt?
who$_{acc}$ has she a professor$_{dat}$ all introduced
"Who all did she introduce to a professor?"

(9) Wer$_1$ hat dem Professor alles$_1$ gratuliert?
who$_{nom}$ has the professor$_{dat}$ all congratulated
"Who all congratulated the professor?"

1.2 Case Agreement

- In Czech, predicate nominals (PN) can be formed by prefixing a noun phrase by the particle *jako* or *coby* ("as"). Such a PN case-agrees with the argument it predicates over (10)-(11).
- Intervention effects occur when two *wh*-phrases precede the PN due to multiple *wh*-fronting. Note that there is no superiority; any *wh*-phrase can be clause-initial. Only the *wh*-phrase which is lowest on the argument hierarchy may associate with the PN, independent of the *wh*-phrases' order. (11) vs. (12), (13-a) vs. (13-b), (13-c).

(10) Komu Jirka představil jako dobrému příteli toho inženýra?
who$_{dat}$ Jirka introduced as good friend$_{dat}$ the engineer$_{acc}$
"To whom did Jirka introduce the engineer as a good friend?"

(11) a. Koho komu Jirka představil jako dobrého přítele?
who$_{acc}$ who$_{dat}$ Jirka introduced as good friend$_{acc}$
"Who did Jirka introduce to whom as a good friend?"
b. Komu koho Jirka představil jako dobrého přítele?
who$_{dat}$ who$_{acc}$ Jirka introduced as good friend$_{acc}$

(12) a.*Koho komu Jirka představil jako dobrému příteli?
who$_{acc}$ who$_{dat}$ Jirka introduced as good friend$_{dat}$
"Who did Jirka introduce to whom as a good friend?"
b.*Komu koho Jirka představil jako dobrému příteli?
who$_{dat}$ who$_{acc}$ Jirka introduced as good friend$_{dat}$

(13) a. Koho kdo představil jako dobrého přítele Jirkovi?
who$_{acc}$ who$_{nom}$ introduced as good friend$_{acc}$ Jirka$_{dat}$
"Who introduced whom as a good friend to Jirka?"
b.*Kdo koho$_2$ představil coby jeho$_2$ dobrý přítel Jirkovi?
who$_{nom}$ who$_{acc}$ introduced as his good friend$_{nom}$ Jirka$_{dat}$
"Who as his good friend introduced whom to Jirka?"
c.*Koho$_2$ kdo představil coby jeho$_2$ dobrý přítel Jirkovi?
who$_{acc}$ who$_{nom}$ introduced as his good friend$_{nom}$ Jirka$_{dat}$

1.3 Parasitic Gaps

- Parasitic gaps (PG) in German can be bound by objects which undergo *wh*-movement or scrambling (see Bayer 1984; Fanselow 1993; Lutz 2001 for *wh*-movement; Mahajan 1990; Webelhuth 1992; Grewendorf and Sabel 1999 for scrambling).
- If both the indirect (dat) object and the direct (acc) object precede the PG adjunct clause, only the direct object can bind the PG (14-a) vs. (14-b); (15) vs. (16). (Subjects can never bind PGs for independent reasons; cf. Mahajan 1990; Fanselow 1993; Müller 1995)
- Subjects never intervene (17) (Fanselow 1993).
- The indirect object may only bind the PG if the direct object binds another PG (18) (Fanselow 1993; Kathol 2001).

(14) a.*Wem$_2$ hat der Fritz das Buch [anstatt PG$_2$ zu helfen] weggenommen?
who$_{dat}$ has the Fritz the book$_{acc}$ instead to help away taken
"From whom did Fritz take the book instead of helping him?"
b. Was$_2$ hat der Fritz der Maria [anstatt PG$_2$ wegzuwerfen] zu essen angeboten?
what$_{acc}$ has the Fritz the Maria$_{dat}$ instead away to throw to eat offered
"What did Fritz offer Maria to eat instead of throwing it away?"

(15) a.*wenn jemand der Maria$_2$ das Buch [anstatt PG$_2$ zu helfen] wegnimmt
if someone the Maria$_{dat}$ the book$_{acc}$ instead to help away takes
"if someone takes the book from Maria instead of helping her"
b.*dass Hans das Buch der Maria$_2$ [ohne PG$_2$ zu vertrauen] geliehen hat
that Hans the book$_{acc}$ the Maria$_{dat}$ without to trust lent has
"that Hans has lent Maria the book without trusting her"

(16) a. dass Hans der Maria das Buch$_2$ [ohne PG$_2$ durchzulesen] zurückgibt
that Hans the Maria$_{dat}$ the book$_{acc}$ without through to read back gives
"that Hans returns the book to Maria without reading it through"
b. dass Hans das Buch$_2$ der Maria [ohne PG$_2$ durchzulesen] zurückgibt
that Hans the book$_{acc}$ the Maria$_{dat}$ without through to read back gives
"that Hans returns the book to Maria without reading it through"

(17) a. wenn der Anette$_2$ jemand [anstatt PG$_2$ zu gratulieren] kondoliert hat
if the Anette$_{dat}$ someone$_{nom}$ instead to congratulate condoled has
"if someone condoled with Anette (on s.th.) instead of congratulating her (on it)"

(18) wenn jemand der Anette$_2$ das Buch$_3$ [anstatt PG$_2$ PG$_3$ zu schenken] leiht
if someone the Anette$_{dat}$ the book$_{acc}$ instead to give borrows
"if one borrows Anette the book instead of giving it to her as a present"

2 Theoretical Background and Assumptions

Framework:

- Probe-goal framework (Chomsky 2000, 2001, 2007)
- Two operations: *Move* and *Agree* take place when probe and goal are in a c-command configuration; Move is subject to the PIC in (19)

(19) *Phase Impenetrability Condition:*
The domain of a head H of a phase HP is not accessible to operations outside of HP. Only H and its edge domain are accessible.

(20) *Edge Domain:*
α is in the edge domain of β iff α is not a genuine complement of β.

- α is a genuine complement of β if and only if α and β are sisters and β does not possess any specifiers.
- The *Strict Cycle Condition* (SCC, Chomsky 1973) holds.

(21) *Strict Cycle Condition:*
If Σ is the root of the current phrase marker, then no operation can take place exclusively within Ω, where Ω is dominated by Σ.

- Agree and Move obey the *Earliness Principle* (Pesetsky 1989)

(22) *Earliness Principle:*
A syntactic operation must apply as soon as its configurational requirements are fulfilled.

Edge Features:

- Operations are feature-driven. Operation triggering features are ordered on stacks.
- Successive-cyclic movement is driven by *edge features* (EF).
- *Edge Feature Condition (EFC)*: EFs can be inserted on a head H only if H is still active, that is, if H bears at least one other feature that needs to be discharged (by Merge or Agree) (Müller 2010, 2011).
- The features of a head are ordered on stacks; EF insertion targets the top of the stack. Since only the top of the stack is accessible, an EF must be discharged before other structure building operations can be triggered. Thus, the EFC leads to the *Intermediate Step Corollary* (ISC; Müller 2010, 2011)

(23) *Intermediate Step Corollary:*
Intermediate movement steps to specifiers of X (triggered by EFs) must take place before the final specifier is merged in XP.

- Example: successive-cyclic *wh*-movement to Spec,vP

(24)

	Step	*Configuration*	*Feature Stack of v*
a.		$[_{v'}$ v $[_{VP} \ldots wh \ldots]]$	uD …
b.	EF *insertion*:	$[_{v'}$ v $[_{VP} \ldots wh \ldots]]$	EF uD …
c.	*Move wh*:	$[_{v'}$ *wh* v $[_{VP} \ldots t_{wh} \ldots]]$	EF uD …
d.	EF *deletion*:	$[_{v'}$ *wh* v $[_{VP} \ldots t_{wh} \ldots]]$	uD …
e.	*Merge DP*:	$[_{vP}$ DP *wh* v $[_{VP} \ldots t_{wh} \ldots]]$	uD …
f.	uD *deletion*:	$[_{vP}$ DP *wh* v $[_{VP} \ldots t_{wh} \ldots]]$	…

Scrambling:

- In German and Czech, Scrambling is triggered by EFs.
- EFs can be inserted (at least) on v and T. Hence, scrambling can target the vP and the TP domain.

Parallel Movement and MLC:

- Multiple attraction by the same head is often order preserving, i.e., movement applies "in parallel".
- Example: Object shift in Danish (Vikner 1989, 1995)—pronouns in the VP are moved to Spec,vP.

(25) a. Peter viste hende$_2$ den$_3$ jo t_2 t_3.
Peter showed her it indeed
"Peter indeed showed it to her."
b.*Peter viste den$_3$ hende$_2$ jo t_2 t_3.
Peter showed it her indeed

- Adopting both the *Minimal Link Condition* (MLC) (Fanselow 1991; Ferguson 1993; Chomsky 1995) in (26) and the SCC in (21) leads to a derivation like in (27).

(26) *Minimal Link Condition:*
If in a structure $\alpha \ldots [\ldots \beta \ldots [\ldots \gamma \ldots] \ldots]$ both β and γ are of the right type to establish a relation R with α, then α can establish R only with β (but not with γ).

(27) *[$_{vP}$ den$_3$ hende$_2$ … [$_{VP}$ … t$_2$ t$_3$ …]]
② ①

- Consequently, one has to give up either the SCC or the MLC. Here we suggest that the MLC should be dispensed with (see also Hunter and Malhotra 2009).
- In order to derive parallel movement, we make the following assumptions:
  - A head can receive at most one EF per derivation. One EF can attract several goals. (This captures the idea that EFs may trigger multiple applications of Merge; see Chomsky 2007, 11.)
  - An EF scans down the tree for a goal G. Once a goal G_1 is found, it may be placed on top of a stack S. If another goal G_2 is found, it may be placed on top of G_1, etc. The search continues until the EF has exhausted its search space.
  - An EF can skip a potential goal G′ (there is no MLC) and continue its search. However, it may not return to G′ after having attracted a lower G. There is no backtracking. The search algorithm is completely local.
  - After the EF has finished its search, the elements on S are remerged in a last-in-first-out fashion as Specs of the head bearing the EF.
- Example: Object shift in Danish:
  - A relativized EF (EF$_{pron}$) on v attracts pronouns from VP.
  - A feature [*u*PRON] on the pronouns, which is checked if EF$_{pron}$ attracts the pronoun, ensures that object shift is obligatory.

(28)

	Step	*Configuration*	*S*
a.		[$_{v'}$ v [$_{VP}$ … hende$_2$ den$_3$ …]]	⌊ ⌋
b.	*put* hende$_2$ *on S*:	[$_{v'}$ v [$_{VP}$ … t$_2$ den$_3$ …]]	⌊ hende$_2$ ⌋
c.	*put* den$_3$ *on S*:	[$_{v'}$ v [$_{VP}$ … t$_2$ t$_3$ …]]	⌊ den$_3$ / hende$_2$ ⌋
d.	*remerge* den$_3$:	[$_{v'}$ den$_3$ v [$_{VP}$ … t$_2$ t$_3$ …]]	⌊ hende$_2$ ⌋
e.	*remerge* hende$_2$:	[$_{v'}$ hende$_2$ den$_3$ v [$_{VP}$ … t$_2$ t$_3$ …]]	⌊ ⌋

3 Analysis

Main Idea in a Nutshell:

- The associate α (FQ, PN, PG) is adjoined to VP and bears some probe feature [uF] that needs to be checked by an antecedent with a matching feature [F].
- The ISC ensures that if an object move(s) to Spec,vP, it must be merged before the subject is merged ($nom > acc$, $nom > dat$).
- Parallel movement ensures that if both objects move to Spec,vP, the indirect object is remerged later than the direct object ($dat > acc$)
- *Consequence*: Due to the Earliness Principle (22), only the argument which is (re)merged first to the left of α enters into Agree with α.

Case I: Object Intervenes between α and its Subject Antecedent

- Due to the ISC, EF movement of the object must precede Merge of the subject.
- If the object is a suitable antecedent for α, the object must associate with α as soon as it is remerged in Spec,vP (due to the Earliness Principle).
- Since the subject is merged after α has found its antecedent, it cannot associate with α.

(29)

	Step	*Configuration*
a.		$[_{v'}$ v $[_{VP}$ α[uF] $[_{VP}$ ... dat/acc$_1$[F] ...]]]
b.	EF *movement*:	$[_{v'}$ dat/acc$_1$[F] $[_{v'}$ v $[_{VP}$ α[uF] $[_{VP}$ ... t$_1$ ...]]]]
c.	*Agree*:	$[_{v'}$ dat/acc$_1$[F] v $[_{VP}$ α[~~uF~~] $[_{VP}$ ... t$_1$ ...]]]
d.	*Merge* DP$_{nom}$:	$[_{vP}$ nom$_2$[F] dat/acc$_1$[F] v $[_{VP}$ α[~~uF~~] $[_{VP}$ ... t$_1$ ...]]]
e.	*Agree impossible*:	$[_{vP}$ nom$_2$[F] dat/acc$_1$[F] v $[_{VP}$ α[~~uF~~] $[_{VP}$ ... t$_1$ ...]]]

Case II: Direct Object Intervenes between α and its Indirect Object Antecedent

- In the VP, the indirect object is merged later than the direct object.
- Due to parallel movement, the relative order of the objects is preserved in the vP, i.e., the direct object is remerged in Spec,vP before the indirect object.
- Due to the Earliness Principle, the direct object must enter into Agree with the associate α as soon as it is merged in Spec,vP.
- Since the indirect object is merged after α has found its antecedent, it cannot associate with α.

(30)

	Step	*Configuration*	*S*
a.		$[_{v'}$ v $[_{VP}$ α[uF] $[_{VP}$ dat$_2$[F] acc$_1$[F]]]]	
b.	*put* dat *on S*:	$[_{v'}$ v $[_{VP}$ α[uF] $[_{VP}$ t$_2$ acc$_1$[F]]]]	dat$_2$
c.	*put* acc *on S*:	$[_{v'}$ v $[_{VP}$ α[uF] $[_{VP}$ t$_2$ t$_1$]]]	acc$_1$ / dat$_2$
d.	*remerge* acc:	$[_{v'}$ acc$_1$[F] v $[_{VP}$ α[uF] $[_{VP}$ t$_2$ t$_1$]]]	dat$_2$
e.	*Agree*:	$[_{v'}$ acc$_1$[F] v $[_{VP}$ α[~~uF~~] $[_{VP}$ t$_2$ t$_1$]]]	dat$_2$
f.	*remerge* dat:	$[_{v'}$ dat$_2$[F] acc$_1$[F] v $[_{VP}$ α[~~uF~~] $[_{VP}$ t$_2$ t$_1$]]]	
g.	*Agree impossible*:	$[_{v'}$ dat$_2$[F] acc$_1$[F] v $[_{VP}$ α[~~uF~~] $[_{VP}$ t$_2$ t$_1$]]]	

3.1 Floating Quantifiers

- Assume for sake of the argument that, semantically, *alles* must associate with a *wh*-phrase (but cf. Beck 1997). Non-*wh*-phrases cannot associate with *alles*.
- Association requires syntactic Agree with respect to [uINDEF] (on the FQ) and [INDEF] (on the indefinite).
- Direct Consequence: Only indefinite arguments may associate with *alles* and, therefore, only indefinite arguments intervene for Agree (see Reis 1992).

Case I:

(31) *Bleeding*

*Wer$_1$ hat einem Professor alles$_1$ gedankt?
who$_{nom}$ has a professor$_{dat}$ all thanked

"Who all thanked a professor?"

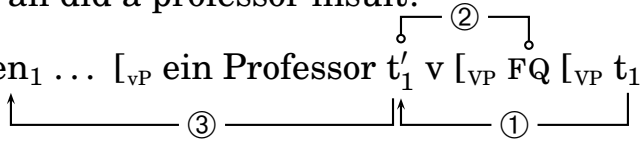
(32) $[_{vP}$ wer$_1$ einem Professor$_2$ v $[_{VP}$ FQ $[_{VP}$ t$_2$ gedankt]]]

(33) *Counter-Bleeding*

Wen$_1$ hat ein Professor alles$_1$ beleidigt?
who$_{acc}$ has a professor$_{nom}$ all insulted

"Who all did a professor insult?"

(34) [$_{CP}$ wen$_1$ … [$_{vP}$ ein Professor t$'_1$ v [$_{VP}$ FQ [$_{VP}$ t$_1$ …]]]]



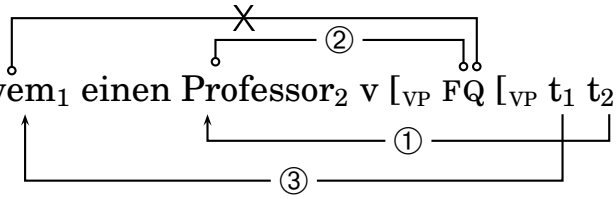
Case II:

(35) *Bleeding*

*Wem$_1$ hat sie einen Professor alles$_1$ vorgestellt?
who$_{dat}$ has she a professor$_{acc}$ all introduced

"To whom all did she introduce a professor?"

(36) [$_{v'}$ wem$_1$ einen Professor$_2$ v [$_{VP}$ FQ [$_{VP}$ t$_1$ t$_2$ …]]]



3.2 Case Agreement

- PNs have a probing case feature [*u*CASE] which must be checked by a DP with a matching feature [CASE].
- In multiple *wh*-fronting in Czech, only one *wh*-phrase moves to Spec,CP; all other *wh*-phrases move just as far as TP, due to a focus feature (Rudin 1988; Richards 2001; also Toman 1981, 298; see Meyer 2003 for certain qualifications).
- The association capacities are already determined in the vP.
- Since there is no MLC, there are two options for *wh*-movement from Spec,TP to Spec,CP: movement of the indirect object leads to bleeding and feeding; movement of the direct object leads to counter-bleeding and counter-feeding.

Case II:

(37) a. *Feeding*

Komu$_2$ koho$_1$ Jirka představil jako dobrého přítele?
who$_{dat}$ who$_{acc}$ Jirka introduced as good friend$_{acc}$
"To whom did Jirka introduce who as a good friend?"

b. *Counter-Bleeding*

Koho$_1$ komu$_2$ Jirka představil jako dobrého přítele?
who$_{acc}$ who$_{dat}$ Jirka introduced as good friend$_{acc}$

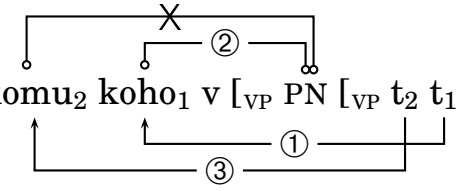
c. *Counter-Feeding*

*Koho$_1$ komu$_2$ Jirka představil jako dobrému příteli?
who$_{acc}$ who$_{dat}$ Jirka introduced as good friend$_{dat}$
"Who did Jirka introduce to whom as a good friend?"

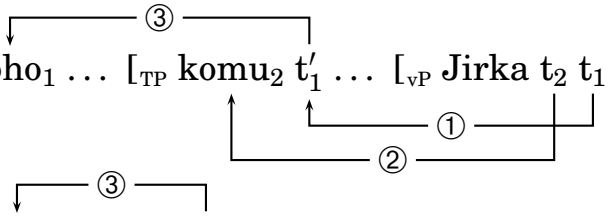
d. *Bleeding*

*Komu$_2$ koho$_1$ Jirka představil jako dobrému příteli?
who$_{dat}$ who$_{acc}$ Jirka introduced as good friend$_{dat}$

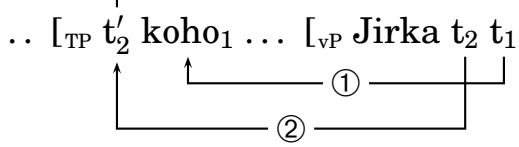
(38) [$_{vP}$ Jirka komu$_2$ koho$_1$ v [$_{VP}$ PN [$_{VP}$ t$_2$ t$_1$ . . .]]]



(39) a. [$_{CP}$ koho$_1$ . . . [$_{TP}$ komu$_2$ t$'_1$ . . . [$_{vP}$ Jirka t$_2$ t$_1$ . . . PN . . .]]]



b. [$_{CP}$ komu$_2$ . . . [$_{TP}$ t$'_2$ koho$_1$ . . . [$_{vP}$ Jirka t$_2$ t$_1$ . . . PN . . .]]]



Case I:

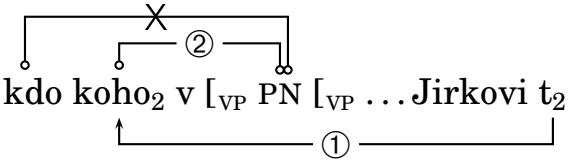
(40) a. *Bleeding*

*Kdo$_1$ koho$_2$ představil coby jeho$_2$ dobrý přítel Jirkovi?
who$_{nom}$ who$_{acc}$ introduced as his good friend$_{nom}$ Jirka$_{dat}$
"Who as his good friend introduced whom to Jirka?"

b. *Counter-Bleeding*

Koho$_2$ kdo$_1$ představil jako dobrého přítele Jirkovi?
who$_{acc}$ who$_{nom}$ introduced as good friend$_{acc}$ Jirka$_{dat}$

(41) [$_{vP}$ kdo koho$_2$ v [$_{VP}$ PN [$_{VP}$ . . . Jirkovi t$_2$ . . .]]]



3.3 Parasitic Gaps

- PGs and their antecedents must enter into an Agree relation (Assmann 2011).
- A PG bears a probing feature [uF] and a feature [D] while a potential antecedent bears a probing feature [uD] and a feature [F].
- A PG may only associate with an antecedent that still possesses an unchecked [uD] feature, i.e., the antecedent must be active for Agree with a PG.
- Consequence: One antecedent can bind only one PG (but see Ross 1967).

- Subjects may never bind a PG due to the anti-c-command condition (Chomsky 1982; Safir 1987)
- A PG and its antecedent coincide with respect to case and animacy.
  Direct Consequence: A dative indirect object cannot bind an accusative PG and vice versa.

Case II:

(42) a. *Feeding:*

dass Hans der Maria$_2$ das Buch$_1$ [ohne PG$_1$ durchzulesen] zurückgibt
that Hans the Maria$_{dat}$ the book$_{acc}$ without through to read back gives
"that Hans returns the book to Maria without reading it through"

b. *Counter-Bleeding:*

dass Hans das Buch$_1$ der Maria$_2$ [ohne PG$_1$ durchzulesen] zurückgibt
that Hans the book$_{acc}$ the Maria$_{dat}$ without through to read back gives
"that Hans returns the book to Maria without reading it through"

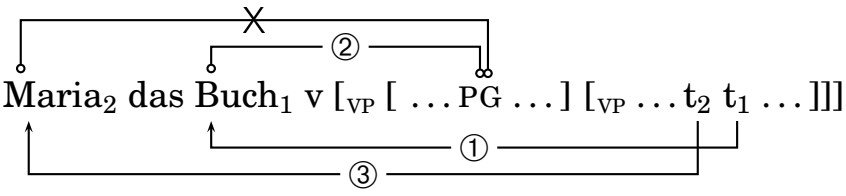
c. *Bleeding*

*wenn jemand der Maria$_2$ das Buch$_1$ [anstatt PG$_2$ zu helfen] wegnimmt
if someone the Maria$_{dat}$ the book$_{acc}$ instead to help away takes
"if someone takes the book from Maria instead of helping her"

d. *Counter-Feeding*

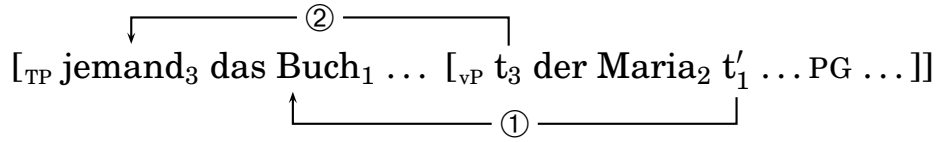
*dass Hans das Buch$_1$ der Maria$_2$ [ohne PG$_2$ zu vertrauen] geliehen hat
that Hans the book$_{acc}$ the Maria$_{dat}$ without to trust lent has
"that Hans has lent Maria the book without trusting her"

(43) [$_{vP}$ jemand der Maria$_2$ das Buch$_1$ v [$_{VP}$ [. . . PG . . .] [$_{VP}$ . . . t$_2$ t$_1$ . . .]]]



Subsequent scrambling to Spec,TP may alter the order of the objects but not the binding possibilities.

(44) *Optional scrambling of the direct object to Spec,TP*

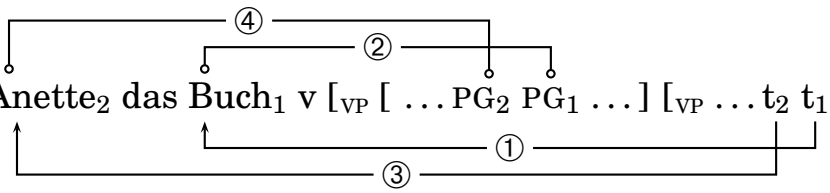


Multiple PGs:

(45) *Counter-Bleeding*

wenn jemand der Anette$_2$ das Buch$_3$ [anstatt PG$_2$ PG$_3$ zu schenken] leiht
if someone the Anette$_{dat}$ the book$_{acc}$ instead to give borrows

"if one borrows Anette the book instead of giving it to her as a present"

(46) 

4 Further Issues

4.1 Verb Classes

- Haider (1992, 1993, 2010) claims that different verb classes in German project different argument orders.
- Class 1: indirect object > direct object (e.g. *geben*, *vorstellen*)
- Class 2: direct object > indirect object (e.g. *aussetzen*, *entziehen*)
- If this were true, one would expect that with Class 2 verbs it is the indirect object that relates to the associate (instead of the direct object).
- (47) (PGs) and (48) (FQs) together with our theory seem to imply that the underlying order of all verbs is indirect object > direct object.

(47) a. ?weil er das Kind$_2$ dem Test [ohne PG$_2$ zu schonen] aussetzte
because he the$_{acc}$ child the$_{dat}$ test without to spare exposed
"because he exposed the child to the test without sparing her"

b.?*weil er das Kind dem Test$_3$ [ohne PG$_3$ zu trauen] aussetzte
because he the$_{acc}$ child the$_{dat}$ test without to trust exposed
"because he exposed the child to the test without trusting it (the test)"

c. weil er sie$_2$ dem schlechten Einfluss [ohne PG$_2$ zu befragen]
because he she$_{acc}$ the$_{dat}$ bad influence without to ask
entzog
withdrew
"because he withdrew her from the bad influence without consulting her"

d.?*weil er sie dem schlechten Einfluss$_3$ [ohne PG$_3$ zu unterliegen]
because he she$_{acc}$ the$_{dat}$ bad influence without to be subject
entzog
withdrew
"because he withdrew her from the bad influence without being subject to it"

(48) a. Wen_2 hat er solchen Belastungen alles_2 ausgesetzt?
who$_{acc}$ has he such$_{dat}$ burdens all exposed
"Who all has he exposed to such burdens?"

b. *Welchen Belastungen$_2$ hat er einen Freund alles$_2$ ausgesetzt?
Which$_{dat}$ burdens has he a$_{acc}$ friend all exposed
"To which burdens all has he exposed a friend?"

c. Wen_2 hat er schlechten Einflüssen alles_2 entzogen?
who$_{acc}$ has he bad influences$_{dat}$ all withdrawn
"Who all did he withdraw from bad influences?"

d. *Welchen schlechten Einflüssen$_2$ hat er ein Kind alles$_2$ entzogen?
which$_{dat}$ bad influences has he a$_{acc}$ child all withdrawn
"From which bad influences all did he withdraw a child?"

4.2 Scrambling as a Transformation

- Instead of analyzing scrambling as a transformation (see also Bierwisch 1963; Ross 1967; Fanselow 1990; Giusti 1990; Webelhuth 1992; Müller and Sternefeld 1994; Grewendorf and Sabel 1999), proponents of the base generation approach (Haider 1988; Fanselow 1993, 2001, 2003; Bayer and Kornfilt 1994; Kiss 1994; Neeleman 1994; Bošković and Takahashi 1998) argue that arguments can be freely merged in any order.
- Leaving all other assumptions in place, base generation accounts have a hard time deriving the data presented in section 1:
  - In order to derive cases of bleeding (49-a), one could assume that *wh*-phrases are base-merged adjacent to the FQ and may not move across an indefinite; cf. (50).
  - But then, cases of counter-bleeding (49-b) are incorrectly ruled out as well; cf. (51).
  - To rule in cases of counter-bleeding, the base generator could allow the *wh*-phrase to be base-generated to the left of the indefinite, provided that intervention does not exist.
  - Without intervention, however, cases of bleeding are again ruled in.

(49) a. *Bleeding*

*Wem_1 hat sie einen Professor alles_1 vorgestellt?
who$_{dat}$ has she a professor$_{acc}$ all introduced
"To whom all did she introduce a professor?"

b. *Counter-Bleeding*

Wen_1 hat sie einem Professor alles_1 vorgestellt?
who$_{acc}$ has she a professor$_{dat}$ all introduced
"Who all did she introduce to a professor?"

(50) [$_{CP}$ wem$_1$ … [$_{vP}$ sie einen Professor t$_1$ ① FQ vorgestellt]]

(51) * [$_{CP}$ wen$_1$ … [$_{vP}$ sie einem Professor t$_1$ ① FQ vorgestellt]]

4.3 Tucking-in

- Another way to account for parallel movement is the tucking-in approach (Richards 1997, 2001).
- If two categories α and β are attracted by the same head H and α asymmetrically c-commands β, the transderivational constraint *Shortest Paths* (Chomsky 1995; Collins 1994; Nakamura 1998) ensures (i) that attraction proceeds in the order $\alpha > \beta$ and (ii) that β tucks in below α.

(52) *Shortest Paths*:
If two derivations D_1 and D_2 are in the same reference set and the movement paths of D_1 are shorter than the movement paths of D_2, then D_1 is to be preferred over D_2.

(53) [$_{HP}$ α_2 β_1 H … [… t$_2$ t$_1$]]
① ②

Problems with Tucking-in:

1. Tucking-in is not compatible with the SCC.
2. Tucking-in relies on a transderivational constraint. Since transderivational constraints are more complex than local constraints, a theory which only builds on local constraints is to be preferred.
3. Tucking-in is not compatible with a strictly derivational theory.

- Consider (54). Given tucking-in and Earliness, the indirect object is expected to bind the PG, thereby blocking PG binding by the direct object, contrary to fact.
- To avoid this, a theory that incorporates tucking-in must procrastinate Agree until the phrase is complete. The MLC blocks illicit PG binding.
- This abandons the Earliness Principle (22) and extends the representational residue, which is against the tenet that derivational theories should minimize their representational residue (see Brody 2001).

(54) [$_{vP}$ Hans der Maria$_3$ das Buch$_2$ [… PG$_3$ …] t$_3$ t$_2$ …]
② ① ③

5 Conclusion

Main Claim:

- Intervention effects with association of arguments with FQs and PGs in German and with PNs in Czech are often opaque and do not make reference to the surface order of arguments.
- Opaque intervention can be derived by consulting previous stages of the derivation where the opacity has not arisen yet.

Analysis:

- Arguments are merged in a fixed hierarchy: $nom > dat > acc$, where ">" is "c-commands".
- Arguments may only associate with FQs/PNs/PGs if they c-command them.
- Due to parallel movement, the hierarchy that is established with base generation obtains after movement.
- Thus, acc and dat intervene for association of nom; acc intervenes for association of dat.
- Subsequent movement of arguments may alter the structural hierarchy, but comes to late for altering the association capacities as well.

Minimizing the Representational Residue:

- We showed that intervention effects can be derived derivationally without reference to representational constraints such as the MLC.
- Since in derivational theories the representational residue is to be minimized, no reference to traces/copies should be made either when accounting for intervention effects.

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http://www.uni-leipzig.de/~lomo

Contact
Anke Assmann
Universität Leipzig
Institut für Linguistik
anke.assmann@uni-leipzig.de
http://www.uni-leipzig.de/~assmann

Fabian Heck
Universität Leipzig
Institut für Linguistik
heck@uni-leipzig.de
http://www.uni-leipzig.de/~heck