

# Theta-induced binding vs. pronoun-centered binding: the case of free datives in German

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## 0. Introduction

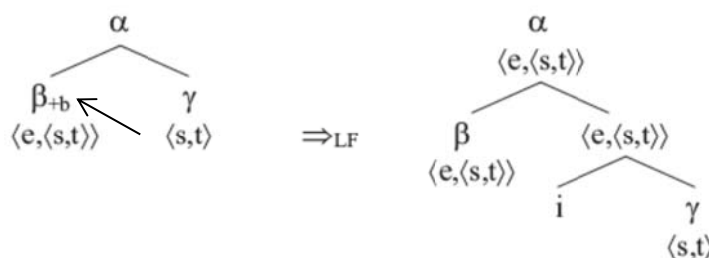
- **Main goal:** Discuss consequences of a view of clause-level binding where binder theta heads in the tradition of Kratzer (2009) trigger the reflexivization of predicates.
- **Empirical domain:** Free datives in German
- **Point to take home:** We don't need Principle A.
- **Roadmap**
  1. Upshot
  2. The market
  3. The data
  4. Knight Move Binding? Knight Move Binding.
  5. The argument fleshed out
  6. Competing accounts
  7. Conclusions

## 1. Upshot

“[S]emantic binders ( $\lambda$ -operators represented as binder indices) are introduced by verbal functional heads, rather than by “antecedent” DPs, as assumed in Heim and Kratzer 1998, for example. Verbal functional heads, rather than DPs, are then the true syntactic antecedents for bound pronouns.” Kratzer (2009: 193)

- Binder indices are tied to verbal functional heads (theta heads), not to so-called antecedent DPs.
- I will present a detailed implementation along these lines.
  - (i) Theta heads come in two flavors: the first flavor introduces a binder index underneath, the other one doesn't.
  - (ii) Predicate Abstraction and Davidsonian Predicate Modification do the rest of the work.

(1)



(Hole 2014: 129)

- We will review a particular tree-geometrical configuration which is important for binding targets: Knight Move Binding
- Theta-induced binding downgrades the role of pronominal classes for binding theory.

- Theta-induced binding turns binding from a process that “looks upward” into a process that “looks downward” in the local search space.
- The variable that gets bound may sit in any old pronoun(-like element) whose distribution is regulated independently.

## 2. The market

- Data as in (2) with extra arguments have been given basically three different analyses.

- (2)
- |    |  |   |
|----|--|---|
| a. | Paul kicked <b>me</b> in the shin.   | (“possessor” datives)                     |
| b. | Paul fixed <b>me</b> a drink.  | (“beneficiary”/TO-applicative)            |
| c. | <b>Mir</b> fiel eine Vase runter.<br>me <sub>DAT</sub> fell a vase down<br>‘A vase fell down on me.’   | (“possessor”/“maleficiary” datives)       |
| d. | <b>Mir</b> zerbrach eine Vase.<br>me <sub>DAT</sub> broke a vase<br>‘A vase broke on me.’  | (“maleficiary” datives/“oblique causers”) |
| d. | <b>Mir</b> war die Treppe zu steil. ( <i>dativus iudicantis</i> )<br>me <sub>DAT</sub> was the staircase too steep<br>‘I found the staircase too steep.’ |   |

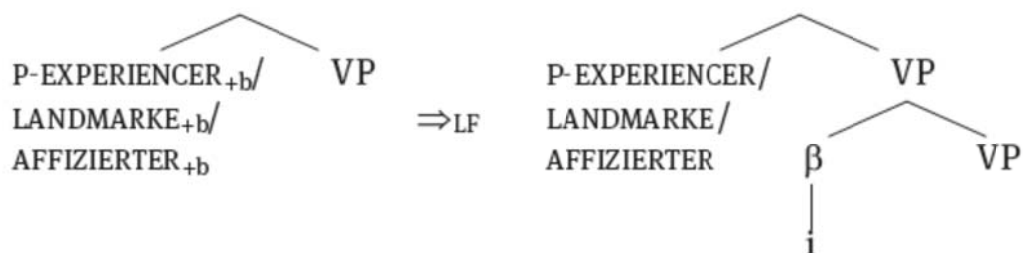
A) Raising analyses (Perlmutter/Postal 1977, Aissen 1987, Gallmann 1992, Landau 1999, Lee-Schoenefeld 2006, Deal 2013) – mainly for data as in (2a/c/d)

B) Applicative analyses (Pylkkänen 2002 and the tradition kicked off by this, Schäfer 2008) – mainly for data as in (2b/c/d)

C) Binding/Control analyses (Guéron 1985, Borer/Grodzinsky 1986, Vergnaud/Zubizarreta 1992, Brandt 2003, 2006) – mainly for data as in (2a)

- Hole (2008, 2014) unifies all data types in (2) under the roof of a binding analysis with binder theta heads.

(3)



### 3. The data

Recurrent idea for the presentation of data:

Demonstrate the unimportance of specific pronominal classes in the binding configuration at hand: variables bound by one and the same theta-head related binder index may sit in **possessive pronouns**, in **bridging articles** or in **unpronounced material**.

#### 3.1 Free datives and bound possessive pronouns/bridging articles

(4) Klara guckte jedem<sub>DAT</sub>  $\theta_i$  streng [auf **seine<sub>i/\*j</sub>/die<sub>i/\*j</sub>** Wurst].  
Klara looked everyone<sub>DAT</sub> strictly on his/the sausage  
'Klara was looking at everybody's sausage in a strict way.'

- Binding of (bridging) definites across clause boundaries is impossible (5), just as between whole sentences (6).

(5) Klara guckte jedem  $\theta_i$  so streng[auf seine<sub>i/\*j</sub>/die<sub>i/\*j</sub>Wurst], dass **sein<sub>i</sub>/der<sub>\*i</sub>** Appetit verschwand.  
Klara looked everyone<sub>DAT</sub> so strictly on his/the sausage that his/the appetite disappeared  
'Klara was looking at everybody's sausage in such a strict way that the appetite went away immediately.'

(6) They arrived in a small village. The church was locked.

**The local binding behavior of bridging definites bound by free datives follows the pattern of Principle A** (however Principle A is derived further and however the bound variable gets spelled out, if it is spelled out at all).

- Notes on raising accounts for data as in (4)-(6) (e.g. Lee-Schoenefeld 2006):
  - (i) The structures with definite articles are easily captured, if it is assumed that there's a trace underneath the article: *die*  $t_i$  *Wurst* 'the  $t_i$  sausage'
  - (ii) The structures with the possessive pronouns would appear to be beyond the scope of movement theories: the movement paths are simply too short for the PF-spellout of traces.

#### 3.2 Bound readings with the directional particle *hin*

- Under normal circumstances, the local reference of *hin* is resolved depending on (extrasentential) context.

(7) Paul legte ein Buch hin.  
Paul put a book NOT.DEICTIC.CENTER  
'Paul put down a book in a place made available by the context which is not the deictic center.'

- With free datives, the resolution becomes internal to grammar.

(8) Paula legte [jeder Schülerin]<sub>DAT</sub>  $\theta_i$  ein Buch **hin<sub>i/\*j</sub>**.  
Paula put each schoolgirl a book NOT.DEICTIC.CENTER  
'Paul put down a book for each schoolgirl.'  
[Each book ends up in a place associated with one of the students.]

- If (8) has something like (8') underlying it, the pattern is as in 3.1 above..

(8') Paula legte [jeder Schülerin]<sub>DAT</sub>  $\theta_i$  ein Buch [in **ihren**<sub>i/\*j</sub> Bereich] hin.  
 Paula put each schoolgirl a book into her area N.D.C  
 'Paul put down a book for each schoolgirl, and he put it in each girl's respective region.'

**Bound readings with the directional particle *hin* can easily be accounted for if a frequently unpronounced goal PP is assumed.**

### 3.3 Bound readings with directional particles *hoch/runter* 'up/down'

(9) Paula  $\theta_i$  ist eine Serviette hoch-geweht.  
 Paula.DAT is a napkin up-blown.

(i) 'A napkin blew up away from where Paula was.'

(ii) 'A napkin blew up to where Paula was.'

(10) Paula  $\theta_i$  ist eine Serviette runter-geweht.  
 Paula.DAT is a napkin down-blown.

(i) 'A napkin blew down away from where Paula was.'

(ii) 'A napkin blew down to where Paula was.'

(9') Paula  $\theta_i$  ist eine Serviette [aus **ihrem**<sub>i</sub> Bereich heraus] hoch-geweht.  
 Paula.DAT is a napkin out.of her area PRT up-blown.  
 'A napkin blew up out of the area where Paula was.'

(9'') Paula  $\theta_i$  ist eine Serviette [in **ihren**<sub>i</sub> Bereich hinein] hoch-geweht.  
 Paula.DAT is a napkin into her area PRT up-blown.  
 'A napkin blew up into the area where Paula was.'

**Bound readings with the directional particles *hoch* 'up' and *runter* 'down' can easily be accounted for if a frequently unpronounced goal/source PP is assumed.**

**Note:** (11) only has sloppy-identity interpretations.

(11) Nur Paula  $\theta_i$  ist eine Serviette hoch-geweht.  
 only Paula.DAT is a napkin up-blown.

(i) 'It only happened to Paula that a napkin blew up to where Paula was (nobody else had napkins blowing up to their places).'

(ii) 'It only happened to Paula that a napkin blew down to where Paula was (nobody else had napkins blowing down to their places).'

(iii) \*'It only happened to Paula that a napkin blew up to where Paula was (nobody else had napkins blowing up to Paula's place).'

### 3.3 Good and bad descriptive generalizations

#### BAD

- (i) Possessive pronouns must be bound if they are in the local scope of a free dative.
- (ii) Possessive pronouns may be bound if they are in the scope of a non-local antecedent.
- (iii) Definite articles must be bridging-bound (i.e. receive interpretations parallel to bound possessive pronouns) if they are in the local scope of a free dative.
- (iv) Definite articles may not be bridging-bound if they are in the scope of a non-local antecedent.

#### GOOD

- (i) Free datives (licensed by binder theta heads) must bind a local possessor variable.
- (ii) Outside the local scope of theta-induced binding, possessive pronouns and definite articles behave as they always do.

- Binding with free datives should be stated from the perspective of the theta head and its search space, not from the perspective of the bound variable and its phonological (non-)spellout.

### 3.4 A look at benefactives (to demonstrate performance)

- Traditionally, a certain subclass of free datives is analyzed as encoding a beneficiary relation (or a TO-applicative).
- (12) Homer mixte Marge<sub>DAT</sub> einen Drink.  
'Homer fixed Marge a drink.'
- I submit that *Marge* in (19) is really a kind of experiencer, and that it binds a covert beneficiary variable as in (19'), or rather as in (19'').
- (12') Homer mixte Marge  $\theta_i$  einen Drink **zur**<sub>i</sub> Entspannung.  
'Homer fixed Marge a drink so that Marge would have the benefit of relaxing.'
- (12'') Homer mixte Marge  $\theta_i$  einen Drink (zu **ihrem**<sub>i</sub> kontextuell gegebenen Zweck Z).  
'Homer fixed Marge a drink so that Marge would have the contextually determined benefit Z.'
- In (12''), *Marge* can easily be said to encode a mere experiencer, because the beneficiary relation is encoded in a different place.
  - However, who is supposed to buy this story?

#### Supporting evidence I: Sloppy identity is obligatory

- (13) Homer mixte Marge  $\theta_i$  einen Drink **zur**<sub>i</sub> Entspannung, und Bart<sub>DAT</sub> auch.  
'Homer fixed Marge a drink so that Marge would have the benefit of relaxing, and Bart, too.' (the one to have the benefit of relaxation in the elided constituent must be Bart, and cannot be Marge)

## Supporting evidence II: Effects of (non-)redundancy

- (14a) with the PP is redundant, while (14b) (= (12'')) is not.

- (14) a. Homer mixte Marge  $\theta_i$  (<sup>???</sup>für sie<sub>i</sub>) einen Drink.  
 'Homer fixed Marge<sub>i</sub> a drink (<sup>???</sup>for her<sub>i</sub>).'  
 b. Homer mixte Marge  $\theta_i$  einen Drink (zu **ihrem**<sub>i</sub> kontextuell gegebenen Zweck Z).  
 'Homer fixed Marge<sub>i</sub> a drink so that she<sub>i</sub> would have the contextually determined benefit B.'

- This is quite unexpected on the traditional account which has *Marge* stand in the beneficiary relation to the fixing event.
- With the obligatory Knight Move Binding configuration in place, the pattern becomes understandable.

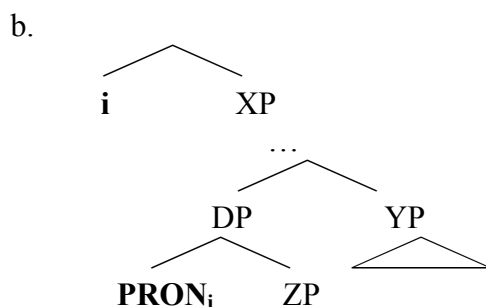
- (14') a. Homer mixte Marge  $\theta_i$  einen Drink (zu **ihrem**<sub>i</sub> kontextuell gegebenen Zweck Z) (<sup>???</sup>für sie<sub>i</sub>).  
 b. Homer mixte Marge  $\theta_i$  einen Drink (zu **ihrem**<sub>i</sub> kontextuell gegebenen Zweck Z).

- (14a) and (14'a) are bad because the two beneficiary PPs are redundant. The second PP is left unpronounced in (20a), but it is syntactically and semantically active.
- (14b) and (14'b) are good because just one beneficiary PP (the obligatory one with the Knight Move Binding configuration) is present.
- In all four sentences, the dative DP encodes an experiencer.

## 4. Knight Move Binding? Knight Move Binding.

- Definition

- (15) a. Knight Move Binding  
 Binding configuration in which the binder targets the left branch of a c-commanded clause-mate DP.



- Description: Knight Move Binding is the single massively privileged binding configuration in natural language.
  - (i) grammaticalization of reflexive pronouns from body-part DPs 'x's body-part', never from representation nouns like 'picture/statue/... representing x'
  - (ii) bound pronouns in argument position move to the left edge of their DPs (Reuland 2011: 275)
  - (iii) free datives and other extra arguments typically bind in a Knight Move Binding configuration (see sect. 3)

- Knight Move Binding in action

- (16) a. Sie zerstreuten ihm  $\theta_i$  [**seinen<sub>i</sub>** Verdacht].  
 they dispelled him<sub>DAT</sub> his suspicion  
 ‘They dispelled HIM<sub>DAT</sub> his suspicion.’  
 (“possessor” reading)
- b. Sie zerstreuten ihm  $\theta_i$  [den Verdacht der Staatsanwaltschaft gegen **ihn<sub>i</sub>**].  
 they dispelled him<sub>DAT</sub> the suspicion of.the attorneys against him  
 ‘They dispelled HIM<sub>DAT</sub> the attorneys’ suspicion against him.’  
 (“benefactive” reading)
- b’. Sie zerstreuten ihm  $\theta_i$  [zu **seiner<sub>i</sub>** Entlastung] [den Verdacht der Staatsanwaltschaft gegen **ihn<sub>i</sub>**].  
 they dispelled him<sub>DAT</sub> to his exoneration the suspicion of.the attorneys against him  
 ‘They dispelled HIM<sub>DAT</sub> for the purpose of his exoneration the attorneys’ suspicion against him.’  
 (“benefactive” reading; purposive PP with Knight Move Binding configuration spelled out)

- If no bindable expression in a Knight Move Binding configuration is offered with free datives as in (16b), hearers accommodate one as in (16b’).

## 5. The argument fleshed out

- The binding generalizations that hold true of free dative binding repeated:

### BAD

- (i) Possessive pronouns must be bound if they are in the local scope of a free dative.
- (ii) Possessive pronouns may be bound if they are in the scope of a non-local antecedent.
- (iii) Definite articles must be bridging-bound (i.e. receive interpretations parallel to bound possessive pronouns) if they are in the local scope of a free dative.
- (iv) Definite articles may not be bridging-bound if they are in the scope of a non-local antecedent.

### GOOD

- (i) Free datives (licensed by binder theta heads) must bind a local possessor variable.
- (ii) Outside the local scope of theta-induced binding, possessive pronouns and definite articles behave as they always do.

- The search space of free dative binding is confined by phasehood (and maybe Knight Move Binding if DPs are not phases).
- In contradistinction to this, Binding Principle A is an embarrassment, because it’s so constructional.
- Can’t we make do without it?
- For free dative binding we have seen that we don’t need principle A.
- And for canonical reflexivity?
- Reuland (2011): German reflexive *sich* moves to the left edge of DP.

- Gast/Hole (2003): SE reflexives can be described as an elsewhere phenomenon.
  - (i) SE reflexives have minimal phi-feature content/are highly underspecified.
  - (ii) SE reflexives tend to crop up elsewhere in the grammar (in response to feature problems in clitic sequences, Bonet 1995; derived intransitivity, semantic middle domain; impersonal subjects).
- English SELF reflexives are not that easily described as an elsewhere phenomenon, though.

## 6. Competing accounts in the domain of free datives and extra argumentality in general

### 6.1 Applicatives

#### 6.1.1 Natural classes

- Why do supposedly high and low applicatives behave alike or highly similar in language after language?

- (17) high:  $\langle e, \langle s, t \rangle \rangle$   
 low:  $\langle e, \langle e, \langle \langle e, \langle s, t \rangle \rangle, \langle s, t \rangle \rangle \rangle \rangle$  (Pylkkänen 2001)

#### 6.1.2 Theme severance

- Kratzer (2003) argues that the theme relation probably doesn't exist as a theta role in its own right, because it is not cumulative/additive.
- However, low applicatives require the theme relation to be severable.

- (18)  $[[\text{APPL}_{\text{LOW}}]] = \lambda x. \lambda y. \lambda f_{\langle e, \langle s, t \rangle \rangle}. \lambda e. f(e, x) \ \& \ \mathbf{theme}(e, x) \ \& \ \text{to-the-possession}(x, y)$   
 (Pylkkänen 2001)

### 6.2. Possessor raising

- Problem of pronounced traces
- Raising into theta positions requires adjustments in the grammar design
- I know no other domain where a pronoun moves from a presuppositional position (possessor) to an assertive one (the target position). For instance, movement out of factives is **barred** with long extraction at the clausal level

- (19) a. Who<sub>i</sub> do you think t<sub>i</sub> came?  
 b. \*Who<sub>i</sub> do you know t<sub>i</sub> came.

## 7. Conclusions



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