1. Introduction

- Despite the pioneering works of Vergnaud & Zubizarreta (1992) König & Haspelmath (1998), or Koenig (1999), among others, there’s a lot in the domain of bound bridging definites (BBDs) that awaits further elucidation.

(1) Paula/ [Jede Schülerin] hob den\textsubscript{i} Arm.
Paula every student raised the arm
‘Paula, [Every student], raised her\textsubscript{i} hand.’

- What are BBDs (bound bridging definites)?

BBDs are definite DPs which receive an interpretation which equals (or is very similar to) that of the same DP with a possessive pronoun instead of the definite determiner. Crucially, the possessive pronoun in such a paraphrase is locally bound (Hole 2008, 2012, 2014).

(2) Paula, hob den\textsubscript{ihren} Arm, und Clara auch.
Paula raised the/her arm and Clara too
‘Paula raised her hand, and Clara did, too.’
✓ sloppy identity: Clara raised her own hand.
* strict identity: Clara raised Paul’s hand.

- Main goals: Pin down the distribution of BBDs and attempt to account for it
- Points to take home:
  - Tying co-phasal binding to theta heads (verbal functional heads) à la Kratzer (2009) and Reuland (2011) is probably a very good idea.
  - Distributive Morphology may find an interesting playground here.
  - The definite determiner in BBDs is not a bound possessive pronoun.

2. Descriptive generalizations
2.1 Possible “antecedents”

- Bound bridging definites occur with NOM, DAT and ACC “antecedents”. Hence we are not dealing with a subject-oriented phenomenon.

(3) a. NOM “antecedent”
\textit{Jeder}, hob \textsubscript{die} Hand.
everyone.NOM raised the hand
‘Everyone raised his hand.’

b. DAT “antecedent”
\textit{Paul} klopfte jedem, auf \textsubscript{die} Schulter.
Paul patted everyone.DAT on the shoulder
‘Paul patted everyone on the shoulder.’
c. ACC “antecedent”

Paul boxte jeden in den Bauch.
‘Paul boxed everyone’s belly.’

- A 100% diagnostic to tell anaphoric and bridging uses of definite determiners apart. (Hole 2008, 2014)
  Anaphoric uses of definite determiners can be replaced by besagter ‘said’ without any, or without much change in discourse felicity.
  Bridging definites become infelicitous if they are replaced by besagter ‘said’.

(4) a. anaphoric

Jeder hob die/besagte Statue hoch.
‘Everyone, lifted the/said statue.’

b. [at school]

Jeder hob die/besagte Hand.
‘Everyone, raised their/said hand.’

- BBDs do not need to refer to body-parts.

(5) Klara, die Veganerin, guckte jedem streng [auf die Wurst].
‘Klara, the vegan, was looking at everybody’s sausage in a strict way.’

Bridging definites may be bound by any old c-commanding antecedent.
(to be revised)

2.2 Strict locality

- BBDs are a strictly local (co-phasal) phenomenon.

Paul has Paula.DAT in the stew spat
‘Paul spat into Paula’s stew’
(lit.: ‘Paul spat Paula.DAT in the stew.’)

b. Paul hat Paula in die Tasse, in der Eintopf sollte, gespuckt.
Paul has Paula.DAT in the cup in which the stew should spat
lit.: ‘Paul spat Paula.DAT into the cup that the stew was supposed to be served in.’

(7) Klara guckte jedem so streng [auf die Wurst], dass der Appetit verschwand.
‘Klara was looking at everybody’s sausage in such a strict way that the appetite went away immediately.’

- This is parallel to the cross-sentential behavior of bridging definites.
(8)  a.  *Sie kamen in einen kleinen Ort. Die Kirche war verschlossen.* (anaphoric bridging ok)
   ‘They got to a small village. The church was locked.’

   b.  *Sie kamen in [jeden Ort]. Die Kirche war verschlossen.* (bound bridging bad)
   ‘They got to every village. The church was locked.’

   An appropriate co-phasal quantifier salvages such structures.

(9)  *Sie kamen in [jeden Ort]. Die Kirche war immer, verschlossen.*  (bound bridging good)
   ‘They got to every village. The church was always locked.’

Bridging definites may be bound by any c-commanding co-phasal antecedent.

2.3 The special case of paired body-parts

- BBDs referring to body-parts that come in pairs (or small sets) behave in a peculiar way.
- They are definite-marked DPs, but they do not have definite reference. Only the complete pair (or set) has definite reference.
- Moreover, the uniquenss presupposition of definites is not fulfilled.

(10)  *Pauli brach sich das Bein.*
   Paul broke his leg.

- (10) leaves it open whether Paul broke his right or his left leg. (no real definiteness)
- (10) does not presuppose that Paul has only one leg. (no uniqueness presupposition)

- This behavior recurs with arms, feet, all pairwise joints, ears(?), but not with nostrils, kidneys, ovaries or testicles. Therefore, we are probably dealing with a phenomenon that is regulated by the lexical/functional endowment of words like Arm, Fuß etc.

- Body-parts like hair(s) do(es) not display this effect.

(11)  *Trotz dieser Spülung ist mir das Haar gebrochen.*
   despite this conditioner is me.DAT the hair broken
   ‘My (single/collective referent) hair broke despite this conditioner.’

- Fingers sometimes pattern with the body-parts that come in pairs. Toes do as well.

   Paula cut her finger.

   - It is unclear which finger Paula cut.
   - does not presuppose: Paula has only a single finger.
b. Paula ist mir auf den Zeh getreten.
   Paula is me on the toe stepped
   ‘Paula stepped on my toe.’
   - It is unclear which toe was stepped on.
   - does not presuppose: The speaker has only a single toe.

- I assume tentatively that sentences like (13a) (=10) receive an interpretation similar to (13b) and that the definite marking really signals the definiteness of the pair of legs in the partitive structure.

(13) a. Paul brach sich das Bein.
    Paul broke REFL the leg
    ‘Pauli broke his leg.’

b. Paul brach sich ein Bein von seinen zwei Beinen.
    Paul broke REFL a leg of his two legs
    ‘Pauli broke a leg from among his two legs.’

<table>
<thead>
<tr>
<th>BBDs referring to some paired body-parts (or body-parts that come in small sets) are not truly definite in reference. Only the pairs (or sets) are.</th>
</tr>
</thead>
</table>

3. The status of the definite determiner in BBDs – is it a possessive?

- It is suprisingly hard to tell if the definite articles in (14) (=3) are really possessive pronouns or not. (In the end I will argue they are not.)

(14) a. Jeder hob die Hand.
    everyone.NOM raised the hand
    ‘Everyonei raised his hand.’

b. Paul klopfte jedem auf die Schulter.
    Paul patted everyone.DAT on the shoulder
    ‘Paul patted everyonei on his shoulder.’

- Replacing the definite determiner of bound bridging definites by a possessive pronoun always leads to well-formed results with identical truth-conditions (Hole 2008, 2015). (Sometimes this replacement may lead to mild awkwardness or de-idiomatization, though.)

    everyone.NOM raised his hand
    ‘Everyonei raised his hand.’

b. Paul klopfte jedem auf seine Schulter.
    Paul patted everyone.DAT on his shoulder
    ‘Paul patted everyonei on his shoulder.’

- Hence, in the co-phasal domain, BBDs and possessive-marked DPs have the same distribution (not across phase boundaries, though; cf. (6b)/(7)).
• The distribution of BBDs is thus very much like that of bound possessives like Swedish *sin* (Kiparsky 2002).

• However, here is one reason why it would be premature to draw a quick conclusion: the determiner in BBDs cannot be used in stressed form and, thus, not deictically. If it is stressed, the BBD reading vanishes, and an anaphoric reading surfaces.

(16) \( \text{Jeder} \ \text{hob} \ \text{DIE} \ \text{Hand} \)

  everyone raised the hand

  i. ‘Everyone raised THAT hand.’ (accompanied by a pointing gesture)
  ii *‘Everyone raised HIS hand.’

• As the possessive reading vanishes under these circumstances, it is not possible to test if the pointing gesture, if it accompanied the determiner in BBDs, targets the complete BBD referent, or the possessor.

• We could, therefore, be dealing with a clitic reflexive possessive, or with a definite determiner.

• In fact, there’s another structure in German which is akin to BBDs: D-POSS\(N\)

(17) \( \text{Jeder}, \ \text{hob} \ \text{die} \ \text{seine}[^*] \text{Hand}. \)

everyone raised the his\(N\) hand

‘Everyone raised his\(i\).’

• In this construction, the restriction that usually bans the co-occurrence of determiners and possessives in German (Haspelmath 1999) is lifted, because the possessive is nominalized and probably sits in N (or some other rather low position).

• Taking together all the evidence, I conclude that the best generalization about the categorial composition of BBDs is as in (18).

(18) \( \text{Jeder}, \ \text{hob} \ \text{die} \ \text{POSS} \text{\(\varnothing\)} \text{\(i\)} \ \text{Hand}. \)

everyone raised the his\(i\) hand

‘Everyone raised the \text{POSS} \text{\(\varnothing\)} \text{\(i\)} hand.’

• Like this, the definite determiner in BBDs is \textbf{not} a reflexive possessive pronoun.

The bound possessive pronoun of BBDs may be analyzed as phonetically empty. The definite determiner and the possessive pronoun compete for spell-out in a single position at the left edge of the BBD.
4. Analysis

- **BINDING:**
  The bound variable in BBDs is bound by a co-phasal antecedent.

- **D-LINKING:**
  BBDs referring to some paired body-parts (or body-parts that come in small sets) are not truly definite in reference. Only the pairs (or sets) are.

- **COMPETITION FOR SPELL-OUT:**
  The bound possessive pronoun of BBDs may be analyzed as phonetically empty. The definite determiner and the possessive pronoun compete for spell-out in a single position at the left edge of the BBD.

4.1 DP syntax/Truth and felicity conditions

- **COMPETITION FOR SPELL-OUT:**
  The bound possessive pronoun of BBDs may be analyzed as phonetically empty. The definite determiner and the possessive pronoun compete for spell-out in a single position at the left edge of the BBD.

(19) a. *Jeder* hob die POSS∅i Hand.
   'Everyone raised the POSS∅i hand.'

   b. *Jeder* hob DEF∅ seinei Hand.
   'Everyone raised DEF∅ hisi hand.'

- Both the determiner and the possessive pronoun compete for the leftmost position in the DP.
  - The determiner, because it belongs there.

- As in languages like German only one of the two may be pronounced (unless the possessive stays down under N), I assume that the possessive always moves to D (or π). In a DM fashion, one of the two categories undergoes impoverishment.

(20) a. The spell-out of D and POSS in BBDs:

   \[
   \text{D+POSS} \Rightarrow \text{D} \lor \text{POSS}
   \]

   - I have nothing to say here about the optionality that this introduces into the syntax.
• D-LINKING:
BBDs referring to some paired body-parts (or body-parts that come in small sets) are not truly definite in reference. Only the pairs (or sets) are.

• If I could bake my own distributed morphology for this, it would look as in (21) and (22) (cf. Hirose 2003 for an account of Japanese d-linked *dono* ‘which’ that assumes a *pro* to model d-linking).

(21) a. *Paul brach sich ein Bein von seinen zwei [Beinen]ELLIPSIS.
Paul broke REFL a leg of his two legs
‘Pauli broke a leg from among his two legs.’

b. 

```
D                 NumP
   |                  |
[-def, 1] Num     NP
   |                  |
{+} N               PartP
     |                  |
Bein     Part       DP
     |                  |
von     D           NumP
       |                  |
[+def, +Poss] Num   NP
       |                  |
[1+1][+Dual] proi [Beinen]ELLIPSIS
```

(22) a. *Paul brach sich das sein Bein.
Paul broke REFL the his leg
‘Pauli broke the his leg.’

b. 

```
D                 NumP
   |                  |
[-def, +def, 1] Num     NP
   |                  |
{+} N               PartP
     |                  |
Bein     Part       DP
     |                  |
[Rel]     D           NumP
       |                  |
[+def, +Poss] Num   NP
       |                  |
[+Dual] proi [Beinen]ELLIPSIS
```
• However, at the present point I’m not in the position to really defend these structures.

4.2 0P syntax – Knight Move Binding

• BINDING:
  The bound variable in BBDs is bound by a co-phrasal antecedent.

“[S]emantic binders (λ-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.
• This will, then, tie co-phrasal binding to the presence of certain functional heads of the Voice and higher theta domains.

(23)

• Structures with a bare numerical index like the output of (23) trigger predicate abstraction. Consequently, the DP in the specifier of β will bind the variable in γ.

(Hole 2014: 129)

(24) For any assignment a:

```
\[
\begin{array}{c}
\text{SpecVoiceP} \\
\text{Voice'} \\
\text{Voice}^0 \\
\text{Agent} \\
\text{VP} \\
\text{VP} \\
\end{array}
\]
\[
\begin{array}{c}
\lambda x . \lambda \mathbf{e}. \text{pinch}(\mathbf{x})(\mathbf{e}) & \lambda x . \lambda \mathbf{e}. \text{agent}(\mathbf{x})(\mathbf{e}) \\
\lambda x . \lambda \mathbf{e}. \text{agent}(\mathbf{x})(\mathbf{e}) & \lambda x . \lambda \mathbf{e}. \text{pinch}(\mathbf{x})(\mathbf{e}) \\
\lambda \mathbf{e}. \text{pinch}(\mathbf{a}(5))(\mathbf{e}) \\
\end{array}
\]
```

Application 2: German free datives

- Subscribing to the undercurrent of control/binding analyses in this domain (Guéron 1985, Borer/Grodzinsky 1986, Vergnaud/Zubizarreta 1992, Brandt 2003, 2006), I put such binder theta heads to work to model German free datives.

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


(26)

```
P\textsubscript{-EXPERIENCER}\textsubscript{+b} / VP \Rightarrow \textsubscript{LF} P\textsubscript{-EXPERIENCER} / VP
```

```
\begin{array}{c}
\text{LANDMARKE}\textsubscript{+b} \\
\text{AFFIZIERTER}\textsubscript{+b} \\
\end{array}
\Rightarrow \text{LF}
```

```
P\textsubscript{-EXPERIENCER} / VP
```

```
\begin{array}{c}
\text{LANDMARKE} \\
\text{AFFIZIERTER} \\
\end{array}
\Rightarrow \text{LF}
```

9
Application 3: Bound bridging definites

- Bound bridging definites may have the binder variant of any theta head (= verbal functional head) as their antecedents. This explains their broad distribution.

- Accusatives as antecedents may pose a problem, though. Kratzer (2003) claims that the theta role of non-incremental themes must come from the verb stem/root, and cannot come from a theta head.

- If Kratzer (2003) is right, themes that are not incremental (= themes that are directly theta-marked by verbs) ought to be impossible “antecedents” of BBDs. This prediction is preliminarily borne out by data as in (27).

(27) a. ACC as a non-incremental theme

\[ \text{Sie brachten Paul, langs in den Garten.} \]

They carried Paul slowly in the garden

no incrementality: despite the slowness the change of location remains momentaneous

no bound bridging reading available

b. ACC as an incremental theme

\[ \text{Sie brachten Paul, langs um den Verstand.} \]

They brought Paul slowly so as to lose the mental sanity

incrementality: their action incrementally affects more and more of Paul and his sanity.

bound bridging reading available


4. Conclusions and outlook

5. References


Brandt, Patrick (2006). ‘Receiving and perceiving datives (ciipients)’. In: Daniel Hole, André Meinunger und Werner Abraham (Hrsg.), 103-139.


