The "free" datives of German as exponents of a type of clause-level reflexivization
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0. Introduction

- **Empirical domain:**
  so-called "free datives" of German, i.e. datives that appear to be arguments without being subcategorized-for (or licensed) by verb stems

(1) *Paul backte Maria einen Kuchen.*   (classical "beneficiary" dative/
Paul baked Maria$_{DAT}$ a cake   *"dativus commodi"*)
'Paul baked Maria a cake.'

(2) *Paul verband Maria den Arm.*   ("possessor" dative (sometimes
Paul bandaged Maria$_{DAT}$ the arm   with a beneficiary undertone))
≈ 'Paul bandaged Mary's arm.'

(3) *Paul ist die Treppe zu steil.*   ("*dativus iudicantis*")
Paul$_{DAT}$ is the staircase to steep
≈ 'Paul finds the staircase to steep.'

- **Main claims** (Hole 2014)**:**

  Binding/Locality
  Free datives are very similar to reflexivity:
  free datives invariably bind a variable in the local tense domain.

  Knight Move Binding
  Special constraint on tree geometry: variables that fulfil the binding requirement of free datives sit on left edges of (PP) co-arguments.

- **Structure of the paper:**
  §1: **Delimiting the empirical domain**
  §2: **Background on binding and reflexivity**
  §3: **Free datives and how they instantiate hallmark properties of reflexive binding**
  §4: **How to model this?**

1. Delimiting the empirical domain

- Omissibility of free datives without semantic or syntactic residues

free datives	datives rooted in stem arity
ihm$_{DAT}$ *einen Kuchen backen* 'bake him a cake'	*ihm*$_{DAT}$ *den Dachboden zeigen* 'show him the attic'
einen Kuchen backen 'bake a cake'	*den Dachboden zeigen* 'show the attic'
no entailment that someone is baked a cake: *einen Kuchen backen* $\nrightarrow$ 'There is someone who is baked the cake.'	**entailment** that there is someone who is shown the attic: *den Dachboden zeigen* $\rightarrow$ 'There is someone who is shown the attic.'

Table 1: Entailment patterns with free datives and datives rooted in stem arity

(4) **Syntactico-semantic deletion test for free datives**
A dative argument D not dependent on a preposition is *free* in a simple positive declarative sentence S of German **iff**
   (i)   S without D is grammatical;
   (ii)   S without D does not entail that there is an individual
         (α)   which participates in the event described by S and
         (β)which could be encoded as a dative argument.

- **Clarifications:**
  - The apparent entailed participation of s.o. whose arm is bandaged in (5) goes away if a different real-world setting as in (6) is chosen.
  - Similar considerations apply to (7).

(5) *Paul verband* (*Maria*) *den Arm.*   ("possessor" dative (sometimes
    Paul bandaged Maria$_{DAT}$ the arm   with a beneficiary undertone))
    ≈ 'Paul bandaged {Mary's/the} arm.'
(6) *Paul stopfte* (*Maria*) *den/ihren Ärmel.*
    Paul darned Maria$_{DAT}$ the/her sleeve
    'Paul darned the/her sleeve (for Mary).'

(7) *Paul ist die Treppe zu steil.*   ("*dativus iudicantis*")
    Paul$_{DAT}$ is the staircase to steep
    ≈ 'Paul finds the staircase to steep.'

(8) [Paul is an inexperienced carpenter. He has built a staircase in a new house, but after he's done he notices that the staircase doesn't conform to the blueprint. He thinks:]
    a. *Die Treppe ist zu steil.*
       the staircase is too steep
       'The staircase is too steep.'
    b. #*Mir ist die Treppe zu steil.*
       me$_{DAT}$ is the staircase to steep
       ≈ 'I find the staircase to steep.'

2. Background on binding and reflexivity

- **Hallmark property 1:** strict identity/bound readings

(9) *Paul$_i$ loves his$_{i/j}$ wife, and so does Bill.*   [strict identity or sloppy identity]
  ✓ 'Bill loves Bill's wife.'
  ✓ 'Bill loves Paul's wife.'
(10) *Paul$_i$ loves himself$_{i/*j}$, and so does Bill.*   [only sloppy identity(=binding)]
  * 'Bill loves Paul.'
  ✓ 'Bill loves himself.'

(11) *Only Paul$_i$ votes for himself.*   [only sloppy identity(=binding)]
  * 'Others don't vote for Paul.'
  ✓ 'Others don't vote for themselves.'

Reflexive pronouns (usually) only have sloppy-identity/bound readings.
Other pronouns, including German possessive pronouns, typically have strict-identity and sloppy-identity readings.
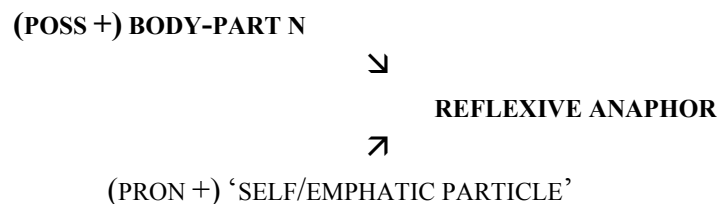

- **Hallmark property 2:** Binding with reflexives is local. (Binding with reflexives typically doesn't cross clause boundaries.)

(12) a.   Paul$_i$ sah sich$_i$ im Spiegel.
            'Paul saw himself in the mirror.'
      b.   Paul$_i$ sah im Spiegel, dass Ed$_j$ sich$_{*i/j}$ zwickte.
            'Paul saw in the mirror that Ed pinched himself.'

Sich (the German reflexive) must find its antecedent within the clause in which it occurs.

- **Hallmark property 3:** Knight Move Binding (inspired by the move of knights in the chess game).

- Knight Move Binding is *the* structural configuration for the grammaticalization of reflexives out of body part nominals.

The most frequent grammaticalization channels for reflexive anaphors:

(POSS +) BODY-PART N
                                        ↘
                                                REFLEXIVE ANAPHOR
                                        ↗
(PRON +) 'SELF/EMPHATIC PARTICLE'

(Faltz 1985, König & Siemund 2000b, Schladt 2000)

- At the same time, no (or very few) N+complement structures ever grammaticalize into reflexive anaphors (cf. Schladt 2000: 105-7, 110-1).

PICTURE NOUN + CONTENT PRONOMINAL
'statue representing x'
'picture representing x'   * $\rightarrow$ **REFLEXIVE ANAPHOR**
'memory of x'
'shadow of x'

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3. Free datives and how they instantiate hallmark properties (HP) 1-3 of reflexive binding

3.1 Free datives and bound possessive pronouns/bridging articles

- Interpretive potential of possessive pronouns and definite articles w/o free datives.

(13)   Klara   guckte streng [auf   **ihre/seine/die**   Wurst].
       Klara   looked strictly on   her/his/the   sausage
       'Klara was looking at her/his/the sausage in a strict way.'

- Interpretive potential of possessive pronouns and definite articles w/ free datives.

(14)   Klara   guckte jedem$_{DAT}$ θ_i streng [auf   **seine$_{i/*j}$/die$_{i/*j}$** Wurst].
       Klara   looked everyone$_{DAT}$ strictly on   his/the   sausage
       'Klara was looking at everybody's sausage in a strict way.'

(15)   ***Dem Patienten*$_i$** *platzte   ein Stück Gips* $\begin{Bmatrix} vom_i \\ von\ seinem_i \end{Bmatrix}$ *Arm ab, und **dem Arzt** auch.*

       [the   patient]$_{DAT}$ cracked   a   piece cast $\begin{Bmatrix} \text{off.the} \\ \text{off its} \end{Bmatrix}$ arm off and   [the doctor]$_{DAT}$ too

       ✓'It happened to [the patient]$_i$ that part of the cast on his$_i$ arm came off, and it happened to [the doctor]$_j$ that part of the cast on his$_j$ arm came off, too.'
       *'It happened to [the patient]$_i$ that part of the cast on his$_i$ arm came off, and it happened to [the doctor]$_j$ that another part of the cast on the arm of [the patient]$_i$ came off .'

HP1: Binding enforced

- Obligatory Binding of (bridging) definites across clause boundaries is impossible.

(16) Klara guckte jedem θ_i so streng[auf seine$_{i/*j}$/die$_{i/*j}$Wurst], dass **sein$_{i/j}$**/**der$_{*i}$** Appetit verschwand.
Klara looked everyone$_{DAT}$ 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.'

HP2: Variables that are obligatorily bound by free datives are locally bound.

3.2 Free datives and bound readings with the directional particle *hin*

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

(17) 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.

(18) Paula legte [jeder Schülerin]$_{DAT}$ θ_i ein Buch **hin$_{i/*j}$**.
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 (18) has something like (18′) underlying it, the pattern is as in 3.1 above..

(18′) Paula legte [jeder Schülerin]$_{DAT}$ θ_i ein Buch [in **ihren$_{i/*j}$** 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.'

HPs 1/3: Bound readings with the directional particle *hin* can easily be accounted for if a frequently unpronounced goal PP with a bound pronominal on a left branch is assumed.

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

(19) Paula θ_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.'

(20) Paula θ_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.'

(19') Paula θ_i ist eine Serviette [aus **ihrem$_i$** 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.'

(19'') Paula θ_i ist eine Serviette [in **ihren$_i$** 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.'

HPs 1/3: 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: (21) only has sloppy-identity interpretations.

(21) Nur Paula θ_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.'

3.4 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; Pylkkänen 2001).

(22) Homer mixte Marge$_{DAT}$ 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 – more generally – as in (19″).

(22′) Homer mixte Marge θ_i einen Drink **zur$_i$** Entspannung.
'Homer fixed Marge a drink so that Marge would have the benefit of relaxing.'

(22″) Homer mixte Marge θ_i einen Drink (zu **ihrem$_i$** kontextuell gegebenen Zweck Z).
'Homer fixed Marge a drink so that Marge would have the contextually determined benefit Z.'

- In (22″), *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

(23)   Homer mixte Marge θ_i einen Drink **zur$_i$** Entspannung, und Bart$_{DAT}$ 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

- (24a) with the PP is redundant, while (24b) (=(22'')) is not.

(24)   a.   Homer mixte Marge θ_i ($^{???}$für sie$_i$) einen Drink.
                'Homer fixed Marge$_i$ a drink ($^{???}$for her$_i$).'
         b.   Homer mixte Marge θ_i einen Drink (zu **ihrem$_i$** kontextuell gegebenen Zweck Z).
                'Homer fixed Marge$_i$ a drink so that she$_i$ would have the contextually deter-
                mined benefit B.'

- This is quite unexpected on the traditional account which has *Marge* stand in the benefi-
  ciary relation to the fixing event.

- With the obligatory Knight Move Binding configuration in place, the pattern becomes
  understandable.

(24')   a. Homer mixte Marge θ_i einen Drink (zu **ihrem$_i$** kontextuell gegebenen Zweck Z) ($^{???}$für sie$_i$).
         b. Homer mixte Marge θ_i einen Drink (zu **ihrem$_i$** kontextuell gegebenen Zweck Z).

- (24a) and (24'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.

- (24b) and (24'b) are good because just one beneficiary PP (the obligatory one with the
  Knight Move Binding configuration) is present.

- I submit that, in all four sentences, the dative DP encodes an experiencer.

3.5. Knight move Binding in action

- Obligatory binding by free datives only targets left branches (but everything that *may*
  be bound by any old antecedent may be bound by free datives, too).

(25)   a.   [What crooked prospective heirs do:]
                Sie   zerstreuten ihm θ_i [**seinen$_i$** Verdacht].
                they dispelled   him$_{DAT}$ his   suspicion
                'They dispelled HIM$_{DAT}$ his suspicion.'
                ("possessor" reading)

         b.   [What expensive lawyers do:]
                Sie   zerstreuten ihm θ_i [**ihren** Verdacht gegen **ihn$_i$**].
                they dispelled   him$_{DAT}$ their suspicion against him
                'They dispelled HIM$_{DAT}$ the attorneys' suspicion against him.'
                ("benefactive" reading)

b'. Sie zerstreuten ihm θ_i [zu **seiner$_i$** Entlastung] [ihren Verdacht gegen **ihn$_i$**].
they dispelled him$_{DAT}$ to his exoneration their suspicion against him
'They dispelled HIM$_{DAT}$ for the purpose of his exoneration their (the attorneys', for instance) 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 (25b), hearers accommodate one as in (25b')**.**

4. How to model this?

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