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Parameterized [E]llipsis

An argument from German determiner sharing

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1 The Data

- Structures in which a **determiner or quantifier** is **omitted** from the second conjunct in a **gapping** construction have been known as **determiner sharing** structures (DS) since McCawley (1993).
- DS is acceptable, but marked and not information-structurally neutral (Schwarzer (in prep.)).

(1) a. **Few** dogs eat Whiskas or ~~few~~ cats (*eat) Alpo. (Johnson 2000)

   b. **Jede** Gräfin mag Lavendel und ~~jede~~ Königin (*mag) Flieder.
      every countess likes lavender and every queen likes lilac
      "Every Countess likes lavender and every Queen likes lilac."

   c. Er hat **jedem** Lehrer ein Buch gegeben und ~~jedem~~ Schüler ein Heft
      he has every.DAT teacher.DAT a book given and every.DAT student.DAT a folder
      ~~gegeben~~.
      given
      "He has given every teacher a book and every student a folder."

Generalizations:

1. **DS is parasitic on Gapping** (McCawley 1993; Johnson 2000; Lin 2002 *et seq*). If the verb in the second (and following) conjuncts is not gapped, an interpretation of a shared quantifier is not available.

(2) **Alle** Mädchen spielen Klavier und __ Jungen spielen Geige.
   all girls play piano and boys play violin
   only interpretation: *"All girls play the piano and boys in general play the violin."*

2. **The shared DET must be initial in its conjunct**. Any material overtly intervening between the coordinator and the DET makes DS impossible.

(3) *?[Ein Teleskop] haben **viele** Kollegen Peter geschenkt und **[einen Römertopf]**
   a telescope.ACC have many colleagues.NOM P given and a clay.pot
   ~~haben viele~~ Freunde ~~Peter geschenkt~~
   have many friends.NOM P given
   intended: *"Many colleagues have given a telescope to Peter and many friends have given him a clay pot."*

3. **DS can never skip elements**. A prenominal modifier can only be deleted a) if it is the first one (generalization 2) or b) if it's left/higher neighbor has been deleted.

(4) **Jeder zweite** Schüler spielt Geige und **jeder** ~~zweite~~ Lehrer spielt Klavier.
   every second student suffers under stress and every second teacher under noise
   "Every other student suffers from stress and every other teacher suffers from noise."
   "Every other student suffers from stress and every teacher suffers from noise."

4. **Not all DETS may be shared**. There is a lot of cross- and intra-linguistic variation. The only cross-linguistically robust generalization[1] seems to be that (bare) **cardinal numbers** and the **indefinite article** may never be shared.

(5) a. possible in German DS: *alle* 'all', *einige* 'some', *wenige* 'few', *viele* 'many', *kein* 'no', definite article, ordinal numbers, etc.

    b. impossible in German DS: indefinite article, cardinal numbers, possessive pronouns, demonstratives

2 Gapping in German

- Many analyses of DS in other languages posit a low coordination structure for gapping sentences (Johnson (2000); Lin (2002); Arregi & Centeno (2005); Citko (2006)).
- German is language that exhibits **Large Conjunct Gapping**, i.e., conjuncts are clause-sized and many elements can be gapped alongside the predicate.
- Evidence for clause-sized conjuncts:

(6) *No wide scope of negation* (Repp 2009)
?*Max hat den Kuchenteller **nicht** abgewaschen und Paul die Salatschüssel.
Max has the cake.plate NEG washed and Paul the salad.bowl

(7) *No cross-conjunct binding*
?*Jede$_1$ Studentin wählt SPD und ihr$_1$ Betreuer ~~wählt~~ CDU.
every student votes SPD and her advisor votes CDU

(8) *Object fronting* (D. Büring via Hartmann 2000)
Ich weiß nicht [**was** Peter Ute zum Geburtstag schenkt] und [*(**was**) sie ihm ~~zum~~
I know NEG what.ACC P.NOM U.DAT to birthday give and what.ACC she.NOM him.DAT to
~~Geburtstag schenkt~~]
birthday give

3 Analysis

- The relation between DS and gapping has the **same properties as syntactic Agree** (phase mates, c-command, Minimality):
  - **Phase** condition: The elided determiner and the gapped verb have to be **phase mates**. Assuming that gapping licenses DS, gapping in the matrix clause cannot license DS in the embedded clause because of the intervening phase boundary.

    (9) [$_{CP}$ Kein Mädchen sollte Klavier spielen,] findet SIE, und [$_{CP}$ *(kein) Junge sollte Geige
    no girl should piano play thinks she and no boy should violin
    spielen], ~~findet~~ ER.
    play thinks he

  - **C-command** condition: The operation that produces DS obeys **c-command**. Gapping in an embedded sentence should be too low to license DS in the matrix clause.

    (10) *[$_{CP}$ **Jede** Professorin glaubt dass die Regierung die Wirtschaft beeinflusst]
    every professor believes that the government.NOM the economy.ACC influences
    und [$_{CP}$ ~~jede~~ Studentin denkt (*dass) der Markt die Regierung ~~beeinflusst~~]
    and every student thinks that the market.NOM the government.ACC influences
    intended: *"Every professor believes that the government influences the economy and every student believes that the market influences the government."*

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[1] Based on a small sample of 5 languages: German, English (Lin 2000; Johnson 2000; McAdams 2012), Spanish (Arregi & Centeno 2005), Korean(Kim 2011; Citko 2006, Hyunjung Lee, p.c.), and Dutch dialects (Ackema & Szendrői 2002).

- This is tricky to test. (10) also involves a phase boundary. Unfortunately, gapping independently only apply to finite verbs, and embedding of finite verbs always involves a phase boundary.
- **Minimality** condition: The IO c-commands the DO, intervening in the relation between the gapping-triggering Fin^0 and the DS-exhibiting DO.

(11) *Ich habe meiner Mutter **jede** Blume gezeigt und meinem Vater ~~jede~~   Krähe.
      I   have my.DAT mother every flower shown and my.DAT   father every crow
   intended: *"I have shown my mother every flower and my father every crow."*

⇒ Gapping licenses DS via Agree

Proposal:
DS is a type of **[E]-deletion** (Merchant 2001), licensed by Agree with gapping-[E] (Aelbrecht 2010, (12)).

- A syntactic head carries a feature [E] that, under Agree with a higher, licensing head, instructs post-syntax to leave that head's complement unpronounced, (12).
- Axiom: [E] is phase-bound, i.e., it can only target elements within the same phase as its host head

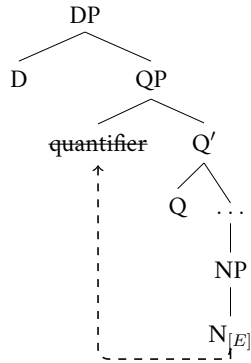(12)   *Ellipsis and licensing (Aelbrecht 2010)*
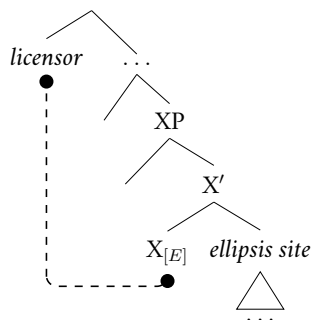
- Special [E] feature for every type of ellipsis (Merchant 2001, 2004).
- New type $[E_{DS}]$ differs from $[E_{sluice}]$ in systematic ways:
    - **direction**: $[E_{sluice}]$ marks an element in its c-command domain for non-pronunciation; $[E_{DS}]$ is "upward": it deletes an element that c-commands it
    - **locality**: $[E_{sluice}]$ deletes the most minimal element (= complement); $[E_{DS}]$ deletes the most anti-local element (as far away from it as possible, but still within the same phase)
- $[E_{DS}]$ is defined in (13) (in a notation that combines Merchant's and Aelbrecht's). $[E_{DS}]$ is hosted on N^0, has to be licensed by agreeing with Fin^0, and instructs PF to leave a [–c-command, –local] element unpronounced.

(13)   *Definition of $[E_{DS}]$*
      a.   CAT: [E]
      b.   INF: [uFin]
      c.   SEL: [uN*]
      d.   PHON: $\varphi(X_{[-\text{c-com},-\text{loc}]}) \rightarrow \emptyset/[E]$

3.1 Derivation

(14)   *Step 1: Determiner sharing*

```
              DP
            /    \
          D       QP
                /    \
        quantifier    Q'
                     /  \
                    Q   ...
                         |
                        NP
                         |
                       N_[E]
```
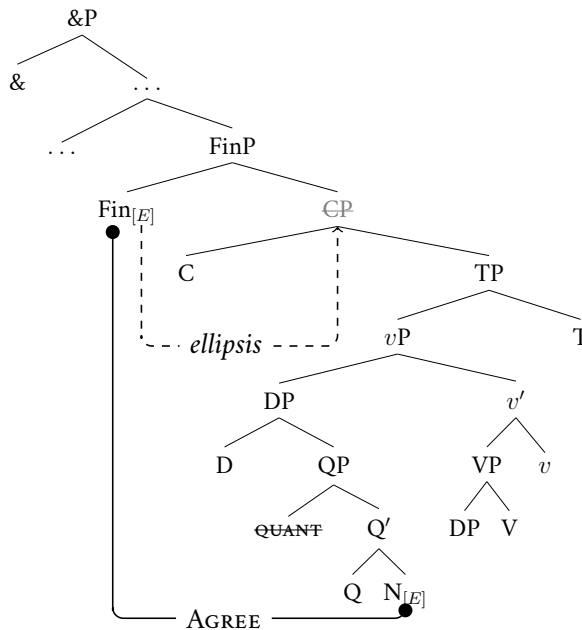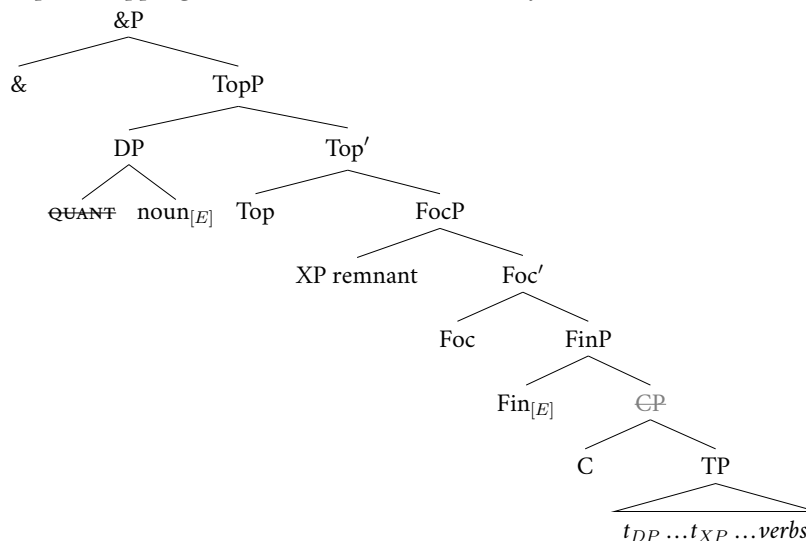
- $[E_{DS}]$ mark the most anti-local c-commanding element for non-pronunciation

(15)   *Step 2: Licensing of DS by gapping-[E]*

```
                  &P
                /    \
              &       ...
                    /    \
                  ...     FinP
                        /     \
                  Fin_[E]      CP
                      |      /    \
                      |     C      TP
                      |  ellipsis  /  \
                      |          vP    T
                      |        /    \
                      |      DP      v'
                      |    /   \    /  \
                      |   D    QP  VP    v
                      |      /   \  / \
                      |  QUANT   Q' DP  V
                      |         /  \
                      |        Q   N_[E]
                      └──── AGREE ────┘
```

- DS must be licensed by gapping
  $\Rightarrow$ Agree between $[E_{DS}]$ on N^0 and $[E_{gap}]$ on Fin^0
- [E] acts as a derivational time bomb: if $[E_{DS}]$ can't agree with $[E_{gap}]$, the structure becomes ungrammatical
- $[E_{gap}]$: deletion of CP-complement

(16)   *Step 3: Gapping and evacuation movement of the remnants*

```
                  &P
                /    \
              &       TopP
                    /      \
                  DP        Top'
                /   \      /    \
           QUANT  noun_[E] Top   FocP
                              /      \
                        XP remnant    Foc'
                                     /    \
                                   Foc     FinP
                                         /      \
                                   Fin_[E]       CP
                                               /    \
                                              C      TP
                                                   /  |  \
                                            t_DP ...t_XP ...verbs
```

3.2 Accounting for the properties of DS

Gen1 The dependency on gapping: [E]-licensing by Agree with gapping-[E]

Gen2 Conjunct initiality: The requirement to be conjunct-initial should be reduced to Minimality. Other DPs/XPs are defective interveners in the Agree relation between [E] on Fin^0 and [E] on N^0.

Gen3 No skipping: Also a Minimality effect. [E] can re-apply and successively delete all c-commanding, anti-local elements. A potential elidee cannot be skipped.

Gen4 impossible DETS: Numerals and indefinite articles are considered to be *lower* nominal projections (e.g. Julien 2002). They might be so low that they are not anti-local enough.

4 Implications and extensions

- If this analysis is on the right track, [E] could be more flexible than previously thought, (17).

  (17) *Generalized [E]-ellipsis*
  Within phase π, [E] on head H marks an element ε in π, ε [α c-command, α local], for non-pronunciation.

- The [E] feature can be **parameterized**: some ellipses target [+/+] elements, others [–/–] elements.
- Obvious question: are the other patterns [α c-command, $-\alpha$ local] also possible?
- It seems so:
- Cardinal numbers cannot be shared in DS on their own, (18-a). However, as part of a complex of modifiers, they can be, (18-b).

  (18)　a. *Zwölf Mädchen machen Tee und ~~zwölf~~ Jungen ~~machen~~ Kaffee.
  　　　　　 twelve girls　　make　 tea and twelve boys　 make　coffee
  　　　 b. Alle 12 Mädchen machen Tee und ~~alle 12~~ Jungen ~~machen~~ Kaffee.
  　　　　　 all　12 girls　　　make　 tea and all　12 boys　 make　coffee

- This is reminiscent of the **Principle of Minimal Compliance** (Richards 198), (19).

  (19) *Principle of Minimal Compliance* (Preminger 2019)
  Once a probe P has successfully targeted a goal G, any other goal G' that meets the same featural search criterion, and is dominated or c-commanded by G (= dominated by the mother of G), is accessible to subsequent probing by P irrespective of locality conditions.

- Low, local elements can only be elided after deletion of higher, non-local elements. Thus, in (18), [E_{DS}] can target *"zwölf"* in a second round of application, even though that element is usually too low.
- The other possible pattern is that in a second round of application, [E] checks only DPs with the feature [+c-com, –loc], i.e. phrases that are in the c-command domain of the [E]-carrying N, but are not local.
- PPs may be such elements as their phase barrier classifies them as anti-local.
- Observe the contrast in (20). In (20-a), no deletion of a determiner occurred and the reading *"movies about linguists"* is not available, thus it cannot be present in the structure. (20-b) involves DS and makes the reading available.

  (20)　a. [$_{DP}$ **Viele** Bücher [$_{PP}$ über Linguisten]] hab ich gelesen und [$_{DP}$ viele Filme] gesehen.
  　　　　　 many books　　 about linguists　 have I read　 and　 many movies watched
  　　　　　 "I have read many books about linguists and have seen many movies (#about linguists)."
  　　　 b. [$_{DP}$ **Viele** Bücher [$_{PP}$ über Linguisten]] hab ich gelesen und [$_{DP}$ ~~viele~~ Filme ~~über~~
  　　　　　 many books　　 about linguists　 have I read　 and　 many movies about
  　　　　　 ~~Linguisten~~] gesehen.
  　　　　　 linguists　　 watched
  　　　　　 "I have read many books about linguists and have seen many movies about linguists."

5   Conclusion

DS is a niche phenomenon but can potentially give us insights into the core properties of ellipses. It shows how two different ellipsis processes interact through syntactic licensing, and a potential instantiation of Minimal Compliance in ellipsis.

If Agree can apply downward and upward (as argued for by Himmelreich 2017 e.g.), then this parameterization of [E] is entirely expected.

References

Ackema, Peter, & Kriszta Szendrői. 2002. Determiner sharing as an instance of dependent ellipsis. *The Journal of Comparative Germanic Linguistics* 5:3–34.

Arregi, Karlos, & Naiara Centeno. 2005. Determiner sharing and cyclicity in wh-movement. In *Theoretical and experimental approaches to Romance linguistics*, ed. Randall Gess & Edward Rubin, 1–19. Amsterdam, Philadelphia: John Benjamins.

Citko, Barbara. 2006. Determiner sharing from a crosslinguistic perspective. *Linguistic Variation Yearbook* 6:73–96.

Himmelreich, Anke. 2017. Case matching effects in free relatives and parasitic gaps: A study on the properties of Agree. Doctoral dissertation, UniversitLeipzig.

Johnson, Kyle. 2000. Few dogs eat Whiskas or cats Alpo. *UMOP* 23:59–82.

Julien, Marit. 2002. Determiners and word order in Scandinavian DPs. *Studia Linguistica* 56:265–315.

Kim, Jeong-Seok. 2011. D-sharing. *Studies in Modern Grammar* 63:21–46.

Lin, Vivian. 2000. Determiner sharing and the syntactic composition of determiner phrases. Handout of paper presented at GLOW 2000, University of the Basque Country, Vitoria-Gasteiz.

Lin, Vivian. 2002. Coordination and sharing at the interfaces. Doctoral dissertation, Massachusetts Institute of Technology, Cambridge, MA.

McAdams, Darryl. 2012. Unifying determiner sharing and NCC-PSC. Ms., University of Maryland.

McCawley, James D. 1993. Gapping with shared operators. In *Annual Meeting of the Berkeley Linguistics Society*, volume 19, 245–253.

Schwarzer, Marie-Luise. in prep. Ellipsis in DP and quantifier scope: An experimental study of German determiner sharing. Manuscript in preparation.