

Deletion is acyclic

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Deletion I

- GB assumed a mechanism *Move* (or *Move alpha*) that inserts *traces* at the extraction site.
- Since *Move* acts on structure already built, this adds (changes) elements: Violates No Tampering Condition ("do not alter existing structure")
- *traces* are added to structure already built, violates the Inclusiveness Condition ("everything must be included from the start")
- *traces* also are an additional ontological type, against the Minimalist effort to reduce the theory
- So a copy theory of movement was adopted (Chomsky 1993) Movement (the phenomenon of interpretation/pronunciation in distinct positions) is the result of two processes: Copy and Delete.

Deletion II

- Copy is Internal Merge (repeated Merge of something already Merged).
- Copying serves an interpretational (= LF) requirement. Deletion serves a PF requirement: efficiency.
- Assuming Deletion to be a PF algorithm that cannot see syntax nor LF. Like in Landau (2006).
- Empirically, usually the highest copy survives deletion. But we find exceptions (see below)
- How do some copies in multi-copy pronunciation data avoid deletion? What is the precise algorithm of deletion?

VP doubling I

(1) Landau (2006:59), formatted

- a. *le***hoil** *la-proyekt* *selanu hu lo* ***(hoil)**
 To-be-useful to-the-project our he not be-useful.V
af-paam.
 never
- b. *lihyot* **moil** *la-proyekt* *selanu hu lo* *haya* **(??moil)**
 to-be useful to-the-project our he not was (useful)
af-paam.
 never

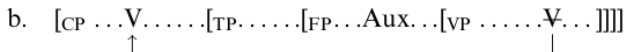
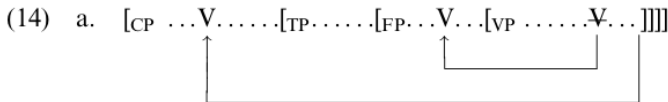
"As for being useful to the project, he never was useful."

VP doubling II

Landau (2006:58): Spell out a lower copy if it is for

"P-recoverability": For a lower copy T-V, e.g., he argues that this "copy is associated with the phonological requirement of [the head T it moved to:] the need to spell out tense and agreement features (...)"

Aboh (2009) on Landau's Hebrew data, plus Gungbe data: Parallel chains, both from the same goal (lowest copy) to different probes (linearly speaking, the intermediate and high copy). Deleting the tail only results in two overt copies. For Aboh, Delete is cyclic (phase by phase), since it applies only to the first phase.



Case study: Alemannic verb doubling I

(2) Obligatory verb doubling in VP recursion

- a. *dass si goht *(ga) schaffa*
that she goes go.DBL do-work
- b. *dass si goht (*ga) (is Büro)*
that she goes *go.DBL (to-the office)

Doubling of V by Doublet_V is obligatory **iff**:

- ① V is a doubling verb **and**
- ② V embeds a bare verbal complement (an infinitive)

Case study: Alemannic verb doubling II

Doubling verbs:

	+FIN			-FIN	Doublet
	1sg	2sg	3sg		
"go"	gang/ga	gaasch	gaat	gaa	ga
"come"	chum	chunsch	chunt	choo	cho
"let"	la	laasch	laat	laa	la
"begin"	afa	afaasch	afaat	afaa	afa

- A verb is predictably a DV if it is monosyllabic and its infinitival form ends in a long vowel.
- *a+fa* is a particle verb, and only the stem doubles

(3) *dass si faat a (*a) fa schaffe*
 that she catches on *on catch.DBL do-work

"that she begins [lit. catches on] to work."

Proposal: Acyclically delete tail in eXP I

- The doublet *ga* is arguably the lowest copy, since nothing can come between it and the complementing infinitival phrase. Therefore, "delete tail" does not work here.
- Rather, doubling is sensitive to there being another verb below it. (2a vs b)

Proposal: Acyclically delete tail in eXP II

- Proposal: Deletion targets the lowest of several copies of the same category in a set of adjacent projections of the same category plus intervening functional projections.

(4) $[vP \text{ } laa \text{ } let.INF]$ $[VP \text{ } la \text{ } let.DBL]$ $[vP \text{ } staa \text{ } stand.INF]$ $[VP \text{ } sta \text{ } stand]$

"to leave (...) there" [lit.: "(to) let (...) stand"]

- In this recursive vP structure we have two phases vP. If deletion were cyclic, deletion would proceed in each phase (each vP) and delete both verbs' lower copies.
- Instead, I propose that deletion proceeds globally, that is, just before actual externalization. At a point when all phases are at PF already.

Proposal: Acyclically delete tail in eXP III

- Deletion is acyclic
- Targets the tail (lowest copy) of a chain **determined by category** (not nondistinctness) **in an extended projection eXP**
- Define an eXP as **a span of adjacent same-category projections plus any functional layers**. Deviating from Grimshaw (1991)'s definition as [FP [XP]], this can stretch several spines: [FP [XP [FP [XP]]]] if $X == X$.
- Here, then, $\langle vP \ VP \ vP \ VP \rangle$ is one eXP.

Predictions

- Predicts head doubling in any XP-recursion structure *iff* there are at least two movements in there.
- Problem: This very likely overgenerates.
- ALS Verb Doubling, for instance, must additionally be restricted lexically: The Lx must be able to spell out a verb's low copy (given its root morphology) for doubling to happen. This way, no doubling in recursive vPs is predicted for non-doubling verbs in ALS. (Not all ALS dialects double all 4 DVs, for instance.)

Prediction: V-v-(T-)C movement

- Although acyclic, deletion sees phase boundaries, i.e. acts on spell-out domains. An eXP then consists of multiple (here: 2) spell-out domains.
- The eXP's higher phase's head, here v1, is not included in the spell-out domain of vP1, therefore not in the first eXP. It is part of the next higher spell-out domain CP, thereby of the the next eXP. Accordingly, it is deleted in V2 structures (6).

(5) *dass_C si [vP1 goht_v ga_v [vP2 schaffa schaffa]]*
 that she goes go.DBL do-work.INF ~~do-work~~

(6) *hüt goht_C si [vP1 goht_v ga_v [vP2 schaffa schaffa]]*
 today goes she goes go.DBL do-work ~~do-work~~
]]

Prediction: Subject Movement

E.g., DP movement of the Subject DP in German V2.

[CP DP ... [TP DP ... [vP DP ...]]]

- 1 First eXP: vP downwards. Tail is DP, delete it.
- 2 Second eXP: CP downwards. Tail is spec,TP, delete it.

Same mechanism? No:

- First of all, the definition of copies as "same category" (here DP) predicts that any DP (object, etc.) be pronounced. This is plain wrong. -> Restrict the definition of "copy" for phrases.
- Second, recall from the prev. slide that spec,vP is not part of vPs spell-out domain (phase). -> TP also a phase?

Violability I

- In ALS VD (I argue), a low copy "falls through the cracks" of the deletion algorithm.
- This is therefore not a violation of the Deletion algorithm
- To explain other cases of doubling/resumption, I do assume it to be violable, though, namely due to stronger requirements.

Violability II

E.g., a phonological requirement to support an affix (this is basically one of Landau's 2006 points). Alemannic preposition doubling:

(7) *(do) oba-d-oba*
 (here) up-there-up

"at the top"

Within exploded PP, P (specifically, Svenonius (2006, et seq.)'s *AxPart*) A-bar-moves up for focus. The lower copy has to be pronounced to host the affixal deictic morpheme (or "R-word") <d->.

Another inhibitor of deletion would be Landau's phonological requirement "to spell out tense and agreement" from above.

Summary

- I have searched for a PF-algorihtm of Copy Deletion (Chain Reduction)
- Aboh's account does not allow low copies at all, assumes parallel chains instead
- Landau's account assumes Deletion to be violable due to P-recoverability
- I suggest that ALS Verb Doubling is a case of true non-deletion (syntactically caused non-deletion), since there is no interface (PF or LF) requirement for pronouncing the low copy whatsoever.
- The proposed algorithm (delete lowest, but in eXP rather than in chain) predicts this. This algorithm has **deletion apply globally, not phasally/cyclically**.
- Outlook: Take into account new Minimalist work on Merge and Copy determination (Chomsky et al. 2023). WIP!

-  Aboh, Enoch O. (2009). “Delete: A phase-level property”. In: *Theoretical Linguistics* 35-2/3, pp. 229–237. DOI: DOI10.1515/THLI.2009.012.
-  Chomsky, Noam (1993). “A Minimalist Program for Linguistic Theory”. In: *The view from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*. Ed. by Kenneth Hale and Samuel Jay Keyser. MIT Press, pp. 1–52.
-  Chomsky, Noam et al. (2023). *Merge and the strong minimalist thesis*. Cambridge University Press.
-  Den Dikken, Marcel (2007). “Phase extension contours of a theory of the role of head movement in phrasal extraction”. In: *Theoretical Linguistics* 1.33, pp. 1–41. URL: <https://doi.org/10.1515/TL.2007.001>.
-  Grimshaw, Jane (1991). *Extended projection*. Ms., Brandeis University.
-  Svenonius, Peter (2006). “The emergence of axial parts”. In:

Appendix 1: Orphaned doubling I

- (8)
- dass si sot_{Mod} (goo_v) ga_v schaffa schaffa*
 - dass si isch_{Mod} (ggange) ga schaffa schaffa*
 - si sot_C ~~sot~~_{Mod} (goo_v) ga_v schaffa schaffa*
 - si isch_C isch_{Aux} (ggange_v) ga_v schaffa schaffa*
- Verb doubling under perfective auxiliary, or a modal: The lower copy (a doublet) is obligatory, as above. The higher copy of the verb is infinitival (under Mod) or participial (under Aux), and can be deleted. Why?

Appendix 1: Orphaned doubling II

- This is likely unrelated ellipsis, since it occurs outside of verb doubling, too:

- (9) a. *Si isch is Büro (ggange)*
 b. *Si sot is Büro (goo)*

Appendix 2: Secondary doubling verbs

- *go* doublet under other verbs (complex motion verbs)
 - ① specified [manner] (open class!)
 - ② specified [deixis]
 - ③ causative

- (10) a. *renne/fahre/... ga luaga*
 run/drive/... go.DBL look
 "run/drive/... [somewhere] to look"
- b. *khoo ga luaga*
 come go.DBL look
- c. *schicke ga luaga*
 send go.DBL look
 "make [someone] go look"

Appendix 3: Phase Extension

- Phase Extension (den Dikken 2007) requires head movement.
- No movement from v/V2 to v/V1 here:
- Therefore not an alternative.

[vP1 go [VP1 go.dbl [vP2 look [VP2 ~~look~~]