Scrapping clauses with clausal anaphors

Peter Grishin (MIT)
grishin@mit.edu

An understudied variety of clausal "ellipsis" in English, which I term *scrapping* (Sentential Complement Reduction in ACD Positions), argues for the existence of a null clausal anaphor—a clausal proform that must be c-commanded by its antecedent, which I call a *scrap*. This work joins others like Chao (1987), Hardt (1997), and Schwarz (2000) in arguing that languages not only employ PF-deletion to derive ellipsis, but also null bound proforms of various kinds.

Scrapping is licensed in comparatives (1), relative clauses (2), and temporal adjuncts (3). The surface signature of scrapping is the non-pronunciation of the clausal complement of a verb. I first establish some core properties of scrapping which any analysis should account for.

(1) This building is bigger than I thought ⟨~~it was d-big~~⟩.
(2) It started raining right at the hour that the weather report predicted ⟨~~it would rain~~⟩.
(3) The guests arrived after we expected ⟨~~they would arrive~~⟩.

I demonstrate that scrapping is only licensed by antecedent-contained deletion (ACD), that the gap is interpreted as a structurally-reduced clause that maximally contains a low modality phrase (ModP), and that, once the constituent containing the gap has QRed in order to resolve antecedent-containment, the antecedent for the gap must c-command it. An analysis of the gap as containing a ModP-sized bound anaphor predicts all these facts. I argue that the gap contains the following structure: [Op PRO_{ModP}], with an operator adjoined to the anaphor that QRs to create a degree, entity, or temporal abstract (Elliott and Murphy, in prog.). If this analysis is on the right track, the broader picture is that surface instances of nonpronunciation might not only be null pronouns or PF-deletion, but also null bound anaphors.

Scrapping ≠ NCA: Although scrapping bears a surface similarity to Null Complement Anaphora (NCA, Hankamer and Sag 1976, Depiante 2000), it behaves strikingly differently. The interpretation available in scrapping is obligatorily one in which an operator appears to have moved from the silent clausal complement. In (1), a degree operator moves from inside the gap; in (2), a relative clause operator does; and in (3), a temporal operator does. However, NCA disallows movement out of the gap. I also show that different sets of predicates license NCA and scrapping. Finally, NCA is able to take its antecedent from the discourse context (Hankamer and Sag 1976), but scrapping cannot—rather, its antecedent must be structurally-present linguistic material.

ACD: Scrapping is limited to ACD contexts. Not only is scrapping unavailable in non-ACD contexts, it's also unavailable in non-ACD contexts that have a fully parallel linguistic antecedent. Observe the case of ATB movement, where VPE is licensed but scrapping isn't:

(4) a. How$_i$ did [Jo hope I would [$_{vP}$ cook the potatoes t_i]] and [Lily fear I would ⟨~~cook the potatoes t_i~~⟩]?
b.* How$_i$ did [Jo hope [$_{CP}$ I would cook the potatoes t_i]] and [Lily fear ⟨~~I would cook the potatoes t_i~~⟩]?

This fact, among others, leads to the conclusion that the ACD requirement on scrapping doesn't come from a need to establish parallelism, found in typical cases of ellipsis, but rather from some independent constraint.

Gap size: The gap in scrapping is structually reduced, only containing a low modality phrase. Following Wurmbrand (2014), I show that the temporal interpretation of the gap is what we'd expect from a future irrealis infinitive. With verbs that take both finite and infinitival complements, scrapping only has the infintivial complement readings. Infinitive-embedding *promise*

forces a future-shifted interpretation, but finite-embedding *promise* is compatible with both future and past interpretations (5-6). (7) shows that scrapping only allows the future-shifted reading, patterning with infinitival complements, revealing that these gaps are smaller than TP (Wurmbrand 2014). Additionally, negation cannot appear inside the gap, suggesting that scraps are too small to even host negation. However, deontic and circumstantial modals to be interpreted in the gap. I conclude that the gap only contains a low ModP that is merged below NegP.

(5) a. I promised him to run tomorrow.
b.* I promised him to run yesterday.
(6) a. I promised him that I would run tomorrow.
b. I promised him that I ran yesterday.
(7) a. Kat will come earlier than she promises.
b.* Kat came earlier than she promises.

C-command: Scraps must be c-commanded by their antecedent at LF, a requirement not found in canonical cases of ellipsis. For instance, scraps cannot scope above an intensional predicate if their antecedent is the embedded clause, as demonstrated in (8). I argue that this is unavailable due to the scrap not being c-commanded by its antecedent embedded ModP after QRing over *want*. Crucially, this same restriction is not seen in VPE, where the *de re* reading is available, indicating that this is a scrapping-specific constraint.

(8) Molly wants to own a bigger dog than Brad thinks ⟨~~she owns a d-big dog.~~⟩
⇝ Molly$_1$ wants to [$_{\text{ModP}}$ t_1 own a t_2-big dog] [$_{\text{DegP}}$ -er than Brad thinks ⟨~~she$_1$ owns a d-big dog.~~⟩]$_2$
a. ✓want ≫ DegP; *DegP ≫ want

I also show that scraps cannot scope above negation, even after controlling for inner island effects. This is all a consequence of the c-command generalization: if the scrap QRs above its antecedent ModP, then the antecdent no longer c-commands the scrap at LF.

Enter PRO$_{\text{ModP}}$: Analyzing scraps as the following structure—[Op PRO$_{\text{ModP}}$], where PRO$_{\text{ModP}}$ is a ModP-level anaphor that must be bound by a c-commanding antecedent—accounts for all these properties described above. It straightforwardly predicts the c-command generalization—a typical property of anaphors—and the small gap facts. It also explains the ACD generalization, as PRO$_{\text{ModP}}$ can only be licensed after QRing to ModP so as to escape antecedent-containment and get bound. Since PRO$_{\text{ModP}}$ has QRed out of its antecedent, we license "ACD" (as a byproduct of getting PRO$_{\text{ModP}}$ in the right place to be bound)—*et voilà*, we derive the ACD-sensitivity of these kinds of constructions. PRO$_{\text{ModP}}$ is ungrammatical in non-ACD contexts because it is not c-commanded by a ModP antecedent.

A sample (abbreviated) derivation for scrapping in a comparative is provided in (9). I follow Heim (1985) in assuming a degree quantifier analysis.

(9) a. Chris has a larger spoon than Andy thought Op **PRO$_{\text{ModP}}$**.
b. Chris λ3 [$_{\text{DegP}}$ -er than Op λ2 Andy thought t_2 **PRO$_{\text{ModP}}$**] [$_{vP}$ λ1 [$_{\text{ModP}}$ t_3 has a t_1-large spoon]]
c. PRO$_{\text{ModP}}$ ⇝ λd . g$_3$ has a d-large spoon
d. ⟦than Op…PRO$_{\text{ModP}}$⟧^{g} = λd . Andy thought g$_3$ has a d-large spoon

(9a) depicts a pre-QR representation, with the eventual antecedent for PRO$_{\text{ModP}}$ underlined. In (9b), we have the post-DegP-QR and post-subject-raising representation. Now, PRO$_{\text{ModP}}$ is c-commanded by [$_{\text{ModP}}$ λ1 *t_3 has a t_1-large spoon*], so PRO$_{\text{ModP}}$ can be bound by it, copying its denotation (9c). Once PRO$_{\text{ModP}}$ has been bound, it composes with the trace of operator movement, which will be abstracted over to result in a denotation that can be fed to the comparative morpheme *-er* (9d). Scrapping thus brings us a new perspective on surface cases of nonpronunciation; they might not be PF-deletion or a null proform, but rather a third option available to the grammar—a null clausal anaphor.