Partial deletion at word-level: discontinuous predicates in Cantonese

Introduction. As a variant of Copy Deletion (CD), partial/scattered deletion (Fanselow & Ćavar 2002 *et seq.*) has been adopted to handle discontinuous phrasal constituents in both nominal and verbal domains (e.g., left branch extraction, as in Bošković 2001, 2015; Pereltsvaig 2008, Fanselow & Féry 2013, Bondarenko & Davis 2019; and predicate fronting, as in Bentzen 2008, Larson 2020, van Urk 2021). In this study, we propose that partial deletion is not restricted to phrasal constituents but also heads (i.e., partial deletion at word-level), based on new evidence from discontinuous predicates in Cantonese.

Discontinuous verbs in Cantonese. A disyllabic verb can appear in discontinuous form when it takes verbal suffixes (Chan & Cheung 2021). For example, the perfective suffix *-zo* (referred to as x) can intervene between the two syllables (referred to as A and B) of a monomorphemic verb *feilou* 'fail' (an English loanword), as in (1)-(2). Notably, A and B can be further separated by other phrasal elements such as frequency phrases, as in (3).

(1) Baseline*:*   *feilou-zo* *sap-gei* *ci*   fail-PFV ten-several time   "failed a dozen times" (AB-x)
(2) Dis. verb 1: *fei<zo>lou* *sap-gei* *ci*   fail<PFV> ten-several time   Same as (1)   (A-x-B)
(3) Dis. verb 2: *fei<zo><sap-gei ci>lou*   fail<PFV><ten-several time>   Same as (1)   (A-x-XP-B)

The same is true of other monomorphemic verbs such as *sowi* 'sorry', *oukei* 'okay' (loanwords); *kuilou* 'bribe', *haaihau* 'meet (by chance)' (native words), etc.

The analysis. We suggest that the discontinuous strings in (2) and (3) involve a conspiracy of multiple operations in Narrow Syntax and in the PF component. We motivate a hybrid (syntactic + phonological) approach that preserves the lexical integrity of the verbs while allowing the (apparent) syllable separation. For concreteness, we assume that verbal suffixes head a projection above the verb and that verbal suffixation generally involves syntactic verb movement to the suffix (Tang 2003, Tsai 2001). Crucially, we propose that discontinuous verbs in Cantonese are resulted from (i) a PF deletion rule triggered by affixes on the higher copy (=4), followed by (ii) *partial* CD that applies to the lower copy (*cf.* Pan & Ye 2015, who propose a non-CD partial deletion account for Mandarin).
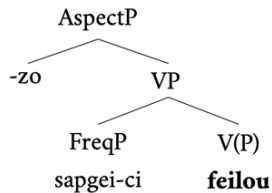
(4) (Affix-induced) Syllable Deletion
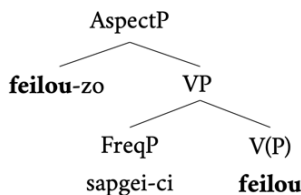   Affixes optionally trigger deletion on an *adjacent* syllable of their hosts.

Implementation. (5a) serves as the base AspectP in the syntax. (5b) indicates verb movement to the Aspect head *-zo*, creating two copies of *feilou* (under the copy theory of movement). In (5c), when the structure is shipped to the PF, Syllable Deletion in (4) applies and deletes the second syllable *-lou* as it is adjacent to the suffix. Finally, in (5d), partial CD applies to the lower copy by just deleting the *complement* (i.e., the first) syllable *fei-*, giving rise to the string in (3). Note that, if Syllable Deletion does not apply, CD would apply to the whole lower copy, resulting in no discontinuous verbs (i.e., just *feilou-zo sapgei-ci*).

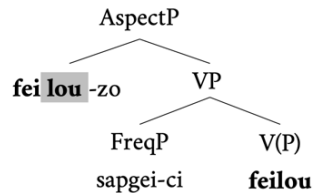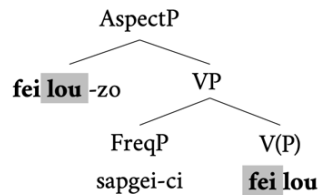(5) Step-by-step derivation of (3)

A desirable consequence of the proposal is that it does not over-generate to include all logically possible discontinuous forms. That is, it correctly disallows the following patterns in (6).

(6)	Syllable Deletion	Copy Deletion (CD)
a. *lou<zo>fei (*B-x-A)	✗ non-adjacent deletion	
b. *fei<zo>fei (*A-x-A)		✗ fail to apply
c. *lou<zo>feilou (*B-x-AB)	✗ non-adjacent deletion	✗ fail to apply
d. *fei<zo>feilou (*A-x-AB)		✗ fail to apply

Supporting evidence from prefixes. It has been argued that the *lin…dou*-focus constructions can target verbs, leading to verb doubling (Shyu 1995, Cheng & Vicente 2013). In cases of disyllabic monomorphemic verbs, the whole verb (i.e., A+B) associated with *lin-* 'even' is doubled, resulting in two AB-strings.

(7) **Lin** *sowi* *keoi* *dou* *mou* *sowi*   (**lin**-AB … AB)
  even sorry 3SG also NEG.PFV sorry   "He even didn't say sorry."

Interestingly, it is also possible to have B to occupy the position adjacent to *lin* 'even', while stranding A in the low position, as in (8). Crucially, the position of A and B cannot be flipped, indicated in (9).

(8) *Lin* **-wi** *keoi* *dou* *mou* **so-**   (**lin**-AB … AB)
  even (sor)ry 3SG also NEG sor(ry)   "He even didn't say sorry."

(9) ***Lin*** **so-** *keoi* *dou* *mou* **-wi**   (***lin**- AB … AB*)
  even sor(ry) 3SG also NEG (sor)ry   Int.: "He even didn't say sorry."

The pattern in (8) gives rise to another instance of discontinuous predicates. The contrast in (8) and (9) falls out from the proposal naturally if we assume *lin-* is a *prefix*. The proposed rule in (4) enables *lin-* to trigger Syllable Deletion on A (i.e., *pi-*, as it is adjacent to *lin-*), and CD *partially* applies to the lower copy, deleting B (i.e., *-sen*). (9) is disallowed since Syllable Deletion on B in the higher copy is not adjacent.

Against a reanalysis approach. A prevailing (syntactic) reanalysis approach for discontinuous compounds in Mandarin suggests that the disyllabic verbs like *feilou* are indeed reanalyzed as a Verb-Object phrase, whose separation is no surprise (Chao 1968, Huang 1984, Packard 2000, *i.a.*). This approach predicts that, in discontinuous predicates, (i) the second syllable displays nominal/object properties and (ii) the first syllable acts as a genuine verb. Both predictions are however not borne out. First, the second syllable cannot undergo object relativization (=(10) vs. (11)). Additional evidence from object movement in disposal constructions similarly reveals the lack of nominal/object properties (not shown).

(10) **Ni* *go* [*keoi* **fei**-*zo* _] *ge* **lou**
  this CL 3SG fail-PFV MOD fail
  Int.: "the failure that he made"

(11) *Ni* *ceot* [*keoi* *tai-zo* _] *ge* **hei**
  this CL 3SG look-PFV MOD movie
  "the movie that he watched"

Second, the first syllable cannot be doubled in *lin…dou* constructions in the form of *lin*-A…AB (=12). If the first syllable *fei* were an independent verb, it should have been able to undergo verb doubling, just like *tai* in (13) and *sowi* in (7).

(12) ***Lin* **fei** *keoi* *dou mou* **feilou**
  even fail 3SG also NEG fail
  Int.:"He didn't even *make* a failure."

(13) *Lin* **tai** *keoi dou mou* **tai** *ni* *ceot hei*
  even look 3SG also NEG look this CL movie
  "He didn't even *watch* this movie."

Consequences. (a) The proposal suggests that discontinuous predicates in Cantonese are dependent on the presence of affixes. It predicts that they cannot occur in constructions which do *not* involve affixes, such as verb topicalization and right dislocation of verb (Cheng & Vicente 2013, Lee 2017, 2021). This prediction is borne out. **(b)** The proposal also suggests that partial deletion is not exclusively applied to phrasal constituents, but also to words/heads, a possibility briefly mentioned in Pereltsvaig (2008). **(c)** Partial deletion under the current conception is *not* a special subtype of CD (which scatters over different copies). The non-canonical/partial nature of CD is indeed due to a combination of a PF deletion rule (on the higher copy) and the general CD (on the lower copy), where the latter is disturbed by the former with regard to the calculation of what to be deleted. As such, we maintain a relatively conservative understanding of CD.

Selected References. • **Chan**, S. S.-L., & L. Y.-L. **Cheung**. 2021. "Morpho-syntax of non-VO separable compound verbs in Cantonese". *Stud. in Chi. Ling* 41(2). • **Pereltsvaig**, A. 2008. "Split phrases in colloquial Russian". *Studia Linguistica* 62(1). • **Pan**, H. & K. **Ye** 2015. "Separable words and cognate objects in Mandarin Chinese" *Dangdai Yuyanxue* 17(3).