

# Verbal “infixation” as partial deletion: a case in Cantonese verbs

Sheila Shu-Laam Chan, Tommy Tsz-Ming Lee and Ka-Fai Yip

The Chinese University of Hong Kong, University of Southern California and Yale University

sheilachan@cuhk.edu.hk; tszmingl@usc.edu; kafai.yip@yale.edu

at *The 45th Penn Linguistics Conference (PLC-45)*,

*University of Pennsylvania (online)*,

*March 19-21, 2021*

## Contents

<b>1</b>	<b>Introduction</b>	<b>2</b>
<b>2</b>	<b>Separable verbs in Cantonese</b>	<b>3</b>
2.1	Ways of separation . . . . .	3
2.2	Idiosyncrasies of separable verbs . . . . .	5
<b>3</b>	<b>Against a reanalysis approach</b>	<b>5</b>
3.1	The second syllable is not an object . . . . .	6
3.2	Conceptual difficulties of reanalysis . . . . .	11
<b>4</b>	<b>Proposal: syllable deletion</b>	<b>12</b>
<b>5</b>	<b>Extension to other cases</b>	<b>13</b>
5.1	Partial verb fronting: <i>lin</i> ‘even’-focus construction . . . . .	13
5.2	Partial reduplication: A-not-A . . . . .	14
<b>6</b>	<b>Micro-variations with Mandarin</b>	<b>15</b>
<b>7</b>	<b>Concluding remarks</b>	<b>17</b>
7.1	Syllable deletion vs. reanalysis . . . . .	17
7.2	Implications under a syllable deletion account . . . . .	17

# 1 Introduction

A substantial amount of verbs in Cantonese are disyllabic. Their morphological makeup may be different, but they can be separated by verbal suffixes, showing an apparent ‘infixation’ pattern.

Types	Examples	Literal meaning	Meaning	Separation by affix
Verb + Object	daam-saam 擔心	bear + heart	worry	daam- <b>gwo</b> -saam 擔過心
Verb + Verb	ying-yan 影印	reflect + print	photocopy	ying- <b>zo</b> -yan 影咗印
Modifier + Verb	zi-sak 自殺	self + kill	commit suicide	zi- <b>maai</b> -sak 自埋殺
Verb + Result	laai-coeng 拉長	pull + long	lengthen by pulling	laai- <b>faan</b> -coeng 拉翻長
Subject + Verb	jat-sik 日食	sun + eat	(solar) eclipse	jat- <b>jyun</b> -sik 日完食

Table 1: Various types of disyllabic verbs (w.r.t. the relation between the two morphemes)

Notably, even *monomorphemic* disyllabic verbs (mostly English loanwords) allow separation.

## (1) Separation of monomorphemic verbs

- |  |   |
|--|---|
| <p>a. 阿明肥佬咗 / 阿明肥咗佬</p> <p>Aaming <b>feilou</b>-zo/ <b>fei</b>&lt;zo&gt;<b>lou</b></p> <p>Aaming fail-PERF/ fail&lt;PERF&gt;</p> <p>‘Aaming failed.’</p> | <p>b. 阿明OK咗 / 阿明O咗K</p> <p>Aaming <b>oukei</b>-zo/ <b>ou</b>&lt;zo&gt;<b>kei</b></p> <p>Aaming okay-PERF/ okay&lt;PERF&gt;</p> <p>‘Aaming said okay.’</p> |
|--|---|

The focus of this talk is on how such separation is sanctioned by the computational system.

## (2) Central ideas:

- a. There is no genuine “separation” nor “infixation”. The discontinuous strings of the verb are resulted from **syntactic movement** and **PF deletion rules**.
- b. A hybrid approach to “separable” verbs:
  - (i) Syntactic head movement is responsible for creating copies;
  - (ii) Affixes trigger a syllable deletion rule in the post-syntactic component;
  - (iii) Copy Deletion erases the complement part of the lower copy.
- c. We argue against a reanalysis account which suggests that disyllabic verbs can be reanalyzed as V+O phrases.

## Road map

- |   |   |
|---|---|
| §2: More properties of separable verbs      | §5: Extensions to two other cases               |
| §3: Arguments against a reanalysis approach | §6: Micro-variations with Mandarin (in handout) |
| §4: Proposal: movement + syllable deletion  | §7: Implications                                |

## 2 Separable verbs in Cantonese

Caveat: word-phrase distinction We adopt an *operational* definition to distinguish (compound) verbs from phrases, in particular VO compounds from VO phrases:

### (3) Operational definition of verbs

Only lexical items that allow suffixation of a verbal suffix are verbs.

Hence, some VO combinations traditionally perceived as compounds would be regarded as phrases here, such as a verb taking a *cognate object*:

- |  |   |
|--|---|
| <p>(4) a. *瞓覺咗<br/>             *<b>fan</b> <b>gaau</b>-zo (VO phrase)<br/>             sleep nap-PERF</p>                     | <p>b. 瞓咗覺<br/>             <b>fan</b>-zo <b>gaau</b> (≠separation)<br/>             sleep-PERF nap<br/>             Lit.: ‘Slept a nap’</p>     |
| <p>(5) a. 擔心咗<br/>             <b>daamsam</b>-zo (VO compound)<br/>             bear+heart-PERF<br/>             ‘worried’</p> | <p>b. 擔咗心<br/>             <b>daam</b>&lt;zo&gt;<b>sam</b> (=separation)<br/>             bear+heart&lt;PERF&gt;<br/>             ‘worried’</p> |

### 2.1 Ways of separation

- Separation by verbal suffixes

The separation patterns are not exclusive to -zo but it applies to all the other verbal suffixes, e.g. experiential -gwo, progressive -gan, modal -dak and -ngaang, universal -saai and -can etc.

#### (6) Separation by verbal suffixes

- |  |               |
|--|---------------|
| <p>a. 阿明肥咗佬<br/>             Aaming <b>fei</b>&lt;zo&gt;<b>lou</b><br/>             Aaming fail&lt;PERF&gt;<br/>             ‘Aaming failed.’</p>            | <p>(=(1))</p> |
| <p>b. 阿明肥過佬<br/>             Aaming <b>fei</b>&lt;gwo&gt;<b>lou</b><br/>             Aaming fail&lt;EXP&gt;<br/>             ‘Aaming has failed before.’</p> |               |

- In some cases, certain affixes such as -can require obligatory separation, in contrast with -zo, which allows non-separation (=(1)).

(7) Obligatory separation

## a. \*阿明肥佬親都俾人鬧

\*Aaming **feilou**-can dou bei jan naau

Aaming fail-WHENEVER all PASS person scold

Int: 'Whenever Aaming failed, he got scolded.'

## b. 阿明肥親佬都俾人鬧

Aaming **fei<can>lou** dou bei jan naau

Aaming fail<WHENEVER> all PASS person scold

'Whenever Aaming failed, he got scolded.'

- Separability varies with suffixes, which may be divided into three groups (out of 24 suffixes):

- Group I: Prefer separation, e.g. *gwo* 過, *zo* 咗, *maai* 埋, *can<sub>universal</sub>* 親, *saai* 晒 etc.
- Group II: Degraded separation, e.g. *zyu* 住, *hoi* 開, *haa5* 吓, *faan* 翻, *dak<sub>only</sub>* 得 etc.
- Group III: No separation, e.g. *hei* 起, *can<sub>adversive</sub>* 親, *zoek* 著, *gam* 噉, *gang* 梗 etc.

Separability is measured by the average acceptability scores (on a scale of 1-5) of 60 verbs for each suffix with 3 annotators.

- Separation by phrasal elements

Notably, phrasal elements like frequency phrases may be 'inserted' after the affix, separating the two syllables of the verb. Note that they can only be inserted when the affix is 'infix' (=b), but not 'suffix' (=c).

(8) Separation by frequency phrases

## a. 肥佬咗十幾次

feilou-zo **sapgeici**

fail-PERF ten.several.time

'failed a dozen times.'

## b. 肥 咗 十幾次 佬

fei<zo><**sapgeici**>lou

fail<PERF><ten.several.time>

'failed a dozen times.'

## c. \*肥 十幾次 佬 咗

\*fei<**sapgeici**>lou-zo

fail<ten.several.time>-PERF

Int.: 'failed a dozen times.'

- Other than frequency phrases, affectees may also be ‘inserted’. Separation by multiple phrasal elements is also possible as in (b).

(9) Separation by affectees

a. 老師肥咗佢佬

Lousi fei<zo><**keoi**>lou

Teacher fail<PERF><3SG>

‘The teacher failed him.’

b. 老師肥咗 佢 十幾次 佬

Lousi fei<zo><**keoi**><**sapgeici**>lou

Teacher fail<PERF><3SG><ten.several.time>

‘The teacher failed him a dozen times.’

- Note that separation by phrasal elements makes a metathesis analysis for infixation implausible here (e.g. Harris and Halle (2005)). Since a local PF metathesis rule does not preserve the syntactic constituency, it cannot guarantee a whole phrase to be ‘inserted’.

## 2.2 Idiosyncrasies of separable verbs

- Constraints on syllables

In general, only disyllabic verbs can be separated. Trisyllabic verbs like loanword *intawiu* ‘interview’ or native verb *cyunkau-faa* ‘globalize, (lit.) globe-ize’ cannot be separated.

- Root specificity

Only certain verbs allow separation.

- VO compounds: 62% (Chan and Cheung 2021) (Note: VO phrases with cognate objects included)
- Non-VO compounds: 29% (Chan and Cheung 2021)
- Mono-morphemic verbs (mostly loanwords): 40% (24 out of 60, this study)
- They also seem to interact with suffixes, i.e. some roots are more separable with certain suffixes.

## 3 Against a reanalysis approach

Previous studies suggested that separable verbs are reanalyzed as verb-object phrases (Chao 1968; Huang 1984; Her 2010). While their implementation may differ in details, they share the core idea that the second syllable of a separable verb is an object-like element.

### 3.1 The second syllable is not an object

If the second syllable of a separable verb (i.e. B in A-x-B) is reanalyzed into an object, we expect it to behave like an object or at least a nominal. We adopt two sets of tests for objecthood and nominal properties:

- (10) a. Displacement of objects  
 (i) Relativization: [A-x \_] ... B  
 (ii) Object fronting: B ... [A-x \_]  
 b. Adnominal modifier  
 Modification: A-x-MOD-B

We only discuss one case of (10a)ii today.

- Relativization (= (10a)i)

While a genuine object may be relativized and serve as the head noun of a relative clause, the second syllable of a separable verb cannot be relativized. Note that cognate objects may also undergo relativization, suggesting that the ungrammaticality of (12) is not due to the lack of thematic role of *-sen*.

- (11) 呢齣就係 [佢睇咗 *t*] 嘅戲  
 ni ceot zau hai [keoi tai-zo *t*] ge **hei** (true VO)  
 this CL then be 3SG watch-PERF MOD movie  
 ‘This is the movie that he watched.’
- (12) \*呢個就係 [佢pre咗 *t*] 嘅 **sent**  
 \*ni go zau hai [keoi pi-zo *t*] ge **-sen** (separable verbs)  
 this CL then be 3SG present-PERF MOD present  
 Int.: ‘This is the presentation that he made.’
- (13) [佢瞓 *t*] 嘅覺係不同凡響地長 (cognate object, Facebook, 2020-2-11)  
 [keoi fan *t*] ge **gaau** hai battungfaanhoeng-dei coeng  
 3SG sleep MOD nap be extraordinary-ly long  
 Lit.: ‘The nap that she sleeps is extraordinarily long.’

- Object preposing by disposal marker (= (10a)ii)

A genuine object may be preposed in a disposal construction marked by *zoeng*. The second syllable of a separable verb, however, cannot be preposed by *zoeng*.

## (14) 佢將齣戲睇咗

keoi zoeng **ceot hei** tai-zo (true VO)

3SG DISP CL movie watch-PERF

'He has watched that movie.'

## (15) \*佢將個sent pre咗

\*keoi zoeng **go -sen** pi-zo (separable verb)

3SG DISP CL present present-PERF

Int.: 'He has made that presentation.'

- Object fronting by focus marker (= (10a)ii)

A genuine object may be fronted by a focus marker *hai*. The second syllable of a separable verb, however, cannot be fronted by *hai*.

## (16) 係魚阿明唔食啊

hai **jy** Aaming m-sik aa (true VO)

FOC fish Aaming NEG-eat SFP

'It is fish that Aaming does not eat (, but not something else).'

## (17) \*係sent 阿明唔 pre 啊

\*hai **-sen** Aaming m-pi aa (separable verbs)

FOC present Aaming NEG-present SFP

Int.: 'It is presentation that Aaming does not make (, but not something else).'

- Some may notice that the second syllable may also be fronted in *lin* 'even'-focus constructions, which seems to contrast with *hai*-focus.

## (18) 連[sent]阿明都有pre

lin **-sen** Aaming dou mou **pi-** (separable verb)

even present Aaming also NEG present

'Aaming even didn't present.'

Yet, *lin* may also target verbs, whereas *hai*-focus cannot target a verb. Hence, (18) does not inform us anything about objecthood. We will go back to *lin* 'even'-focus constructions in section 5.1.

## (19) a. 連[食]阿明都有食

lin **sik** Aaming dou mou **sik** (<sup>OK</sup>regular verb)

even eat Aaming also NEG eat

'Aaming even didn't eat.'

b. \*係[食]阿明唔食

\*hai **sik** Aaming m-**sik**

(\*regular verb)

FOC eat Aaming NEG-eat

Int.: 'Aaming doesn't EAT (but he drinks).'

Together with relativization and the *zoeng* disposal construction, the pair above shows a more general asymmetry of whether the 2nd syllable may be fronted according to whether the movement is verb-targeting.

(20) Generalization on displacement of separable verbs

If a movement operation may target verbs, it may also displace a syllable of a separable verb. However, if a movement operation cannot target verbs, it cannot displace a syllable of a separable verb.

Note that this generalization not only applies to mono-morphemic verbs, but compound verbs as well. Strikingly, even VO compounds (not to be confused with VO phrases, see (3)) show the same asymmetry.

(21) \*呢啲就係 [佢出咗 *t*] 嘅版

\*ni di zau hai [keoi ceot-zo *t*] ge **baan** (relativization, VO 'out+plate')

this CL.PL then be 3SG publish-PERF MOD publish

Int.: 'These are the publications that he published.'

(22) \*佢將個殺自咗

\*keoi zoeng **go saat** zi-zo

(*zoeng* preposing, MV 'self+kill')

3SG DISP CL suicide suicide-PERF

Int.: 'He has killed himself.'

(23) \*係大阿明唔放啊

\*hai **daai** Aaming m-fong aa

(*hai*-focus fronting, VR 'release+big')

FOC enlarge Aaming NEG-enlarge SFP

Int.: 'It is enlargement that Aaming does not make (, but not something else).'

(24) 連[發]阿明都未出

lin **faat** Aaming dou mei **ceot**

(*lin*-focus fronting, VV 'out+send')

even depart Aaming also NEG depart

'Aaming haven't even departed.'



We now examine whether the second syllable of a separable verb has nominal properties in the configuration in (10b), repeated below:

(25) Adnominal modifier

Modification: A-X-MOD-B

- Classifiers and numerals

A real object, being a nominal, may be preceded by an individual classifier. However, this is not possible for the 2nd syllable of a separable verb. Note that only classifiers for individuals (nominals) should be considered, but not event classifiers such as *ci* ‘time’.

(26) 佢睇咗一本書

keoi tai-zo      **jat bun** syu      (true VO)

3SG watch-PERF one CL book

‘He read a book.’

(27) \*佢肥咗一個佬

\*keoi fei-zo      **jat go** lou      (separable verb)

3SG fail-PERF one CL fail

Int.:‘He failed (a class).’

Note that some cognate objects may allow a direct modification of numerals, unlike thematic objects. Yet, it is not allowed for separable verbs.

(28) 佢瞓咗一覺

keoi fan-zo      **jat gaau**      (cognate object)

3SG sleep-PERF one nap

‘He took a nap.’

(29) \*佢肥咗一佬

\*keoi fei-zo      **jat** lou      (separable verb)

3SG fail-PERF one fail

Int.:‘He failed (once).’

- Event modification marked by adnominal *ge*

A duration or frequency phrase may be added before objects (either thematic or cognate) to modify the event denoted by the whole verb phrase, marked by an adnominal *ge*. Although the objects are not the direct modifiee, the second syllable of a separable verb still cannot follow *ge*, showing no nominal properties.

- (30) 佢睇咗成十幾日嘅戲喇  
 keoi tai-zo seng sapgeijat **ge** hei laa (true VO)  
 3SG watch-PERF as.much.as ten.several.day MOD movie SFP  
 'He has watched movies for days.'
- (31) 佢瞓咗成十幾日嘅覺喇  
 keoi fan-zo seng sapgeijat **ge** gaau laa (cognate object)  
 3SG sleep-PERF as.much.as ten.several.day MOD nap SFP  
 'He has been sleeping for days.'
- (32) \*佢pre咗成十幾日嘅sent喇  
 \*keoi pi-zo seng sapgeijat **ge** -sen laa (separable verbs)  
 3SG present-PERF as.much.as ten.several.day MOD present SFP  
 'He has been doing presentation for days'

Together with the contrasts on classifiers and numerals, we obtain the following generalization which suggests that the 2nd syllable lacks nominal properties.

- (33) Generalization on modifying separable verbs  
 The second syllable of a separable verbs cannot be preceded by an adnominal modifier regardless of whether the syllable is being semantically modified.

- A note on thematic objects

One argument of the reanalysis approach is that separable verbs disfavor a post-verbal object, which is argued to follow from the purported objecthood of the 2nd syllable.

- (34) ?佢影咗印[呢份野]喇  
 ?keoi jing<zo>jan [nei fan je] laa (separable verbs)  
 3SG photocopy<PERF> this CL thing SFP  
 'He made a photocopy of this document.'

- However, separable verbs can indeed take a thematic object, as long as it is preposed. Hence, (34) should not be taken as evidence for objecthood of the 2nd syllable.

- (35) a. 佢將[呢份野]影咗印喇  
 keoi zoeng [nei fan je] jing<zo>**jan** laa (separable verbs)  
 3SG DISP this CL thing photocopy<PERF> SFP  
 'He made a photocopy of this document.'

## b. 佢連[呢份野]都影埋印喇

keoi lin [nei fan je] dou jing<maai>**jan** laa (separable verbs)  
 3SG even this CL thing also photocopy<also> SFP  
 'He even made a photocopy of this document.'

### 3.2 Conceptual difficulties of reanalysis

- The basis of reanalysis

- *Semantic basis:*

Two morphemes of a compound may be coerced into a VO on the basis of an agent-theme like reading (Chao 1968; Zhao and Zhang 1996; Cao and Feng 2003). However, it is not clear how non-VO compounds (Verb-Verb, Modifier-Verb, Verb-Result & Subject-Verb) and monomorphemic verbs may provide such a basis, in particular the latter one which contain only non-morphemic syllables.

- *Prosodic basis:*

Chao (1968) proposes that relative prosodic prominence of two syllables may also facilitate reanalysis, such as verbs with iambic stress (Weak-Strong), comparable to the Weak-Strong pattern on VO. Yet, this prosodic account is challenged by the presence of separable trochaic (Strong-Weak) English loanwords in Cantonese, e.g., *sowi* 'sorry', *seaa* 'share', *gugou* 'Google', etc.

- Without both bases, we are forced to say that reanalysis comes for free, which is implausible for a restrictive theory.

- The level of reanalysis

In a classic Y-model in generative grammar, there are three levels where the reanalysis may occur, each of them faces conceptual difficulties:

- *Pre-syntactic: lexicon* (as suggested by Packard (2000) and Her (2010))

Given the productivity of separation by over 30 suffixes, there will be learnability issues. Moreover, one also needs to explain why separated forms are meaning-equivalent to non-separated forms if they are two lexical items.

- *Syntactic: narrow syntax*

Separation involves splitting a V node into a V and an object node, which violates current theoretical assumptions (e.g. No Tampering Condition).

- *Post-syntactic: PF* (presumably not LF)

Separation can be achieved by morphophonemic operations like metathesis, but it is not sensitive to syntactic constituency of the “inserted” elements (cf. phrasal elements).

- Possibility to capture language variations (see section 6)

## 4 Proposal: syllable deletion

### (36) Affix-induced Syllable Deletion

Affixes optionally trigger deletion on an adjacent syllable of their hosts.

### (37) Derivation steps for separable verbs

- a. [-x [AB]] (base structure)
- b. [<AB>-x [<AB>]] (verb movement)
- c. [<A~~B
- d. [<A~~BB~~~~

We assume that verbal suffixation generally involve syntactic verb movement to the suffix (Tang 2003).

We also assume the copy theory of movement (Chomsky 1995; Nunes 1995, 2004; Bošković 2007), and that if the higher copy is not fully spelt out, the remaining part would be spelt out in the lower copy.

An immediate consequence is that it explains why the following patterns below are unattested:

Examples	Schema	Syllable Deletion	Copy Deletion
a. *lou<zo>fei 佬咗肥	*B-x-A	<del>X</del> <sub>non-adjacent deletion</sub>	
b. *fei<zo>fei 肥咗肥	*A-x-A		<del>X</del> <sub>fail to apply</sub>
c. *lou<zo>feilou 佬咗肥佬	*B-x-AB	<del>X</del> <sub>non-adjacent deletion</sub>	<del>X</del> <sub>fail to apply</sub>
d. *fei<zo>feilou 肥咗肥佬	*A-x-AB		<del>X</del> <sub>fail to apply</sub>

- Motivation for the affix-induce deletion

Some suffixes prefer to attach to a monosyllabic verb (Tang 2002, 2003, 2015), e.g. epistemic *-ngang* ‘must’ and *-can* ‘whenever’. This correlates with their obligatory separation on some verbs. Deletion is induced by the monosyllabic requirement imposed on the verbal host.

- Copy deletion

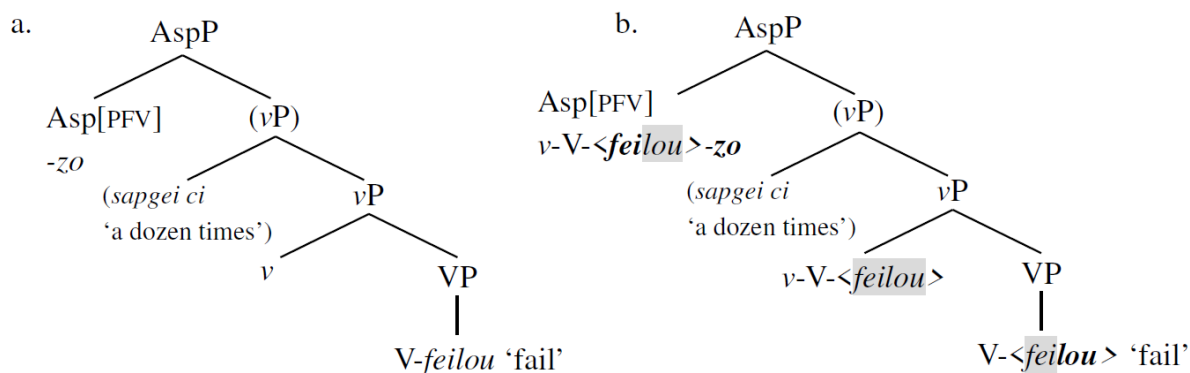
While deleting the whole lower copy is the default option (Chomsky 1995; Nunes 1995, 2004;

Bošković (2007), chain reduction is sensitive to the status of the higher copy. If the higher copy is not fully spelt out, the remaining part would be spelt out in the lower copy.

- Derivation of insertion of phrasal elements

- (38) a. 肥咗十幾次佬  
 fei<zo><sapgeici>lou (=8b)  
 fail<PERF><ten.several.time>  
 ‘failed a dozen times.’

(39)



## 5 Extension to other cases

- Partial verb fronting: *lin* ‘even’-focus construction
- Partial reduplication: A-not-A (not being discussed today)

### 5.1 Partial verb fronting: *lin* ‘even’-focus construction

*Data.* Apparently, the second syllable may be fronted, leaving the first syllable stranded:

(40) (Apparent) partial verb fronting

- a. 連~~sent~~阿明都有~~pre~~  
 lin **sen** Aaming dou mou **pi**  
 even present Aaming also NEG present  
 ‘Aaming even didn’t present.’
- b. 連~~ry~~阿明都有~~sor~~  
 lin **wi** Aaming dou **so**-maai  
 even sorry Aaming also sorry-ADDITIVE  
 ‘Aaming even said sorry.’

Interestingly, full copying of both syllables is also possible:

(41) (Full) verb doubling

- a. 連**present**阿明都有**present**  
 lin    **pi-sen**    Aaming dou mou **pi-sen**  
 even present Aaming also NEG present  
 ‘Aaming even didn’t present.’
- b. 連**sorry**阿明都有**sorry**  
 lin    **sowi** Aaming dou **sowi-maai**  
 even sorry Aaming also sorry-ADDITIVE  
 ‘Aaming even said sorry.’

*Analysis.* Syllables are not terminals and cannot undergo syntactic movement. It should be the whole verb moving. We suggest that (40) is derived by (41) through syllable deletion, by assuming *lin* ‘even’ to be a prefixal element:

(42) Derivation steps for partial verb fronting

- a. [even- [Aaming [also [not [pi-sen] ] ] ] ] (base structure)
- b. [even-<pi-sen> [Aaming [also [not [<pi-sen>] ] ] ] ] (focus movement of verb, =(41))
- c. [even-<~~pi~~-sen> [Aaming [also [not [<pi-sen>] ] ] ] ] (*prefix-induced syllable deletion*)
- d. [even-<~~pi~~-sen> [Aaming [also [not [<pi-~~sen~~>] ] ] ] ] (partial copy deletion, =(40))

Crucially, the deletion is sensitive to the direction of affixation: while a suffix deletes the second syllable, a prefix deletes the first syllable.

## 5.2 Partial reduplication: A-not-A

*Data.*

(43) A-not-A formation

- a. **sor**唔**sorry**都得  
 so-m-**sowi**    dou dak  
 sorry-not-sorry also fine  
 ‘It is fine to say sorry or not.’
- b. 阿明**OK**都唔關我事  
 Aaming **ou-m-oukei**    dou m-gwan    ngo si  
 Aaming okay-not-okay also NEG-relate 1SG matter  
 ‘I don’t care whether Aaming says okay or not.’

*Analysis.*

*No Copy Deletion.*

## 6 Micro-variations with Mandarin

- Separable verbs

Unlike Cantonese, Mandarin generally disallows separation of non-VO compounds and monomorphemic words. Even for VO compounds, Mandarin disfavors separation as compared to Cantonese:

- Obligatory separation in Cantonese, optional separation in Mandarin:

### (44) Cantonese: *batjip* ‘graduate, (lit.) end-business’

#### a. ??畢業咗三年

??**batjip**-zo      saam-nin

graduate-PERF 3-year

Int.: ‘graduated for 3 years’

#### b. 畢業咗業三年

**bat**<zo>**jip**      saam-nin

graduate-<PERF> 3-year

‘graduated for 3 years’

### (45) Mandarin: *biye* ‘graduate, (lit.) end-business’

#### a. 畢業了三年

**biye**-le      san-nian

graduate-PERF 3-year

Int.: ‘graduated for 3 years’

#### b. 畢了業三年

**bi**<le>**ye**      san-nian

graduate-<PERF> 3-year

‘graduated for 3 years’

- Optional separation in Cantonese, non-separation in Mandarin:

(46) Cantonese: *ceot-baan* ‘publish, (lit.) out-plate’

- a. 本書出版咗未？  
 bun syu    **ceotbaan**-zo mei?  
 CL   book   publish-PERF   NEG  
 ‘Did the book get published?’
- b. 本書出咗版未？  
 bun syu    **ceot**<zo>**baan** mei?  
 CL   book   publish-<PERF>   NEG  
 ‘Did the book get published?’

(47) Mandarin: *chu-ban* ‘publish, (lit.) out-plate’

- a. 那本書出版了沒有？  
 Na   ben shu    **chu-ban**-le   meiyou?  
 that CL   book   publish-PERF   NEG  
 ‘Did the book get published?’
- b. ??那本書出了版沒有？  
 ??Na   ben shu    **chu**<le>**ban**   meiyou?  
 that CL   book   publish<PERF>   NEG  
 Int.‘Did the book get published?’

- Under the current syllable deletion account, the micro-variations can be captured by the obligatoriness of the syllable deletion rule.
- A-not-A formation

(48) Obligatory partial reduplication in Cantonese A-not-A

- a. 鍾(\*意)唔鍾意  
**zung(\*ji)**-m-zungji  
 RED-NEG-like  
 ‘like it or not’

(49) Optional partial reduplication in Mandarin A-not-A

- a. 喜(歡)不喜歡  
**xi(huan)**-bu-xihuan  
 RED-NEG-like  
 ‘like it or not’



## 7 Concluding remarks

### 7.1 Syllable deletion vs. reanalysis

- **Formulation within the generative framework**

- Our syllable deletion account derives separable verbs by adopting a move-and-copy theory in syntax and a syllable deletion rule in PF/phonology. There are no novel, specialized operations outside the generative framework.
- Reanalysis, on the other hand, is a rather ad-hoc mechanism and faces difficulty in terms of formalization in the generative theory.

- **Capturing micro-variations**

- A syllable deletion account is also empirically superior in being able to capture micro-variations between Cantonese and Mandarin, by stating the obligatoriness of the deletion rule.
- Yet, it is unclear how to capture this under a reanalysis account given that reanalysis is not a rule.

### 7.2 Implications under a syllable deletion account

- **A head movement approach to complex words**

There is a prevailing debate on at which part of grammar complex words are formed, in both generative theories and Chinese linguistics:

- *A lexicalist approach*: Complex words, including affixed words, are formed and stored in the lexicon. (Chomsky 1970, 1995, 2000; Huang, Li, and Li 2009)
- *A non-lexicalist approach*: No complex objects can be stored in lexicon. They are all derived in syntax or a post-syntactic component. (Halle, O’Neil, and Vergnaud 1993; Tsai 2001; Tang 2003)

This paper provides novel support for the latter non-lexicalist approach, where verbs move to a syntactic head host by affixes, creating copies for syllable deletion. Affixation is derived in syntax by head movement but not in the lexicon.

- **Distributed deletion on the word level**

- Copy Deletion does not necessarily delete a full copy. Sub-parts of copies may also be deleted, i.e. Distributed (Copy) Deletion (Fanselow and Ćavar 2002). It has been attested on the phrasal level (e.g. discontinuous noun phrases in German, Croatian, Polish).
- This paper shows that Copy Deletion interacts with PF operations such as the proposed syllable deletion rule and can be scattered, leading to Distributed Deletion on the word level.

- **Cross-linguistic: German and Dutch separable verbs**

German and Dutch also have separable complex verbs, where a prefix (generally particles, but could also be a noun or an adjective) may be ‘separated’ from the verbal stem:

(50) Separable complex verbs in German (Polzin 1997:4)

- ... daß Peter die Suppe **aufißt**  
that Peter the soup up-eat  
‘...that Peter finishes the soup.’
- Peter **ißt** die Suppe **auf**  
Peter eats the soup up  
‘Peter finishes the soup.’

(51) Separable complex verbs in Dutch (Booij 1990:46)

- dat John [PRO me  $t_i$ ] wil **opbellen<sub>i</sub>**  
that John me want up-ring  
‘that John wants to phone me.’
- dat John [PRO me **op**  $t_i$ ] wil **bellen<sub>i</sub>**  
that John me up wants ring  
‘that John wants to phone me.’

Given the similarity of these examples with the partial verb fronting in Cantonese, it is worthwhile to explore how a syllable deletion account may extend to German and Dutch.

## References

- Bošković, Željko. 2007. "On the Locality and Motivation of Move and Agree: An Even More Minimal Theory." Linguistic Inquiry 38 (4): 589–644.
- Cao, Bao-ping, and Gui-hua Feng. 2003. "Forming - type of Separable Word and Its Separating Rule." Journal of Radio and TV University (Philosophy and Social Sciences), no. 4: 95–97.
- Chan, Sheila Shu-Laam, and Lawrence Yam-Leung Cheung. 2021. "Morpho-Syntax of Non-VO Separable Compound Verbs in Cantonese." Studies in Chinese Linguistics 41 (2).
- Chao, Y R. 1968. A Grammar of Spoken Chinese. Berkeley: University of California Press.
- Chomsky, Noam. 1970. "Remarks on Nominalization." In Readings in English Transformational Grammar, edited by J Jacobs and P Rosenbaum, 184–221. Waltham, Massachusetts: Ginn.
- . 1995. The minimalist program. 420. Cambridge, Massachusetts: MIT Press.
- . 2000. "Minimalist inquiries: The framework." In Step by step: Essays on minimalist syntax in honor of Howard Lasnik, edited by Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.
- Fanselow, Gisbert, and Damir Ćavar. 2002. "Distributed Deletion." In Theoretical Approaches to Universals, edited by Artemis Alexiadou, 65–107. John Benjamins Publishing Company.
- Halle, Morris, Wayne O'Neil, and Jean-Roger Vergnaud. 1993. "Metrical Coherence in Old English without the Germanic Foot." Linguistic Inquiry 24 (3): 529–538.
- Harris, James, and Morris Halle. 2005. "Unexpected Plural Inflections in Spanish: Reduplication and Metathesis." Linguistic Inquiry 36 (2): 195–222.
- Her, One Soon. 2010. Interaction and variation in the Chinese VO construction. Taiwan: Crane Publishing Co., Ltd.
- Huang, C.-T. James. 1984. "On the Distribution and Reference of Empty Pronouns." Linguistic Inquiry 15:531–574.
- Huang, C.-T. James, Audrey Yen-hui Li, and Yafei Li. 2009. The syntax of Chinese. Cambridge, MA: Cambridge University Press.
- Nunes, Jairo. 1995. "The Copy Theory of Movement and Linearization of Chains in the Minimalist Program." PhD diss., University of Maryland.

- Nunes, Jairo. 2004. Linearization of Chains and Sideward Movement. Linguistic Inquiry Monographs. Cambridge, Massachusetts: MIT Press.
- Packard, Jerome Lee. 2000. The Morphology of Chinese : A Linguistic and Cognitive Approach. Cambridge: Cambridge University Press.
- Tang, Sze-Wing. 2002. "Focus and dak in Cantonese." Journal of Chinese Linguistics 30 (2): 266–309.
- . 2003. "Properties of ngaang and the syntax of verbal particles in Cantonese." Journal of Chinese Linguistics 31 (2): 245–269.
- . 2015. Jyutjyu jyufaat gongji [Lectures on Cantonese Grammar]. Hong Kong: The Commercial Press.
- Tsai, Wei-Tien Dylan. 2001. "On subject specificity and theory of syntax-semantics interface." Journal of East Asian Linguistics 10 (2): 129–168.
- Zhao, Shuhua, and Bolin Zhang. 1996. "The determination properties of separable words." Language Teaching and Linguistics Studies, no. 1: 40–51.