

### Zero-coded passives in Cantonese

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#### 1. Introduction

We observe an alternation in terms of argument structure in some attitude verbs, where the external argument is suppressed.

- (1) a. 我感覺／聽聞場雨唔會停

*Ngo gamgok/tengman coeng-jyu m-wui ting*  
1SG feel.like hear.say CL-rain NEG-will stop  
'I feel like/ heard that the rain will not stop.'

- b. 場雨感覺／聽聞唔會停

*Coeng-jyu gamgok/tengman m-wui ting*  
CL-rain feel.like hear.say NEG-will stop  
'It is felt (like)/ heard that the rain will not stop.'

The alternation seems to echo the flexibility in transitivity in Cantonese:

- (2) a. 阿明打開咗道門

*Aaming daahoi-zo dou-mun*  
1SG open-PERF CL-door  
'Ming opened the door.'

- b. 道門打開咗

*Dou-mun daahoi-zo*  
CL-door open-PERF  
'The door is open.'

We argue that (1) and (2) are derivationally different with evidence from the co-occurrence with *bei-jan* 俾人 'by someone' and topic constructions. In particular, our proposal is two-fold:

- (3) a. Zero-coded passives

There is a covert passive morpheme,  $\emptyset_{\text{PSV}}$  in Cantonese, on a par with *bei*.

- b. Blocking (Aronoff 1976)

If a transitive predicate can take  $\emptyset_{\text{PSV}}$ , it must. ( $\emptyset_{\text{PSV}}$  blocks *bei*.)

Consequently, (1b) involves a passive structure (a derived intransitive structure): *gamgok/tengman* 感覺/聽聞 'feel like/hear' is combined with  $\emptyset_{\text{PSV}}$ . We conclude with evidence for zero-coded passives in Archaic Chinese (Chou 1961) and other languages (Cobbinah & Lüpke 2007).

## 2. Against lexical ambiguities

One way to explain the alternation in (2) is by suggesting that the verb *daahoi* 打開 ‘open’ can be lexically ambiguous between two verbs with different argument structures (Sybesma 1992, Shen 1992, Tang 2008, 2010).

- (4) Transitive *daahoi* 打開 ‘open’ in (2a): [NP, NP]  
Unaccusative *daahoi* 打開 ‘open’ in (2b): [NP]

This is essentially the same as the causative alternation of ‘break’, which is lexically ambiguous between an unaccusative verb and a causative verb.

- (5) Causative *break* ‘He broke the vase.’: [NP, NP]  
Unaccusative *break* ‘The vase broke.’: [NP]

We, however, suggest that the alternation in (1) cannot be reduced to a lexical ambiguity of some attitude verbs. The evidence comes from the compatibility with *bei-jan* ‘by someone’.

- (6) \*場雨俾人感覺/聽聞唔會停

\**Coeng-jyu bei-jan gamgok/tengman m-wui ting*  
CL-rain BEI-person feel.like hear.say NEG-will stop

Int.: ‘It is felt (like)/ heard by someone that the rain will not stop.’

- (7) 道門俾人打開咗

*Dou-mun bei-jan daahoi-zo*  
CL-door BEI-person open-PERF

‘The door is opened by someone.’

If *gamgok/tengman* ‘feel like/hear’ is ambiguous between a transitive and unaccusative verb, we expect passivization with *bei-jan* is possible with the transitive one, contrary to the fact.

Note that there is no general ban on attitude verbs co-occurring with *bei-jan*, hence the ungrammaticality of (6) cannot be attributed to a semantic conflict between attitude verbs and passives.

- (8) 場雨俾人覺得/認為唔會停

*Coeng-jyu bei-jan gokdak/jingwei m-wui ting*  
CL-rain BEI-person think think NEG-will stop

‘It is thought by someone that the rain will not stop.’

- (9) 我怕俾人知道係我舉報 (source: ICAC Document)

*Ngo paa bei-jan zidou hai ngo geoibou*  
1SG fear BEI-person know be 1SG report

‘I fear that I will be known to be the one who reports.’

Moreover, to suggest the verbs in (1) are unaccusative fails to generalize over other attitude verbs as in (8) and (9), since the absence of *bei-jan* results in unacceptability.

- (10) \*場雨覺得/認為唔會停  
 \*Coeng-jyu gokdak/jingwei m-wui ting  
 CL-rain think think NEG-will stop
- (11) \*我怕知道係我舉報  
 \*Ngo paa zidou hai ngo geoibou  
 1SG fear know is 1SG report

A lexical ambiguity account is thus inadequate in capturing the alternation in (1) and its difference with (2).

### 3. Against topicalization + *pro* analysis

Another other possible way to analyze (2) is by suggesting a topic + *pro* construction, where the surface subject is a topic, followed by a subject *pro* (Wang & He 2002, Shi 2003). Schematically,

- (12) [TopP 道門<sub>i</sub> [TP *pro*<sub>阿明</sub> [VP 打開咗 *t<sub>i</sub>* ] ] ]  
 [TopP *dou-mun<sub>i</sub>* [TP *pro*<sub>Aaming</sub> [VP *daahoi-zo t<sub>i</sub>* ] ] ]

In other words, (2a) and (2b) are derivationally related by topicalization. One may suggest (1b) can also be derived from (1a) by topicalizing the embedded subject and pronominalizing the matrix subject with a *pro*. But there are two challenges with this analysis.

First, it fails to extend to the attitude verbs in (8)-(9), as illustrated in (10)-(11). Or we have to stipulate topicalization is applicable to a subset of attitude verbs. The attitude verbs in (8)-(9) may have a topic + *pro* construction:

- (13) [Context: you are looking for a flat and have viewed several places.]  
 呢間屋呢，覺得唔夠大。嗰間好啲。  
*Ni-gaan-uk ne, gokdakm-gau daai. Go-gaan hou di.*  
 this-CL-flat TOP think NEG-enough big that-CL good a.bit  
 ‘This flat, (I) think is not big enough. That one’s better.’

Second, the surface subject in (1) appears to occupy an A(rgument)-position, instead of an A’-position (which is the landing site of topics). There are some nominals cannot be topicalized, e.g. *houdou jan* 好多人 ‘many people’.

- (14) a. 好多人會黎  
*Houdo jan wui lai* (houdou jan as a subject)  
 many person will come  
 ‘Many people will come.’
- b. \*好多人呢，會黎  
 \**Houdo jan ne, wui lai* (houdou jan as a topic)  
 many person TOP will come

However, the same nominal can take part in the alternation illustrated in (1), as in (15). This shows that surface subjects in (1b) and (15) are genuine subjects, not topics.

- (15) 好多人感覺/聽聞會黎  
*Houdo jan gamgok/tengman wui lai*  
 many person feel.like hear.say will come  
 ‘It is felt like/ heard that many people will come.’

If there is a movement in (1b) and (15), it appears to be sensitive to a locality condition: it privileges subjects over objects. Topicalization, in contrast, is sensitive to discourse features (i.e. a topic feature [top]) and may target the object.

- (16) a. 好多樹<sub>subj</sub> [CP t<sub>subj</sub> 感覺生咗蟲]  
*houdo syu<sub>subj</sub> gamgok* [CP t<sub>subj</sub> *saang-zo cong*]  
 many tree feel.like grow-PERF bug  
 ‘Many trees are felt to be bored by bugs.’
- b. \*好多樹<sub>obj</sub> 感覺 [颱風會吹畀 t<sub>obj</sub>]  
 \**houdo syu<sub>obj</sub> gamgok* [CP *go-toifung wui ceoilam t<sub>obj</sub>*]  
 many tree feel.like CL-hurricane will blow.down  
 Int.: ‘Many trees are felt to be that the hurricane will blow them down.’

#### 4. Proposal

While we argued against a topicalization (plus *pro*) account, we maintain that (1a) and (1b) are derivationally related. We propose a covert passive morpheme in Cantonese:

- (17) Zero-coded passive  
 There is a covert passive morpheme,  $\emptyset_{PSV}$  in Cantonese, on a par with *-bei*.

Consequently, the structure of (1b) can be schematically represented as follows:

- (18) 場雨 [voiceP  $\emptyset_{PSV}$  [vP 感覺 [CP <場雨> 唔會 停]]]  
*Coeng-jyu<sub>i</sub>* [voiceP  $\emptyset_{PSV}$  [vP *gamgok* [CP t<sub>i</sub> *m-wui ting*]]]

... comparable with attitude verbs that take *bei-jan* ‘by someone’

- (19) 場雨 [voiceP 畀人 vP 覺得 CP <場雨> 唔會 停 ] ] ]  
*Coeng-jyu<sub>i</sub>* [voiceP *beijan* [vP *gokdak* [CP *t<sub>i</sub>* *m-wui ting* ] ] ]

If there are two morphemes that are responsible for the same grammatical function, what determines the choice?

We attribute the choice to a blocking effect, following the spirit of Aronoff (1976):

- (20) Blocking of passive in Cantonese  
 If a transitive predicate can take  $\emptyset_{PSV}$ , it must. ( $\emptyset_{PSV}$  blocks *bei*.)

Specifically, as suggested by Embick & Marantz (2008), it is the Vocabulary items of the passive morpheme in Cantonese which compete for the insertion into the morpheme.

There are two Vocabulary items for passive in Cantonese: *-bei* and  $\emptyset_{PSV}$ .

- (21) Rule of covert passive  $\emptyset_{PSV}$   
*-bei* → [-*bei*#[X]<sub>vP</sub>]<sub>voiceP</sub>/X cannot take  $\emptyset_{PSV}$   
 $\emptyset_{PSV}$  → [ $\emptyset_{PSV}$  [X]<sub>vP</sub>]<sub>voiceP</sub>

The passive morpheme gets to take one of the Vocabulary items in a transitive predicate.  $\emptyset_{PSV}$  will be taken whenever possible, otherwise *-bei* will be taken.

A Vocabulary item is inserted into a morpheme if it matches all or a subset of the grammatical features specified in the terminal morpheme (Halle 1997).

If there are more than one Vocabulary item for a morpheme, and they can all meet the condition of insertion, usually only one item is chosen. The item matching the greatest number of features specified in the morpheme must be chosen.

In our case here, the passive morpheme and the two Vocabulary items *-bei* and  $\emptyset_{PSV}$  all have their own sets of features. When the features of the morpheme match with those of  $\emptyset_{PSV}$ ,  $\emptyset_{PSV}$  will be chosen; otherwise, *-bei* will be chosen.

## 5. Zero-coded passives in other languages

Archaic Chinese (Chou 1961)

- (22) 大國之攻小國：攻者，農夫不得耕，婦人不得織，以守為事；攻人者亦農夫不得耕，婦人不得織，以攻為事（《墨子·耕柱》）  
*Da guo zhi gong xiao guo: gong zhe, ...; gong ren zhe, ...*  
 big state GEN attack small state being.attacked those.who attack person those.who  
 ‘(These are the things that would happen) while strong states attack the weak ones: for those being attacked, ...; for those attacking others, ...’ (*Mozi.Gengzhu*, ca. 400 BC)

- (23) 刑人之父子 (《呂氏春秋·慎大覽·順說》)  
Xing ren zhi fu zi  
 kill person GEN father son  
 ‘Kill fathers and sons of the others.’ (*Lvshichunqiu.Shendalan.Shunshuo*, ca. 200 BC)
- (24) 若殆往而刑耳 (《莊子·人間世》)  
Ruo dai wang er xing er  
 you fear go and being.killed SFP  
 ‘I fear that you would be killed if you go.’ (*Zhuangzi.Renjianshi*, ca. 300 BC)

African languages (Cobbinah & Lüpke 2007)

- (25) *Maimuna jee-na baa.* Jalonke (Lüpke, elicitations)  
 Maimuna water-DEF draw  
 ‘Maimuna drew water.’
- (26) *Jee-na baa.* Jalonke (Lüpke, elicitations)  
 Water- DEF draw  
 ‘The water has been drawn.’
- (27) *Û bε n̄ dan.* Bambara (Cobbinah, elicitations)  
 3PL PRES millet sow  
 ‘They sow millet.’
- (28) *N̄ bε dan (u fε).* Bambara (Cobbinah, elicitations)  
 millett PRES sow (3 PL PP)  
 ‘Millet is sown (by them).’ but: \*‘Millet sows.’

Caribbean English Creole (Cobbinah & Lüpke 2007; LaCharite & Wellington, 1999; no gloss provided)

- (29) *Jan mash di eg-dem.* CEC (Winford 1993:119)  
 ‘John mashed the eggs.’
- (30) *Di eg-dem mash.* CEC (Winford 1993:119)  
 ‘The egg has been mashed’
- (31) *Im change op di rum.*  
 ‘He rearranged the room.’
- (32) *Di rum change op.*  
 ‘The room was rearranged.’

## 6. Concluding remarks

The proposal is motivated largely on empirical grounds, so we left open the question of why some (attitude) verbs are ‘special’ in the sense that they can take  $\emptyset_{\text{PSV}}$ , as opposed to other verbs.

Note that our proposal involves a somewhat non-conventional pattern of A-movement, namely, a hyper-raising of subject to the matrix clause, instantiating a violation on Improper Movement (Chomsky 1973). We refer interested readers to Lee & Yip (2020).

## 7. Selected references

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## 8. Appendix: Attitude verbs vs. resultatives

Attitude verbs show a clear dichotomy on zero-coded passive and *bei*-passive: they are complementary distributed in two sets of attitude verbs.

### (33) Complementary distribution of zero-coded passives

- a. 場雨感覺／聽聞唔會停  
*Coeng-jyu gamgok/tengman m-wui ting*  
CL-rain feel.like hear.say NEG-will stop  
'It is felt (like)/ heard that the rain will not stop.'
- b. \*場雨覺得／認為唔會停  
*\*Coeng-jyu gokdak/jingwei m-wui ting*  
CL -rain think think NEG -will stop

### (34) Complementary distribution of *bei*-passives

- a. \*場雨俾人感覺／聽聞唔會停  
*\*Coeng-jyu bei-jan gamgok/tengman m-wui ting*  
CL-rain BEI-person feel.like hear.say NEG-will stop  
Int.: 'It is felt (like)/ heard by someone that the rain will not stop.'
- b. 場雨俾人覺得／認為唔會停  
*Coeng-jyu bei-jan gokdak/jingwei m-wui ting*  
CL-rain BEI-person think think NEG-will stop  
'It is thought by someone that the rain will not stop.'

Resultatives, however, have a somewhat complex picture. *Daahoi* ‘open’ allows the surface subject to receive a theme role without any marking (=35a), while *bei*-passive is also permitted (=35b).

- (35) a. 道門打開咗  
*Dou-mun daahoi-zo*  
CL-door open-PERF  
‘The door is open.’
- b. 道門俾人打開咗  
*Dou-mun bei-jan daahoi-zo*  
CL-door BEI-person open-PERF  
‘The door is opened by someone.’

Yet, (35a) is not a zero-coded passive but simply an unaccusative configuration, evidenced by the lack of agentivity in (36), where the adverb ‘automatically’ signals non-agentivity. The alternation in (35) can thus be accounted for with a lexical ambiguity approach.

- (36) 道門自動打開咗  
*Dou-mun zidung daahoi-zo*  
CL-door automatically open-PERF  
‘The door opens by itself.’

Nevertheless, as Cheng & Huang (1994) argues, there is another type of resultatives which form pseudo-passives (also called derived ergatives) and cannot be treated as unaccusative verbs, e.g. *teoihoi* 推開 ‘push to open’ in (37). Agentivity is retained in (37), which is incompatible with the adverb ‘automatically’ (=38).

- (37) 道門推開咗  
*Dou-mun teoihoi-zo*  
CL-door push.open-PERF  
‘The door is opened.’
- (38) \*道門自動推開咗  
\**Dou-mun zidung teoihoi-zo*  
CL -door automatically push.open-PERF

Assuming that *teoihoi* ‘push to open’ may form zero-coded passives, (39) would be surprising given our blocking account for passives. *Bei*-passive with *teoihoi* ‘push to open’ is not blocked by (37).

- (39) 道門俾人推開咗  
*Dou-mun bei-jan teoihoi-zo*  
CL-door BEI-person push.open-PERF  
‘The door is opened by someone.’



Wrapping up, there seems to be an asymmetry between attitude verbs and resultatives. The passivization pattern for attitude verbs is constrained by blocking, while that for resultatives is unconstrained.

- (40) a. Attitude verbs:  
i. Take  $\emptyset_{\text{PSV}}$ : *gamgok* 感覺 ‘feel.like’  
ii. Take *-bei*: *gokdak* 覺得 ‘think’  
b. Resultatives (excluding unaccusatives):  
Take  $\emptyset_{\text{PSV}}$  **and** *-bei*: *teoihoi* 推開 ‘push to open’