

Classifiers and Unaccusative Verbs in Cantonese

Observation: This study makes a novel observation that a group of classifiers, listed in table 1, doubles as unaccusative verbs in Cantonese. As nominal classifiers (1), they all denote the shape of the object, and the NP (which are predicates over individuals) taken by the classifier is always interpreted as unbounded, i.e. either plural count or mass, but not singular. As verbs, they are always unaccusative (2). More specifically, they all undergo the causative alternation (Schäfer, 2009; Embick, 2004), similar to ‘break’ or ‘melt’ in English. The VPs are all stative, as shown by the resistance to progressive *gan2* in (2) and (3). However, the theme of the VP, e.g. *syu1* ‘book’ in (3), can be bounded or unbounded.

Analysis: This study extends Rothstein (2010)’s nominal classifier and gives a unified treatment to these classifiers and verbs as a boundedness marker *K* with the denotation:

$$[\![K]\!] = \lambda P \lambda y. \text{cum}(P) \rightarrow \text{count}_k(P(y) \cap Q)$$

The boundedness marker *K* bounds a cumulative predicate, defined in (5). A predicate *P* takes either individuals or events as its argument, represented as *y*. The lexical content of *K*, such as *deoi1* ‘pile’, gives the boundary and specifies what constitutes a unit in context. That is, the count_k process turns uncountable masses into countable units, where subscripted-*k* specifies the contextually-defined countable unit, following Rothstein. The same count_k process also applies for events. This forces *K* to take only homogenous events, which are unbounded temporally. A homogenous event would require all subevents to be the same, e.g. ‘sit’ where subparts of the whole event are identical to one another.

The bounded theme-NP does not affect the temporal boundedness of the VP, as a single book may still sit on the floor for an infinite time, supporting the proposed application with verbs to events and not their arguments, in contrast to the function of *K* when manifest as nominal classifier with individuals.

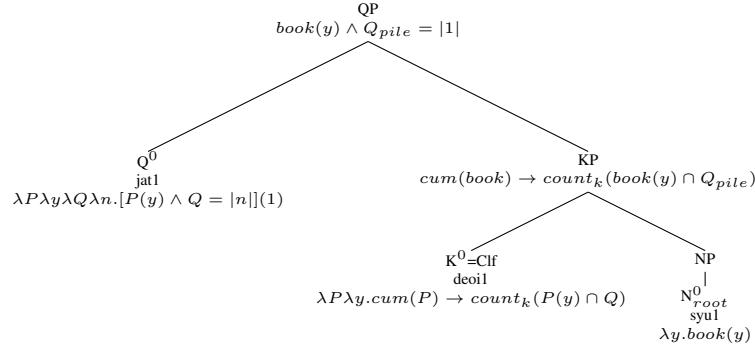
K differs from regular classifiers. It forbids non-cumulative predicates (e.g. naturally atomic nouns, à la Cheng (2012)) and prevent example (1) being interpreted as one single thick volume. *K* differs from regular verbs in that it must take stative (hence unbounded) predicates as its argument. Following Neo-Davidsonian event semantics (Parsons, 1990), the θ -assignment of the theme would be in a conjunct within the lower VP, hence *K* does not restrict the selection of internal arguments.

Syntactically, this study proposes that *K* can manifest as nominal classifiers or unaccusative verbs. *K* can take a complement NP and provide a countable unit of the object like regular classifiers. It can, in the verbal use, also turn unbounded elements to bounded. Passivization in (4) indicates that *K* is below little-v and does not introduce the agent.

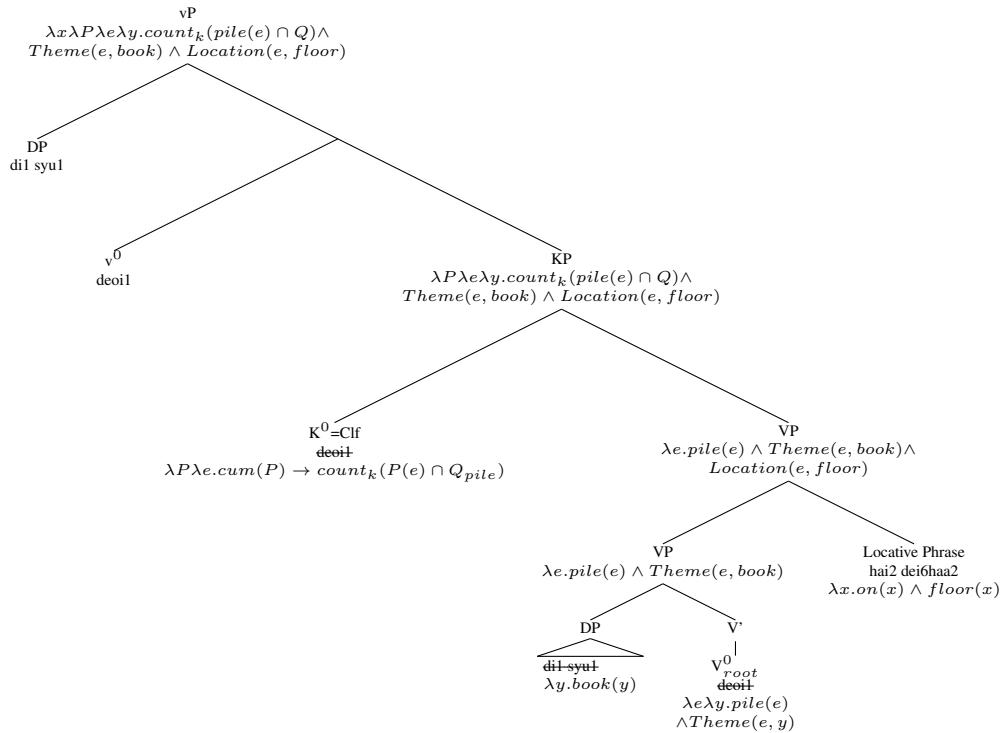
Semantically, *K* is realized by a nominal classifier in sentence (1). From the fact that most Cantonese nouns require a classifier to show the unit of counting, I assume the majority of Cantonese nouns are semantically mass. For example, *syu1* ‘book’ is mass in (1) by default¹. *K* takes the cumulative predicate N_{root} as the complement. The denotation of unit is supplied by the lexical item (e.g. *deoi1* returns Q_{pile}). KP denotes the meaning like ‘there is book such that it can be contextually counted by piles’. Q denotes quantification or number, which is lexically filled by *jat*

¹One can, however, find cases where the pragmatics is in favour of count reading.

‘one’ in (1). D^0 is empty for simplicity, but it is possible to include demonstratives such as *go2* ‘that’.



K in verbal predicates differ minimally and takes events as complements, rather than NP. The derivation omits the aspect marker, which is assumed to be affixal to the v^0 . The derivation is shown below (strikethrough denotes copy deletion):



Implications: First, both nominal and verbal uses mark the boundedness of the predicate. This uniform treatment provides a principled explanation for the similarities of the two uses. Second, the analysis correctly predicts that only classifiers that always select cumulative predicates would systematically double as unaccusative verbs, and not regular classifiers that select non-cumulative objects. Lastly, the unified treatment suggests that semantic functions in NP and VP are hierarchically structured in similar ways. *Boundedness* here shows how homomorphic syntactic structure can be grounded on semantic selection.

Keywords: Classifier, boundedness, cross-categorial behavior, syntax-semantics interface

Examples:

- (1) jat1 deoi1 syu1 / nai4
 one Clf-pile book / mud
 ‘a pile of books / mud’ (less plausible interpretation: ‘a pile of (shredded) book pages’)
- (2) di1 syu1 deoi1 {zo2 / *gan2} hoeng2 dei6haa2
 $\text{Clf}_{\text{plural}}$ book V-pile Perf Prog at floor
 ‘The books pile (up) on the floor.’
- (3) Peter deoi1 {zo2 / *gan2} di1 syu1 hoeng2 dei6haa2
 Peter V-pile Perf Prog Clf_{plural} book at floor
 ‘Peter has piled the books on the floor.’ (not ‘Peter *is piling* the books on the floor.’)
- (4) di1 syu1 bei2 Peter deoi1 {zo2 / *gan2} hoeng2 dei6haa2
 $\text{Clf}_{\text{plural}}$ book PASSIVE Peter V-pile Perf Prog at floor
 ‘The books are/get piled (up) on the floor by Peter.’
- (5) A predicate P is cumulative iff
 (i) $\forall x, y[P(x) \wedge P(y) \rightarrow P(x \oplus y)]$, and
 (ii) $\exists x, y[P(x) \wedge P(y) \wedge \neg x = y]$ (cf. Krifka (1998))

Table 1: Lexical Items with the Dual-use

Transcription	Meaning
deoi1	‘pile; to pile (up)’
pat6	‘mass, mess; to lay (flat and wilted)’
daap6	‘stack; to stack (up)’
taan1	‘puddle; to lie (flat)’
dung6	‘tall/standing upright object; to stand’

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