

Classifiers and unaccusative verbs in Cantonese

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1.0 Observations

Classifiers in Cantonese, or Chinese languages in general, are considered a semi-functional category in the nominal domain. Few studies in the literature have discussed the use of classifiers in the verbal domain. This study observes that some classifiers in Cantonese can occur as verbs, as shown in (1) and (2).

- (1) jat1 deoi1 nai4 / syu1
 one Clf-pile mud / book
 ‘a pile of mud/books’
- (2) di1 syu1 deoi1 zo2 hoeng2dei6haa2
 Clf_{plural} book V-pile Perf at floor
 ‘The books pile (up) on the floor.’

In (1), *deoi1* occurs after quantifiers or numerals and precedes the noun. This is not at all surprising for classifiers in Cantonese. What is unexpected is that the same word *deoi1*, with the same sound and meaning, occurs in (2) as a verb, found between the sentence subject and the aspect marking *zo2*. The dual use does not occur only to *deoi1* ‘pile’. Table 1 lists the morphemes appearing in the same pattern. For ease of exposition, I call this group of morpheme Shape-and-Posture Classifiers or Shape-and-Posture Verbs, (SP-Clf or SP-V).

Table 1. Lexical Items with the Dual-use

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

To confirm that this pattern is systematic, rather than a mere coincidence, section 2 describes the syntactic behaviors of the classifier and verbal uses. Section 3 discusses the parallels of the two uses in their semantic behaviors. The goal of this study is to provide a preliminary analysis to this pattern. Section 4 proposes a common semantics that applies to both classifier and verbal uses. Section 5 discusses the broader implications of this particular analysis of Cantonese.

2.0 Syntactic Behaviors

Syntactically, Shape-and-Posture Classifiers (SP-Clf) behave just like regular classifiers. They are obligatory and occur between the determiner and the lexical noun (3). In the definite context (4), the determiner is optional. This is also consistent with the well-known contrast between Cantonese and Mandarin in the acceptability of bare classifier phrase. Also, being classifiers of shape and posture, it is predictable that they take nouns of substances, such as ‘mud’ in (3).

- (3) *jat1* (**deoi1*) *nai4* / *syu1*
 one Clf-pile mud / book
 ‘a pile of mud/books’
- (4) (*ni1*) *deoi1* *syu1*
 this Clf-pile book
 ‘this pile of books’

Following the standard assumption for nominal structure in Cantonese (Cheng 2012, Zhang 2013), this study assumes Cantonese nominals have the structure $DP[QP[ClfP[NP[N]]]]$. When these shape-and-posture morphemes double as verbs, they are always unaccusative. In the intransitive use (2), the subject of the predicate is interpreted to take the shape and posture of the SP-V. Also, SP-V appears to be more compatible with the aspect marker *zo2* than with progressive *gan2* in (5) and (7), this indicates that the SP-V is stative and not dynamic. Examples (5) and (7) also show the causative alternation (Schäfer, 2009), where SP-V can be used in a transitive/causative context. Example (7) shows that SP-V can appear in passivization.

- (5) *di1* *syu1* **deoi1** {*zo2* / **gan2*} *hoeng2deihaa2*
 Clf_{plural} book V-pile Perf / Prog at floor
 ‘The books pile (up) on the floor.’
- (6) Peter **deoi1** {*zo2* / **gan2*} *di1* *syu1* *hoeng2deihaa2*
 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.’)
- (7) *di1* *syu1* *bei2* Peter *deoi1* {*zo2*/ **gan2*} *hoeng2deihaa2*
 Clf_{plural} book PASSIVE Peter V-pile Perf Prog at floor
 ‘The books are/get piled (up) on the floor by Peter.’

3.0 Semantic Behaviors and their Similarities

SP-Clf and SP-V always denote size and posture, as shown in the glosses in examples (3-4) and table (2). This indicates that the links to the semantics of existence or placement. In fact, many of the sentences involving SP-Clf and SP-V, such as (6) and (7), are much more felicitous when there is a location. Also, both SP-Clf and SP-V select unbounded arguments. SP-Clf can take either typical mass nouns, such as *seoi2* ‘water’ or plural nouns, such as *syu1* ‘book’. Though Cantonese nouns do not mark plurality by morphology, the plural interpretation of sentence (1) confirms this observation.

4.0 Analysis

This study extends Rothstein (2010) and gives a unified treatment to these SP-Clf and SP-V. The occurrences SP-Clf and SP-V are hypothesized to have the denotation of K in (9), which can be construed as a boundedness marker.

$$(9) \llbracket [K] \rrbracket = \lambda P \lambda y. \text{cum}(P) \rightarrow \text{count}_k (P(y) \cap Q)$$

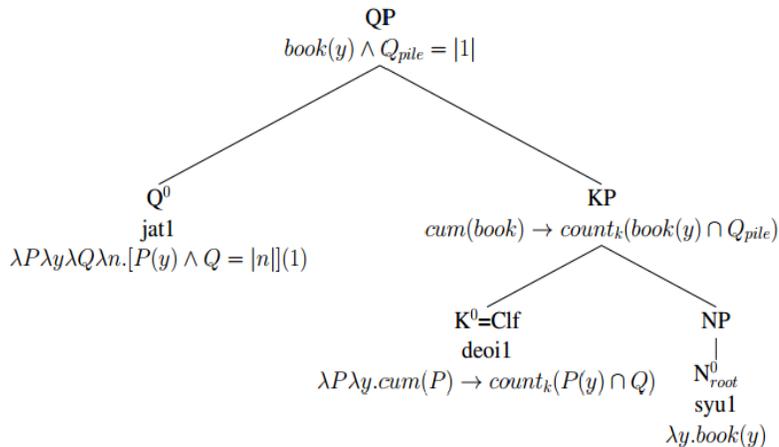
The boundedness marker K bounds a cumulative predicate¹. A predicate P takes either individuals or events as its argument, represented as y. The lexical content of K, such as *deoi1*

¹ For the purpose of this study, that equals cumulative in Krifka (1998)’s term. Therefore, *water* in English is cumulative, because *water(x)* and *water(y)* together is considered water. That is, *water(x ⊕ y)* is true. Notice that a

‘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 (2010). The same count_k process also applies for events. This forces K to take only homogeneous events, which are unbounded temporally. A homogeneous event would require all subevents to be the same, e.g. ‘sit’ where subparts of the whole event are identical to one another.

The main claim of this study is that SP-Clf and SP-V share the same denotation in (9), which allows K to appear in both syntactic environments. (10) shows the NP structure. In (10), *deoil* acts as a classifier and takes the NP argument *syul* ‘book’. The denotation of unit is supplied by the lexical item (e.g. *deoil* 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 like *jat* ‘one’. Notice that the denotation of K allows only cumulative predicates, which explains why KP is interpreted as ‘pile of books’ or ‘pile of book substance’ (e.g. shredded pages of books). The structure (10) shows the partial structure without the determiner, which may appear on the left of Q^0 and dominate the QP shown in (10).

(10)



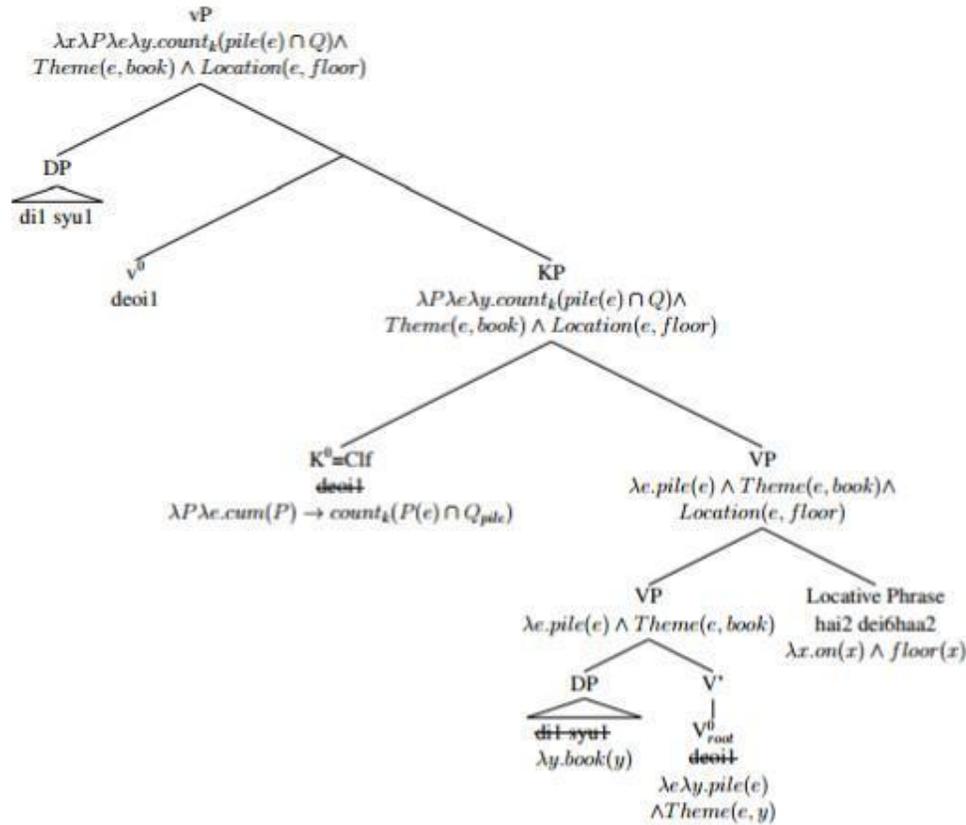
For vP , the denotation of K remains the same. K in verbal predicates differ minimally and takes events as complements, rather than NP. In the lower VP, the verb *deoil* provides the lexical content ‘pile’ to the predicate. Since the predicate is unaccusative, this study assumes the theme *dil syul* ‘the books’ to be base-generated within the VP.

Following Neo-Davidsonian event semantics (Parsons, 1990), the θ -assignment of the theme would be in a conjunct within the lower VP. Recall that passivization in (7) indicates that K is below little- v and does not introduce the agent. This suggests the hierarchy in (11), where vP dominates KP , which in turn dominates VP.

The lexical verb then moves first to K^0 and v^0 via cyclic movement. For sentences without a subject, the theme-DP moves to the specifier of TP, (11) shows its intermediate landing site at Spec, vP . For sentences with an agentive subject, such as (6), the subject would be base-generated in Spec, vP and the theme would remain in-situ. This captures the causative alternation discussed above.

drop of water in English behaves differently and is non-cumulative.

(11)



Note that *dil syul* ‘the books’ is not the argument of K, hence K does not restrict the selection of internal arguments and it does not contradict the claim that K takes only unbounded predicates, although *dil syul* ‘the books’ is in fact bounded.

5.0 Implication

The common semantics shows a possibility to account for cross-categorical behaviors, such as dual use of morphemes across nouns and verbs in this study. This study claims that the semantic property is the reason for the syntactic distribution of K as classifier and verbs. K takes cumulative predicates, regardless of type or syntactic category. This semantic proposal explains the data that cannot be explained by syntactic category alone.

Different categories behaving similarly is not a novel idea. Winter (2004) studies the restrictions on prepositions, adjectives and comparatives by measure phrases, and claims that measure phrase modification of these various categories can be explained under a unified semantic analysis. Wellwood et al. (2012) studies the similarities between nominal and verbal comparatives and claims that *more* in English should be treated under a uniform analysis. This shows that similar ideas have been explored in English and other Indo-European languages. The current study shows that parallels between categories can also be found in a Chinese language.

Acknowledgement

I thank Tsz-him Tsui and Professor Marjorie Chan for the helpful comments on the Cantonese data.

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