

# Scalarity and the Cantonese post-verbal particle *can1*

Joanna Ut-Seong Sio 

Nanyang Technological University

Proceedings of the 22nd International Conference on  
Head-Driven Phrase Structure Grammar

Nanyang Technological University (NTU), Singapore

Stefan Müller (Editor)

2015

Stanford, CA: CSLI Publications

pages 234–241

Sio, Joanna Ut-Seong. 2015. Scalarity and the Cantonese post-verbal particle *can1*. In Stefan Müller (ed.), *Proceedings of the 22nd International Conference on Head-Driven Phrase Structure Grammar, Nanyang Technological University (NTU), Singapore*, 234–241. Stanford, CA: CSLI Publications. DOI: 10.21248/hpsg.2015.14.



## Abstract

This paper provides an analysis of the Cantonese post-verbal particle *can1*. We argue that *can1* is a resultative particle encoding the meaning of ‘a small degree’. It is only compatible with (i) verbs that entail a specific resulted state of the theme argument and (ii) verbs that encode a potential change of the theme argument (Beavers, 2011, 2013). Assuming that change of state verbs involve a property scale (Hay et al., 1999), we propose that *can1* makes the property scale bounded by providing an end-point. This end-point, however, is not precise. It consists of a range of values on the lower end of the scale.

## 1 Introduction

Cantonese has a very rich inventory of post-verbal particles (Matthews and Yip, 2011). Some examples are given below:

Aspectual particles: *gan2* ‘progressive’, *zo2* ‘perfective’, etc.  
Directional particles: *hei2* ‘up’, *dai1* ‘down’, *zau2* ‘away’, etc.  
Resultative particles: *bao2* ‘full’, *dou2* ‘arrive’, *sei2* ‘dead’ etc.  
Quantifying particles: *saai3* ‘completely’, *maai4* ‘also’, etc.  
Adversative/habitual particle: *can1*

The last particle listed above, *can1*, has two different senses. It can mean (i) ‘being mildly and negatively affected’, as in (1) or (ii) ‘whenever’, as in (2). Matthews and Yip (2011) calls the former ‘adversative’ and the latter ‘habitual’.

- (1) Ngo5 zong6-can1      zek3 maau1 aa3  
1SG bump.into-CAN CL cat SFP  
‘I bumped into the cat (and as a result the cat was mildly hurt).’
- (2) Keoi5 coeng3-can1 go1 dou1 ham3 ga3  
3SG sing-CAN song always cry SFP  
‘S/He cries whenever s/he sings.’

This paper focuses on the adversative sense of the particle *can1*. We will discuss its grammatical properties and propose an analysis that captures its selectional restriction.

---

<sup>†</sup>The research reported here is supported by the project ‘Grammar Matrix Reloaded: Syntax and Semantics of Affectedness’ (MOE 2013-T2-1-016) funded by the Ministry of Education (MOE) in Singapore. We would like to thank all the participants of the HPSG 2015 conference as well as others who had given their useful input.

## 1.1 The grammatical properties of *can1*

*Can1* is a post-verbal particle. It is placed after the verb. Stacking of post-verbal particles is possible, subject to semantic compatibility. Though it is hard to find cases with more than 2 post-verbal particles in a row. An example of *can1* followed by the aspectual particle *zo2* is given below:

- (3) Ngo5 zong6-can1-zo2        zek3 maau1 aa3  
1SG bump.into-CAN-PERF CL cat SFP  
'I bumped into the cat (and as a result the cat is mildly hurt).'

When *can1* appears in transitive sentences, the affected argument is the object. The affected argument has to be sentient. *Can1* is not compatible with an inanimate object.

- (4) \* Ngo5 zong6-can1        bun2 syu1 aa3  
1SG bump.into-CAN CL book SFP  
Intending reading: 'I bumped into a book (and as a result the book was mildly hurt).'

Physical contact is not required for *can1* to be used:

- (5) Lei5 haak3-can1 keoi5 laa3  
2SG scare-CAN 3SG SFP  
'You scared her/him (and as a result she/he was frightened mildly).'

*Can1* is also compatible with intransitive sentences. As observed by Gu and Yip (2004), it is compatible with unaccusatives, but not unergatives:

- (6) a. unaccusative  
Keoi5 dit3-can1 aa3  
3SG fall-CAN SFP  
'S/He fell (and as a result s/he was mildly hurt).'
- b. unergative  
\* Zek3 maau1 tiu3-can1 aa3  
CL cat jump-CAN SFP  
Intended reading: 'The cat jumped (and as a result it was mildly hurt).'

The negative effect on the participant has to be small. In example (1), repeated here as (7), if the result of the event is that the cat ends up dead, the use of *can1* would not be appropriate.

- (7) Ngo5 zong6-can1        zek3 maau1 aa3  
1SG bump.into-CAN CL cat SFP  
'I bumped into the cat (and as a result the cat was mildly hurt).'

In addition to the reading of ‘a small degree’, *can1* is also adversive. It has to mean being negatively affected to a small degree but not positively affected to a small degree. In fact, when *can1* is used with a verb with a positive connotation, the sentence is either ungrammatical, (8) or it would be interpreted negatively, (9):

- (8) \* Lei5 zan3-can1 Siu2koeng4 aa3  
 2SG praise-CAN Siukoeng SFP  
 Intended reading: ‘You praised Siukeong (and as a result Siukoeng was mildly annoyed).’
- (9) Lei5 caat3-can1 keoi5 haai4 aa3  
 2SG polish-CAN 3SG shoe SFP  
 ‘You flattered her/him (and as a result s/he was mildly annoyed).’

*Zan3* ‘praise’ is a positive thing. It cannot be combined with *can1*, as in (8). *Caat3 haai4* literally means ‘polish shoes’. It has the meaning of ‘trying hard to flatter someone’. When used with *can1*, as in (9), it gives rise to the interpretation of over-doing the flattering and generating annoyance on the receiving end.

Gu and Yip (2004) observe that verb-*can1* complexes are not compatible with *hai2dou6* ‘right now’ or the progressive aspectual particle *gan2*:

- (10) \* Keoi5 hai2dou6 haak3-can1 go3 bi4bi1  
 3SG right.now scare-CAN CL baby  
 Intended reading: ‘S/He is now scaring the baby.’
- (11) \* Keoi5 haak3-can1-gan2 go3 bi4bi1  
 3SG scare-CAN-PROG CL baby  
 Intended reading: ‘S/He is now scaring the baby.’

Verb-*can1* complexes act like achievements, which are punctual events. Since punctual events have exactly two atomic parts, a beginning and an end, but have no middle (Dowty, 1979). *Can1* is expected to be incompatible with the progressive aspect, *gan2*, or adverbs that modify the middle of an event, *hai2dou6* ‘right now’.

## 2 Analysis

### 2.1 Verb selection

Beavers (2011, 2013) identifies 4 classes of verbs which encode different degrees of affectedness on the event participant x (in descending order):

- (i) x undergoes a quantized change (e.g. *peel, kill, shatter* x).
- (ii) x undergoes a non-quantized change (e.g. *cut, widen, lengthen* x).
- (iii) x has potential for change (e.g. *hit, wipe, rub* x).
- (iv) x is unspecified for change (e.g. *see, smell, ponder* x).

For verbs of type (i), the participant reaches a precise result state. The result is encoded as part of the semantics of the verb (e.g. being *killed* means the victim results in death). For verbs of type (ii), a result on the participant is entailed, but it is not uniquely specified (e.g. a piece of dough can be *flattened* into different degrees). For verbs of type (iii), a change on the participant is possible, but there does not have to be one (e.g. being *hit* by a baby may not result in any observable change). For verbs of type (iv), there is no change (e.g. being *seen* would not cause any change).

The Cantonese *-can1* is only compatible with verbs of type (ii) and (iii), non-quantized change and potential for change, but not (i) and (iv), quantized change and unspecified for change. The relevant data are given below:

(12) Quantized change:

\* Siuming saat3-can1 Siukoeng aa3  
Siuming kill-CAN Siukoeng SFP

Intended reading: ‘Siuming killed Siukeong (and as a result Siukoeng was mildly hurt).’

(13) Non-quantized change:

Siuming cap3-can1 Siukoeng aa3  
Siuming stab-CAN Siukoeng SFP

‘Siuming stabbed Siukoeng (and as a result Siukoeng was mildly hurt).’

(14) Potential for change:

Siuming daa2-can1 Siukoeng aa3  
Siuming hit-CAN Siukoeng SFP

‘Siuming hit Siukeong (and as a result Siukoeng was mildly hurt).’

(15) Unspecified for change:

\* Siuming tai2-can1 Siukoeng aa3  
Siuming see-CAN Siukoeng SFP

Intended reading: ‘Siuming saw Siukeong (and as a result Siukoeng was mildly hurt).’

In (13) and (14), the object was both mildly hurt. It is natural to assume that being stabbed is more severe than being hit in general. Thus, being mildly hurt from being stabbed could be more severe than being mildly hurt from being hit. The ‘mildly’ interpretation is calculated according to the range of possible effect of the action, but not a general standard that applies across the board.

## 2.2 Scalarity

There are three type of incremental themes (Tenny, 1994):

- (16) a. Creation/Consumption predicates  
John ate the fish.
- b. Motion predicates  
John walked to the store.
- c. Change of state predicates  
John scrubbed the sink clean.

Each of the example above encodes a three-way relation between an event, a theme and a scale. The type of scales differs depending on the verb type (Hay, Kennedy and Levin 1999). For creation and consumption predicates, the scale is the spatial content of the theme argument (ascending for creation or descending for consumption). For motion predicates, the scale is the path of motion of the theme argument (a path from the original location of the theme to the final location of the theme). For change of state predicates, the scale is the gradable property (of the resulted state) of the theme argument.

Affectedness encodes a change of property of the theme argument. Different degrees of affectedness on the theme argument can be expressed using a property scale model (Beavers 2013):

*kill*: theme x undergoes a quantized change on a scale and reaches a specific point in the scale.

*stab*: theme x undergoes a non-quantized change on a scale and reaches some unspecified point in the scale.

*hit*: theme x might change but there might not be any actual change. (latent scale)

*see*: x is not specified for change as it is just an event participant. (no scale)

The post-verbal particle *can1* has no lexical meaning on its own. But when interpreted with a verb, it means ‘a small degree’ (the degree interpretation of ‘mildly’). We claim that *can1* is only compatible with verbs that involve a scale that is unbound, i.e. with no end-point. *Can1* provides an end-point for the scale, making it bounded. For quantized change, the scale is already bounded. The extra value that *can1* provides will lead to ungrammaticality. For verbs that are unspecified for change, there is no scale, and are thus not compatible with *can1* either. For verbs that encode non-quantized change on the theme argument, *can1* provides an end-point for that scale (out of the many possible end-points). For verbs encode potential change on the theme argument, the use of *can1* indicates that there is indeed a change in the theme argument (i.e. there is a change of state) and again *can1* provides an end-point for that property scale.

To be precise, *can1* does not provide just one value for the scale. *Can1* indicates that the theme argument is negatively affected to a small degree. ‘A small degree’

is compatible with many possible values, as long as they are close to the lower end of the scale. vanden Wyngaerd (2001) claims that resultative predicates are subject to a boundedness requirement: they are telic. Gu and Yip (2004) argues that such boundedness, however, can be non-precise (a range of values), as in the case of *can1*.

### 2.3 *Can1* and other resultative particles

Gu and Yip (2004) treat *can1* as a resultative particle. *Can1*, however, is different from the other resultative particles. Unlike the other resultative particles, it does not have a clear lexical meaning (unlike *sei2* ‘dead’ for example), and as a consequence we think, it does not provide a precise end-point.

The lack of precision has consequences on *can1*’s distribution. Its appearance is more restricted than the other regular resultative particles that encode a precise end-point. As discussed earlier on, Gu and Yip (2004) claim that *can1* is not compatible with unergatives because *can1* does not provide a precise enough end-point, (17). When the resultative particle provides a precise end-point, it is compatible with unergatives verbs, (18).

- (17) \* Zek3 maau1 tiu3-can1-zo2 aa3  
 CL cat jump-CAN-PERF SFP  
 Intended reading: ‘The cat jumped (and as a result it was mildly hurt.’
- (18) Zek3 maau1 tiu3-wan4-zo2 aa3  
 CL cat jump-faint-PERF SFP  
 ‘The cat jumped to the extent that it fainted.’

Regular resultative particles are compatible with *dou3*, which means ‘to the extent’, (20). *Can1*, however, is not, (19). This could be due to the fact that *can1* does not give a precise end-point and thus it is unclear what the extent is.

- (19) \* Lei3 daa2 dou3 keoi5 can1 laa3  
 2SG hit to.the.extent 3SG CAN SFP  
 Intended reading: ‘You are hitting him to the extent that s/he is going hurt a little bit.’
- (20) Lei3 daa2 dou3 keoi5 sei2 laa3  
 2SG hit to.the.extent 3SG dead SFP  
 ‘You are hitting him to the extent that s/he is going to die.’

## 3 Conclusion

In this paper, we have provided an overview of the grammatical properties of the Cantonese post-verbal particle *can1*. We follow Beavers (2011, 2013) in classifying verbs into four classes with respect to affectedness. *Can1* is compatible with

verbs that encode a non-quantized change with an entailed result and verbs that encode a potential result. We propose that *can1* specifies a result state that is not precise. It provides a range of value denoting a small degree on a property scale.

Even though our analysis, adopting Beavers (2011, 2013), accounts for the selectional restriction of *can1*, the analysis does not account for its adverbial reading. It is imaginable that a theme argument is positively affected to a small degree, but *can1* cannot encode that.

Beavers (2011, 2013) makes a prediction on affectedness in general which is contrary to the behaviour of *can1*. Beavers claims that the relevant degrees of affectedness fall into an implicational Affectedness Hierarchy based on monotonically weakening truth conditions: quantized > non-quantized > potential > unspecified. He claims that no grammatical phenomenon picks out a discontinuous range on the hierarchy, or picks out a continuous range that excludes quantized change. This is not true. In fact, *can1* does exactly that. *Can1* picks out the middle range, non-quantized and potential, excluding the edges, quantized and unspecified.

## References

- Beavers, J. (2011). On affectedness. *Natural Language & Linguistic Theory*, 29(2):335–370.
- Beavers, J. (2013). Aspectual classes and scales of change. *Linguistics*, 51(4):681–706.
- Dowty, D. (1979). Word meaning and montague grammar: The semantics of verbs and times in generative semantics and in montague's ptq, d. *Reidel, Dordrecht*.
- Gu, Y. and Yip, V. (2004). On the cantonese resultative predicate v-can. *Concetric: Studies in Linguistics*, 30:35–67.
- Hay, J., Kennedy, C., and Levin, B. (1999). Scalar structure underlies telicity in "degree achievements". In *Semantics and linguistic theory*, pages 127–144.
- Matthews, S. and Yip, V. (2011). *Cantonese: A comprehensive grammar*. Routledge.
- Tenny, C. L. (1994). *Aspectual roles and the syntax-semantics interface*. Springer.
- vanden Wyngaerd, G. J. (2001). Measuring events. *Language*, 77(1):61–90.