

A New Type of Relative Clause in Cantonese

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Abstract

In this paper we describe a form of relative clause in Cantonese which has not previously been described. In a set of relative clauses elicited from children and adults in a production experiment, the head noun has the role of patient. We suggest that these are subject relative clauses involving a form of locative inversion. The aspect marker *zyu6* is consistent with locative inversion as analysed by Mok (1992) and Pan (1996) in which an unaccusative construction is derived.

Keywords

Cantonese, relative clauses, locative inversion

The experiment reported here was part of a study which examined the production of Cantonese relative clauses by manipulating the animacy of the NPs in the relative clauses (Lau 2016). Adult and child native speakers of Cantonese both produced a type of relative clauses that has not been previously described – a transitive subject relative clause whose head noun takes a role of patient.

1. Current Study

1.1. Methods

Participants. Twenty-two Cantonese-speaking children from a local kindergarten in Hong Kong participated in this experiment. Their ages ranged from 4;02.29 – 5;10.00 (mean age: 5;00.18). Children were awarded a gift for their participation. Seven children were excluded due to unbalanced trials in one set of test materials, and another due to high rate of failed attempts, bringing the sample to a total of 14 participants in subsequent analysis. As adult controls, twenty undergraduate students of the University of Hong Kong participated in the experiment. They were all born in Hong Kong, and Cantonese was their first language.

Materials. The sentences targeted were manipulated for animacy in each syntactic position in the relative clause (animate vs. inanimate). Each sentence depicted a transitive

event, involving an agentive subject and a patient object, even for those with an inanimate subject. The sentence was paired with a visual stimulus to facilitate the elicitation. The picture consisted of two panels, both depicting the same event with the same target character. The difference between the two panels was the non-target character involved in the event. As shown in Figure 1, with the girl as the head noun, a girl is bound with fairy lights whereas the other girl is bound with ivy. Throughout the trial, a little fairy appeared and pointed at the target referent with a wand, which prompted the participants to describe the character at which the fairy pointed. The most felicitous way would be using a relative clause to distinguish the little girl pointed at by the fairy from the other in the picture.

Figure 1 Visual stimulus for relative clause elicitation in the inanimate subject – animate subject condition



Procedure. Participants took part in a game designed to elicit relative clauses, a modified version of the protocol used in Mckee, McDaniel and Snedeker (1998), Zukowski, (2009) and Hsu, Hermon and Zukowski (2009). The modified version replaced the original naïve observer experimenter with a computer character who communicated with the participants through voice chatting. Participants were invited to have a video chat with the computer character (a bunny in the current experiment) in front of the computer and tell the computer character what they saw on the screen. There were a few practice trials to familiarize the participants with the experimental procedure and to ensure they were immersed in the mode of communication with the computer character. The experimenter began each trial by first describing the scene to the participants. All descriptions were simple declarative sentences, providing the participants with the necessary vocabulary, including the labels for each character and the action for each event, to form the relative clauses. Participants were told that only verbal communication with the computer character is possible, as it could not see what was on the participants' screen; the participants were compelled to produce highly informative verbal descriptions throughout the experiment — hence the need for relative clauses. Positive feedback from both the experimenter and the computer character were given after every trial, regardless of whether the response was target-like.

1.2. Results

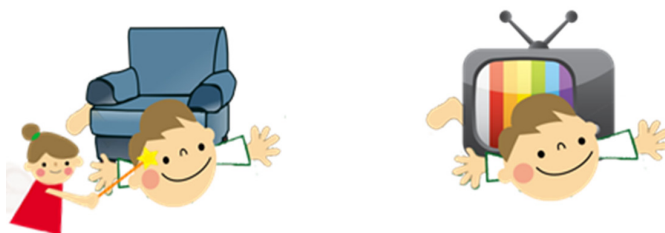
Overall results of the study are reported in Lau (2016). Here we focus on a type of relative clause which was elicited in the experiment but which has not previously been described, as illustrated in (1).

- (1) 砸住 梳化 嗰 個 男仔
 zaak6zyu6 so1faa2 go2 go3 naam4zai2
 crush-CONT sofa that CL boy
 'the boy that is crushed by the sofa'

This type of relative clause was produced almost exclusively in contexts designed to elicit direct object relative clauses, and predominantly in the condition with an inanimate subject and animate object. In the elicitation experiment, children were asked to describe the character being pointed to by the fairy as shown in Figure 2. In this condition, the event involved an inanimate subject, such as the sofa, and an animate object, the boy in Figure 2.

The intended target was an object relative clause with the boy as the head, as in (2a); children, however, often produced a type of relative clause in which the patient head noun seemed to be relativized from the subject position, as shown in (2b).

Figure 2 Visual stimulus for target sentence ‘the boy that the sofa is crushing’



- (2) a. Target: object relative clause
 [RC 梳化 砸住 ___] 嗰 個 男仔
 so1faa2 zaak6zyu6 go2 go3 naam4zai2
 sofa crush-CONT that CL boy
 'the boy that the sofa is crushing'
- b. Elicited relative clause:
 [RC ___ 砸住 梳化] 嗰 個 男仔
 zaak6zyu6 so1faa2 go2 go3 naam4zai2
 crush-CONT sofa that CL boy
 'the boy that is crushed by the sofa'

In relative constructions like (2b) the gap is in the subject position, but has the thematic role of patient. Such relative clauses were produced not only by children, but also by adults, though at a much lower rate. Like the children, the adults produced this type in object relative clause elicitation in the inanimate subject – animate object configuration. That is, when the target was an object relative clause as shown in (3a), some adults produced a relative clause as in (3b).

(3) a. Target: object relative clause

[_{RC} 把 劍 拑住 _] 嗰 個 伯伯
 baa2 gim3 gat1zyu6 go2 go3 baak3baak3
 CL sword stab-CONT that CL old.man
 'the old man that the sword is stabbing'

b. Elicited relative clause:

[_{RC} _ 拑住 嗰 把 劍] 嗰 個 伯伯
 gat1zyu6 go2 baa2 gim3 go2 go3 baak3baak3
 stab-CONT that CL sword that CL old.man
 'the old man that has been stabbed by the sword'

2. Analysis

It is widely assumed that relative clauses are based on a main clause counterpart, with the possible exception of 'attributive' or gapless noun-modifying clauses (Chan, Matthews and Yip 2011, Matthews and Yip 2017). What would be the main clause corresponding to the relative clauses in (2b) and (3b)? In some cases, the elicited relative clause can be derived from a main clause (4-6) and can therefore be analysed as a subject relative clause. However, in many cases the main clause counterpart is ungrammatical (8b, 9b and 10b) or marginal (7b) in the relevant sense, with the subject understood as patient:

Children's elicited relative clauses

(subset):

- (4) a. 𠵼 件 衫 嗰 個 BB
 kam2 gin6 saam1 go2 go3 bi4bi1
 cover CL clothes that CL BB
 'the baby that is covered by the clothes'
- (5) a. 夾住 夾 嗰 張 紙
 gep6zyu6 gep2 go2 zoeng1 zi2
 clip-CONT clip that CL paper
 'the paper that is clipped by a clip'
- (6) a. 綁住咗 鏈 嗰 個 箱
 bong2zyu6zo2 lin2 go2 go3 soeng1
 tie-CONT-PF chain that CL chest
 'The chest that is bound by the chain.'

Corresponding main clause:

- b. BB 𠵼 件 衫
 bi4bi1 kam2 gin6 saam1
 BB cover CL clothes
 'The baby is covered by the clothes.'
- b. 張 紙 夾住 夾
 zoeng1 zi2 gep6zyu6 gep2
 CL paper clip-CONT clip
 'The paper is clipped by a clip.'
- b. 個 箱 綁住咗 鏈
 go3 soeng1 bong2zyu6zo2 lin2
 CL chest tie-CONT-PF chain
 'The chest is bound by the chain.'


- | | |
|---|---|
| <p>(7) a. 拑住 把 劍 嗰 個
gat1zyu6 baa2 gim3 go2 go3
stab-CONT CL sword that CL
'the one that got stabbed by the sword'</p> | <p>b. ? 嗰個(人) 拑住 把 劍
go2go3(jan4) gat1zyu6 baa2 gim3
that guy stab-CONT CL sword
'The old man is stabbed by the sword.'</p> |
| <p>(8) a. 打中咗 罐 嗰 個 伯伯
daa2zung3zo2 gwun3 go2 go3 baak3
hit-PF can that CL uncle
'the old man that is hit by the can'</p> | <p>b. * 伯伯 打中咗 罐
baak3baak3 daa2zung3zo2 gwun3
uncle hit-PF can
'The old man is hit by the can.'</p> |
| <p>(9) a. 砸住 梳化 嗰 個 男仔
zaat6zyu6 so1faa2 go2 go3 naam4zai2
crush-CONT sofa that CL boy
'the boy that got crushed by the sofa'</p> | <p>b. * 男仔 砸住 梳化
naam4zai2 zaat6zyu6 so1faa2
boy crush-CONT sofa
'The boy is crushed by the sofa.'</p> |
| <p>(10) a. 婆婆 砸緊 嗰 堆 沙
po4po2 zaat6gan2 go2 deoi1 saa1
granny crush-PROG that CL sand
'the sand that is crushing granny'</p> | <p>b. * 婆婆 砸緊 堆 沙
po4po2 zaat6gan2 deoi1 saa1
granny crush-PROG CL sand
'Granny is being crushed by the sand.'</p> |

All the elicited relative clauses involve a transitive verb taking the original patient object as subject, while the original agent subject becomes the object of the predicate as in (4-6). Such NP placement causes a mismatch between the thematic relations and grammatical roles of the NPs in a canonical transitive predicate. Yet, the switching of the syntactic positions does not trigger a change in meaning of the predicate event; the original transitive sense, such as the meaning of the sofa crushing the boy in (2b), is preserved. There is, however, a slight difference in semantics between the target transitive object relative clause (2a) and the patient-subject relative clause (2b), which carries an additional sense of describing the state experienced by the referent.

The elicited relative clauses all have a canonical agent-patient main clause counterpart. In the case of (2), the corresponding transitive clause would be as in (11).

- (11) 梳化 砸住 個 男仔
so1faa2 zaak6zyu6 go3 naam4zai2
sofa crush-CONT CL boy
'The sofa is crushing the boy.'

It could be that children (as well as adults) somehow derived the elicited relative clauses from main clauses such as (11). A problem here is that the main clause counterpart of the elicited relative clause is not consistently well-formed, as shown in examples (7b-10b) above. The main clause counterpart (12) of the relative clause in (2b, or 9a), for example, does not allow the relevant reading (indicated by the stimulus picture):

- (12) 男仔 砸住 梳化 
 naam4zai2 zaak6zyu6 so1faa2
 boy crush-CONT sofa
 ‘The boy is crushing the sofa.’
 (not ‘*The boy is crushed by the sofa’)

The relevant reading is not available where the subject is animate, such as ‘the boy’ in (12), apparently because an agentive reading (‘the boy is crushing the sofa’) takes precedence. By contrast, with an inanimate subject such as ‘the chest’ in (13), the main clause construction corresponding to the relative clause in (6a) is possible:

- (13) 個 箱 綁住咗 條 鏈
 go3 soeng1 bong2zyu6zo2 tiu4 lin2
 CL chest tie-CONT-PF CL chain
 ‘The chest has a chain bound around it.’

A main clause as in (13) is therefore available as the source for a relative clause such as (6a). But what is the nature of the construction in (13)? The translation suggests a passive construction, but there is no sign of passive morphosyntax. Instead, the verb is typically marked by the continuous aspect 住 *zyu6* and/or 咗 *zo2*, both being present in (13) where 綁住咗 *bong2 zyu6 zo2* ‘has been tied’ denotes a resultative state. These aspectual features are typical of locative inversion as described by Mok (1992) for Cantonese and Pan (1996) for Mandarin, where a morphological operation involving the resultative marker 着 *zhe* triggers the elimination of the agentive role of the verb. In a canonical locative inversion construction, an NP encoding a location appears as subject as in (14-15):

- (14) 牆 上面 掛咗 幅 畫 (Cantonese: Mok 1992)
 coeng4 soeng6min6 gwaa3zo2 fuk1 waa5
 wall top/on hang-ASP CL picture
 ‘There is a picture hanging on the wall’
- (15) 桌子上 放着 一 本 書 (Mandarin: Pan 1996)
 zhuozi-shang fang-zhe yi ben shu
 table-top put-ZHE one CL book
 ‘There is a book placed on the table.’

Mok (1992) demonstrates that the initial locative phrase is a subject, and that the locative inversion construction as in (14) is unaccusative. Similarly, in Pan’s (1996) analysis, suffixation of the aspect marker *-zhe* as in (15) suppresses the agent role of the verb, thus deriving an unaccusative predicate. Recall that most of the relative clauses elicited in the experiment

(4a-10a) have an aspect marker (*zyu6*, *zo2* or *gan2*) and these are also required in the main clause counterparts (5b-6b), consistent with a derivation involving locative inversion.¹

The elicited relative clauses are not typical instances of locative inversion, however. Typical locative inversion constructions have an inanimate subject as in (14-15), whereas the relative clauses elicited in (4-10) include those with animate head nouns, as in (16). The main clause counterpart in (17) has an animate subject, making it only marginally acceptable:

- (16) 繞住 燈燈 嗰 個 女仔
 kiu5zyu6 dang1dang1 go2 go3 neoi5zai2
 bind-CONT lights that CL girl
 ‘the girl that has fairy lights strung around her’
- (17) ? 嗰 個 女仔 繞住 燈燈
 go2 go3 neoi5zai2 kiu5zyu6 dang1dang1
 that CL girl bind-CONT lights
 ‘The girl has fairy lights strung around her.’
- 

¹ There is one exception to this aspectual requirement: with the verb *kam2* ‘cover’, the continuous aspect marker *zyu6* is optional in both the patient subject relative clause (i) and the corresponding main clause (ii):

- (i) [RC 冚 (住) 件 衫] 嗰 個 BB
 kam2-(zyu6) gin6 saam1 go2 go3 bi4bi1
 cover-(CONT) CL clothes that CL BB
 ‘The baby that is covered by the clothes.’
- (ii) BB 冚 (住) 件 衫
 bi4bi1 kam2-(zyu6) gin6 saam1
 BB cover-(CONT) CL clothes
 ‘The baby is covered by the clothes.’

The transitive verb *kam2* has two senses in Cantonese: ‘cover’ as in (iiia), or ‘cover oneself (e.g. with a blanket)’ as in (iiib).

- (iii) a. *Kam2* (active voice):
 個 BB 冚住 隻 眼
 go3 bi4bi1 kam2zyu6 zek3 ngaan5
 CL baby cover-PROG CL eye
 ‘The baby is covering the eye.’
- b. *Kam2* (reflexive sense):
 個 BB 冚緊 一 張 被
 go3 bi4bi1 kam2gan2 jat1 zoeng1 pei2
 CL baby cover-PROG one CL blanket
 ‘The baby is covered by a blanket.’

Because the reflexive sense ‘cover oneself with’ is available, a patient-subject sentence such as (iiib) is possible even without locative inversion. The verb *kam2* is therefore a lexical exception to the generalization that the sentences discussed must be derived by a form of locative inversion, licensed by imperfective *zyu6* or another aspect marker.

The treatment of (17) as locative inversion is nevertheless supported by cases where an inanimate expression is added to spell out the location, such as 身上 *san1soeng6* ‘on (her) body’ in (18) which renders the clause fully well-formed:²

- (18) 嗰 個 女仔 身上 繞住 燈燈
 go2 go3 neoi5zai2 san1soeng6 kiu5zyu6 dang1dang1
 that CL girl body.LOC bind-CONT lights
 ‘The girl has fairy lights strung around her body.’

We suggest that (16) and (17) involve a form of locative inversion in which the animate subject 女仔 *neoi5zai2* ‘the girl’ is construed as location and the verb 繞住 *kiu5zyu6* ‘being bound’ expresses a resultative state. Following the above argumentation, (17) is less than fully acceptable because the agentive reading (‘the girl is binding some fairy lights’) takes precedence. Note that without the continuous aspect marker *zyu6* to license the inversion (following Pan’s 1996 analysis for Mandarin *-zhe*), the sentence would have an agent-patient reading, as in (19):

- (19) 嗰 個 女仔 繞 燈燈
 go2 go3 neoi5zai2 kiu5 dang1dang1
 that CL girl bind lights
 ‘The girl is twisting the fairy lights.’

The analysis of clauses such as (13) and (16-17) in terms of locative inversion is supported by similar constructions elicited from adults using a picture elicitation task (Ng 2015), as in (20):

- (20) 條 毛巾 穿咗 個 窿
 tiu4 mou4gan1 cyun1-zo2 go3 lung1
 CL towel drill-PERF CL hole
 ‘The towel has a hole (drilled) in it.’

Here, although the inanimate subject 條毛巾 *tiu4 mou4gan1* ‘the towel’ is not a prototypical locative expression, it can be construed as a location. As in the cases discussed above such as (13), the verb takes the aspect marker *zo2* denoting a resultative state, consistent with locative inversion (Ng 2015).

² We thank an anonymous reviewer for pointing out this possibility.

Child vs adult Cantonese

While both children and adults were found to produce the novel relative clause construction as seen in (4-10) above, children produced more tokens (over 10) than adults, who produced only four tokens in the experiment. Adults were more prone to use passives in response to the stimuli, as in (21-22):

- (21) a. Passivized subject relative clause:
俾 燈燈 繞住 嗰 個 女仔
bei2 dang1dang1 kiu5zyu6 go2 go3 neoi5zai2
PASS lights bind-CONT that CL girl
'the girl with fairy lights strung on her'
- b. Corresponding main clause:
女仔 俾 燈燈 繞住
neoi5zai2 bei2 dang1dang1 kiu5zyu6
girl PASS lights bind-CONT
'The girl has fairy lights strung on her.'
- (22) a. Passivized subject relative clause:
俾 ung1住 雪 嗰 個
bei2 ung1zyu6 syut3 go2 go3
PASS bury-CONT snow that CL
'the one that is buried in snow'
- b. Corresponding main clause:
男仔 俾 雪 ung1住
naam4zai2 bei2 syut3 ung1zyu6
boy PASS snow bury-CONT
'The boy is buried in snow.'

Although children show comprehension of passives from as early as age 3 (Lau 2011), they rarely produce them at the age range in this study (4;02.29 – 5;10.00). This may account for their overuse of the novel relative clause type.

3. Conclusion and implications

In this paper we have analysed a previously undescribed form of relative clause. We have suggested that this construction is based on a variant of locative inversion which, in accordance with Mok (1992) and Pan (1996), derives an unaccusative configuration.

The experiment shows that although both children and adults produce relative clauses of this kind, children do so more frequently, and with a wider range of predicates. Children resist using object relative clauses with an inanimate subject and animate head noun (Lau 2016). At a stage when they are not yet using passives productively, children resort to the construction in the experimental situation. Whether such relative constructions are also produced spontaneously remains to be seen.



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粵語中的新型關係從句

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提要

本文描述一種以往從未被文獻描述過的廣東話關係從句 – 從一個產出誘出實驗中，小孩及成人均不約而同產出以受詞為主語的關係從句。這些主語關係從句包含一種處所倒裝結構。當中的體標記“住”亦呼應了莫瑞生（1992）及潘海華（1996）的處所倒裝結構衍生出非受格句之分析。

關鍵詞

粵語，關係從句，處所倒裝結構

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