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論廣東話之補語連詞<br>＂話＂

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# ON THE STATUS OF THE COMPLEMENTIZER WAA6 IN CANTONESE* 

Ka-Wai Yeung


#### Abstract

Complementizers are generally known as function words that introduce a clausal complement, like that in English, for instance (Radford 1997). In many languages, complementizers are re-analyzed from verba dicendi, or verbs of 'saying' (Lord 1976; Frajzyngier 1991; Hopper and Traugott 1993; Lord 1993). This paper argues for the existence of a complementizer re-analyzed from a verb of 'saying' in Cantonese by providing a synchronic analysis of waa $6^{l}$. Waa6 has often been assumed to be a lexical verb in serial verb construction because of its following a 'saying' predicate or a cognitive predicate. However, this paper argues that waa6 is not always a verb, postulating that waa6 may have different meanings and subcategorizations in different situations, including waa6 ${ }_{l}$ meaning $\qquad$ (PP) CP] or [ $\qquad$ PP NP], the transitive verb waa6 ${ }_{2}$ meaning 'blame/


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${ }^{1}$ As is common practice for Mandarin and Taiwanese romanization, the paper use the Scheme for the Chinese Phonetic Alphbat (Hanyu Pinyin Fang'an) and Church Romanization, which was devised by Presbyterian missionaries in the $19^{\text {th }}$ century in Taiwan. The tones are not indicated in the transcription, except when they are essential to the analysis. For Cantonese romanization, this article follows the Cantonese Romanization Scheme (Jyutping) designed by the Linguistic Society of Hong Kong (LSHK) in 1993. See Tang et al (2002). The Chaozhou data are directly cited from Xu and Matthews (2005), in which the romanization is based on Xu (2004).
condemn' [__NP CP], and the complementizer waa $_{3}$ selecting a clause [__ $\mathrm{IP}^{2}$ ]. This proposal is supported by different tests, such as aspect marking and argument selection, confirming that the complementizer waa $\sigma_{3}$ formally exhibits different properties from that of the verbs waa6 ${ }_{1}$ and waa $6_{2}$.


## 1. INTRODUCTION

### 1.1 Background to the Grammaticalization of Complementizers from verba dicendi

Complementizers, in general, are the words that introduce a complement clause (IP), indicating that such a word is a complement of some lexical head. Complementizers are typically selected by verbs, usually verba dicendi (i.e., verbs of 'saying'), like say, tell, or cognitive verbs describing mentality, like think, doubt. For example in English, that in I thought that they would come is categorized as a complementizer. ${ }^{3}$

Heine (2002) describes grammaticalization in terms of a four-stage scenario. At Stage I, the 'initial stage,' the grammaticalized item is expressed with its 'normal' or source meaning. At Stage II, there should be a 'bridging context' that gives rise to an inference in favour of a new meaning that is a more plausible interpretation than the source meaning. Stage III concerns a 'switch context,' in which an interpretation in terms of the old source meaning is no longer allowed. Stage IV is the 'conventionalisation' of the grammaticalized items, where the target meaning no longer needs to be supported by the context that gave rise to it. The four-stage scenario does not occur in discrete stages, but in a continuum leading from Stage I to Stage IV and it has been found to be a helpful model in typological studies of the grammaticalization of

[^0]complementizers. Studies of grammaticalization have shown that that one of the paths of re-analysis by which complementizers develop is from verba dicendi ${ }^{4}$, as both complementizers and verbs potentially subcategorize for a clausal complement (IP). This potential constitutes the 'right typological precondition' for the grammaticalization of complementizers from verbs, in particular the 'say’ verbs. Wu (2004:90-91) observes that 'frequently this [grammaticalization] occurs when a language has serial verb constructions which allow for a sequence of two verbs of communication (one more specific, the second less specific) to become re-analyzed as a sequence of verb + complementizer [...].' Xu and Matthews (2005) also suggest that the productive verb serialization in Sinitic languages provides a 'relevant typological precondition' for complementizer grammaticalization. These preconditions construct the possible context by which the target meaning can be established.

The first exhaustive study of the re-analysis of complementizers from 'say' verbs is by Lord (1976) who surveyed a number of African and Asian languages, mostly Niger-Congo languages, and found that 29 of them appeared to have a complementizer re-analyzed from 'say' verbs. Her work provides extensive cross-linguistic evidence that complementizers can be re-analyzed from 'say' verbs. (1) shows an example from the Kwa language Ewe, where the complementizer bé is re-analyzed from the verb be, meaning 'say'. In (1a), the 'say' verb be takes a propositional complement. Yet, the 'say' verb gblo only takes an NP complement, as in (1b). If gblo takes a propositional complement, the complement clause must be introduced by a complementizer bé, as in (1c) and (1d).
(1)

| a. me-be mewoe | b. | me-gblo-e |
| :--- | :--- | :--- |
| I-say I-do-it | I-say-it |  |
| 'I said, "I did it".' or | 'I said it.' |  |
| 'I said that I did it.' |  |  |

[^1]| c. | *megblo | mewoe |
| :---: | :---: | :---: |
|  | I-say | I-do-it |
|  | 'I said, "I (Lord 197 |  |

$\begin{array}{lll}\text { d. megblo bé } & \text { mewoe } \\ \text { I-say } & \text { COMP } & \text { I-do-it }\end{array}$ I-do-it 'I said that I did it.'

Apart from West African languages, the same phenomenon is found in other languages, such as the Creole languages Saramaccan, as in (2), and Sranan, as in (3) (Plag 1993; Veenstra 1996; Lefebvre 2001). ${ }^{5}$

## Saramaccan:

| (2) a. Hén a táa: mi nángó |  |
| :--- | :--- | :--- | :--- |
| and-then 3sg say 1sg Asp_go |  |
|  | 'And then he said: I am leaving.' |

b. A táki: táa: a náki hén

3sg say say 3 sg hit $3 s g$
'He said that he had hit her.'
(Veenstra 1996:155)

## Sranan:

(3) a. Da’ Anansi taki, eng go proberi efi eng kan saki fa a nem
'Then Anansi said, he would try if he could learn his name.' (Plag 1993:40)
b. Mi sabi taki Marlon no fufuru na fowru I know SAY Marlon Neg steal the chicken 'I know that Marlon didn't steal the chicken.' (Plag 1993:36)

For Chinese, some studies (Chui 1994; Hwang 1998; Hwang 2000) have provided evidence to suggest that 'say' verbs are grammaticalized into complementizers introducing propositional complement clauses. These examples include shuo in Mandarin, kong in Taiwanese, and waa6 in Cantonese, as shown in (4).
(4) a. Mandarin:

Liji hui-da shuo (*le) meiyou...
Liji answer SHUO (*Asp) NO
'Liji's answers (that) "NO."'

[^2]b. Taiwanese:

Goa siongsin kong (*goe) $l$-teng bo phian goa I believe KONG (*Asp) he must Neg lie I 'I believe that he didn't lie to me.'
c. Cantonese:

John gong2 waa6 keoi5 hai6 mei5gwok3 lai4 gaa3 John say WAA6 he be America come SFP 'John said that he was from the U.S.' (Hwang 1998)

These studies are primarily concerned with a diachronic analysis of the grammaticalization of complementizers from 'say' verbs, setting the stage for further investigation through a synchronic analysis of these complementizers.

### 1.2 The Aims and the Proposal of the Paper

Building on proposals from earlier diachronic studies of Chinese, this paper argues for the existence of a complementizer re-analyzed from a verb of 'saying' in Cantonese by providing a synchronic analysis of waa6. It is tempting to analyze waa6 as a lexical verb in serial verb construction (SVC) because of its following a 'saying' predicate or a cognitive predicate. An SVC analysis is often assumed without any synchronic justification, such as in Matthews and Yip (1994:308), 'gong...wah "talk...say" is a serial verb construction in which the second verb waa6 appears redundant.' Also, Hwang (2000) analyses shuo 'say' construction as 'factive-complementizer shuo "say" serial verb construction,' even though she believes that shuo performs the grammatical function as a complementizer following saying, informative, and cognitive verbs. This paper takes the alternative view that although the waa6 construction is historically derived from an SVC, and waa6 continues to be used as a serial verb in some contexts, there is a usage of waa6 that is fully grammaticalized as a complementizer and synchronically distinct from a serial verb.

This paper postulates that waa6 may have different meanings and subcategorizations in different constructions, including 1) waa6 meaning 'say' which subcategorizes either an optional PP and an obligatory CP [__ (PP) CP], or selects a PP and an NP [ ___ PP NP]; 2) the transitive verb waa6 meaning 'blame/ condemn' which subcategorizes an NP and an optional CP [ ___ NP (CP)], and 3) the
complementizer waaf $_{3}$ as a clause introducer selecting a propositional sentence (__ IP). In addition, this paper argues that waa6 $6_{3}$ lacks the syntactic characteristics typical of verbs, providing further evidence that waat $_{3}$ is not a serial verb in this usage. In the following sections, a number of syntactic and semantic arguments will be given to support these proposals.

| The Three wat's: |  |  |
| :---: | :---: | :---: |
| waal $_{1}$ 'say': | Intransitive Verb: | __ (PP) CP |
|  | Transitive Verb: | $\ldots$ PP NP |
| waa6 $_{2}$ 'blame/condemn': | Transitive Verb: | -_ NP (CP) |
| waa6 $_{3}$ : | Complementizer: | _ IP |

Having ascertained the complementizer status of waab $_{3}$, the paper then looks into the possibility of further grammaticalization of waa6 into a sentence-final particle (SFP) with reference to the case of Taiwanese kong (Simpson and Wu 2002; Wu 2004). In addition, it also contrasts the grammaticalization of waab in Cantonese with other reanalyzed complementizers in the Sinitic languages, such as $t \tilde{a}$ in Chaozhou and Taiwanese kong, showing the process of grammaticalization of waa6 is still in its 'younger' stage. The complementizer status of waat also sheds light on word order typology in Chinese. A postulation of how the fact that waa6 is a head-initial complementizer relates to the unusual word order typology in Chinese will be given in the concluding section.

## 2. A PRELIMINARY ANALYSIS BASED ON CANTONESE CORPUS DATA

Before probing into the syntactic and semantic evidence, this section provides a brief sketch of the Cantonese data gathered from Cantonese corpora. These data provide some preliminary information on the different usages of waa6. Most of the data used in the section are taken from two corpora, the Cantonese Radio Corpus (CRC) by Francis, Yiu, Matthews, and Chu (in preparation), and the Hong Kong Cantonese Adult Language Corpus (HKCAC) by Law et al. (2002).

### 2.1 The Verbal Usage of waa6

The basic usage of waa6 is as a 'say' verb, as in (5a). As a 'say' verb, waa6 ${ }_{1}$ subcategorizes a CP ( _ CP) and it exhibits several verbal properties, including aspect marking (5b) and (5c), selecting an optional PP goal argument (5d) and (5e), and following an auxiliary (5f).
(5) a. keoi5 waa6 [срji5hau6 dou1 m4 heoi3 lak3] 3sg WAA ${ }_{1}$ [cp forever all Neg go Part] '(S)he said that (s)he would never go again.'
b. keoi5 waa6_zo2 [ср ji5hau6 doul m4 heoi3 lak3]
(HKCAC) 3sg $\mathrm{WAA}_{1}$ Asp [cp forever all Neg go Part] '(S)he said that (s)he would never go again.'
c. ngo5 mou5 waa6_gwo3 [ ${ }_{\text {CP }}$ lei5 co3]
(CRC)
1 sg Neg $\mathrm{WAA}_{1}$ Asp [cр 2sg wrong] 'I didn’t say you're wrong.'
d. keoi5 waa6 [pp bei2 ngo5 teng1],
(HKCAC)
$3 \mathrm{sg} \mathrm{WAA}_{1}$ [pp to 1 sg listen], [cpinploeng5ci3 lol]
[cpinp twice Part]
'(S)he told me that it happened twice.' or
'(S)he told me twice.'
e. zau6 waa6 [pp bei2 ngo5dei6 zil]
(CRC) then $\mathrm{WAA}_{1}$ [pp to 1 pl know] [срjau5 mel saanglji3 ho2ji3 zou6] [cр have what business can do] 'Then tell us what kind of business we can do.'
f. ngo5 gok3dak3 ngo5 jinglgoil
(CRC)
1sg think 1sg Mod waa6 bei2 keoi5 teng1 [Nㅏ lilgo3 cing4fong3] $\mathrm{WAA}_{1}$ to 3 sg listen [ Np this situation] 'I think I should tell him/her the situation.'

Sometimes, waa6 ${ }_{I}$ is used in a metaphorical sense. This metaphorical extension bleaches the original verb of its meaning of 'say' and the verb meaning slowly alters from to that of a 'cognitive' sense, such as 'think.' Hwang (1998) suggests that the metaphor involved here is probably SPEECH IS THOUGHT (Chui 1994; Lord 1993). In (6), waa6 $6_{l}$ may also be used as a cognitive verb, meaning 'think.'
(6) gam2 lei5 waa6 [Ср hai2 mai6 hou2 fung3ci3 aal? ] (HKCAC) then 2sg $W_{A A}$ [CP is Neg very ironic Part] 'So, don't you think it's ironic?'
 meaning 'blame', 'condemn' or 'criticize.' The subcategorization of $w a a 6_{2}$ is different from waa6 ( $\qquad$ CP ). It selects an NP, the patient argument, and a CP, (__ NP CP), as (7a) and (7b). The passive \left. construction of ${w a a \sigma_{2}}^{(7 c}\right)$ is also common. It should be noted that for the $w a a 6_{2}$ construction, it is possible to have another waa6 before the complement clause, as in (7d). It is likely that the second waa6 in (7d) is the complementizer $\boldsymbol{w a a b}_{3}$. A detailed analysis will be provided in later sections ${ }^{6}$.


[^3]
### 2.2 The Clausal Complement-introducing waa6

In addition to the verbal usages of waa6, waa6 can also be used to introduce a complement clause. From the analysis of the preliminary corpus data, it is found that a number of predicates can co-occur with waa6 as the complement-clause introducer. These predicates fall into three main categories: 'say' predicates indicating any forms of speech; cognition and perception predicates describing the speaker's mentality or perception; and informative predicates. This following list shows all the predicates found to co-occur with waa6 in the two corpora, with waa6 in a complement-introducing position. The list of actual instances in which waa6 were found is given in Appendix II.

| 'say' predicates: |  | cognition and perception predicates: |  |
| :---: | :---: | :---: | :---: |
| gong2 'say' | king1 'discuss' | gok3dakl'think' / | soeng2 'think'/ |
| tai4 / tai4dou3 / | tai4ceot1 | 'believe' | 'plan' |
| tai4kap6 | 'suggest' | heilmong6 'hope' | $\operatorname{lam2}$ 'think'/ |
| 'mention' | man6 'ask' | tai2 'see' | 'plan' |
| daap3 'answer' | sing4jing6 |  |  |
| giu3zou6 | 'admit' |  |  |
| 'be called ' | akl 'cheat' |  |  |
| jyun3 'grumble’ | gaai2sik1 |  |  |
| san3 'grouch' | 'explain’ |  |  |
| giu3 'shout' | teoil 'refuse' |  |  |
| laai6 'blame' | tam3 'comfort' |  |  |
| 'informative' pre | dicates: | Other predicates: |  |
| tunglzil | se2 'write' | hai6 'be' |  |
| 'inform' |  |  |  |

From the data, it can be seen that predicates that can co-occur with waa6 in the complement-introducing position are mostly the ones that

[^4]potentially select a clausal complement, i.e., the 'say' predicates, the 'cognition and perception' predicates, and the 'informative' predicates. Even for hai6 'be,' which is not in these three categories, hai6 'be' is still a potential predicate selecting a clause as its complement. While in some cases, waa6 appears unambiguously with a complementizer reading, many of the cases in which the 'say' and informative predicates are followed by a waa6-clause may be ambiguous between serial verb and complementizer interpretations, i.e., the bridging contexts postulated by Heine (2002). In such cases, both old (SVC) and new (complementizer) interpretations are available, even though the new meaning is favoured.

Finally, the corpora even show waa6 with some English predicates. In code-mixing situations, speakers may use waat to introduce propositional complements after an English predicate that potentially subcategorizes a that-clause. Note that such the data are found in both our Cantonese corpora:
(8) ngo5 doul m4 EXPECT waa6 [zanlhai6 wui5 hai6] (CRC) 1 sg all Neg expect WAA [really Mod is] 'I didn't expect that would really be true.'
(9) keoi5 ENCOURAGE ngo5 waa6 kei4sat6 laam4sing3 (HKCAC) 3 sg encourage $1 \mathrm{sg} \quad$ WAA actually men
dou1 jau5 hou 2 zan 1zi3 ge3 jau5ji4
all have very sincere Poss friendship
'He encouraged me to believe that actually men also have sincere friendship.'

This phenomenon may suggest that intrinsically, waa6 may be understood and used as a complementizer. When speakers encounter a complement-taking predicate which potentially selects a complementizer that in English, they probably select the word waa6 as the complementizer. Even if the predicate actually does not allow a that-complement in English ${ }^{8}$, like encourage in (9), the code-mixing speaker probably foresees its potential of taking a propositional complement and picks out waa6 to introduce the complement because of overgeneralization. Or, speakers may actually be forced to choose waa6

[^5]because it is the only complementizer available to follow a verb in Cantonese. ${ }^{9}$ While Example (9) may be ambiguous as to whether it takes a serial verb or complementizer reading, i.e., between 'he encouraged me saying [...]' or 'he encouraged me (to believe) that [...],' the serial verb reading in (8) is definitely incompatible with the context. This usage probably corresponds to Heine's (2002) 'switch context,' in which the source meaning (verbal usage of waa6) is no longer compatible.

After the preliminary analysis of the Cantonese corpus data, we have seen the plausibility of analyzing waa6 into three different words with different meanings, syntactic properties, and subcategorizations. From the fact that waa6 may co-occur with various predicates, it is likely that waa6, in fact, functions as a complementizer that introduces a complement clause in some cases. To justify this postulation, more syntactic and semantic evidence is necessary. This will be the main focus of the following sections.

## 3. SYNTACTIC EVIDENCE

This section aims to evaluate the syntactic evidence that waab, apart from its verbal usage, may function as a complementizer in some constructions. The first part focuses on the different argument selection properties of different senses of waa6, justifying them as separate lexical entries. The second part demonstrates the loss of the verbal behaviour of waa6 in the complement-introducing position, which involves the inability of being aspect marked and undergoing verb-doubling. The third part will be a constituency test proving that waa6 forms a constituent with its following IP.

### 3.1 Argument Selection

As a 'say' verb, waa6 ${ }_{l}$ can select an optional PP as its goal argument (10), such as gong2 (11). However, in the complement-introducing

[^6]position, the goal argument can only follow the first verb gong2, but not waa6 (as shown in (12) and (13)). The ungrammaticality of (13) shows that waa6 in (13) cannot be waa6 $6_{1}$ in a SVC with gong2 and that the verbal behaviour of waat $_{1}$ which takes a PP argument has been lost. It is therefore likely that waa6 in (12) is the complementizer waa6 $_{3}$.
(10) keoi5 waa6 [pp bei2 ngo5 teng1] lei5 wui5 lai4 $3 s g$ say [pp to 1sg listen] you Mod come '(S)he said to me that you would come.'
(11) keoi5 gong2 [pp bei2 ngo5 teng1] lei5 wui5 lai4 3 sg say [pp to 1 sg listen] you Mod come '(S)he said to me that you would come.'
(12) keoi5 gong2 [pp bei2 ngo5 teng1] waa6 lei5 wui5 lai4 3sg say [pp to 1sg listen] WAA you Mod come '(S)he said to me that you would come.'
(13) *keoi5 gong2 waa6 [pp bei2 ngo5 tengl] lei5 wui5 lai4 3sg say WAA [pp to 1sg listen] you Mod come

This argument selection property is a useful tool to identify the status of waa6 in many constructions appearing to be SVC's and it will be used in later sections.

### 3.2 Loss of Verbal Behaviour

During the re-analysis process, semantic bleaching often occurs on a grammaticalized item and some of the syntactic properties exhibited by the original item are then lost (Lord 1976; Hopper and Traugott 1993). Regarding the case of waa6, it is observed that the verbal properties of waa6 ${ }_{l}$, such as aspect marking and undergoing verb-doubling, are lost, as shown by the following examples.

## Aspect marking

Generally, in SVC's, either verb can be aspect marked, as (14) and (15). As a 'say' verb, waa6 $6_{l}$ can be aspect-marked by gwo3 or zo2 (17), just like other 'say' verbs such as gong2 (16). In (18), when waa6 follows a 'say' verb, gong 2 , only gong 2 can be aspect-marked (18a), but not waa6 (18b).
(14) a. ngo5 pui4 keoi5 sik6_gwo3/zo2 faan6

1sg accompany 3sg eat_Asp rice
'I have had dinner with him/her.'
b. ngo5 pui4_gwo3/zo2 keoi5 sik6 faan6

1sg accompany_Asp 3sg eat rice
'I have had dinner with him/her.'
(15) a. keoi5 heoi3 gwo3/zo2 king1 [ip gaal m4 gaal jan4gung1] 3sg go_Asp discuss [ip add Neg add salary]
(batlgwo3 mei6 jau5 kyut3ding6)
(but Neg have decision)
'(S)he has tried to discuss whether to have a pay rise (but there hasn't been a decision).’
b. keoi5 heoi3 king1_gwo3/zo2 [ip gaal m4 gaal jan4gung1]

3sg go discuss_Asp [IP add Neg add salary]
(batlgwo3 mei6 jau5 kyut3ding6)
(but Neg have decision)
'(S)he has tried to discuss whether to have a pay rise (but there hasn't been a decision).'
(16) keoi5 gong2 gwo3/ zo2 [IP lei5 wui5 lai4]
3sg say_Asp [IP 2sg Mod come]
'(S)he said you would come.'
(17) keoi5 waa6_gwo3/_zo2 [iplei5 wui5 lai4]

3sg WAA_Asp [ip 2sg Mod come]
'(S)he said you would come.'
(18) a. keoi5 gong2 gwo3/zo2 waa6 [ip lei5 wui5 lai4]

3sg say_Asp WAA [IP 2sg Mod come]
'(S)he said that you would come.'
b. *keoi5 gong2 waa6_gwo3/_zo2 [IP lei5 wui5 lai4]

3sg say WAA_Asp [IP 2sg Mod come]
One possibility is to suggest that waa6 in (18) has become a defective verb that cannot take any aspect markers, like the verb hai6 'be' (c.f. *hai6_zo2, *hai6_gwo3). Another possibility is that in a complement-introducing position, waa6 has lost its verbal property and become a complementizer. The confusion is expected and predicted in a bridging context, in which both serial verb and complementizer readings are possible.

## Verb-doubling test

In Saramaccan and Sranan, we can observe a similar phenomenon, i.e., a lexical item serving both as a verb and as a that-type complementizer (refer to (2) and (3)). To distinguish between the verbal function and the complementizing function, Lefebvre (2001) uses the verb-doubling test, which is also known as 'verb-topicalization' (Matthews and Yip 1998) or 'verb-fronting' (Matthews 2003). In Creoles, the basic function of verb-doubling is for emphasis and concession. (Matthews 2003). As a verb, taki/táa may participate in the verb doubling phenomena, but as a complementizer it cannot. The contrast in grammaticality between (19a) and (19b) is shown in Lefebvre (2001):

Saramaccan:
(19) a. Verb:

$$
\begin{array}{lllll}
\text { táa } & \text { a táa: } & \text { m’e } & \text { nángó } \\
\text { say } & \text { 3sg say: } & \text { 1sg-Neg } & \text { Asp-go }
\end{array}
$$

'He really said: I am not leaving.'
b. Complementizer:

$$
\begin{array}{cccll}
\text { * táa a táki táa } & \text { á } & \text { búnu } \\
\text { say } & \text { 3sg } & \text { say say } & \text { 3sg-Neg } & \text { good } \\
\text { (Lefebvre 2001:113) } & &
\end{array}
$$

Verb-doubling phenomenon is also a productive phenomenon in Cantonese syntax, carrying a similar emphatic or concessive sense as in the Creoles (Matthews and Yip 1998), as (20).
(20) fan3 zau6 fan3_zo2 hou2 loi6 laa1
sleep then sleep_Asp very long Part
(daan6hai6 zung6 mei6 fan3_zoek6)
(but still Neg sleep_Asp)
'He went to sleep some time ago (but hasn't been asleep yet).'
In serial verb constructions, both the main verb and the serial verb may undergo verb-doubling, such as pui4 and sik6 in (21), as well as heoi3 and kingl in (22):
(21) a. pui4 zau6 pui4_gwo3 keoi5 sik6 faan6 ge2 accompany then accompany_Asp 3sg eat rice Part (daan6 keoi5 hau6meil heoi3 bin1 ngo5 m4 cenglcok2) (but 3sg later go where 1sg Neg certain) 'I did have dinner with him/her (but I don’t know where (s)he was after then).'
b. sik6 zau6 pui4 lei5 sik6_zo2 faan6 laak3
eat then accompany 2sg eat_Asp rice Part
(gam2 lei5 zung6 soeng2 heoi3 bin1)
(then 2 sg still want go where)
'I have already had dinner with you (so where else do you want to go?)'
(22) a. heoi3 zau6 heoi3_zo2 kingl gaal jan4gung1 ge2
go then go_Aso discuss add salary Part (batlgwo3 mou5 git3gwo2)
(but Neg result)
'(I) did go and discuss a pay rise (but there's been no result).'
b. kingl zau6 heoi3 kingl_zo2 gaal jan4gungl ge2 discuss then go discuss_Asp add salary Part (batlgwo3 lou5sai3 teng1 m4 tengl zau6 $\mathrm{m4}$ zil laak3) (but boss listen Neg listen then Neg know Part)
'(I) did go and discuss a pay rise (but I don't know whether the boss would listen to me).'

When the verb-doubling test is applied to waa6, it appears that waa6 only allows verb-doubling in its verbal usage, as in (23a); but disallows verb-doubling in its complementizer usage, i.e., when it follows the predicate gong2 'say' (23b), or lam2 'think' (23c):
(23) a. Verb:
waa6 keoi5 zau6 waa6 gwo3 waa6 [ip m4 daklhaan4]
WAA 3sg then WAA_Asp WAA [ip Neg free]
(daan6 hau6meil jau6 lei4_zo2)
(but eventually but come_Asp)
'(S)he really said that (s)he was not free (but she came eventually).'

## Complementizer:

b. \{gong2 ${ }^{*}$ waat $\}$ keoi5 zau6 gong2 waa6 [IP $m 4$ daklhaan4] \{say / *WAA\} 3sg then say WAA [IP Neg free] (daan6 hau6meil jau6 lei4_zo2) (but eventually but come_Asp)
'(S)he really said that (s)he was not free (but she came eventually).'
c. \{lam2/*waa6\} keoi5 zau6 lam2 waa6 [ip m4 daklhaan4] \{think / *WAA \} 3sg then think WAA [ip Neg free] (daan6 haubmeil jau6 lei4_zo2) (but eventually but come_Asp)
'(S)he really thought that (s)he was not free (but she came eventually).'

The test shows that waa6 in the complement-introducing position lacks verbal behaviour, to the extent that it cannot undergo verb-doubling. According to the results of this test, we may draw a similar conclusion to that in the Creole languages discussed, namely that Cantonese waa6 functions more like a complementizer than a serial verb in such a construction. ${ }^{10}$

### 3.3 Constituency Test

If waa $_{3}$ is a complementizer, it must form a constituent, namely CP, with the following IP. Even though constituency tests do not directly prove the complementizer status of waa6, they are necessary for identifying waa6-clauses as single constituents. If waa6-clauses fail to be proven as constituents, the postulation of waa6 as a complementizer

\footnotetext{
10 However, it is observed that the second verb in certain Cantonese serial verb constructions may not undergo verb-doubling either, as in (i):
i. \{co5/*faan1\} ngo5 zau6 co5_gwo3 sailtit3 [faan1 uklkei2] \{sit/back\} 1sg then sit_Asp West Rail [back home] 'I really took the West Rail home.'
In (i), co5 is the first verb and faan1 is the second verb in the SVC. It is proposed that the unacceptability of (i) may be caused by the complement NP uklkei2 'home,' c.f.:

selecting an IP complement will be undermined. In this section, coordination tests are carried out to investigate the constituent structure of waa6-clauses.

Assuming waa6 is a complementizer following predicates like gong2 'say' or lam 2 'think,' it should form a CP constituent with the following IP. Example (24) shows the possible coordination of waa6-clauses (CPs). The coordinating conjunction tung4maai4 'and' is optional as in Cantonese parallel coordination can be generally achieved by juxtaposition (Matthews and Yip 1994) However, the coordinating conjunction waak6ze2 'or' is obligatory.
(24) a. With gong2 'say':
keoi5 gong2_gwo3 [срwaa6 m4 daklhaan4,] (tung4maai4) 3sg say_Asp [cРWAA Neg free,] (and) [СР(waa6) $m 4$ soeng2 gin3_dou2 ngo5,] so2ji3 m4 heoi3 [cp(WAA) Neg want see_Asp 1sg,] so Neg go '(S)he said that (s)he was not free and that (s)he didn't want to see me, so (s)he would not come.'
b. With lam2 'think':
ngo5 lam2 zyu6 [срwaa6 keoi5 m4 heoi3,] waak6ze2
1sg think_Asp [cРWAA 3sg Neg go,] or [cp(waa6) ngo5 daklhaan4,] sin1 wui5 ceotljin6 [cp(WAA) 1sg free,] only_when Mod appear 'I think I will be there if (s)he doesn't go or if I am free.'

For the predicate waa6 'blame/ condemn' however, the sentences appear to be slightly worse than the examples in (24), probably because it becomes unclear whether the repeated waa6 is waa6 ${ }_{1}, w a a 6_{2}$, or waaf $_{3}$ :
(25) a. With waa6 'blame/ condemn':
ji4gaal dil jan4 seng4jat6
now Cl people always
waa6 $_{2}$ hoenglgong2 ge3 daai6hok6saangl, condemn Hong Kong Poss university students,

| [cpwaa6 jinglman2 | $m 4$ hou2, |
| :---: | :---: |
| [CPWAA English | Neg good, |
| [cp(?*waa6) zunglman2 | $m 4$ hou2] |
| [cp(?*WAA) Chinese | Neg good] |

'Now, people always condemn the university students in Hong Kong for having a low ability in English and a low ability in Chinese.'
b. In passive voice:
hoenglgong2 ge3 daai6hokbsaang1
Hong Kong Poss university students
seng4jat6 bei2 jan4 waa6
always Pass people condemn
[cpwaa6 jinglman2 m4 hou2,]
[cPWAA English Neg good,]
[cp(?*waa6) zung1man2 m4 hou2]
[cp(?*WAA) Chinese Neg good]
'Now, the university students in Hong Kong are always condemned for having a low ability in English and for having a low ability in Chinese.'

It is observed that these sentences sound better if a conjunction, like tung4maai4 'and,' is added:
(26) a. With waa6 ${ }_{2}$ 'blame/ condemn':
ji4gaal dil jan4 seng4jat6
now $\quad \mathrm{Cl}$ people always
waat $_{2}$ hoenglgong2 ge3 daai6hok6saangl,
condemn Hong Kong Poss university students,
[cpwaa6 jinglman2 m4 hou2,]
[cPWAA English Neg good,]
tung4maai4 [ср(waa6) zunglman2 m4 hou2]
and [cp(WAA) Chinese Neg good]
'Now, people always condemn the university students in Hong Kong for having a low ability in English and a low ability in Chinese.'
b. In passive voice:

tung4maai4 [СР(waa6) zunglman2 $m 4$ hou2]
and [cp(WAA) Chinese Neg good]
'Now, the university students in Hong Kong are always condemned for having a low ability in English and for having a low ability in Chinese.'

It is not clear why coordination without an explicit conjunction tung4maai4 'and' appears to be less grammatical. In cases without the second waa6, we have IP-, not CP-, conjunctions. Although the possible coordination of waa6-clauses does not directly prove the complementizer status of waa6, it ascertains the fact that waa6 forms a constituent with the following IP and is consistent with the previous analyses of waa6 as a potential complementizer.

## 4. SEMANTIC EVIDENCE

After demonstrating the syntactic evidence, this section will provide some semantic evidence that supports the proposal that waab $_{3}$ is a complementizer, rather than a verb in SVC with other predicates. The co-occurrence of two waat's in sentences will be first discussed, suggesting that there may be two different waab's with different semantic/ pragmatic functions. The second part analyzes the occurrence of waa6 following non-factive predicates, a context where waa6 cannot be interpreted as a 'say' verb.

### 4.1 The Co-occurrence of waa6's

For SVC, the co-occurrence of different senses of the same predicate is found to be problematic, such as ${ }^{11}$ :

[^7](27) *keoi5 bei2 cin2 bei2 ngo5

3sg give money give 1sg
'(S)he gave money to me.'
Even though Hwang (1998) proposes that waa6 may have different meanings in different situations, such as as a 'saying' verb, or as a complementizer, she suggests that the co-occurrence of waat's in a series is not possible, as in:
(28) keoi5 waa6 (*waa6) heonglgong2 hou2 dei6fong1

3sg say (*WAA) Hong Kong good place
'(S)he said that Hong Kong was a nice place.'
(Hwang 1998)
The appearing ungrammaticality of the immediate co-occurrence of waa6's may be due to the 'Obligatory Contour Principle', which states that consecutive phonological identical/ similar features are banned in underlying representations ${ }^{12}$. Chappell (to appear) relates this observation with Chao's (1968) rule of haplology in Chinese linguistics, whereby 'two consecutive instances of the same syllable in Mandarin simplex clauses result in the omission of the second'. The co-occurrence of waa6's can only be grammatical in some structures, such as with intervening aspectual markers, particles, pauses. These examples are shown in (29) to (31).

## With aspectual marker intervening:

(29) keoi5 waa6_gwo3 waa6 [IP $m 4$ daklhaan4 lai4]

3sg say_Asp WAA [IP Neg free come]
'(S)he said that (s)he was not free to come.'

## With particle intervening:

(30) keoi5 waa6 le1 waa6 $\quad$ [IP $m 4$ daklhaan4 lai4]
3sg say Part WAA
'(S)he said that (s)he was not free to come.'
more acceptable sentence becomes. (Tang 1998a)
${ }^{12}$ For discussion of the 'Obligatory Contour Principle’ (OCP), see McCarthy (1981, 1986).

With pause:
(31) keoi5 waa6 $\langle p\rangle$ waa6 [ ${ }_{\mathrm{IP}} m 4$ dakIhaan4 lai4] 3sg say <p> WAA [ ${ }_{\text {IP }} \mathrm{Neg}$ free come] '(S)he said that (s)he was not free to come.'

It is interesting to note that in other Sinitic languages, such as Chaozhou and Taiwanese, the immediate co-occurrence of the verbal 'say' and the re-analyzed complementizer 'say' is accepted without any intervening elements, which may reflect a more 'advanced' stage of grammaticalization of Chaozhou $t \tilde{a}$ and Taiwanese kong:
(32) a. i tã tã "lu tsio sẽ tso $m$ tui"

3sg say say 2 sg this way do not right
'(S)he said "What you did was wrong".'
(Xu and Matthews 2005)
b. lín ban-chek-à kah goá kóng kóng

2pl youngest_uncle comitative-marker 1 sg say say
goá oân-á ū chò siān-sū là
1sg also have do good_deed Part
'Your youngest uncle told me that I had also done some good deeds.'
(Chappell to appear)
Apart from these constructions with intervening elements, it is also possible to have an immediate surface adjacency of waa6 without intervening elements, at least in the case of transitive verb waa6 $_{2}$ 'blame/ condemn', as (33). Note that it is only a case of surface adjacency, as assuming a movement analysis for passivization, there is a trace left between the two waat's.

Immediate (surface) adjacency without intervening elements:
(33) keoi5 bei2 jan4 waa6 $t_{i}$ [СР waa6 m4 sikl jinglman2]
$3 \mathrm{sg}_{\mathrm{i}}$ Pass people condemn $\mathrm{t}_{\mathrm{i}}$ [cp WAA Neg know English]
'(S)he is condemned in that she doesn't know English.'
The two superficially adjacent waat's may be made possible by the trace left after the NP-movement. It is also possible that the lexical sense
of the transitive waa6 is maximally distinct from the semantically bleached complementizer waa6, facilitating their juxtaposition.

It might be argued that the second waa6 is not necessarily waa $6_{3}$, but actually waa6 $_{1}$ 'say' in a serial construction with waa6 ${ }_{2}$ 'blame/ condemn'. Yet, this possibility can be ruled out by the ungrammaticality of (35) where waa6 is not able to take the PP argument. (Please refer back to (12)-(13).)
(34) keoi5 bei2 jan4 waa6 waa6 [IP $m 4$ sikl jinglman2] 3sg Pass people condemn WAA [ip Neg know English] '(S)he is condemned for not knowing English'
(35) *keoi5 bei2 jan4 waa6 waa6 [pp bei2 keoi5 teng1] 3sg Pass people condemn WAA [pp to 1sg listen] [IP $m 4$ sikl jinglman2]
[IP Neg know English]
'(S)he was condemned by people, telling her that she doesn't know English.’

The ungrammaticality of (35) implies that the second waa6 that introduces the complement clause cannot be there in its verbal usage, but as a complementizer $\left(\mathrm{waaf}_{3}\right)$.

### 4.2 Non-factive Predicates

Non-factive predicates presuppose the complement clause as being false (Ludlow 1996:406-461). For example, in (36a), in order to make the non-factive reading felicitous, there exists a presupposition that proposition (36b) must be false.
(36) a. He thought that she went to the church. (non-factive reading) b. She went to the church.

Owing to its occurrence following non-factive predicates, such as ji5wai4 'think,' waai4ji4 'suspect,' and lam2zyu6 'think,' waa6 ${ }_{3}$ cannot be interpreted as a 'say' verb. For example, (37a) only presupposes (37b) as false, but not (37c). Therefore, the complement proposition should be (37b), not (37c); hence, it forces waa6 to be given a complementizer reading, like the English that, instead of a verbal meaning (waa6 'say'). This corresponds to the 'switch context' stage of the grammaticalization
pathway (Heine 2002), in which the new context is incompatible with the source meaning, i.e., the verbal meaning of waat as 'say' is incompatible within the context.
(37) a. ngo5 zung6 ji5wai4 waa6 [lei5 m4 dakIhaan4 timl]

1sg again think WAA [2sg Neg free Part]
'I thought that you were not free.'
b. lei5 m4 dakIhaan4

2sg Neg free
'You were not free.'
c. ngo5 waa6 lei5 m4 daklhaan4
(T/F ??)
1 sg say 2 sg Neg free
'I said that you were not free.'
Sometimes, waa6 sentences with a potential non-factive reading may be thought to be ambiguous, as in (38a). Some may argue that (38a) may have two possible readings and the verbal interpretation of waa6 is still salient. In fact, (38a) only entails the non-factive reading of waa6 as being a complementizer, i.e., only the presupposition of heoi3 baklgingl 'go to Beijing' is false, as demonstrated in (38b). It does not presuppose the falsity of the proposition in (38c) waa6 heoi3 baklging1 'say to go to Beijing'. Thus, waa6 following a non-factive predicate, as in (38a), rules out the possible verbal interpretation of waa6.
(38) a. ngo5 lam2_zyu6 waa6 [Ipheoi3 baklging1]

1sg plan_Asp WAA [II go Beijing]
'I planned to go to Beijing (but I didn't).'
(Reading 1: non-factive, waa6 as complementizer)

* 'I planned to say that I would go to Beijing.'
(Reading 2: waa6 as 'say')
b. ngo5 lam2_zyu6 waa6 [ip heoi3 baklging1],

1sg plan_Asp WAA [ip go Beijing],
$\operatorname{dim} 2 z i l$ mou $5 \quad$ cin2
but Neg money
'I planned to go to Beijing, but I have no money.'
(Presupposition: heoi3 baklgingl 'go Beijing' is false)
c. ngo5 waa6 [ip heoi3 baklgingl], (T/F??)

1sg WAA [ip go Beijing],
'I said I went to Beijing.' (T/F ??)

The occurrence of waat with non-factive predicates rules out the possible verbal interpretation of waa6. It provides the switch context (Stage III), in which the source meaning (as a 'say' verb) is no longer compatible with the non-factive context of the sentence; hence foreshadowing that the target meaning (as a complementizer) provides the only possible interpretation.

## 5. FURTHER GRAMMATICALIZATION OF WAA6 INTO A SENTENCE-FINAL PARTICLE (SFP)

Heine (2002) hypothesizes a four-stage grammaticalization pathway in which various contexts are involved. The four-stage grammaticalization pathway is represented as follows:
Stage I
II
III
IV

Initial stage > Bridging context > Switch context > Conventionalization
The pathway for 'say'-complementizer in Sinitic languages may possibly be (Xu and Matthews 2005):

I II
Initial stage $>$ Bridging context $>$
'say' verb Quotative marker (following speech act verbs)

## III

Switch context $\quad>\quad$ Conventionalization Complementizer (following cognition/ perception verbs)

Complementizer (following epistemic modals)

For some complementizers developed from 'say' verbs, all stages in the entire pathway have been observed, such as $t a \tilde{a}$ in Chaozhou:
(39) a. Initial Stage (I): tã as a lexical verb
$i \quad$ siã $t a \tilde{a}$

3sg first say
'He will say (it) first.'
b. Bridging context (II): tã as a quotative marker
$i$ ta $t \tilde{a}$ "lm tsio se tso $m$ tui"
3sg say say 2sg this way do not right
'(S)he said "what you did was wrong".'
c. Switch context (III): $t \tilde{a}$ as a complementizer following cognition/ perception verbs
ua siõ ${ }^{*}(t a ̃)$ mazek tio? tsiõpaך 1sg think *(say) tomorrow should go.to.work 'I thought I had to go to work tomorrow.'
d. Conventionalization (IV): $t \tilde{a}$ as a complementizer following epistemic modals
$i \quad$ upià $t a ̃ \quad s a ̃ \quad m e \quad s a ̃$ zek men $\tilde{a}$ 3sg can say three nights three days not.need sleep '(S)he can go without sleep for three days and three nights.' (Xu and Matthews 2005)

Unlike the Cantonese waa6, the Chaozhou $t \tilde{a}$ is in a more 'advanced' stage of grammaticalization. For example, the immediate co-occurrence of $t a \tilde{a}$ 's is acceptable without any intervening elements, as (39b); whilst the co-occurrence of Cantonese waa6 is problematic, and is acceptable only with an intervening element. (Please refer back to $\$ 4.1$ on the co-occurrence of waa6's.) Moreover, the complementizer usage of the Chaozhou $t \tilde{a}$ is conventionalized when it follows a cognition/ perception predicate where it becomes an obligatory element, as in (39c). The Cantonese waa6, on the other hand, is never observed to be obligatory as a complementizer. For the case of the Taiwanese kong, Chappell (to appear) suggests that it appears to be 'well-advanced' in terms of the stages of grammaticalization. Apart from the possibility of immediate co-occurrence (32b), she observes that kong may follow preceding emotion, psych-verbs ${ }^{13}$ and possibly other stative verbs, allowing 'what might be normally non-complement taking verbs.' For instance, hoanlo kong 'be anxious that' and hoa-hi kong 'to rejoice that' are found in Taiwanese corpora, but not in the two Cantonese corpora cited in this study. If the Chaozhou tã or the Taiwanese kong is said to be fully

[^8]grammaticalized from a 'say' verb to a complementizer, Cantonese waa6 should be regarded as in its 'earlier' stages of grammaticalization. As examined in the paper, there have been many clear instances of waa6 in a bridging context (Stage II) serving as quotative markers following speech act verbs. Some examples appear to suggest instances of waa6 in a switch context (Stage III), in which the verbal meaning of waa6 is disallowed. These include the examples of wat6-clauses following cognition/ perception predicates, especially the non-factive predicates. Instances of waa6 in switch contexts indicate a later stage of grammaticalization. Yet the grammaticalization of waa6 is still quite far from being fully grammaticalized, as $\mathrm{waa}_{3}$ is still an optional element, but not a conventionalized obligatory complementizer, when introducing the clausal complement.

The previous sections have confirmed the complementizer status of Cantonese waa6 as distinct from its verbal usage. As mentioned in §1, complementizers re-analyzed from verbs of 'saying' exist not only in Cantonese: the Taiwanese kong is also a complementizer re-analyzed from 'say' verbs (Hwang 1998). Simpson and Wu (2002) and Wu (2004) have worked on the syntax of Taiwanese kong and by means of phonological evidence ${ }^{14}$, they postulate that the Taiwanese kong is further grammaticalized into a sentence final particle carrying an emphatic assertion sense. Examples of kong as a complementizer followed by its complement IP clause (as in (40)) and kong as a sentence final particle (as in (41)) are shown as follows ${ }^{15}$ :
(40) a. $A \bullet-h u i \quad s i o n g \bullet s i n \bullet k o n g \bullet \quad A \bullet-\sin \quad m \bullet \quad l a i$ A-hui believe KONG A-sin Neg come 'A-hui believes that A-sin is not coming.'

[^9]b. $A \bullet-h u i \quad$ liau $\bullet c h u n \bullet k o n g \bullet A \bullet-s i n ~ s i \bullet \quad t a i \bullet p a k \bullet l a n g$ A-hui thought KONG A-sin is Taipei person 'A-hui thought that A-sin is from Taipei.' (Wu 2004:94-95)
(41) a.

| $A \bullet-h u i$ | $s i o n g \bullet$ | $A \bullet-s i n$ | $m \bullet$ | $l a i$ | kong • |
| :--- | :--- | :--- | :--- | :--- | :--- |
| A-hui | think | A-sin | Neg | come | KONG |

A-hui think A-sin Neg come KONG
'A-hui thinks A-sin is not coming.'
b. $A \bullet-h u i \quad$ siong $\bullet$ kong • $A \bullet-\sin m \bullet \quad$ lai $\quad$ kong • A-hui think KONG A-sin Neg come KONG 'A-hui thought that A-sin is not coming.' (Simpson and Wu 2002:80)

Similarly, in a recent study on the Mandarin shuo, Wang et al (2003) provide a descriptive study of shuo and suggest that when 'shuo is attached to the initial or final positions of an utterance,' it functions as a 'discourse marker,' expressing 'the emotional state of the speaker' (Wang et al 2003:482).
(42)

| a. | (SK-II) | shuo | meitian | $z h i$ | shui | $y i$ | ge | xiaoshi, |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | (SK-II) | say | everyday | only | sleep | one | Cl |  |
|  | ..ni | xiangxin ma? |  |  |  |  |  |  |
|  | you | believe SFP |  |  |  |  |  |  |
|  | 'It is said | d that | only ne | to sle | for on | ur | th S | ), do you | believe it?’

$\begin{array}{lllll}\text { b. wo yiwei ta ershiwu } & \text { liu } & \text { shuo }^{16} \\ \text { I thought he twenty-five } & \text {-six } & \text { say }\end{array}$
Although the Cantonese waa6 does not appear in the sentence final position as the Taiwanese kong does, some cases with waa2 in the sentence final position indicating an interrogative sense were found in the corpus data:

[^10]| (43) | lei5 | sikl | zo2 | keoi5 | gei2 | noi6 | waa2 | (HKCAC) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2sg | know | Asp | 3sg | how | long | WAA2 |  |
|  | 'How long did you say that you have known him/her?' |  |  |  |  |  |  |  |
| (44) | zung | jau5 | dil | matlje | w |  |  | (HKCAC) |
|  | else | have | Cl | what |  |  |  |  |
|  | 'What else did you say? |  |  |  |  |  |  |  |

This case of waa2 appears to occupy a similar sentence final position to the Taiwanese kong and it is phonologically similar to the complementizer waa6. However, unlike the Taiwanese kong, waa2 does not have the same pronunciation as waab and it does not signal any emphatic sense, but rather an interrogative sense. Phonologically, waa2 has a rising tone and waa6 is a low tone word. In Cantonese, there are many cases of tone 2 words deriving from low tone words, e.g., jan2 from jan4 'person.' It is possible that waa2 carries an interrogative function and serves as an echo question particle. Clearly, both the SFP waa2 and the complementizer $w a a 6_{3}$ are derived from the lexical verb waa $\sigma_{l}$. The question is whether the two pathways of grammaticalization are related (i.e., whether the SFP waa2 is historically derived from the complementizer $w a a 6_{3}$ ). At this stage, to determine the grammatical status of waa simply by its reference to the case of the Taiwanese kong might be incautious.

Tang (1998b) has suggested that waa2 is an echo question particle occupying the COMP position and that waa2 cannot occur in subordinating clauses. It appears that waa 2 occurring in matrix clauses and waa6 introducing subordinating clauses are in complementary distribution. Tang suggests that the omission of SFP's (including waa2) in embedded clauses can be accounted for by the possibility of having a head-initial complementizer waa6 in embedded clauses. This proposal requires further research to ensure its justification. Further research is also needed to investigate the relation of waa2, if any, to the complementizer waa6; and its typological relationship to the Taiwanese kong. Being diachronically related in the sense that both waa2 and waa6 ${ }_{3}$ appear to be derived from the verb waa6 $_{1}$, the relation of waa6 and waa2 may serve as a good starting point for the investigation of the relation between head-initial complementizers introducing subordinating clauses and head-final complementizers occurring in matrix clauses.

## 6. SOME CONCLUDING REMARKS: FROM HEAD-INITIAL COMPLEMENTIZERS TO WORD ORDER TYPOLOGY IN CHINESE

This paper has ascertained the status of waa6 as a complementizer and introduced a new member to the Chinese COMP category. In the studies of Chinese complementizers, it has been proposed in the literature that relative clause markers, like de in Mandarin and ge3 in Cantonese are complementizers (Cheng 1986; Law 1990; Ning 1993; Xu 1997). Unlike waa6 $_{3}$, which is a head-initial complementizer selecting propositional clauses as its complements, relative clause markers de or ge3 can be selected by nouns and introduce noun-complement clauses. The clauses selected can be modifying clauses, as in (45), and also complement clauses, as in (46).
(45)
a. de or ge3 selects a modifying clause:
[ $e_{i}$ zuotian zai wuli yong bi xie xin] de ren [ yesterday in room with pen write letter] DE man 'the man who wrote the letter with a pen in the room yesterday.'
b. [ ${ }_{\mathrm{NP}}\left[e_{i} \quad\right.$ seng4jat6 wan6dung6 ge3] sai3lou6zai2 $\left.{ }_{i}\right]$ all-day exercise children
bei2gaau3 gin6hong1
compare healthy
'Children who always exercise are healthier.'
(46)
de or ge3 selects a complement clause:
a. [np $\left[\begin{array}{ll}\text { ta zuotian zai wuli yong bi xie xin }]\end{array}\right.$
[ $\mathbf{N P}^{\text {P }}$ [he yesterday in room with pen write letter]
de qingkuang] hen qiguai
DE situation] very strange
'The situation that he wrote a letter with his pen in the room yesterday was very strange’
 [ ${ }_{\text {NP }}$ [IP Student oppose principal ge3] activity] more come more strong 'The activities that the students engage in to oppose the principal are getting stronger.'

At least in this usage in (46), de or ge3 appears to be a complementizer which is head-final and selected by a noun. If waa6 has been proven to be a head-initial complementizer, it seems to conflict with the previous assumptions in the literature that Chinese complementizers are head-final. One possibility could be that the conflict between head-initial and head-final complementizers is related to the conflict between head-initial VP's and head-final NP's. In Chinese, as NP's tend to be head-final and as del ge3 are relativization markers which link a modifying/ complement phrase with the head noun, it is expected that de/ ge3 are head-final. For waa6, however, as verbs are head-initial within the VP and as waa6 is reanalyzed from a 'say' verb, selecting an IP propositional complement, waa6 is expected to be head-initial.

This proposal is predictable in view of theories on word-order typology, such as the Branching Direction Theory (BDT) proposed by Dryer (1992) or the principle of Early Immediate Constituents (EIC) ${ }^{17}$ developed by Hawkins (1994). Both theories suggest that regarding word-order in a language, consistent left-branching like (47a) or right-branching structures like (47b) are preferred over a mixture of leftand right-branching (47c-d).

[^11](47) a

b.

c.

d.

(Dryer 1992:131)
According to Hawkins (2002:101), for cognitive processing reason, languages prefer 'minimal domains.' Since the mixed word orders 'involve larger viewing windows (CRDs) ${ }^{18 \text {,' they are 'dispreferred }}$ cross-linguistically.'

Contrary to typological predictions, the structure of NP in Chinese is inconsistent with the structure of VP. However, the branching structures within NP and VP appear to be internally consistent. According to the BDT and the EIC, consistent left-branching or right-branching structures are preferred over a mixture of left- and right-branching. Thus, if Chinese NP tends to be head-final (i.e., a left-branching structure as in (47a)), the complementizer position is expected to precede the head noun, as shown in (48):

[^12](48) Left-branching structures in Chinese NP's:


Similarly, if Chinese VP's are head-initial (i.e., right-branching structure as in (47b)), the complementizer is expected to be head-initial (i.e., following the head verb), as shown in (49):
(49) Right-branching structures in Chinese VP's:


The next question that naturally follows is whether typologically the co-existence of head-initial and head-final complementizers in a language is possible. Primus (2001) constructs a table showing the basic details associating with head-initial and head-final patterns:

Table 1 Basic details associating with head-initial and head-final patterns
(Primus 2001:856)

| Consistent head-initial order: | Consistent head-final order: |
| :--- | :--- |
| verb - object (VO) | object - verb (OV) |
| inflected auxiliary - main verb | main verb - inflected auxiliary |
| (AuxV) | (VAux) |
| preposition - noun (Pr) | noun - postposition (Po) |
| noun - genitive/possessor (NG) | genitive/possessor - noun (GN) |
| adjective - object of comparison | object of comparison - adjective |
| article - noun | noun - article |
| noun - adjective (NA) | adjective - noun (AN) |
| noun - numeral (NNum) | numeral - noun (NumN) |
| noun - demonstrative (NDem) | demonstrative - noun (DemN) |
| noun - relative clause (NRel) | relative clause - noun (RelN) |
| complementizer - clause (CompS) | clause - complementizer (SComp) |
| verb - adverb (VAdv) | adverb - verb (AdvV) |
| adjective - adverb (AAdv) | adverb - adjective (AdvA) |

The table shows the ideal distinction between head-initial and head-final languages and it is noted that many languages are found to be less consistent with the shown pattern. For example, English is observed to be a less consistent head-initial language as it has word order patterns such as adjective - noun (AN), genitive/ possessor - noun (GN), and adverb - adjective (AdvA); where Finnish is categorized as a less consistent head-final language as it is a language with SVO, AuxV, and NRel/RelN word order patterns. Regarding Chinese, it is similar to Finnish in that it also appears to be a less consistent head-final language with SVO, AuxV, article-noun and adjective-object word order patterns. According to Primus (2001, pp.856), 'relative and complement clauses and complementizers are bad patterners in head-final languages,' and which depart quite often from the cross-categorial harmony shown in Table 1. Regarding the typological word-order pattern of complementizers and relative/ complement clauses in head-final languages, Primus (2001) observes that:
'...head-initial languages will have almost only CompS order whereas head-final languages will have both CompS and SComp.'
(Primus 2001:861)

Japanese is an example of a verb-final language with head-final complementizers; while Persian is a verb-final language with head-initial complementizers. However, Primus (2001) does not indicate whether the co-existence of CompS and SComp in the same language is possible. Siewierska (1998:791-810) lists a total number of 37 European languages that employ both NRel and RelN for NP's containing relative clauses. Examples of these languages include Basque, Georgian, Gothic, Latin, Finnish, and Hungarian. The possible co-existence of NRel and RelN structures in the same language may imply a possibility of having a language with both head-initial and head-final complementizers, but there is not a single language reported to have both head-initial and head-final complementizers. Still, it is believed that Chinese may be the only possible candidate for having both types of complementizers because it is the only language reported to be head-initial in VP's, but head-final in NP's for relative clauses/ noun-complement structures. Dryer (1992:82-87) examines the word-order properties in 625 languages from various language genera including Africa, Eurasia, Southeast Asia \& Oceania, Australia-New Guinea, North America, and South America, and the only language found to have the order of verb-object (VO) and the order of relative clause-noun (RelN) is Chinese. Hawkins (1994) makes a similar observation:
'(a language) combining verb-initial VP's and prepositions with pronominal relatives, are exceedingly rare...Mandarin Chinese is the only language known to me that provides solid evidence for these structures...,
(Hawkins 1994:268)
Hence, it would not be a surprise if Chinese were the only language family found to have both head-initial and head-final complementizers. In such a case, de or ge3 may be the head-final complementizer selected by a noun to introduce the noun-complement. As relative/ complement clause-noun structures in Chinese are head-final (RelN), the complementizer position within the NP is preferably at the right edge of the complement clause (i.e., head-final). On the other hand, waa6 reanalyzed from a 'say' verb might be a head-initial complementizer selected by a verb to introduce the verb-complement. As Chinese has head-initial VP's, the complementizer position within the VP should be at the left edge of the complement clause (i.e., head-initial).

The proposal of having the head-initial complementizer waa6 in the VP, as opposed to the head-final complementizer de or ge3 in the NP, sheds light on the head-initial and head-final word order differences in Chinese VPs and NPs, providing further supporting evidence for theories in word order typology, such as the Branching Direction Theory (BDT) (Dryer 1992) and the principle of Early Immediate Constituents (EIC) (Hawkins 1994), which predict consistent left-branching or right-branching structures in languages.

This paper has successfully distinguished the complementizer status of waab $_{3}$ from its verbal status by various synchronic tests, including argument selection, aspect marking, verb-doubling, coordination tests, and proposition negation in non-factive predicates. Further, even though in its earlier stage of grammaticalization, it has proposed that in some cases, waat $_{3}$ is a head-initial complementizer in the VP introducing IP complements. This paper has not only introduced a new member to the Chinese COMP category, it has also shed light on other possible research areas. For example, this paper suggests a possible case of the grammaticalization pathway where sentence-final particles, like waa2, are derived from complementizers, like waa6 $_{3}$. In light of waa6 $_{3}$ being a head-initial Chinese complementizer, the paper relates to the special word order typology in Chinese and provides supportive evidence for theories in word order typology (e.g., BDT and EIC). It is hoped that the findings of this paper will be inspiring and stimulate further research in the studies of Chinese complementizers derived from 'say' verbs.

## APPENDIX I <br> ABOUT THE CORPORA:

The Cantonese Radio Corpus (Francis, Yiu, Matthews, and Chu, in preparation)
This corpus contains samples of adult spoken Cantonese from four radio talk programs in Hong Kong, with a total of 43,283 lines of text transcribed and coded for syntactic analysis. The corpus constitutes part of a project entitled 'Lexical and contextual effects on the grammar of syntactic categories' which is funded by the Committee on Research and Conference Grants of the University of Hong Kong. The principal investigator on the project is Elaine J. Francis, the co-investigator is Stephen Matthews, and the research assistants are Winnie S.M. Yiu and Gene Y.F. Chu. The data for the corpus were collected by tape recording
several Hong Kong radio talk programs and selecting a sample of four programs which span a variety of genres, including celebrity interviews, political and economic discussions, and relationship issues. A pre-publication version of the CRC was used for this research, and a corrected version is due to be summitted to the online TalkBank database.

The HKCAC Corpus (Law, Fung, and Leung, 2002)
The development of the Hong Kong Cantonese adult language corpus (HKCAC) was made possible by a grant from the Research Grant Council of Hong Kong (\# HKU 5190/98H) to Sam-Po Law, Suk-Yee Fung, and Man-Tak Leung. The database consists of orthographic and phonetic transcriptions of phone-in programs and forums broadcast on the radio. The recordings, totaling more than eight hours, were made during the period from November 1998 to February 2000. Sixty-nine speakers in addition to the program hosts were recorded. The corpus has approximately 170,000 characters.

## APPENDIX II

LIST OF SENTENCES CONTAINING INSTANCES OF WAA6:
Note: This is not an exhaustive list of all instances encountered. For each predicate, only one or two instances are listed.
'say' predicates:
gong2 'say'
tau4sin1 lei5dei6 gong2 waa6 singlgaa3bol ge3 jilliu4 ne1 just now 2 pl say WAA Singapore Poss medical SFP 'Just now, you talked about the medical facilities in Singapore...'
(HKCAC)
ngo5 jatllou6 dou1 mou5 tung4 keoi5 gong2 waa6
1sg always all Neg with 3sg say WAA
ngo5 tung4 faanl keoi5 jatlcai4
1sg accompany_Asp 3sg together
'I never told her that we were back together.'
(CRC)

## king1 'discuss'

kam4jat6 ngo5 tung4 jatlgo3 jan4 king1_gan2 waa6 yesterday 1sg with one person discuss_Asp WAA zikl ji4gaal ge3 ngan4hong4 zung6 seoil m4 seoiljiu3 fan1hong4 ne1 that now Poss bank still need Neg need branch SFP 'Yesterday, I was talking to someone about whether banks still need branches nowadays.'
(HKCAC)

## tai4/tai4dou3/tai4kap6 'mention'

keoi5 jat1zou2 tai4_gwo3 waa6 m4 jiu3 3sg early mention_Asp say Neg want 'she'd always mention that she didn't want it.'
(A-kuan. 1988. A JAN ri ji 'Jan's Diary', v.3. Hong Kong: Yau Wo, pp.77)
gam2 kei4sat6 baau1zi3gam1 jik6 doul tai4dou3 waa6 ne1 then actually Bokhary also all mention WAA SFP gam1ci3 lai4 gong2ji5 dou3 hin3faat3 so2 jung4heoi2 this time for say already reach constitution that allow ge3 gik6haan6 laa 3
Poss limit SFP
'Actually, Mr Justice Bokhary also mentioned that for this incident, it had already reached the limit of the constitution.'
(HKCAC)
jan1wai6 colcol tai4kap6 waa6 zel
because in the beginning mention WAA SFP
batljyu4 paak3tol hou $m 4$ hou2 nel gam2
why not dating good Neg good SFP SFP
'In the beginning, I mentioned, "how about dating? Is that okay?"'
(CRC)

## tai4ceot1 'suqgest'

maa4maal zik6zeng4 tai4ceot1 waa6 lei4fan1 lol
Mother actually suggest WAA divorce SFP
'Mother actually suggested a divorce.'
(HKCAC)

## man6 'ask'

ngo5 zau6 man6 keoi5 waa6 lei5 baai2 soeng5 heoi3 ze1
1 sg then ask 3sg WAA 2sg put up go SFP go2zan6si4 jau5 mou5 waa6 seon6 faanl
that time have Neg say arrange again
'I asked him/her whether (s)he had re-arranged them after (s)he put them back.’
(HKCAC)

## daap3 'answer'

daan6hai6 ne1 zau6 daap3_zo2 ngo5 ngo5 waa6 but SFP then Answer_Asp 1sg 1sg WAA waa6 jan1wai6 jan1wai6 ngo5 m4 ngo5 ngo5 m4 ngo5 mou5 WAA because because 1sg Neg 1sg 1sg Neg 1sg Neg 'But, (somebody) answered me, "Because...I didn't...I...I didn't...I haven't"...'
ngo5 daap3 waa6 jiu3 bou2ci4 ceng1sing2
1 sg answer WAA need keep awake
'I answered that I had to be calm.'
(A-kuan. 1998. Xiao nan ren zhou ji (3) 'The diary of a small man (3)'.
Hong Kong: Crown Publishing, pp.45)
keoi5 daap3 waa6 jau5
(s)he answer WAA yes
'(S)he answered, "Yes!"'
(A-kuan. 1998. Xiao nan ren zhou ji (3) 'The diary of a small man (3)'
Hong Kong: Crown Publishing, pp. 99)
ak1 'lie'
ngo5 ak1 keoi5 waa6 tin1man4toi4 bou3gou3
1sg lie 3sg WAA observatory report
hei3wan1 wui5 dit3 dou3 sap6 dou6
temperature will drop reach ten degree
'I lied to him, saying that the weather report had said that the temperature would drop to 10 degrees.'
(A-kuan. 1988. A JAN ri ji 'Jan's Diary', v.3. Hong Kong: Yau Wo,
ngo5 ak1 keoi5 waa6 aa3 Ann faan1_zo2 heong1haa2 wullou5mukbcai4 1sg lie 3sg WAA Ah Ann back_Asp hometown Urumqi
'I lied to him/her that Ah-Ann had gone back to her hometown Urunqi.'
(A-kuan. 1996. Xiao nan ren zhou ji (1) 'The diary of a small man (1)'
Hong Kong: Crown Publishing, pp. 38)

## sing4jing6 'admit'



## giu3zou6 'called as'

leildou6 dou3 m4 hai6 giu3zou6 waa6 gam3 hung2bou3 here all Neg be call as WAA that scary
'This place cannot be considered all that scary.'
(HKCAC)

## gaai2sik1 'explain'

| keoi5 | gaai2sik1 | waa6 | zifgei2 | sam lceng4 | m4 | hou2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3sg | explain | WAA | oneself | feeling | Neg | good |

'(S)he explained that (s)he was not in a good mood.'
(A-kuan. 1988. A JAN ri ji 'Jan's Diary', v.3. Hong Kong: Yau Wo,
Diana gaai2sik1 waa6, "so2ji3 jat6bun2zai2 zung3 di1
Diana explain WAA, so Japanese grow Poss
ping4gwo2 pou4tai4zi2 gam3 daai6 lap1 zel."
apple grape so big Cl SFP
'Diana explained, "That's why the apples and grapes grown by the
Japanese are so big."'
(A-kuan. 1996. Xiao nan ren zhou ji 'The diary of a small man' Hong Kong: Crown Publishing, pp. 50)

## iyun3 'grumble'

| keoi5 ganlzyu6 | hai2 ngo5 min6cin4 | jyun3 lou5dau6 waa6 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 3sg then | at | 1sg before | grumble father | WAA |
| keoi5 jatlzou2 | tai4_gwo3 | waa6 m4 jiu3 |  |  |
| 3sg early | mention_Asp say Neg want |  |  |  |
| 'Then, she grumbled about my father in front of me, saying that she'd |  |  |  |  |
| already mentioned that she didn't want it.' |  |  |  |  |

(A-kuan. 1988. A JAN ri ji 'Jan's Diary', v.3. Hong Kong: Yau Wo, pp.77)

## teoi1 'refuse'

bun2loi4 soeng2 teoi1 keoi5 waa6 m4 heoi3...
originally think refuse 3 sg WAA Neg go
'At first, I wanted to refuse him/her saying that I would not go...'
(A-kuan. 1996. Xiao nan ren zhou ji 'The diary of a small man' Hong Kong: Crown Publishing, pp. 98)

## san3 'grouch'

| gu1maa1 | tung4 | maa1mi4 | san3 | waa6 | ji6 | biu2ze2 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| auntie | with | mummy | grouch | WAA | two | female cousin |
| jan1wai6 | git3fan1 | fong3hei3 | heoi3 | ngoi6gwok3 | duk6syu1 |  |
| because | marry | give up | go | overseas | study |  |

'My auntie grouched to my mother that my second elder female cousin had given up a chance to study overseas for the sake of marriage.'
(A-kuan. 1988. A JAN ri ji 'Jan's Diary', v.3. Hong Kong: Yau Wo,

| seng4jat6 | san3 | waa6, | "jyu4gwo2 | ngo5 lou5gung1 |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| always | grouch | WAA, | "if | 1sg | husband |  |
| bei2 | ngo5 | heoi3 | jat6bun2 | zing2 | jat1 | zing2 |
| allow | 1 sg | go | Japan | do | one | do | jatljoeng6 ho2ji3 gam3 jau5 tai2tau4!"

same can so have stunning
'(She) always grouched, "If my husband let me go to Japan to do that just once, I could also be that stunning.""
(A- kuan. 1988. A JAN ri ji 'Jan's Diary', v.2. Hong Kong: Yau Wo, pp.38)

## tam3 'comfort'

ngo5 zung6 tam3 keoi5 waa6 lai4_gan2 leilgo3 lai5baai3 1 sg even comfort 3sg WAA come_Asp this week
wan2 maan3 tung4 keoi5 jatlcai4 heoi3 gaail
find night with 3sg together go street
'I even comforted him, saying that I would go out with him one night sometime this week.'
(A-kuan. 1988. A JAN ri ji 'Jan's Diary', v.2. Hong Kong: Yau Wo,

## giu3 'shout'

ngo5 hoil_zoek6 dang1 teng1_dou2 ji6 gaalzel giu3 waa6, 1sg turn on_Asp light listen_Asp two sister shout WAA " $m 4$ hou2 hoil dakl $m 4$ dakl?"
"Neg good turn on can Neg can?"
'I turned on the lights and heard my second elder sister shout, "Could you not turn on the lights?",
(A-kuan. 1988. A JAN ri ji 'Jan's Diary', v.2. Hong Kong: Yau Wo, pp.90)
keoi5 gin3 dou2 ngo5 gin3_dou2 keoi5 zung6 daai6 sengl giu3 waa6, 3sg see_Āsp 1sg see_Āsp 3sg even big voice shout WAA "aa3funl, lei5 mai5 soeng5 lai4 aa3..."
"Ah-Fun 2sg Neg up come SFP..."
'When (s)he saw me see him/her, (s)he actually shouted, "Ah-fun, don't come forward..."'
(A-kuan. 1998. Xiao nan ren zhou ji (3) 'The diary of a small man (3)' Hong Kong: Crown Publishing, pp. 42)

## laai6 'blame'

jin4hau6 zau6 laai6 dil gei3ze2 waa6 hou2 bou3dou6 ne1 after then blame Cl reporter WAA very report SFP 'And then you put the blame on the reporters.'
'cognition and perception' predicates: gok3dak1 'think/ believe'
keoi5 seng4jat6 gok3dak1 waa6
3sg always think WAA
leilgo3 neoi5jai2 hou 2 min6sin6 hou2 min6sin6
this girl very familiar very familiar
'(S)he always thought that this girl looked very familiar.'
(HKCAC)

## soeng2 'think/ plan'

| kei4sat6 | dou1 | soeng2 |  |
| :--- | :--- | :--- | :--- | :--- |
| actually | all | waa6 |  |
| allink | WAA |  |  |
| aal | batljyu4 heoi3 | haa5 | gaail gam2 |
| SFP | why not go | once | street so |

'Actually, I have thought that, say, if we might go out some time.'
(HKCAC)
$\begin{array}{lll}\text { ngo5 } & \begin{array}{l}\text { soeng2 } \\ \text { think }\end{array} & \text { waa6 hoeng2 lau4haa6 zit6 diklsi2, } \\ \text { 1sg } & \text { WAA at } & \text { downstairs get taxi, }\end{array}$
daan6hai6 pinlpin1 mou5 cel
but unfortunately Neg car
'I wanted to get a taxi downstairs, but unfortunately there were none about.'
(A-kuan. 1996. Xiao nan ren zhou ji (1) 'The diary of a small man (1)' Hong Kong: Crown Publishing, pp. 99)
hei1mong6 'hope'
zau6 hei1mong4 waa6 bei2 ngo5dei6 teng1 then hope WAA to 1 pl listen zou6 si6 ne1 hai6 juiu jau5 kwailleot6 gaa3 do matter SFP be want have rhythm SFP 'Then, (somebody) wants to tell us that we should regulate our work.'
(CRC)

## lam2 'think/plan'

ngo5 jau5 lam2_gwo3 waa6 lei5 cou5
1sg have think_Asp WAA 2sg save up
batljyu4 baai2 hai2 ngo5 dou6 laal gam2 ngo5 keep_zyu6... why not put at 1sg place SFP so 1sg keep_Asp... 'I thought if you save up, why don't we put the money at my place and I will keep it.'
ngo5 m4 wui5 zoi3 lam2 waa6
1sg Neg will again think WAA
tung4 paak3_zo2 loeng5 go3 lai5baai3 ge3 laam4zai2 jat1cai4 lo1 with date_Asp two Cl week Poss boy together SFP 'I don't think that I will be together with the boy who's been dating me for two weeks.'

## tai2 'see'

ji4gaal lei5 tai2_haa3 waa6 si5min6 soeng6 gam3 siultiu4 now 2sg see_Asp WAA market up so downturn tung4maai4 gam3 dol jan4 zapllap1
and so many people close business
'Now you see that the economy is in a downturn and many businesses are closing down.'
(HKCAC)
'informative' predicates
tung1zi1 'inform'
daan6hai6 go2go3 course le1 zau6 catljyut6
but that course SFP then July
sinlzi3 tung1zi1 waa6 sau1_zo2 ngo5
only inform WAA take_Asp 1sg
'But the course only informed me in July that I was approved for admission.'
(HKCAC)

## se2 'write'

keoi5 se2_zyu6 waa6 hou2 zunglji3 ngo5 lo1,
3sg write_Asp WAA very love 1sg SFP,
peng4si4 keoi5 mou5 gong2 gaa3
usually 3sg Neg say SFP
'He wrote that he loved me very much. He didn't say so.'
(HKCAC)

## Other predicates

hai6 'be'
hai6 jau5 po2 do1 ge3 hai6 order le1, ze1 maai5pun2 laalhaa2, be have quite many Poss be order SFP, that's buyer SFP, hai6 waa6 buy at the market.
be WAA buy at the market.
'There are quite a lot of orders, that's buyers, who are buying at the market.'
(HKCAC)


(HKCAC)

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## 論廣東話之補語連詞：「話」

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補語連詞（Complementizer）泛指連接子句補述語之詞（見英語中的 that），據類型語言學前人研究，表述說話之動詞於多種語言中均有語法化成補語連詞之現象。本文以横向斷代方式分析廣東話「話」字，提出前述現象亦見於廣東話。「話」常見於各種表述言語或思想的謂語之後，一向被認為連動句式中的第二動詞，然而，本文以為「話」不一定用作動詞，於不同情況下，「話」之語意各異，其次語類制約亦有所不同，譬如：話 $1_{1}$ ，意「說」
$\qquad$ （PP）CP］／［ PP NP］；話 2 ，意「責怪／指摘」［ NP CP］；而話 3 ，則為補語連詞，用作連接子句補述語［ $\qquad$ IP］。根據其表現之形式句法特徵，如：時體結構，論元選擇關係，本文論證了話 3 於作補語連詞時，形式句法上有別於說話動詞話 1 與及物動詞話 2 。


[^0]:    ${ }^{2}$ The paper assumes propositional sentences as maximal projections IP projected by the INFL. See Chomsky (1981).
    ${ }^{3}$ The strict definition of complementizers is problematic. See Yeung (2003). While some believe complementizers are function heads that subcategorize a clausal complement IP (Radford 1997; Haegeman and Guéron 1999); and some categorize complementizers by their semantic functions (Wierzbicka 1988; Langacker 1991; Frajzyngier 1995; Givón 2001); some even totally reject the proposition that complementizers form a distinct word class (Hudson 1995; Hudson 2000). Still, these approaches all share the general consensus that complementizers subcategorize for a clausal complement, forming a constituent that acts as the complement for the preceding lexical item (Yeung 2003).

[^1]:    ${ }^{4}$ Regarding the sources of complementizers, Hopper and Traugott (1993) suggest several paths of grammaticalization, including derivation from accusative case morphemes, allatives, datives, deictic demonstratives, lexical nouns, and verbs of ‘saying'.

[^2]:    ${ }^{5}$ It is likely that these Creoles have the same phenomenon as a result of substrate influence from Niger-Congo languages. See Plag (1995).

[^3]:    ${ }^{6}$ It is worthy noting a methodological point here, as Matthews (2003:8) notes that some of these sentences, when presented in isolation to a lay Cantonese speaker, produce a "puzzled reaction." He observes that presenting such sentences out of the blue "is no way to test the productivity of a structure so dependent on discourse," as many of the constructions belong to colloquial register and their use is closely tied to the discourse context. Therefore, this paper assumes the same methodological concern, stipulating that "(w)hile some aspects of the phenomenon can be discussed on the basis of single sentences, the need for such a discourse context should be borne in mind in the following discussion."

[^4]:    ${ }^{7}$ It should be noted that the same also applies to the Mandarin shi 'be' as in:
    xin de da-yi shi shuo...
    letter DE main-points be explain
    'The main point of this letter is to narrate...'
    (Hwang 1998)

[^5]:    ${ }^{8}$ The verb encourage only allows an NP followed by a that-clause in extrapositions, e.g., It encourages me that she is doing well.

[^6]:    ${ }^{9}$ In code-mixing situations, it is likely that speakers select waa6 in preference to that due to constraints on code-mixing which generally exclude 'system' morphemes (i.e., 'closed-class' words, such as specifiers, quantifiers, or complementizers. See Chan (1998).

[^7]:    ${ }^{11}$ It is suggested that the longer the intervening elements between the two verbs, the

[^8]:    ${ }^{13}$ The psych-verbs described in Chappell are not the cognition/ perception verbs discussed in the paper. They are the 'verbs' that are more adjective-like and depict personal emotions. Examples of these verbs include hoanlo 'be anxious', or hoa-hi 'be rejoice'.

[^9]:    ${ }^{14}$ Simpson and Wu (2002) and Wu (2004) make use of phonological evidence involving 'tone sandhi,' which is a well-known property of southern Min dialects such as Taiwanese. It is observed that a syllable may not undergo tone sandhi if it occurs sentence-finally. However, the sentence-final kong is found to have undergone tone sandhi which indicates, according to their analysis, that the complement IP clause of kong has actually moved up to the left of kong, leaving kong in the surface sentence-final position.
    ${ }^{15}$ The symbol of a dot $\bullet$ following the word indicates the tone sandhi change.

[^10]:    ${ }^{16}$ The author has confirmed the sentence-final usage of shuo in Mandarin with native Mandarin speakers. It has been reported that the usage likely originated from Taiwanese Mandarin speakers, but has been spread to mainland China via Internet and entertainment programmes. The usage can be occasionally found on Internet and newsgroups in mainland China. The same usage is reported in Chappell (to appear).

[^11]:    ${ }^{17}$ The 'Early Immediate Constitutes' (EIC) is defined in Hawkins (2001:5) as follows: 'The human parser prefers linear orders that minimize CRD's (by maximizing their IC-to-nonIC [or IC-to-word] ratios), in proportion to the minimization difference between competing orders.'

[^12]:    18 The definition for a 'Constituent Recognition Domain' (CRD) in Hawkins (2001:5) is as follows: 'The CRD for a phrasal mother node M consists of all non-terminal and terminal nodes dominated by M on the path from the terminal node that constructs the first IC on the left to the terminal node that constructs the last IC on the right.' For further discussion of the parsing approach proposed by Hawkins, see Hawkins (1990, 1994, 2001, 2002).

