The Acquisition of Chinese as a First Language in the U.S.:
The Cantonese Perspective

Sik Lee Dennig
Stanford University

Genevieve Leung
University of San Francisco

This paper looks at the Cantonese language development of Chinese Americans. Using Frog Story narratives collected from children and adult Cantonese heritage speakers, Cantonese language production was analyzed with respect to (i) the noun phrase, (ii) the verb phrase, (iii) word order, and (iv) discourse connectors. Findings show that the basic grammar of Cantonese has been acquired for all heritage speakers, with the semantics-syntax interface yielding linguistically hybrid forms. This study has direct implications for Chinese heritage language teaching and bilingual development in the U.S.

0. Introduction: Cantonese Chinese within the U.S. context

In countries that have long been receiving Chinese immigrants, Cantonese speakers are the Chinese group with the longest residence. In the U.S. context, Chan and Lee (1981) note that “approximately 70-90% of the resident Chinese population in various communities in the period 1870-1930” spoke some variety of Cantonese (p. 121). Inspection of the U.S. Census records from the 1800s to 1965, the year that marks the passing of the Immigration and Nationality Act, shows that up until 1965, nearly two-thirds of the Chinese in America came from some part of Southern China or Hong Kong, and both locations are where Cantonese is spoken as an L1 by the majority of the population. Despite these statistics and long-standing history, study of the acquisition of Cantonese outside of China and Hong Kong in linguistic literature and academia in general has been noticeably missing. This paper addresses the lack of information about the development and maintenance of Cantonese as an L1 by heritage speakers (HSs) in the U.S. by looking at their acquisition of major Cantonese grammatical features.1

1 Despite the lack of recent literature about Cantonese acquisition in the U.S., we still received tremendous encouragement and insight from people who supported our work and whom we would like to thank: Drs. Stephen Matthews and Virginia Yip, Dr. Yuuko Uchikoshi for the K-2 data supported by the Foundation for Child Development, and of course the Cantonese native and heritage speakers who volunteered their narratives.
Knowledge about the acquisition of Cantonese as an L1 in Chinese immigrant communities is important for historians, linguists, and language teachers alike. As more and more Cantonese parents are sending their children to Chinese schools to learn Mandarin in response to China’s rising economic developments and opportunities, an understanding of how Cantonese differs from Mandarin and what specific factors impact Cantonese heritage language development can enhance the teaching of Mandarin to these learners. While Cantonese and Mandarin share many similarities, there are also meaningful differences. In the Cantonese noun phrase, the prevalent form in the preverbal position is [Classifier-Noun], which is ungrammatical in Mandarin. Cantonese has a postverbal progressive marker as well as a rich array of verbal particles, some of which do not exist in Mandarin. Word order can also differ between Mandarin and Cantonese, for example, the placement of the direct object before the indirect object in Cantonese when the main verb is .isHidden(béi ‘to give’) or another related verb. At the discourse level, an array of colloquial discourse connectors is distinguishing of Cantonese, as is the topic marker nē to highlight the topic-comment structure. How these and other related characteristics are acquired by Cantonese HSs is a main concern of this paper.

1. Acquisition of Cantonese as an L1 in immigrant contexts

Typical of children around the world born to immigrant parents, the majority of Cantonese-speaking children in immigrant communities acquire Cantonese and English successively, as opposed to simultaneously from birth. Cantonese is acquired as an L1 with English introduced through exposure to English media and interaction with English speakers outside of home, for example, at daycare, before the children reach kindergarten around age 5, by which point English input rises while Cantonese input drops substantially. Generally speaking, basic grammatical structures and principles in an L1 are acquired before kindergarten whereas more complex semantic distinctions, syntactic structures, and discourse functions are developed later during elementary school years (Verhoeven & Strömqvist, 2001). Overgeneralization, a typical phenomenon in early stages of language acquisition, may also take time to resolve (Ambridge, Pine, & Rowland, 2012).

Though not a sufficient condition by itself, input frequency plays a critical role in shaping as well as resolving overgeneralization in language acquisition (Ambridge et al., 2012; Polinsky, 2008). Polinsky’s investigation of American Russian found that the contrast between perfective and imperfective verb forms was neutralized with the more frequently occurring form overextended to the less frequent form. Ambridge et al. demonstrated that frequency was one of the two significant factors in facilitating monolingual English-speaking children’s retreat from locative verb overgeneralization. In a rare study of the acquisition of Cantonese as an L1 outside of China, Wei and Lee (2001) found that Cantonese-speaking children in Britain continued to overextend the general classifier go (個) to other semantic classes of nouns in their production beyond age 5, when input to Cantonese was greatly reduced. Without sufficient input about the
full repertoire of classifiers, it came as no surprise that the Cantonese-British children also made much smaller gains than their monolingual counterparts as they progressed through elementary to secondary grades. The acquisition of noun classifiers by child and adult Cantonese HSs is investigated in the current study to see the extent to which classifiers are acquired in childhood and maintained in adulthood.

In tandem with the drop in Cantonese input around age 5 is the surge in English input in the immigrant context. In what way can the increased exposure to English affect the development of HSs’ Cantonese? Based on their original research on the Cantonese-English bilingual children in Hong Kong, Matthews and Yip (2010) predicted the following three syntactic structures to be potentially most vulnerable to transfer from English in the acquisition of Cantonese by HSs: (1) double object datives, (2) prepositional phrases (PPs), and (3) directional verb complements. In all three cases, the English word order can influence or replace the Cantonese word order. These three domains are investigated in the current paper to see if the predictions can be confirmed.

2. Research Questions

This study takes a comprehensive look at how Cantonese HSs acquire and maintain the NP, the VP, word order, and discourse connectors in Cantonese. Three sets of questions are asked:

(1) What happens to the grammatical structures that HSs have acquired before formal education in English begins? Are they maintained into adulthood?

(2) As input to Cantonese diminishes, how do Cantonese HSs acquire the linguistic forms and functions that are usually acquired late by monolingual children?

(3) As English input increases significantly, in what way would English influence Cantonese acquisition?

2.1. The Study

Some of the data from this study come from a three-year longitudinal study by Dr. Yuuko Uchikoshi at the University of California, Davis, which looks at the bilingual development of Cantonese-English bilingual children in Northern California from kindergarten to second grade. The second author (Leung) has been involved with this project for seven years in the capacity of collecting, coding, and analyzing bilingual data. As much of the data on Cantonese language development come from Cantonese-speaking children from Hong Kong, the authors of this paper sought to uncover and document the Cantonese language development of Cantonese-English bilingual children in the U.S. As a veteran Cantonese language instructor and researcher in Northern California, the first author (Dennig) is well-equipped in analyzing the narratives and acquisition of particular forms of Cantonese produced by HSs and suggested that the children’s data should be supplemented with adult HSs’ data as means of providing exemplars of what the children’s linguistic trajectories might be when they become adults.
2.2. Participants
The data for this study come from a total of 47 Cantonese HSs of different ages with these characteristics: 1) they were born in the U.S. or came at a very young age, 2) Cantonese was the dominant language before starting preschool or kindergarten, and 3) they attended urban schools from lower elementary grades. Some subjects had also learned Mandarin. Of the 47 subjects, 22 were adults aged 19-29, and 25 were children around age 5 at the start of the study. To track linguistic development, the children were tested yearly from grades K-2 (from Dr. Uchikoshi’s study); the adult HSs were only tested once. In addition, 10 adult native Cantonese speakers were recruited as control subjects. In all, 107 narratives were elicited from the 47 subjects and 10 controls, representing what one might describe as the wide range of heritage and native Cantonese speakers residing in the U.S.

Table 1: Participants’ characteristics

<table>
<thead>
<tr>
<th>Subject Type</th>
<th>n</th>
<th>Age Range</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children</td>
<td>25</td>
<td>Followed from 5-7</td>
<td>F</td>
</tr>
<tr>
<td>Adult HS</td>
<td>22</td>
<td>19-29</td>
<td>13</td>
</tr>
<tr>
<td>Adult Control</td>
<td>10</td>
<td>20s-60s</td>
<td>8</td>
</tr>
</tbody>
</table>

With respect to first English age and dominant language spoken at home for the HSs based on formal parental questionnaires for the HS children and informal questionnaires with the HS adults, 71-74% of the children were first exposed to English at age 3 or older. For the HS adults, 82% were exposed to English at age 5 or older. As for the dominant language in the home, 72% of the children were Cantonese-dominant at kindergarten. By the time the children reached second grade, only 47% were Cantonese-dominant.

2.3. Procedure
Participants were asked to tell a story based on the wordless picture book, “Frog, Where are you?” (Mayer, 1969), as detailed in Berman & Slobin (1994). Participants were individually asked to flip through the book first, and then tell a story using the pictures in the book. The stories were audio recorded and later transcribed and verified by trained Cantonese transcribers. For the purposes of this research study, the transcriptions were analyzed with respect to: (i) the noun phrase (NP), (ii) the verb phase (VP), (iii) word order, and (iv) discourse connectors and the topic marker nē.

3. Results
In this section we describe the main results from our study.
3.1 The NP

The main types of NPs observed in the corpus of Frog Story narratives that were collected were the following: [CL-N] (e.g., go náahmjái 個男仔); [DEM-(NUM)-CL-N] (e.g., nī (léuhng) jek gáu 呢(兩)隻狗 ‘these two dogs’); [NUM-CL-N] (e.g., yāt dī mahtfūng 一啲蜜蜂 ‘some bees’); Bare N (e.g., chīngwā (m̀ h gin-jó) 青蛙 (唔見咗) ‘the frog had disappeared’); N POSS N (e.g., tihnsyú ge ūkkéi 田鼠嘅屋企 ‘the groundhog’s home’).

According to Tse, Li, and Leung’s (2007) typology of Cantonese classifiers, go 個 and jek 隻 are considered sortal classifiers, while dī 啟 is a mensural classifier used for collective, generic nouns. Their research shows that the time of and before three years is a critical period for the acquisition of Cantonese classifiers. The percentages of use of the classifier go 個 in monolingual children’s conversations were 86% (141/164), 95% (155/164) and 89% (146/164) for ages 3;0, 4;0 and 5;0, respectively. The overextended use of go 個 as a classifier occurred most frequently to refer to everyday objects that have their own specific classifiers. This indicates that, in terms of the syntactic awareness of these Cantonese preschoolers, the general classifier go 個 was used to replace only sortal classifiers, not all kinds of classifiers. Thus the finding of no omission of classifiers by the HSs in our study, particularly in the data elicited by the children, seems to indicate that by three years, Cantonese-speaking children understand that a classifier is obligatory when enumerating or quantifying nouns.

With respect to the most frequent NP type across HSs, we find that for the children, the [CL-N] type of NP was most frequent, followed by the [DEM-(NUM)-CL-N].

Figure 1: K-2 HSs’ most frequent NP type
For the adult HSs, the [CL-N] was also the most frequent NP type. Unlike the children HSs, however, the second most frequent NP type was the BARE N. The detailed percentages of the NP type distribution for the adult HSs are below:

Figure 2: Adult HSs’ most frequent NP type

For the adult control Cantonese speakers, again, the [CL-N] NP type was most frequently used, followed by BARE N. Their type distribution can be found below:

Figure 3: Adult controls’ most frequent NP type

Overall, from the data across these three groups we can see that the children and adult HSs are more like the adult control speakers than unlike them when it comes to NP type
usage. The drop in the children’s production of BARE N is discussed in the last section of this paper.

3.2. Target v. Non-Target Classifier Frequency Rates

With regards to HSs’ use of classifiers in the corpus, go, di, and jek were the three most commonly used classifiers. These results are consistent with Cantonese data from Hong Kong as well as British Cantonese data (cf. Li & Lee, 2001). When it came to target use of classifiers, HSs generally used more classifiers and were more target-like with age. The most non-target uses of classifiers came with the overextension of go. Interestingly, this non-target behavior was also exhibited in the 10 control participants, which speaks to the prevalence and even acceptability of the overextended use of go.

The complete chart of the target v. non-target classifier frequency rates is provided below:

Figure 4: Target v. non-target classifiers

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>go</th>
<th>di</th>
<th>jek</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>T %</td>
<td>N-T %</td>
<td>T %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T %</td>
<td>N-T %</td>
<td>T %</td>
</tr>
<tr>
<td></td>
<td></td>
<td>T %</td>
<td>N-T %</td>
<td>T %</td>
</tr>
<tr>
<td>K</td>
<td>25</td>
<td>137</td>
<td>38.6</td>
<td>210</td>
</tr>
<tr>
<td></td>
<td></td>
<td>37</td>
<td>88.1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>31</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td>Gr 1</td>
<td>25</td>
<td>346</td>
<td>48.4</td>
<td>369</td>
</tr>
<tr>
<td></td>
<td></td>
<td>49</td>
<td>98.0</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42</td>
<td>97.7</td>
<td>1</td>
</tr>
<tr>
<td>Gr 2</td>
<td>25</td>
<td>251</td>
<td>41.0</td>
<td>361</td>
</tr>
<tr>
<td></td>
<td></td>
<td>43</td>
<td>93.5</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>56</td>
<td>98.3</td>
<td>1</td>
</tr>
<tr>
<td>Adult HS</td>
<td>22</td>
<td>200</td>
<td>40.0</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td></td>
<td>47</td>
<td>90.4</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>197</td>
<td>99.5</td>
<td>1</td>
</tr>
<tr>
<td>Control</td>
<td>10</td>
<td>221</td>
<td>68.6</td>
<td>101</td>
</tr>
<tr>
<td></td>
<td></td>
<td>40</td>
<td>100</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>172</td>
<td>98.3</td>
<td>3</td>
</tr>
</tbody>
</table>

3.3. Discourse Connectors

At the discourse level, Cantonese deploys a wide range of discourse connectors, topic markers, and sentence-final particles; our HSs’ narratives displayed a wide range of discourse connectors. Some examples are included below:
The most frequently used discourse connectors were gānjyuh (跟住) ‘and then’, gám (咁) ‘then’, jauh (就) ‘then’, and dahnhái (但係) ‘but’. The frequency chart of these connectors is provided below:

The multi-functional sentence-final particle and topic marker nē (呢) was also used, with much greater frequency and variety as age progressed.
3.4. The VP

Three major findings regarding VPs are observed and presented below.

3.4.1. Aspect Markers and Verbal Particles

The main verb can be followed by an aspect marker or a verbal particle in Cantonese. Aspect markers denote the speaker’s perspectives on events. According to Matthews and Yip (1994), Cantonese has six aspect markers, four of which appeared in our data and are shown in (1) below.

(1) Four aspect markers produced in the current corpus:
   a) The perfective –jó (咗)
   b) The progressive –gán (緊)
   c) The durative –jyuh (住)
   d) The delimitative –háh (吓)

The frequency of each of the four aspect markers was first calculated for each speaker by dividing the number of tokens of a particular marker by the total number of clauses in the speaker’s Frog Story. Then all the frequencies from the speakers within a group for that marker were averaged. The frequency distributions of the four aspect markers are reported in Figure 6 below:

Figure 6: Frequency Distributions of Aspect Markers

Over 25% of the clauses in the narratives told by the adult controls as well as the children in Grades 1 and 2 contained one of the four aspect markers. Of the four aspect markers,
the perfective -jó was produced substantially more often by every group of speakers. With the exception of Grade 1, the progressive -gan was the least common of the markers.

Cantonese has a rich set of verbal particles, many of which were produced by the participants in this study. Examples are given in (2):

(2) Verbal particles in the current data:
   a) The accomplishment –dóu (倒)
   b) The retrieval –fāan (番)
   c) The adversative/habitual –chān (親)
   d) Others: e.g. –màaih (埋) ‘close to, together’, –yuhn (完) ‘finish’, and –dou (到) ‘reach’

The frequency distributions of verbal particles are shown in Figure 7 below. The most frequently produced particle for all groups of participants was the accomplishment marker -dóu, which is required for perceptual verbs, for example, gin-dóu (見倒) ‘see’ and tēng-dóu (聽倒) ‘hear’. The children used verbal particles more often than adults at kindergarten and Grade 1 both in quantities and varieties. Some of their particles in the ‘others’ category are gin as in tāi-gin (睇見) ‘to see’, jāu as in tāi-jāu (偷走) ‘to sneak away’, dāi as in dit-dāi (跌低) ‘to fall down’, saht as in jēui-saht (追實) ‘to chase closely’, and séng as in giu-séng (叫醒) ‘to wake up’.

Figure 7: Frequency Distributions of Verbal Particles
The adversative/habitual \textit{-chan} does not exist in Mandarin. An example is given in (3) to illustrate how it is used in Cantonese. The first occurrence of \textit{-chan} in the example denotes its habitual meaning and the second its adversative sense.

(3) The adversative/habitual \textit{-chan}:
\begin{quote}
\textit{Ngóh heui-chān waaht-syut dōu wúih dit-chān.}

我去親滑雪都會跌親

‘Every time I go skiing, I’ll fall and hurt myself.’
\end{quote}

Overall, the participants modified over one-third of their main verbs with an aspect marker or a verbal particle. The distributions of the most commonly used markers and particles look similar across speaker types. However, when the HSs’ production of verbal modifiers was examined closely, a small number of non-target forms were found, mostly involving the verb \textit{dit} (跌) ‘to fall, to drop unintentionally’. An example is provided below.

(4) K1066, Female, age 4;3
\begin{quote}
\textit{Gó go nàahmjái *dit-jó}

嘅個男仔跌*咗.

‘The boy dropped (something)’ [Intended meaning: ‘The boy fell.’]
\end{quote}

To convey the intended meaning, the speaker needed to add the verbal particle \textit{dāi} ‘down’ (dit-dāi-jó) or simply replaced \textit{-jó} with \textit{dāi} (dit-dāi). Using \textit{-jó} instead of \textit{dāi} to mean ‘fell’ is likely due to influence from English.

3.4.2. Transitivity and Volition

Cantonese makes a three-way distinction with falling/dropping verbs, as illustrated in (5). Examples of non-target uses are given in (6).

(5) Verbs of Falling and Dropping:

\begin{enumerate}
\item Intransitive, nonvolitional: \textit{dit} (跌) ‘to fall’
\item Transitive, nonvolitional: \textit{dit} (跌) ‘to drop unintentionally’
\item Transitive, volitional: e.g. \textit{diuh} (掉) ‘to drop intentionally’
\end{enumerate}
\begin{quote}
dám (扌) ‘to throw’
\end{quote}

(6) Examples of non-target uses:

\begin{enumerate}
\item See (4) above.
\item F1091, Male, age 6;3
\begin{quote}
\textit{Kéuih dit-jó go mahtfūng go ūkkéi}

佢跌咗*個蜜蜂個屋企
\end{quote}
\end{enumerate}
‘The dog had dropped the beehive.’
[Intended meaning: The dog had made the beehive fall.]

c) S1087, Male, age 7;9
*Go lúk dit-jó gó go nàahmjái heui gó dī séu gódouh
個鹿跌* 吃個男仔去喩啲水喩度。
‘The deer had dropped that boy into the water there unintentionally.’
[The intended meaning should be intentional.]

To achieve the intended meaning in (6b), the speaker could employ the make-causative, jíng-dit (整跌) ‘make-fall’. In (6c), a volitional verb such as dám ‘to throw’ can be used instead of dit. Overall, 12 children had produced one or more of the three non-target forms illustrated in (6) in one or more grades. Of the 12 children, one child produced non-target tokens throughout all three grades and four children did so for two consecutive grades. By contrast, only two of the 22 adult HSs had produced non-target tokens.

3.4.3. Semantics-syntax Interface

What kind of syntactic structure a verb can occur in is a crucial part of language acquisition. Evidence of non-target pairings of verbs and syntactic structures is found in this study. One of the verbs is tái (睇) ‘to look, to watch’ and another verb is wán (搵) ‘to look for’. Also affected is the class of “shouting” verbs, e.g., aai (嗌) and giu (叫). Generally speaking, all of these verbs cannot take directional PPs in Cantonese. Some older children and adult HSs associated these verbs with directional PPs, as shown in (7).

(7) Non-target Semantics-syntax Correspondences:

a) F1083, Female, Age 6:2:
*Go nàahmjái wán lohk go lūng
個 男仔搵*落個窿
‘The boy looked for *down the hole.’

b) AHL10, Female, Age 29; Proficiency Level: Advanced-mid:
Gám kéuih giu *yahp go lūng
咗佢叫*入個窿
‘He shouted into the hole.’

c) AHL21, Male, Age 19, Proficiency Level: Intermediate-mid:
*Gó go siú pàhngyáuh tái yahp heui yāt go lūng douh
個小朋友 睇*入去 一個窿度
‘That little friend looked into a hole.’

In (7c), the non-target correspondence can be attributed to the partial overlapping of this verb tái with another verb, mohng (望) ‘to look,’ which can take directional PPs.
In addition, tái can appear with directional verbs in idiomatic expressions, as shown in (8).

(8) Tái (睇) and Directional Verbs:
   a) Néih gám tái lohk heui, wúih tái màahng deui ngáahn.
      你咁睇落去，會睇盲對眼。
      ‘If you continue to read like this, you’ll go blind.’
   b) Kéuih tái héi séuhng làih, 20 seui jó yáu jē.
      佢睇起上嚟，20歲左右啫。
      ‘When you look at him/her, he/she only looks 20ish.’

3.5. Word Order
   One of the three vulnerable domains predicted by Matthews and Yip (2010) is concerned with double object datives. In Cantonese, the theme (T) or direct object has to appear before the recipient (T) or indirect object, that is, [V-T-R], e.g., ngóh běi láihmah Mâhmâ ‘I gave a gift (to) mom.’ We did not find many tokens of full datives in our corpus, as was the case in Yip and Matthews’ (2010) corpus. Of the eight tokens of full datives produced at kindergartener, only one was non-target. Examples of non-target production are shown in (9).

   (9) Double Object Datives:
      a) Kindergarten:
         Gó go chīngwā běi *kéuih yāt go sai chīngwā
         ‘That frog gave him a small frog.’
         [Target word order: běi yāt go sai chīngwā kéuih]
      b) From older children:
         Kéuih māhmâ běi-jó *kéuih go chīngwā
         ‘His mother had given him a frog.’
         Gānjyuh dī chīngwā jauh běi yāt go chīngwā ?běi gō go siu pàhngyáuh
         ‘And then the frogs gave a frog to the little friend.’

In the last example, the child used double běi, which has become acceptable to many native speakers. Since there were not sufficient tokens from our corpus to evaluate the vulnerability status of double object datives, the first author elicited tokens from 10 of the adult HSs by asking them to talk about what they would do on Mother’s Day. The
subjects produced sentences such as [máaih/sung-T-béi-R], where máaih means ‘to buy’ and sung means ‘to give as a present.’ When forced to use béi as the main verb, the most advanced of the ten speakers produced tokens of the target [béi-T-R], the second most advanced speaker produced a token of the double béi, and the rest all used the non-target [béi-R-T], suggesting that [béi-R-T] could become entrenched in adult HSs’ Cantonese.

One of the other two vulnerable domains is about the placement of the PP with respect to the main verb. In Cantonese, the PP appears before the main verb unless the verb is a verb of placement (e.g. báai ‘to place’) or a posture verb (e.g. chó ‘to sit’). Examples of the non-target [V PP] word order are given in (10).

(10) Non-target [V PP] Word Order:
− Gānjyuh go chīngwā jáu-jó chēunt láih *kéuih go būi
跟住個青蛙走咗出嚟*佢個杯
‘And then the frog had walked out of his cup.’
− Gānjyuh go nàahmjái chēung-gō tūhngmàaih go gáu
跟住個男仔唱歌*同埋個狗
‘And then the boy sang with the dog.’

Surprisingly, it was actually infrequent for the HSs to produce [V PP]. Only around a quarter of the child and adult HSs made this kind of word order error. The figure is much lower when tokens involving wán and “shouting” verbs are excluded since these tokens can be caused by a mismatch between verb semantics and syntax instead of not having acquired the target word order. There is clear evidence from the adult HSs that this is indeed the case. Of the 22 adult HSs, six produced tokens of the non-target [V PP]. Closer examination indicates that all but one error involve the verb wán ‘to look for’ or a “shouting” verb. An example is provided in (11).

(11) AHL 04, Female, 20, Proficiency Level: Advanced-low
Siúmhng wán *hái kéuih ge hēu
小明仲搵*喺佢嘅佢嘅靴。
‘Siúming also searched inside his boot.’
[Intended Meaning: looked into his boot]

The same subject had produced four tokens of [V PP], half with aai ‘to shout’ and the other half with wán ‘to look for’. She had also produced seven tokens of the target [PP V] and the main verb in each of the seven cases was not wán or a “shouting” verb. When asked about the token in (11), she explained she was translating from the English ‘looked into his boot’. The other five adults who contributed non-target tokens had also produced target tokens with verbs other than wán and “shouting” verbs as well.

Now we take a look at the lone token, which has nothing to do with wán or a “shouting” verb. As shown in (12), it contains the posture verb fan (瞓) ‘to sleep’ as its
main verb. This type of verb can appear in both [V PP] and [PP V]; however, in this particular token, the noun gaau (覚) ‘a sleep’ was added to the verb and so [V PP] is no longer available. This type of error usually occurs as a result of the speaker not knowing fan-gaau is actually a verb-object compound and so treating the compound as a verb instead.

(12) Verb-object Compounds:

... yātchàih fan-gaau *hái go chòhng
...
‘...together slept on the bed.’

To sum up the findings about the placement of PPs, we do not find convincing evidence that this was a vulnerable domain for the adult HSs in our corpus. How did the children fare compared with the adults? Of the 25 children, one child did not produce any tokens of PPs with verbs throughout all three grades and 19 of them had produced tokens with the target [PP V] order. On the other hand, five children had produced tokens of the non-target [V PP] order throughout all three grades. Similar to the adults but not to the same extent, some of the children’s non-target tokens also involved wán ‘to look for’ or a shouting verb. Other non-target tokens may contain dit ‘to fall, to drop unintentionally’ or tài ‘to look for’.

The last vulnerable domain deals with the placement of the direct object in a VP that contains a directional verb complement, as illustrated in (13).

(13) Placement of the Direct Object and Directional Verb Complements

a) Fōng dāi jek chīngwā
放低隻青蛙
‘put down the frog’

b) Ló jek chīngwā chēut làih
摞隻青蛙出嚟
‘take the frog out’

Regardless of whether the direct object is a lexical noun or a pronoun, it goes after the complement when the complement consists of a single directional verb such as dāi ‘down’ and hēi ‘up’, but it goes between the main verb and the complement if the latter consists of two directional verbs such as chēut làih ‘come out’ and yahp heui ‘go in’. In English, when the direct object is a noun, both kinds of word order are allowed grammatically (e.g. take the frog out and take out the frog); however, if the object is a pronoun, only one kind of word order is allowed (e.g. take it out). The English word order can have an impact on how the Cantonese-English bilingual children place the object, resulting in non-target forms. An example is quoted from Matthews and Yip
which shows the object pronoun appearing between the main verb and the complement *dāi* ‘down’.

(14) *M4hou2 baa2 keoi5 dai1 laa1*  
    don’t put her down SFP  
    ‘Don’t put her down!’ (Timmy 3;09;09)  
    (referring to a child being carried)

How did the HSs in the current corpus deal with directional verb complements? As in the case with datives, the HSs did not produce many tokens with directional verb complements and explicit direct objects. More advanced speakers demonstrated that they could use the object marker *jēung* (將) to front the direct object to the preverbal position. Overall, no clear evidence of non-target word order was found in the children’s narratives. Only one unambiguous token of non-target word order was identified in the adults’ data:

(15) *Hónàhng haih go nàahmjái jūk-jó fāan làih go chīngwā*  
    ‘perhaps it was the boy who had caught back the frog.’

4. Discussion

The HSs in our study had acquired the basic grammatical structures of Cantonese by the time they started kindergarten and these structures were maintained in adulthood. The NP, the VP, word order, and discourse connectors were all largely well-formed. The syntactic properties of noun classifiers were in place while classifiers for less common semantic classes were being worked out. Under the pressure of real-time production, the HSs streamlined the rather complex noun classifier system in Cantonese and made the most crucial contrast, individuation (*go/jek*) vs. mass/non-count (*dī*). When they produced a singular noun or an NP with a numeral, it never contained the classifier *dī*. The second contrast most frequently made was human (*go*) vs. animal (*jek*). The overextension of *go* does not necessarily mean the HSs had not acquired other more specific classifiers. The same kind of overextension was observed in the controls’ data though not to the same extent. Furthermore, when the first author asked about half of the adult HSs to give her the classifier for animals after they had just told their Frog Stories, almost all of them were able to name *jek* right away. Some were very surprised to hear they used *go* for the animals in their stories.

The disappearance of BARE *N* from the children’s Frog Stories after kindergarten is most likely due to influence from English. After over a year of heightened exposure to English, the children might have concluded that nouns need to be modified in some way and rejected Cantonese BARE *N* as a result. However, the adult HSs’ data suggest that most children would switch back to accepting BARE *N* in Cantonese at a later point if
they continue to receive input about BARE N in Cantonese.

The HSs used aspect markers and verbal particles in ways and at rates comparable to those of the controls. Non-target forms might appear but tended to be produced only by a small minority of the speakers. Verb transitivity, which takes monolingual children a while to sort out, is acquired late by HSs. A well-known example regarding transitivity from monolingual English-speaking children is their acquisition of causative-noncausative pairs (Bowerman, 1974); for instance, these children may use the intransitive *fall* as if it were the transitive *drop*. The equivalents of *fall* and *drop* (*dit* and *diuh*) in Cantonese are even more complex since they involve the added dimension of volition. Not surprisingly, close to half of the child HSs had not mastered these forms, but almost all of the adult HSs had acquired them. The latter group’s greater success is most likely due to longer exposure to Cantonese. At the same time, we do not rule out the possibility that the adult HSs were also aided by their slightly later exposure to English compared with the child HSs.

Given the prevalence of English exposure and use after formal education had started, the semantics-syntax interface displayed influence from English, yielding linguistically hybrid forms. These forms were particularly evident with the verb *wàn* ‘to look for’ and verbs of “seeing” and “shouting.” Influence from English also came with the reanalysis of double object datives. However, we concur that other factors are also at play (Yip & Matthews, 2010). The lack of full datives in Cantonese input and the common use of *béi* to mean ‘to let’ (e.g. *béi néih sihk* ‘let you eat’) contribute to the entrenchment of *[béi R T]*. Another area English influence was felt was the appearance of English discourse connectors such as “and then” in a small number of our Frog Stories.

Our findings undoubtedly have direct implications for language prospects of Cantonese HL teaching and learning in the U.S. First, contrary to some prevailing discourses that describe Cantonese as a “dying” language because of the rising popularity of Mandarin, our data provide striking evidence against these claims. The findings that our HS children data have acquired all the basic grammar and forms of Cantonese and that the HS adults continue this trend, too, show that Cantonese in the U.S. is very much alive and well. In many ways, the HSs’ production of linguistic forms is more like the control speakers than unlike them. We have not looked at phonology in this paper. The vast majority of the HSs in our study had native pronunciation. Thus the question becomes how to best foster this Cantonese-English bilingualism and meet the specific language learning needs of this group of learners such as developing literacy skills in Chinese. To this end, we advocate for the heightened awareness of this group of bilinguals, their language learning experiences, as well as language maintenance gains in the U.S. amidst what many describe as an increasingly English-only educational environment.
REFERENCES


TSE, SHEK-KAM; LI HUI; and SHING-ON LEUNG. 2007. The acquisition of Cantonese classifiers by preschool children in Hong Kong. *Journal of Child Language* 34:495-517.
