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Title: Development of Cantonese Nominal Structure in a Bilingual Child: Some Preliminary Findings

First author: Yike Yang[1]

Co-authors: Changwei Zhang[1], Yunyi Hu[2], Helena Yan Ping Lau[1] and Bei Li[1]

Affiliations:
[1]Department of Chinese and Bilingual Studies, The Hong Kong Polytechnic University
[2]Department of Otorhinolaryngology, Head and Neck Surgery, The Chinese University of Hong Kong

Email: yi-ke.yang@connect.polyu.hk

Biodata

Yike Yang received training in linguistics from Southwest University and The Chinese University of Hong Kong, and is currently a PhD student in the Department of Chinese and Bilingual Studies, The Hong Kong Polytechnic University. He has been working on several research projects at local tertiary institutions, including The Chinese University of Hong Kong, The Open University of Hong Kong, and The Hong Kong Polytechnic University.

Abstract

Research on child bilingualism has focused extensively on children speaking Indo-European languages, which share typological similarities within language pairs. It is thus proposed that investigating language pairs that are more typologically distant (e.g., English and Chinese languages) would bring more insights into the literature. In the very few studies on bilingualism involving Chinese languages, however, conflicting results have been found. Some studies reveal comparable performance in bilingual and monolingual children, while others suggest divergence between them and produce solid evidence of transfer of the two languages studied. This study attempts to investigate how nominal structure is developed in the early Cantonese of a Cantonese-English bilingual child, and whether there are differences between the acquisition sequences of Cantonese nominal structure in bilingual and monolingual children. Our data were obtained from a longitudinal corpus via the Child Language Data Exchange System (CHILDES) archive. The child's spontaneous utterances containing nominal structure were extracted for further analyses. Our preliminary findings show that the developmental sequences of the bilingual child were similar to that of the monolingual child. Bare nouns and pronouns were among the first to emerge, and *wh*-words, numerals and the possessive marker were among the latest to emerge. However, the bilingual child's rate of acquisition seems to differ from that of the monolingual child. Data from more children collected over a longer period of recording sessions are needed to confirm our initial observations about the sequence and rate of nominal acquisition by this bilingual child.

Keywords:

bilingualism, child language, nominal structure, Cantonese

Highlights

- There are similar developmental sequences in bilingual and monolingual children.
- There are different rates of acquisition in bilingual and monolingual children.

Introduction

Research on child bilingualism has focused extensively on children speaking Indo-European languages (e.g., Meisel, 2007), which share typological similarities within each language pair. It is thus proposed that investigations on language pairs that are more typologically distant (such as English and Chinese languages) would bring more insights into the literature (Yip & Matthews, 2010). A central debate on simultaneous bilingual language development is whether the two languages of a balanced bilingual child exhibit similar developmental pathways as the corresponding languages of monolingual children. Studies on bilingualism involving Chinese languages, however, provide conflicting results. Some studies find comparable performance in bilingual and monolingual children (Chang-Smith, 2010), while others suggest divergence between bilingual and monolingual children, and give solid evidence of the cross-linguistic influences of the two languages studied (Chan, 2010). To bring more evidence to this debate, the current study investigates the development of Cantonese nominal structure (NP) in a Cantonese-English bilingual child and compares the bilingual data with the data of a Cantonese-speaking monolingual child.

The following are the research questions this study attempts to address:

1 What are the developmental sequences of Cantonese NPs in the bilingual child?
2 Do the NPs in early Cantonese tend to occupy certain syntactic positions?
3 Does the development of Cantonese NPs exhibit any difference between bilingual and monolingual children?

Methodology

The corpora

The bilingual longitudinal data of the child Darren were obtained from the Hong Kong *Bilingual Child Language Corpus* (Yip & Matthews, 2007), which comprises data from nine Cantonese-English bilingual children. The data on Darren were compared with the data on a monolingual child Bernard, which was taken from the *Hong Kong Cantonese Child Language Corpus* (Lee & Wong, 1998), a corpus documenting the early language development of eight Cantonese monolingual children. The corpora were annotated with the CHAT (Codes for the Human Analysis of Transcripts) format and are available via the Child Language Data Exchange System (CHILDES) archive (Macwhinney, 2000).

The informants

The bilingual child Darren and monolingual child Bernard were selected as the informants of the study, the details of whom are given below in Table 1.

Table 1. Background of informants

Informants	Language background	From	To	# of sessions
Darren	Cantonese-English bilingual	1;07.23	2;09.03	13
Bernard	Cantonese monolingual	1;07.00	2;08.06	26

Darren was born to Cantonese-speaking parents who speak English as a second language. His parents adopted the one parent-two language strategy, so Darren was exposed to both languages at a relatively equal frequency. The corpus contains regular recordings of interactions between the child and the experimenter (sometimes family members were involved) from 1;07.23 to 3;11.24. There are 13 sessions for the period we analysed in the study (1;07.23-2;09.03). A comparison of the mean length of utterance (MLU) in Cantonese and English suggests that Darren is a balanced bilingual child in both languages, as shown in Figure 1.

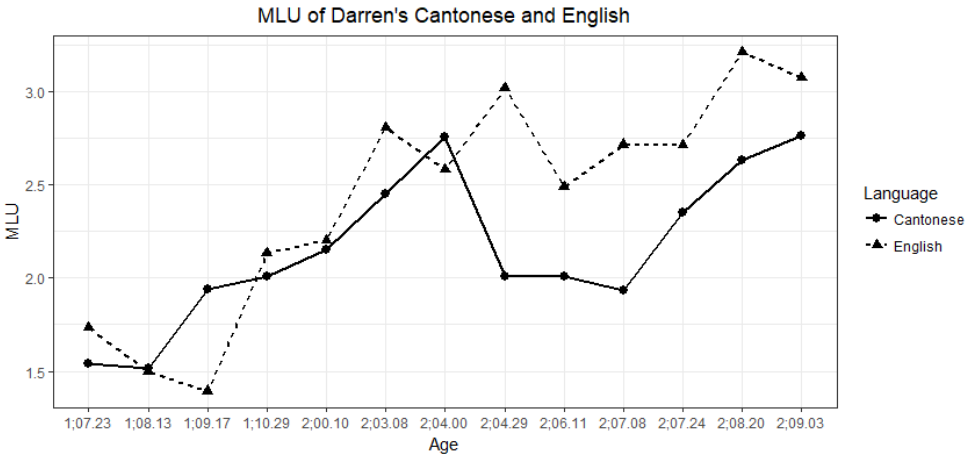

Figure 1. MLU of Darren's Cantonese and English during the 13 sessions

Bernard was also the son of a Cantonese-speaking couple. He was born in the United Kingdom and moved back to Hong Kong at the age of eight months. He was mostly exposed to Cantonese and also communicated in Cantonese, so he is treated as a monolingual Cantonese child. There are 26 recording sessions during the period of 1;07.00 and 2;08.06. Our analysis of Darren's data was compared with the analysis of Bernard's data in Wong (1998).

Data annotation and analysis

We used the 'KWAL' command in CLAN to extract two lines before and after the child's speech containing NPs. Following Wong (1998), nouns, proper names, pronouns (including reflexive pronouns), demonstratives, classifiers, numerals, the possessive marker *ge* and *wh*-words are all considered as elements of NPs in our study. To work on the child's spontaneous speech, any exact imitation, fragments of songs and book readings, and unintelligible utterances were excluded from our analysis. We also encountered several cases of vocatives, all of which were not included in our final database. The first author annotated the NP type and the syntactic position of each extracted NP and the second author checked all the annotation. In cases of any inconsistency, the first two authors went over each trial with the fourth author to reach a consensus.

Preliminary Findings

NP development in the bilingual child

An overview of the bilingual child Darren's spontaneous production of NPs is presented in Table 2. MLU is an important measurement of language proficiency in child language development. It is shown that, with the development of Darren's Cantonese (indicated by a growth of MLU), more NPs were spontaneously produced, and this was confirmed by the Pearson correlation coefficient (r = .69, p = .008).

Table 2. An overview of the data

Session	Age	# of NP	# of utterances	# of morphemes	MLU	MLU_SD
1	1;07.23	3	131	202	1.54	1.07
2	1;08.13	1	97	147	1.52	1.11
3	1;09.17	3	114	221	1.94	1.40
4	1;10.29	15	234	470	2.01	1.61
5	2;00.10	14	152	327	2.15	1.87
6	2;03.08	15	148	363	2.45	1.56
7	2;04.00	34	188	518	2.76	1.70
8	2;04.29	43	288	578	2.01	1.37
9	2;06.11	39	107	215	2.01	1.39
10	2;07.08	42	132	255	1.93	1.27
11	2;07.24	43	134	315	2.35	1.42
12	2;08.20	63	176	463	2.63	1.71
13	2;09.03	82	242	669	2.76	1.89

During his one-word stage in the first three sessions, Darren produced seven NPs, and the NPs were all bare nouns with no modifiers such as in (1a) below. Once his Cantonese entered the two-word stage in Session 4, the number of NPs increased sharply together with the emergence of new NP types. For example, there was an NP with an adjective modifier as shown in (1b). Singular first and second person pronouns and a classifier appeared in the fifth session, but bare nouns still accounted for the majority. A demonstrative occurred with a classifier in the sixth recording session as in (1c), and there was also the first use of a *wh*-word. It is remarkable that the classifier *bun2* is a specific one referring to books, so it seems plausible that this child had already mastered some specific classifiers by 15 months. The number of NPs in the seventh session doubled that of the previous session, and the possessive marker *ge* first emerged as illustrated in (1d). The structure of D+Cl+N occurred in Session 8 as in (1e) and the structure of Num+Cl+N only occurred in the last session as in (1f).

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(1) a *caang2*
orange
'Orange.'
b *san1 je5*
new thing
'New things.'
c *nei1 bun2*
this Cl
'This (book).'
d *nei1 go3 laam4sik1 ge3 hei2cung5gei1*
this Cl blue *GE* crane
'This is a blue crane.'
e *jiu3 ji1 go3 tip3zi2*
want this Cl sticker
'I want this sticker.'
f *ngo5 jiu3 jat1 gaau6 din6*
I want one piece electricity
'I want one electric battery.'

We also examined the distribution of the syntactic positions the NPs occupied, the results of which are listed in Table 3. The NPs in the first three sessions did not yet enter any syntactic position. There were four instances of null subjects in Session 4, where the NPs occurred as objects of the utterances. But, as shown in the table, the occurrence of NPs as subjects and that of NPs as objects were generally balanced.

Table 3. The distribution of NPs

Session	Age	Bare	Subject	Object	Total
1	1;07.23	3	0	0	3
2	1;08.13	1	0	0	1
3	1;09.17	3	0	0	3
4	1;10.29	11	0	4	15
5	2;00.10	7	3	4	14
6	2;03.08	9	2	4	15
7	2;04.00	14	8	12	34
8	2;04.29	26	5	12	43
9	2;06.11	29	2	8	39
10	2;07.08	14	18	10	42
11	2;07.24	8	18	17	43
12	2;08.20	13	26	24	63
13	2;09.03	9	42	31	82
Total		147	124	126	397

Comparing the bilingual and monolingual children

This subsection compares the age of emergence of each NP by the bilingual and monolingual children. The age of first emergence of various NPs is provided in Table 4. It can be seen from Table that the emergence of various NPs in the bilingual child was later than that of the monolingual child. By age two, different types of NPs had already emerged in Bernard's data, but only nouns and pronouns had occurred in Darren's data. Although there were some differences in the sequences of emergence in the two children, the patterns were basically similar.

Table 4. Age of first emergence of NPs

	Darren	**Bernard**
Emergence of nouns	1;07	1;07
Emergence of classifiers	2;01	1;07
Emergence of demonstratives	2;03	1;07
Emergence of pronouns	1;10	1;08
Emergence of numerals	2;06	1;09
Emergence of GE	2;04	1;10
Emergence of *wh*-words	2;03	1;11

Concluding Remarks

This study analyses the development of Cantonese NPs in a bilingual child and compares his data with an age-matched monolingual child. Our preliminary findings show that the developmental sequences of the bilingual child were similar to that of the monolingual child. Bare nouns and pronouns were among the first to emerge, and *wh*-words, numerals and the possessive marker were among the latest to emerge. However, the bilingual child's rate of acquisition seemed to differ from that of the monolingual child. Data from more children collected over a longer period of recording sessions are needed to confirm our initial observations about the sequence and rate of nominal acquisition by this bilingual child. Future studies may also examine the interactions between bilinguals' two languages in bilingual children's language development (Luk & Shirai, 2018).

References

Chan, A. (2010). The Cantonese double object construction with bei2 "give" in bilingual children: The role of input. *International Journal of Bilingualism*, *14*(1), 65-85. http://doi.org/10.1177/1367006909356653

Chang-Smith, M. (2010). Developmental pathways for first language acquisition of Mandarin nominal expressions: Comparing monolingual with simultaneous Mandarin-English bilingual children. *International Journal of Bilingualism*, *14*(1), 11-35. http://doi.org/10.1177/1367006909356645

Lee, H. T., & Wong, C. (1998). Cancorp: The Hong Kong Cantonese child language corpus. *Cahiers de Linguistique - Asie Orientale*, *27*(2), 211-228. http://doi.org/10.3406/clao.1998.1535

Luk, Z. P., & Shirai, Y. (2018). The development of aspectual marking in Cantonese-English bilingual children. *IRAL - International Review of Applied Linguistics in Language Teaching*, *56*(2), 137-179. http://doi.org/10.1515/iral-2014-0018

Macwhinney, B. (2000). *The CHILDES Project: Tools for analyzing talk*. Mahwah, NJ: Lawrence Erlbaum Associates.

Meisel, J. M. (2007). The weaker language in early child bilingualism: Acquring a first language as a second language? *Applied Psycholinguistics*, *28*(3), 495-514.

http://doi.org/10.1017/S0142716407070270
Wong, S. P. (1998). *The acquisition of Cantonese noun phrases* (Unpublished doctoral dissertation). University of Hawai‘i at Mānoa.
Yip, V., & Matthews, S. (2007). *The bilingual child: Early development and language contact*. Cambridge: Cambridge University Press.
Yip, V., & Matthews, S. (2010). The acquisition of Chinese in bilingual and multilingual contexts. *International Journal of Bilingualism, 14*(1), 127-146. http://doi.org/10.1177/1367006909356652