Universality and Variability in Chinese Heritage Language: Implications for Researchers and Practitioners

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Cantonese Heritage Language (CHL) Learning
Variability in Linguistic Knowledge & Performance

Larsen-Freeman (2010: 53):

“Variability stems from the ongoing self-organization of systems of activity. To honor this, we need to take into account learners’ histories, orientation and intentions, thoughts and feelings. We need to consider the tasks that learners perform and to consider each performance anew -- stable and predictable in part, but at the same time, variable, flexible, and dynamically adapted to fit the changing situation. Learners actively transform their linguistic world; they do not just conform to it.”
Research Questions

Given CHL speakers’ language history:
1. What is stable and predictable as opposed to what is variable and adaptive?
2. What do CHL learners conform to and what do they transform in the process of mastering referencing?
3. Does English affect their development of referencing skills as English replaces Cantonese as their dominant language from the time they start kindergarten?
## Subjects and Controls

<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 to 7</td>
<td>20 F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5 M</td>
</tr>
<tr>
<td>Adult HS</td>
<td>22</td>
<td>19 to 29</td>
<td>13 F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>9 M</td>
</tr>
<tr>
<td>Adult Control</td>
<td>10</td>
<td>20s to 60s</td>
<td>8 F</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2 M</td>
</tr>
</tbody>
</table>
Children’s Background

Children’s Schools:

- 6 schools from 2 major urban school districts in northern CA with high % of Cantonese-speaking children
- 3 of 6 schools had early-exit transitional bilingual classrooms as well as mainstream English-only classrooms

Attending Early-exit Transitional Bilingual Programs

- 20 out of 25 in Kindergarten
- 14 out of 25 in Grades 1 and 2
Learners’ Histories: Parents’ Questionnaires

First language spoken by child:
• 72% report Cantonese

First English Age:
• 68% report at age 3 or older

Children’s Dominant Language Spoken at Home:
• 72% Cantonese dominant at Kindergarten
• 44% Cantonese dominant at Grade 2
• Leung & Uchikoshi (2012): Cantonese-only as a home language was related to higher proficiency in Cantonese
1. **First English Age:**
   82% at age 5 or older (Recalled from memory)

2. **OPI data available on 16 of the subjects**

<table>
<thead>
<tr>
<th>OPI Level</th>
<th># Subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate-low</td>
<td>3</td>
</tr>
<tr>
<td>Intermediate-mid</td>
<td>5</td>
</tr>
<tr>
<td>Intermediate-high</td>
<td>2</td>
</tr>
<tr>
<td>Advanced-low</td>
<td>2</td>
</tr>
<tr>
<td>Advanced-mid</td>
<td>1</td>
</tr>
<tr>
<td>Advanced-high</td>
<td>3</td>
</tr>
</tbody>
</table>

3. **Language history questionnaire**
## Case Studies

<table>
<thead>
<tr>
<th>Name</th>
<th>Age(s) observed</th>
<th>Duration</th>
<th>Language Background</th>
<th>Home Language</th>
<th>Proficiency Level (OPI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adam</td>
<td>19-22</td>
<td>3 years</td>
<td>Cantonese only until K; Dad speaks Vietnamese &amp; Cantonese; Mom speaks Cantonese</td>
<td>Cantonese from birth</td>
<td>Advanced-low to Advanced-mid</td>
</tr>
<tr>
<td>Ben</td>
<td>early 20s</td>
<td>9 months</td>
<td>Cantonese only until K; both parents speak Cantonese</td>
<td>Cantonese from birth</td>
<td>Advanced-high</td>
</tr>
<tr>
<td>Chuck</td>
<td>early 20s</td>
<td>9 months</td>
<td>Cantonese only until K; both parents speak Cantonese</td>
<td>Cantonese from birth</td>
<td>Advanced-high</td>
</tr>
<tr>
<td>Dan</td>
<td>19</td>
<td>6 months</td>
<td>Cantonese only till preschool; both parents speak Cantonese; live-in Cantonese nanny until preschool</td>
<td>Cantonese before preschool</td>
<td>Intermediate-high</td>
</tr>
<tr>
<td>SB</td>
<td>0-15</td>
<td>15 years</td>
<td>Cantonese dominant until preschool; Dad speaks English; Mom speaks Cantonese and English</td>
<td>Mostly Cantonese before preschool</td>
<td>Currently intermediate-mid</td>
</tr>
</tbody>
</table>
Method

- **Stimulus material**: the wordless picture book “Frog, Where are You?” (Mayer, 1969)

- The 25 children tested twice each year from kindergarten to Grade 2:
  - CPPVT receptive vocabulary
  - Frog Stories

- 22 adult HL speakers tested once with follow-ups for some

- 10 adult Cantonese immigrants from different age groups as controls

- **Total: 107 Frog Stories**
Development of Referencing: Findings

1. Dennig, Leung, & Uchikoshi (2011): Referential functions: Similar to children from diverse L1s:
   a) Using definite forms for new introductions
   b) Re-introducing a referent similar to competing referents is cognitively most challenging: e.g. the boy’s frog with another frog.

Typological Differences between Cantonese and English:

1. Pro-drop: Cantonese allows both subject and object omissions

2. Referential forms:
   a) Common nouns usually require classifiers (CL).

3. Classifiers:
   a) Syntax: before the head noun
   b) Semantics: over 60 classifiers grouped by functions and semantic features such as shape and size
Frequency Distribution of Anaphoric Types by Age
# Narrative Length

<table>
<thead>
<tr>
<th>Group</th>
<th>Clause Count (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kindergarten</td>
<td>30 (14.95)</td>
</tr>
<tr>
<td>Grade 1 (n=25)</td>
<td>34 (10.19)</td>
</tr>
<tr>
<td>Grade 2 (n=25)</td>
<td>32 (9.94)</td>
</tr>
<tr>
<td>Adult HL (n=22)</td>
<td>66.7 (34.3)</td>
</tr>
<tr>
<td>Adult Control (n=10)</td>
<td>84 (21.67)</td>
</tr>
</tbody>
</table>
Examples of Over Specification

1. Go chīngwā yauh m̀h-hái deui-haaih douh.
   CL frog also not be-at CL shoe LOC

   Chīngwā yauh m̀h-hái nīdouh.
   frog also not be-at here

   “The frog was not in this pair of shoes.
   The frog was also not here.”

2. Go nàahmjái séung-heui yāt go sehk gó-douh
   CL boy go up one CL rock there

   kéuih giu.
   he call/shout

   “The boy went up a rock. He called.”
   [In Cantonese, he can be omitted.]
## Frequency of Over Specification

<table>
<thead>
<tr>
<th>Group</th>
<th>School Type</th>
<th>Over Specification % (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K (n=25)</td>
<td>Trans Bilingual</td>
<td>.06 (.07)</td>
</tr>
<tr>
<td></td>
<td>Mainstream</td>
<td>.08 (.08)</td>
</tr>
<tr>
<td>Gr 1 (n=25)</td>
<td>Trans Bilingual</td>
<td>.07 (.10)</td>
</tr>
<tr>
<td></td>
<td>Mainstream</td>
<td>.09 (.05)</td>
</tr>
<tr>
<td>Gr 2 (n=25)</td>
<td>Trans Bilingual</td>
<td>.10 (.09)</td>
</tr>
<tr>
<td></td>
<td>Mainstream</td>
<td>.08 (.07)</td>
</tr>
<tr>
<td>Control (n=10)</td>
<td></td>
<td>.07 (.06)</td>
</tr>
</tbody>
</table>

**Pro-drop: No evidence of transfer from English**
#2 Major Nominal Forms Observed in Data

1. [DEM-(NUM)-CL-N]: nī (léuhng) jek chīngwā 
   “these (two) frogs”
2. [CL-N]: jek chīngwā  “a/the frog”
3. Bare N: chingwā “frog”
4. POSS: chingwā ge ūkkéiyàhn  “frog’s family”
5. [NUM-CL-N]: yāt jek chīngwā  “a frog”
Frequency Distribution of Most Common Nominal Types by Age

Bare N:
(1) Children and Controls: IRR=0.209, p<0.001
(2) Children/Controls vs. Adult HL/Controls $\chi^2=44.10$, p<0.001
The thematic and grammatical roles: [CL-N] vs. Bare Nouns

Thematic correlations with forms?
1. 72% of the adult HL speakers preferred [CL-N].
2. Production of bare nouns varied significantly:
   a) 37% didn’t produce any bare nouns.
   b) 26% restricted bare nouns to the frog almost exclusively in direct speech.
   c) 14% produced more bare nouns than other subjects did. They were probably influenced by children’s stories in written Chinese: 1 of the 3 subjects had studied Chinese for years and the remaining 2 had studied it throughout college.

Findings: More variable and restrictive at the same time
1. 60% of the controls preferred [CL-N].
2. Half assigned a name to one or more of the main characters (e.g. Siumihng and Chǐngchǐng)
3. Their uses of bare nouns were less restrictive than the adult HL speakers’.

Finding: CHL speakers produced similar nominal forms as the controls, but their chances of using these forms could differ from the controls’.
#3 Classifiers

Typology of Cantonese Classifiers (Tse, Li & Leung 2007)

CHL speakers’ production:

*go* 個 "general" > *dī啰 (些) “mass/non-count" > *jek* 隻 "animate"
Frequency Distribution of Target & Non-target Classifiers

<table>
<thead>
<tr>
<th>Group</th>
<th>n</th>
<th>Frequencies</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>go</td>
<td>dī</td>
<td>jek</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>T</td>
<td>%</td>
<td>N-T</td>
<td>%</td>
<td>T</td>
</tr>
<tr>
<td>K</td>
<td>25</td>
<td>137</td>
<td>38.6</td>
<td>210</td>
<td>61.4</td>
<td>37</td>
</tr>
<tr>
<td>Gr 1</td>
<td>25</td>
<td>346</td>
<td>48.4</td>
<td>369</td>
<td>51.6</td>
<td>49</td>
</tr>
<tr>
<td>Gr 2</td>
<td>25</td>
<td>251</td>
<td>41.0</td>
<td>361</td>
<td>59.0</td>
<td>43</td>
</tr>
<tr>
<td>Adult HS</td>
<td>22</td>
<td>200</td>
<td>40.0</td>
<td>300</td>
<td>60.0</td>
<td>47</td>
</tr>
<tr>
<td>Control</td>
<td>10</td>
<td>221</td>
<td>68.6</td>
<td>101</td>
<td>31.4</td>
<td>40</td>
</tr>
</tbody>
</table>
Other Studies

Wei & Lee (2001):
1. 34 British-born Cantonese-English bilinguals aged 3-16
2. Taped conversations and retold a story just heard
3. *Go* and *dī* are "invariably used by nearly all the children" (p.369).

Tse, Li, & Leung (2007):
1. 492 monolingual Cantonese preschoolers ages 3, 4, and 5
2. A 30-minute toy play session
3. The general classifier *go* is never over-extended to mensural classifiers.
4. “… using the general classifier is a cognitively accessible and economical strategy so that, when in the toy-play situation, the children eased the burden on their cognitive processing and shortened response time…” (514).
Talmy, 2008:
“…within the category of number, a bound closed-class form can represent such concepts as ‘singular’, ‘dual’, ‘plural’, and ‘paucal’, while a free closed-class form can also represent such concepts as ‘no’, ‘some’, ‘many’, and ‘all.’”

go for “individuating small numbers”

$dī$ for “mass/non-count nouns”
Number Concepts

Cognition:
1. Marmasse, Bletsas, & Marti (2000): Infants can distinguish small numbers below 5
2. Animals, birds, dolphins (more or less)

Production strategies:
   a) Extending go to other classes of sortal classifiers
   b) Using go for “individuating, small numbers” and dī for “mass/noun-count”
Stability and predictability in CHL

1. Across diverse languages:
   a) Referent Introduction
   b) Referent Maintenance & Referent re-introduction

2. Intra-language tendencies in spite of typological differences between Cantonese and English:
   a) An organizing principle of Cantonese: Pro-drop
   b) Basic referential forms
   c) Nominal articles: similar strategies
Variability in CHL

1. Classifier system (morpho-syntactic):
   • Variability in how many classifiers are acquired and used
   • Morphology: classifiers learned item by item.

2. Distributional frequencies of nominals:
   • More restrictive or no use of bare nouns
Influence of English

1. No evidence of transfer: pro-drop
2. Some evidence of transfer:
   a) Low frequency of bare nouns among children
   b) More restrictive or no use among some adult CHL speakers
Discussion

1. Learners’ Histories:
   a) The environment in which HL speakers acquire their HL varies from speaker to speaker.
   b) Most learn their HL before K through interacting with their families and immediate community.
   c) HL is for performing social functions within their family and community.

2. They soft assemble their language resources in response to the task in hand (Larsen-Freeman, 2010) and may use strategies to make production more efficient.

3. Different components may interact with each other, e.g. semantic universals, L2, word order, and discourse.

4. Features that are conformed to are those that are influenced by cognitive development and those that are defining characteristics of Cantonese.

5. Features that are transformed are those that are highly adaptive to the needs of a task and the social context in which the task is performed.
Implications

Researchers:

To build a more accurate representation of HL speakers’ knowledge of their HL:

1. There’s a need to document language histories and social identities and track proficiency levels.
   a) Attainment levels correlated with amount of Cantonese spoken at home when growing up: both current study and Leung & Uchikoshi (2012)
   b) Age of first exposure to English was insignificant in Leung & Uchikoshi’s study but seemed significant in our ongoing case studies.
   c) Social identities: Adam’s case study
   d) Learning styles and aptitude: Adam vs. Ben
Implications

Researchers:

2. There’s a need to broaden our data base of CHL development,” e.g. comprehension vs. production in different social contexts, narrating a personal experience in conversations vs. telling a fictional story.
   a) Comprehension and production of classifiers
   b) Speakers’ production of referential forms influenced by test materials: Frog stories vs. personal narratives
      ▪ Chuck: Relative clauses in frog story vs. narrative about the World Expo 2010 in Shanghai: 5 simple time relative clauses vs. 5 complex, descriptive relative clauses
   c) Spontaneous, interactive data:
      ▪ Ben: Yéung jái “adopted son”; Lee: Yéung jí; Ben: Yéung jí
      ▪ Ben: Kéuih houh houh curious; Lee: houhkèih; Ben: houhkèih
Implications

Practitioners:

1. Finding out HL speakers’ experience with HL is crucial in being able to connect with them and address their linguistic needs.
   a) Analyzing their needs: the local and the global (transnational)
   b) Addressing challenges of HLs that are not “official” languages
   c) Integrating HL learners in the foreign language classroom:
      “At the Language Center, we prepare all Stanford students to have a foreign language capability that enhances their academic program and enables them to live, work, study, and research in a different country.”

2. Understanding the type and amount of linguistic input the learners got when growing up can help practitioners predict and target potentially difficult areas.

3. Sharing research findings with HL learners
   a) How much they know and
   b) How they can build on that foundation
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References


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