

# The 3<sup>rd</sup> Workshop on Innovations in Cantonese Linguistics



March 12<sup>th</sup> – 13<sup>th</sup>, 2016  
The Ohio State University  
Columbus, Ohio

<http://u.osu.edu/wicl/>



**THE OHIO STATE UNIVERSITY**



# Welcome

The Institute for Chinese Studies (ICS) and the Graduate Association of Chinese Linguistics (GACL) at The Ohio State University are delighted to host the **3<sup>rd</sup> Workshop on Innovations in Cantonese Linguistics (WICL-3)**. This 1-1/2 day event, inaugurated at Ohio State in 2012, returns to The Ohio State University campus this spring. The event takes place on **12-13 March 2016** at our Mershon Center for International Security Studies (1501 Neil Avenue, Columbus, Ohio 43201).

This workshop focuses on new advances in Cantonese Linguistics, including innovations in methodologies, tools, and/or computing software. Especially welcomed are new approaches and research on language variation within the Cantonese (or Yue 粵 ‘Cantonese (broadly construed)’) subgroup of the Chinese language family, language contact phenomena, and new subfields and their interfaces. While Cantonese linguistics workshops and conferences are regularly held in mainland China, Macao and Hong Kong, WICL is the only North American event that is held solely for scholarly exchanges on Cantonese linguistics research. We are immensely gratified that colleagues in Canada and the U.S., as well as some from abroad have joined us at this workshop, and in a couple of cases, virtually, as we explore and harness current technological breakthroughs to exchange ideas.

We have put together what we hope is an exciting and informative program at this workshop that, through the generosity of our sponsors, we are able to host with free registration and for it to be open to The Ohio State University community and the general public. We have three keynote speakers, one from Canada and two from Hong Kong: Professor Valter Ciocca (School of Audiology and Speech Sciences, University of British Columbia, Vancouver, Canada); Professor Stephen Matthews (Department of Linguistics, University of Hong Kong, Hong Kong SAR); and Professor Virginia Yip (Department of Linguistics and Modern Languages, Chinese University of Hong Kong, Hong Kong SAR). We are thrilled that a number of the presenters are also from Canada and Hong Kong, in addition to presenters from the U.S., including local presenters and OSU alumni.

We thank our sponsors for their generosity in making this event possible, and all those who have chipped in, volunteered, and helped in preparing for this event. We look forward to a fruitful and productive event, and thank you all for your participation and attendance at this workshop on 12-13 March 2016! We welcome you—or welcome you back, as the case may be—to our Buckeye State and to The Ohio State University!

Sincerely,

Marjorie K.M. Chan, Litong Chen, Yutian Tan & Tsz-Him Tsui  
Co-Chairs, WICL-3 Organizing Committee

# Organizers & sponsors

## **Organizing committee:**

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# General information

## 1. On-site registration

Mershon Center for International Security Studies, 1501 Neil Ave., Columbus, OH 43201.

March 12: 8:00 am to 4:45 pm

March 13: 8:00 am to 11:15 am

## 2. Arriving at the workshop venue

**Parking garage:** 9<sup>th</sup> Avenue East Garage, 345 West 9<sup>th</sup> Avenue, Columbus OH 43210.

**City bus:** COTA bus routes 7 and 18 stop within a block from the workshop venue. Updated COTA bus schedules can be found on Google Map and <http://www.cota.com/>.

**Campus bus:** CABS is a free transit service provided by OSU. Routes MC, CLS and CLN stop within two blocks from the workshop. Real time CABS bus tracking is available on the Ohio State app (iOS/Android), and <http://trip.osu.edu/>.

## 3. Internet access

Connect to "**WiFi@OSU**" service set identifier (SSID) from a WiFi enabled device, then launch your device's web browser to complete the log in.

## 4. Information for visitors to the Ohio State University

OSU provides very helpful information for visitors at  
<https://www.osu.edu/visitors/>

Campus maps are available at  
<https://www.osu.edu/map/>

# Program

**March 12<sup>th</sup>, 2016 (Saturday)**

**All presentations are in Room 120, Mershon Center.**

- 8:00-8:20      Registration
- 8:20-8:30      Welcome and opening remarks  
Etsuyo Yuasa (Director, East Asian Study Center, Ohio State U)
- 8:30-10:00     Session A: Tones and intonation  
(Chair: Stephen Matthews, U of Hong Kong)  
Una Y. Chow & Stephen J. Winters (U of Calgary)  
*Perception of intonation in Cantonese: native listeners versus exemplar-based model*  
Zoe Wai-Man Lam, Kathleen Currie Hall & Douglas Pulleyblank (U of British Columbia)  
*Temporal location of perceptual cues for Cantonese tone identification*  
Chow Pui Lun (U of Hong Kong)  
*Headedness and prominence: A study in tone changes in N+N Cantonese noun phrases*
- 10:05-11:35    Session B: Corpus and computational linguistics  
(Chair: Naomi Nagy, U of Toronto)  
Charles Lam (Hang Seng Management College)  
*Multiple functions of HAVE in Cantonese: a corpus study*  
Andrew Peters & Holman Tse (York U & U of Pittsburgh)  
*Evaluating the efficacy of Prosody-lab Aligner for a study of vowel variation in Cantonese*  
Jackson L. Lee, Litong Chen & Tsz-Him Tsui (U of Chicago & Ohio State U)  
*PyCantonese: Developing computational tools for Cantonese linguistics*
- 11:35-11:50    Break
- 11:50-12:50    Plenary session 1  
(Chair: Robert Fox, Ohio State U)  
Valter Ciocca (U of British Columbia)  
*A developmental perspective on the perception and production of Cantonese tones*
- 12:50-1:50     Lunch

## March 12<sup>th</sup>, 2016 (Saturday) (cont.)

- 1:50-2:50      Plenary session 2  
(Chair: Udo Will, Ohio State U)  
Stephen Matthews (U of Hong Kong)  
*Tonal targets in language and music*
- 3:00-4:30      Session C: Cantonese in contact  
(Chair: Virginia Yip, Chinese U of Hong Kong)  
Dana Scott Bourgerie (Brigham Young U)  
*Notes on Cantonese as spoken in the Cambodia Chinese diaspora*  
Kay Hoi Yi Wong (Chinese U of Hong Kong)  
*Contact-induced language change in Hong Kong Written Chinese: A case of baa2- and zoeng1-constructions*  
Jennifer Jay & Marjorie K.M. Chan (U of Alberta & Ohio State U)  
*Sun Yat-sen's 1924 speech: A preliminary historical and linguistic analysis of the Cantonese audiorecording*
- 4:30-4:45      Break
- 4:45-6.15      Session D: Cantonese in North America  
(Chair: Dana Scott Bourgerie, Brigham Young U)  
Genevieve Leung & Melissa Chen (U of San Francisco)  
*From ear-cleaning to asking how to say I love you: Metalinguistic discussions and positive affective stance on the “Hoisan Phrases 學講台山話 ” Facebook site*  
Samuel Lo, Junrui Wu, Elaine Wang, Zahid Daudjee, Deepam Patel & Naomi Nagy  
(U of Toronto)  
*Use of Heritage Cantonese and Korean classifiers in Toronto*  
Holman Tse (U of Pittsburgh)  
*Contrast maintenance and innovation in Toronto Heritage Cantonese high vowels*
- 7:00            Dinner at Ohio Staters, Inc. Traditions Room, The Ohio Union  
(1739 N. High Street, Columbus, OH 43210)



## March 13<sup>th</sup>, 2016 (Sunday)

- 8:30-10:00      Session E: Language attitudes and variations  
(Chair: Genevieve Leung, U of San Francisco)  
Thomas Hun-tak Lee (Chinese U of Hong Kong)  
*The status of Cantonese in Hong Kong — fact and perception*  
Sha Huan (Ohio State U)  
*How does younger generation view their language? A case study in Guangdong and Hunan*  
Yutian Tan & Tsz-Him Tsui (Ohio State U)  
*Quantifying the lexical affinity among Siyi Yue dialects*
- 10:05-11:05      Plenary session 3  
(Chair: Mineharu Nakayama, Ohio State U)  
Virginia Yip (Chinese U of Hong Kong)  
*The acquisition of Cantonese in bilingual contexts*
- 11:05-11:15      Break
- 11:15-1:00      Session F: Special panel on Cantonese pedagogy  
(Chair: Marjorie K.M. Chan, Ohio State U)  
Sik Lee Dennig (Stanford U)  
*The production of aspect markers in narratives by advanced Heritage Cantonese speakers*  
Raymond Pai (U of British Columbia)  
*Cantonese as a Foreign Language (CFL) Curriculum design based on learner needs in North America*  
Matthew Christensen & Dana Scott Bourgerie (Brigham Young U)  
*Principles for developing Cantonese curriculum and materials — from beginning to advanced*  
General discussion on the state of Cantonese pedagogy
- 1:00-1:05      Closing remarks  
Marjorie K.M. Chan, Litong Chen, Yutian Tan & Tsz-Him Tsui  
(WICL-3 Organizing Committee Chairs)

# Invited talks

## **A developmental perspective on the perception and production of Cantonese tones**

Valter Ciocca

University of British Columbia

For native speakers of tonal languages, language acquisition involves the development of contrastive, language-specific lexical tone categories. Although amplitude, duration and voice quality characteristics have been found to be associated with lexical tones, fundamental frequency (F0) patterns are the primary cues to lexical tone recognition for Chinese languages such as Cantonese. The presentation will review the findings about Cantonese tone perception and production from infancy to adulthood. The talk will focus on evidence obtained from experimental studies on tone perception in which participants are asked to identify a target monosyllabic word spoken by an adult male speaker within a carrier phrase. These words represented eight pairs of minimal tone contrasts. Following the auditory presentation of a word, two pictures representing the relevant minimal tone contrast were presented. Listeners were asked to select the picture corresponding to the word they had heard. Participants were children (between 2 and 10 years of age) and adult controls. Participants who were 2 to 5 year old, as well as adult participants, were also asked to produce monosyllabic words for each of the sixteen pictures that were used in the perception experiments. The developmental pattern of tone production was measured through both perceptual and acoustic analyses. For perceptual analysis, a native speaker with expertise in phonetic transcription transcribed the lexical tones of the children's utterances. Because of the observed large discrepancies between judgments provided by the same judge at different times, the analysis of tone production data will focus on the results of the F0 patterns of the utterance obtained from the acoustic analysis. For the development of tone perception, the performance (% correct identification) of each child for each minimal tone contrast was calculated.

Conclusions about the age at which Cantonese lexical tone are acquired, and about the impact of methodological choice on the reported age of acquisition will be discussed on the basis of evidence obtained from these tasks as well as other findings from previous studies. The talk will also discuss how a review of the developmental data can provide insights about the relationship between the perception and the production of phonological contrasts.

## Tonal targets in language and music

Stephen Matthews

The University of Hong Kong

Linguists such as Jones & Woo (1913) and Chao (1949) have used musical notation to represent Cantonese tones. Is this more than an analogy? “Musical approaches” to teaching Cantonese suggest that the keys to mastering tone lie in musical analogies, while popular belief suggests that musicians have an advantage in learning languages with complex tone such as Cantonese. But what, if any, is the basis for these notions? Recent work shows that both native and non-native speakers with musical training do have an advantage, not only for tonal but also for segmental perception (Pang 2012). Such behavioral results suggest that the mental resources used for tonal and musical processing overlap (Mok & Zuo 2012).

An aspect of the equivalence between linguistic tone and musical pitch which can be confirmed empirically involves intervals (Chow 2012, Yiu 2013). While the F0 interval between tone 1 [55] and tone 3 [33] is two to three semitones, the interval between the level tones 6 [22] and 3 [33] corresponds to a semitone, just as in Jones and Woo’s notation.

These patterns have implications for the representation of tone. Chan (1987) showed that tone pairs 25/55 and 23/33 are interchangeable, suggesting that tonal offsets are relevant to tone-melody mapping. Yet this fact is not captured by analyses positing tonal registers and features such as [+/-raised] (Yip 2001). The equivalences between musical and tonal intervals are reflected in the in tone-melody mapping at cadences, where particular tones serve as tonal targets at the end of a melody. As shown by Ho (2010), in Canto-pop major key songs end on either tone 3 [33] or tone 5 [23]; given that melodies typically end on the keynote, the choice of tonal target at the ending reflects the placement of the semitone between the keynote and the leading note, which may be sounded either in the melody or the accompanying harmony. We show that this pattern is highly consistent for major key songs ending on the keynote, which consistently end on 23 or 33 tones. The patterns for minor key melodies are more variable, reflecting the differing placement of semitones in the various forms of minor scale.

This evidence calls for a representation in which tonal offsets are explicitly represented, in order for them to be targeted by rules of tone-melody mapping and to serve as targets at cadences. This conclusion supports an analysis proposed for independent reasons in Lee (2014), in which both onsets and offsets are specified.

## **The acquisition of Cantonese in bilingual contexts**

Virginia Yip

Chinese University of Hong Kong

Most children acquiring Cantonese today are also exposed to another language from birth. In a community like Hong Kong, they grow up bilingual in Cantonese and English. How do bilingual children acquire various aspects of Cantonese in the first few years of life? Cantonese and English are two typologically divergent languages with striking contrasts in many aspects of grammar. The development of Cantonese-English bilingualism offers a unique window that allows us to see how the two target languages interact in systematic ways. In a number of grammatical domains including dative constructions, verb particle constructions, relative clauses, bilingual children's Cantonese shows cross-linguistic influence from English. Cross-linguistic influence will be illustrated by examples from the case study of 9 children aged from 1;3 to 4;6 based on longitudinal speech data from the Hong Kong Bilingual Child Language Corpus (Yip 2013; Yip and Matthews 2007, in preparation). I will then show that similar interactions take place in the acquisition of tone: in particular, English stress patterns are realized as prosodic templates.

I will discuss the relationship between Cantonese linguistics and bilingual development which constitutes a two-way street, with the fields mutually informing each other (Matthews and Yip 2014). For Cantonese linguistics, bilingual development shows how properties of Cantonese interact with another language, and which properties are vulnerable to cross-linguistic influence. At the same time, Cantonese opens new windows on bilingual development: interactions which do not arise with other language pairs, such as those between Cantonese and English relative clauses, enrich the picture of possible interactions and our understanding of their causes.

# General sessions

## Notes on Cantonese as spoken in the Cambodia Chinese diaspora

Dana Scott Bourgerie

Brigham Young University

There has been a Chinese population in Cambodia for more than 500 years and Chinese emigration to Cambodia was first mentioned by emissary Zhou Daguan as early as 1296. Despite a relatively high degree of integration into the majority Cambodia culture, ethnic Chinese have maintained their own cultural organizations, news media, and schools. The Cambodian Chinese population is organized around five *Huiguan* (会馆) ‘congregations’ corresponding to the southern-origin Chinese groups that comprise it: 潮州会馆, 广肇会馆, 客属会馆, 福建会馆, and 海南会馆. Until the Khmer Rouge forced closure of Chinese schools in the mid seventies, there was a major Cantonese medium school in Phnom Penh and the Cantonese cultural association persists today to support Cantonese culture and language.

Through examination of recorded interviews, this paper outlines key features of Cantonese as spoken in contemporary Cambodia, with special emphasis on the phonological. The study also examines more generally the influences of other Chinese dialects and of Khmer on the local variety of Cantonese.

## Headedness and prominence: A study in tone changes in N+N Cantonese noun phrases

Chow Pui Lun  
University of Hong Kong

Previous studies have shown that Cantonese tone changes primarily occur on the second or final syllable and mainly involve alternations between low tones ([22] or [21]) to the high-rising tone [25] (e.g. Matthews & Yip, 2001; Yu 2009 ;Yue-Hashimoto 1972). Further, such tone changes are thought to be a signal of lexicalization. This study re-examines tone change in Cantonese N+N compounds. While affirming the previous findings, these new data show that there is additionally a number of tone changes on the first syllable, apparently involving the ‘reverse’ rules: i.e. high-rising → low.

The data are based on recordings made from stimuli constructed using Cantonese a head-final N+N compounds. First, I created stimuli exhaustive of all tonal combinations for the N+N compounds. 168 N+N phrases were recorded in a carrier phrase (“This word is X”) and the monosyllabic constituents of these compounds were additionally elicited in isolation. Of these 168 tokens, only 33 instances of tone changes were found: 24 involve an input of low tone [21] or [22] changing to high-rising [25], as shown in Set A of the examples in Table 1 below.

Table 1.

Set	Examples	Changed tone Input → Output	Change on head?	Change on final?
A	鑛盆 sink basin 'the basin'	sing <sup>55</sup> pun <sup>21</sup> → pun <sup>25</sup>	+	+
	海味 hoi <sup>25</sup> mei <sup>25</sup> sea taste 'seafood'	hoi <sup>25</sup> mei <sup>22</sup> → mei <sup>25</sup>	+	+
	男人 naam <sup>21</sup> jan <sup>25</sup> male people 'man'	naam <sup>21</sup> jan <sup>21</sup> → jan <sup>25</sup>	+	+
B	籃球 laam <sup>25</sup> kau <sup>21</sup> net ball 'basketball'	laam <sup>25</sup> → laam <sup>21</sup> kau <sup>21</sup>	-	-
	鶴咀 hok <sup>25</sup> zeoi <sup>25</sup> crane mouth 'crane beak'	hok <sup>25</sup> → hok <sup>22</sup> zeoi <sup>25</sup>	-	-
	蛋糕 daan <sup>22</sup> gou <sup>55</sup> egg cake 'cake'	daan <sup>25</sup> → daan <sup>22</sup> gou <sup>55</sup>	-	-

For all the set A tokens (24/33 of the elicited sandhi instances), the change from low to rising tone occurs on the final syllable, the head of the compound. The set B, however, (9/33 instances) show an input of a rising tone being realized as a low tone. Furthermore, the changes occur on the non-head, the initial syllable in these N+N phrases.

In this paper, I propose that tone changes in N+N phrase formation are determined by headedness and position of tone change. Following Matthews & Yip (2011), it is argued that this type of tone change is motivated by the need of *prominence* on the head. In N+N noun phrases in which the final head morphemes retain their syntactic prominence, the low tone input gives an output of high rising [25], involving an increase in prominence due to the pitch (cf. Yu 2009:6-7). Yet, the reverse type of tone change rule (rising to low) suggests the possibility of a kind of ‘prominence reduction’. In other words, a lowering of the tone end signals a ‘loss’ of the canonical head status of a morpheme. Therefore, I claim that the low → high-rising and high-rising → low alternation correspond to the different syntactic structure of the noun phrases

This study adds to existing observations about tone changes in Cantonese N+N compounds, and emphasizes the importance of syntactic information and the interaction of syntax and phonology.

### References:

- Matthews, S & Yip, V. 2011. *Cantonese: A Comprehensive Grammar*. London: Routledge, 2nd edition.  
 Yu, A. C. L. 2009. Tonal mapping in Cantonese vocative reduplication. BLS35: 6-7.  
 Yue-Hashimoto, A. O.-K. 1972. *Studies in Yue Dialects: The Phonology of Cantonese*. Cambridge: CUP



## Perception of intonation in Cantonese: Native listeners versus exemplar-based model

Una Y. Chow & Stephen J. Winters  
University of Calgary

This study investigated the perception of Cantonese intonation by an exemplar-theoretic model, without using F0 normalization. Exemplar Theory (Johnson, 1997) claims that listeners store experienced utterances (i.e., exemplars) in rich phonetic detail, so that when a new utterance is heard, it is classified by comparing its acoustic similarity to all exemplars stored in memory. Chow and Winters (2015) applied Johnson's model to intonation perception and demonstrated that the model could correctly classify 95% of statements and questions in Cantonese, based on F0 cues. Cantonese provides an interesting test case for this model, because its high boundary tone on echo questions (Wong et al., 2005) potentially creates perceptual confusion with the rising tones, 25 and 23, on the final syllable (Ma et al., 2011). In this study, we compared the performance of human listeners in a perception study to the performance of this computer model, in order to determine whether an exemplar-based model could account for human perception of intonation in statements and questions in Cantonese.

First, we recorded two male and two female native speakers from Hong Kong producing twenty pairs of statements and questions in Cantonese. Then we presented these 160 recorded sentences to twenty native listeners of Cantonese in an identification task in three different forms: 1) the complete sentence (e.g., *Wong<sup>55</sup> Ji<sup>22</sup> gaau<sup>33</sup> lik<sup>22</sup> si<sup>25</sup>* 'Wong Ji teaches history'), 2) the non-final portion of the utterance (e.g., *Wong<sup>55</sup> Ji<sup>22</sup> gaau<sup>33</sup> lik<sup>22</sup>*), and 3) the final syllable of the utterance (e.g., *si<sup>25</sup>*). Finally, we tested the model in the same conditions as in the testing of the human listeners. The model categorized statements and questions based on the total acoustic distance between a new token and each of the previously presented tokens, calculated by applying an exponential function to the Euclidean distance between F0s of eleven equidistant time points of the periodicity of the compared tokens.

ANOVAs on perceptual sensitivity ( $d'$ ) and response bias ( $\beta$ ) revealed that both listeners and the model were significantly less sensitive to non-final stimuli than to complete sentences and to final syllables ( $p < 0.05$ ). However, listeners were able to classify statements and questions from non-final stimuli significantly better than the model, but showed significantly more bias towards statements in this condition ( $p < 0.05$ ). These results suggest that native listeners rely primarily on F0 cues in the final syllable to identify statements and questions. In the absence of these F0 cues, listeners tended to identify non-final stimuli as statements. The results from this study show that an exemplar-based model, without F0 normalization for speaker, is a promising model for the human perception of statements and questions in a language that relies primarily on F0 for both lexical tones and sentence intonation, such as Cantonese.

### References:

- Chow, U. Y., & Winters, S. J. (2015). Exemplar-based classification of statements and questions in Cantonese. In The Scottish Consortium for ICPHS 2015 (Ed.), Proceedings of the 18th International Congress of Phonetic Sciences. Glasgow, UK: the University of Glasgow.
- Johnson, K. (1997). Speech perception without speaker normalization: An exemplar model. In K. Johnson, & J. W. Mullennix (Eds.), Talker variability in speech processing (pp. 145-165). San Diego: Academic Press.
- Ma, J. K.-Y., Ciocca, V., & Whitehill, T. L. (2011). The perception of intonation questions and statements in Cantonese. *Journal of Acoustical Society of America* 129(2), 1012-1023.
- Wong, W. Y. P., Chan, M. K. M., & Beckman, M. E. (2005). An autosegmental-metrical analysis and prosodic annotation conventions for Cantonese. In S.-A. Jun (Ed.), *Prosodic typology: The phonology of intonation and phrasing* (pp. 271-300). New York: Oxford University Press.

## **Principles for developing Cantonese curriculum and materials — from beginning to advanced**

Matthew Christensen & Dana Scott Bourgerie  
Brigham Young University

Although not nearly as widely taught as Mandarin, there is a long history of teaching Cantonese in North America dating especially from the 1950s and 1960s. Notwithstanding the growing influence of Mandarin in high profile Cantonese-speaking locales such as Hong Kong and Macau, demand for university level courses has been steady and has even expanded. Indeed, there have been new programs established in recent years for heritage learners, Mandarin learners, and true beginners. Since the ground breaking Yale series by Parker Huang there have been a steady stream of materials and other Cantonese learning aids — including dictionaries, glossaries, and more recently online materials.

This paper outlines core principles for developing Cantonese language materials across levels and for various learner needs based on the specific curricular goals. We also address issues of literacy and standardness within a Cantonese context and consider the challenges of articulation between basic and advanced level Cantonese.

# Language contact: The production of aspect markers in narratives by advanced heritage Cantonese speakers

Sik Lee Dennig  
Stanford University

This paper examines how advanced Cantonese heritage (ACH) speakers use aspect markers in Cantonese to tell stories and whether there is evidence of hybridization as Cantonese and English come into close contact in these speakers. Aspect as a universal linguistic concept is expressed differently in Cantonese and English. While English only has one grammatical marker (-*ing*) to encode the imperfective aspect, Cantonese distinguishes between progressive (-*gán*) and stative (-*jyuh*). The perfective marker (-*jó*) in Cantonese serves multiple language-specific functions such as marking the peak event or the end of a discourse unit in addition to encoding boundedness. The acquisition of aspect by different kinds of learners has been studied extensively in Mandarin and other languages (e.g., Chen & Shirai, 2010; Ma, 2006; Mikhaylova, 2012), yet hardly any attention has been paid to Cantonese heritage speakers though these speakers have a significant presence in overseas Chinese communities. The current study aims to fill that gap.

The data for this study consist of 23 stories from 13 ACH speakers and 55 stories from monolingual controls. The ACH speakers were all undergraduates enrolled in advanced conversational Cantonese courses at the time of the study. They all acquired Cantonese as a first language in early childhood and continued to have exposure to the language after English became their dominant language when formal education started around age 5. Of the ACH speakers' stories, 13 of them were Frog Stories based on a children's wordless book about a boy looking for his missing pet frog. The remaining stories were Pear Stories, which the subjects told after they watched a video on Dr. Mary Erbaugh's Pear Stories' website (<http://pearstories.org/>). The video depicts a boy stealing a basket of pears from a man who was picking pears from a tree and the boy's later adventures. For comparisons with the ACH speakers' stories, I also analyzed 30 Pear Stories from Hong Kong Cantonese speakers and 20 from English speakers available on the same website as well as five Frog Stories told by Hong Kong immigrants.

HK Cantonese speakers used a variety of aspect markers to encode a wide range of functions. The durative marker, -*jyuh*, appeared more often than the progressive marker, -*gán*, for backgrounding. The delimitative marker, -*háh*, was also used for backgrounding, e.g., *kéuih jaahk-háh jaahk-háh yihnjihauh lohk-fāan-làih lak* "He picked a bit picked a bit, and then came back down." The verbal particle *saai* "all" precluded -*jó* whereas the verbal particle *dāi* "down" or a directional verb compound was used with -*jó* when intransitive verbs such as *dit* "to fall" and *tihng* "to stop" appeared; e.g., *jek lúk tihng-dāi-jó* "the deer has stopped." The English speakers preferred to use the historic present to tell their Pear Stories and reserve the past tense for background information; e.g., "the man who was picking pears comes down his ladder." The adverb *off* was used frequently. If translated into Cantonese, it would often correspond to -*jó* in Cantonese; e.g., "he takes his kerchief off, and he wipes it off" would be *kéuih chéuih-jó tuih sáugān, tühngmàaih kéuih maat-jó kéuih*.

There is no evidence that the ACH speakers equated -*jó* with the English -*ed*, as less advanced Cantonese or Mandarin learners might do (Ma, 2006). On the other hand, there is strong evidence that ACH speakers had acquired the basic functions of aspect markers and used them in ways similar to the Hong Kong Cantonese speakers'. Furthermore, both groups of speakers tended to mark telic verbs such as *dit* "to drop" and *jíng-laahn* "to break" with -*jó*. Though language-specific factors may weaken them, the correlates between grammatical and semantic aspect have generally been observed in acquisition studies across languages (Chen & Shirai, 2010). Whether the ACH speakers had acquired the more advanced functions of aspect markers is harder to assess because telic verbs such as "to drop" and "to break" also tended to mark the peak or end event. There is evidence that some ACH speakers might not have acquired the advanced functions. The interaction between -*jó* and verbal particles is an area of difficulty for ACH speakers. These results will be elaborated. Overall, they suggest that formal training would be helpful to draw ACH speakers' attention to such details in the Cantonese aspectual system.

## References:

- Chen, J., & Shirai, Y. (2010). The development of aspectual marking in child Mandarin Chinese. *Applied Psycholinguistics*, 31, 1–28.
- Ma, L. (2006). Acquisition of the perfective aspect marker *le* of Mandarin Chinese in discourse by American college learners. Doctoral Dissertation, University of Iowa, IA, USA. Retrieved from <http://ir.uiowa.edu/etd/68>.
- Mikhaylova, A. (2012). Aspectual Knowledge of High Proficiency L2 and Heritage Speakers of Russian. *Heritage Language Journal*, 9 (1), 50-69.

## How does younger generation view their languages? – A case study in Guangdong and Hunan

Sha Huan

The Ohio State University

Chinese dialects have different developments and status in Mainland China. *Putonghua*, as the standard language, is largely promoted by the government. According to Li (2014), the *Putonghua* promotion is overall successful in dialect regions except Guangdong, and it is mainly because there is a regional lingua franca, the standard Cantonese. On the contrary, Xiang dialect, spoken in the nearby Hunan Province, is receiving substantial influence from *Putonghua*. Although there is no standard Xiang dialect, *Putonghua* with a strong Hunan accent is becoming outstanding nowadays. The younger generation in the capital city of Hunan and surrounding cities can switch between standard and accented *Putonghua* according to whom they talk to.

Many previous language attitude studies are conducted in terms of integrative and instrumental orientation (Lai, 2005). Integrative orientation focuses on the perspective as a member of the community, and instrumental orientation emphasizes on using the language as a tool. This study uses these two orientations, and focuses on language attitudes of younger generation towards standard *Putonghua*, accented *Putonghua*, and dialects in Guangdong and Hunan.

To minimize the influence of variations within Cantonese and Xiang dialect, only participants who grew up in Guangfu-pian (广府片) in Guangdong and Changyi-pian(长益片) in Hunan were recruited. Data includes 7 participants from Guangdong and 8 from Hunan under the age of 30. The gender distributions are balanced in both groups. All the participants were asked to rate statements from 1 (strongly disagree) to 5 (strongly agree). The table below shows the average rating for each category:

Perspective	Towards	Guangdong	Hunan
<b>Integrative Orientation</b>	Local Dialects	4.47	4.25
	Standard <i>Putonghua</i>	3.14	3.50
	Accented <i>Putonghua</i>	2.73	3.52
<b>Instrumental Orientation</b>	Local Dialects	4.29	4.19
	Standard <i>Putonghua</i>	3.68	3.82
	Accented <i>Putonghua</i>	2.50	3.82

The results showed that participants from Guangdong have a slightly stronger preference for their dialect while participants from Hunan are more open to standard *Putonghua*, because they have more needs for standard *Putonghua* in everyday life. Accented *Putonghua* in Hunan is not merely *Putonghua* with accent caused by low proficiency in *Putonghua*; however, it still lacks legitimacy considering the relevantly lower scoring than dialect and standard *Putonghua*.

This study directly presents how younger generation in Guangdong and Hunan view the languages they are speaking and/or hearing every day after years of *Putonghua* promotion. It is helpful in exploring solutions to balance *Putonghua* promotion and preservation of dialects. Results also point out the specialty of accented *Putonghua* in Hunan, and call for further studies on this special category of *Putonghua*.

### References:

- Lai, M. L. (2005). Language attitudes of the first postcolonial generation in Hong Kong secondary schools. *Language in Society*, 34(03), 363-388.
- Li, D. (2014). Lingua Francas in Greater China. In C. Sun & W. S. Wang (Ed.), *The Oxford Handbook of Chinese Linguistics* (pp.590-600). Cary, NC, USA: Oxford University Press.

## Sun Yat-sen's 1924 speech:

### A preliminary historical and linguistic analysis of the Cantonese audiorecording

Jennifer Jay & Marjorie K.M. Chan

University of Alberta & The Ohio State University

Sun Yat-sen—or Sun Zhongshan—known as the father of modern China, passed away in Peiping (Beijing) in March 1925, three years before his re-structured Nationalist Party launched the Northern Expedition from Guangzhou and set up the nationalist government in Nanjing. While in Guangzhou, a year before his death, Dr. Sun was audiorecorded by Mr. Zhuowu Shen (沈卓吾) of China Evening News (中國晚報) in two speeches, one read in Mandarin and the other in Cantonese, wherein he reintroduced and reinstated his earlier revolutionary ideology of The Three People's Principles: Nationalism, Democracy and People's Livelihood. These two audiorecordings, made on 30 May 1924, constitute our only known audiorecording of Dr. Sun.

This paper focuses on the Cantonese speech (available at multiple websites online), lasting under 7 minutes. We have three main objectives: 1) to provide some brief research on the background to his 1924 speech given in Cantonese, 2) to trace Dr. Sun's multilinguistic background during his formative years, and 3) to conduct a preliminary study of some of the linguistic variations that are found in Dr. Sun's speech, variations that result from lengthy exposure to both Zhongshan Cantonese and standard Cantonese in Hong Kong and Guangzhou. The recording contains interesting mixtures of these two major subvarieties of Cantonese. Not surprisingly, he retains some features of Zhongshan Cantonese, since he was born in Xiangshan (香山), a district that was renamed Zhongshan (中山) in his memory in 1925. At the same time, he had also lived in both Hong Kong and Guangzhou, and was thus also exposed to standard Cantonese spoken in those two major cities.

Take, for example, the subordinative particle, 嘅, pronounced [kɛ] in standard Cantonese (Ball 1924) and [kɔ] in Zhongshan Cantonese (Chao 1948, based primarily on fieldwork conducted in 1929 in Shiqi (Zhongshan City); Chan 1980). Dr. Sun does not produce the particle as [kɛ] but as [kɔ]. In the case of syllables where standard Cantonese has the diphthong, [ei], Dr. Sun's pronunciation is sometimes [ei] and sometimes [i], the latter occurring in Zhongshan Cantonese; examples include productions such as 內地 [nɔi ti] 'inland,' on the one hand, and 畀 [pei] 'give' and 我哋 [ŋɔ tei] 'we' on the other. An interesting observation can also be made concerning the vowel corresponding to [œ] in the final, [œŋ], in standard Cantonese. This vowel is transcribed as ɔ̄ in Ball (1924:liii) and described by him as “nearly like er in her”; in other words, phonetically [œ]. That vowel in Zhongshan, however, is “broken” into [øɔ], as noted by Chao (1948) and Chan (1980). The [øɔ] production is very salient in Dr. Sun's speech, such as in the phrase, 世界上 [sɛi kai sɔŋ] 'in the world.'

The above is a sampling of the findings that will be presented on the 1924 audiorecording of Dr. Sun's Cantonese speech.

#### References:

- Ball, J. Dyer. 1924. *Cantonese Made Easy*. Hong Kong: Kelly and Walsh, Ltd., Printers.
- Chan, Marjorie K.M. *Zhong-shan Phonology: A Synchronic and Diachronic Analysis of a Yue (Cantonese) Dialect*. 1980 M.A. thesis, University of British Columbia, Vancouver, Canada.
- Chao, Yuen Ren (趙元任). 1948. Zhongshan Fangyan (中山方言). *Bulletin of the Institute of History and Philology (歷史語言研究所集刊)* 20:49-73.

# Multiple functions of HAVE in Cantonese: a corpus study

Charles Lam

Hang Seng Management College

This study argues that 有 *jau5* ‘have’ is special in its acceptance of a wide range of complements. In addition to verbal use (1) as ‘possess’, *jau5* also has multiple functions: it is an existential marker of nominals (2), an experiential aspect marker (3), and denotes equative comparatives (4). Corpus data support the case for the crosscategorical behaviors of functional *jau5*.

(1) Lexical verb: 'have; possess'

*keoi5 jau5 leong5 zek3 gau2*  
3SG have two CL dog  
'S/he has two dogs.'

(2) Nominal: Existential marker

*jau5 leong5 go3 jan4 zyu6 hai2dou6*  
HAVE two CL person live at.here  
'There are two people living here.'

(3) Verbal: Experiential marking

*keoi5 jau5 heoi3 guo3 faat3gwok3*  
3SG HAVE go EXP France  
'S/he has been to France.'

(4) Adjectival: Equative comparative

*keoi5 jau5 maa1mi4 gam3 gou1*  
3SG HAVE mom so tall  
'S/he is as tall as mom.'

This study contributes two observations. First, fig. 1 shows that *jau5* occurs far more frequently than other common verbs<sup>1</sup>. Second, the high frequency is not caused by occurrences in compounds (e.g. *jau5 si4* ‘sometimes’), because (i) there are far more tokens of *jau5* tagged as verbs (N=1628, 86%) than other common verbs, and (ii) other verbs occurs in compounds too (e.g. *hou2 sik6*, ‘tasty, lit: good-eat’). Fig. 2 shows that *jau5* has similar distribution as other common verbs, which means that the compounding is not the cause of the high frequency of *jau5*.

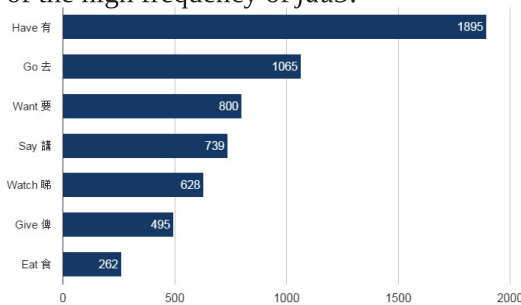


Fig 1. Number of tokens of common verbs

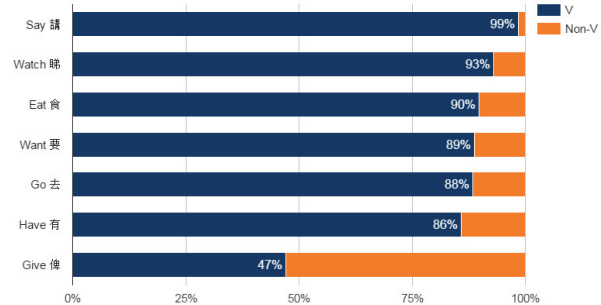


Fig 2. Percentage of verbal use in HKCanCor

This study explains the versatility / grammaticalization of *jau5* by its semantics, following Xie's (2014) degree analysis on Mandarin *yǒu*. **Across semantic domains, *jau5* denotes a minimal degree.** This means existential (i.e. ‘at least one’) in the nominal domain, experiential (i.e. ‘events occurring at least once’) for events and equative comparative (i.e. ‘at least as tall as, or taller’) for properties.

Building on the part-of-speech annotation in HKCanCor (Luke & Wong, 2015), we are able to narrow down the verblike uses of *jau5*. However, HKCanCor does not differentiate uses like (2-4). Examples attested in HKCanCor (5-6) clearly show experiential marking, similar to (3), but are nevertheless annotated as a verb.

(5) *jau5 gam2 gong2 gwo3 me1*  
HAVE so speak EXP Q  
'Did (anyone) say so?'

(6) *jau5 syun1bou3 gwo3 gaa4*  
HAVE announce EXP Q  
'Was there really an announcement?'

This study gives a distributional solution by incorporating the part-of-speech of the complement to improve the current annotation. The implication is that (i) more specific coding is needed to address the research question, and (ii) *jau5* presents an interesting case of cross-categorical behavior as a functional item.

References:

Luke, K.K. & Wong M.L.Y. (2015). The Hong Kong Cantonese Corpus: Design and Uses. *Journal of Chinese Linguistics*.  
Xie, Z. (2014). The degree use of the possessive verb *yǒu* in Mandarin Chinese: a unified analysis and its theoretical implications. *Journal of East Asian Linguistics*, 23 (2), 113-156.

<sup>1</sup> Expectedly, 係 *hai6* ‘be’ occurs even more frequently than *jau5* (N=10,146), with 6381 tokens tagged as a verb (N=6381, 62.9%).

# Temporal location of perceptual cues for Cantonese tone identification

Zoe Wai-Man Lam, Kathleen Currie Hall & Douglas Pulleyblank  
University of British Columbia

**Background:** In connected speech, speech sounds often have varied phonetic realizations due to influences from adjacent sounds. *Anticipatory* and *carryover coarticulation* refer to effects from a subsequent sound and that of a preceding sound respectively. Previous studies on tone languages find that the magnitude of effects from the two directions is asymmetric. In bisyllabic nouns of Thai, anticipatory tonal effects are dominant (Gandour et al 1992). However, in Vietnamese (Brunelle 2009) and Mandarin Chinese (Xu 1997), carryover effects are of a greater magnitude. In Cantonese, a language with six lexical tones listed in Table 1, carryover effects are so strong that in a disyllabic sequence  $\sigma_1$ - $\sigma_2$ , F0 transition from the tone of  $\sigma_1$  to  $\sigma_2$  takes up 50% of  $\sigma_2$ , resulting in a great magnitude of F0 variation across different tonal contexts (Wong 2007). The second half of  $\sigma_2$ , however, has less varied F0 curves that are similar to those produced in isolation.

**Goals of this study:** Based on Wong's (2007) results from tone production, the current study investigates the role of coarticulatory effects in Cantonese tone perception. Three research questions are put forward: (i) Is the period of transition a necessary component for tone identification of  $\sigma_2$ ? (ii) Are tonal perceptual cues concentrated in a particular portion of the syllable? (iii) Are the answers to these questions the same for all six tones in Cantonese?

Table 1. Cantonese tone minimal sextuplets used as target syllables

			si	se	fu
1	high level	55	詩 poetry	些 some	呼 to exhale
2	high rising	25	史 history	寫 to write	苦 bitter
3	mid level	33	試 to try	瀉 diarrhea	富 wealth
4	low falling	21	時 time	蛇 snake	符 to match
5	low rising	23	市 market	社 society	婦 woman/wife
6	low level	22	是 to be right	射 to shoot	負 to load

**Methodology:** Twenty-four native Cantonese speakers were recruited for a forced-choice tone identification task. Target syllables are contained in the carrier sentence [jɛw<sup>23</sup> kɔ<sup>33</sup> kiw<sup>33</sup> ( $\sigma_1$ ) ( $\sigma_2$ ) kɛ<sup>33</sup> jɛ<sup>23</sup>] 'There is something called ( $\sigma_1$ ) ( $\sigma_2$ ).' To ensure that the starting point of the vocalic portion of the syllable can be clearly marked, all target syllables have voiceless onsets.  $\sigma_1$  and  $\sigma_2$  can be any bisyllabic combination of the words in Table 1. Stimuli are manipulated into four types: **(A)** unmanipulated, thus  $\alpha$ ,  $\beta$ ,  $\gamma$  and  $\delta$  in Table 2 are all kept in the signal; **(B)** either  $\alpha$  or  $\beta$  is removed as a control for the effect of manipulation; **(C)**  $\gamma$ , the period of F0 transition, is zeroed out; **(D)**  $\delta$ , the steady part of the tone contour, is zeroed out. Each subject is presented with randomized stimuli of all four types, and is always asked to identify the tone of  $\sigma_2$  by choosing one of the six tones in their orthographic form.

**Results:** Results in Figure 1 show that the temporal location of perceptual cues is different for level and contour tones. The perception of level tones (Tone 1, 3, 6) suffers most in Type C, in which the first half of  $\sigma_2$  ( $\gamma$ ) is zeroed out. However, the identification of contour tones (Tone 2, 4, 5) is significantly affected in Type D, in which the second half of  $\sigma_2$  ( $\delta$ ) is zeroed out. Confusion patterns across subjects are similar. Possible reasons and their implications on other tone-related phonological phenomena will be discussed.

References:

- Brunelle, M. (2009). Northern and Southern Vietnamese tone coarticulation: A comparative case study. *Journal of Southeast Asian Linguistics*, 1, 49-62.
- Gandour, J., Potisuk, S., Dechongkit, S., & Ponglorpisit, S. (1992). Tonal coarticulation in Thai disyllabic utterances: a preliminary study. *Linguistics of the Tibeto-Burman Area*, 15(1), 93-110.
- Wong, Y.W. (2007). Production and perception of tones in Cantonese continuous speech. Unpublished MPhil thesis, Chinese University of Hong Kong.
- Xu, Y. (1997). Contextual tonal variations in Mandarin. *Journal of phonetics*, 25(1), 61-83.

Table 2. Symbols representing the first/second half of the vocalic portion of the first/second syllable in a disyllabic sequence

$\sigma_1$		$\sigma_2$	
$\alpha$	$\beta$	$\gamma$	$\delta$

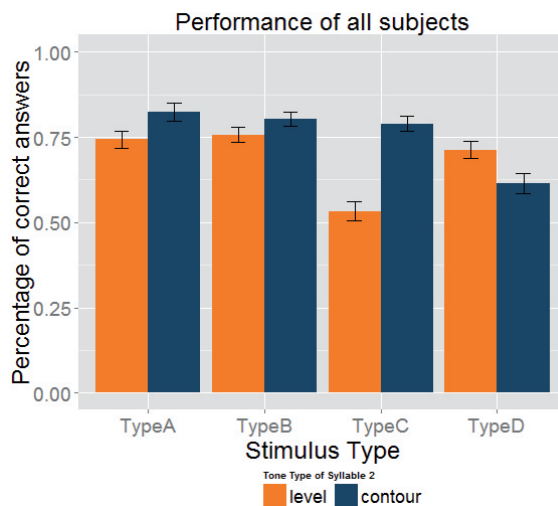


Figure 1. Accuracy rate across all stimulus types

# PyCantonese: Developing computational tools for Cantonese linguistics

Jackson L. Lee, Litong Chen & Tsz-Him Tsui  
University of Chicago & The Ohio State University

**Introduction:** In this talk, we introduce PyCantonese, an open-source Python library for computational research in Cantonese linguistics. There are two primary motivations for this project. First, while an increasing number of Cantonese corpora are available (e.g., the Hong Kong Cantonese Corpus (Luke & Wong 2015), HKCAC (Leung & Law 2001, Fung & Law 2013), the Cantonese Radio Corpus (Francis & Matthews 2005)), these resources are in incompatible formats and there are no general toolkits for handling Cantonese corpus data. Second, computational linguistics is a largely undeveloped sub-field for Cantonese. In response to these gaps, PyCantonese is designed to provide general tools for the manipulation, annotation, and analysis of Cantonese corpus data. We demonstrate the implemented tools including the handling of Jyutping romanization and corpus search functions, and show how PyCantonese can facilitate Cantonese linguistic research.

**Handling Jyutping:** A common scenario in Cantonese corpus work is that a corpus is available and transcribed in Jyutping, but no tools are readily available to parse Jyutping in order to identify onsets, nuclei, codas, and tones. We demonstrate the relevant functionalities of PyCantonese, and how they facilitate research areas such as phonotactics and phonological development using child-directed speech data.

**Search functions:** Another frequent task is to search for particular items in corpus data. Depending on the exact nature of the dataset being used, PyCantonese provides search functions for some given Jyutping elements, part-of-speech tags, and Chinese characters. We show how simple searches are performed using PyCantonese, and how to combine these functions and programming techniques to achieve what would be of great interest to linguists (e.g., find verbal and prepositional phrases).

**Ongoing work:** Because high-quality data in a consistent format are essential in corpus-based research, part of the ongoing work involves the reformatting of corpus data. The datasets thus made available act as training data for various annotation and analysis tools being developed, including word segmentation, conversion between Jyutping and Chinese characters, and part-of-speech tagging.

**Conclusions:** Computational linguistic research for Cantonese is very much at its infancy. In the current age of big data research, computationally heavy work coupled with large corpus datasets necessitates the availability of suitable tools. As an expanding and evolving project, PyCantonese is envisioned to play the facilitating role that interfaces between the researchers and the large volume of Cantonese data.

## References:

- Francis, Elaine J. and Stephen Matthews. 2005. A multi-dimensional approach to the category 'verb' in Cantonese. *Journal of Linguistics* 41: 269-305.
- Fung, Suk-Yee and Sam-Po Law. 2013. A phonetically annotated corpus of spoken Cantonese: The Hong Kong Cantonese Adult Language Corpus. *Newsletter of Chinese Language* 92(1): 15.
- Leung, Man-Tak and Sam-Po Law. 2001. HKCAC: The Hong Kong Cantonese adult language corpus. *International Journal of Corpus Linguistics* 6: 305-326
- Luke, Kang-Kwong & May Lai-Yin Wong. 2015. The Hong Kong Cantonese Corpus: Design and uses. *Journal of Chinese Linguistics*.



## **The future of Cantonese in Hong Kong: Issues on planning and policy**

Thomas Hun-tak Lee

The Chinese University of Hong Kong

To understand the status of Cantonese today, it would be instructive to examine the changes in its societal functions since the colonial era, when English was the dominant language in government discourse, the courts and the schools (Lord and Tsou 1985, Tsou 1997). It is an indisputable fact that Cantonese has expanded its domains of use in significant ways since the change of sovereignty (Chen 2013; Evans 2011, 2014). Accompanying the growing prominence of Cantonese in the last two decades is, however, a deeply felt anxiety about the vitality of the language, to the extent that public outcries about the endangerment of the language are often heard. The present study assesses the reality of these perceptions of Cantonese, based on a survey of native speakers across an age spectrum. It will be shown that while the paradoxical anxiety about the future of the language is quite real and reflects underlying concerns about the changing status of Putonghua in the community, the claim about Cantonese being seen as endangered is unsupported. Clear age differences can be found with respect to their perceptions of the strength of Cantonese, the use of Putonghua as the medium of instruction for teaching Chinese, and the potential social impact of a weakened mother tongue.

## **From ear-cleaning to asking how to say I love you: Metalinguistic discussions and positive affective stance on the “Hoisan Phrases 學講台山話 ” facebook site**

Genevieve Leung & Melissa Chen  
University of San Francisco

This research examines the language and cultural maintenance practices of a specific heritage of Chinese Americans: *Hoisan-wa* heritage people. *Hoisan-wa* is one of the languages linking nearly all early Chinese immigrants in the U.S., but this language background has not only been slowly erased by other Chinese' existence in the U.S. (e.g., Standard Cantonese and Mandarin), but it has also been perpetually omitted in research for the last 150 years. Much current metalinguistic and metapragmatic commentary about “Chinese” in scholarly and popular discourse, that is, the “talkings about” what “Chinese” is, having been reappropriated and changed over time, has both explicitly and implicitly propelled Mandarin over all other Chinese. This directly impacts how varieties like *Hoisan-wa* are thought of and talked about. What little work is done on non-Mandarin language acquisition and maintenance in the U.S. hardly ever distinguishes Standard Cantonese from *Hoisan-wa*; as such, *Hoisan-wa* as a language background is muddled in the sense that people know the background exists (e.g., “in Chinatown”) but not much more.

While there are many negative ideologies attached to *Hoisan-wa*, including it being seen as a “rural” and “uneducated” language disrupting a future-oriented ideology of modernity and that it is “awkward” or “unnatural” to speak *Hoisan-wa* in a contemporary U.S. society that prizes fluency in English, this paper will focus solely on the online discourses of an online Facebook group called “Hoisan Phrases 學講台山話 ” and how this online forum is used to construct positive ideologies about *Hoisan-wa*. Using a multicompetence and symbolic competence frameworks, we view these online interactions as sites where *Hoisan-wa* speakers engage in the ability “to perform and construct various historicities in dialogue with others” (Kramsch & Whiteside, 2008, p. 665) and how humor serves as a way of moving beyond mere caricatures and negative ideologies of *Hoisan-wa* and its speakers to a linguistic display of nuanced competencies.

Data for this project come from a corpus of two years’ worth of posts (n=600 posts) from the top three posters and corresponding comments on the Facebook group. Using a discourse analytic lens, all posts went through an iterative process of open coding, initial memos, focused coding, and integrative memos. We double coded the data and discussed salient themes that emerged, including: metapragmatic commentary about appropriateness of *Hoisan-wa* standardization and Romanization (“It’s been a babel’s curse with everyone just doing their own version of romanization”) and the humorous commenting on intergenerational stereotypes about *Hoisan-wa* (“When hoisan people argue, it’s all about death. Nei fai nai hui thei la ah! ”).

The data presented here demonstrate a re-envisioning of the way we view *Hoisan-wa* vis-à-vis online communication, expanding the domains of language use where *Hoisan-wa* is considered a resource. This is part of a positive, counter-hegemonic affective stance that pushes back against established negative ideologies about *Hoisan-wa*, serving as implementational spaces that can serve as wedges to pry open language ideologies (cf. Hornberger, 2005) and enable speakers to adopt a language-as-resource view (cf. Ruiz 1984) towards their heritage language.

### References:

- Hornberger, Nancy. 2005. Opening and filling up implementational and ideological spaces in heritage language education. *Modern Language Journal* 89(4). 605-612.
- Kramsch, Claire & Anne Whiteside. 2008. Language ecology in multilingual settings: Toward a theory of symbolic competence. *Applied Linguistics* 29(4). 645–671.
- Ruiz, Richard. 1984. Orientations in language planning. *NABE Journal* 8. 15-34.

## Use of Heritage Cantonese and Korean classifiers in Toronto

Samuel Lo, Junrui Wu, Elaine Wang, Zahid Daudjee, Deepam Patel & Naomi Nagy  
University of Toronto

Classifiers, morphemes that categorize nouns by semantic category, are a robust grammatical feature of Cantonese and Korean. Classifiers specialize to noun classes and so have no English parallel (except rarely used partitives, e.g. “murder of crows”). They are governed by a range of complex factors. These facts make them an ideal candidate for investigating language contact phenomena. While acquisition of Cantonese classifiers in L1 and balanced bilingual contexts is documented through experimental studies (cf. Loke & Harrison 1986, Mak 1991), the study of classifier use in spontaneous speech is less developed, as is exploration of classifiers in the heritage language context, where there is imbalance in use, status, attitudes and institutional support of the two languages (but cf. Wei & Li 2001; Nagy, Chung & Tong 2012; Chan & Nagy 2015). We compare classifier usage in Heritage Cantonese and Korean to test claims that heritage languages are uniform in how they simplify the source language (cf. Polinsky 2008). Although classifiers are used differently in Korean and Cantonese, we can compare patterns of inter-generational change and, particularly, overgeneralization. In addition to the traditional exploration of classifier selection according to Noun being modified, we unify our analyses by locating classifiers in our corpus and checking whether or not they accompany a noun; in Korean this context is restricted to quantified NPs, while in Cantonese the context is broader.

Conversational Cantonese and Korean data from transcribed sociolinguistic interviews are used to determine patterns of classifier use. 50 tokens × 16 speakers of each language are coded for 7 linguistic factors. Speakers are coded for sex, age, ethnic orientation and speaker group (*Gen1* speakers are long-term residents in Toronto who grew up in Hong Kong/Seoul; *Gen2* speakers grew up in Toronto and have *Gen1* parents; *Homeland* speakers were born and live in Hong Kong/Seoul). Logistic regression models are constructed to show the effect of each factor on the choice of classifier, showing which patterns differ significantly between speaker groups.

In spite of heritage speakers’ widespread claims that *go3* is overgeneralizing within their speech community, as a way of compensating for lack of knowledge of more specific classifiers due to restricted input, we find no significant difference in the rate of *go3* use between Homeland, Gen1 and Gen2 speakers of Cantonese. This contrasts with Wei & Lee’s (2001) study of Gen2 British Cantonese speakers, where they interpreted their data as showing limited acquisition of classifiers “in an L2 environment” without direct comparison to non-heritage speaker data.

### References:

- Chan, A. & N. Nagy. 2015. Toronto Cantonese heritage speakers’ use of sortal classifiers. Workshop on Classifiers, Hong Kong Polytechnic U, April 2015.
- Mak, D. 1991. The Acquisition of Classifiers in Cantonese. PhD dissertation, U Reading.
- Nagy, N, Chung, T. & J. Tong. 2012. Classifier variation and change in Toronto Heritage Cantonese. Workshop on Innovations in Cantonese Linguistics, Ohio State U.
- Wei, L. & S. Lee. 2001. L1 development in an L2 environment. *International J Bilingual Education and Bilingualism* 4(6): 359-82.
- Loke, K.K. & G. Harrison. 1986. Young children’s use of Chinese (Cantonese and Mandarin) sortal classifiers. In *Linguistics, Psychology and the Chinese Language*, H.S.R. Kao & R. Hoosain (eds.). 125-146. Hong Kong: Centre of Asian Studies, U Hong Kong.
- Polinsky, M. 2008. *Heritage Language Narratives*. In D. Brinton & O. Kagan, (Eds.), *Heritage Languages: A New Field Emerging*. Mahwah, NJ: Lawrence Erlbaum Associates.

## **Cantonese as a Foreign Language (CFL) curriculum design based on learner needs in North America**

Raymond Pai

University of British Columbia

The University of British Columbia (UBC) begins offering Beginning Level Cantonese Courses in the 2015-2016 school year for the first time as part of its new Cantonese Program, which is also a first in Canada in history. The establishment of such Cantonese program is viewed as a "resistance" to the trends of the decreasing number of post-secondary level Cantonese course offerings available and students enrollment in North America (The Economist 2015). For the purpose of curriculum design and future of the program, a student needs analysis is conducted using a number of research methods for triangulation purpose on the data collected (Lee 2005; Li & Richards 1995). A survey is conducted on the 440 Cantonese students on their language attitudes (Flowerdew & Miller 1998; Tinker & Li 2007) towards Cantonese, English and their other native languages and feedback on the courses offered, individual interviews on student motivations and response to the course design, and data from student course evaluations at the conclusion of the courses. The preliminary results of the ongoing study show that there are common grounds as well as distinct differences between the needs of learning material choices to the student needs is crucial. The challenges of Cantonese curriculum design, pedagogical issues, and student placements due to diverse language background in North America are also discussed. As a case study it is hope that this can provide data and insights on student language attitudes of the Cantonese as a Foreign Language (CFL) in the North American context, as well as resources on curriculum development for the future of CFL teaching.

### References:

"Long Live Cantopop", (August 15, 2015), The Economist, Retrieved September 6 2015.

<http://www.economist.com/news/americas/21661035-chinatown-cantonese-squares-against-mandarin-long-live-cantopop>

Flowerdew, J., Li, D., & Miller, L. 1998. Attitudes toward English and Cantonese among Hong Kong Chinese university lecturers. TESOL Quarterly 32:201-231.

Lee, S. L. 2005. History and current trends of teaching Cantonese as a Foreign Language: Investigating approaches to teaching and learning Cantonese. EdD thesis, University of Leicester, U.K.

Li, D.C.S. & Richards, J.C. 1995. Cantonese as a second language: A study of learner needs and Cantonese course books. Research monograph No. 2. Department of English, City University of Hong Kong.

Tinker Sachs, G. & Li D. 2007 Cantonese as a second language in post-colonial Hong Kong: A language attitude survey. Multilingua 26:95-130.

## Evaluating the efficacy of Prosody-lab Aligner for a study of vowel variation in Cantonese

Andrew Peters & Holman Tse

York University & University of Pittsburgh

In this talk, we discuss the effectiveness of using Prosody-lab Aligner (Gorman, Howell, & Wagner, 2011) as a tool for the study of vowel variation and change in Cantonese. Automated (Forced-)aligner programs have recently been introduced as a computational tool for facilitating the process of creating time-aligned transcripts of speech data. The most widely used program, FAVE (Rosenfelder, Fruehwald, Evanini, & Yuan, 2011), however, is designed to work only on English. We therefore use Prosody-lab Aligner (Gorman et al., 2011) as an alternative because of its ability to train models for alignment of any language.

Speech samples used in this project come from sociolinguistic interviews that were collected as part of the Heritage Language Variation and Change in Toronto (HLVC) project (Nagy, 2011). We investigate two questions for evaluating the efficacy of this methodology for use in a larger project on intergenerational change in Heritage Cantonese vowels: 1) Is Prosody-lab aligner effective at producing sufficiently accurate transcript alignment to permit automated measurement of vowel data? 2) What sort of data used to train models for Prosodylab-aligner is most effective at producing results that require minimal manual adjustments?

We address these questions by running Prosodylab on 10 speakers, including four GEN 1 speakers (born and raised in Hong Kong), and six GEN 2 speakers (raised in Toronto). For each speaker, 50% of their transcript data was set aside for model training, and on each speaker the aligner was run using 3 different models: once with data from that speaker alone in the model training, once with data from all speakers in the respective generation used in model training, and a final time with data from all speakers used in model training.

The three types of model training were compared for their efficacy quantitatively by measuring the differential between the automatically-generated boundaries of 468 monophthong vowel tokens, and “gold-standard” manually-aligned vowel boundaries for the same vowels. On this data, the root-meansquare-deviation was calculated for the time-aligned results of each model type (Chen, Liu, Harper, Maia, & McRoy, 2004). The percentage of occurrences in which the center of the automatically-aligned vowel segment lay within the manually-aligned target vowel area was also calculated for each instance.

Our results show that models trained on the individual speakers alone produced the least-deviant data from the ideal manually-aligned vowel targets, and the model trained on data from all speakers produced the most deviant results. However, as requirements on a minimum amount of data to be made available for model training would necessitate up to 50% loss in analyzable vowel tokens if taken from one speaker’s interview alone, an individual-based training model is rejected as impractical. A model trained on data from the respective generational cohort is accepted as the best compromise that produces results requiring the least manual adjustment post-alignment, without sacrificing large amounts of data to model training.

### References:

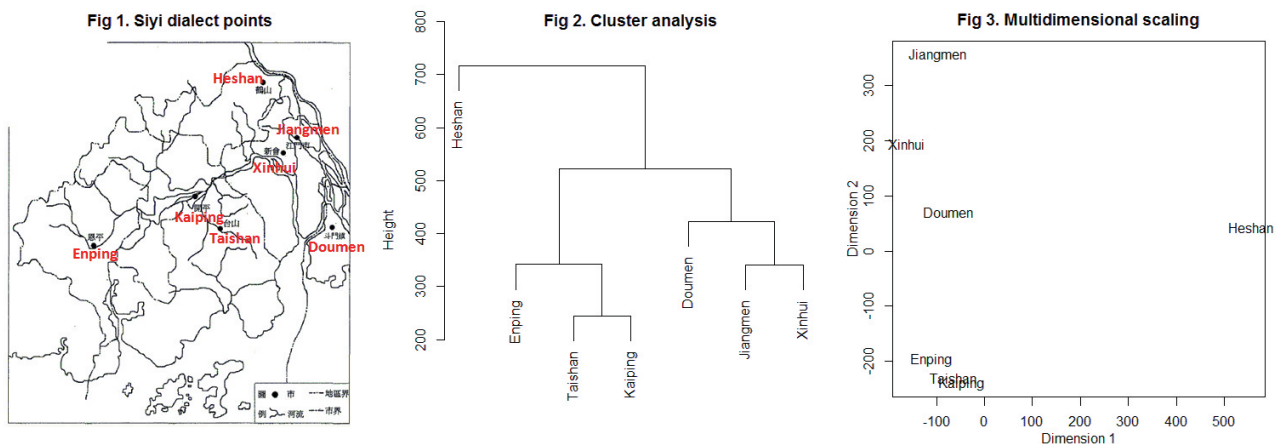
- Chen, L., Liu, Y., Harper, M. P., Maia, E., & McRoy, S. (2004). Evaluating Factors Impacting the Accuracy of Forced Alignments in a Multimodal Corpus. In LREC. Retrieved from <https://www-new.comp.nus.edu.sg/~rpnlp/ir/proceedings/lrec-2004/pdf/307.pdf>
- Gorman, K., Howell, J., & Wagner, M. (2011). Prosodylab-aligner: A tool for forced alignment of laboratory speech. *Canadian Acoustics*, 39(3), 192–193.
- Nagy, N. (2011). A Multilingual Corpus to Explore Variation in Language Contact Situations. *Rassegna Italiana Di Linguistica Applicata*, 43(1/2), 65–84.
- Rosenfelder, I., Fruehwald, J., Evanini, K., & Yuan, J. (2011). FAVE (Forced Alignment and Vowel Extraction) Program Suite. Retrieved from <http://fave.ling.upenn.edu>

# Quantifying the lexical affinity among Siyi Yue dialects

Yutian Tan & Tsz-Him Tsui  
The Ohio State University

**Introduction:** Previous research mainly focused on the differences between Standard Cantonese and Siyi Yue dialects, a subgroup of Yue spoken in the southwestern area in the Pearl River Delta in Guangdong Province of China. Only a few studies (Gan 2002, Tong 2004) have tackled the internal variation within Siyi dialects, while none of them used quantitative approaches. This current study quantifies lexical differences between the Siyi dialects, and presents a synchronic classification of Siyi. The current classification conforms with the geographic distances and contact situations between the dialect points.

**Methods:** The current data contains 1340 lexical items documented in Zhan & Cheung (1988). To calculate distances between the 7 Siyi dialect points (Taishan, Kaiping, Heshan, Jiangmen, Xinhui, Enping and Doumen; see Fig 1), the number of segmental differences (i.e. segmental Levenshtein distances) between the lexical items among the dialect points were normalized (Heeringa 2004), and fed into a hierarchical cluster model and a non-metric multidimensional scaling (MDS) model to visualize the relationship between the 7 Siyi dialect points.



**Results and Discussion:** Both the cluster model (Fig 2) and the MDS model (Fig 3) suggest that Heshan is most different from other Siyi dialects. This can be explained by Heshan's proximity to and contacts with Guangzhou, the capital city of Guangdong Province, where the more prestigious Standard Cantonese is spoken. For the remaining 6 Siyi core members, the cluster model divides them into two major groups: Xinhui, Jiangmen and Doumen in one cluster, and Enping, Taishan and Kaiping in another. The MDS configuration suggests that variation within Siyi dialect can be modeled in two dimensions. Dimension 1 represents Heshan's linguistic distance from other Siyi members. Dimension 2, on the other hand, can be interpreted as the geographical location of 7 Siyi dialect points. Taishan, Kaiping and Enping are on one end of Dimension 2 and located in the southwestern Siyi area; while the other 4 dialect points are on the other end of Dimension 2 and located in the northeastern Siyi area. Overall the current study not only quantifies the affinities among 7 Siyi dialect points, but also sheds new lights on the history of Siyi area, that both geographical and social aspects contribute to its internal variation.

## Reference:

- Gan, Yu'en. 2002. Guangdong Siyi Fangyan Yufa Yanjiu. Guangzhou, Guangdong: Jinan University dissertation.
- Heeringa, Wilbert. 2004. Measuring dialect pronunciation differences using Levenshtein Distance. Groningen: Rijksuniversiteit Groningen dissertation.
- Tong, Choi-Lan. Guangdong Xinhui Siqianhua Yinyun Yanjiu. Guangzhou, Guangdong: Jinan University dissertation.
- Zhan, Bohui; and Yat-Shing Cheung. 1988. A survey of dialects in the Pearl River Delta vol.2: Comparative lexicon. Guangdong, China: People's Publishing House of Guangdong.

# Contrast maintenance and innovation in Toronto Heritage Cantonese high vowels

Holman Tse

University of Pittsburgh

This presentation expands on Tse's (2015) analysis of four vowels in Toronto Heritage Cantonese by adding formant measurements for two additional vowel categories. The results to be presented are part of a larger project investigating variation and change in the entire monophthong system of a diasporic Yue variety using sociolinguistic methodology. This project addresses two general questions: (1) Are vowel contrasts maintained across two generations of Cantonese speakers in Toronto? (2) Is there influence from contact with Toronto English and if so what is the nature of this influence?

The data for this project comes from the HerLD (Heritage Language Documentation) Corpus, a product of the Heritage Language Variation and Change (HLVC) in Toronto Project (Nagy, 2011). This corpus includes hour-long sociolinguistic interviews, word list readings, an Ethnic Orientation Questionnaire and time-aligned transcripts using the program ELAN (Sloetjes & Wittenburg, 2008). For this study, a total of 17 speakers (seven male and ten female) from the corpus were analyzed including nine from GEN 1 (Canadian immigrants born and raised in Hong Kong) and eight from GEN 2 (grew up in Toronto). For each speaker, the F1 and F2 for 15 tokens of each of 7 contrastive monophthongs were measured for a grand total of 1,785 tokens. Formant measurements were normalized using the Watt & Fabricius Modified method (Fabricius, Watt, & Johnson, 2009). R-brul (Johnson, 2009) was then used on the normalized values for mixed effects modeling.

The results show maintenance of allophonic conditioning of high vowels as well as overall maintenance of phonological contrasts for seven monophthongs among GEN 2 speakers. There is no evidence that any of these vowels are merging. Influence from Toronto English appears to be motivated primarily by phonological factors rather than purely by phonetic assimilation with phonetically similar vowels. For example, GEN 2 speakers (especially female speakers) show a much greater acoustic distinction between the two allophones of /i/ than GEN 1 speakers. This appears to be influenced by English, which has a phonological contrast between two phonetically similar vowels (SEEK vs. SICK). Also, while the fronted /u/ in Toronto English might lead to the prediction that /u/ in Cantonese would also front among GEN 2 speakers, results show the exact opposite. There is a significant positive correlation between age and F2 of this vowel meaning that the youngest speakers are retracting /u/ ( $p < 0.02$ ). In addition, the youngest speakers are also retracting /y/ ( $p < 0.01$ ) while maintaining an overall contrast between /u/ and /y/.

When the three high vowels are examined together, the results show evidence in support of generalizations made in previous studies of heritage language vowel systems. In particular Chang et al (2011) have shown that the context of early bilingualism means early exposure to two phonological systems and a greater ability of maintaining both cross-linguistic distinctions and language-internal phonological contrasts than is the case for late bilinguals. Thus, while contrasts in Cantonese are maintained, innovations appear to be mediated by cross-linguistic phonological factors.

## References:

- Chang, C. B., Yao, Y., Haynes, E. F., & Rhodes, R. (2011). Production of phonetic and phonological contrast by heritage speakers of Mandarin. *The Journal of the Acoustical Society of America*, 129(6), 3964–3980. <http://doi.org/10.1121/1.3569736>
- Fabricius, A. H., Watt, D., & Johnson, D. E. (2009). A comparison of three speaker-intrinsic vowel formant frequency normalization algorithms for sociophonetics. *Language Variation and Change*, 21(03), 413–435. <http://doi.org/10.1017/S0954394509990160>
- Johnson, D. E. (2009). Getting off the GoldVarb Standard: Introducing Rbrul for Mixed-Effects Variable Rule Analysis. *Language and Linguistics Compass*, 3(1), 359–383.
- Nagy, N. (2011). A Multilingual Corpus to Explore Variation in Language Contact Situations. *Rassegna Italiana Di Linguistica Applicata*, 43(1/2), 65–84.
- Sloetjes, H., & Wittenburg, P. (2008). Annotation by category – ELAN and ISO DCR. In *Proceedings of the 6th International Conference on Language Resources and Evaluation (LREC 2008)*.
- Tse, H. (2015). Is Heritage Phonology Conservative?: Evidence from Toronto Heritage Cantonese. Presented at *New Ways of Analyzing Variation (NWAV 44)*, Toronto, ON, Canada

## Contact-induced language change in Hong Kong Written Chinese: A case of *baa2*- and *zoeng1*-constructions

Kay Hoi Yi Wong

The Chinese University of Hong Kong

Languages, unless unusually isolated, come into contact with one another at different levels and with varying intensities (Thomason 2001; Sankoff 2001). With 150 years history of colonization, language contact is nothing new to the Hong Kong speech community. To date, the literature on language change phenomenon in Hong Kong focused mostly on the influence of English on Cantonese. In light of the increasing contact of Mandarin and Cantonese after the return of sovereignty, researchers have looked into the classifiers (Tsou & Mok 2013) and double-object construction (Chin 2009) in Hong Kong Cantonese and suggested that there is an on-going language change.

In an attempt to capture and understand this phenomenon, this study systematically investigates the possible diachronic change of *baa2*- and *zoeng1*-constructions (also known as the pre-transitive constructions). They are of particular interests because *zoeng1*-construction is considered as the nearest equivalent to *bǎ*-construction in Mandarin (Matthews & Yip 2011). In addition, it is observed that Cantonese speakers increasingly replace *zoeng1*-construction with *baa2*-construction in speech due to heavy influence of Mandarin in the Pearl River Delta Region<sup>1</sup>. However, this study seeks to investigate the written forms, which are Hong Kong Written Chinese (HKWC) and Standard Written Chinese (SWC) as it is suggested that indirect language contact through written texts is more prominent than face-to-face interactions in Hong Kong (Leung 2004). Unlike previous comparative studies which capitalize on synchronic language data (Diao 2012; Leung 2004), this study applies a diachronic corpus methodology. The data are extracted from newspapers and government documents in Hong Kong and China from 1975 to 2015 and are analyzed quantitatively and qualitatively in three ways: The change in the frequency of the pre-transitive constructions, the change in the verbs used in the two constructions and the change in the frequency of the semantic types are examined diachronically.

Results show that both pre-transitive constructions are on the rise in HKWC in both official documents and newspapers. I argue that the increase is due to the influence of SWC since the pre-transitive constructions are more frequently used in SWC. Also, more *baa2*-construction than *zoeng1*-construction is used in official documents since 1990 in Hong Kong but the same phenomenon is not as clear in newspapers. This indicates that the genre of the texts matters in analyzing the language change process. Besides, the analysis on the verbs used reveals a more similar usage of both constructions in HKWC and SWC than before. Despite these findings, the analysis on the semantic types of the pre-transitive constructions shows no significant diachronic change. This study concludes that the influence from SWC is not prevalent in all areas and may vary across two different genres. Nonetheless, the current study still provides evidence indicating that both quantitative and qualitative changes in HKWC are the linguistic outcomes of the language contact phenomenon in Hong Kong.

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<sup>1</sup> An observation made by Benjamin K. Tsou and is mentioned in Kwan (2014).



# Participants

<b>First name</b>	<b>Last name</b>	<b>Institution</b>	<b>Email</b>
Dana Scott	Bourgerie	Brigham Young University	bourgerie@byu.edu
Valter	Ciocca	University of British Columbia	director@audiospeech.ubc.ca
Donglin	Chai	The Ohio State University	chai.39@osu.edu
Marjorie K.M.	Chan	The Ohio State University	chan.9@osu.edu
Litong	Chen	The Ohio State University	chen.1883@osu.edu
Melissa	Chen	University of San Francisco	mchen57@dons.usfca.edu
Pui Lun Grace	Chow	The University of Hong Kong	aogdaisy@yahoo.com.hk
Una	Chow	University of Calgary	uchow@ucalgary.ca
Matthew	Christensen	Brigham Young University	matthew_christensen@byu.edu
Zahid	Daudjee	University of Toronto	zahid.daudjee@mail.utoronto.ca
Sik Lee	Dennig	Stanford University	lcheung2@stanford.edu
Robert	Fox	The Ohio State University	fox.2@osu.edu
Sha	Huan	The Ohio State University	huan.4@osu.edu
Cathy	Huang	The Ohio State University	huang.2344@osu.edu
Charles	Lam	Hang Seng Management College	charleslam@hsmc.edu.hk
Zoe Wai-Man	Lam	University of British Columbia	zoelam@alumni.ubc.ca
Nathan	Lancaster	The Ohio State University	lancaster.102@osu.edu
Jackson L.	Lee	University of Chicago	jsllee@uchicago.edu
Genevieve	Leung	University of San Francisco	gleung2@usfca.edu
Yuhan	Lin	The Ohio State University	lin.1406@osu.edu
Samuel	Lo	University of Toronto	samuel.lo@mail.utoronto.ca
Stephen	Matthews	The University of Hong Kong	matthews@hku.hk
Joshua	Melching	The Ohio State University	joshua.melching@gmail.com
Naomi	Nagy	University of Toronto	naomi.nagy@utoronto.ca
Mineharu	Nakayama	The Ohio State University	nakayama.1@osu.edu
Raymond	Pai	University of British Columbia	raymond.pai@ubc.ca
Deepam	Patel	University of Toronto	deepam.patel@mail.utoronto.ca
Andrew	Peters	York University	abpeters@yorku.ca
Yun	Shen	Yunnan University & Ohio State Univ.	shen.915@osu.edu
Yutian	Tan	The Ohio State University	tan.279@osu.edu
Holman	Tse	University of Pittsburgh	hbt3@pitt.edu
Tsz-Him	Tsui	The Ohio State University	tsui.15@osu.edu

Kimberly	Wan	The Ohio State University	wan.213@osu.edu
Qian	Wang	The Ohio State University	wang.5026@osu.edu
Qianling Elaine	Wang	University of Toronto	aling.wang@mail.utoronto.ca
Udo	Will	The Ohio State University	will.51@osu.edu
Kay Hoi Yi	Wong	The Chinese University of Hong Kong	k.wong@cuhk.edu.hk
Junrui	Wu	University of Toronto	Junrui.Wu@mail.utoronto.ca
Zhiguo	Xie	The Ohio State University	xie.251@osu.edu
Qingyang	Yan	The Ohio State University	yan.497@osu.edu
Seojin	Yang	The Ohio State University	yang.3170@osu.edu
Virginia	Yip	The Chinese University of Hong Kong	vcymatthews@cuhk.edu.hk
Etsuyo	Yuasa	The Ohio State University	yuasa.1@osu.edu
Qianqian	Zhang	The Ohio State University	zhang.1543@osu.edu





Institute for Chinese Studies  
314 Oxley Hall  
1712 Neil Avenue  
The Ohio State University  
Columbus, Ohio, USA  
<http://ics.osu.edu/>

**GACL**

漢語語言學研究生聯合會

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