Onset, Rhyme and Coda Corresponding Rules of the Sin-Korean Characters between Cantonese and Korean

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Introduction to the Korean Writing System

Hangul

- 박선생은 고등학교의 선생이다.

- 朴先生은 高等學校의 先生이다.

Sino-Korean Characters / Hanja (漢字)

s   ɔ   s   æ

선 생

n   ŋ

Korean pronunciation: sɔn.sæŋ

A Korean Passage with Hangul

　중학생의 일과는 분주하다 . 오전 여섯시에 기상한다 . 늦잠을 자면 조반을 굶고 등교하게 된다 . 학교 근처에 사는 학생은 걸어서 통학하지만 집이 먼 데 있는 학생은 시내버스나 전차로 통학한다 . 직장으로 출근하는 사람들과 등교하는 학생들의 수가 많으므로 교통은 여간 복잡하지 않다 .

시간은 학년에 따라 다르다 . 학년이 높으면 매일 평균 여섯시간을 공부한다.국어,수학,물리,화학,외국어,역사,지리등에 많은 시간이 배당된다 . 체육,미술,음악은 일주일에 한두 시간뿐이다 . 자기가 좋아하는 과목이 많은 날은 신이 나고 싫어하는 과목이 많은 날은 지루하다 .

A Korean Passage with Mixed scripts (Hangul and Sino-Korean characters)

中學生의 日課는 奔走하다. 午前 여섯時에 起床한다. 늦잠을 자면 朝飯을 굶고 登校하게 된다. 學校 近處에 사는 學生은 걸어서 通學하지만 집이 먼 데 있는 學生은 市內버스나 電車로 通學한다. 職場으로 出勤하는 사람들과 登校하는 學生들의 數가 많으므로 交通은 如干 複雜하지 않다.

時間은 學年에 따라 다르다. 學年이 높으면 每日 平均 여섯 時間을 工夫한다. 國語,數學,物理,化學,外國語,歷史,地理等에 많은 時間이 配當된다. 體育,美術,音樂은 一週日에 한두 時間뿐이다. 自己가 좋아하는 科目이 많은 날은 신이 나고 싫어하는 科目이 많은 날은 지루하다.

Introduction

- Similar pronunciation between Cantonese words and Sino-Korean characters / Hanja（漢字）

- E.g.

    Cantonese: 大學 [tai^{22} hɔk^{22}] 'University'

    Korean: 대학 大學 [tæ hak]

    Cantonese: **平均** [pʰiŋ^{21} kʷɐn^{55}] 'Average'

    Korean: 평균 **平均** [pʰyɔŋ.kyn]

Previous Studies on the Corresponding Rules between Korean and Cantonese

- **Kang and Simmons (2001)**
  - Some correspondence in Cantonese and Korean codas
  - Nasal Codas
    - Cantonese /-p/ → Korean /-p/
    - Cantonese /-t/ → Korean /-l/
    - Cantonese /-k/ → Korean /-k/
  - Oral Codas
    - Cantonese /-m/ → Korean /-m/
    - Cantonese /-n/ → Korean /-n/
    - Cantonese /-ŋ/ → Korean /-ŋ/

- No observations were made on the correspondence in rhyme between Cantonese and Korean.

Korean consonants

	Bilabial	Alveolar	Palato-Alveolar	Velar	Glottal
Stop	p b pʰ ㅂ ㅃ ㅍ	t d tʰ ㄷ ㄸ ㅌ		k g kʰ ㄱ ㄲ ㅋ	
Affricate			ʧ ʧ ʧʰ ㅈ ㅉ ㅊ		
Fricative		ˢ ss ㅅ ㅆ			
Nasal	m ㅁ	n ㄴ		ŋ ㅇ	
Approximant		l ~ r ㄹ			h ㅎ

Cantonese consonants

	Bilabial	Labio-dental	Dental	Alveolar	Post-alveolar	Palatal	Velar	Labial-velar	Glottal
Plosive	p pʰ		t tʰ				k kʰ	kʷ kʷʰ	
Affricate				ts tsʰ					
Nasal	m		n				ŋ		
Fricative		f	s						h
Approximant						j		w	
Lateral Approximant			l						

Cantonese and Korean vowels

CANTONESE
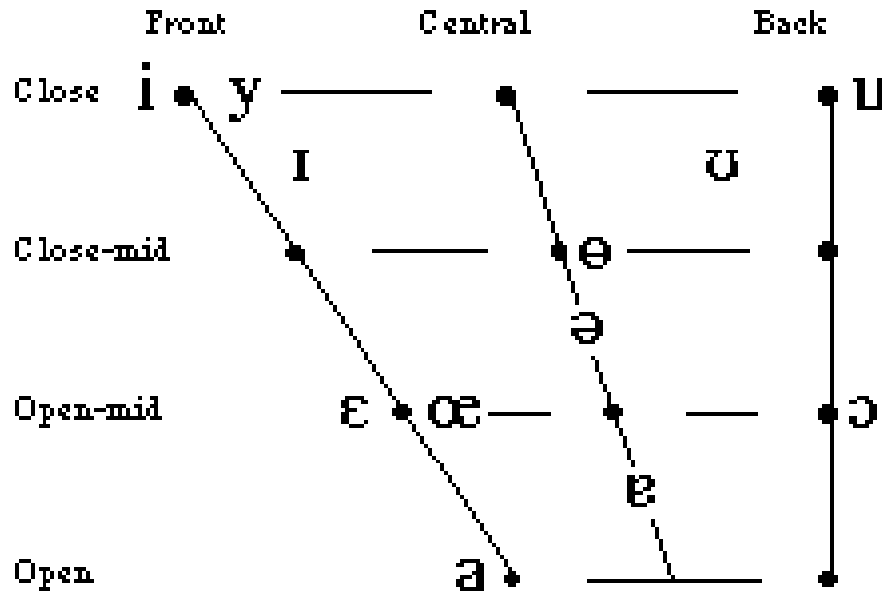
KOREAN

VOWELS
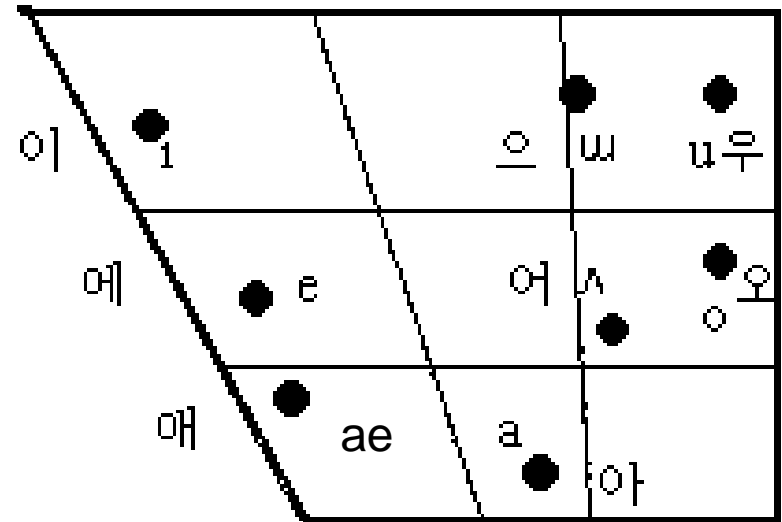
Handbook of the International Phonetic Association. 1999. Cambridge. Cambridge University Press.

Methodology

- Focus of the study:

  2044 frequently used Sino-Korean characters which are selected by the Korean Ministry of Education (Kim & Jang, 2003).

  - 2 Sino-Korean characeters are exlcuded since there are no corresponding characters in Cantonese.
  - If one Chinese characeter has several different pronunciations in Cantonese, these different pronunciations were treated as different items.
    - E.g. 畫 [wa^{35}] 'paint' (verb)   [wak^{22}] 'picture' (noun)
  - The total number of items is 2081 characeters.

- The pronunciations of the Chinese characters in Cantonese were based on He and Zhu (2001).

Corpus Design

- Cantonese Onset (O), Monophthong/Diphthong (N1、N2) and Coda (C)，Korean Onset (KO)、Monophthong/Diphthong (KN1、KN2) and Coda (KC) were entered into separate columns.

- A Partial List in the corpus

	Character	Cantonese Pronunciation	O	N1	N2	C	Korean	KO	KN1	KN2	KC
1	拜	bai	p	a	i		배	ㅂ	ㅐ		
2	敗	bai	p	a	i		패	ㅍ	ㅐ		
3	包	bau	p	a	u		포	ㅍ	ㅗ		
4	胞	bau	p	a	u		포	ㅍ	ㅗ		
5	飽	bau	p	a	u		포	ㅍ	ㅗ		
6	爆	bau	p	a	u		폭	ㅍ	ㅗ		ㄱ
7	白	bak	p	a		k	백	ㅂ	ㅐ		ㄱ
8	百	bak	p	a		k	백	ㅂ	ㅐ		ㄱ
9	伯	bak	p	a		k	백	ㅂ	ㅐ		ㄱ
10	帛	bak	p	a		k	백	ㅂ	ㅐ		ㄱ

Major Onset Correspondence between Cantonese and Korean (I)

Cantonese Onset	Korean Onset	No. of char.	Percentage	Example
p	p (ㅂ)	60	61.86%	博 (박)
	pʰ (ㅍ)	37	38.14%	包 (포)
pʰ	p (ㅂ)	23	51.11%	拍 (박)
	pʰ (ㅍ)	22	48.89%	破 (파)
t	t (ㄷ)	57	57.00%	道 (도)
	ts (ㅈ)	29	29.00%	低 (저)
	tʰ (ㅌ)	10	10.00%	打 (타)
	tsʰ (ㅊ)	3	3.00%	遞 (체)
tʰ	t (ㄷ)	31	39.24%	頭 (두)
	tʰ (ㅌ)	27	34.18%	透 (투)
	tsʰ (ㅊ)	10	12.66%	體 (체)
	ts (ㅈ)	9	11.39%	田 (전)
	s (ㅅ)	2	2.53%	盾 (순)
k	k (ㄱ)	171	95.53%	家 (가)
	h (ㅎ)	8	4.47%	解 (해)
kʰ	k (ㄱ)	45	93.75%	期 (기)
	h (ㅎ)	3	6.25%	吸 (흡)

Cantonese Onset	Korean Onset	No. of char.	Percentage	Example
kʷ	k (ㄱ)	28	100.00%	廣 (광)
kʷʰ	k (ㄱ)	13	86.67%	誇 (과)
	h (ㅎ)	2	13.33%	擴 (확)
ts	ts (ㅈ)	171	68.40%	正 (정)
	tsʰ (ㅊ)	49	19.60%	總 (총)
	s (ㅅ)	25	10.00%	習 (습)
	tʰ (ㅌ)	5	2.00%	宅 (탁)
tsʰ	tsʰ (ㅊ)	84	51.22%	層 (층)
	ts (ㅈ)	46	28.05%	財 (재)
	s (ㅅ)	30	18.29%	查 (사)
	t (ㄷ)	1	0.61%	茶 (다)
	k (ㄱ)	1	0.61%	車 (거)
	Ø (ㅇ)	1	0.61%	弛 (이)
	tʰ (ㅌ)	1	0.61%	桌 (탁)

Major Onset Correspondence between Cantonese and Korean (II)

Cantonese Onset	Korean Onset	No. of char.	Percentage	Example
l	l (ㄹ)	113	100%	立 (립)
m	m (ㅁ)	105	98.13%	買 (매)
	p (ㅂ)	1	0.93%	剝 (박)
	tsʰ (ㅊ)	1	0.93%	秒 (초)
n	n (ㄴ)	28	96.55%	能 (능)
	ts (ㅈ)	1	3.45%	鳥 (조)
ŋ	Ø	42	93.33%	危 (위)
	k (ㄱ)	3	6.67%	硬 (경)
j	Ø (ㅇ)	212	92.58%	入 (입)
	h (ㅎ)	16	6.99%	現 (현)
	k (ㄱ)	1	0.44%	丘 (구)
w	h (ㅎ)	37	50.00%	話 (화)
	w	35	47.30%	位 (위)
	k (ㄱ)	2	2.70%	壞 (괴)

Cantonese Onset	Korean Onset	No. of char.	Percentage	Example
f	p (ㅂ)	72	64.86%	費 (비)
	h (ㅎ)	21	18.92%	化 (화)
	k (ㄱ)	8	7.21%	科 (과)
	pʰ (ㅍ)	8	7.21%	風 (풍)
	kʰ (ㅋ)	1	0.90%	快 (쾌)
	m (ㅁ)	1	0.90%	撫 (무)
h	h (ㅎ)	84	63.16%	下 (하)
	k (ㄱ)	46	34.59%	起 (기)
	Ø (ㅇ)	2	1.50%	熊 (웅)
	m (ㅁ)	1	0.75%	耗 (모)
s	s (ㅅ)	218	96.46%	西 (서)
	ts (ㅈ)	4	1.77%	適 (적)
	tsʰ (ㅊ)	1	0.44%	縮 (축)
	ss (ㅆ)	2	0.88%	氏 (씨)
	h (ㅎ)	1	0.44%	恤 (휼)

Onset Correspondence between Cantonese and Korean

● One to one major correspondence relationship

Cantonese Onset	Korean Onset	No. of char.	Percentage	Example
k	k (ㄱ)	171	95.53%	家 (가)
kʰ	k (ㄱ)	45	93.75%	期 (기)
kʷ	k (ㄱ)	28	100.00%	廣 (광)
kʷʰ	k (ㄱ)	13	86.67%	誇 (과)
ŋ	Ø	42	93.33%	危 (위)
j	Ø (ㅇ)	212	92.58%	入 (입)
m	m (ㅁ)	105	98.13%	買 (매)
l	l (ㄹ)	113	100%	立 (립)
n	n (ㄴ)	28	96.55%	能 (능)
s	s (ㅅ)	218	96.46%	西 (서)

◄ All the **velar** onsets in Cantonese (/k/, /kʰ/, /kʷ/ and /kʷʰ/) correspond to /k/ in Korean.

◄ Most of the **sonorant** onsets have a one to one correspondence relationship.

◄ The importance of distinguishing **/l/-/n/ contrast** in Cantonese!
Cantonese [l~] →Korean [l~]
Example：立、李、力、來、利、理、零
Cantonese [n~] →Korean [n~]
Example：年、女、暖、內、末、南、男

Onset Correspondence between Cantonese and Korean

Cantonese Onset	Korean Onset	No. of char.	Percentage	Example
p	p (ㅂ)	60	61.86%	博 (박)
	pʰ (ㅍ)	37	38.14%	包 (포)
pʰ	p (ㅂ)	23	51.11%	拍 (박)
	pʰ (ㅍ)	22	48.89%	破 (파)
t	t (ㄷ)	57	57.00%	道 (도)
	ts (ㅈ)	29	29.00%	低 (저)
tʰ	t (ㄷ)	31	39.24%	頭 (두)
	tʰ (ㅌ)	27	34.18%	透 (투)
ts	ts (ㅈ)	171	68.40%	正 (정)
	tsʰ (ㅊ)	49	19.60%	總 (총)
tsʰ	tsʰ (ㅊ)	84	51.22%	層 (층)
	ts (ㅈ)	46	28.05%	財 (재)
	s (ㅅ)	30	18.29%	查 (사)
w	h (ㅎ)	37	50.00%	話 (화)
	w	35	47.30%	位 (위)
f	p (ㅂ)	72	64.86%	費 (비)
	h (ㅎ)	21	18.92%	化 (화)
h	h (ㅎ)	84	63.16%	下 (하)
	k (ㄱ)	46	34.59%	起 (기)

- One to two or more major correspondences

The two major correspondences are related to the aspiration contrasts in plosive onsets (except Cantonese /t/).

The minor correspondence rule in Cantonese /t/ is related to the stop-affricate contrast.

The 3 correspondence rules in Cantonese /tsʰ/ is related to both the aspiration contrast and the affricate-fricative contrast.

Since Korean does not have the phoneme /f/, the major corresponence to Cantonese /f/ is /p/, which is the most similar phoneme to /f/.

Major Rhyme and Coda Correspondence between Cantonese and Korean (I)

Cantonese Coda	Korean Coda	No. of char.	Percentage	Example
~p	**~p (ㅂ)**	**41**	**100.00%**	十 (십)
~t (include, ~at, ~et, ~œt, ~it, ~ɔt, ~ut, ~yt)	**~l (ㄹ)**	**100**	**91.74%**	八 (팔)
	~p (ㅂ)	6	5.50%	捷 (첩)
	~ŋ (ㅇ)	2	1.83%	骨 (골)
	~Ø	1	0.92%	刷 (쇄)
~k (include, ~ak, ~ɐk, ~œk, ~ik, ~ɔk, ~uk)	**~k (ㄱ)**	**229**	**97.03%**	百 (박)
	~l (ㄹ)	3	1.27%	穀 (곡)
	~n (ㄴ)	2	0.85%	哭 (곤)
	~p (ㅂ)	1	0.42%	逼 (펍)
	~Ø	1	0.42%	值 (치)
~m (include ~am, ~ɐm, ~im)	**~m (ㅁ)**	**88**	**98.88%**	三 (삼)
	~n (ㄴ)	1	1.12%	禪 (선)
~n (include ~an, ~ɐn, ~un, ~yn)	**~n (ㄴ)**	**342**	**97.71%**	年 (년)
	~m (ㅁ)	4	1.14%	品 (품)
	~ŋ (ㅇ)	2	0.57%	坤 (공)
~ŋ (include ~aŋ, ɐŋ, ɛŋ)	**~ŋ (ㅇ)**	**362**	**99.45%**	中 (중)
	~n (ㄴ)	2	0.55%	認 (인)

Cantonese Rhyme	Korean Rhyme	No. of char.	Percentage	Example
ŋ (Ø)	**~o (오)**	**6**	**100.00%**	五 (오)
~a	**~a (아)**	**39**	**97.50%**	打 (타)
	~æ (애)	1	2.50%	掛 (괘)
~ai	**~æ (애)**	**24**	**63.16%**	大 (대)
	~e (에)	**10**	**26.32%**	界 (계)
	~a (아)	4	10.53%	街 (가)
~au	**~o (오)**	**19**	**100.00%**	考 (고)
~ei	**~e (에)**	**52**	**52.00%**	第 (제)
	~i (이)	**25**	**25.00%**	費 (비)
	~ɔ (어)	12	12.00%	低 (저)
	~u (우)	9	9.00%	龜 (구)
	~æ (애)	1	1.00%	奚 (해)
	~ui (위)	1	1.00%	毅 (의)
~ɐu	**~u (우)**	**90**	**96.77%**	球 (구)
	~i (이)	2	2.15%	就 (취)
	~o (오)	1	1.08%	某 (모)

Major Rhyme and Coda Correspondence between Cantonese and Korean (II)

Cantonese Rhyme	Korean Rhyme	No. of char.	Percentage	Example
~ei	**~i (이)**	**60**	**88.24%**	美 (미)
	~ui (의)	5	7.35%	希 (희)
	~a (아)	2	2.94%	四 (사)
	~e (에)	1	1.47%	憩 (게)
~ε	**~a (아)**	**16**	**88.89%**	謝 (사)
	~i (이)	1	5.56%	騎 (기)
	~ɔ (어)	1	5.56%	車 (거)
~i	**~i (이)**	**47**	**48.45%**	時 (시)
	~a (아)	**37**	**38.14%**	事 (사)
	~ui (의)	13	13.40%	衣 (의)
~iu	**~o (오)**	**47**	**97.92%**	紹 (소)
	~u (우)	1	2.08%	叫 (규)
~ou	**~o (오)**	**85**	**84.16%**	努 (노)
	~u (우)	12	11.88%	部 (부)
	~e (외)	3	2.97%	腦 (뇌)
	~ɔ (어)	1	0.99%	盧 (려)

Cantonese Rhyme	Korean Rhyme	No. of char.	Percentage	Example
~ɔ	**~a (아)**	**34**	**75.56%**	羅 (라)
	~o (오)	9	20.00%	助 (조)
	~æ (애)	2	4.44%	個 (개)
~ɔi	**~æ (애)**	**35**	**97.22%**	來 (래)
	~e (외)	1	2.78%	外 (외)
~œy	**~u (우)**	**24**	**37.50%**	區 (구)
	~ɔ (어)	**20**	**31.25%**	女 (녀)
	~e (에)	11	17.19%	歲 (세)
	~i (이)	7	10.94%	取 (취)
	~æ (애)	2	3.13%	隊 (대)
~u	**~o (오)**	**23**	**57.50%**	古 (고)
	~u (우)	**17**	**42.50%**	夫 (부)
~ui	**~æ (애)**	**14**	**73.68%**	每 (매)
	~e (외)	**5**	**26.32%**	回 (회)
~y	**~ɔ (어)**	**24**	**46.15%**	書 (서)
	~u (우)	**24**	**46.15%**	宇 (우)
	~e (에)	3	5.77%	諸 (제)
	~o (오)	1	1.92%	娛 (오)

Coda Correspondence between Cantonese and Korean

● All the codas have a one to one major correspondence relationship.

Cantonese Coda	Korean Coda	No. of char.	Percentage	Example
~p	~p (ㅂ)	41	100.00%	十 (십)、入(입)、吸(흡)、習(습)
~t	~l (ㄹ)	100	91.74%	八 (팔)、一(일)、七(칠)、術(술)
~k	~k (ㄱ)	229	97.03%	百 (박)、國(국)、格(각)、學(학)
~m	~m (ㅁ)	88	98.88%	三 (삼)、男(남)、音(음)、驗(험)
~n	~n (ㄴ)	342	97.71%	年 (년)、半(반)、段(단)、真(진)
~ŋ	~ŋ (ㅇ)	362	99.45%	中(중)、定(정)、等(등)、能(능)

Except for **Cantonese [-t] → Korean [-l]**, all the other Korean codas are the same as their Cantonese codas. Same observation as in Kang and Simmons (2001).

Rhyme Correspondence between Cantonese and Korean

- One to one major correspondence relationship

Cantonese Rhyme	Korean Rhyme	No. of char.	Percentage	Example
ŋ (Ø)	~o (오)	6	100.00%	五(오)、午(오)、誤(오)、悟(오)
~a	~a (아)	39	97.50%	打(타)、沙(사)、家(가)、他(타)
~au	~o (오)	19	100.00%	考(고)、教(교)、貌(모)、抄(초)
~ɐu	~u (우)	90	96.77%	球(구)、宙(주)、九(구)、口(구)
~ei	~i (이)	60	88.24%	美(미)、基(기)、氣(기)、李(리)
~ɛ	~a (아)	16	88.89%	謝(사)、社(사)、野(야)、者(자)
~iu	~o (오)	47	97.92%	小(소)、紹(소)、標(표)、要(요)
~ou	~o (오)	85	84.16%	努(노)、母(모)、普(보)、圖(도)
~ɔi	~æ (애)	35	97.22%	來(래)、開(개)、內(내)、海(해)

Rhyme Correspondence between Cantonese and Korean

- One to two or more correspondence relationships

Cantonese Rhyme	Korean Rhyme	No. of char.	Percentage	Example
~ai	~æ (애)	24	63.16%	大 (대)
	~e (에)	10	26.32%	界 (계)
~ɐi	~e (에)	52	52.00%	第 (제)
	~i (이)	25	25.00%	費 (비)
~i	~i (이)	47	48.45%	時 (시)
	~a (아)	37	38.14%	事 (사)
~ɔ	~a (아)	34	75.56%	羅 (라)
	~o (오)	9	20.00%	助 (조)
~œy	~u (우)	24	37.50%	區 (구)
	~ɔ (어)	20	31.25%	女 (녀)
	~e (에)	11	17.19%	歲 (세)
~u	~o (오)	23	57.50%	古 (고)
	~u (우)	17	42.50%	夫 (부)
~ui	~æ (애)	14	73.68%	每 (매)
	~e (외)	5	26.32%	回 (회)
~y	~ɔ (어)	24	46.15%	書 (서)
	~u (우)	24	46.15%	宇 (우)

Korean Vocabulary Learning

- **Nouns**
  - 學生 [hɔk saŋ] → 학생 [hak sæŋ]
  - 韓國 [hɔn kʷɔk] → 한국 [han kuk]
  - 美國 [mei kʷɔk] → 미국 [mi kuk]

- **Verbs**
  - 退勤 [tʰɵy kʰɐn] → 퇴근하다 [tʰwe kɨn]
  - 入學 [jɐp hɔk] → 입학하다 [ip hak]

- **Adjectives**
  - 幸福 [hɐŋ fuk] → 행복하다 [hæŋ bok]
  - 清新 [tsʰiŋ sɐn] → 청신하다 [tsʰoŋ sin]

- **Adverbs**
  - 特히 [tɛk] → 특히 [tʰɨk]

Korean Passage Reading

- 야외의 공기는 청신하다.
- 野外의 空氣는 淸新하다.

- 나의 취미는 미술 이다.
- 나의 趣味는 美術 이다.

- 박선생은 고등학교의 선생이다.
- 朴先生은 高等學校의 先生이다.

- 남녀학생들이 배구를 한다.
- 男女學生들이 排球를 한다.

The Implicit Association between the two pronunciations through the use of corresponding rules

- There are corresponding rules between Cantonese and Japanese in the pronunciation of *onyomi kanji* (音讀漢字) words. (Lee, 1992)

Cantonese Coda		Japanese Syllable	Percentage	Kanji	Cantonese Pronunciation	Japanese Pronunciation
~p	➔	〜う (long vowel)	75.9%	採集 (さいしゅう)	tsʰɔi tsap	saishuu
~t	➔	〜つ (tsu)	78.6%	印刷 (いんさつ)	jɛn cat	insatsu
~k	➔	〜く (ku)	77.6%	握手 (あくしゅ)	ak sɐu	akushu
~m	➔	〜ん (n)	97.7%	增減 (ぞうげん)	tsɛŋ kam	zougen
~n	➔	〜ん (n)	99.1%	旋律 (せんりつ)	syn lɐk	senritsu
~ŋ	➔	〜う (long vowel)	75.0%	急增 (きゅうぞう)	kɐp tsɛŋ	kyuuzou

- Cantonese speakers can make implicit association between the Cantonese and Japanese pronunciations. (Chu, 2007)

A Questionnaire Study (Chu, 2007)

- Please choose the correct pronunciation of the following Japanese vocabularies. If you haven't learn the vocabularies before, please <u>circle the vocabulary</u>, read through all the 4 choices and choose the one that you think is the most probable answer.

	- Long vowel	- ku	- n	- tsu
1.採集	a.さいしゅう	b. さいしゅく	c. さいしゅん	d. さいしゅつ
2.印刷	a. いんさあ	b. いんさく	c. いんさん	d.いんさつ
3.並立	a. へいりつ	b. へくりつ	c. へんりつ	d.へつりつ
4.握手	a. ああしゅ	b. あくしゅ	c.あんしゅ	d.あっしゅ

Cantonese learners of Japanese of different levels (beginner, intermediate and advanced) participated in this study. They were also tested on their Cantonese pronunciations.

Results of the Study (Overall)

Japanese Pronunciation   **Cantonese Pronunciation**

Cantonese coda	~ long vowel	~ く (~ /ku/)	~ ん (~ /n/)	~ つ (~ /tsu/)		~ /p/	~ /t/	~ /k/	~ /m/	~ /n/	~ /ŋ/	~ others
/p/	**74%**	**14%**	3%	10%		**74%**	5%	5%	9%	1%	4%	3%
/t/	9%	**19%**	5%	**67%**		2%	**56%**	**35%**	0%	3%	2%	2%
/k/	2%	**74%**	5%	**19%**		4%	**16%**	**72%**	0%	2%	3%	3%
/m/	**10%**	8%	**78%**	4%		2%	2%	2%	**78%**	**12%**	3%	1%
/n/	**15%**	6%	**75%**	4%		1%	4%	1%	2%	**76%**	**14%**	2%
/ng/	**59%**	10%	**27%**	4%		2%	2%	3%	0%	**31%**	**61%**	2%

Many students can guess the correct pronunciations for the words that they haven't learnt before. Most of them mentioned that they did not use any rules or strategies in guessing the answer.

Negative Transfer from Cantonese into Japanese
/t/-/k/ contrast in the coda position (突 /tɐt/ vs. 特 /tɐk/)
/n/-/ŋ/ contrast in the coda position (文 /mɐn/ vs. 盟 /mɐŋ/)

Conclusions and Future Research

- Native Cantonese speakers have advantage in learning Korean vocabularies which use Sino-Korean characters.

- The importance of learning the "prescribed pronunciation" in learning foreign languages in order to prevent negative transfer from the mother language.

- Replicate the Japanese study using Korean vocabularies

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