Phonological change in Hong Kong Cantonese through language contact with Chinese topolects and English over the past century*

Picus Sizhi Ding

1.   Introduction

The linguistic selection for the prestige form in a society, as discussed in Labov (2001) and Hruschka *et al* (2009) for example, is also applicable to language contact. In a typical dyadic language contact situation, where two languages differ in the number of speakers and in the social status, the minority one with a lower prestige would, given a protracted period, eventually undergo restructuring that makes it similar to the dominant language. For instance, Thurgood and Li (2003) discussed such a case for the Tsat of Hainan, China. However, the prestige pressure for language change is not absolute. In the study of creole genesis, Lefebvre (2004) reports that the superstratum language, also the prestige one, tends to contribute lexicon together with the phonological form (typically simplified) to a creole, while the substratum language often shapes the semantic and syntactic properties of the creole.

A rather complicated scenario in terms of prestige languages occurs in Hong Kong: Cantonese, one of the major Chinese topolects, is spoken by the majority, but with a less prestigious status compared to English. The English language has enjoyed its privileged status in Hong Kong since the British rule, and this status has been maintained after the political turnover of Hong Kong to China in 1997, thanks to the important role of English in the modern world.

In colonial times natives in Hong Kong equated Cantonese to the Chinese language in a diglossic manner: Cantonese for the spoken form and standard Chinese for the written form (see Bruche-Schulz 1997 for details). On the other hand, several Chinese topolects have coexisted with Cantonese

for a long time in Hong Kong. As speakers of Cantonese outnumber those of the other Chinese topolects, its position as the dominant and prestige language among the Chinese population in Hong Kong has never been challenged. Thus Cantonese bears a varying prestige status in Hong Kong.

Over the decades, the use of Cantonese as the major language for medium of instruction in Hong Kong has necessitated language shift to Cantonese by children whose parents speak other Chinese topolects. In the process some linguistic features have probably been introduced into Hong Kong Cantonese from such Chinese topolects as Southern Min (Hokkien and Teochew), Hakka and Wu. While all these Chinese topolects are historically related to one another, they are mutually unintelligible between any two of them.

This preliminary study examines how Chinese topolects (other than Mandarin) may contribute to phonological change in Hong Kong Cantonese on the one hand, and how English may influence Hong Kong Cantonese on the other. After presenting some sociolinguistic background of Hong Kong in §2, I will address characteristics of Hong Kong Cantonese in §3. Externally-induced phonological innovations will be examined in §4. The effects of bilingualism and language shift as consequences of language contact in Hong Kong will be discussed in §5 before the paper comes to a conclusion.

2.   Brief Sociolinguistic Background of Hong Kong

In the year before Hong Kong was ceded to Britain in 1842, the island had a population of less than 8,000 people. As the new colony appealed to opportunity seekers from the mainland, its population soared to over 22,500 in 1851 and then spiralled to 80,000 in 1871 (Liu 2009). The population growth in Hong Kong over the past one century is presented in Table 1. The demographic change, however, has never challenged the majority status of ethnic Chinese, which has stood at well over 90% throughout the history of Hong Kong.[1] Hakka and Teochew (or Chiu Chau, as known in Cantonese), the other two major Chinese topolects of Guangdong, have also been spoken in various parts of present-day Hong Kong before the British rule (Siu 1995; Liu 2009).

---

[1] See http://en.wikipedia.org/wiki/Demographics_of_Hong_Kong

	Population
1901	368,986
1911	456,739
1921	625,166
1931	840,473
1941	1,639,000

Year	Population
1951	2,015,300
1961	3,129,648
1971	3,936,630
1981	5,109,812
1991	5,674,114
2002	6,773,200

Table 1: Population growth of Hong Kong in a century (based on Liu 2009)

During the 1930s, the population of Hong Kong doubled to over 1.6 million with an enormous number of war refugees fleeing from different parts of mainland China beyond the Guangdong province to the colony. The large scale of migration movement continued in the next five decades until the colony's population exceeded 5 million in 1981. The influx of Chinese immigrants has brought to Hong Kong a significant number of Wu speakers, particularly Shanghainese, and Southern Min speakers. The latter includes the Teochew dialect spoken along the eastern coast of Guangdong. According to Tsou (1997), in 1966 nearly 11% of the population of Hong Kong was from Chiu Chau, about 55% of whom spoke Teochew at home. However, the proportion of Chiu Chau Chinese who maintained their native tongue at home declined sharply to below 28% in a mere lapse of five years in the 1971's census.

The conspicuous language shift to Cantonese in Hong Kong is wide-spread among families speaking other Chinese topolects. This has rein-forced the dominant role of Cantonese as the *lingua franca* in the multilingual society of Hong Kong. Table 2 shows the results of three language surveys on the mother tongue of ethnic Chinese in Hong Kong conducted between 1983 and 2003 (adapted from Bacon-Shone and Bolton 1998, 2008; Bolton and Luke 1999).

Year	1983	1993	2003
Number of respondents	*1,240*	*886*	*1,060*
Cantonese	76.5%	81.6%	90.4%
Chinese†	8%	10.5%	n/a
Teochew (Chiu Chau)	2.9%	1%	1%
Hokkien (Fukien)	1.6%	0.7%	0.6%
Hakka	2.3%	0.6%	0.7%
Shanghainese	1.5%	0.2%	--
Putonghua (Mandarin)	2.5%	2.6%	5.6%
Total	95.3%	97.2%	98.3%

Table 2: Use of mother tongue by ethnic Chinese in Hong Kong
(†Chinese is construed as referring to Cantonese in the earlier surveys)

The surveys confirmed the general observation of language shift to Cantonese by younger generations of immigrants from mainland China. The exceptional increase of Mandarin as the mother tongue in Hong Kong in recent decades reflects the continuous intake of a large number of highly-educated ethnic Chinese, who typically have prior living experience outside China. Given the higher prestige of Mandarin as the national language, self-funded international schools have adopted Mandarin, rather than Cantonese, for Chinese courses. Among Chinese in Hong Kong Mandarin-speaking families are exceptional in holding off the language shift to Cantonese. However, it is unclear how Mandarin may maintain this position in future generations of these families in Hong Kong when they are fully integrated to the society.[2]

Multilingualism in Hong Kong is not confined to the diversity of Chinese topolects. The linguistic landscape of Hong Kong consists of an array of foreign languages, especially after the colony became an international metropolis. Afendras (1998) listed the following non-Chinese languages spoken at meal time by students of an international school in Hong Kong: Bengali, Burmese, Dutch, English, French, German, Greek, Japanese, Korean, Malay, Polish, Sinhalese, and Spanish among others. Moreover, sizable communities of Indians, Nepalese, Thai, Filipinos and

---

[2] Under the current transitional policy adopted by the central government in Beijing, I take the view that Cantonese will not utterly lose its status as the primary language in Hong Kong even after 2047, notwithstanding the increasing prominence of Mandarin in the special administrative region.

Indonesians also reside in Hong Kong. On 23 November 2008, the International Social Service of Hong Kong made a Guinness World Record for reciting 'Values on Communal Harmony' in 79 different languages. [3] According to the latest census released in 2007, the total population of non-Chinese speakers in Hong Kong as of 2006 has not risen above 5%.[4]

3. Major Innovations of Hong Kong Cantonese

Hong Kong Cantonese has developed linguistic innovations in two major aspects, namely: the lexicon and the phonological system. Each of these can be brought out under both internal and external forces. The four kinds of innovations are summarised in Table 3 with some examples.

	Lexicon	**Phonological System**
Internal development	Slang	Variation in initial consonants
External influence	Loan words	Confusion between final consonants

Table 3: Various kinds of innovations in Hong Kong Cantonese

Coined expressions can easily give rise to slang in Hong Kong Cantonese through the flourishing entertainment industry, largely films, television and such print media as comics and magazines. [5] This internal force has generated many innovative words for the language, e.g. /kaj^{33} nøy^{23}/ 'to go after a girl/woman out of sexual desire' (see Hutton and Bolton 2005). As is well-known, Hong Kong Cantonese has absorbed plenty of loan words from English (cf. Chan and Kwok 1990; Wong *et al* 2009). Some of them eventually become indispensible lexemes of Cantonese, e.g. /t^{h}aj^{55}/ 'tyre' and /tɪk^{55} si^{23}/ 'taxi'. Furthermore, English may also introduce, through loan words, new syllabary to fill some accidental gaps permitted by the phonotactics of Cantonese (see Bauer 2006). However, the expansion of Cantonese syllabary may not be fully realised or accepted in the phonological system of speakers who do not speak English; there is also considerable variation among different bilingual speakers. In any event the filling of accidental syllabary gaps through borrowing from English has not drastically affected the phonological system of Cantonese.

---

[3] See http://www.isshk.org/docs/New Era New Record/press_release.pdf
[4] http://www.censtatd.gov.hk/hong_kong_statistics/statistical_tables/
index.jsp?charsetID=1&tableID= 139
[5] Although Cantonese has no formal writing forms, informal writing in Cantonese has gained momentum with the availability of the internet, see Snow (2004) for more discussion.

The term *laan5jam1* (懶音, or *lǎnyīn* in Mandarin, literally meaning 'lazy pronunciation') has been used in recent years to refer to ongoing sound changes in Hong Kong Cantonese. This term designates the use of a variety of consonant variants in the speech of younger *native* speakers of Hong Kong Cantonese, mainly: (a) substitution of [l] for [n] at the syllable onset, e.g. /nej^{23}/ [lej^{23}] 'you (singular)'; (b) syncope of [ŋ] at the syllable onset, e.g. /ŋo^{23}/ [o^{23}] 'I'; (c) loss of labialisation in velar plosives, e.g. /kwɔ^{23}/ [kɔ^{23}] 'fruit'; and (d) change of the velars [k] and [ŋ] to alveolars, [t] and [n] respectively, at the syllable coda, e.g. /kɔŋ^{25}/ [kɔn^{25}] 'to speak'. To this list I will also add the change of the bilabials [p] and [m] to alveolars at the syllable coda, e.g. /sɐp^{55}/ [sɐt^{55}] 'wet'. It should be pointed out that *laan5jam1* is different from a foreign accent: the former is regarded as characteristics found in L1, whereas the latter is typically expected from L2 speakers. A foreign accent of Cantonese may contain any of the five kinds of *laan5jam1*, but it is not restricted to these.

Of the five types of consonant variation listed above, those occurring at the syllable-onset, i.e. (a) to (c), have been the topics of linguistic studies (e.g. Bauer and Benedict 1997; Zee 1999a; Pan 2008, etc.). Although there is a change from /n/ to /l/ in some dialects of Teochew, with /n/ preserved in Shantou and /l/ developed in Chaozhou (Li 1994), this dialectal split of alveolar sonorants is different in nature from the free variation between [n] and [l]. Furthermore this free variation has been observed in Guangzhou Cantonese (cf. Li 1994) as well as other languages (e.g. Southwestern Mandarin spoken in Sichuan and Jianghuai Mandarin spoken in southern Jiangsu, cf. Qian 2002). Therefore this sound change is considered as an internal one for Hong Kong Cantonese. Similarly, from the perspective of historical Chinese linguistics, the loss of the initial velar nasal [ŋ] and the deletion of labialisation on velar plosives fall within the area of internal development.

On the other hand, those consonants involving change on the place of articulation at the coda of the syllable have been less investigated (but see Bauer 1979 for addressing the fronting of velars and Law *et al* 2001 for neutralisation of coda contrast). As will be discussed in the next section, the changes in the final consonants are likely attributed to the phonotactics of the other coastal Chinese topolects, and thus they are regarded as innovations under external linguistic influence.

This study will focus on phonological change concerning the syllable finals, i.e. change of place of articulation for consonants at the syllable coda. These sound changes have the potential to cause confusion due to homo-

phony. However, they are often tolerated in daily communication when they do not lead to communication failure. As a result, the innovative forms have gradually emerged as variants of some closed-syllable words in Hong Kong Cantonese. In the following I will use the term *laan5jam1* in the narrow sense to refer to variants found at the syllable-final position.

4. Phonological Innovations in Hong Kong Cantonese

While Hong Kong has emerged as a metropolis bilingual in Cantonese and English since the 1970s, the majority of Hong Kong people acquire English as a second language through education (Tsou 1997; Bacon-Shone and Bolton 2008). As such, the impact of English on Cantonese is mainly felt in loan words and code mixing in casual speech. Its influence has barely reached such fundamental aspects as the phonological system of the language: affecting the syllable structure or realisation of Cantonese phonemes. However, English appears to have left a trace of its century of existence in Hong Kong in the domain of Cantonese intonation (to be discussed in §4.2).

On the other hand, thousands of children whose parents are not native speakers of Cantonese have acquired it as their first language. As noted in §2, Hong Kong had a sizable number of families who came from non-Cantonese-speaking areas. Law *et al* (2001) reports that neutralisation of certain consonants at the syllable-coda occurs in elicited Cantonese of some university students who grew up in Hong Kong (but their linguistic background was not provided). The *laan5jam1* affecting final consonants is rather common in the speech of younger generations of Hong Kong population, including a few locally born actors and actresses.[6]

In what follows I will explore the connection between *laan5jam1* and younger generations of Hong Kong people who have grown up in families with non-native speakers of Cantonese. In this pilot study I have not included a control group who speak only Cantonese at home for two reasons: the limitation on the scope of this paper and the complexity of factors involved in propagation of variants – growing up with parents who are not native speakers of Cantonese does not necessarily cause alternation of consonants at the syllable-coda. When a high level of sociolinguistic study is conducted in the future, taking the subjects' early linguistic surroundings and other relevant factors into account, we should be able to comprehend

---

[6] In singing 'The Forbidden Colour' (http://www.youtube.com/watch?v=7QLvybG4PMU), Denise Ho has clearly substituted [sɛt⁵⁵] 'lose' for [sɛp⁵⁵] 'wet'.

confidently how the discernible connection between the coda variants and the other coastal Chinese topolects has influenced Hong Kong Cantonese.

4.1 Influence from Chinese Topolects on the Syllable Finals

In addition to the Southern Min dialects Teochew and Hokkien, Wu has entered the linguistic scene of Hong Kong with the elites in Shanghai seeking refuge in Hong Kong in the 1940s after the Second World War and the civil war in China (Wong 1988). After China has regained its sovereignty over Hong Kong in 1997, a steadily-increased number of Mandarin speakers have settled in the new special administrative region. However, Mandarin influence on Hong Kong Cantonese, for the time being, is mainly found in lexemes rather than the phonology, reminiscent of the impact from English.

4.1.1 Comparison of syllable finals in Chinese topolects spoken in Hong Kong

Norman (1988; 2003) classifies Cantonese, Hakka and Min into Southern Chinese, whereas Shanghainese belongs to Central Chinese and Mandarin Northern Chinese. From the comparison of phonotactics of these Chinese topolects in Table 4, it is apparent that within Southern Chinese Hakka shares with Cantonese the same phonotactic constraints on syllable-final consonants, while Southern Min allows an additional glottal stop, but alveolars are excluded in Teochew. Shanghainese and Mandarin show more constraints: disallowing the bilabial nasal and any obstruents, although the glottal stop is permitted in Shanghainese.

Chinese Topolect	Nasal coda	Obstruent coda
Cantonese (Guangzhou)	-m, -n, -ŋ	-p, -t, -k
Hakka (Meixian)	-m, -n, -ŋ	-p, -t, -k
Southern Min (Teochew)	-m, -ŋ	-p, -k, -ʔ
Southern Min (Xiamen)	-m, -n, -ŋ	-p, -t, -k, -ʔ
Wu (Shanghai)	-n, -ŋ	-ʔ
Mandarin (Beijing)	-n, -ŋ	--

Table 4: Phonotactic constraints on syllable-final consonants in Chinese topolects (based on Lee and Zee 2009, Li 2002, Li 1994, Yan 2006 and Zee 2003)

It should be stressed that similarity of phonotactics between any two Chinese topolects in no way implies that a word would have the same final in the topolects. Table 5 demonstrates how words with a closed syllable in Cantonese may be realised differently in the other topolects. Shaded words indicate that the syllable final differs from that in Cantonese. Note that variation in this regard may also occur across dialects within the same topolect (see Yan 2006 for details).

Cantonese (Guangzhou)	Hakka (Meixian)	Southern Min (Xiamen)	Wu (Suzhou)	
sam⁵⁵	sam⁴⁴	sã⁴⁴	sɛ̝⁴⁴	'three'
sɐm⁵⁵	sim³⁵	sim ⁴⁴	sin⁴⁴	'heart'
san⁵⁵	san⁴⁴	suã⁴⁴	sɛ̝⁴⁴	'hill'
sɐn⁵⁵	sin⁴⁴	sin⁴⁴	sin⁴⁴	'new'
sɪŋ⁵⁵	sen³⁵	tsʰĩ⁴⁴	sin⁴⁴	'star'
foŋ⁵⁵	fuŋ⁴⁴	hoŋ⁴⁴	foŋ⁴⁴	'wind'
jip²²	iap⁵⁵	hioʔ⁴⁴	ɦiəʔ²³	'leaf'
sɐp²²	səp⁵⁵	tsap⁴⁴	zəʔ²³	'ten'
pat³³	pat¹¹	pueʔ³²	poʔ⁵⁵	'eight'
jɐt⁵⁵	it¹¹	it³²	iəʔ⁵⁵	'one'
sek²²	sət⁵⁵	tsiaʔ⁴⁴	tɕʰiə⁵⁵	'eat'
lok²²	liuk¹¹	lak⁴⁴	loʔ²³	'six'

Table 5: Correspondence of closed-syllable words between Cantonese and other topolects (based on Ting and Sun's Sino-Tibetan Cognates Database)

As can be seen from Table 5, Hakka has a rather close correspondence with Cantonese (spoken in Guangzhou and Hong Kong) as regards the finals in the closed syllable. The only divergence appears in words ending with a velar in Cantonese: some of them correspond to alveolars in Hakka (as shown in the table), but some maintain the same place of articulation.

The comparison of syllable finals between Cantonese and Southern Min shows a greater variation. Southern Min varieties such as Xiamen have a wider range of syllable finals than Cantonese, while varieties such as Teochew have lost alveolar finals. Therefore colloquial Southern Min (as opposed to the literary pronunciation) holds no consistent sound correspondence with Cantonese as far as the coda consonants are concerned. Children growing up with Cantonese as their first language in a bilingual family speaking a Southern Min dialect may have difficulty acquiring the

precise final in closed-syllable words of Cantonese. Children from Wu families in Hong Kong may face similar problems. To test this hypothesis, a few sentences containing closed-syllable words are recorded from several Cantonese speakers whose families speak Wu, Teochew, or Hakka.

4.1.2   A test on syllable finals in young speakers of Hong Kong Cantonese
The elicitation was conducted with the sentences below written in Cantonese. As the closed-syllable words are embedded in two short passages, the subject is unlikely to pay particular attention to the target syllables.

(1a)　香　　港　　一　　年　　四　　季　　都　　相　　當　　潮　　濕，
　　　　hœŋ⁵⁵ koŋ²⁵ jat⁵⁵ nin²¹ sej³³ kʷej³³ tow⁵⁵ sœŋ⁵⁵ toŋ⁵⁵ tsʰju²¹ sɐp⁵⁵
　　　　Hong Kong　one　　year　four　season　also　quite　　　　damp

　　　　非　　常　　適　　合　　甲　　由　　生　　活。
　　　　fej⁵⁵ sœŋ²¹ sɪk⁵⁵ hɐp²² kat²² tsat²⁵ saŋ⁵⁵ wut²²
　　　　very　　　suitable　cockroach　dwell
　　　　'Hong Kong is quite humid throughout the year, extremely suitable for the inhabitation of cockroaches.'

(1b)　喺　　實　　驗　　室　　嘅　　　　研　　究　　顯　　示，
　　　　hej²⁵ sɐt²² jim²² sɐt⁵⁵ kɛ³³　　　jin²¹ kɐw³³ hin²⁵ si²²
　　　　at　　laboratory　　ATTRIBUTIVE　study　　show

　　　　甲　　由　　喺　　濕　　熱　　嘅　　　　環　　境　　下，
　　　　kat²² tsat²⁵ hej²⁵ sɐp⁵⁵ jit²² kɛ³³　　　wan²¹ kɪŋ²⁵ ha²²
　　　　cockroach　　at　　wet hot　ATTRIBUTIVE　environment　under

　　　　有　　驚　　人　　嘅　　　　繁　　殖　　能　　力。
　　　　jɐw²³ kɪŋ⁵⁵ jɐn²¹ kɛ³³　　　fan²¹ tsɪk²² nɐŋ²¹ lɪk²²
　　　　has　　astonishing　ATTRIBUTIVE　reproduction　　ability
　　　　'Studies conducted in the laboratory show that cockroaches develop an astonishing reproduction ability under the humidly hot environment.'

(2a) 香 港 嘅 失 業 率 持 續 高 升,
hœŋ⁵⁵ koŋ²⁵ kɛ³³ set⁵⁵ jip²² let² tsʰi²¹ tsuk²² kow⁵⁵ sɪŋ⁵⁵
Hong Kong ATTRIBUTIVE unemployment rate continuous high rise

已 經 到 咗 緊 急 關 頭,
ji²³ kɪŋ⁵⁵ tow³³ tso²⁵ ken²⁵ kep⁵⁵ kʷan⁵⁵ tʰew²¹
already reach PERFECTIVE emergent moment
'The unemployment rate in Hong Kong has spiralled continuously and has already reached an emergent point.'

(2b) 但 政 府 仲 係 一 副 姿 柔 淡 定、
tan²² tsɪŋ³³ fu²⁵ tsuŋ²² hej²² jet⁵⁵ fu³³ tsi⁵⁵ jew²¹ tam²² tɪŋ²²
but government still is one CLASSIFIER cool and calm

十 拿 九 穩 嘅 架 勢,
sep²² na²¹ kew²⁵ wen²⁵ kɛ³³ ka³³ sej³³
great confidence ATTRIBUTIVE posture

實 行 天 跌 落 嚟 當 被 冚。
set²² heŋ²¹ tʰin⁵⁵ tit³³ lɔk²² lej²¹ tɔŋ³³ pʰej²³ kʰam²³
perform sky fall down come take as quilt cover
'But the government has taken a cool and calm posture with great confidence, as if it would be only a quilt to cover should the sky fall down.'

Seven Cantonese speakers, all born in Hong Kong in families where a Chinese topolect other than Cantonese is spoken, were asked to read the sentences twice: at a normal speed first and then at a slow speed. The utterances were recorded for later analysis. The basic background of the seven speakers is as follows:

Speaker	Age	Sex	Non-Cantonese topolect	Competence in the topolect
S	20s	M	Hakka	Speaking in early childhood
J	20s	M	Teochew	Limited in speaking
N	20s	M	Shanghaiese	Limited in speaking
K	10s	M	Shanghaiese	Passive knowledge
V*	10s	F	Shanghaiese	Passive knowledge
L	30s	F	Shanghaiese	Fluent
W	30s	F	Shanghaiese	Fluent

* Speaker V has taken a course for eliminating *laan5jam1* in school.

Table 6: The background of the participating Cantonese speakers

The five informants with Shanghainese background are relatives living in three families across two generations. The usual family language of all seven informants is Cantonese, which they all speak fluently. According to their production of the Cantonese sentences above, they could be placed on a continuum for authentic pronunciation between native speakers and non-native speakers of Cantonese as follows:

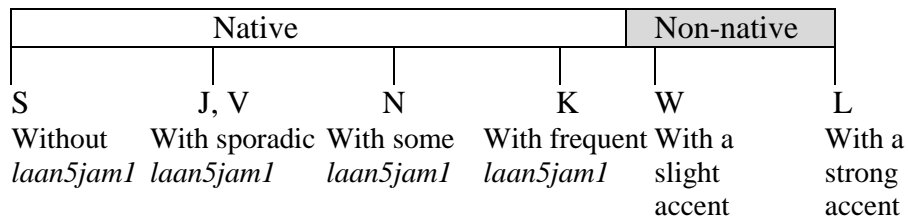| Native				Non-native	
S	J, V	N	K	W	L
Without *laan5jam1*	With sporadic *laan5jam1*	With some *laan5jam1*	With frequent *laan5jam1*	With a slight accent	With a strong accent

Figure 1: Varied degrees of authentic pronunciation of Cantonese by the seven speakers

Under the current hypothesis, *laan5jam1* is construed as a kind of variant used by speakers who otherwise have an authentic pronunciation of Hong Kong Cantonese. Such speakers possess a high command of Cantonese and they have typically shifted to Cantonese as their first language since early childhood. On the other hand, those bilingual in Cantonese and another topolect often speak Cantonese with noticeable foreign accents, which are characterised with not only *laan5jam1* but also other borrowing or interference from the non-Cantonese topolect. Since L's and W's Cantonese

is marked with an appreciable accent of an ethnolect, their recording will be excluded from discussion.

The recorded sentences show a rather common alveolarisation of final velars in words such as 當 / tɔŋ³³/ [tɔn³³] 'to take as' and 能力 / nɐŋ²¹ lɪk²²/ [nɐn²¹ lɪʔ²²] 'ability'; glottalisation of stops also occurs at the syllable final. The most interesting finding from the data concerns the word 濕 /sɐp⁵⁵/ 'wet', which appears in the compounds 潮濕 / tsʰju²¹ sɐp⁵⁵/ 'humid' and 濕熱 / sɐp⁵⁵ jit²²/ 'humidly hot'. J and V appear to have assigned to /sɐp⁵⁵/ 'wet' a free variation between [sɐp⁵⁵] and [sɐt⁵⁵], although the latter is homophonous to /sɐt⁵⁵/ 'lose'. On different occasions, both variations occurred in their recording. Coronalisation of the bilabial stop in the word /sɐp⁵⁵/ 'wet' seems to represent the preferred pronunciation: J used it more often than [sɐp⁵⁵] and V gave the form [sɐt⁵⁵] in her slow reading of the sentence. Furthermore, this innovative form is also used by N and appears in a song sung by Denise Ho (see footnote 5).

Other instances of coronalisation of bilabials include: 合 /hɐp²²/ 'close' becoming [hɐt²²] and 急 /kɐp⁵⁵/ 'rush' pronounced as [kɐt⁵⁵] by N. Nasal finals are also subject to coronalisation: 驗 /jim²²/ 'test' was changed to [jin²²] by V, N and K.

However, the substitute of [-t] for [-p] does not apply across the board in the phonological system of any native-like speakers. Rather, it operates at the lexical level, affecting certain words but not others, e.g. /sɐp²²/ 'ten' always retains the bilabial stop at the coda. Its occurrence also varies from one speaker to another. If a speaker regards the innovative form as a free variation, the substitute will be subject to a third consideration: the situational choice.

J and N are bilingual in Cantonese and English. They were asked to read the following English sentences on a separate session after they had recorded the Cantonese sentences:

(3a)   Let's go to a live show tonight.
(3b)   It's snowing right now outside.
(3c)   Sorry, I don't know you're sleeping. Did I sing too loud?
(3d)   To sum up, when you're sick, just sit near the lake and sip the herbal tea.

The kind of syllable-coda *laan5jam1* found occasionally in their Cantonese is definitely kept separate from the phonological system of their English system, although a few young university students in Hong Kong have mentioned to me a tendency to substitute onset /n/ for /l/ when they speak

English. This is likely to be due to the hypercorrection of pronouncing [l] for /n/ in Cantonese, as there has been an informal campaign initiated by the broadcasting industry in Hong Kong for 'proper articulation' of Cantonese (正音 *zing3jam1*).[7] The hypercorrection has, to varying degrees, interfered with some bilingual speakers' English phonology.

It would be an over-generalization to take coronalization of bilabials as characteristic of native speakers of Cantonese who grew up in a Southern Min or Shanghainese speaking family. However, there is a discernible connection between the phonological innovative in syllable finals of Hong Kong Cantonese and language shift to Cantonese by the younger generations of bilingual families who speak other coastal Chinese topolects. This means that language contact between Cantonese and these Chinese topolects in Hong Kong has been affecting the syllable finals of the predominant language when younger generations of other Chinese topolects are adopting Cantonese as their native language. The innovation by virtue of substrate effects, however, is not confined to those communities where language shift has taken place or is taking place. The extent of its influence is on the rise in the dynamic society of Hong Kong, diffusing to other sectors of the speech community.

4.2 Influence from English on Intonation

Sino-Tibetan languages usually employ an interrogative particle to form questions (Thurgood and LaPolla 2003), which can also be taken as an areal feature for languages of the Far East. Similar in this regard, Cantonese typically uses the sentence-final particle 呀 /a^{33}/ in interrogatives. For instance, example (4) and the question made by A in (5).

(4)　你　　最　　近　　點　　呀？
nej^{23}　$tsey^{33}$ ken^{22} tim^{25}　a^{33}　　　[Intonation: non-rising]
you　recently　　how　Q
'How have you been lately?'

(5)　　A dialogue between A and B.
　A: 你　　點　解　唔　去　　呀？
　　nej^{23}　tim^{25} kaj^{25}　$m̩^{21}$　hey^{33}　a^{33}　　　[Intonation: non-rising]
　　you　why　　not　go　Q

---

[7] Details of the campaign for proper articulation of Cantonese can be found (in Chinese) at: http://zh.wikipedia.org/wiki/粵語正音運動

'Why don't you go?'

B: 點　　解　　唔　　去？
    tim²⁵ kaj²⁵ m̩²¹ hɐy³³   [Intonation: rising]
    why　　　　not　go
    'Why don't (I) go?'

When the question particle is present, the intonation for the interrogative does not rise in pitch. Nonetheless, Cantonese may also use a rising intonation for interrogative, as shown by the echo question made by B in (5). The pitch pattern for this intonation is similar to English in that it rises at the end of an utterance, but it differs from English in its pragmatic function: interrogatives with a rising intonation in Cantonese convey an echo question. Such an echo question typically implies a sense of surprise (cf. Flynn 2003; Fox *et al* 2008). Note that echo questions in Cantonese can also be expressed with the interrogative particle /a³³/ instead of the rising tone. In this case the pitch of the particle is lowered, i.e. /a²¹/, and the echo question implies no sense of surprise. These are summarised in Table 7. Note that the rising intonation is incompatible with the interrogative particle at the end of an utterance.

	By the interrogative particle /a/	By a rising intonation
General questions	Yes	No
Echo questions	Yes (with no sense of surprise)	Yes (with a sense of surprise)

Table 7: Encoding of interrogatives in Cantonese

An influence from English on Cantonese is discernable in the augmenting frequency for applying a rising intonation to interrogatives in the speech of young people in Hong Kong. They prefer encoding questions in Cantonese, irrespective of their type and the sense of surprise implied, through a rising intonation to the use of the interrogative particle:

(6)　　你　　食　　飯　　未？
　　　nej²³ sɪk²² fan²² mej²² [Intonation: rising]

you   eat   rice   yet
'Have you eaten yet?'

(7)   咁   都   要   幫   佢   買 ？
kɐm²⁵ tow⁵⁵ ju³³ pɔŋ⁵⁵ kʰɵj²³ maj²³   [Intonation: rising]
like this also need for him/her buy
'Even this we need to buy for him/her?'

These questions, if expressed by conservative speakers, would be encoded with the interrogative particle 呀 /a³³/ rather than the rising intonation. Based on my observation, the extended use of the rising tone for expressing non-echo questions in Cantonese occurs chiefly in the speech of younger generations. I conjecture that English may be the ultimate source responsible for this new pattern of intonation for Cantonese interrogatives.

5.   Consequences of Language Contact: Bilingualism and Language Shift

Hong Kong has been regarded as the intersecting place where English language culture meets and mingles with the Chinese culture. From the point of view of language contact, Hong Kong is also the locus where Cantonese and English have interacted extensively in the daily life of the residents for over one and a half centuries. Bilingualism in Cantonese and English is one of the characteristics of Hong Kong after its transformation to a modern international metropolis (cf. Bacon-Shone and Bolton 2008). However, the population of native speakers of English has remained in the minority throughout the history of Hong Kong. While many English speakers and their children acquired Cantonese during their stay in Hong Kong, the number of native speakers of English bilingual also in Cantonese since childhood is small and insignificant. Conversely, Chinese children with balanced bilingualism in Cantonese and English since early childhood are also exceptions to the norm. Such bilingual children would typically live with a parent or close relative who is a native speaker of English. The majority of Cantonese speakers growing up in Hong Kong acquire English as a foreign language or at best a second language for those attending English immersion schools.

On the other hand, Hong Kong represents a melting pot which turns descendents of Chinese speaking other topolects into native speakers of Cantonese. Such language shift resembles an 'internal affair' – a Chinese

topolect cedes its status as a mother tongue to Cantonese without provoking any resentment; it receives little discussion under the disguise of Chinese language. Nonetheless, language shift as a consequence of language contact could plant the seeds of change in the target language, whereas the effect of bilingualism arising from language contact typically lies in the outward domains such as the lexicon of the less prestigious language. In other words, language contact may result in varying developments in a language, depending on how intimately and intensely the language comes to contact with another.

The phonological innovations in Hong Kong Cantonese discussed above show that different conditions of language contact lead to particular linguistic mutations. Substrate traits leave the imprint of a mother tongue that has undergone language shift: locally-born Chinese of families who speak a coastal topolect, Southern Min or Shanghainese, have contributed to consonant variations in the syllable-coda of Hong Kong Cantonese, as they adopt Cantonese as their first language. Although such variations are still negotiating their place in the phonological system of the language, they are widespread with the potential to exert a permanent impact. Even if remedial lessons for *laan5jam1* were taken seriously, it could result in hyper-correction, as mentioned above. In one way or the other, the phonological system of Hong Kong Cantonese, in the sociolinguistic terms, is less likely to be fully restored to the conservative form of an earlier period.

The impact of the extended usage of rising intonation for expressing ordinary interrogatives in Hong Kong Cantonese appears to remain mild. It is unclear whether it has propagated beyond bilinguals and, to what extent, it has become the preferred choice for encoding questions by Cantonese speakers who do not speak English. As intonation is seldom a topic in prescriptivism, there has been no appeal to avoid using the rising intonation in favour of the use of the interrogative particle in Hong Kong Cantonese. This linguistic innovation may find shelter to survive for a longer period.

6.   Conclusion

Hong Kong Cantonese has emerged under an unusual language contact situation, in which it has retained its position as the dominant language of the territory, but with a varying prestige status: it is superior to other Chinese topolects such as Hakka, Southern Min and Shanghainese, while inferior to English. Language shift to Cantonese from speakers of other Chinese topolects takes place in Hong Kong on a large scale, but few, if any, native speakers of English abandon English in favour of Cantonese. The

sociolinguistic outcome of language contact between Cantonese and English is an increasing number of bilinguals through learning English in school, whereas the consequence of language contact between Cantonese and other topolects of southern China is a steady language shift, with younger generations speaking Cantonese as their first language. Different kinds of externally-induced phonological changes seem to have arisen out of these contact situations. Interference from other Chinese topolects have affected the consonants at the syllable-coda in Hong Kong Cantonese, while English has exerted influence on the intonation pattern of Hong Kong Cantonese, extending the use of a rising intonation to ordinary questions.

The findings of this paper corroborate cross-linguistic studies of borrowability in contact-induced change, where prosodic features are reported to have the highest susceptibility to replication (Matras 2009).[8] This explains why intonation in Hong Kong Cantonese is affected even though the degree of contact between English and Cantonese is less intense than that between coastal Chinese topolects and Cantonese. If prosody is placed at the top of a replication hierarchy for contact-induced change, the syllable structure, representing a more abstract aspect of the phonological system, will probably sit near the bottom of the hierarchy.

---

[8] Stephen Matthews (p.c.) raised the question whether we could take the merger of the high and low rising tones in some speakers of Hong Kong Cantonese (reported in Bauer *et al* 2003) as another attribute of those who have shifted their mother tongue to Cantonese. Since some Cantonese dialects such as Zhuhai (adjacent to Macao) do not distinguish the two rising tones (cf. Zhan and Gan 2002; also Bauer and Benedict 1997 for Macao Cantonese), it would be difficult to account for the varying tone merger situation in Hong Kong on the ground of language contact alone.

References

Afendras, Evangelos. 1998. 'The onset of bilingualism in Hong Kong: language choice in the home domain'. In Pennington, Martha (ed.) 1998. *Language in Hong Kong at Century's End.* Hong Kong: Hong Kong University Press, 113-41.

Bacon-Shone, John and Kingsley Bolton. 1998. 'Charting multilingualism: language censuses and language surveys in Hong Kong'. In Pennington, Martha (ed.) 1998. *Language in Hong Kong at Century's End.* Hong Kong: Hong Kong University Press, 43-90.

− 2008. 'Bilingualism and multilingualism in the HKSAR: language surveys and Hong Kong's changing linguistic profile'. In Bolton, Kingsley, and Han Yang (eds.) 2008. *Language and Society in Hong Kong*. Hong Kong: Open University of Hong Kong Press, 25-51.

Bauer, Robert. 1979. 'Alveolarization in Cantonese: a case of lexical diffusion'. *Journal of Chinese Linguistics* 7: 132-41.

− 2006. 'The stratification of English loanwords in Cantonese'. *Journal of Chinese Linguistics* 34: 172-191.

Bauer, Robert and Paul Benedict. 1997. *Modern Cantonese Phonology*. Berlin: Mouton de Gruyter.

Bauer, Robert, Cheung Kwan-hin, and Cheung Pak-man. 2003. 'Variation and merger of the rising tones in Hong Kong Cantonese'. *Language Variation and Change* 15: 211–25.

Bolton, Kingsley and Kang-kwong Luke. 1999. *Language and Society in Hong Kong: the Social Survey of Languages in the 1980's*. Hong Kong: Social Sciences Research Centre, University of Hong Kong.

Bruche-Schulz, Gisela. 1997. '"Fuzzy" Chinese: The status of Cantonese in Hong Kong'. *Journal of Pragmatics* 27: 295-314.

Chan, Mimi and Helen Kwok. 1990. *A Study of Lexical Borrowing from English in Hong Kong Chinese*. Hong Kong: Centre of Asian Studies, University of Hong Kong.

Faure, David (ed.) 1984. *From Village to City: Studies in the Traditional Roots of Hong Kong Society*. Hong Kong: Centre of Asian Studies, University of Hong Kong.

Fox, Anthony, Kang-Kwong Luke & Owen Nancarrow. 2008. 'Aspects of intonation in Cantonese'. *Journal of Chinese Linguistics* 36: 321-67.

Flynn, Choi-Yeung-Chang. 2003. *Intonation in Cantonese*. Munich: LINCOM Europa.

Hruschka, Daniel *et al*. 2009. 'Building social cognitive models of language change'. *Trends in Cognitive Sciences* 13: 464-69.

Hutton, Christopher and Kingsley Bolton. 2005. *A Dictionary of Cantonese Slang: the Language of Hong Kong Movies, Street Gangs and City Life*. Honolulu: University of Hawai'i Press.

Labov, William. 2001. *Principles of Linguistic Change II: Social Factors*. Oxford: Blackwell.

Law, Sam-Po, Roxana Fung, and Robert Bauer. 2001. 'Perception and production of Cantonese consonant endings'. *Asia Pacific Journal of Speech, Language, and Hearing* 6: 179-95.

Lee, Wai-Sum and Eric Zee. 2009. 'Hakka Chinese'. *Journal of the International Phonetic Association* 39: 107-11.

Lefebvre, Claire. 2004. *Issues in the Study of Pidgin and Creole Languages*. Amsterdam: John Benjamins.

Li, Rulong. 2002. 'Min'. In Hou, Jingyi (ed.). 2002. 現代漢語方言概論 (*An Introduction to Modern Chinese Dialects*). Shanghai: Shanghai Education Press, 207-48.

Li, Xinkui. 1994. 廣東的方言 *(Topolects of Guangdong)*. Guangzhou: Guangdong People Press.

Liu, Shu-yong (ed.) 2009. 簡明香港史 (*A Brief History of Hong Kong, new edition*). Hong Kong: Joint Publishing (H.K.) Company.

Matras, Yaron. 2009. *Language Contact*. Cambridge: Cambridge University Press.

Norman, Jerry. 1988. *Chinese*. Cambridge: Cambridge University Press.

–   2003. 'The Chinese dialects: phonology'. In Thurgood, Graham and Randy LaPolla (eds.) 2003. *The Sino-Tibetan Languages*. London: Routledge, 72-83.

Pan, Peter G. 2008. 'Hong Kong Cantonese: a sociolinguistic perspective'. In Bolton, Kingsley, and Han Yang (eds.) 2008. *Language and Society in Hong Kong*. Hong Kong: Open University of Hong Kong Press, 120-36.

Qian, Zengyi. 2002. 'Mandarin'. In Hou, Jingyi (ed.). 2002. 現代漢語方言概論 (*An Introduction to Modern Chinese Dialects*). Shanghai: Shanghai Education Press, 3-40.

Siu, Kwok-kin. 1995. 香港古代史 (*The History of Ancient Hong Kong*). Hong Kong: Chung Hwa Book Company.

Snow, Donald. 2004. *Cantonese as Written Language: the Growth of a Written Chinese Vernacular*. Hong Kong: Hong Kong University Press.

Thurgood, Graham and Fengxiang Li. 2003. 'Contact induced variation and syntactic change in the Tsat of Hainan'. In Bradley, David, Randy LaPolla, Boyd Michailovsky, and Graham Thurgood (eds.) 2003. *Language Variation: Papers on Variation and Change in the Sinosphere and the Indosphere in Honour of James A. Matisoff*. Canberra: Pacific Linguistics, Australian National University, 285-300.

Ting, Pang-hsin and Hongkai Sun. Sino-Tibetan Cognates Database. http://iea.cass.cn/stdpi/

Tsou, Benjamin. 1997. 'Sanyan liangyu shuo Xianggang' [Language in Hong Kong]. *Journal of Chinese Linguistics* 25: 290-307.

Wong, Cathy, Robert Bauer, and Zoe Lam. 2009. 'The integration of English loanwords in Hong Kong Cantonese'. *Journal of the Southeast Asian Linguistics Society* 1: 251-65.

Wong, Siu-lun. 1988. *Emigrant Entrepreneurs: Shanghai Industrialists in Hong Kong*. Hong Kong: Oxford University Press.

Wong, Tak-Sum. 2008. 'The beginning of merging of the tonal categories B2 and C1 in Hong Kong Cantonese'. *Journal of Chinese Linguistics* 36: 155-74.

Xu, Hui Ling. 2007. *Aspect of Chaozhou Grammar: A Synchronic Description of the Jieyang Variety*. Berkeley: Project on Linguistic Analysis.

Yan, Margaret Milan. 2006. *Introduction to Chinese Dialectology*. Munich: LINCOM.

Zee, Eric. 1999a. 'Change and variation in the syllable-initial and syllable-final consonants in Hong Kong Cantonese'. *Journal of Chinese Linguistics* 27: 120-67.

–   1999b. 'Chinese (Hong Kong Cantonese)'. In *Handbook of the International Phonetic Association: A guide to the use of the International Phonetic Alphabet*. Cambridge: Cambridge University Press, 58-60.

–   2003. 'Shanghai phonology'. In Thurgood, Graham and Randy LaPolla (eds.) 2003. *The Sino-Tibetan Languages*. London: Routledge Press, 131-38.

Zhan, Bohui and Gan Jiacai. 2002. 'Cantonese'. In Hou, Jingyi (ed.). 2002. 現代漢語方言概論 (*An Introduction to Modern Chinese Dialects*). Shanghai: Shanghai Education Press, 174-206.