16 *The impact of English loanwords on the Cantonese syllabary*

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1 Introduction

No Chinese variety has had more intimate and longer contact with English than Cantonese. Their contact began just over 300 years ago when the early English-speaking traders arrived in Guangzhou to exchange silver for Chinese tea, porcelain, silk, and other goods. Today the effect of English influence on the Cantonese language shows up most clearly in the Hong Kong Cantonese lexicon in which hundreds of English loanwords occur (cf. Bauer and Benedict 1997:361–405). Some of these loanwords have been in use in Hong Kong Cantonese for such a long time that they have an official status and are written with Chinese characters, for example, *ba¹-si⁶/³* 'bus' and *tek⁷ᴬ-si⁶/³* 'taxi';[1] further, many Cantonese speakers who do not speak English assume such words as these and others are ordinary Cantonese words.

In studying English loanwords in Hong Kong Cantonese we have several advantages over trying to identify the source languages of other kinds of loanwords (cf. Bauer 1996): first, the borrowing was not so long ago as to render the identity of the source words in English irrecoverable; second, the contact and borrowing are still ongoing with the objects

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[1] The Cantonese lexical tone categories are indicated by raised numbers following the syllables as follows (the two-digit number following the tone contour name represents the start point and end point of the tone contour on the five-point scale): ¹ High Level (55); ² Mid-low Falling (21); ³ High Rising (25); ⁴ Mid-low Rising (23); ⁵ Mid Level (33); ⁶ Mid-low Level (22); ⁷ᴬ High Stopped (55); ⁷ᴮ Mid Stopped (33); ⁸ Mid-low Stopped (22). The morphological changed tone (known as *pinjam*) is marked by separating the basic tone from the changed tone which is usually tone 3 High Rising with the slash '/'; for example, *si⁶/³* indicates the basic tone is tone 6 Mid-low Level and the changed tone is tone 3 High Rising.

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of our study in use right before our eyes (and ears) and so easily accessible; and third, the phonological systems of English and Cantonese are so markedly different and the loanwords so abundant that the phonetic adaptation of English loanwords into Cantonese can be described as a series of distinctive and principled correspondences.

One aspect of the borrowing of English words into Cantonese that has particularly interested me for some time has been the impact that the phonetic adaptation of English loanwords has had on the structure and development of the Cantonese syllabary. Structure refers to the phonetic shapes of syllables and the total number of them that occur in Cantonese; development recognises that the syllabary has been continuously evolving as new syllables are created and then added to it. The phrase 'new syllables' means just that: syllables that did not exist prior to the borrowing of the loanword have been constructed through the combination of existing initial consonants and rimes to form new syllables with which to represent the loanwords. Although there are constraints on the structure of syllables imposed by the phonotactics of the language, the Cantonese phonological system is still flexible and expansive enough to accommodate loanwords; it has no need to borrow any sounds from English it does not already have but has been able to handle loanwords through the recombination of its existing phonetic resources.

The value of studying the impact of English loanwords on the Cantonese syllabary is that it provides us with concrete evidence of language change that has resulted from language contact.

2 Cantonese syllabary

The first step in the identification of uniquely loanword syllables is to map out the Cantonese syllabary. The syllabary can be constructed by first listing the 20 initial consonants across the top of the page and the 56 rimes down the far left side. The resulting intersections of columns of initial consonants with rows of rimes form a matrix of syllables and yields a potential of 1,120 syllables (recognising the occurrence of the two nasal syllabics _ and ŋ raises the possible number of syllables to 1,122). One can then check through the individual syllables to identify them as either occurring or non-occurring. Appendix 3 of Bauer and Benedict (1997:486–487) has been updated and reproduced in this paper as Appendix 2. The syllables in the syllabary are classified into four categories as follows:

1) Cantonese syllables that are associated with the standard Chinese characters (which are used to write the modern standard Chinese language) as their standard reading pronunciations. These syllables are unmarked in the syllabary.

2) Cantonese syllables that occur in the colloquial stratum of the lexicon and are not cognate with their semantic and functional equivalents in standard Chinese. These colloquial morphosyllables may not have standard Chinese characters associated

with them as their written forms; but if they do, the characters have been borrowed for their homophonous pronunciations. Many colloquial morphosyllables are represented by dialectal characters which have been especially created for this purpose. The colloquial syllables are marked with the superscript 'c'.

3) Syllables that only occur in the representation of English loanwords. These loanword syllables are marked with the superscript '+'.

4) The non-occurring syllables are marked with the superscript 'n'.

As far as I am aware, this syllabary is the only one that explicitly marks the non-occurring syllables.[2] The purpose in doing this is to try to determine if there is an underlying pattern of avoiding certain types of syllables. This idea is further considered in §4 below. Because syllables occurring in loanwords can be homophonous with syllables belonging to categories 1 and 2, the syllabary described here makes it possible to identify those syllables that uniquely occur in the representation of English loanwords.

3 English loanword syllables

In my first attempt (Bauer 1985) to produce a comprehensive Cantonese syllabary in which the loanword syllables were explicitly marked, a total of 30 loanword syllables were

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[2]   A number of Cantonese syllabaries have been published over the years, and the forms these syllabaries have taken have varied. One type of syllabary has simply listed the series of morphosyllables in phonetic transcription followed by standard Chinese characters which are pronounced with the morphosyllables, as in Yu 1982. A second type of syllabary has been based on the matrix of phonetically transcribed initial consonants either down or across one side of the page and the rimes in the corresponding direction; Chinese characters are written at the intersections of initials and rimes to mark the occurrence of morphosyllables, as in Kao (1971:177–184) and Yue-Hashimoto (1972:205–398). Rao et al (1981:296–302), however, indicated the occurrence of morphosyllables with a single or double slanted line. This second type of syllabary has typically recognised the standard and many colloquial morphosyllables but excluded those morphosyllables that occur only in English loanwords. In terms of its recognition of the first three kinds of occurring morphosyllables referred to above, Yue-Hashimoto's syllabary is by far the most comprehensive by listing all the standard and almost all the colloquial Chinese characters with which Cantonese morphosyllables are written; her syllabary also recognises some English loanwords. However, marking the occurrence of Cantonese morphosyllables in a syllabary with Chinese characters has necessarily limited the morphosyllables that can be recognised to those which are associated with Chinese characters: even if the morphosyllables do exist in the spoken language, they have no written forms and so are overlooked. The syllabary on the inside front cover of the index of standard Chinese characters in Cantonese romanisation compiled by the Linguistic Society of Hong Kong (Linguistic Society of Hong Kong 1997) has this limitation. In order to recognise the characterless morphosyllables, Kao (1971) marked them with the check mark. Yue-Hashimoto recorded English glosses enclosed within parentheses to indicate these syllables. In addition, the phrase 'taboo syllable' recognised morphosyllables regarded as vulgar and obscene (even though dialectal characters exist for writing these).

recognised. However, a recheck of these reduced the number to 26 because it was found that four syllables were actually homophonous with colloquial syllables. Twelve years later Bauer and Benedict (1997:410) identified 40 English loanword syllables. My most recent tally has now noted 49 such syllables and these have been listed and exemplified in Appendix 1. It is possible that my earlier research for identifying the loanword syllables may have undercounted some of them, and that the number of new syllables that entered Cantonese over the past two decades may be less than 23; nonetheless, I do believe the pattern of increase from 26 loanword syllables in 1985 to 40 in 1997 and to 49 in 2002 does point to a gradual expansion of the Cantonese syllabary as a result of the contact between Cantonese and English.

Represented among the set of 49 loanword syllables listed in Appendix 1 are 23 different rimes. When we look at these rimes within the framework of the Cantonese syllabary's four categories of syllables as described above, the most remarkable thing we discover is that there is nothing unusual about them. First, all these rimes belong to the set of 56 Cantonese rimes, so none are non-occurring. Second, they can be categorised into two sets: (1) rimes that occur in syllables that are associated with the standard Chinese characters: *-i, -œ, -u, -ɔ, -iw, -ow, -ej, -ɔj, -im, -in, -im, -it, -eŋ, -ɛŋ, -ɛk, -at, -ɔn, -ɔt*; and (2) rimes that occur in colloquial morphosyllables: *-ɛw, -ɛm, -ɛn, -ɛp, -ɛt*. Admittedly, this is the only syllabary that has recognised all five of these colloquial rimes (the syllabary in Rao et al (1981:298) listed *-ɛm, -ɛp, and -ɛt,* but only syllable *kɛm* is marked as occurring). Appendix 4.1 in Bauer and Benedict (1997:488–496) listed lexical items from the colloquial lexicon (including both words and phrases) in which the five rimes occur.

4 Conclusion

The phonetic structure of loanword syllables seems to be an extension of phonetic patterns observed in the occurrence of colloquial syllables. In looking at all four types of syllables, can we identify accidental and systematic gaps in the Cantonese syllabary? Do the non-occurring syllables establish a pattern that underlies Cantonese phonotactics in which certain types of syllables are disallowed? In examining the non-occurring syllables that are marked in Appendix 2, we observe that four labially articulated initial consonants have the following number of non-occurring syllables out of the 56 that are possible: *khw-* 41, *kw-* 35, *w-* 27, *f-* 23. These numbers may indicate a tendency to avoid syllables with labial initial consonants. Other non-occurring syllables seem to suggest a tendency to avoid syllables that have both labially-articulated initial and final consonants, yet we must also note the occurrence of *piw, phiw, miw, pɐw, phɐw, mɐw, paw, phaw, maw* among others as readings of standard Chinese characters, and *pɐm, pɐp, phɐp, mɐm,* and *wiw* in the colloquial lexicon. There may also be a tendency to avoid syllables in which all three elements, including the nuclear vowel, are labially-articulated; but again we find that *pow,*

phow and *mow* are readings of standard Chinese characters, while *wow* occurs in the colloquial lexicon and *fow* in an English loanword. For any of these patterns that appear to underlie the labial dissimilation constraint that has been posited for Cantonese (Yue-Hashimoto 1972:139; Light 1977:79), counterexamples occur among the syllables associated with standard Chinese characters, syllables from the colloquial lexicon, and those that occur in loanwords. In view of the complex distribution of syllables within the syllabary and the trend for the number of loanword syllables to increase, the matters of identifying the accidental and systematic gaps in the Cantonese syllabary and mapping out Cantonese phonotactics still await a satisfying resolution.

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Appendix 1: 49 "new" Cantonese syllables created by borrowing English words.

pɔːj¹ 'boy'	(Bauer 1985: 101)
pɛːn¹ 'band'	(Zhang 1972: 221)
phœː in *phœːˈ-sɛːn¹* 'percent'	(Rao et al. 1981: 179)
phaːt in *phaːt⁷ᴬ-naː²* 'partner'	(Zhang 1972: 221)
phɔːt in *phaːˈ-siː-phɔːt⁷ᴬ* 'passport'	(Zhang 1972: 225)
tɛːn in *khɔːn-tɛːnˈ-saː²* 'condenser'	(Zhang 1972: 223)
tɔːn in *aːⁿ-tɔːn¹* 'Don'	(Bauer 1994)
thiː in *thiːˈ-sɵt⁷ᴬ* 'T-shirt'	(Zhang 1972: 220)
thej in *thejˈ-siː²* 'taste'_	(Bauer 2001)
thɛːn in *thɛːnˈ-niːᶜ-siː²* 'tennis'	(Zhang 1986: 48)
kɛːm¹ 'game'	(Zhang 1972: 222)
khɔːˈ 'call'	(Bauer 1985: 101)
khɔːn¹ 'coin'	(Bauer 1985: 101)
khiːp in *khiːp⁷ᴬ-fiːt⁷ᴬ* 'keep fit'	(Bauer 1985: 101)
khɛːp in *khɛːp⁷ᴬ-thɵn²* 'captain'	(Zhang 1972: 221)
khaːt⁷ᴬ 'card'	(Yue-Hashimoto 1972: 329)
khɔːt⁷ᴬ 'court'	(Bauer 1994)
khwiːm¹ 'cream'	(Cathy Wong pc 4/12/97)
khwiːn¹ 'queen'	(Chan & Kwok 1982: 114)
khwiːt⁷ᴬ 'quit'	(Bauer 1997)
muː in *muːˈ-fiː²* 'movie'	(Zhang 1972: 224)
mɛːn¹ MAN 'manly'	<dung1 jing1 zai2> March 1997, #45:22 (adultcomic book)
mɔːn¹ 'monitor (for computer)'	(Cheung Kwan-hin pc 1997)
mɛːk in *mɛːk⁸-khɛːn¹* 'mechanical'	(Kiu 1977: 19)
fiːw in *fiːwˈ-siː²* 'fuse'	(Zhang 1972: 217)
fow in *siːˈ-fow²* 'civil'	(Bauer & Benedict 1997: 365)
fɛːn¹ 'friend'	(Zhang 1986: 44)
fɔːt⁷ᴬ 'volt'	(Zhang 1972: 227)
fɛːk in *fɛːk⁷ᴬ-siː²* 'fax'	(Zhang & Ni 1999: 393)
sɛːw in *sɛːwˈ-siː²* 'sales'	(Bauer 1997)
sɛːm⁴ 'semester'	(Bauer 1997)
sɛːn in *phœːˈ-sɛːn¹* 'percent'	(Rao et al 1981: 179)
hɛːp in *hɛːp⁷ᴬ-phiː²* 'happy'	(Zhang & Ni 1999: 393)
tsej in *tiːˈ-tsej¹* 'DJ (disk jockey)'	(Zhang 1986: 45)
tsɛːm¹ 'jam'	(Zhang 1972: 217)
tsɔːn in *aːⁿ-tsɔːn¹* 'John'	(Bauer 1994)
wiːn in *wiːnˈ-naː²* 'winner'	(Zhang 1972: 222)
wɛːn in *wɛːnˈ-tsɐj²* 'van'	(Cheung 1986: 33)
wɔːn in *wɔːnˈ-lɛːˈ-laː²* 'vanilla'	(Zhang 1986: 49)
lɛːp in *lɛːp⁷ᴬ-pɔːˈ* 'net-ball (in table tennis)'	(Cheung Kwan-hin pc 1997)
jɛːwˈ 'yell at'	(Cheung Pak-man pc 6/3/00)
jɛːn¹ '(Japanese) Yen'	(Cheung 1986: 33)
juːˈ 'U' (short form for *university*)	(Zhang & Ni 1999: 396)
iːn in *iːnˈ-tɕiː²* 'inch'	(Zhang 1986: 46)
eŋ in *eŋˈ-liːt⁷ᴬ* 'Eng. Lit.'	(Zhang 1986: 48)
ɛːm in *ɛːmˈ-siːˈ* 'MC'	(Zhang 1986: 45)
ɛːn in *ɛːnˈ-tɕiːn²* 'engine'	(Zhang 1972: 224);
ɛːnˈ-khɔːˈ 'encore'	(Zhang & Ni 1999: 392);
ɛːn²-tɕiːˈ N.G. 'no good'	(Bauer & Benedict 1997: 405)
ɛːŋ in *waːjˈ-ɛːŋˈ-kow²* 'wide-angle'	(Zhang 1972: 225)
ɛːk in *ɛːk⁷ᴬ-siːˈ-kwɔːŋ¹* 'X-ray'	(Zhang 1972: 213)

Appendix 2: Cantonese syllabary.

No mark = syllable associated with standard character; ᶜ = colloquial; ⁺ = in English loanword; ⁿ = non-occurring.

	p-	ph-	t-	th-	k-	kh	kw-	khw-	m-	n-	ŋ-	f-	s-/ɕ-	h-	ts-/tɕ-	tsh-/tɕ	w-	l-	j-	-
-i	ᶜpi	ᶜphi	ᶜti	⁺thi	ᶜki	ᶜkhi	ⁿkwi	ⁿkhwi	ᶜmi	ᶜni	ᶜŋi	ᶜfi	si	ᶜhi	tɕi	tɕhi	ᶜwi	ᶜli	ji	ⁿi
-iw	piw	phiw	tiw	thiw	kiw	khiw	ⁿkwiw	ⁿkhwiw	miw	niw	ⁿŋiw	⁺fiw	siw	hiw	tɕiw	tɕhiw	ᶜwiw	liw	jiw	ⁿiw
-im	ⁿpim	ⁿphim	tim	thim	kim	khim	kwim	⁺khwim	ⁿmim	nim	ⁿŋim	ⁿfim	sim	him	tɕim	tɕhim	ⁿwim	lim	jim	ⁿim
-in	pn	phin	tin	thin	kin	khin	ⁿkwin	⁺khwin	min	nin	ⁿŋin	ⁿfin	sin	hin	tɕin	tɕhin	⁺win	lin	jin	⁺in
-ip	ⁿpip	ⁿphip	tip	thip	kip	⁺khip	ⁿkwip	ⁿkhwip	ⁿmip	nip	ⁿŋip	ⁿfip	sip	hip	tɕip	tɕhip	ⁿwip	lip	jip	ⁿip
-it	pit	phit	tit	thit	kit	khit	kwit	⁺khwit	mit	ⁿnit	ᶜŋit	ᶜfit	sit	hit	tɕit	tɕhit	ᶜwit	lit	jit	ⁿit
-y	ⁿpy	ⁿphy	ⁿty	ⁿthy	ⁿky	ⁿkhy	ⁿkwy	ⁿkhwy	ⁿmy	ⁿny	ⁿŋy	ⁿfy	ɕy	ⁿhy	tɕy	tɕhy	ⁿwy	ⁿly	jy	ⁿy
-yn	ⁿpyn	ⁿphyn	tyn	thyn	kyn	khyn	ⁿkwyn	ⁿkhwyn	ⁿmyn	nyn	ⁿŋyn	ⁿfyn	ɕyn	hyn	tɕyn	tɕhyn	ⁿwyn	lyn	jyn	ⁿyn
-yt	ⁿpyt	ⁿphyt	tyt	⁺thyt	ᶜkyt	khyt	ⁿkwyt	ⁿkhwyt	ⁿmyt	ⁿnyt	ⁿŋyt	ⁿfyt	ɕyt	hyt	tɕyt	tɕhyt	ⁿwyt	lyt	jyt	ⁿyt
-ej	pej	phej	tej	⁺thej	kej	khey	ⁿkwej	ⁿkhwej	mej	nej	ⁿŋej	fej	sej	hej	⁺tsej	ⁿtshej	ⁿwej	lej	ⁿjej	ej
-eŋ	peŋ	pheŋ	teŋ	theŋ	keŋ	kheŋ	kweŋ	ᶜkhweŋ	meŋ	neŋ	ŋeŋ	ᶜfeŋ	seŋ	heŋ	tseŋ	tsheŋ	weŋ	leŋ	jeŋ	⁺eŋ
-ek	pek	phek	tek	thek	kek	ᶜkhek	kwek	ᶜkhwek	mek	nek	ⁿŋek	ᶜfek	sek	ⁿhek	tsek	tshek	wek	lek	jek	ⁿek
-ɛ	ᶜpɛ	ᶜphɛ	tɛ	ⁿthɛ	ᶜkɛ	khɛ	ᶜkwɛ	ⁿkhwɛ	ᶜmɛ	ᶜnɛ	ᶜŋɛ	ᶜfɛ	sɛ	ᶜhɛ	tsɛ	tshɛ	ᶜwɛ	ᶜlɛ	jɛ	ᶜɛ
-ɛw	ᶜpɛw	ᶜphɛw	ᶜtɛw	ⁿthɛw	ᶜkɛw	ᶜkhɛw	ⁿkwɛw	ⁿkhwɛw	ⁿmɛw	ⁿnɛw	ⁿŋɛw	ⁿfɛw	⁺sɛw	ᶜhɛw	tsɛw	ⁿtshɛw	ⁿwɛw	ᶜlɛw	⁺jɛw	ᶜɛw
-ɛm	ⁿpɛm	ⁿphɛm	ᶜtɛm	ⁿthɛm	⁺kɛm	ᶜkhɛm	ⁿkwɛm	ⁿkhwɛm	ⁿmɛm	ⁿnɛm	ⁿŋɛm	ⁿfɛm	⁺sɛm	ⁿhɛm	⁺tsɛm	ⁿtshɛm	ⁿwɛm	ᶜlɛm	ⁿjɛm	⁺ɛm
-ɛn	⁺pɛn	ⁿphɛn	⁺tɛn	⁺thɛn	ⁿkɛn	ᶜkhɛn	ⁿkwɛn	ⁿkhwɛn	⁺mɛn	ⁿnɛn	ⁿŋɛn	⁺fɛn	⁺sɛn	ⁿhɛn	ⁿtsɛn	ⁿtshɛn	⁺wɛn	ⁿlɛn	⁺jɛn	⁺ɛn
-ɛŋ	pɛŋ	phɛŋ	tɛŋ	thɛŋ	kɛŋ	ᶜkhɛŋ	ⁿkwɛŋ	ⁿkhwɛŋ	mɛŋ	ⁿnɛŋ	ⁿŋɛŋ	ⁿfɛŋ	sɛŋ	hɛŋ	tsɛŋ	tshɛŋ	ⁿwɛŋ	lɛŋ	jʂŋ	⁺ɛŋ
-ɛp	ᶜpɛp	ᶜphɛp	ᶜtɛp	ⁿthɛp	ᶜkɛp	⁺khɛp	ⁿkwɛp	ⁿkhwɛp	ⁿmɛp	ⁿnɛp	ⁿŋɛp	ⁿfɛp	ⁿsɛp	⁺hɛp	ⁿtsɛp	ⁿtshɛp	ⁿwɛp	⁺lɛp	ⁿjɛp	ᶜɛp
-ɛt	ᶜpɛt	ᶜphɛt	ᶜtɛt	ᶜthɛt	ⁿkɛt	ᶜkhɛt	ᶜkwɛt	ⁿkhwɛt	ⁿmɛt	ⁿnɛt	ⁿŋɛt	ᶜfɛt	ⁿsɛt	ⁿhɛt	ⁿtsɛt	ᶜtshɛt	ᶜwɛt	ᶜlɛt	ⁿjɛt	ᶜɛt
-ɛk	pɛk	phɛk	tɛk	thɛk	ⁿkɛk	khɛk	ᶜkwɛk	ⁿkhwɛk	⁺mɛk	ⁿnɛk	ⁿŋɛk	⁺fɛk	sɛk	hɛk	tsɛk	tshɛk	ⁿwɛk	lɛk	ⁿjɛk	⁺ɛk
-œ	ⁿpœ	⁺phœ	tœ	ᶜthœ	ᶜkœ	ᶜkhœ	ⁿkwœ	ⁿkhwœ	ⁿmœ	ᶜnœ	ⁿŋœ	ⁿfœ	ᶜsœ	hœ	ᶜtɕœ	⁺tɕhœ	ⁿwœ	ᶜlœ	ⁿjœ	ᶜœ
-œŋ	ⁿpœŋ	ⁿphœŋ	ᶜtœŋ	ⁿthœŋ	kœŋ	khœŋ	ⁿkwœŋ	ⁿkhwœŋ	ᶜmœŋ	nœŋ	ⁿŋœŋ	ⁿfœŋ	sœŋ	hœŋ	tɕœŋ	tɕhœŋ	ⁿwœŋ	lœŋ	jœŋ	ⁿœŋ
-œk	ⁿpœk	ⁿphœk	tœk	ⁿthœk	kœk	khœk	ⁿkwœk	ⁿkhwœk	ⁿmœk	ⁿnœk	ⁿŋœk	ⁿfœk	sœk	ⁿhœk	tɕœk	tɕhœk	ⁿwœk	lœk	jœk	ⁿœk
-ɵy	ⁿpɵy	ⁿphɵy	tɵy	thɵy	kɵy	khɵy	ⁿkwɵy	ⁿkhwɵy	ⁿmɵy	nɵy	ⁿŋɵy	ⁿfɵy	sɵy	hɵy	tɕɵy	tɕhɵy	ⁿwɵy	lɵy	jɵy	ⁿɵy
-ɵn	ⁿpɵn	ⁿphɵn	tɵn	thɵn	ⁿkɵn	ⁿkhɵn	ⁿkwɵn	ⁿkhwɵn	ⁿmɵn	ⁿnɵn	ⁿŋɵn	ⁿfɵn	sɵn	ⁿhɵn	tʃɵn	tɕhɵn	ⁿwɵn	lɵn	jɵn	ⁿɵn
-ɵt	ⁿpɵt	ⁿphɵt	ⁿtɵt	ⁿthɵt	ᶜkɵt	ⁿkhɵt	ⁿkwɵt	ⁿkhwɵt	ⁿmɵt	ⁿnɵt	ⁿŋɵt	ⁿfɵt	sɵt	ⁿhɵt	tɕɵt	tɕhɵt	ⁿwɵt	lɵt	ᶜjɵt	ᶜɵt
-ɐj	pɐj	phɐj	tɐj	thɐj	kɐj	khɐj	kwɐj	khwɐj	mɐj	nɐj	ŋɐj	fɐj	sɐj	hɐj	tsɐj	tshɐj	wɐj	lɐj	jɐj	ɐj
-ɐw	ᶜpɐw	phɐw	tɐw	thɐw	kɐw	khɐw	ⁿkwɐw	ⁿkhwɐw	mɐw	nɐw	ŋɐw	fɐw	sɐw	hɐw	tsɐw	tshɐw	ⁿwɐw	lɐw	jɐw	ɐw

Appendix 2: Cantonese syllabary (continued).

	p-	ph-	t-	th-	k-	kh-	kw-	khw-	m-	n-	ŋ	f-	s-	h-	ts-	tsh-	w-	l-	j-	Ø-
-ɐm	ᶜpɐm	ⁿphɐm	ᶜtɛm	ᶜthɛm	kɛm	khɛm	ⁿkwɛm	ⁿkhwɛm	ᶜmɐm	ᶜnɐm	ᶜŋɛm	ⁿfɛm	sɛm	hɛm	tsɛm	tshɛm	ⁿwɛm	lɛm	jɛm	ɐm
-ɐn	pɐn	phɐn	tɛn	thɛn	kɛn	khɛn	kwɐn	khwɐn	mɐn	nɐn	ŋɐn	fɐn	sɛn	hɛn	tsɛn	tshɛn	wɛn	ᶜlɛn	jɛn	ᶜɐn
-ɐŋ	pɐŋ	phɐŋ	tɛŋ	thɛŋ	kɛŋ	khɛŋ	kwɐŋ	khwɐŋ	mɐŋ	nɐŋ	ᶜŋɛŋ	ᶜfɛŋ	sɛŋ	hɛŋ	tsɛŋ	tshɛŋ	wɛŋ	ᶜlɛŋ	ⁿjɛŋ	ɐŋ
-ɐp	ᶜpɐp	ᶜphɐp	ᶜtɛp	ᶜthɛp	kɛp	khɛp	ⁿkwɛp	ⁿkhwɛp	ⁿmɛp	nɛp	ᶜŋɛp	ⁿfɛp	sɛp	hɛp	tsɛp	tshɛp	ⁿwɛp	lɛp	jɛp	ᶜɐp
-ɐt	pɛt	phɛt	tɛt	ⁿthɛt	kɛt	khɛt	kwɛt	ⁿkhwɛt	mɛt	nɛt	ŋɛt	fɛt	sɛt	hɛt	tsɛt	tshɛt	wɛt	ᶜlɛt	jɛt	ᶜɐt
-ɐk	pɛk	ᶜphɛk	tɛk	ⁿthɛk	ⁿkɛk	ᶜkhɛk	ᶜkwɛk	ᶜkhwɛk	mɛk	ᶜnɛk	ŋɛk	ᶜfɛk	sɛk	hɛk	tsɛk	tshɛk	ⁿwɛk	lɛk	ⁿjɛk	ɛk
-a	pa	pha	ta	tha	ka	kha	kwa	khwa	ma	na	ŋa	fa	sa	ha	tsa	tsha	wa	ᶜla	ja	a
-aj	paj	phaj	taj	thaj	kaj	khaj	kwaj	ᶜkhwaj	maj	naj	ŋaj	faj	saj	haj	tsaj	tshaj	waj	laj	ᶜjaj	aj
-aw	paw	phaw	ⁿtaw	ⁿthaw	kaw	khaw	ⁿkwaw	ⁿkhwaw	maw	naw	ŋaw	ⁿfaw	saw	haw	tsaw	tshaw	ⁿwaw	law	ᶜjaw	aw
-am	ⁿpam	ⁿpham	tam	tham	kam	ⁿkham	ⁿkwam	ⁿkhwam	ⁿmam	nam	ŋam	ⁿfam	sam	ham	tsam	tsham	ⁿwam	lam	ᶜjam	am
-an	pan	phan	tan	than	kan	ⁿkhan	kwan	ⁿkhwan	man	nan	ŋan	fan	san	han	tsan	tshan	wan	lan	ⁿjan	an
-aŋ	paŋ	phaŋ	taŋ	thaŋ	kaŋ	ᶜkhaŋ	ᶜkwaŋ	khwaŋ	maŋ	naŋ	ŋaŋ	faŋ	saŋ	haŋ	tsaŋ	tshaŋ	waŋ	laŋ	ᶜjaŋ	aŋ
-ap	ⁿpap	ⁿphap	tap	thap	kap	ⁿkhap	ⁿkwap	ⁿkhwap	ⁿmap	nap	ᶜŋap	ⁿfap	sap	hap	tsap	tshap	ⁿwap	lap	ᶜjap	ap
-at	pat	⁺phat	tat	that	ᶜkat	⁺khat	kwat	ⁿkhwat	ᶜmat	nat	ᶜŋat	fat	sat	ⁿhat	tsat	tshat	wat	lat	ⁿjat	at
-ak	pak	phak	ᶜtak	ⁿthak	kak	ⁿkhak	kwak	ᶜkhwak	mak	ⁿnak	ŋak	ᶜfak	ᶜsak	hak	tsak	tshak	wak	ᶜlak	ᶜjak	ak
-u	ᶜpu	ᶜphu	tu	ᶜthu	ku	khu	ⁿkwu	ⁿkhwu	⁺mu	ⁿnu	ⁿŋu	fu	ⁿsu	ⁿhu	ⁿtsu	ⁿtshu	wu	ᶜlu	⁺ju	ⁿu
-uj	puj	phuj	ⁿtuj	ⁿthuj	ᶜkuj	khuj	ⁿkwuj	ⁿkhwuj	muj	ⁿnuj	ⁿŋuj	fuj	ⁿsuj	ⁿhuj	ⁿtsuj	ⁿtshuj	wuj	ᶜluj	ⁿjuj	ⁿuj
-un	pun	phun	ⁿtun	ⁿthun	kun	ⁿkhun	ⁿkwun	ⁿkhwun	mun	ⁿnun	ⁿŋun	fun	ⁿsun	ⁿhun	ⁿtsun	ⁿtshun	wun	ⁿlun	ⁿjun	ⁿun
-ut	put	phut	ⁿtut	ⁿthut	ᶜkut	khut	ⁿkwut	ⁿkhwut	mut	ⁿnut	ⁿŋut	fut	ⁿsut	ⁿhut	ⁿtsut	ⁿtshut	wut	ⁿlut	ⁿjut	ⁿut
-ɐk	pɛk	ᶜphɛk	tɛk	ⁿthɛk	ⁿkɛk	ᶜkhɛk	ᶜkwɛk	ᶜkhwɛk	mɛk	ᶜnɛk	ŋɛk	ᶜfɛk	sɛk	hɛk	tsɛk	tshɛk	ⁿwɛk	lɛk	ⁿjɛk	ɛk
-ow	pow	phow	tow	thow	kow	ⁿkhow	ⁿkwow	ⁿkhwow	mow	now	ŋow	⁺fow	sow	how	tsow	tshow	ᶜwow	low	ⁿjow	ow
-oŋ	poŋ	phoŋ	toŋ	thoŋ	koŋ	khoŋ	ⁿkwoŋ	ⁿkhwoŋ	moŋ	noŋ	ᶜŋoŋ	foŋ	soŋ	hoŋ	tsoŋ	tshoŋ	ᶜwoŋ	loŋ	joŋ	oŋ
-ok	pok	phok	tok	thok	kok	khok	ⁿkwok	ⁿkhwok	mok	ᶜnok	ŋok	fok	sok	hok	tsok	tshok	ⁿwok	lok	jok	ok
-ɔ	pɔ	phɔ	tɔ	thɔ	kɔ	⁺khɔ	kwɔ	ⁿkhwɔ	mɔ	nɔ	ŋɔ	fɔ	sɔ	hɔ	tsɔ	tshɔ	wɔ	lɔ	ᶜjɔ	ɔ
-ɔj	⁺pɔj	ⁿphɔj	tɵj	thɵj	kɔj	khɔj	ⁿkwɔj	ⁿkhwɔj	ⁿmɔj	nɔj	ŋɔj	ⁿfɔj	sɔj	hɔj	tsɔj	tshɔj	ⁿwɔj	lɔj	ⁿjɔj	ɔj
-ɔn	ⁿpɔn	ⁿphɔn	⁺tɔn	ⁿthɔn	kɔn	⁺khɔn	ⁿkwɔn	ⁿkhwɔn	⁺mɔn	ⁿnɵn	ŋɔn	ⁿfɔn	ⁿsɔn	hɔn	⁺tsɔn	ⁿtshɔn	⁺wɔn	ⁿlɔn	ⁿjɔn	ɔn
-ɔŋ	pɔŋ	phɔŋ	tɔŋ	thɔŋ	kɔŋ	khɔŋ	kwɔŋ	khwɔŋ	mɔŋ	nɵŋ	ŋɔŋ	fɔŋ	sɔŋ	hɔŋ	tsɔŋ	tshɔŋ	wɔŋ	lɔŋ	ⁿjɔŋ	ɔŋ
-ɔt	ⁿpɔt	⁺phɔt	ⁿtɔt	ⁿthɔt	kɔt	⁺khɔt	ⁿkwɔt	ⁿkhwɔt	ⁿmɔt	ⁿnɵt	ⁿŋɔt	⁺fɔt	ᶜsɔt	hɔt	ⁿtsɔt	ⁿtshɔt	ⁿwɔt	ⁿlɔt	ⁿjɔt	ⁿɔt
-ɔk	pɔk	phɔk	tɔk	thɔk	kɔk	khɔk	kwɔk	khwɔk	mɔk	nɵk	ŋɔk	fɔk	sɔk	hɔk	tsɔk	tshɔk	wɔk	lɔk	ⁿjɔk	ɔk

ᶜm (m-)   ŋ (ŋ)   ᶜhm ᶜhŋ (h-)