Language shift and language maintenance in a Singaporean Chinese family[*]

Liang Chua

Abstract

In a study of language shift in a Cantonese family in Singapore, Gupta and Siew (1995) suggest that the loss of Chinese dialects is exacerbated by the setting up of nuclear families. This paper supports the view that the tradition of multi-generation families living in the same household aids the maintenance of the ancestral Chinese dialect. The family studied consists of three generations living under the same roof and although the grandchildren show signs of shifting to English and Mandarin, they demonstrate an impressive command of Hokkien.

บทคัดย่อ

ในการศึกษาเรื่องการย้ายภาษาในครอบครัวที่พูดภาษากวางตุ้ง Gupta และ Siew (1995) เสนอว่า การสูญภาษาถิ่นจีนมีเพิ่มมากขึ้น เนื่องจากการแยกตัวไปตั้งครอบครัวเดี่ยว บทความนี้สนับสนุนความคิดที่ว่า การอยู่แบบครอบครัวขยายคือมีคนหลายช่วงอายุร่วมอยู่ด้วยกัน ช่วยรักษาภาษาถิ่นจีนซึ่งเป็นภาษาของบรรพบุรุษเอาไว้ ครอบครัวที่ศึกษาในงานนี้มี คน 3 ช่วงอายุอยู่ในบ้านเดียวกัน คนรุ่นหลานแม้จะแสดงแววของการย้ายภาษาไปสู่ภาษาอังกฤษและภาษาจีนกลางให้เห็น แต่คนรุ่นนี้ก็สามารถใช้ภาษาฮกเกี้ยนได้ดี

1. Introduction

It has been firmly established that rapid and widespread language shift from Chinese dialects to English and Mandarin is taking place among the Singaporean Chinese (for example, Gupta and Siew, 1995; Li *et al.*, 1997). Census data from 1980 (Khoo, 1981) and 1990 (Lau, 1993) has often been cited as evidence of the shift.

Since the factors which contribute to the shift have already been discussed at great length elsewhere (for example, Chua, 2001), I will mention only the main factors here briefly.

Since the 1950s, the educational policy promoted the learning of English and Mandarin by all Chinese children. In 1960, the learning of Mandarin was made obligatory in all primary schools. From 1966, the teaching of Mandarin became compulsory in secondary schools. In Singapore today, the study of English and Mandarin is obligatory for all Chinese students, except for a small minority deemed to be incapable of coping with more than one language by the education authorities. Before the 1960s, the use of Chinese dialects in the home had been the norm. From the 1960s, English and Mandarin have been increasingly used in the home, very often at the expense of Chinese dialects. Parents are aware of the competitive school system and try to give their children a head start by introducing the school languages in the home. Most parents also believe that the learning of two school languages is arduous enough for their children, and the learning of a third language, a Chinese dialect, will unnecessarily detract time and attention from the school languages. The history of education in Singapore is discussed in Gupta, 1994; and Gopinathan, 1991. Language policy changes in education are discussed in Gopinathan, 1994.

The Speak Mandarin Campaign also contributes to the shift from Chinese dialects. It was first launched in 1979 by the government to promote the use of Mandarin, urging everyone to use Mandarin instead of Chinese dialects. A major aim was to eradicate Chinese dialects. The campaign has since been an annual event.

Attitudes towards English are the most positive compared to those towards Mandarin and Chinese dialects. English has always been the language of status and prestige in Singapore. It is one of the official languages as well as the working language. It has always been seen as the pathway to membership of the elite. It functions as the language of education and education at all levels is exclusively English-medium. Although Mandarin is also an official language, a school language and its use is much encouraged by the government, it does not command the status and prestige English does. Despite language shift to Mandarin, attitudes towards it are

rather mixed. Materialistic and success-worshipping Singaporeans measure most things in terms of material gain, including languages. Although Mandarin is presented as the language which transmits traditional Chinese virtues and is believed to be so, the material benefits of knowing English are plain. No one without a good command of English would dream of climbing the social ladder in Singapore. It is no wonder that Singaporeans perceive Mandarin as second best to English. The most negative attitudes are reserved for Chinese dialects. The promotion of Mandarin over other varieties of Chinese in the annual Speak Mandarin Campaign and government discouragement and disapproval of the use of Chinese dialects have made them low status and prestige in the eyes of Singaporeans. Many Singaporeans feel that they do not need Chinese dialects anymore since Mandarin has taken over the role of transmitting Chinese values. Chinese dialects are seen as pragmatically useless.

Because language shift is progressing so rapidly, grandparents often do not share a common language with their grandchildren. This was exactly what Gupta and Siew (1995) found in their study of language shift in a Cantonese family in Singapore. The authors suggest that the trend towards setting up nuclear families exacerbates the loss of Chinese dialects.

This paper supports the view that the tradition of multi-generation families living under the same roof aids the maintenance of the ancestral Chinese dialect. The observations recorded here come from a study originally aimed at testing the predictions of Matrix Language Frame (MLF) model (Myers-Scotton, 1992; 1993; 1995; 1997; 1998; Myers-Scotton and Jake, 1995). The family which provides the data consists of three generations living in the same household. Although the grandchildren show signs of shifting to English and Mandarin, they demonstrate an impressive command of their ancestral Chinese dialect, Hokkien.

The next section introduces the family to the reader. In section 3, the patterns of language use and interaction in the family are described. The occurrence of English core forms and lexical items in Hokkien is discussed briefly in section 4, as well as the Matrix Language (ML) of Hokkien-English utterances.

2. The Family

Five members of the family participated in the study: grandfather (GF, age 69), grandmother (GM, age 61), daughter 2 (D, age 38), granddaughter (daughter of D)(GD, age 11) and grandson (son of D) (GS, age 7). Two other members, daughter 1 (age 39) and daughter 3 (age 33), did

not take part in the study because they were seldom at home and the researcher (R) found it difficult to include them in the fieldwork sessions. GF is a retiree, GM and D are homemakers, and GD and GS are primary school students. GF received English-medium primary education, GM had little formal education and D received both her primary and secondary education in Mandarin-medium schools. Both GD and GS are at English-medium schools.

The grandparents of the family are first-generation Singaporeans. Their parents emigrated from Fújiàn province of China. (It is not clear exactly which part of Fújiàn province they came from.) Most of the Singaporean Chinese are descendants of Mĭn speakers who emigrated from the coastal regions of Fújiàn province. (See Norman, 1988; Ramsey, 1987; and Li and Thompson, 1987 on the Chinese language.) Fújiàn province, together with the northeastern corner of Guăngdōng province, is the homeland of the Mĭn-speaking people. The ancestors of the family spoke a dialect of the Xiàmén type known as Hokkien. Hokkien comes under the larger group of Southern Mĭn dialects. The Southern Mĭn group includes not just the Mĭn dialects spoken in Xiàmén (as well as almost all of southwestern Fújiàn), but also Cháozhōu in Guăngdōng province, and the Mĭn dialects of Táiwăn and Hăinán. The ethnic Hokkiens in Singapore constitute the single largest ethnic group, as well as the largest Chinese ethnic group within the Chinese community.

The fieldwork of this study was carried out, using the participant observation method, in three sessions, each lasting six hours. Each fieldwork session was, to the members of the family, no more than a social visit to the family home by the researcher, since the researcher is a family friend and is in regular habit of making such visits. The visits were in the afternoon, when GD and GS were back from school, and GF, GM and D were also mostly at home. The researcher wore a tape recorder and moved around the family home freely. She obtained eighteen hours of everyday speech on tape in total. During these sessions, the family members would be going about their usual, everyday activity. At the beginning of the first fieldwork session, the researcher requested permission to use the tape recorder, the aim being 'to study Singaporean speech'. The family was happy to grant permission. All members of the family behaved and spoke naturally despite the presence of the tape recorder.

After fieldwork in Singapore was completed, the tape recordings were transcribed, which gave about 360 pages of transcripts in all. A mixture of codes, i.e. Hokkien, Mandarin and English was used, as well as some Malay, Cantonese and Japanese lexical items. Norman's (1988) system for

representing Hokkien in Roman script is adopted in transcribing parts of the data in Hokkien. The standard romanisation system for Mandarin, Hànyǔ Pī nyín, is used in transcribing parts of the data in Mandarin.

3. Some Interesting Observations

The material in the next two subsections comes from the participant observation sessions as well as from the researcher's personal knowledge of the family.

3.1 Code choices

The code choices of the family members partly reflect the general patterns of language shift in the larger Singaporean Chinese community. Although Hokkien is still very much used in the family, its outlook is not good. Its role as a household language gets smaller with each generation. For the grandparents of the family, Hokkien is the only household language; but when it comes to the grandchildren, Hokkien is a language they use only with their grandparents.

GF is fluent in Hokkien and English (and knows a little Mandarin) but uses only Hokkien in the home. He speaks to everyone in the family, and also to the researcher, in Hokkien. Traditionally, Chinese dialects are the main household language used in Singaporean Chinese homes. GF and GM brought up daughter 1, D and daughter 3 with only Hokkien in the home back in the 1960s and 1970s. GF's choice of Hokkien as the home language reflects this tradition.

GM is practically monolingual in Hokkien, since she had little formal education. She has very little knowledge of Mandarin and English. Hokkien is her household language to all members of the family, and also to the researcher.

D is fluent in Hokkien and Mandarin. Due to the Mandarin-medium education she received, D's command of English is limited. The variety of English she speaks corresponds to the basilect in Ho and Platt's (1993) speech continuum paradigm, which is contrasted with the acrolect used by those with a strong grasp of the language. In Ho and Platt's model of Singapore English, speakers are arranged on a vertical axis according to their proficiency in English. Those at the top of the vertical axis are the most proficient in English, and the variety of Singapore English they speak corresponds to the acrolect. The mesolect is spoken by those with a weaker command of English, and the basilect by those with limited proficiency.

D's use of Hokkien in the home is customary. She uses exclusively Hokkien to her parents, GF and GM. To her sisters, daughter 1 and daughter 3, and also to the researcher (who belongs to the same generation as daughter 1, D and daughter 3), D uses Hokkien and a little Mandarin.

What is striking is the difference in code D employs to GD and GS. She uses mainly Mandarin and a little English to GD. GD has been spoken to in Mandarin since she was very young, reflecting the influence of the Speak Mandarin Campaign. Although GS is only four years younger than GD is, D decided to introduce a different home language, English, for GS. This can be attributed to attitudes towards English, the desire to give GS a head start in the school language, and the belief that the use of English in the home will aid GS's English learning at school. However, since D has limited proficiency in English and knows only the basilect form of Singapore English, it is doubtful that her efforts will bear fruit. It is still not clear exactly why D uses different languages with her two children. D has always felt herself a 'victim' of Mandarin-medium education: she had difficulty securing employment, she feels discriminated against in society because she is weak in English and she cannot handle situations which demand the use of English (such as when meeting her children's teachers).

It is interesting which cues the grandchildren, GD and GS, take into consideration in deciding which code to use to whom. They are, at the moment, fluent in Hokkien, Mandarin and English. Both of them speak to their grandparents only in Hokkien. They are most likely aware that GM is monolingual in Hokkien and that although GF speaks English, Hokkien is the appropriate household language for members of their grandparents' generation.

GD uses mainly Mandarin and a little English with D, though she uses mostly English and a little Mandarin with daughter 1, daughter 3, the researcher and her brother, GS. I suspect GD is aware of D's limited proficiency in English and therefore uses mainly Mandarin with her. Daughter 1, daughter 3 and the researcher, on the other hand, received English-medium education and have a good command of the language.

GD also seems to have strong convictions about which code should be used with whom, or more specifically, strong beliefs about Hokkien being used exclusively with her grandparents. Because GD always invariably uses English with the researcher, the researcher, out of curiosity, made several attempts at speaking to GD in Hokkien. GD's respond is always to answer in English and to carry on with the rest of the conversation in English. The following examples are from the transcripts:

1. GD: Why you wear the same clothes again   a?
                                                     QP

         'Why are you wearing the same clothes again?'

    R: **Ua**   **si**   **bo**   **lui**   **laŋ**   **ma.** **Bo**
          1PS PRO   COP   NEG   money,   person   PP   NEG

          li   **a ni** **tsue** **sã.**
          2PS PRO   so   many   clothes

         'I am a poor person. (I) do not have as much clothes as you do.'

    GD: I got very little clothes only.

         'I have only very little clothes.'

    GM: Qiàn, **li**   **pat tɔ**   **e iau**   **bue?**
                 2PS PRO   stomach   hungry   QP

         'Qiàn, are you hungry?'

    GD: **Bue**   **iau.**
          NEG   hungry

         '(I am) not hungry.'

                                                                (93)

(Utterances in Hokkien are in bold throughout the paper.) In the above
example, GD continued the discussion about clothes in English even though
the researcher responded to her in Hokkien. However, when GM interrupted
by asking GD if she was hungry, she answered in Hokkien.

2. GD: | I naŋ | khi | khui | phue | siŭ. | Ua | ka ki | e |
    |---|---|---|---|---|---|---|---|
    | 3PP PRO | go | open | letter | box | 1PS PRO | REF PRO | |

tsi	e	laŋ	tse	tien	thui.
one	CL	person	sit	electric	stair

'They went to open the letter box. I went in the lift by myself.'

R: | Li | kã | a? |
    |---|---|---|
    | 2PS PRO | dare | QP |

'Do you dare (do that)?'

GM: | Ma Mi | khi | tse | tien | thui | a? |
     |---|---|---|---|---|---|
     | | go | sit | electric | stair | QP |

'Did Ma Mi go in the lift?'

GD: Ấ.
     INT

'Yes.'

R: | Li | bue | kiã? |
    |---|---|---|
    | 2PS PRO | NEG | scared |

'Aren't you scared?'

GD: Not scared. I do that many times already ə.
                                                          PP

'(I am) not scared. I have already done that many times.'

R: **Hã?**
        INT

        'Really?'

GD: I also with other people. Come back from school la.   Then?
                                                                PP

        Hã?   Si mi?   Kue   ŋ   a?
        INT   what   chicken egg QP

        'I am also with other people. (I) come home from school. What
        do you expect? What? What? (Is it) egg?'

                                                                (110)

Example 2 starts with GD telling GM in Hokkien where D and GS had gone
and how GD went in the lift on her own. However, she switched to English
when responding to the researcher's question of whether she was afraid to be
in the lift by herself and continued the conversation in English until she heard
GM asking her from a distance whether she wanted some eggs.

        GS uses mainly English and a little Mandarin with all members of the
family (as well as with the researcher), apart from his grandparents.

        Although it is remarkable that the grandchildren of the family are
fluent in Hokkien, the outlook for Hokkien is not good. In perhaps twenty or
thirty years' time, when the grandparents are no longer around, it is doubtful
that GD and GS will continue to use Hokkien. GF and GM are the only
people GD and GS use Hokkien with at the moment, and the researcher does
not know of anyone else inside or outside the family with whom GD and GS
converse in Hokkien. Daughter 1, D and daughter 3 will most likely continue
to use Hokkien among themselves, although this will not prevent Hokkien
from facing the threat of loss in the family.

3.2 Multi-generation families and nuclear families

        Although the grandchildren of the family are fluent in their ancestral
Chinese dialect, Hokkien, I must stress that they are the exception rather than
the norm in the Singaporean Chinese community. The grandchildren in Gupta
and Siew's study of language shift in a Cantonese family in Singapore are
more typical cases in that they have limited competence in Cantonese.

The main factor that has enabled the grandchildren in my study to keep up the use of Hokkien is their proximity to their grandparents. Since they were born, GD and GS lived with and were brought up by GM, with some help from D. To this day, GM plays a tremendous role in looking after her grandchildren. This arrangement of several generations living under one roof is regarded as a Singaporean Chinese tradition. However, it is gradually being phased out and replaced instead by nuclear families. The typical modern day Singaporean Chinese couple gets married, moves away from their parents, and starts a young family on their own.

One must add that the switch from multi-generation families to nuclear families is a major culprit in the loss of Chinese dialects. Because grandparents typically employ Chinese dialects as their household language, grandchildren who live under the same roof have much greater opportunity to be in contact with Chinese dialects. Parents, on the other hand, tend to speak to their children in English and/or Mandarin. In multi-generation families, grandchildren use Chinese dialects with their grandparents and English and/or Mandarin with their parents. In nuclear families, only English and/or Mandarin is used. The trend towards setting up nuclear families potentially leads to the loss of Chinese dialects. In some families, the use of grandparents as baby-sitters while parents are at work has helped transmit the grandparental language to the grandchildren, though children may undergo language loss or show refusal when they become older (Gupta and Siew, 1995:303).

Gupta and Siew's family is a case in point of the ancestral Chinese dialect undergoing loss due to the setting up of nuclear families. The family consists of fifteen members living in four households. The grandparents live by themselves, and each of their three children has a nuclear family. The family is described as 'an extended Chinese family which has undergone the typical Singaporean Chinese pattern of language shift so rapidly that there is a non-congruence of repertoire between the eldest and youngest generation' (Gupta and Siew, 1995:305). They add that communication between the grandparents and grandchildren tends to be non-congruent, since there is no common language used by them all. The grandparents speak mainly Cantonese, and the grandchildren, mostly English and Mandarin. The authors conclude that:

'...the difference in language repertoire between members of different generations has resulted in impediments to communication and interaction between members of different generations which lead to a reduced ability to transfer traditional and cultural values from the oldest to the youngest generation. In this family, the switch to English has resulted in loss of contact of grandchildren with their grandparents, surely to the personal loss of both groups.'

(Gupta and Siew, 1995:313)

The consequences described above are by no means trivial. If the phenomenon of no common language between grandparents and grandchildren is indeed as widespread as I suspect, something needs to be done to reverse the situation before it is too late.

Fortunately for the family in my study, its fortunes are very different from those of Gupta and Siew's family. Communication and interaction between grandparents and grandchildren is unhindered, thanks to their common language, Hokkien. GD and GS speak spontaneously to their grandparents in Hokkien, unlike the grandchildren in Gupta and Siew's family. The authors also observed that any usage of Cantonese (except for terms of address) by the grandchildren is not voluntary but rather, is prompted or forced by their parents. The grandchildren in my study enjoy a close relationship with their grandparents and they frequently initiate conversations in Hokkien:

3. GD: **A Ma,   kiã lit   sien sĩ   hɔ   u naŋ   tsia**
             today   teacher   give 1PP PRO eat

    i   e   potato   lɛ.
    3PS PRO   NOMS   potato   PP

    'A Ma, teacher let us eat her potato today.'

    GM: **Hã?**
         INT

    'Really?'

GD: | I | e | potato | tsin | ho | tsia | lɛ.
---|---|---|---|---|---|---
| 3PS PRO | NOMS | potato | very | good | eat | PP

'Her potato was very delicious.'

(111)

Shortly after returning home from an after-school class, GD spontaneously told GM about the teacher offering her some potato snack. GS is equally loquacious with his grandparents:

4. GS: **A Ma, kiã lit ua e peŋ iu lai**
    today   1PS PRO   NOMS   friend   come

lɛ.
PP

'A Ma, my friend came (to school) today.'

GM:	To	tsi	e?	...tsui	tsu	lai	liau	a?
which	one	CL	water	pearl	come	PERF	QP

Ho liau a? Ho bue?
good   PERF   QP   good   QP

'Which friend? (Is it the one who had) chicken pox who came? (He has) recovered? (Has he) recovered?'

(178)

After school, GS tells his grandmother what happened in school that day. The friend he refers to in example 4 was mentioned to GM a while ago when he went down with chicken pox and missed school. GS updates GM on his friend's recovery. On another occasion, GS burst in through the door after school to tell GM the school bus driver took a different route that day:

5. GS: **A Ma,** kiã lit   uncle   kiã   bo,   pat   e
         today   uncle   go   NEG   other   NOMS

         lɔ   lɛ.
         road   PP

    'A Ma, uncle took a different route today.'

                                                                (250)

It is clear from the discussion of the two families in this section what consequences the family unit can have on the maintenance of the ancestral Chinese dialect and the relationship between grandparents and grandchildren.

4. Language Shift, Language Maintenance and The Matrix Language Frame (MLF) Model

Without going into the technicalities and mechanics of the MLF model, I would like to give the reader an idea of the results of testing the model's hypotheses relating code-switching to language shift. See Chua, 2001 for the details.

First, the researcher counted the core forms. L2 core forms in L1 are generally lexical items which L1 has viable equivalents for. Language shift towards English is manifested in the distinct negative correlation between the number of English core form types used in Hokkien and the subject's age. In other words, the younger the subject, the more English core forms he/she uses in his/her Hokkien. An inverse relationship is also seen between the number of English core forms in Mandarin and the age of the subject. Since the presence of English core forms in Hokkien indicates English's incursion into Hokkien, perhaps the rising number of English core forms in Mandarin suggests English's incursion into Mandarin. This strengthens the argument that attitudes towards English are more positive than attitudes towards Mandarin.

Next to be counted were the lexical items. Lexical items in this case consist of L2 core forms, cultural forms and proper names in L1. L2 Cultural forms represent new objects or concepts in L1. There is the same negative correlation between the number of English lexical types in Hokkien and the subject's age, again reflecting language shift in favour of English. The inverse relationship between the number of English lexical types in Mandarin

and the subject's age perhaps signifies a preference for English over Mandarin.

On the other hand, no negative relationship between the number of Mandarin core form types and lexical items in Hokkien and the subject's age is detected, despite evidence of the shift to Mandarin. This could be due to the mixed attitudes held towards Mandarin.

The grandchildren may use more English core forms and lexical items in their Hokkien, they, however, do not go as far as replacing the Matrix Language (ML) of their Hokkien-English utterances with English. The ML is defined as the dominant language in sentences showing intra-sentential code-switching. The ML sets the morpheme order and supplies the system morphemes. System morphemes are either [+Quantification], [-Quantification][-Thematic Role-Assigner] or [-Quantification][-Thematic Role-Receiver]. They are roughly equivalent to closed class items. The fact that Hokkien is still the dominant language in sentences involving Hokkien-English code-switching reflects the maintenance of Hokkien.

It would be interesting, for comparison, to collect data from domains beyond the home. The findings described in this section hold only for the domain of the home. The occurrence of core forms and lexical items may show different patterns in, say, the school domain. Also, English, rather than Hokkien or Mandarin, might be ML in sentences involving code-switching.

Notes

References

Brenzinger, M. ed. 1992. *Language Death in East Africa.* Berlin:
   Mouton de Gruyter.
Chew, E. C. T. and Lee, E. eds 1991. *A History of Singapore.* Singapore:
   Oxford University Press.
Chua, L. 2001. "Language shift in a Singaporean Chinese family and the
   Matrix Language Frame model." D.Phil. thesis, University of Oxford.
Comrie, B. ed. 1987. *The World's Major Languages.* London: Croom Helm.
Gopinathan, S. 1991. "Education." In *Chew and Lee eds*, pp. 268-287.
————— 1994. "Language policy changes 1979-1992: politics and
   pedagogy."In *Gopinathan et al. eds*, pp. 65-91.
Gopinathan, S., Pakir, A., Ho, W. K. and Saravanan, V. eds. 1994. *Language,
   Society and Education in Singapore: Issues and Trends.* Singapore:
   Times Academic Press.
Grenoble, L. A. and Whaley, L. J. eds. 1998. *Endangered Languages.
   Language Loss and Community Response.* Cambridge: Cambridge
   University Press.
Gupta, A. F. 1994. *The Step-Tongue. Children's English in Singapore.*
   Clevedon: Multilingual Matters Ltd.
Gupta, A. F. and Siew, P. Y. 1995. "Language shift in a Singapore family."
   Journal of Multilingual and Multicultural Development 16: 301-314.
Ho, M. L. and Platt, J. T. 1993. *Dynamics of a Contact Continuum.
   Singaporean English.* Oxford: Clarendon Press.
Khoo, C. K. 1981. "Census of Population, Singapore." Release no. 8.
   Languages Spoken at Home. Singapore: Department of Statistics.
Lau, K. E. 1992. "Singapore Census of Population 1990." Statistical
   release 3. *Literacy, Languages Spoken and Education.* Singapore:
   Department of Statistics.
Li, C. N. and Thompson, S. A. 1987. "Chinese." In *Comrie ed.*, pp. 83-105.
Li, W., Saravanan, V. and Ng, J. L. H. 1997. "Language shift in the Teochew
   community in Singapore: a family domain analysis." *Journal of
   Multilingual and Multicultural Development* 18: 364-384.
Milroy, L. and Muysken, P. eds 1995. *One Speaker, Two Languages:
   Cross-Disciplinary Perspectives on Code-Switching.* Cambridge:
   Cambridge University Press.
Myers-Scotton, C. 1992. "Code switching as a mechanism of deep
   borrowing, language shift, and language death." In *Brenzinger ed.*,
   pp. 31-58.

Myers-Scotton, C. 1993. *Duelling Languages. Grammatical Structure in Codeswitching.* Oxford: Clarendon Press.
—— 1995. "A lexically based model of code-switching." In *Milroy and Muysken eds,* pp. 233-256.
—— 1997. "Afterword." In *paperback edition of Myers-Scotton 1993,* pp. 240-259.
—— 1998. "A way to dusty death: the Matrix Language turnover hypothesis." In *Grenoble and Whaley eds*, pp. 289-316.
Myers-Scotton, C. and Jake, J. L. 1995. "Matching lemmas in a bilingual language competence and production model: evidence from intrasentential code switching." *Linguistics* 33: 981-1024.
Norman, J. 1988. *Chinese.* Cambridge: Cambridge University Press.
Ramsey, S. R. 1987. *The Languages of China.* Princeton, New Jersey: Princeton University Press.

Appendix 1
Lists of abbreviations

GF	grandfather
GM	grandmother
D	daughter 2
GD	granddaughter
GS	grandson
R	researcher
ML	Matrix Language
MLF	Matrix Language Frame
EL	Embedded Language
MC	mixed constituent
ELI	EL island
CL	classifier
COP	copular
EXI	existential marker
INT	interjection
NEG	negator
NOMS	nominalising particle
PERF	perfective marker
PP	pragmatic particle

QP	question particle
1PS PRO	first person singular pronoun
2PS PRO	second person singular pronoun
3PS PRO	third person singular pronoun
1PP PRO	first person plural pronoun
2PP PRO	second person plural pronoun
3PP PRO	third person plural pronoun
REF PRO	reflexive pronoun

Appendix 2
Hokkien symbols

	Approximate IPA equivalent
p	p
ph	p^h
b	b
t	t
th	t^h
ts	c
tsh	c^h
k	k
kh	k^h
g	g
m	m
n	n
ŋ	ŋ
s	s
h	h
l	l

a	ʌ
ã	ʌ̃
ai	ʌi
au	ʌu
e	e
ə	ə
ɛ	ɛ
i	i
ĩ	ĩ
iã	iʌ̃
o	o
ɔ	ɔ
u	u
ua	uʌ
uã	uʌ̃
ue	ue
ui	ui