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Author(s)	Vanithamani Saravanan
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## A SURVEY OF BILINGUAL LANGUAGE NETWORKS

Vanithamani Saravanan

*National Technological University, Singapore*

Abstract: This reports on a study of language use patterns of bilingual Chinese, Malay and Tamil families. It attempts to survey and understand the functional and social interactional behaviour of bilingual speakers. Patterns of language use analysed using network indices, (Li Wei, 1994) distinguished two types of network: occupation-oriented and generation-oriented networks. If the majority of one's frequent interlocutors are of the same occupation, then the speaker has an occupation-oriented network. If the majority of one's frequent interlocutors are of the same generation, then the speaker has generation-oriented network. Each generation develops its own set of networks depending on the interlocutors. This study surveys bilingual and trilingual networks, as well as the range of bilingual networks speakers in the community have contact with and establish. Case studies will be presented to illustrate network types and patterns of language use in various families. When for instance, do parents choose to speak dialect? When do parents choose Mandarin and when do they choose English? The findings have implications for inter-generational transmission of language and culture. What the patterns of interaction show is the extent of maintenance of community languages. Families which have fewer contacts with extended familial relations of grandparents, aunts and uncles will find it more difficult to maintain their mother tongues compared to families which belong to an active familial network that includes the grandparent generation.

### Introduction

This reports on a study of language use patterns of bilingual Chinese, Malay and Tamil families. It attempts to survey and understand the functional and social interactional behaviour of bilingual speakers. Patterns of language use analysed using network indices, (Li Wei, 1994) distinguished two types of network: occupation-oriented and generation-oriented networks. If the majority of one's frequent interlocutors are of the same occupation, then the speaker has an occupation-oriented network. If the majority of one's frequent interlocutors are of the same generation, then the speaker has generation-oriented network. Each generation develops its own set of networks depending on the amount of interaction with their interlocutors.

Previous papers looked at language use patterns across three generations (Saravanan, 1999). This paper surveys bilingual and trilingual networks, as well as the range of bilingual networks speakers in the community have contact with and establish. As this part of the preliminary analysis case studies will be presented to illustrate network types and patterns of language use in various families.

What the patterns of interaction show is the extent of maintenance of community languages. Families which have fewer contacts with extended familial relations of grandparents, aunts and uncles will find it more difficult to maintain their mother tongues compared to families which belong to an active familial network that includes the grandparent generation. The findings will have implications for intergenerational transmission of language and culture.

Several case studies are presented below.

**Case Study 1: Chinese family, No: 17**

*Analysis on types of interaction within the family network*

*Interaction between the grandparent generation and the parent generation:* Valerie’s grandmother speaks Mandarin and Hokkien to her son and Mandarin to her daughter-in-law.

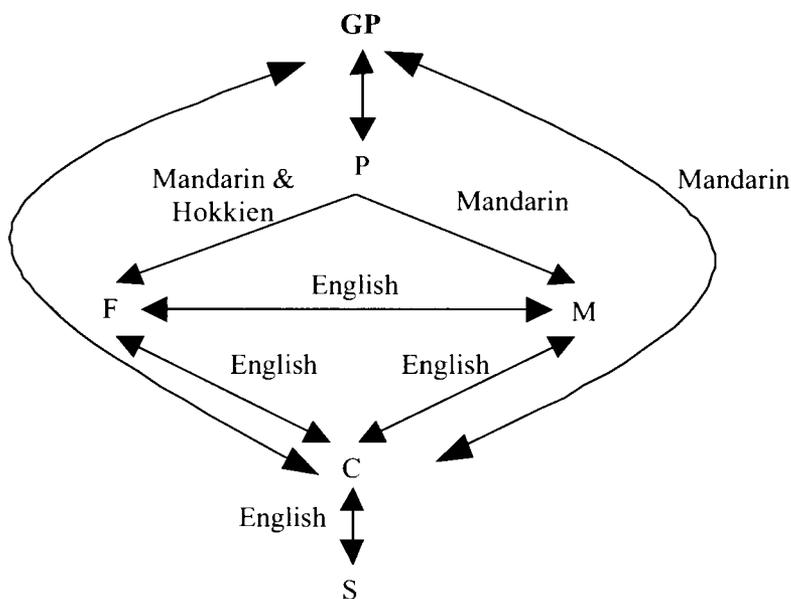
*Interaction within the parent generation (within the family):* Valerie’s parents choose English when they interact with each other.

*Interaction between the parent generation and the child generation:* Both Valerie’s father and mother speak English when they interact with Valerie.

*Interaction between the grandparent generation and the child generation:* Valerie’s grandmother speaks Mandarin when she interacts with Valerie.

*Interaction within the child generation (the child and the siblings):* Valerie speaks English when she interacts with her siblings.

**Figure 1: No. 17 – Valerie kA**



*Gp- grandparent; P- parent; F- father; M- mother; C- child; S- siblings*

**Table 1: Valerie’s father’s network**

	Generation Network (GN)	Occupation Network (ON)	English Network (EN)
Father	100%(9)	44.4%(4)	100%(9)

*Generation-oriented Network:* if the majority of one’s frequent interlocutors are of the same generation, then the speaker has a generation-oriented network.

*Occupation-oriented network:* if the majority of the one’s frequent interlocutors are of the same occupation, then the speaker has an occupation-oriented network. Table 1 shows that Valerie’s father’s friends are of the same generation, which means his generation-oriented network (GN) is

100%. Valerie's father's friends, 44.4% come from the same occupation. All of the father's friends speak English when they interact, English Network is (EN =100%

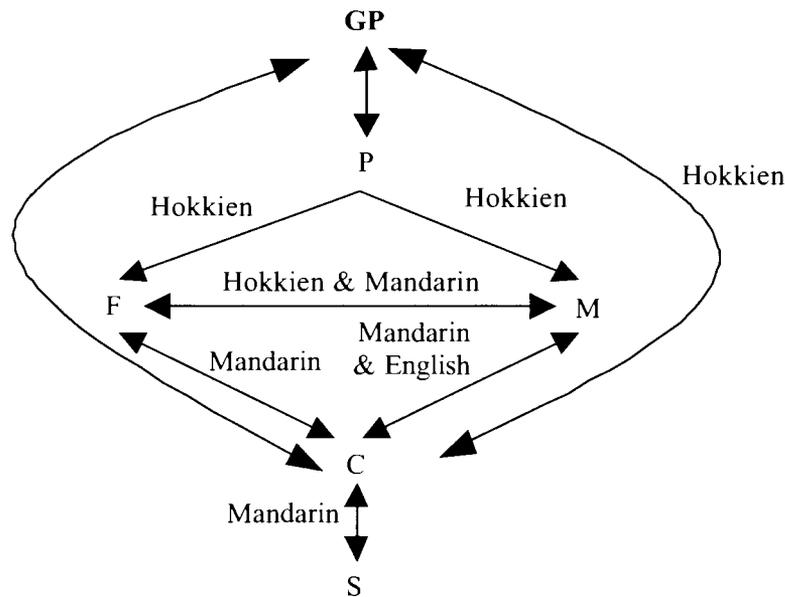
**Table 2: Valerie's mother's network**

	<b>Generation Network (GN)</b>	<b>Occupation Network (ON)</b>	<b>English Network (EN)</b>	<b>Bilingual Network (BN)</b>	<b>Dialect Network (DN)</b>
Mother	40%(6)	93.3%(14)	46.7%(7)	46.7%(7)	6.6%(1)

In Valerie's mother's network, GN or generational network friendships is 40%. Occupational Network friendships is 93.3%. 46.7% of Valerie's friends speak English, 46% are bilingual speakers and 6.6% form dialect networks when they interact with each other.

### Case study 2: Chinese family

**Figure 2: No. 21- Delphinna Neo Hui Xuan**



*Gp- grandparent; P- parent; F- father; M- mother; C- child; S- siblings*

*Interaction between the grandparent generation and parent generation:* Delphinna's grandmother interacts with in Hokkien.

*Interaction within the parent generation (within the family):* The parents speak Hokkien and Mandarin when they interact with each other.

*Interaction between the parent generation and the child generation:* Delphinna's father speaks Mandarin when he interacts with Delphinna, while Delphinna's mother speaks Mandarin and English when she interacts with Delphinna.

*Interaction between the grandparent generation and the child generation:* Delphinna speaks Hokkien when she interacts with her grandmother.

*Interaction within the child generation (the child and the siblings):* Delphinna and her siblings speak Mandarin when they interact with each other.

**Table 3: The Network of Delphinna's father**

	Generation Network (GN)	Occupation Network (ON)	English Network (EN)	Dialect Network (DN)
Father	100%(13)	92.3%(12)	0%	100%(13)

Table 3 shows that Delphinna's father's network is both a Generation-oriented and an Occupation-oriented network. Father's friends are of the same generation (GN=100%) and 92.3% of them same occupation (ON=92.3%). What's interesting is Delphinna's father's network is Dialect-oriented network, which means they speak dialects all the time.

**Table 4: The network of Delphinna's mother**

	Generation Network (GN)	Occupation Network (ON)	English Network (EN)	Bilingual Network (BN)	Mandarin Network (MN)	Dialect Network (DN)
Mother	90.9%(10)	36.4%(4)	0%	72.7%(8)	18.2%(2)	8.1%(1)

Table 4 shows that Delphinna's mother's network is a Generation-oriented network (90.9%) While only 36.4% of her friends come from the same occupation (ON) as Delphinna's mother. None of them interact in English. (72.7%) choose at least two languages when they interact.

**Table 5: The network of Delphinna's grandmother**

	Generation Network (GN)	Occupation Network (ON)	English Network (EN)	Dialect Network (DN)	Mandarin & Dialect Network
Grand-mother	50%(2)	50%(2)	0%	75%(3)	25%(1)

Table 5 shows that Delphinna's grandmother speaks dialect when she interacts with her friends most of the time (75%).

### Case study 3: Chinese family

*Interaction between the grandparent generation the parent generation:* The communicative language between grandparents and parents is Hokkien.

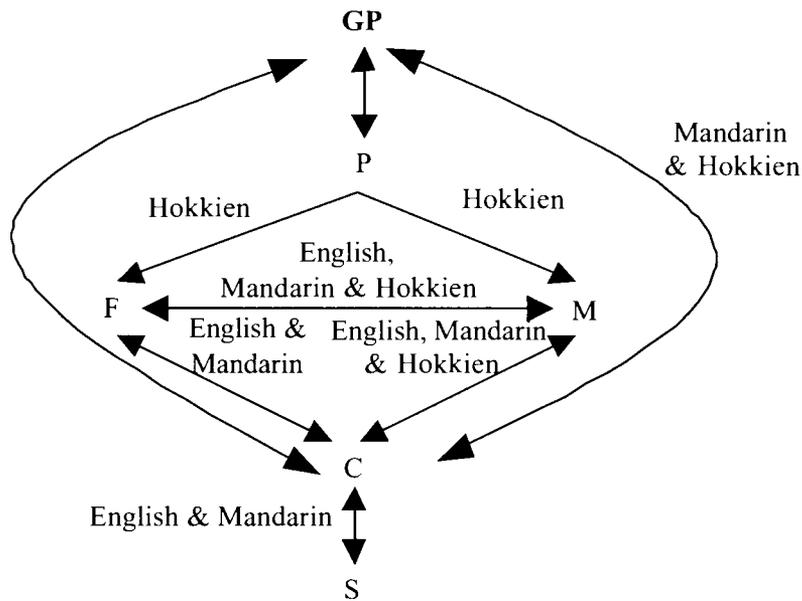
*Interaction within the parent generation (within the family):* Hui Ting's father speaks English, Mandarin and Hokkien when he interacts with Hui Ting's mother

*Interaction between the parent generation and the child generation:* Hui Ting's father speaks English and Mandarin to Hui Ting, while her mother speaks English, Mandarin and Hokkien to Hui Ting:

*Interaction between the grandparent generation and the child generation:* Uh Ting's grandmother speaks Mandarin and Hokkien to Hui Ting.

*Interaction within the child generation (the child and the siblings):* Hui Ting speaks English and Mandarin when she interacts with her siblings.

Figure 3: No. 28- Zhuo Hui Ting



Gp- grandparent; P- parent; F- father; M- mother; C- child; S- siblings

Table 6: The Network of Hui Ting’s father

	Generation Network (GN)	Occupation Network (ON)	English Network (EN)	Mandarin Network (MN)	Dialect Network (DN)
Father	100%(10)	70%(7)	50%(5)	20%(2)	30%(3)

Table 6 shows Hui Ting’s father’s network is a Generation-oriented network for all of her father’s friends are the same generation. 70% of Hui Ting’s father’s friends come from the same occupation. 50% of Hui Ting’s father’s friends speak English when they interact with Hui Ting’s father.

Table 7: The network of Hui Ting’s mother

	Generation Network (GN)	Occupation Network (ON)	English Network (EN)	Bilingual Network (BN)	Mandarin Network (MN)
Mother	100%(10)	60%(6)	30%(3)	50%(5)	20%(2)

Table 7 shows that Hui Ting’s mother’s network is also a Generation-oriented network. 60% of Hui Ting’s mother’s friends come from the same occupation. 50% of Hui Ting’s mother’s friends speak at least two languages when they interact with Hui Ting’s mother.

Table 8: The network of Hui Ting’s grandmother

	Generation Network (GN)	Occupation Network (ON)	English Network (EN)	Dialect Network (DN)	Mandarin Network (MN)
Grand-mother	100%(6)	50%(3)	0%	33.3%(2)	66.7%(4)

Table 8 shows that Hui Ting’s grandmother’s network is also a Generation-oriented one. Hui Ting’s grandmother chooses Mandarin and Dialect as her communicative languages when she interacts with her friends.

**Discussion: Active and Passive networks**

Two types of language networks of families are found from the analysis of the case studies:

*Active network* and *Passive network* types. Zhuo Hui Ting's family and Delphinna's family is the active network type, while Valerie's family is the passive network type. The languages used by the 3 families helps to confirm the network type.

*Active network* types tend to maintain more multilingual language uses, Mandarin and dialect. For example, Zhuo Hui Ting's family maintains Hokkien as they interact in Hokkien frequently. All the three generations (grandparent, parent and child) speak Hokkien. Mandarin is also maintained among the three generations. Delphinna's family also maintains Hokkien and Mandarin. Even the child speaks Mandarin to her siblings.

*Passive network* types help to predict language shift, with for example, language shift of dialect and Mandarin. For example, in the case of Valerie's family, Mandarin and dialect have disappeared both in the interaction between the child generation and the parent generation. English is the main language spoken by the parent and child generations. Mandarin is used only when the parents and the child interact with the grandparent.

**Cross-generational interaction**

Active networks, with bilingual and trilingual language use helps in cross-generational interaction, amongst children, parents and grandparents. In the network of Hui Ting's family, English, Mandarin and Hokkien are maintained by the interaction among the grandparent, the parent and the child generation. For example, Hokkien is maintained during the interactions of grandmother and the parents, father and mother, mother and child, grandmother and child (Figure 3). In the network of Delphinna's family, Mandarin and Hokkien are maintained by the interaction of the three generations. For example, Mandarin is maintained during the interactions of father and mother, the parents and child, child and siblings (Figure 2).

Cross-generation interaction may also encourage code switching, where for example, Hui Ting speaks Mandarin and Hokkien to her grandmother, while English and Mandarin to her siblings and English, Mandarin and Hokkien to her mother.

It can be seen that there is strong relationship between the parents' language network and the language use below the level of the parent generation. For example, Valerie's father's English network is 100%, and Valerie's mother's English network is 46.7%. So the main language used by the parents and the child is English. Both Delphinna's father's and mother's English network are 0%, with the languages used by the parent generation and the child generation being Mandarin and Hokkien.

Both Hui Ting's father's and mother's language network are distributed among four levels of networks, English network, Mandarin network, Bilingual network and Dialect Network, so the languages used by the family are trilingual, with the use of English, Mandarin and Hokkien.

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