# Dialect maintenance, shift and variation in a Northern Thai industrial estate

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## Abstract

This study investigates linguistic variation in a case of dialect change and maintenance, for a Northern (NT) Thai dialect in a Northern Industrial Estate (NTIE) of Thailand, in Lamphun province. The target area is the Ban Klang Municipal (MBK) community where locals use the NT Thai dialect. However, due to internal immigration over the past 30 years, MBK has undergone a dramatic change in socio-economics and culture, from an agriculturally-based society, swiftly transforming into an urbanised and industrialised one. The national standard Bangkok (BKK) Thai, has influenced and motivated dialect shift among MBK speakers who speak the NT Thai dialect. The quantitative variationist approach can clarify the changing linguistic situation in the MBK area.

The dependent linguistic variables include rhotic consonant onset (r) incorporating [r], [ɾ], [l] and [h] as its variants, such as [rɯa:n0], [ɾɯa:n0], [lɯa:n0] and [hɯa:n0], "house". The consonant cluster onset with rhotic (Cr) comprises {Cr}, {Cɾ}, {Cl} and {CØ}, such as [k$^{h}$rap3], [k$^{h}$ɾap3], [k$^{h}$lap3] and [k$^{h}$ap3], "male polite final particle". Only the (r) onset includes the local variant [h] in NT Thai dialect; only (Cr) includes a deleted variant. The independent variables comprise Labovian style factors, demographic social factors, social network strength (SNS) factors and phonological constraints. The dyadic interviews included 66 respondents. Defined by geographic origin differences, the 57 MBK locals were the focused group, while the 9 BKK speakers were the control group. A friend-to-friend method and judgment sampling were employed. The total length of interviews was around 120 hours.

The study revealed the following:

1. In both (r) and (Cr) variables, the study showed that [l] and {CØ} were the most commonly-used forms. Stylistic stratification occurs, with formal styles favouring the standard rhotic variants.

2. Style plays a major role in linguistic variability, followed by social factors and linguistic constraints, respectively. LMC women are the linguistic trailblazers in certain variants. MMC elderly local males are the primary dialect maintainers. The MMC and WC locals used the covert prestige form [h] more often, but with different underlying social meanings.
3. Social network (SN) analysis employed an ego-centric network approach. SN factors were significant in the model but not a strong explanatory predictor. MBK networks were largely ethnically homogeneous. Contact frequency and intimacy scores were highly correlated. This confirms that all attributes forming the SN are highly interrelated and dependent.
4. The corresponding variants of (r) and (Cr) reveal non-parallel linguistic patterns. The relationship between variable (r) and (Cr) exhibited weak associations, with the rhotic variants patterning similarly, while the lateral variants were not aligned. The emergence of laterals in (Cr) might be derived partly from articulatory errors, while [l] patterned in line with {CØ} as the neutral variants in casual styles.
5. The stylistic and social factors played greater roles in linguistic variability than the internal linguistic factors. This might be due to the social structure that has an effect on the linguistic structure, particularly in these Tai-Kadai family and related non-Western languages. The style and social factor elements are an important determinant of linguistic structure.

Key words: Northern Thai, Bangkok Thai, language variation and change, social networks, ego-centred network, dialect maintenance, industrial estate, logistic regression, style

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# Introduction

## 1.1 Introduction and the problems of the study

This study investigates linguistic variation in a case of dialect change and maintenance, for the Northern (NT) Thai dialect spoken in a Northern Industrial Estate (NTIE) of Thailand, in Lamphun province. Ban Klang Municipal (henceforth MBK) is the target community where the locals (MBK) employ the NT Thai dialect. However, due to the establishment of the NTIE and internal immigration over the past three decades, MBK community has undergone dramatic changes in socio-economics, culture and language, from an agriculturally-based society to an urbanised and industrialised one. Linguistically, the national standard Bangkok (hereafter BKK) Thai dialect has influenced and motivated dialect shift among MBK residents who speak NT Thai. The variationist approach is employed to identify and explain the changing linguistic situation in the MBK area.

Rhotic consonant onsets – operationalized as the sociolinguistic variable (r) - and consonant clusters with rhotic onset, (Cr), are the phonological dependent variables. Both of them originally belong to the BKK Thai dialect. These two phonological variables do not appear in the traditional NT Thai dialect phonological system, and occur in MBK participants as a product of dialect contact. The two variables are separately analysed (see 3.9 and 4.3). The {Cr}[1] cluster onset, which includes {Cr}, {Cɾ}, {Cl} and {CØ} as variants, is analyzed in Chapter 5, while the (r) onset, including [r], [ɾ], [l] and [h] as variants, is analyzed in Chapter 6.

The participants include 66 speakers, with equal proportions of sexes between the speaker groups. All speakers are stratified and characterised by at least 3 demographic factors, namely sex, age and social class. Stylistic tests (Labov 2001) are

[1] Please see footnote 13, for the explanation of this variant representation

conducted, including informal style (casual speech, picture description and animation description) and formal style contexts (reading passage and minimal pair test).

Regression models are generated examining each major linguistic variant as a dependent variable, in order to explore the patterns in which respondents employed them. A range of socio-economic factors, social network analysis (SNA) and internal linguistic factors are considered as explanatory measures. Local people in the NTIE community (MBK native participants) are contrasted with internal immigrants who natively speak a variety from the Bangkok area.

It is hypothesised that the linguistic situation of NT Thai in NTIE community is changing and will continue changing under the influence of BKK Thai, with the latter gaining new local functions, even though there is some resistance by the senior MBK locals of higher social class. This is analyzed as a diglossic situation. Not all functions of the variables (r) and (Cr) appear to be shifting, though the general direction is from substrate dialect (L) to superstrate dialect (H). It is speculated that the next young generation will shift significantly towards BKK Thai, though this study cannot conclusively demonstrate change in progress. Style is the strongest explanatory factor, along with other demographic factors which contribute to the changing of the NT Thai dialect towards BKK Thai.

Social network (SN) is a relatively important predictor, as it explains how the homogeneity in local ethnicity leads to resisting some changes from the BKK Thai dialect. Nevertheless, it was not as strong as other demographic and stylistic factors. Other confounding factors – such as the Pali-Sanskrit language, from which BKK Thai borrowed, and mass media disseminating influence of BKK Thai – may play a role in the dialect shift, but are only briefly noted in 3.6 and the final chapter.

Each variant is found to show specific social meanings. Variants held in common by the (r) onset and (Cr) onset demonstrate weak associations, not entirely parallel. Such patterns contribute to our understanding of the dialect variation, shift and maintenance in this NTIE speech community.

## 1.2 Variation in Thai spoken in the Banklang municipal area[2]: the pilot study

Prior to the early 1980s, most of the Ban Klang Municipal (MBK) villagers[3] in Lamphun province had low incomes and worked in agriculture, mostly as farmers and field labourers. Since the 1980s, it has undergone an influx of internal immigrants due to the establishment of a Northern Thai Industrial Estate (NTIE). Most native people in the community changed from agricultural work to employment in factories, small businesses or various levels of services.

The NTIE development and socio-economic reactions and changes constituted urbanisation, with the dramatic influx of people and development of the countryside on the outskirts of NTIE swiftly changing Lamphun to a town with high economic status. People have migrated from many regions in Thailand, bringing different backgrounds and speaking other regional dialects. Urbanisation and linguistic variation have been linked for decades, as found by Bortoni-Ricardo (1985) in Brazil, and in the southern USA by Thomas (1997), Tillery and Bailey (2003), Tillery, Bailey, & Wikle (2004), and others. These studies revealed shifts among local dialects and correlated such shifts with demographic factors and social network structures, and this was observed too within the phenomenon of MBK urbanisation.

In the NTIE area of MBK, there is significant linguistic variation between two salient dialects, NT Thai and Bangkok (BKK) Thai. Some local MBK participants employ only NT Thai, some migrants use only a form of BKK Thai, while others alternate or

[2] In Lamphun province, around 80% of the population claim Yong ethnicity for themselves and speak Yong dialect. However, in the NTIE area, the main dialect used is Northern Thai, which is also the mainstream dialect spoken in neighbouring Chiang Mai province. NT Thai is regarded as the major regional dialect employed by speakers in the Northern provinces. Standard or Bangkok Thai is also important as a lingua franca and the official language of Thailand. Other areas in Lamphun province use different regional dialects.

[3] In this study, the **MBK participants/ locals/ natives or local MBK people** refer to the native NT Thai speakers who are the long term residents in the NTIE area in the MBK community for more than 10 years. Most of the MBK participants speak NT Thai. They are the focus group.

The **BKK participants** refer to the internal immigrants who have been staying in this target area (NTIE) for at least 2 years. Their places of origin are Bangkok or Bangkok's vicinity provinces. Most of them use BKK Thai as a basis (see details in 2.8). They are the reference group.

blend both dialects. (Speakers of other Lamphun or immigrant dialects exist in MBK area but are excluded from the study. See more information in chapter 2) I have often informally observed that the elderly who are wealthy tend to use only NT Thai even though they have contact with many internal immigrants. In contrast, in some circumstances the lower middle class MBK elderly speak the BKK Thai dialect fluently instead. These two dialects exhibit linguistic variation on levels ranging from phonology to discourse. Table 1.1 illustrates some linguistic variation in casual speech, as observed in my pilot study (Panyaatisin, 2013).

## 1.3 Phonological systems of the target dialects

In this part, the phonological systems of two target dialects are discussed, as this research aims at understanding the contact between the two dialects leading to linguistic variation. Table 1.1 compares some characteristics of the dialects.

Table 1.1 Phonological systems of NT Thai dialect and BKK Thai dialect

| **Comparison** | **Northern (NT) Thai dialect (Muang[4])** | **Bangkok (BKK) Thai** |
|---|---|---|
| Language family and sub-group | Chiang Saeng, Yuan | Chiang Saeng, BKK Thai |
| Typical location | Northern provinces, Chiang Mai | Provinces in the Central part, Bangkok, or as a lingua franca |
| Consonant cluster onsets | 2 | 11 |
| Diphthongs | 6 | 6 |
| Lexical tones | 6 | 5 |

BKK Thai and NT Thai share similar syntactic structures, but their lexicons are very different, especially among NT Thai elderly native speakers above 60 years old, for whom the influence of BKK Thai is the least. Also, there are many sound correspondences between BKK Thai and NT Thai, such as the approximants in BKK Thai /r/ or /l/ corresponding with a glottal fricative /h/ in NT Thai, and aspirated consonants in BKK Thai corresponding with unaspirated sounds in NT Thai: /pʰ/ with /p/, /tɕʰ/ with / tɕ/ and so forth (please see Appendix C). However, at the present time, due to the high level of linguistic contact, these two dialects are partially mutually intelligible. Also, a number of BKK Thai loanwords have been borrowed into NT Thai.

BKK Thai has a much greater number of initial consonant clusters than NT Thai. Even though the number of diphthongs in both dialects is equal, they do not share the

[4] "Muang" literally means "city" or "urban", so will recur in different areas; but as the name of a dialect, "Kammuang" refers specifically to the Chiang Mai regional dialect. In addition, in the past, "Muang" can indicate the area's radius of urban territory situated inside the walls (along with moats surrounding the walls). Other villages outside the wall of "Muang", including MBK, are regarded as suburban areas. This ideology is found in most of the upper NT regional provinces.

same sounds (see below). NT Thai has one more lexical tone than BKK Thai. Most of the tones are alike in both contour and level tones, but NT Thai has a high falling tone with glottal stop which does not exist in BKK Thai. The details of both dialects' phonological systems are elaborated below.

### 1.3.1 Phonological system of Northern Thai dialect

According to Schliesinger (2001 cited in Tuwakham, 2005), the Northern Thai dialect (also called (Kam) Muang) is a Tai language closely related to the Bangkok Thai dialect (as shown with an asterisk) and the Lao language, which are all in the sub-branch of the Southwestern Thai – East Central group. NT Thai has approximately six million speakers, mostly inhabiting the kingdom of Thailand, while some live in northwestern Laos.

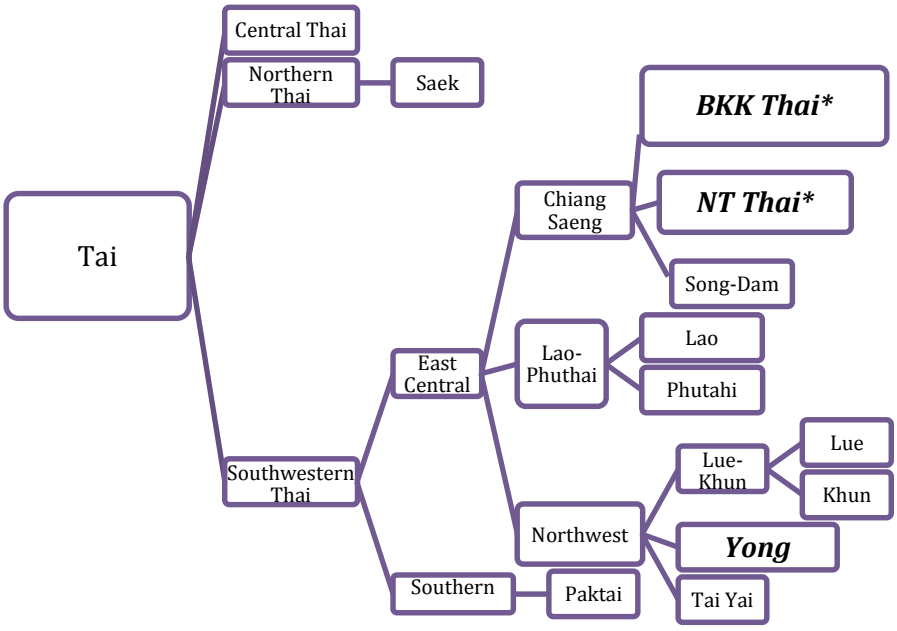


Figure 1.1 Tai language family: Muang, Bangkok Thai and Yong dialect (adapted from Schliesinger, 2001)

Geographically the NT Thai dialect is used pervasively across the upper northern part of Thailand. It is mainly used in Chiang Mai, Chiang Rai, Lampang, Phayao, Phrae, Nan, Mae Hong Son and Lamphun provinces. It can be found sporadically in many districts in other regions, such as in the Lap Lae district in Uttaradit province, Saw Hai district in Saraburi province, Khu Bua sub-district in Ratchaburi province and Se-Kiew district in Nakhon Ratchasima province.

Schliesinger (2001), cited in Tuwakham (2005), notes that people who use NT Thai dialect as their mother tongue recognize themselves as "Khon Muang". This literally means the people who live in the urban heart of the city, just as "Lanna Thai" refers to the people who reside in the millions of paddy fields. The former implies an abundance of resources and profound serenity, and they are known as the group of "Phayap" or the "North western of Central Thai", as viewed from central Thailand.

Burutphakdee (2004) stated that the term "Yuan" is still sometimes used for Northern Thai's distinctive Tai Tham alphabet, which is closely related to the old Tai Lue alphabet and the Lao religious alphabets. However, L-Thongkum[5] (2009) claimed that the concept of Yuan does not exist in the language family. It is derived from a local dialect classification by the users, but has no evidentiary support based on comparative historical linguistics. Thus, this thesis uses the NT Thai dialect term, rather than the popular terms "Yuan" or "Muang".

[5] T. L-Thongkum, p.c., (2009)

Table 1.2 The NT Thai consonant phoneme inventory[6], adapted from Wangsai (2007) Rungrueangsi (2004) and Pankhuenkha (1982)

| Places of articulation/ manner of articulation | Voicing and aspiration | Bilabial | Labio-dental | Alveolar | Alveolar-palatal | Palatal | Velar | Glottal |
|---|---|---|---|---|---|---|---|---|
| Stop/Plosive | Voiced | b | | d | | | | |
| | Voiceless unaspirated | p | | t | | | k | ʔ |
| | Voiceless aspirated | $p^h$ | | | | | | |
| Nasal | voiced | m | | n | | ɲ | ŋ | |
| Fricative | voiceless | | f | s | | | x[7] | h |
| Affricate | Voiceless unaspirated | | | | tɕ | | | |
| Approximant | voiced | *w | | | | j | | |
| Lateral Approximant | voiced | | | l | | | | |

(*) Tingsabadh and Abramson (1993) treat /w/ as a velar approximant in BKK Thai dialect while in the NT Thai and Yong dialect, /w/ is treated as a lateral bilabial instead.

In the past, apart from /k/, BKK Thai used to have both /x/ and /$k^h$/ but, due to analogical contamination of the BKK Thai orthography, /x/ disappeared. The error (which lead to the sound change eventually) was found in Thai course books which attempted to teach the learner by introducing the target consonant sound along with the /ɔ/ vowel as a nucleus and followed by a word example; this is still a regular practice even today. For instance, ค as คอ-ควาย /$k^h$ɔ0 - $k^h$waj0/ and ต as ต-คน /$k^h$ɔ0-xon0/ were

[6] Please refer to the full details of the NT Thai and the BKK Thai phonological systems in Appendix C.
[7] Khemmuk (2007) uses /$k^h$/ instead of /x/ and /c/ instead of /tɕ/ and gives /j/ and /ɲ/ while Pankhuenkha (1982) employs /c/ instead of /tɕ/, /$k^h$/ to/x/, /j/ to /ɲ/.

different. Unfortunately, most of the syllables have their own lexical meaning which leads to confusion, as below.

/kʰɔ0/ “neck”

/ kʰwaj0/ “water buffalo”

/ xon0/ “human”

The errors occurred in ฅ as ฅ-ฅน /kʰɔ0-xon0/. People associated ฅ to the wrong sound in คอ-ควาย /khɔ0 - kʰwaj0/. With this error, /kʰ/ of/kʰɔ0/ was memorized instead of /x/ of /xon0/ which is the correct phoneme represented by ฅ. Analogical contamination emerged due to this mismatching process (Chancharu, 2016)[8]. If people remember this sound by using /kʰɔ0- kʰɔŋ4-**xon0**/, the target sound shown as the example word, /x/ will be never missed. But they finally recognized the word /kʰɔ0/ ‘neck’ for ฅ instead of / xon0/ “human”. Therefore, there was finally no distinction between the phonemes of /x/ and/kʰ/ even though there is evidence of different orthographic realizations of ค and ฅ. Eventually, ค and ฅ were perceived as the same phonemes as /kʰ/. The later younger generations merge /x/ and/kʰ/ to /kʰ/ through this error in analogy and cannot perceive any distinction between them.The grapheme ฅ has not been used in the modern Thai writing system for more than 40 years.

Wangsai (2007) stated that there are 20 initial phonemes in Northern Thai. It should be noted that NT Thai dialect does not have the /tɕʰ/ and trill [r] or tap [ɾ], which appear in the BKK Thai dialect (Pankhuenkha, 1982). Conversely, /ɲ/ and /x/ do not exist in the Bangkok Thai phonological system while NT Thai has them.

NT Thai dialect does not historically have any consonant onsets followed by /l/ or /r/ as found in BKK Thai. These are (from the point of view of NT Thai) the incoming {Cr} or {Cl} variants, e.g. /kr/ or /kl/, etc.

[8] N. Chancharu, p.c., (2016)

Another exception also emerges in loanwords with rhotic /r/ underlying forms in both consonant and consonant cluster onsets in BKK Thai. In NT Thai, such items – which in BKK Thai are composed of /r/ and {Cr} onsets – are replaced with /l/ and {Cl}, while the corresponding native words in NT Thai display /h/[9]. The cluster consonants are often simplified by consonant reduction {CØ}. A number of exceptions occur due to the high amount of BKK Thai word influx, but most of the rules are still valid.

### 1.3.2 Phonological system of the Bangkok Thai dialect

This section describes the standard forms prescriptively found in BKK Thai dialect as spoken in Bangkok. Tingsabadh & Abramson (1993: 1) state that the Bangkok Thai (BKK) dialect is used by over 20 million people and regarded as the standard and official language for all of those who speak regional dialects in Thailand. The table 1.3 below illustrates the BKK Thai consonant inventory.

[9] This is where the cognates existed already in NT Thai, NT Thai has /h/ and the borrowings have /l/ accordingly.

Table 1.3 The BKK Thai dialect consonant inventory, adapted from Tingsabadh & Abramson (1993)

| Places of articulation/ manner of articulation | Voicing and aspiration | Bilabial | Labio-dental | Alveolar | Alveolar-palatal | Palatal | Velar | Glottal |
|---|---|---|---|---|---|---|---|---|
| Stop/ | Voiced | b | | d | | | | |
| Plosive | Voiceless unaspirated | p | | t | | | k | ʔ |
| | Voiceless aspirated | $p^h$ | | $t^h$ | | | $k^h$ | |
| Nasal | voiced | m | | n | | | ŋ | |
| Fricative | voiceless | | f | s | | | | h |
| Affricate | Voiceless unaspirated | | | | tɕ | | | |
| | Voiceless aspirated | | | | $tɕ^h$ | | | |
| Trill | voiced | | | r[10] | | | | |
| Approximant | voiced | | | | | j | w | |
| Lateral Approximant | | | | l | | | | |

For rhotics, which are the focus in this study, Iwasaki & Horie (2005) mention the rare cases of fully trilled or tapped /r/ production. The lateral liquid /l/ and the trill or tap /r/ are all distinguished in the orthography and pronounced differently in very carefully articulated speech, according to a number of sociolinguistic studies of Bangkok Thai as found in Beebe (1974), Treyakul (1986), Chunsuvimol, (1992). However, in most casual speech /r/ is pronounced [l].

L-Thongkum (2011: 25) observes that the variants of the /r/ phoneme in BKK Thai dialect comprise trill [r], tap [ɾ] (not flap, as claimed by Palakornkul 1975 and Noss 1964), retroflex [ɻ], alveolar approximant [ɹ] and lateral [l]. However, in this thesis, the

[10] There might be several phones for rhotic in BKK Thai, namely tap /ɾ/, retroflex /ɻ/ and approximant /ɹ/ even though they are not found in Tingsabadh & Abramson (1993) but in the other analyses discussed.

variants of (r) based on BKK Thai dialect phonology cover trill [r], tap [ɾ], and glottal fricative [h] as the initial consonant.

Consonant cluster onsets in the Bangkok Thai dialect comprise 11 clusters in initial position: /pr/, /pl/, /p$^{h}$r/, /p$^{h}$l/, /tr/, /kr/, /kl/, /k$^{h}$r/, /k$^{h}$l/, /kw/ and /k$^{h}$w/. Iwasaki and Horie (2005) state that in some instances /t$^{h}$r/ is possible, but very rare. /fr/ and /tl/ also appear in some recent foreign loan words. However, these are excluded in this study.

## 1.4 The observation of dialect variation, shift and maintenance in the NTIE community

This section describes dialect forms found in traditional NT Thai as spoken in MBK by older speakers and those with little contact with BKK Thai in the prescriptively traditional dialect forms.

Table 1.4 Dialectal variation by MBK local respondents and others found in the NTIE zone

| **Example** | **Bangkok Thai orthography** | **IPA transcriptions**[11] | **Meaning** |
|---|---|---|---|
| **(a)** | เฮา เรา เลา | [haw0], [raw0], [law0] | First-person plural pronoun |
| **(b)** | เฮือน เรือน เลือน | [hɯa:n0], [rɯa:n0], /[lɯa:n0] | house |
| **(c)** | หรือ หลือ | [rɯ:4], [lɯ:4] | or |
| **(d)** | ครับ คลับ คับ | [$k^h$rap3], [$k^h$lap3], [$k^h$ap3] | male polite final particle |
| **(e)** | บ่เอา ไม่เอา | [ba:1 ʔaw0], [maj2 ʔaw0] | Not, not taken (negator) |
| **(f)** | เจ้า ค่ะ | [tɕaw2], [$k^h$aʔ1] | Female politeness final particles |

Syllables with a rhotic onset in (a, b, c), consonant clusters with a rhotic onset (d) and grammatical categories such as negator (e) and final particles (d, f) of the NT Thai dialect are used by most MBK natives in the NTIE zone with the variants shown. The words for 'first person plural pronoun' and 'house' can be variably pronounced using [h], [r], and [l] in the consonant onset position. [h] is a marker of NT Thai dialect: all instances of initial /r/ in BKK Thai can be replaced with /h/ in NT Thai. [r] is the prestige incoming form derived from the BKK Thai dialect. [l] is found in the phonology of both dialects.

In the word 'or', variation between [r] and [l] is common among those who speak BKK Thai dialect in the NTIE area, even though they may be MBK locals. The standard/prestige [r] varies in casual speech style with [l].

Genuine consonant cluster onsets {Cr} do not exist in traditional NT Thai dialect phonology. There is only the cluster simplification form, denoted here as {CØ}. However,

[11] The "IPA transcription" column gives the linguistic variants found in the MBK community. It is obvious that the two phonological systems of NT Thai and BKK Thai are mixed in dialect variation.

The number following each lexical item refers to the lexical tone in NT Thai dialect, namely, "0" mid tone, "1" low tone, "2" falling tone, "3" high tone, "4" rising tone and "5" high tone with glottal stop.

{Cr} often emerges in NTIE speech. Sporadically, {Cl} is spotted in MBK participants, e.g. in the polite final male particle. Other examples (e, f) show lexical variation in the negator and polite final female particle between NT Thai and BKK Thai. The mixed use of these lexical and discourse markers is easily spotted but they are disregarded in this study, since the main focus is on phonological variation.

The following observed examples in sentence form, showing phonological variation in NT Thai dialect, were retrieved from NT Thai-speaking local radio broadcasters in Lamphun province (Panyaatisin, 2013).

(1) เพง อยากเป็นคน**ฮัก**บ่อยากเป็นจู๊

$p^{h}$eŋ0 ɲa:k1 pe:n4 $k^{h}$on0 hak3 ba:1 ɲa:k1 pen4 ju:3

“With a song, (I) want to be your lover, not your secret lover/ mistress.”

[hak3] and [rak3], meaning ‘love’, occur interchangeably, derived from NT Thai and BKK Thai respectively.

(2) วิ่ง**เร็ว**ขนาดไหน มันก็บ่ตันย่าผีกองกอย

wiŋ2 rew0 $k^{h}$a1 na:t1 naj4 man0 kɔ2: ba:1 tan0 ɲa:2 $p^{h}$i:4 koŋ0 kɔj0

“No matter how fast he could run, he cannot run as fast as the Kongkoi (blood sucker) ghost.”

[rew0] or [lew0] meaning ‘quickly’ occur interchangeably, derived from BKK Thai and NT Thai respectively.

(3) เอาจ๋นเดือด**ร้อน ฮ้อน**ไหม้

ʔa:w0 tɕon4 dʑt1 rɔ:n3 hɔn3 maj2

“Make yourself in trouble a great deal.”

[rɔ:n3] and [hɔn3], meaning 'hot' or 'get into trouble', occur interchangeably, derived from BKK Thai and NT Thai respectively.

(4) ยับยั้งเซลล์มะเล็งและเลื่องของโลคเบาหวาน

jap3 jaŋ3 se:0 maʔ3 leŋ0 lɛ:3 lɤ:ŋ2 $k^h$o:ŋ4 lo:k2 baw0 wa:n4

"To restrain the cancer cells spreading, and diabetic causation issue."

[leŋ0] or [reŋ0] 'cancer', [lɤ:ŋ2] or [rɤ:ŋ2] 'issue' , [lo:k2] or [ro:k2] 'disease' – these cases of variation between rhotic onset [r] and lateral onset [l] are all possible in BKK Thai dialect too, even though spoken here by MBK respondents.

Table 1.5 The focused variables and their possible variants in the (MBK) NT Thai and the BKK Thai dialect, investigated in the NTIE, MBK community area

| Variables | Variants | The Northern Thai dialect (Muang or Lue) | The Bangkok Thai dialect (Standard Thai) |
|---|---|---|---|
| (r) Consonant onset | [r] | ✗ | ✓ |
| | [l] | ✓ | ✓ |
| | [h] | ✓ | ✗ [12] |
| (Cr) Consonant cluster onset | {Cr} | ✗ | ✓ |
| | {Cl} | ✗ | ✓ |
| | {CØ} | ✓ | ✓ |

Table 1.5 demonstrates the occurrence of variants of the two linguistic variables in NT Thai and BKK Thai. Consonantal onset [h] can be found only in the NT Thai dialect, while it cannot occur in comparable positions in BKK Thai. In contrast, onset [r] which is

[12] In fact, it does exist in BKK Thai phonological system but it is not found where the NT Thai sound occurs.

the prestige form can be found in the BKK Thai system only. [l] can be found in both dialects and is actually the most frequent form during casual speech.

Only BKK Thai has the consonant onset clusters {Cr} and {Cl}. {CØ} is the cluster reduction form. In the traditional NT Thai dialect in the MBK area, there is no cluster onset. NT Thai speakers are likely to use the cluster reduction {CØ} to perform BKK Thai loanwords instead. {Cl} rarely occurs but it can still be found in BKK Thai speakers at higher levels of awareness.

## 1.5 Variation in Thai spoken in the Banklang municipal (MBK) area: Beyond the pilot

However, the actual situation in MBK is not in accordance with the above phonological descriptions based on the pilot study and observations in the literature. All forms or variants can be found interchangeably under certain conditions. Therefore, in-depth variation analysis is required to investigate dialect maintenance and shift in MBK locals in the NTIE zone. The effect of migration into the NTIE communities is very strong and has influenced NT Thai local speech. People across the community are interacting and possibly changing their linguistic repertoires. This Labovian sociolinguistic study will shed light on the dialect variation situation which may lead to dialect shift and/or maintenance of the NT Thai dialect.

It should be noted that the rhotic variables (r) and (Cr) have been investigated in Thailand for quite some time, mostly in Bangkok speech. and the variants of rhotic variables have been competing for a long time. However, I chose to study these variables in other contexts outside Bangkok province and its vicinity in order to investigate its influence on the NT Thai dialect.

Some previous studies dealt with language choices and attitudes (Thathun, 1997; Homkaew, 1997; Kantawang, 2012) but results were not shown explicitly in quantitative terms . The social meanings of linguistic variables are apparently being redefined. [r] and {Cr} have been recognised for quite some time as prestige variants for the underlying form of /r/, while [l] has long been stigmatized. However, currently, young people and

middle-aged people are likely to use these variants with different social meanings/values.

A full-scale variationist approach has not previously been employed to examine industrializing or urbanising situations in Thailand. It is worth examining the variation of such well-known variables as rhotics which are influenced by the dominant BKK Thai dialect. This can establish solid ground for further studies of other linguistic variables, diglossic situations (Fasold 1984), linguistic mobility, and social meanings in linguistic variables and dialects in contact.

To sum up, this works aims at investigating trends of linguistic variation, shift and maintenance for local MBK participants affected by industrialisation and urbanisation in the NTIE community. It employs the Labovian variationist approach to study linguistic variables and their variants' distribution across many relevant independent social predictors, including the (personal) social network analysis variable (Milroy, 1987; Hirano, 2013). Multiple logistic regression and related statistical analysis will be employed. Comparing the distribution of variants across three age groups can imply whether change is in progress.

### 1.6 Research questions

1) How stable is the linguistic situation of the NT Thai dialect found in the NTIE community? Can either dialect maintenance or shift be identified by applying a variationist approach?

2) How are social contact patterns between migrants and long-time local MBK residents affecting the NT Thai dialect? Can social network analysis (SNA), using an Ego-centred approach (focusing mainly in actor-/ego-centred speakers and their individual ties), shed light on dialect contact and change?

3) What linguistic patterns emerge in respect to the (non-)adoption of rhotic sounds in the NT Thai dialect in MBK area? Are there parallels between the two rhotic variables?

## 1.7 Hypotheses

Based on the observation and pilot study, hypotheses are considered as below.

1) Overall NT Thai dialect is progressively shifting towards the BKK Thai dialect.

2) Stylistic factors (Labov, 1973) play an important role in constraining the prestige forms used, in both {r-1}[13] and {Cr-1}, under the influence of the Bangkok (BKK) speech norms.

3) Social network structure partly predicts dialect shift. Strong MBK networks predict dialect maintenance.

4) Other demographic factors including age[14], speaker sex and education provide explanations regarding the dialect shift and maintenance to varying degrees.

5) Lower middle class females are the linguistic innovators.

6) Elderly local males are the linguistic conservatives.

7) Local dialect maintainers use [h] instead of {r-1}.

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[13] I use {curly brackets} instead of square brackets [x] to refer to different variants, i.e. distinct realisations of the variable that are not strictly according to IPA (e.g. "C" for consonant). Throughout the thesis, in terms of rhotic onset, {r-1} refers to the conflation of [r] and [ɾ]; other variants of (r) are shown using IPA square brackets, namely [l] and [h].

In the cluster rhotic onset variable (Cr), {Cr-1} denotes the conflation of an initial cluster with [r] onset and an initial cluster with [ɾ] onset only. Other variants also use the curly bracket, namely {Cl} for the cluster with lateral, and {CØ} for the cluster with zero form.

In Labov (2006), (r-1) refers to an unrestricted number(s) of possible variants; here too we always have more than 2 variants (such as [ɾ], [l], [h] and so forth) in the target variable. In this case, the variable is (r).

[14] In the regression modeling, the factor 'age' was tested in two ways, as a continuous one (from the youngest to the oldest person) and as three discrete categories (young, adult and elderly). The models never ran both of them (continuous or category) at the same time. Eventually, the best model selects the best-fit outcome.

8) In general, both standard rhotic variants {r-1} and {Cr-1} are replaced by [l] and {CØ} in the informal speech styles, but there will be some evidence of penetration by rhotics from BKK Thai.

9) All generations are likely to use [l] in casual styles, since it is a consensus form that occurs in both dialects in contact.

10) (Cr) and (r) show some similar patterns in their linguistic behaviour.

### 1.8 Contributions of this study

1) This variationist study may enable us to predict future dialect shift and maintenance in the NT Thai region. Therefore, it can serve as an empirically-based warning for linguists and community members that if this allegedly strong local dialect in Lamphun province is endangered, others too may well be so.

2) This research may provoke the awareness of local people and organizations and stimulate them to try to promote conservation of the dialect.

3) This first social network study on NT Thai dialect, employing the model adapted from Milroy (1987) and Hirano (2013), may help to explain other facets of dialect contact.

4) In many previous Thai sociolinguistic works, which are relevant to the BKK Thai dialect study, were usually done by percentage, Chi-square and correlation. Their explanatory powers are limited by showing merely pairwise data comparison. It is a relatively weak way to generalise when factors in real life situations can be numerous and sophisticated. The statistical analysis used below may be introduced to Thai linguistic research communities, especially for those who work on quantitative sociolinguistics or dialectology. The statistical approach taken may confirm previous studies or identify more subtle or hidden results. Variationist studies (Bayley, 2002; Tagliamonte, 2006; D Johnson, 2009) have been adopting multiple logistic regression and other sophisticated non-parametric statistic tests for a long time, but have not been employed in regional Thai dialect studies before. The combination of predictive factors ranked in their hierarchy of effects can be stronger tools to explain linguistic variation.

5) Even though social network studies have flourished and been actively developed in western countries, they are barely found in Thailand, especially in the full-scale, quantitative ego-centred approach. This research might be regarded as a pioneering sociolinguistic study in Thailand which incorporates the social network analysis into the variationist study.

In the next chapter, the location of the study, and the background of NT Thai- and BKK-speaking internal immigrants investigated, are addressed.

# Chapter 2
# Community and participants' background

This chapter's focus is the community, its people and their linguistic mobility. It starts from Lamphun province, Lanna Kingdom and Banklang municipality (MBK); second, Banklang municipality's background; third, the background of the Northern Industrial estate (NTIE); fourth, other sociological issues with regard to the effects of the NTIE's emergence on MBK locals; and finally, the target participants.

## 2.1 Lamphun province, Lanna Kingdom and Banklang municipality (MBK)

MBK, the target linguistic community of this study, is situated in Lamphun province. Lamphun province is the smallest province in northwestern Thailand.

Thailand has at least 4 major regional dialects and several minority languages. It includes Bangkok Thai dialect (BKK) which is the standard. Bangkok Thai serves a crucial role as a lingua franca. This is the high dialect in a diglossic model (see 3.1.2). Other regional dialects include Northern Thai, North Eastern Thai and Southern Thai. Even though these dialects share most syntactic structures, their lexicons are very different. My focus is on comparing and analysing the Northern Thai dialect situation and the strong influence of the standard Thai dialect.


Figure 2.1 Map of Thailand, red dot indicating Lamphun province[1]

There are around 410,000 people in this province according to Lamphun province statistics.[2] Formerly, it served as the root of the former Haripunjai Kingdom which dates back 1,400 years (Forbes & Henley, 2012). Around 700 years ago it became the Lanna Kingdom.

Chiang Mai was the capital of the Kingdom of Lanna from 1296–1768 A. D. and is located 700 km north of Bangkok, or Siam of that era. The city is situated along the Ping River, a major tributary of the Chao Phraya River. Literally, Chiang Mai means "a new capital city" of the Lanna kingdom, and was coined when the new capital was founded in 1296 AD, succeeding Chiang Rai, the former capital (Coedes, 1986; Burutphakdee, 2004; Forbes & Henley, 2012).

Chiang Mai and Lamphun are known as the twin towns due to their proximity and similarity in cultures and traditions, but they differ in power. With more power as the ruling city, Chiang Mai is regarded as the cradle of Northern Thai culture and heritage.

[1] http://www.nationsonline.org/oneworld/map/thailand-region-map.htm. Accessed [21 July 2017].
[2] Lamphun population census in 2010 http://lamphun.old.nso.go.th/nso/project/search/result_by_department.jsp Accessed [10 April 2014].

The later Lanna kingdom developed its own orthography and syntax which were relatively distinct from Bangkok Thai.[3] Lamphun or Hariphunchai adopted a number of cultural attributes as the inferior town, but with its own uniqueness.

Dating back 200 years, Lamphun or Hariphunchai Kingdom has been continuously colonised by powerful kingdoms in the vicinity, such as the Burmese and Lanna, until it finally collapsed and was deserted for many decades due to wars.

Malasaem (1997) described how, in the 1700s, the Kingdom of Siam became powerful and controlled Lanna as its colony. Thus, Lanna had to serve Siam as a protector state. In the meantime, after being abandoned for many years, Yong people[4] from the Sip Song Pan Na state in Myanmar were forced to inhabit this area permanently. This period of time was metaphorically expressed as "putting vegetables into baskets and people into towns". This refers to the policy of relocation of the defeated Yong group of people from Sip Song Pan Na state in Southwest Burma to this deserted province, Lamphun (Schliesinger, 2001 cited in Tuwakham, 2005). The motive for this massive transmigration comes from the Lanna Kingdom's aim to strengthen and increase their army due to its function as a buffer state for Siam in the north-western area. The strategy was to establish Lamphun province as the fortress, to protect Lanna and support the supply chain. Lanna aimed to populate its kingdom as well after its people were scattered from many wars. Therefore, it can be said that Lamphun province was reborn through the coming of Yong people who were an entirely new ethnic cohort, distinct from Lanna people.

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[3] Bangkok Thai, Siamese Thai, Standard Thai, Central Thai refer to the same dialect. This thesis prefers to use Bangkok (BKK) Thai to refer to this official dialect or language of the Kingdom of Thailand. The Bangkok Thai dialect is mainly spoken in Bangkok province and Bangkok's neighbouring provinces. Tingsabud and Abramsons (1982) mention that BKK and NT Thai are partially mutually intelligible since basically they share lots of grammatical constructions and various phonemes from Bangkok Thai. Also, phonologically, it has been proved that many phonemes in Bangkok Thai dialect are in complementary distribution to the northern Thai dialects. But the major distinctions are their distinctive tone patterns and their lexicons. In this regard, Northern Thai is likely to contain more varieties of tonal patterns depending on location, than Bangkok Thai. Northern Thai has its own lexical items which are very different and cannot be understood by Bangkok Thai people and vice versa. In the past, Bangkok Thai borrowed a number of lexical items from Northern Thai. However, they became part of Bangkok Thai through the processes of reduplication, lexicalization etc. It is believed that Northern Thai was established long before Bangkok Thai.

[4] Yong refers to both a place name and the ethnic name under the Tai Lue group.

At that time Lanna Kingdom people spoke the Kammuang/Lanna/Lao language (Kammuang language was later called the NT Thai dialect, after being under Siam or Thailand during the era of King Rama V).[5] Due to the unequal power scenario since then, the Northern Thai language of Lanna was seen as **superior** to other languages[6], including the Yong language now found in Lamphun and certain parts of Chiang Mai province. This ideology persisted until the strong influence of the BKK Thai dialect emerged in 1850. However, the hierarchy and prestige of the NT Thai dialect remains higher than other subordinate languages which were regarded as dialects of the Thai language.

Pankhuenkhan (1978: ii cited in Tuwakham, 2005) stated that Lamphun is a linguistically complex area and extremely diverse. It deserves in-depth study in many fields because of its ethnic and linguistic wealth such as Yong, Khoen, Lue or Muang (NT Thai), Chiang Mai or Kammuang, BKK Thai and other varieties. Premsrirat et al. (2004) states that Lamphun is the only province in the Northern region (out of 8 in the upper NT provinces) that uses the Yong dialect as a mother tongue; approximately 85% of Lamphun's population are ethnically Yong, but not all speak Yong as their mother tongue. The other 15% largely use Muang or the NT Thai dialect, with minimal use of the other minority languages.

Although Yong is predominantly used by a majority of people in Lamphun, the MBK people mainly speak NT Thai (or Lue), since MBK locals have a different historical background to others in Lamphun. The distinctions in socio-economic and linguistic aspects were emphasised during the establishment of the industrialised zone in the early 1980s. There was a great shift in national ideology in Thailand in the mid-1970s, promoting a giant leap towards becoming a fully industrialised nation instead of the agricultural one it had been for centuries. As a result, not only was there a big socio-economic shift, but the linguistic situation in the MBK area was strongly affected by large migration. BKK Thai has increasingly influenced NT Thai because it functions as the

[5] These refer to the same variety. It should be noted that the term "Lao" which is used by the NT Thai speakers is highly distinct from "Lao" of the Northeastern Thai speakers and Lao people, even though amongst these groups a number of similar terms and syntax are shared.

[6] This excludes minority languages, including hill-tribal clan languages such as Karen, which are outliers that scarcely share linguistic attributes with NT Thai or Lue.

official language of Thailand, and as a lingua franca. It is the medium of educational instruction, and the Thai mass media employ Bangkok Thai as a default. Although regional people from elsewhere might have their own distinct dialect, they inevitably have to comply with using BKK Thai as the main medium.

## 2.2 Banklang municipal (MBK) background

Due to the positive impact of the NTIE (industrial estate), the economy of MBK has been powerfully boosted. Its annual turnover accounts for 50 billion baht (USD $14 billion) or approximately 3.5 % of Thailand's GPD.[7] It is one of the most important economic zones in the country. Even in the past, Muang Lamphun usually served as a central area of trading, but recently everything has moved swiftly to MBK. Thus, MBK is a new economic and information hub for Lamphun province since the full operation of NTIE.

The data from Banklang municipal office (MBK) mentions that MBK is situated in the low plains of the Kuang river. In the past, it was known as a very small village functioning as a hub of commerce and a juncture of transportation from other towns to Muang Lamphun city. MBK attracted people from other districts by engaging in trading and exchanging goods. Thus, this village in the past was intentionally coined as 'Bangklang', literally representing its function as the centre/hub of the house/community.

[7] https://www.cia.gov/library/publications/the-world-factbook/geos/th.html Accessed [10 July 2015]. $395.3 billion USD was the GDP of Thailand in 2015.

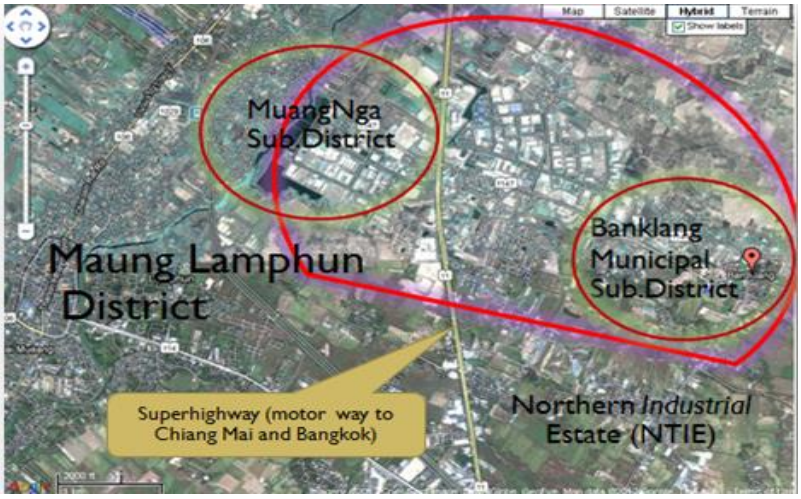


Figure 2.2 An aerial view of Banklang Municipal (MBK) sub-district and NTIE (retrieved and adapted from Google maps)

The aerial view in figure 2.2 shows the location of MBK in the Muang Lamphun district. MBK covers 18 square km. Its town is 10km from Muang Lamphun (the socioeconomic hub). Geographically, MBK borders the Makhuea Chae[8] subdistrict to the north, a part of Si Bua[9] Ban and Pa Sak[10] subdistricts to the south, as well as a part of Si Bua Ban to the east, and Mueang Nga[11] and Wiang Yong[12] subdistricts to the west. The analysis below focuses on MBK only.

The MBK area is composed of 12 villages. As the data collection method was done using a friend-of-a-friend method, sampling all villages would have been very challenging with regard to the uneven density of housing and population in each village. The researcher focused on areas where the housing and dormitories were dense and participants were easy to find. This was only one of the criteria for recruiting and selection (see Chapter 4). The villages number 1, 4, 6 and 10 are the densest in terms of population. The name for a village in Thai is "Moo:

[8] Concerning the contact area of Banklang, Yong dialect is predominantly spoken here.
[9] Muang dialect is their vernacular.
[10] Muang dialect is their vernacular.
[11] Yong dialect is their vernacular.
[12] Yong dialect is their vernacular.

Moo 1: Ban Phaya Phap village,
Moo 2: Ban Tha Lo – Si Kham,
Moo 3: Ban Khilek,
Moo 4: Ban San Pa Fai,
Moo 5: Ban Si Chum,
Moo 6: Ban Sing Khoeng,
Moo 7: Ban Rong Sao,
Moo 8: Ban Mae Yak,
Moo 9: Banklang,
Moo 10: Ban Pratu Khong,
Moo 11: Ban Ho Chai Ban, and
Moo 12: Ban Chaem Phatthana.

The MBK community contained 10,725 people, accounting for 4,988 males and 5,737 females, and a density of 595.8 people per square km. Most people's careers in this area involve commerce and personal business, serving as government officers and in state enterprises and agriculture. However, in the industrialised zone, the estimate is 100,000 internal immigrants.[13] These immigrants come from Lamphun province and other regions in Thailand to join in all types of work in the NTIE industrial zone.

Therefore, because of its role, economy and ethnic composition, all affected by the large number of immigrants, MBK was chosen to be the sampling area for an in-depth study concerning dialect contact.

Although the majority of Lamphun citizens speak Yong dialect as their mother tongue, MBK citizens mostly use the NT Thai dialect. Sporadically, Yong speakers can be found in MBK as well, but in low frequencies. Through the variationist approach, this study aims to investigate to what extent the NT Thai dialect of MBK locals has been undergoing as regards both change and dialect maintenance.

[13] Ban Klang Sub-district Municipality's current information: https://th.wikipedia.org/wiki/%E0%B9%80%E0%B8%97%E0%B8%A8%E0%B8%9A%E0%B8%B2%E0%B8%A5%E0%B8%95%E0%B8%B3%E0%B8%9A%E0%B8%A5%E0%B8%9A%E0%B9%89%E0%B8%B2%E0%B8%99%E0%B8%81%E0%B8%A5%E0%B8%B2%E0%B8%87_(%E0%B8%88%E0%B8%B1%E0%B8%87%E0%B8%AB%E0%B8%A7%E0%B8%B1%E0%B8%94%E0%B8%A5%E0%B8%B3%E0%B8%9E%E0%B8%B9%E0%B8%99) Accessed [10 April 2016].

Figure 2.3 The superhighway to Chiang Mai province

Figure 2.4 The factories around the eastern side of the superhighway

Figure 2.5 The local dormitories close to the factories
(mostly single bedroom with one toilet and no kitchen per room)

In fact, the NT Thai dialect, which is spoken mainly in Chiang Mai province, is regarded as the standard regional dialect for the NT region. Therefore, the origin of this dialect within the Chiang Mai province should be researched, as this area is the most crowded and the most culturally prominent in northern Thailand.

As noted, the MBK locals speak the NT Thai dialect among themselves, as do most in the nearby influential city of Chiang Mai. (It was not possible within the bounds of this thesis to examine dialect differences and influences from Chiang Mai on MBK.) However, in formal contexts such as school, BKK Thai is mostly employed instead and is intelligible to all. Even though the NT Thai dialect has its own orthography – the Lanna script – people are rarely literate in it, either reading or writing. The NT Thai alphabet (also called the Dharma alphabet) is only studied by scholars and Buddhist monks. Currently NT Thai people commonly use standard Thai scripts with a transliteration system to BKK Thai dialect but still retain the NT Thai dialect in their speech.

## 2.3 The background of the Northern Industrial Estate (NTIE)

In this part, the national motives and the background of how this Northern Industrial Estate (NTIE) was established are addressed. According to annual reports of the Industrial Estate Authority of Thailand (IEAT), (2012: 1-4)[14], this estate project was launched with respect to the 4th national economic and social developmental plan during 1977-1981, with the aims of distributing industrial development to various regions in Thailand, and to be concurrent with the 5th national economic and social development plan (1982-1986). This aimed to make Thailand one of the newly industrialised countries (NICs).[15]

[14] http://www.ieat.go.th/en Accessed [17 April 2015].
[15] Thailand was finally adopted into the NICs circle in 2007. However, even nowadays in 2016, it is still recognized as a lower-middle-income country which currently struggles to pass this threshold to become an upper-middle-income nation. Retrieved from:
http://www.bangkokbiznews.com/mobile/view/blog/528927 Accessed [10 April 2015]

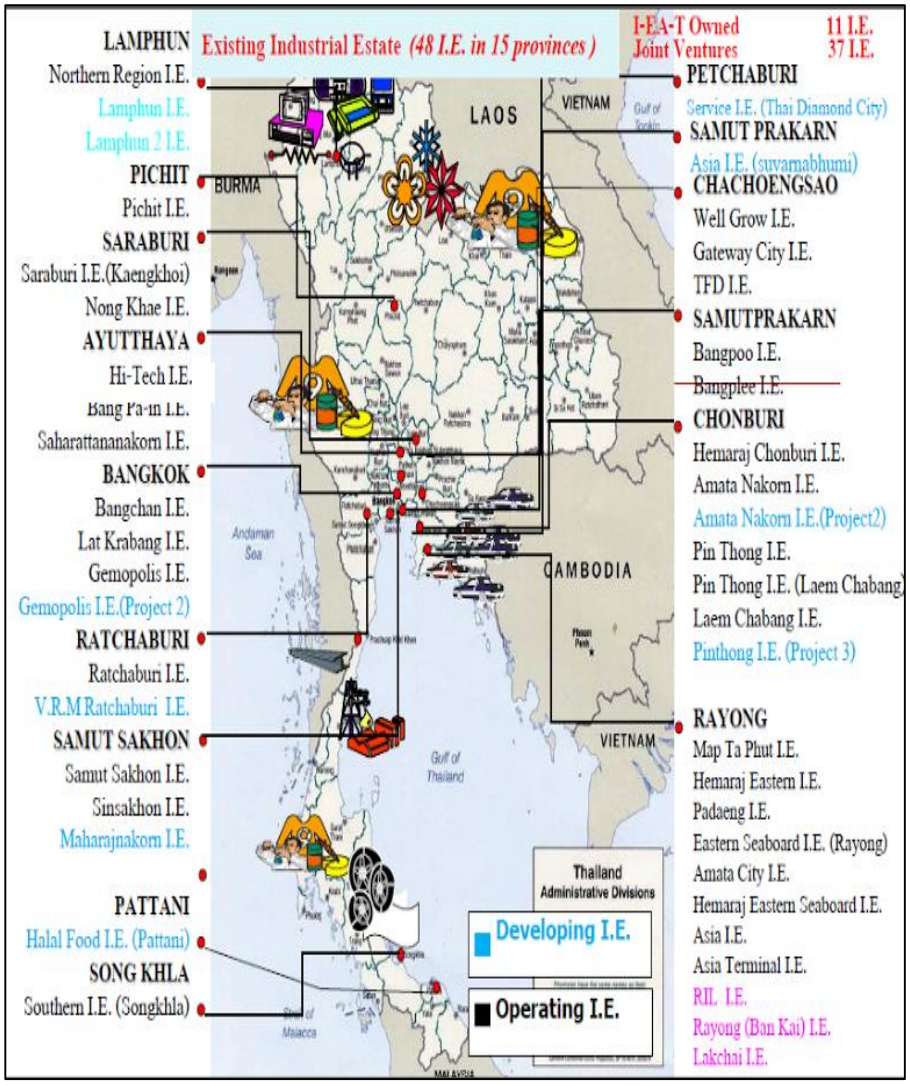


Figure 2.6 The 15 existing industrial estates established across Thailand (Sumantagool, 2010: 2)

Chiang Mai province is the largest and most economically powerful city in northern Thailand. Because of this, the construction of the superhighway, national route no.11, was implemented from the year 1967 and ready to use in 1982. It cuts through the MBK municipal sub-district land of Lamphun province (the NTIE zone), aiming to connect Chiang Mai province (via the route of Lampang province) to Bangkok. This national route is partly responsible for the dramatic change in people and social life in MBK. However, NTIE had not been allowed to construct in Chiang Mai province since this province is too crowded in terms of housing and many types of industries. Many parts of

the province have been reserved for conserved forests and national parks. Thus, Lamphun province was nominated because of its high potential.

In the Northern region, Lamphun province met all criteria for this project, namely, location, public utilities, labour supply, raw materials, agriculture, communication systems and transportation. The areas on both sides of the superhighway were implemented to construct the Northern Industrial Estate (NTIE). This estate is located in Banklang municipal subdistrict (MBK), Muang district of Lamphun province, and situated between the routes from Chiang Mai province to Lampang province, heading to Bangkok by road number 11, at the point of 69 to 70 kms. The NTIE territory engulfs sub-districts of 2,860.8 square m. This project was implemented from April 1983 and finished in March 1986, with a budget of 358 million baht.

To sum up, the feasibility of the NTIE project was assessed in 1977. The first implementation of NTIE establishment started in 1983 and some small sectors of the factories were ready to function in 1985. Finally, large scale industries became fully active in 1995, according to Boonyanupong (1998).

Referring to IEAT (2012: 1-4), the NTIE administration and management divided their area into approximately 6 zones, so that 45% of the NTIE was devoted to export factories. 30% deals with public infrastructures and utility systems. 20% of the zone is used for open-engagement businesses and other local/in-house general industrial sections. 4% serves as markets and commercial buildings, and the last 1% only is used for accommodation, such as dormitories and small single-storey townhouses. The NTIE accommodation is scattered and mostly encircles the factories. There is no zoning area serving for accommodation, as under the previous plan.

Focusing on types of industrial work in NTIE, there are around 70 factories. The majority are electronic industries (26 plants), componential and equipment industries (20 plants) and other miscellaneous industries such as jewelry, food and beverage factories (26 plants). The number of registered workers in NTIE was around 45,000 in 2012[16] and the number will be rising due to the new aims to expand the NTIE in 2017.

[16] Based on NTIE data, retrieved from http://www.ieat.go.th/ Accessed [10 November 2012].

Based on this survey, there were 16,551 males and 29,903 females. Female workers were nearly twice as common as male workers.

The reason why NTIE was to be situated in MBK was because it served as gateway to Bangkok and Chiang Mai. It has the potential to link many important economic zones in the Northern regional provinces, with the particular benefit of the best Thai transportation still being the main road. MBK can access the superhighway to reach Bangkok conveniently, and it can draw resources such as manpower and agricultural raw materials from other neighbouring provinces.

### 2.4 Other sociological changes in urbanisation, family structure and life mode

Apart from the demographic background of MBK community and its speakers, Oshiyama (1995) investigated social relationships between the surrounding communities and the NTIE. Oshiyama conducted interviews and reviewed secondary data accounts of native people in Lamphun who were affected by the establishment of the NTIE area. She described the development of social relationships between people and the NTIE as akin to urbanization. People shifted from agricultural-based labour to the industrial workforce, and from being socially consolidated to being individual and isolated. The elderly gradually had less power to draw people together and became less respected, and the society became more prone to capitalism.

Oshiyama explained the immense changes. Firstly, the NTIE establishment made a big physical impact on the surrounding areas, especially on how land was used. In the past, small villages were scattered haphazardly. A few people resided in each village, and most lands were paddy fields and unused due to recurring droughts and low quality soil. The NTIE promoted massive land sales, and the structure was changed by the superhighway cutting through the fields. This effect raised the land's market value, and many low-income villagers fortunately profited, but at the cost of losing their land. On the positive side, public transportation to important cities was improved throughout, with the superhighway to Chiang Mai and Bangkok, and concrete roads elsewhere. The drawback was that it brought about pollution and speeding trucks at all hours. Local

lands were filled with blocks, walls and small roads. Green areas were reduced dramatically.

Secondly, the elderly had less power at the centre of the family or village, for being highly respected and uniting people. In the past, in important ceremonies such as New Year celebrations and the Loi Kra Thong festival (floating flowery decorated baskets to worship the river), the elderly would head the project and gather people to join in or create themes. The Thai New Year used to aim at respect for the elderly in the family, but now these ceremonies are held for entertainment instead. Thirdly, patrons such as landlords used to be associated with power and high social status. However, at present, the focus is goods and exchange of commodities. Personal relationships between patrons and clients are less important than in the past.

Saenwongwan (2002) found that social behaviour changed among migrant workers in the NTIE. Ten workers were interviewed. The radical changes in their lives included gaining more independence and financial freedom. In terms of life independence, she elaborated that NT speakers in the past resided in extended families, with strong respect for seniority, sharing all resources and conservation. Once the agricultural-based society gave way to the industrialised one, people became more independent as workers because they had stable salaries, and were not hirelings or labourers with seasonally-based or inconsistent incomes.

Not living under the same roofs with parents promoted more independence. Workers mostly reside in dormitories near the factories and live far away from family supervision. It is common nowadays for young couples[17] in their early 20s to remain unmarried, which was extremely uncommon in the past. The NT Thai elderly hold serious norms regarding couples prior to a proper marriage. Those who violated this

[17] In the NTIE area, the number of open LGBTQ couples is relatively high especially for the female same-sex couple cohort. In contrast it is very rare to find male same-sex cohort counterparts. These female LGBTQs live their lives very openly. It is very common to spot female same-sex cohorts in the community. This contrasts extremely with the old NT Thai and Thai conservative norms but they can now live together harmoniously blended. Also, there are many barbers who are supposed to cut only male's hair but the written signs of the barbers nowadays invite customers including both males and transvestite females. Some women prefer to dress like men (known in Thai language as "Thom") openly.

were called "Phid Phee",[18] literally meaning "doing wrong to the spirit/ghost", for bringing bad luck, and severe criticism by the community. This is of less concern now, as elsewhere.

Khambunsri (2004) carried out a study to classify lifestyles of 400 workers in NTIE. After identifying several hundred traits via factor analysis, she finally extracted five. The first trait was the strongest factor, namely 1) economising modern workers who hold fast to principles, and are devoted to their jobs so as to achieve the highest success. Weaker patterns included 2) self-pleasuring workers, interested in fashion and new technologies but who are associated with a lack of self-belief; 3) informative workers who have a better career, are happy with their jobs, participate in entertaining events and value solitude; 4) conservatives who have a high morale, hold to older customs, love their families and join in with most preserved cultural events and rituals; and 5) slackers, interested in entertaining activities only, while ignoring social, cultural and environmental issues. One person can possess more than one trait, to different degrees.

It can be deduced that these sociological views reflect the relationships between NT people who reside in Lamphun and the establishment of the NTIE. Outwardly, the effect of NTIE resulted in suffering for local people emotionally and psychologically, reflecting lifestyle deterioration and the loss of old highly valued traditions, but benefitting the province economically and promoting personal financial freedom.

[18] Living together as a couple prior to marriage was highly prohibited. This norm used to be very serious in Thailand, especially in Northern Thailand. In the past, it was believed that each person had their own individual spirit/ghost guardians. They protected people from harm and could offer well-being if the persons did the right things according to the spirit beliefs. Proper marriage is one of those beliefs. If they violated the norm by living together, especially conducting sexual activities, the couples would be stigmatised as "Phid Phee"or literally means "to do falsehood to the spirit. This would bring them bad luck. The society would severely criticize them, which led to their parents losing face, especially on the female side. To solve this problem, a proper marriage had to result very quickly. However, NTIE people are less prone to honour this norm nowadays, and live together before marriage or even frequently change their partners in the community.

## 2.5 Researcher's actual observations on NTIE social structure

The previous research is somewhat in accordance with what was found in this current study, but further change has occurred. One of the village heads narrated that in the past, the NT Thai people used to have a very strong and closed network. This meant that most adults knew one another in their community very well. Most of them were (distant) relatives, siblings, friends, peers or co-workers. On one hand, they could easily trace newly met people back to their origins and parents, while on the other, new arrivals would be more easily identified because the villagers knew one another well. It is worth noting that at that time, dating back from the 1960s to late 1980s, the number of members in each community was not very high, e.g. only hundreds not thousands. Therefore, it was possible for adults to recognize or be recognized by their community members.

The centre of faith and acknowledged persons that the community could seek out for advice were monks in Buddhist temples, highly respected senior teachers in local schools and village headmasters. These groups of people always announced or broadcast important issues to villagers, although the correctness of knowledge in these suggestions might need to be scrutinized later.

Interestingly, the level of personal privacy was very low or did not even exist. Most people knew about other people's backgrounds and development. This does not mean that people were expected to pry into secrets or interfere in family business, but signified sincerity and an open mindset in order to help and encourage one another to live reciprocally in the agricultural community. Teamwork was very important in agricultural society at occasions such as harvest time.

Once the influx of internal immigrants emerged in the MBK community, the structure changed radically. From only 5,000 people in MBK increasing to 100,000 is a dramatic shift. It is estimated that half of the immigrants came to join the workforce in the factories, while the other half were off-factory workers who ran all sorts of private businesses to supply the community's dramatically-increased demands.

Although the economy tends to be flourishing in this zone, the MBK community has experienced rapid negative changes as well. The headmasters and police officers

stated that the crime rate has risen and gradually become more severe. Policemen regularly warn about contact with new people and to avoid certain risky areas for safety.

Even though the immigrant influx is still happening, most local communities can retain the high quality of their social networks, especially among the elderly. The MBK older locals persist with their old traditions and values and try to maintain their strong networks. At the same time, this does not mean that the MBK locals do not welcome newcomers. They do not resist all changes because the power of consumerism and capitalism are too powerful, while also beneficial for them. The locals need to adjust as well, and by contrast, the powerful or higher class MBK natives try to persuade non-acquaintances or immigrants to join in with ceremonies and old-fashioned traditions. Participation and cooperation depend on their willingness as well, and are not compulsory. Therefore, the second-tie networks (please refer to 2.6 and 3.7) which the MBK locals have tried to expand seem to be very loose or extremely weak.

Most new factory workers sporadically join the ceremonies, while not knowing other new-comers. Also, working hours of NTIE factories are the main obstruction for them to join local people's activities. There are two shifts and each shift lasts for 12 hours. Thus, no matter which shift they work, the workers are mostly too weary or the ceremony tends to be at unavailable times in the morning or afternoon (a morning shift typically lasts from 8.00 am till 8.00 pm and a night shift from 8.00 pm to 8.00 am).[19]

Greeting and introducing newcomers in order to establish friendships is not a problem at all for contacting NT Thai people. Even though to wave hands, saying 'hello' or saying 'thank you', as in the west, are uncommon to them. To contact NT Thai people is fairly simple since in general, the NT Thai people will take care of their new guests very well as the following idiomatic expression below.

[19] Some NTIE workers tend to use their leisure time after the night shift by going to the pubs and getting drunk. In the common view, it is very weird to get drunk starting in the morning, but lots of night shift people do. They start to drink from 8 am onwards until around 10 am, then go to bed in order to prepare for the next shift. Many local pubs and restaurants adjust their opening times as well, staying open almost 24-7 so as to serve these huge demands. After the night shift workers retreat, the shops close for a while and start their businesses again from 5 pm for the normal day shift factory workers. The pubs and normal restaurants have lucrative income from these high demands.

ยินดียิ่งแล้ว แขกแก้วมาเยือน

jin0 di:0 jiŋ2 lɛ:w3 $k^hɛ$:k1 kɛ:w2 ma:0 juan0

delighted good greatly (PFV) guest gem come visit

(We are) so delighted that (our) valuable guests, like a precious gem, come to visit (us).

The above sentence denotes that the NT Thais are so pleased and welcome any newcomers or guests with good food, water, supplies and shelter if they need. They respect their guests and welcome them a great deal. Metaphorically, they believe that if they welcome the guests (or the target domain[20]) who are compared to precious stones/ gems (source domain), the guests will bring good things and lucks to them because they are valuable. I think, strategically, they treat guests nicely with their warm welcome because they might believe that the guests will bring them good opportunities, prosperity and spread the good message about this house/ family in return.

After initiating the good relationship, then, NT Thais tend to gradually observe them, learning from their histories, family or relatives backgrounds or working with them for some time, until finally adopting them as group members in a short period of time. Thus, it is quite challenging for either locals or immigrants to get to know one another or draw each other into the same circle of friends.

However, to conduct this research, I had to face some obstacles for contacting people, especially for the immigrants. As during the longest holidays such as Songkran festival (former Thai New Year – the 'splashing water festival') or the New Year long weekend, most immigrants leave the community to visit their hometowns instead of building new networks and merging into the MBK and Lamphun people. All malls and markets would be closed then. From my interviews, the immigrants do not feel that they belong. Feelings of connection and sharing a sense of community are extremely low. The purpose of coming to the NTIE and MBK community is to seek work, and once they get promoted, they want to leave for better prospects and lifestyle. Thus, it is difficult for the locals and immigrants to bond and form social networks, even though the heads of the village keep trying to weave them in.

[20] Conceptual metaphor analysis

Although the strength of the community seems to be weakening, it is undeniable that local people are still very happy about the economic prosperity. Most of the participants, especially middle class people, expressed sadness about the community and that some favourable customs and traditions of the NT Thai have faded away, with some of the mainstream being replaced, like in Bangkok. They are satisfied that people still have jobs, with other positives like their local siblings and relatives living together or being nearby in the Lamphun province. Local new generations do not need to be separated by having to leave to find jobs in Bangkok or other industrial estates in other provinces, as happened in the past. Many locals have been transformed into millionaires due to land sales producing huge profits. Most businesses in all levels are extremely lucrative due to high demands for goods and services. It seems that locals feel a bit sad and nostalgic for the peaceful old days, however, without resistance, they feel they have to embrace both the pros and cons.

## 2.6 Social network structure in the NTIE community

In Milroy's influential sociolinguistic survey (1980, 1987) in Belfast, a strong network score in Ballymacarrett in North Ireland was found among male speakers according to the density and multiplexity criteria. Males had strong tie or close-knit networks since they shared activities and lifestyles. This is similar to NTIE community[21] in the past to some extent. (Other network patterns were also found among the Belfast neighbourhoods; both strong and weak ties occur in urban settings, see 3.7.) However, many MBK locals worry that by the next 30 years, weak ties will be increasingly common in the MBK community. People's interaction will be extremely low, isolated and indifferent, and individualism will be normal practice. An extended family surrounded by close relatives' houses will be substituted by a single family, as found in the high economic level area. The young adults are likely to interact with other more diverse social network groups.

[21] It should be noted that in all three area in Milroy's study, the respondents came from the working class while in this thesis, the respondents include a fuller range of (three) social classes.

Among MBK residents in the NTIE community, the study showed that the elderly have dense and multiplex (strong) networks. This is because the elderly tend to avoid mixing in new or different age groups due to the age gap, different interests and different responsibilities in their lives. Thus, the elderly are able to maintain their strong network most of the time. People from different age groups do gather together in relatively close groups, or live nearby to one another, but more rarely now. With the exception of these two conditions, the isolated family tends to be flourishing. The extended family is exponentially minimized in the current NTIE situation.

Another trend is that MBK middle-aged locals tend to marry outsiders. This affects dialect shift because the outsiders bring different dialects into contact with the locals (and vice versa). Sometimes, the couples leave the MBK community to start their family elsewhere.

In other extreme cases, the new generation of MBK locals who belong to the middle-middle class or above, are likely to leave the NTIE community, especially the MMC civil servants. It is current practice that the wealthiest migrate to Chiang Mai province, which has the largest city in the NT region.[22] Thus, they are likely to be cut off from their close relatives. It appears that the next generation of this high-status group will adopt either the BKK Thai dialect or the urban NT Thai dialect of Chiang Mai instead. Therefore, if we consider the dialect death and maintenance situation in the NTIE community, changes in social networks may contribute to the NT Thai dialect in this area apparently undergoing a dialect shift towards BKK.

### 2.7 Other observations

The MBK locals pointed out to me that the NTIE city planning is very poor, with no green parks or recreational areas for the people in the NTIE communities to provide for the massive number of 100,000 residents. The city plan reserves some area for agriculture only, but not a forestry zone as expected. A lot of dormitories and simple housing emerged without regulation.

[22] This excludes the entrepreneurs who make a fortune in the NTIE community and still reside here.

Many pubs, bars and secular places sprang up around the NTIE. Interviewees suggested that these places have not been properly zoned, and many pubs are very close to primary schools and religious institutions. The authorities are unable to deal with all the problems and cannot change the zoning because of poor city planning, and the number of pubs is too high for control.

Many water problems have emerged, with no reservoir in this area and the Mae Kuang river as the only source of topsoil hydration. The river is very small and obstructed by a series of small weirs for irrigation purposes. Owing to water obstructions, as well as extreme droughts in Thailand over the past ten years, the river has often completely dried up. Another source of water is underground water. However, due to the fact that this is a clay area, without normal soil layers, the source of artesian basins is naturally very deep at more than 14 metres, making it difficult and expensive and almost not worth doing. The rivers are also said to have been polluted by the factories and domestic households not having proper waste arrangements.

The elderly noted that the weather inside the NTIE and vicinity is much hotter than outside it. The researcher also experienced this problem as it was extremely hot when interviewing people outside, on the roofs of their houses, or even sitting under canopies or nearby trees. People hypothesized that greenhouse gas emissions have caused the scorching atmosphere, at around 40-45C. Short term plants such as banana trees no longer grow well and are often stunted. They wither from the heat even where water supplies are available. As you can see from the aerial view from the figure 2.7 below, there is no green area at all in the NTIE zone which includes the eastern and the western site of the industrial site. Thus, during the interview, the temperature was far higher than outside the industrial site. In both sides of the NTIE zone, it resembled being in a greenhouse. To conclude, living in such a high economic impact area does not guarantee pleasant living conditions.

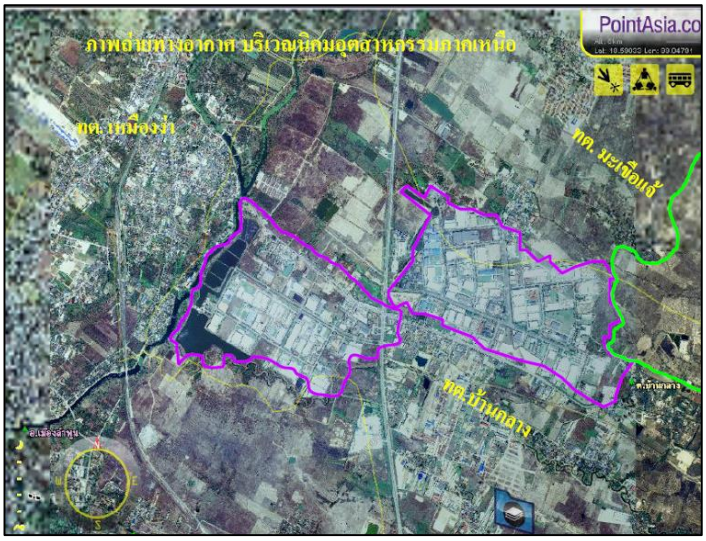


Figure 2.7 The aerial view of the Northern region industrial estates located on both sides of the superhighway

## 2.8 The target participants

As this present study aims at identifying the dialect shift and maintenance situation via a variationist approach, the major focus group will be long-term residents who are native NT speakers in this target area (2.6.1), and currently reside in the MBK area. The other group is the internal immigrants who are native BKK speakers (2.6.2).

### 2.8.1 The MBK participants as a focus group

In total, there are 66 respondents. The first 57 respondents, or 86% of the sample, are all **the MBK participants/ locals** from this target area. Other dialect competence will be observed and examined later. They had to be living in Lamphun province, especially in the MBK area, for more than 10 years to qualify for the sample. This criterion suggests that these speakers may legitimately belong to the community, and

potentially have a sense of engagement; given the NTIE's recently and rapid social changes, it is not possible to guarantee "localness" for all speakers, and typical measures (e.g. being born and raised in a community) are difficult to implement, since housing is largely new and has been drastically transformed within a generation. By contrast, **immigrant BKK speakers** were only required to have spent 2 years living in the NTIE.

Figure 2.8 below demonstrates an association between age of speakers and the amount of time people have spent in the NTIE community for both groups of speakers combined.

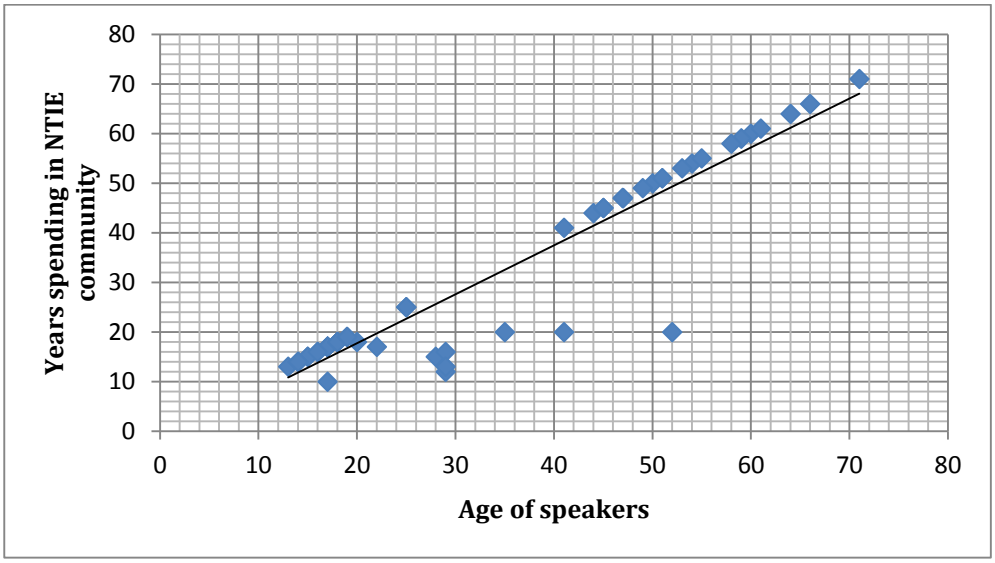


Figure 2.8 The positive association between the age of the speakers (y-axis) and the year spending in the NTIE community (x-axis)

Most of the respondents (around 90%) in NTIE community demonstrate a linear trend (figure 2.8) or a positive association between the duration of time spent in the NTIE (y-axis) and speakers' actual age (x-axis). This means that the older they are, the longer they have lived in this NTIE community. Thus, the criteria made with regard to the minimum residence period of the speakers appears acceptable. Most of the natives/locals and internal immigrants have spent more of their lives in the NTIE than

the researcher expected. A large number of people far exceeded even a stricter criterion of 20 years' residence.

In fact, though these MBK locals mostly use the NT Thai dialect as their mother tongue, they can also use the BKK Thai dialect with a high level of competence. The BKK Thai proficiency found in NT speakers is an asset gained from their educational and family backgrounds. Certain participants can speak BKK Thai very fluently because their family uses both dialects. In certain circumstances, one of these two dialects becomes passive for bidialectal speakers originating in the MBK area. Some speakers basically speak the NT dialect with their family but have to shift to BKK Thai in the school context, due to its use as a medium of instruction.

In addition, it should be noted that some of the speakers can speak Yong. However, they generally admit that NT Thai is their mother tongue and prefer to speak NT Thai instead. To some extent, the MBK people's ability to speak Yong is derived from their dialect contact with Yong speakers for many reasons, such as marriage or work peers. However, most speakers usually employ NT Thai as a default. Their reports regarding their linguistic competence and their mother tongue sometimes seemed dubious to me. Many MBK-origin informants claimed that they are fully capable of speaking BKK Thai or NT Thai or vice versa. According to this research, however, these two things are extremely varied, depending on style and the influences of other circumstances. Therefore, testing participants with various experiments seemed more reliable and believable. This is in accordance with Trudgill (1972) who showed that people can both over-report and under-report pertinent aspects of their linguistic usage. The detailed demographic information of participants is shown in chapter 4 on research methods.

### 2.8.2 The Bangkok-vicinity participants who use BKK Thai as a reference group

In this group, I did not intend to gain a similar number of participants as in **MBK locals/ participants** (57 persons). This second cohort of **BKK participants** accounts for 9 people, or 14% of the sample, all from a central Bangkok province. This is regarded as the reference group (although given the lack of variationist and sociolinguistic research on BKK Thais, the idea of a reference group is necessarily problematic; however, the present comparison seemed clearly better than none). Because the influence of the BKK Thai dialect is the strongest of all the immigrant languages or dialects, it was decided that the most straightforward approach was to focus on the BKK speakers' influence on locals. However, this group functions solely as the reference group (in the main analyses and regression models), and I did not study the effects of language shift and maintenance on their speech.

In addition, this group is surprisingly difficult to locate. Most people who migrate to NTIE are Lamphun people and from the neighbouring NT region provinces, using the NT Thai dialect. Accordingly, the number of the reference group is very small and unbalanced compared to the target group (MBK locals). Likewise, considering the duration of time spent in MBK, the BKK participants who use BKK Thai natively are expected to have been living in MBK area for at least 2 years, and are usually found to have been living there longer than that, with half of them having stayed for more than 10 years. Presumably, at this point, internal immigrants might have some time to become exposed to a new dialect (NT Thai dialect) or might entirely shift or deviate from their original dialect. It was not possible to investigate their individual degrees of shift or acquisition. Other details of BKK respondent demographic information are explained in chapter 4. It is worth noting that the BKK Thai respondents mostly come from the working class with lower levels of education. This may reflect social stratification among speakers of BKK dialect, and their linguistic competence.

In the next chapter, aspects of sociolinguistic theory are reviewed and discussed in the light of the literature, including all relevant factors, especially social factors and social network influences.

# Chapter 3

# Literature review

## Introduction

In this chapter, the literature in relation to sociolinguistic theory and previous works are reviewed. Primarily, 1) language maintenance and shift will be discussed. Several explanatory social or demographic factors will be reviewed, namely, 2) sex, 3) age of the speakers, 4) social stratification and social occupational class (SOC). After that, 5) geographical origin pertaining to the ethnicity variable will be reviewed. Then, 6) educational level of the speaker as a social factor, as well as language policy in Thailand will be elaborated. Later 7) the social network analysis (SNA) in Milroy and Milroy (1987) will be discussed along with Granovetter (1973) and the analysis method adapted from Hirano (2011); and 8) Style, which can be both potentially assigned as a social or a linguistic factor will be discussed. Finally, 9) relevant sociolinguistic studies conducted in Thailand are addressed, namely, rhotic consonant onset (r), the consonant cluster with rhotic onset (Cr) and other linguistic variables. This literature review can shed light on the understanding of dialect variation, change and maintenance and the explanatory factors regarding the NT Thai dialect, the BKK Thai dialect and other related linguistic variation and change issues across the world.

## 3.1 Language maintenance and shift in variationist study

This study focuses on shift and maintenance via the variationist approach, the theoretical grounds of language shift and maintenance are relevant. The major works pertaining to language shift and maintenance are illustrated below.

### 3.1.1 Language shift

Potowski (2013: 231) defines the terms *language shift* (LS) and *maintenance* (LM) as well as related factors promoting them. Potowski (2013) states that language shift is the replacement of one language by another language as the primary means of communication and socialization within that community. Potowski (2013) accepts the principle from Fishman (1991) that language maintenance must involve the inter-generational transmission of language.

This means that the target heritage language must pass from parents to successive generations. If intergenerational transmission of language is not cultivated and perpetuated, the speakers will shift to another language. Even with great attempts and support from governmental sectors and local symbolic institutions such as church and schools, the language shift/decay situation cannot be much improved if the family is not seriously involved.

Potowski (2013: 322-332) identifies the factors which lead to language maintenance and shift, and which are interrelated and interdependent, in four dimensions:

First, individual level factors: the proficiency in the minority language of those bilingual speakers, and their attitude towards the heritage/minority language, are crucial to determining the state of language decay.

Second, the role of family is the most important factor, the intergenerational transmission of language needs to be carried on.

Third, the community factor includes formal educational systems, social networks and religious institutions. Without the family involvement in language maintenance, it is difficult to preserve the heritage/local language. This is because if the heritage language or dialect is strong enough to resist the shift, it is used pervasively in the house. Another important factor is social network strength in the community (§3.8). Finally, religion can play a crucial role for language preservation. For instance, Yiddish-speaking Hasidic Jews in NY City, and Arabic families in the US, rely on religious schools. In Thailand, Islamic religious schools in the three provinces in the most southern part are the centres of language preservation of the Bahasa Melayu Patani language.

Finally, the broader societal factors inflicting shifts in minority languages include national and world political trends regarding language prestige and cultural values. These trends cause changes and variations in people's attitudes through time.

Similar to Potowski, Finocchiaro (2005: 1-2) summarises the overview of how Language Maintenance (LM) and Language Shift (LS) became an independent field of investigation in the early 1960s, pioneered by Joshua A. Fishman. Fishman (1989) described the emergence of either LM or LS, which derive from the occurrence of two linguistically different populations coming into contact. After the contact, and the interaction, the effects are considered for at least three generations.

Fishman (1989) hypothesises that the immigrant group can lose its language because of intergroup social dependency. This means that incoming groups will soon be dependent on the language of the host community. The immigrant group will comply and adopt the new language even if this is not enforced by the community's law. Fishman stated:

> "…In a language contact situation, the speakers of the minority language (B) can reap the rewards, be they material, professional, governmental or educational, of their relationships with the host

> community only if they communicate in the majority language (A). Thus, intergroup social dependency and relationships conducted in language A will also, in time, impact on intragroup relationships. People in the community B, who are speakers of A, are given status because they speak A. Mastery of this language in the community B becomes a desideratum and, finally, a hallmark of leadership status within the community B itself" (Fishman, 1989: 206).

At this point the spread of language A is accompanied by language shift from language B. In the last phase of the shift, the majority language reaches the family unit per se. A is learned in the home itself. Children of families who traditionally speak B learn A as a mother tongue from their parents who have become A speakers. Within three generations the majority language will become the language of the crib for the speakers of the minority language. Fishman says that this will happen even if the nation has a democratic context and a policy permitting pluralism.

The contact of languages contributes to language hierarchy as the socially dominant A language becomes ranked high (H), and the minority language B becomes low (L). The higher language (H) generally has more power than the low language (L). This power contrast is manifested in both direct contact between immigrants or minority speakers and speakers of the dominant language, and also indirect exposure to (H) language. (This view draws on Fishman's (1967 rev. 2000) expanded notion of diglossia which includes unrelated languages, see below.)

Other linguists propose the processes of linguistic shift and maintenance in other aspects in relation to language contact. Paulston (1994) claims that prolonged language contact contributes to three possibilities leading to either dialect maintenance or shift. In dialect shift, firstly, speakers can maintain their own dialect and resist change, or learn the language of the majority. In this case, some broker members of the group will learn the majority language. Secondly, speakers may become bilingual when their own language positioning changes because the minority language is constantly in contact with the majority language, and therefore diglossia emerges (where the high linguistic

form (H) and the low or vernacular linguistic form (L), co-occur with functional differentiation), in Fishman's (1967 rev. 2000) broad sense. Finally, they may entirely shift from their own (minority) language to the language of the majority. This process requires typically 3 generations to develop.

### 3.1.2 Diglossic situation (diglossia)

According to Ferguson (1959 cited in Mesthrie, 2011: 275), diglossia refers to multilingual speech communities which reveal a strict functional specialisation of languages. That is, a specific language is firmly assigned to a context or domain, and other social and situational variables do not easily alter the domain-specific distribution of languages. Ferguson's model requires a specific degree of genetic relatedness between the H and L varieties. Diglossia comprises two varieties, namely a vernacular language variety or "a low variety", and "a high variety" which is employed in formal situations such as in education and literature. Fasold also identified important characteristics of diglossia as follows:

> "a very significant aspect of diglossia is the different patterns of language acquisition associated with the High [H] and Low [L] dialects. . . . Most reasonably well-educated people in diglossic communities can recite the rules of H grammar, but not the rules for L. On the other hand, they unconsciously apply the grammatical rules of L in their normal speech with near perfection, whereas the corresponding ability in H is limited. In many diglossic communities, if speakers are asked, they will tell you L has no grammar, and that L speech is the result of the failure to follow the rules of H grammar." (Fasold, 1984[1])

There are a number of diglossic situations which go beyond Ferguson's original model. Fishman (1967 rev. 2000) elaborated the scope of diglossia, extending Ferguson's

[1] https://www.thoughtco.com/diglossia-language-varieties-1690392 Accessed [12 December 2017].

restricted concept to include the use of unrelated languages as high (H) and low varieties (L). For example, the Alsatian language (Elsässisch, a Germanic variety) in Alsace functions as the (L), and French, a Romance language, as (H). Caribbean English creoles have sometimes been argued to be cases of diglossia (e.g. Mufwene 1994), with the Creole as L and English as H. On the contrary, De Camp (1971), Patrick (1999) and Ferguson himself (1991) rejected the diglossic model for Caribbean Creole continua. Patrick (1999) studied the Urban Jamaican creole by using the variationist sociolinguistic approach, arguing for a continuum model in which the relatedness of vernacular and standard varieties did not amount to clear-cut diglossia. Field (2011) investigated more closely-related dialects, describing the diglossic situation between the mainstream variety of American English and nonstandard varieties of English, namely African American Vernacular English (AAVE), Chicano English, Vietnamese English (VE) and so forth.

In terms of language/dialect shift and maintenance predictions, Fasold's notion of "diglossic community" is relevant: "a social unit which shares the same High and Low varieties" (1984:44). While Fasold discusses the tendency for the strict functional separation of classic diglossia to "leak", typically with the H becoming less used in favour of the L, it is not always the case that dialect or language loss occurs. Both H and L varieties can coexist for a long while. In addition, in certain situations of diglossia, the indirect contact might result from media influence or political and economic enforcement to compel people to use (H) more than the native dialect (L). However, I do not focus on analysing the process of language contact and accommodation from this perspective, since NT Thai in the MBK area is not best analysed as a case of diglossia.

### 3.1.3 Language maintenance

Paulston (1994) also introduces potential factors contributing to language maintenance and preservation. However, this trend is still obscure and rather difficult to

assess, compared to shift. To begin with, there are the origins and types of contact situations in the political or territorial view: migrations, annexation (the incorporation of new territory into the domain of a city or community making it larger) and colonisation. Second, the enclosure of speakers: this refers to institutional separation or segmentation. Third, the degree of control over resources economically and politically affects the target language. These three entities seem not only relevant to dialect preservation but also to active dialect maintenance.

Paulston (1994) added some independent factors which can prevent shift and promote maintenance. Firstly, high knowledge level and the acquisition of a standard orthography (or the creation of a new orthography) can lead to preservation. Secondly, endogamy within the limits of a local community, clan, or tribe can promote language maintenance. This avoids language diffusion, shift and loss by intimate contact with immigrants. Thirdly, easy access to social institutions with formal instruction, such as for literacy in the mother tongue or the schooling system, can save a language. Fourth, a strong network of group adhesion is nurtured. This is highly related to endogamy. Finally, the population of affected language speakers must be large enough to still play a dominant role as the main language in use by the language community even though the incoming language is more prestigious and powerful.

These fundamental concepts can be related to this variation study in the MBK community. Certain groups of MBK locals with varied attributes face the challenge of dialect shift and loss. In contrast, some groups with certain attributes are found to be strong maintainers of the NT Thai dialect.

Nelde (1986 cited in Paulston, 1994) suggested that there are eight factors which contribute to language death in Europe. The most crucial factors deal with psychological aspects and attitudes of the speakers, while others involve socio-economic issues: 1) a lack of courage and self-consciousness, 2) a belief in the superiority of the foreign standard language, 3) more likelihood of better socio-economic status through that incoming foreign language, 4) a foreign language environment, 5) a minority population which is gifted at learning languages, 6) a minority which reconciles themselves to the

prevailing incoming language, 7) pressure that is activated by outsiders/ foreigners, and 8) when children are sent to foreign-language schools that cause the demise of local language in bilingual situations.

To diagnose the language shift situation, Lewis & Simons (2010) critique and elaborate on the Graded Intergenerational Disruption Scale (GIDS), which was developed by Fishman (1991), into their own Extended GIDS (EGIDS) model. The grid in table 3.1 suggests a language's degree of risk with regard to extinction, and how to improve the situation. This original GIDS model has been used for language endangerment study for more than two decades. As a key attribute of the model, Fishman (1991 cited in Paulston, 1994) aimed to revise the role that the family plays in language usage, and their prominent role in language maintenance, preservation and revitalization.

The grid has provided the theoretical underpinnings of much of what practitioners of language revitalization have engaged in. Fishman's (1991) GIDS measure has 8 levels: higher levels mean higher risk of language loss.

Table 3.1 Graded Intergenerational Disruption Scale (adapted from Fishman 1991)

| GIDS (adapted from Fishman 1991) | |
|---|---|
| LEVEL | DESCRIPTION |
| 1 | The language is used in education, work, mass media, government at the nationwide level |
| 2 | The language is used for local and regional mass media and governmental services |
| 3 | The language is used for local and regional work by both insiders and outsiders |
| 4 | Literacy in the language is transmitted through education |
| 5 | The language is used orally by all generations and is effectively used in written form throughout the community |
| 6 | The language is used orally by all generations and is being learned by children as their first language |
| 7 | The child-bearing generation knows the language well enough to use it with their elders but is not transmitting it to their children |
| 8 | The only remaining speakers of the language are members of the grandparent generation |

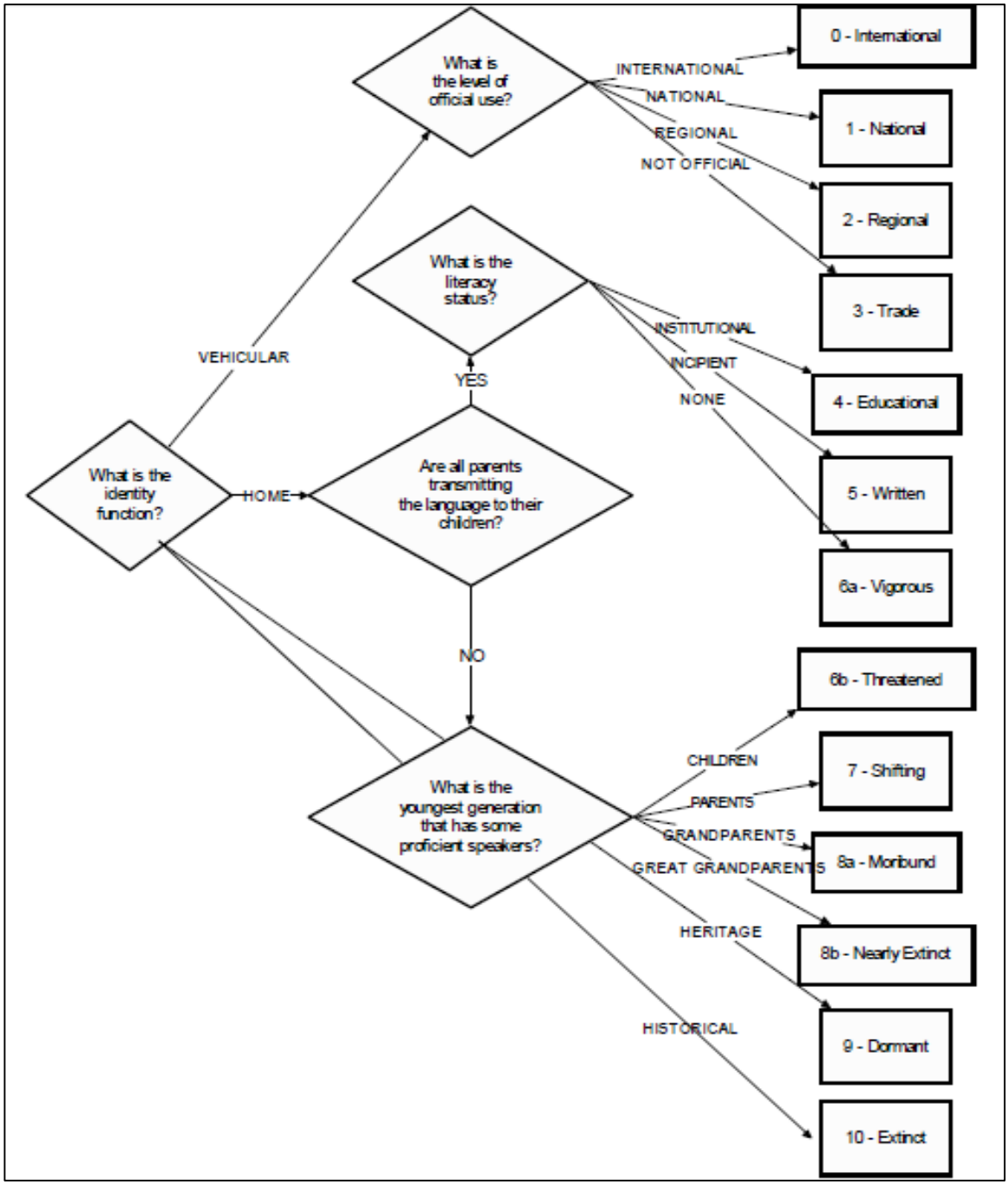


Figure 3.1 Diagnostic decision model of Graded Intergenerational Disruption Scale (GIDS) (Lewis & Simons, 2010), extended version

The flowchart in Figure 3.1 presents Lewis and Simons (2010)'s extended model, which adds several categories and divides others into two levels.

The ideas from Fishman (1991) and others were intended to deal with the macro level of social explanations. They mostly deal straightforwardly with language loss and language preservation rather than working on synchronic change or making predictions on structural, including variationist, grounds, and are not primarily concerned with a standard-and-dialect situation. Some aspects of Fishman's works can help diagnose the dialect endangerment of NT Thai in MBK area. This current work specifically deals with the topic of the internal immigrant influx in an industrialised scenario at a micro-linguistic level (phonological variation).

### 3.1.4 The implications of dialect maintenance and variationist research for this current study

There are a number of variationist studies with implications for language/dialect maintenance. Here, I note a few classic influences on this current study, namely Milroy (1987), Wolfram, Hazen, & Schilling-Estes (1999) and Trudgill (1972), respectively.

Milroy's (1987) Belfast study presented the close-knit network functions found as a norm enforcement mechanism leading to linguistic maintenance of a vernacular dialect. Milroy examined the social network structures of working class urban people by using two social network attributes, multiplexity and density. Three communities were investigated, namely Ballymacarratt, Clonard and the Hammer. The study found that a high Network Strength Score was correlated with the use of vernacular or non-standard forms. In many cases, male speakers showed a high rate of use of the non-standard forms in their vernacular. These men belonged to tight-knit social networks. By contrast, the non-standard forms were less likely to be favoured by women. She argued that the women belonged to less dense social networks (SN), most clearly in Ballymacarrett, with an important exception in Clonard, which showed that economic and social shifts may

produce network patterns which change this stereotypical picture. The SN issues are discussed in detail in §3.7.4.

Wolfram, Hazen, & Schilling-Estes (1999) investigated linguistic variation in Ocracoke Island, part of the Outer Banks located off the coast of North Carolina. The research aimed to shed light on "the sociolinguistic dynamics of the community from the perspective of the community itself" (Wolfram, Hazen, & Schilling-Estes (1999 cited in Chambers, 2003: 70-71). One main result led to the dialect maintenance implication of locals holding out against the mainland's dialect influence interference. Over the course of several years, the research team visited the island regularly, for up to two weeks each time. The team attempted to engage in the community's activities in order to obtain local acceptance and become acquainted with them, joining many social events, poker games, dinner and visiting many families for fitting into the local norms. The benefit of this approach went beyond the level of macro-sociolinguistic study. The team achieved insider knowledge, which contributed to the in-depth explanatory possibilities of the implications of linguistic variation and maintenance.

The researchers observed that local members who joined the poker game network were the linguistic maintainers. This poker network was reserved for men. These male locals had different educational backgrounds and had varying degrees of contact with outsiders. However, these poker players shared a strong-positive ideology of being authentic Outer Banks (Ocracoke) islanders. The evidentiary support was derived from their high rate use of vernacular linguistic features, such as the backed and rounded /aj/, as opposed to other groups. This research shared several key points with Labov's (1963) Martha's Vineyard study and carried it further.

Another dialect maintenance implication can be found in Trudgill's work in Norwich (Trudgill, 1972: 187). The study reveals that working-class speakers attempted to conserve some local linguistic forms and resisted linguistic changes from the standard accent, RP. Men preferred non-standard forms more than women because these linguistic forms retained a sense of social solidarity, with a sharing of community pride or loyalty. Trudgill (1972) investigated three vowel variables, namely (er), (ō) and (ā).

The study showed that women tended to report that they used more RP forms, however, in actual speech, they used more non-standard forms than RP ones. This over-reporting was said to show women's linguistic insecurity. However, men showed the reverse effect. Males reported that they frequently used non-standard forms more than they actually did. This underreporting behaviour reflects that males constructed a stronghold norm rather than complying with prestige or standard norms. This was called "covert prestige". It was employed mostly by men and it reflected on the specific variants they used, and what they perceived about their own linguistic performance. Male speech indexed unity, solidarity and masculinity among men, and social identity in the specific society to which they belong. While later work has questioned and reinterpreted the gender-based explanation (e.g. Gordon 1997), these findings nevertheless reveal dialect maintenance implications which can be associated with this current study of the NTIE community.

## 3.2 Social variable: sex

First, the sex factor will be discussed, starting from, 1) the definition of sex, 2) sex/gender in Labov's (2001) theory of language variation and change, and 3) other relevant issues.

### 3.2.1 Defining sex and gender

Sex is a biological difference based on the anatomy or physiology of the speakers. As addressed in Cheshire (2004: 426 cited in Prompapakorn, 2005) gender is different from sex because the social role and not the biological role is addressed. Gender is a culturally-embedded aspect of identity which is gradient and complex with a number of facets and dimensions. Earlier researchers sometimes defined gender via masculinity

and femininity by using the rating scale from 0-6 referring to the Kinsey scale[2] (1948) in psychology, which involves societal and psychological aspects. The fuzzy boundary of gender is very complicated to judge. Therefore, considering the physiology of the speakers might not give adequate information regarding the gender of the speakers. Thus, in this research I use "sex" in the sense of biological inherent attributes, rather than gender.

### 3.2.2 Linguistic variation and sex, and the mechanisms of linguistic change associated with sex

Labov (2001: 274) described the relationship between sex and linguistic variation patterns, relying on a set of principles. He showed that females possess roles both as linguistic conservers and innovators at the same time, according to the situation (the mechanism of sound change is discussed below in §3.4.2).

*Principle I*

'Women conform more closely than men to sociolinguistic norms that are overtly prescribed, but conform less than men when they are not.'

*Principle II*

'For stable sociolinguistic variables, women show a lower rate of stigmatised variants and a higher rate of prestige variants than men[3].'

*Principle III*

'In linguistic change from above, women adopt prestige forms at a higher rate than men.'

(Labov, William, 2001:261–293)

[2] It is also called the Heterosexual–Homosexual Rating Scale
https://www.kinseyinstitute.org/research/publications/kinsey-scale.php Accessed [1 August 2017]
[3] The principle of the linguistic conformity of women

Labov made the distinction between conscious and unconscious change, or what he termed "change from above" and "change from below" (see §3.4.1). In keeping with the sex and prestige pattern, he generalised that women lead changes that come from above the level of social awareness, and involve borrowing the new prestige forms of higher-ranked social groups, whereas both men and women contribute to the changes which spread from below the level of social awareness, and away from the accepted norms towards the vernacular.

Labov points out the relationship between sex difference and linguistic change from above. Adopting prestige forms at a higher rate than males makes women appear more socially conservative. Meanwhile, women appear to be more innovative than men, because they also adopt new variants more quickly, typically leading changes from below. Thus, women perform both demeanors at the same time. Labov elaborates that women deviate less than men from linguistic norms when the deviations are overtly proscribed, but more than men when the deviations are not proscribed. These addressed behaviour Labov (2001) called it as the *gender paradox* of women which is in relation to change from above. Women might treat language as fashion in attire. Women are the leaders in both fashion and language.

Even though sex of speaker is a key role in numerous language change and variation studies, Zhang (2005) found that the socio-economic factor was the strongest predictor while sex was irrelevant. Zhang differentiated the sharp distinction between linguistic variants which were used by two different social class groups in the Mandarin speakers in Beijing. The yuppies or the MMC/HC cosmopolitans (middle-middle class to high class) differentiated themselves from the mainland China state managers (lower-middle class) by using many different phonological variables, such as full tones. The yuppies not only attempted to construct their own indices and identity, but also created some stigmatised variants to dissociate themselves from the mainstream middle classes. McCafferty (McCafferty, 2001, Amador & McCafferty, 2012) in a study of English in Derry, Northern Ireland, also found that, unusually, sex is not a crucial explanatory factor for the linguistic variation found amongst Protestant and Catholic speakers.

### 3.2.3 Covert prestige and linguistic maintenance

Stigmatised variants by definition are perceived as unfavourable from the mainstream point of view in a speech community. However, certain speakers possessing different beliefs, or sharing eccentric norms from the cohorts, can characterize the same variant differently by viewing it positively. This is called "covert prestige" as it is hidden.

Trudgill (1972: 187) introduced the term "covert prestige", which he found to be embraced by males in Norwich. They prefer non-standard forms more than females because these linguistic forms inherit a social meaning of solidarity, and share a sense of pride or loyalty to a community.

The work on covert prestige by Trudgill is in accordance with the Martha's Vineyard research conducted by Labov (1972).[4] Labov observed a different pattern where men can initiate the language change from the mainstream in certain circumstances. Labov found variation in raising and centralizing diphthongs, such as [au] to [əu] in "house" and [ai] to [əi] in "white". He concludes that there was no conscious awareness among the islanders that these sounds are shifting internally, since there is no variation between different styles of speech. However, the centralized diphthongs were used mostly by men, especially by fishermen aged 31 to 45. In addition, the diphthong characteristics were similar to the phonological forms of older people on the island. This index shows the authentic values of the adults that rejected incoming forms invading from the mainland. Labov (1990) interprets this linguistic behaviour as "covert prestige" which indicates that working-class adult males were adopting non-standard local variants possessing social meanings such as solidarity and masculinity which emphasize certain group values.

In Trudgill's work in Norwich (1972), the coda (ɪŋ) variable is composed of two variants, namely the standard form [ɪŋ] and the vernacular one, [ɪn]. The three

[4] Trudgill emphasised the sex difference while Labov focused on the sense of community with regard to covert prestige.

demographic predictors contributing to the linguistic variation were social class, style and sex. Trudgill points out that women avoid the stigmatised form and adopt the standard form more than men, using the standard form more in more formal speech styles. This result generalise to most dialects of English. It has been interpreted as indicating that females have a higher linguistic awareness than males.

### 3.2.4 Social meaning, power and the linguistic marketplace

Apart from the social meaning attached to the linguistic form/variant, the issue of power and status in the society associated to the linguistic form should be addressed. Wodak and Benke (1996: 135-40) outlined the relationship between women and prestige forms associated with the linguistic marketplace. Bourdieu (1977) coined the term *linguistic market*. This entails that each variety of language or dialect functions as a commodity. Thus, it can be exchanged, traded, negotiated and given unequal values in the community. All linguistic transactions in the community are metaphorically and metonymically implied to belong to the market. Each speaker possesses a different value of capital. Linguistic market is an attribute of the cultural capital that humans inherit differentially.

Sankoff and Laberge (1978) conclude with the three components of the importance of the linguistic market as an explanatory tool of linguistic variation, namely, 1) social context, 2) power or social pressures with varying scales, and 3) knowledge or the linguistic/communicative competence of the speakers. It is regarded as speakers' linguistic capital which exhibits people's different value, or a resource to elevate people's value in the realm of linguistic commodity.

Generally speaking, standard dialects and formal languages normally enjoy more value because of higher prestige and power over other varieties. However, in certain contexts, the latter linguistic varieties can have a higher value, e.g. in covert prestige or the language use of teenagers. Once sex was related to the degree of standard variety

exposure, women tended to be exposed as higher users of the standard form (for stable variables or changes from above), especially lower middle class women, in order to gain more symbolic capital and power. Thus, women will modify their speech more than men. This is akin to the linguistic insecurity found in women, addressed by Labov (1990).

Apart from linguistics, some evidentiary support is drawn from psychology and physiology to argue that females are linguistic leaders as well as, to some extent, superior linguistic users to males. Through socialization, activities and educational bias during the childhood period, Chambers (1995: 147) stated that females have been less encouraged in visual and spatial skill training than males. Therefore, linguistic competence in females was more promoted and emphasised. In addition, in terms of physiological and medical support, he reports a number of claims making indirect implications of difference between two sexes, but most are not directly linked to the superiority of females in speech ability. Cameron (2007) also questions such links and their implications. Thus, the female superiority claim is still debatable and needs more scientific experimental support.

It is widely known that females are likely to be linguistic trailblazers in synchronic change studies. Nevertheless, the Middle East or the Arab world and other places reveal the reverse effect that males can be the leaders as well. Thus, the results can be varied but predictable. In Middle East community circumstances, Haeri (1987: 174 cited in Chambers, 1995: 155) investigated the (q) variable in three Arabic communities, namely Cairo, Amman and among international varieties of Arabic, across both sexes. The variant uvular stop [q] is the standard form, the glottal stop [ʔ] is the urban form, while the velar stop [g] is the stigmatized form. Haeri found that men predominantly use the prestige form [q], which is associated with Classical Arabic education, more than females. Also, male speakers use the stigmatized form, [g] more than their counterparts as well. Thus, this finding argues against the sex paradox premise proposed by Labov. However Haeri argued that [ʔ], the urban form used more heavily by women, is actually the closest equivalent to the “standard” forms studied in Western urban dialectology.

Also, in the context of the Middle East in Asia, Bakir (1986: 6) argues that in the Arab world, men are the linguistic innovators rather than women. Bakir suggests that because of the different sex roles and socio-economic background, the Arab people differ from others. Women tend to be more passive and static as they stay at home, deal with household chores and mainly raise children. Meanwhile males gain more active roles and are mobile, such as running businesses as breadwinners. In many Arab communities, the custom is to segregate people's roles according to sex. Women are expected not to trespass on male careers or copy male behaviour. Arguments like this run counter to those by Haeri (1996), Eckert and McConnell-Ginet (2013), Milroy (1987) and others which identify gender as locally bound up with changing social and economic conditions, rather than monolithic and predictable in its influence.

### 3.3 Social variables: age, life stages and age-grading

Age, the duration of time spent and experience of life events, are prominent factors in people's language and contribute to the process of language variation which leads to linguistic maintenance or shift. Each age group experiences the factors differently.

Eckert (1998a) stratified the properties of age into 4 ranges.

The first age range is childhood, which is the time for ensuring language transmission from the parents. Therefore, the comparison of the youngest group to the elderly group is the criterion for examining change in progress in trend studies in sociolinguistics. However, for language predictions, the historical records regarding language change have to be scrutinised through actual past records.

Secondly, in the adolescent period, it is the first time that people develop their own network. The language of the speakers in this age range might feature *age-grading*[5], so adolescent usage might be unstable and not actually represent language change.

Thirdly, in adulthood, language is the most stable before retirement. It is the longest period of time as well for facing the constraints of the working place, and speakers may respond more conservatively regarding prestige norms.

Finally, elderly people may again be more relaxed with their language use, sometimes resembling adolescents in the profile of age-grading. They are likely to feel less societal pressure.

In sociolinguistic studies, managing age division can be done through either an etic or an emic approach. Eckert (1998a) suggests that with the etic approach, the age of the speakers is arbitrarily classified, e.g. based on their biological ages with equal age ranges such as every decade: 10-19, 20-39, 40-59, and 60-79 years old.

In emic approaches, on the other hand, informants' age ranges are divided according to their "social age" instead. The social ages are considered to be from people's shared experience of time, such as life stages in certain communities, and more specific societies. This is done in the present study with reference to Thai norms for maturity and working life – see 4.5.1.

Relying on age-group comparisons to give an apparent-time change prediction is one of the major issues in sociolinguistics. Apparent-time change estimations constructed by sociolinguists (Labov, 1990) assume that most linguistic attributes are acquired during a speaker's childhood and that later the attributes are carried on unchanged throughout the speaker's lifetime. The apparent-time change or the change in

[5] Labov (1994: 83 cited in Wagner 2012: 378) defined that age-graded effects are individual linguistic changes against a normal situation of community stability. This definition can explain the linguistic change if the community can be shown conclusively to be stable with respect to use of a variable, then any individual change over the lifespan can be classified as age-grading. In addition, Trudgill (2000) claims that the age-grading effect is not limited to the changes at any one particular stage in life. However, it can emerge in various states of life, such as in babies, adolescents, young adult speech, and elderly speech.

progress prediction can be considered to be a form of synchronic change analysis, where language is analysed for a particular moment in time, whereas it is in contrast to a diachronic change analysis which aims at historical linguistic study.

As it is impossible to conduct a full panel study which can take a lifetime, a practical apparent-time change prediction is proposed by Labov (2001). To be adequate for drawing a conclusion, it requires at least three different age cohorts to make a claim of language change. Predictions may be rejected due to confounding factors which emerge later.

One such confounding factor is age-grading. Meyerhoff (2006) addresses the concept of age grading which can emerge when people shift their speech throughout their lifetimes, but the community as a whole does not change. For example, when teenagers approach early adulthood, they alter their speech behaviour due to careers forcing them to comply to speak formally, according to the norm. Once they get old, their speech style tends to be more relaxed.

Apart from the prediction, Sankoff and Laberge (1978) point out the relationship between the linguistic marketplace (Bourdieu, 1977) and the age grading effect in sociolinguistics. They explain the different market values of adolescents' speech and adults' speech in the workplace in different contexts. The decreased capital value of adolescents' or young adults' speech contributes to the temporary linguistic change in these adolescents once they approach the job market.

In a micro-level of the market, such as in the context of family and friends, teenagers can value the variety of their linguistic assets very highly. This attribute is an index of solidarity of the teenager's groups. It implicitly reveals that the adolescents share the same norm with their ties. However, once these cohorts become adults, the use of non-standard variants generally decreases.

In the macro-market, such as the whole (new) community and workplaces, pressure is placed on these new workers. Young adults need to survive by giving up their teenage or local variety and adopting the standard variety if they want to work

successfully and be acknowledged. Conversely, once they resign or retire from this work pressure, the exerted force of the standard variety is no longer dominant. These speakers can use their original non-normative variety again. Thus, linguists have sometimes characterised age-graded variation incorrectly as linguistic change.

### 3.4 Social variable: social occupational class in Thailand context

Social class is one of many crucial factors explaining dialect variation, shift and maintenance, especially in variationist studies.

UK social scientists, and to a lesser extent sociolinguists, have adopted such widely known class stratification schema as Goldthorpe (1978, cited in Rose and Pevalin 2001), which regards occupation and mobility as the best indicators of class differentiation and social stratification. However, my work has not adopted this categorization since it does not reflect the actual context in Thailand. I use the social occupational class findings of Chandhrawanich (1998) instead, which measure career prestige in the Thailand context. Her criteria better reflect modern Thai social classes and social stratification.

Chandhrawanich (1998) investigated how BKK Thai people view social class by using occupational prestige as a criterion. The measurement focused differently on the attitude towards jobs and how people value them, rather than categorizing them based on work-type similarities and characteristics. The 728 respondents across four regions in Thailand were asked to rate 89 jobs ranging from professional careers to unskilled careers. Each job score was indicated and classified into 4 major groups based on an occupational prestige score. Chandhrawanich claims that the types of careers are highly correlated with prestige in Thai norms and the concept of face-saving in Thai society. Even when some careers contribute to a frugal income, if such occupations are related to official servants and power, they scored greater than privatized careers. Thais categorise social occupational classes into 4 types, namely 1) High occupational class (HOC), e.g.

medical groups careers, minister, university lecturer or member of the house of Parliament (12 careers); 2) middle-middle occupational class (MMOC), e.g. school teacher, businessman, professional athlete, middle agriculture, hotel and restaurant manager, scientist, rich entrepreneur or middle rank civil officer (30 careers); 3) Lower-middle-occupational class (LMOC), e.g. auditor, lower rank policeman and soldier, postman, middle scale entrepreneur/shopkeeper, fisherman, security guard, cook or farmer (31 careers); and 4) working/Low occupational class (WOC), e.g. shoemakers, vendors, janitors, labourers, unskilled workman, all kinds of service workers, fortune tellers or prostitutes (see all lists in appendix B).

In this study I use merely the latter three social classes since the highest group does not reside in this community. However, it is widely known that social occupational class stratification can be very flexible and not clear cut. In addition, globally, the social classes of people keep shifting. This also happens in Thailand. The most crucial factor seems to be the level of salary and physical property that people possess. Hence, the salaries and observed properties were asked about, if the respondents allowed. I also observed these issues with my own eyes. These two elements were incorporated to classify people's social occupational class in order to estimate the most accurate level. In general, it is found that most careers of people correspond to their socio-economic status.

For the age group lower than 18 years old, social classes were assigned using their parents' level. Concerning the elderly, even though sometimes their current job might have shifted from what they used to do, this research assigns social class on the basis of their previous jobs, held for a long time prior to their retirement.

### 3.4.1 Change from above and change from below: linguistic (sound) change mechanisms associated with social class

Labov (2001: 178-180 cited in Patrick[6], 2013) explained the concepts of language change with regard to consciousness and the mechanism of sound change. Change from above refers to conscious change by the speakers while change from below is unconscious change by the speakers. The terms "above" or "below" refer to the level of social awareness with regard to the linguistic variants.

#### 3.4.1.1 Change from above

The linguistic variant is mostly introduced by the dominant social class. However, it is *not necessarily the highest class.*

The linguistic variants are borrowed from the higher-prestige speech communities.

The linguistic variant first appears in a careful speech style.

The linguistic variant appearing is inconsistent with the vernacular.

That linguistic variant is correlated with changes in other features.

Therefore, it may refuse integration into the vernacular system. The change of that linguistic variant can achieve the status of a 'coexistent system'. Examples of the change from above appear in the (r)-fulness and the (r-insertion) in NYC (Labov, 2001) and the *sph*- words in English.

[6] http://orb.essex.ac.uk/lg/lg218/ChangeAboveBelow.html Accessed [2 January 2018].

#### 3.4.1.2 Change from below:

In change from below, the linguistic variation is not driven by extra-linguistic or social factors. Changes from below are "systematic changes that appear first in the vernacular and represent the operation of internal, linguistic factors… [they] may be introduced by any social class" (Labov 1994:79). Local identity and status are primary motivations for change from below. Examples of change from below can be found in Martha's Vineyard (Labov 1963), namely the (aw) and (ay) centralization.

Labov (1994:78, 300) offers generalisations about the social location of sound change from below, mainly based in urban research into vowel shifts in US cities.

1) Most advanced changes are found among younger speakers: adolescents, young adults.

2) Most advanced speakers belong to the 'interior groups', centrally located in class/status hierarchy. (LMC, UWC; skilled workers, clerks, teachers, merchants, local activists)

3) They are speakers with highest local prestige: upwardly-mobile individuals, e.g. from ethnic groups who entered the community recently (3-4 generations ago).

4) Women are generally more advanced than men in new and vigorous changes.

## 3.5 Social variable: geographical origin or ethnicity

Kotze (2001: 324-238) addresses the relations between language and ethnicity that should be considered under an ecological framework. The ecological framework is concerned with the societal environment and the speakers who use particular languages.

Thus the relationship between language and ethnicity is indirect. The language signals something regarding the ethnic identity.

Ethnicity connotes the group identity and may signal stigmatised attributes. According to Ball (2010) ethnic communities are similarly defined by reference to both subjective and objective aspects.

Smith (1982: 147 cited in Kotze, 2001) proposes a definition of an ethnic community as it is a group of people who possess a myth of common ancestry. They have a shared history. This historical asset has either one or more elements of common culture. They also have a sense of solidarity. Mostly these attributes signal the sense of solidarity, unity and prestige, and shared background.

Fishman (2013) addresses the association between language and ethnicity, namely

1) Language as a marker of ethnicity: it serves as an indicator of the speakers' group identity. Therefore, the role of ethnicity in mother tongue varieties, ethnicity in cross-cultural communication, and the role of ethnic attitudes towards language maintenance and shift need to be considered separately.

2) The problems resulting from the interaction of ethnic groups in a multilingual environment can range from minor to severe. This is conditioned by, firstly, the importance of the mother tongues for the specific group, and secondly, the degree to which restrictions are imposed upon members of the group because of their dependence on the mother tongue for self-fulfillment.

3) Problems in the field of education (e.g. as a monolingual policy in education in Thailand) frequently relate to ethnicity. Minority ethnic groups are required to use another powerful language as the medium of studying rather than their native language; this is found in Thailand and many countries.

It is worth noting the issue of mobility is crucial. However, in this complex and rapidly urbanising/industrialising context, vernacular authenticity is difficulty to operationalize. The NTIE in MBK area is a new community that does not have a unified norm since it has been established less than 50 years. To some extent, the place of origin

will be treated as the same as the ethnicity predictor with regard to how to operationalize this issue.

### 3.6 Social variable: educational level and language policy

Adger, Wolfram & Christian (2014:237) state that formal educational systems are very important in shaping young people's language use. This is because they spend one third of their waking time in school[7].

Unfortunately, the effects on native/home language in formal education are often negative when it is not the mainstream or prestige language. Some studies suggest that formal teaching of the heritage language has little effect on language preservation in spoken language in daily life (Li, W., et al. 2000: 148). However, Valdés (2011) claimed that bilingual students who join an immersion bilingual programme reveal a higher level of accuracy and overall proficiency in Spanish than in an all-English school in the USA.

Valdés' work (2011) also claimed that third generation Spanish speakers have less opportunity to access the minority language through their home and their community. The attempt to directly involve schools in language maintenance is still crucial for minority language improvement in all generations. Thus, formal schooling to some extent is still important for language maintenance. She added that another crucial factor that might inhibit the heritage language is attitude or the feeling whether that heritage language is still the prestige language or not. This is the critical challenge in bilingual communities.

[7] I noticed that the recent middle class in MBK new generations spend even more time in the school system than the past generations, around one-fourth of their lives, see chapter 4.

### 3.6.1 Language policy in Thailand

Rappa & Wee's survey of Thai language policy (2006: 112-113) addressed the two main categories of language found in Thailand, that is Thai and foreign languages. Other local dialects are regarded as Thai.

Noss (1984) states that the criteria used to distinguish between foreign and minority languages are vaguely defined, while 'regional dialects' refer to provincial/regional varieties and 'national language' refers to BKK Thai. However, regional dialects and languages play little role in the five principles of educational and official language policy in Thailand. These classification criteria and language policies were aimed to accommodate and construct national identity, socio-economic perspectives and security and international diplomacy. Personally, I have a concern with regards to the actual role of the regional dialects and how to elevate their status, importance and function of other Thai regional dialects. The practical plans and executions of dialect preservation seem to be never clear and accomplished.

### 3.6.2 Bangkok Thai and language policy

Many studies in the past revealed that the BKK dialect might override NT Thai dialect, in importance. The Bangkok (BKK) Thai dialect serves as the national standard dialect/language in Thailand. Its status is very strong as the superstrate dialect over all regional dialects and minority languages.

Smalley (1994: 14) stated that Thailand, with more than 80 languages and a high linguistic diversity of many dialects, is still a remarkably unified country, with BKK Thai as the dominant language. Interestingly, BKK or standard Thai is an important symbol of Thai nationality and identity – next to the king, and along with the Buddhist religion.

Addressing the linguistic situation and policy in Thailand, Rappa & Wee (2006) stated that Bangkok Thai is an official language and a lingua franca even though Thailand

is heterogeneous, with multilingual speakers and several regional dialects. As an agricultural country, around 80% of speakers who reside in the rural areas use dialects and languages other than BKK Thai. However, Rappa & Wee (2006) emphasised that the sense of homogeneity and unification in Thailand is very high, as affirmed by King Rama 5th (during his reign, 1868-1910), that

> *'You must remember that if you are speaking with westerners on the one hand and Lao on other, you must maintain that westerner is 'them' and Lao is Thai. If however, you are speaking with Lao on the one hand and a Thai on the other, you must maintain that Lao is 'them' and the Thai is "us".'* (*Rappa & Wee, 2006)*

The influence of BKK Thai dialect on NT Thai dialect was gradually promoted and became very strong during the primary educational compulsory enforcement in the Thai Cultural Revolution period. In terms of this language policy in the northern Thai region (Lanna Kingdom), after it became a part of Thailand in the late 1800s, Standard Thai came to play a dominant role in the Northern provinces (see 2.2). However, the use of BKK Thai was still limited, and only found in the high and higher middle class speakers who could join formal schools in Bangkok, and among those who lived in the adjacent provinces of Bangkok. The majority of NT Thai people still used Lanna Thai or the NT Thai dialect for their daily communication.

The power of Standard Thai was first emphasized during the King Rama XI era in 1921. He enacted the Act of Parliament for primary education with compulsory enforcement. Since then, Standard/BKK Thai dialect has been a means of education and a lingua franca. The use of standard Thai has dramatically risen in all schools, educators, public sectors and media in all provinces, especially for middle class people with some basic level of literacy. The lower classes or illiterates, in these NT regions, mostly still use the NT Thai dialect, but their younger generation have to learn it in schools and from the media.

Another strong pressure on the dialect shift from NT Thai to BKK Thai emerged again in the Thai Cultural Revolution period, influenced by Field marshal Plaek Pibulsonggram, an ex-prime minister (in office during 1938-1957, with interruptions).

Prior to the Second World War, he wished to modernize Thailand according to state decrees[8]. Not only were a number of eccentric practices introduced, but many old Thai customs were also abruptly replaced by this national construction policy. For instance, he simplified the Bangkok Thai dialect and enforced people's use of it, through his Thai language monolingual policy. He enforced the use of many invented Thai word particles, greetings and idiomatic expressions. Thai people had to wear hats, uniforms and shoes like westerners. Throughout his term in office of more than 15 years, the enforcement of Thai language, culture and monolingual policies were strengthened and BKK became prestigious over time, influencing other regional dialects.

Thai linguists also raised other factors to explain why the BKK Thai dialect is so powerful, even though Thailand has an abundance of regional dialects and minority languages. L-Thongkum, et al. (2011) suggested in her interview that education conducted by any single standard language was the crucial cause of language decay and death. Based on her linguistic fieldwork experience in languages of minorities in Southeast Asia for more than 40 years, higher education brought about the language convergence. It made people in the new generation speak the same language, the BKK Thai dialect[9]. It was a warning of the incongruence between the development of humans and the decay of less powerful languages. The preservation and existence of languages could emerge if those languages were isolated from other dominant language contact. The high level of formal education had an influence on their local people. However, the quality of life in some aspects would decline without high levels of education and technology. In contrast, the higher level of education in local people would make the stronger language dominate other minority languages.

Formal education is often catastrophic for minority languages, causing their decay (Skutnabb-Kangas, 2010). Language preservation may succeed if those endangered languages are isolated from dominant language contact. However, formal

[8] The secretariat of the Thai cabinet (1939). The royal Thai government gazette vol. 56, 1281. Retrieved from http://www.ratchakitcha.soc.go.th/DATA/PDF/2482/D/1281.PDF. Accessed [10 April 2013].
[9] According to national language policy of Thailand https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&ved=0ahUKEwieqPTnqcjaAhUCTY8KHd_NBS8QFgg4MAI&url=http%3A%2F%2Farts.tu.ac.th%2Fculture%2F270356.pdf&usg=AOvVaw0rBlcETH693mv_isQzIvfG Accessed [10 April 2013].

education reinforces the language shift in local people. Paradoxically, while people's life quality and well-being may deteriorate and be unpleasant without a high level of education and technology, as in fundamental hygiene, medication, legal issues and critical reasoning, these benefits come from the power of knowledge and (formal) education, which are derived from the dominant language. Therefore, it is unsurprising that the more powerful language, which is the means of education, is preferred to minority languages.

Prachakul (2012) mentioned the process of the state/government's attempt to standardise the BKK Thai dialect and dilute the significance of other dialects and varieties. It was found in the King Rama 6 period (1910 –1925) that there was a book entitled "a well written book for Thais". This book was written by using an entirely standard Thai dialect. It was widely acknowledged by the middle or high socio-economic classes, such as governors and highly educated people. All literature, such as the classic verse "Khun Chang Khun Phan" which is originally derived from the Supanburi province, was retold using the Standard/BKK Thai dialect rather than the Suphanburi dialect. This province inherited their own rich vocabularies and unique phonological system with marked accent differing from standard Thai. Yet, all these were disregarded and transformed into the standard dialect.

Prachakul also emphasised that the discourse of "using a well written book for Thais" was frequently reproduced, memorised and emphasised for younger pupils for many generations, via formal education. In addition, the only academic referential dictionary of Thai language refers strictly to standard Thai. All media[10] and free TV programs broadcast only standard Thai, rarely talking about the issue of regional dialect preservation or warning that they are under critical endangerment. Therefore, the inequity across regional dialects has emerged over a long time, and even though the number of regional dialects' native speakers is much greater than the standard one, the

[10] Potowski (2013) claims that nowadays, the heritage and minority language are more likely to be preserved and maintained than the past. People today can construct their transnational identities through current media such as access online media, having their conversations with native speaker relatives and friends through online medium.

power contrast reflects the inequality of the regional dialects. Referring to my study, the MBK elderly who belong to the lower educational levels do not articulate the rhotic trill /r/. They find it very hard to do because /r/ does not exist in their NT Thai phonological system. Meanwhile the NT Thai young people in the later generations, who are exposed to the formal education of which BKK Thai is the norm, use these marked phonemes fluently. However, the side-effect emerges that they are likely to adopt the BKK Thai dialect and gradually ignore their mother tongue, NT Thai and other minority languages as well.

Premsrirat et al. (2004) pointed out that the younger generations have less chance to be exposed to their local dialects. Therefore, they become passive learners of their local dialects and their vernacular is the dominant dialect instead. Some of them view that their local dialect is outdated and they feel ashamed to speak it. In contrast, other dominant varieties may play a significant role in the new generations since they have a positive attitude towards it. In the globalisation era, the young generations have more chance of exposure to global languages.

This resembles what I find below with MBK participants, in that BKK Thai/standard dialect is dominant everywhere in Thailand. Local dialects are ignored and treated as stigmatized repertoires. In school, the medium of instruction is BKK Thai dialect. This is attributed to the language/dialect attrition of new generations. Premsrirat (2016)[11] speculated that approximately 90% of all Thai regional dialects will cease to exist. It is expected that around 15 dialects in Thailand are under the risk of dialect endangerment. In Thailand, the concept of "the Great (Thailand) Nation" is accompanied by using standard Thai as well.

[11] http://www.siamrath.co.th/n/131. Accessed [24 August 2016].

### 3.6.3 Other confounding factors involving dialect change and variation in the NTIE context

Apart from the internal linguistic factors, the social network factor (which is the next topic) and other social and demographic factors are the core factors which contribute to dialect variation, shift and maintenance in many variationist studies. It is worth speculating on other externally motivated (confounding) factors as well. Therefore, such factors, which have not been added into the regression models, are worth explaining briefly: 1) the influence of loanwords taken from Pali-Sanskrit language on BKK Thai dialect, 2) the educational policy and linguistic policy in Thailand, and 3) the influence of mass media on the BKK Thai dialect.

#### 3.6.3.1 The influence on the BKK Thai dialect of loanwords taken from the Pali-Sanskrit language

The dialect variation and change may have been caused by the borrowing of prestige rhotic sounds from the BKK Thai to the NT Thai dialect. Perhaps the beginning of the change could be traced back to the educational reforms that occurred in the late 1970s or earlier. Based on the literature review, I suggested that the /l/ and /h/ alternation may have originated from the monastic education system, in which the more educated social groups in the 19$^{th}$ to early 20$^{th}$ century were trained. At that time, there was a need to learn Pali-Sanskrit, from which many terms including /r/ in religious Buddhist texts were borrowed, when there was no cognate lexical item in the NT Thai dialect. This is broadly similar to the role of the Arabic classical and religious spreading of terms [q] across vernacular dialects, which have been well studied by variationists (Al-Wer and Horesh 2017).

The rhotic trill /r/ found in Sanskrit and the retroflex [ɻ] found in Pali are adopted in BKK Thai, but the retroflex is not a phoneme in BKK Thai. The people who

learnt Pali-Sanskrit were upwardly mobile and became quite influential. At the time, ordination was an important means to improve social status. A man would enter the monkhood to acquire an education in the temple-based schooling; then disrobe later and leave the monastery to take up a secular post such as the civil service, for raising his socio-economic status.

Apart from this, there is an interrelation between the Pali language, Theravada Buddhist teaching and BKK Thai concerning education. Around 95% of Thai people are Buddhist[12] (Thailand census 2014). Thus, the shared belief in Buddhism in Thailand is a strong ground that unites people to become "Thai" and bear "Thai-ness," even though some of them might be ethnic minority groups. The use of BKK Thai translation and the BKK Thai accent in Buddhist sermons, chanting and preaching, is regarded as formal practice. Even though the people in each region in Thailand have their own regional dialects to convey the Buddhist Dharma content, using the BKK Thai dialect version, and being educated in Buddhist universities from Bangkok, leads to prestige and acknowledgement (Rappa & Wee 2006).

#### 3.6.3.2 Mass media and the BKK Thai dialect

Ubiquitously, the media plays an important role in the introduction of BKK Thai into the NT Thai-speaking MBK community. Major radio and television programmes employ BKK Thai as a basic medium of broadcasting. Newspapers, tabloids and periodicals are all written in BKK Thai. A few print media publications and radio programmes are published or conducted in NT Thai dialect. In the past, finding good printed books was not easy. The MBK community is quite far away from the Lamphun province's downtown area and the transportation from there to downtown was not that convenient either. Besides, the distribution of formal publications was not at all effective

[12] National statistical Thailand. http://www.nso.go.th/sites/2014 Accessed [30 July 2017]. http://lamphun.nso.go.th/index.php?option=com_content&view=article&id=110:--2553&catid=84&Itemid=611 Accessed [30 July 2017].

in the past. However, nowadays the media and knowledge printed and dubbed in BKK are everywhere and extremely accessible.

However, the current trend of dialect preservation has gradually improved. It is observed that the orthography and publications tend to mix BKK Thai with the prescribed NT Thai dialect. This might result from the writers not being competent enough in NT Thai orthography yet more aware of accuracy issues in NT Thai formal mass media press (Panyaatisin, 2013). This is not a simple product of ideology but rather results largely from inconsistent literacy practice by writers. It is all about orthography, not vernacular dialect speech.

Although the local government and community attempted to encourage new generations to study the Lanna or the NT Thai old orthography, the difficulty of doing so puts people off. Only the spoken language is preserved because it is the vernacular for most people in MBK community. Nevertheless, it is quite worrying that most of the new generations are not capable of writing or even reading NT Thai (in ancient NT Thai orthography) at all. Even the monks who were the linguistic maintainers are barely using it or encouraging it in the monasteries. Thus, in the formal schools, NT Thai orthography is offered as short free elective courses. It is not integrated in the formal modules, and students never seem to be interested in it.


Figure 3.2 Code-mixing between NT Thai and BKK Thai in written form of the formal Pawnbroking service in the MBK community.

Figure 3.2 is a poster displaying a code-mixing situation between NT Thai and Bangkok Thai in a pawnbroker's advertisement in the NTIE area. The code-mixing mechanism is not very consistent and prescriptively incorrect. The use of the orthography here does not represent the actual pronunciation in NT Thai. It seems to be the product of the NT Thai later generations to some extent.

Linguistically, the NT Thai lexical tones, /h/ phonemes and unaspirated correspondences are kept. However, the sound correspondences are mostly prescriptively incorrect. The three sentences with tick marks, "✓", in the middle of the poster, can be transcribed and glossed as below:

(1) ฮื้อรากาสูง

huː3 *ra:0 ka:0* suŋ 4

give rate of price high

(We) can give you a high rate of price (for this transaction).

In this clause, *รากา* [ra0 ka0] is the not the right word in the NT Thai dialect. /r/ never exists in the NT Thai phonological system. It is supposed to be *ลากา* [ra0 ka0] instead conveying the meaning of 'price/ cost' in the NT Thai dialect. However, it is observed that the writer retains many attributes associated with NT Thai phonological features, such as using the unaspirated velar onset [k] or *ก* instead of the aspirated velar onset [$k^h$] or *ค*..

(2) ดอกเบี้ยต่ำ

dɔk1 biːa2 tam1

interest low

(You will be charged with) low interest (for this transaction).

In this clause, there is no distinction between the BKK Thai and the NT Thai phonological systems. The code-mixing/switching does not appear here.

(3) เก็บทรัพย์อุ่นใจ๋

kep1 sap3 ʔun1 *ɕaj4*

safe assets warm heart

(Your) assets are safe with us. (So you can trust us.)

For this instance, the writer can only preserve a tone 4 (rising tone) in the word [ɕaj4] ใจ๋ in NT Thai. The lexical tones appearing in other words are all BKK Thai tones. To some extent, the writer might undergo many levels of difficulty in assigning the right NT Thai lexical tones and orthography pertaining to an accurate transliteration. The correct lexical tones in NT Thai, prescriptively, should be [kep3 sap3 ʔun2 ɕaj4] instead. Another point is a collocation problem. [kep3] เก็บ sounds unnatural for NT Thai but acceptable. [hak3 sa:4] *ฮักษา* is more appropriate in this context[13].

It is worth noting that most of the written information is depicted in BKK Thai in order to deliver formal messages while the persuasive text is written using NT Thai sounds but is mostly inaccurate in BKK Thai transcriptions, as exemplified above.

This is the discourse that this company attempted to create to some extent. The use of code-mixing between NT Thai and BKK Thai frames the readers (potential customers) to feel acquainted and safe to take advice from this company. This discourse has a function to persuade the NT Thai local customers to feel included and suggests that the customer and the company belong to the same NT Thai ethnic group. The potential customers are made to believe that they can trust them rather than outsiders who speak different dialects or languages.

### 3.7 Social variable: social network analysis (SNA)

Social network analysis (SNA) plays a major role in several fields such as sociology, behavioural sciences, statistics, economics and linguistics. Social network analysis enables us to understand a number of linguistic phenomena, especially in

[13] To some extent, one problem may rise as well if the transliteration of NT Thai to BKK Thai orthographical system is accurate. It will be too difficult to read and not catch people's attention very well due to so many tone markers appearing all over the words (unkempt word forms) as well as other corresponding sounds. Also, the transliteration from NT Thai phonological system to BKK Thai orthographical system has never been standardised. Thus, the code-mixing and code-switching might be a good strategy for this kind of advertisement.

linguistic variation, maintenance and shift. In this current study, an ego-centric personal social network, which is regarded as one of many approaches in SNA, was adopted. The SNA theoretical background, and a modified approach with regard to the ego-centred approach in SNA, are discussed in this section.

Social network theory was originally proposed by Barnes (1954), whose basis of research was urbanization and urban society studies. His SNA approach presented a high level of academic impact and contribution, and was adopted in many related fields. Since then, SNA theory has been developed over time by many leading researchers, including Fischer (1979), Wellman (1979), and Granovetter (1973), particularly in sociolinguistic variation studies of the 2nd wave (Eckert, 2000), and contributed to many successful leading variationist studies, e.g. Milroy (1987), Labov (1972), Bortoni-Ricardo (1985), Lippi-Green (1989), Cheshire (1982), Milardo (1988), Li (1994), and Eckert (2000).

Wasserman and Faust[14] (1994:17 cited in Hirano 2012) state that social network analysis (SNA) encompasses the linkages amongst social entities (actors) and the implication of these linkages. This means that the objectives of SNA focus on, firstly, the network structure of the actors in the role of an individual, organization unit or collective social unit; and secondly, to present and understand the mechanism of how the network structure affects the actor's behaviour. Therefore, in a sociolinguistic study, the SNA can be treated as one of the social factors that motivates people in the community to behave in certain ways, such as favouring action or non-action. Hence, the aim of this study is to examine what type/characteristic of the social network (SN) structure surrounds the actor(s), as well as how the SN structure influences the actors/speakers' linguistic behaviour.

[14] A word for the future by Wasserman and Faust (Social Network Analysis, Cambridge University Press, 1994: 730) "...we do not expect that the most fruitful development in descriptive techniques will be the continued addition of yet another definition of centrality measure or yet another subgroup definition or yet another definition of equivalence. Rather, we expect that careful assessment of the usefulness of current methods in substantive and theoretical applications will be helpful in determining when, and under what conditions, each method is useful (perhaps in conjunction with statistical assumptions). Considerable work also needs to be done on measurement properties (such as sampling variability) of the current measures."

Wasserman and Faust (1994: 11) explained the basic concept of the SNA: it was developed from the field of sociometry or the study of relationships within a group of people. This can be presented in the form of a sociogram, consisting of several points which represent individuals (with each point named “ego” or “actor” hereafter in this study) or corporations. The relationships between the individuals are represented by lines which potentially connect each point (actor).

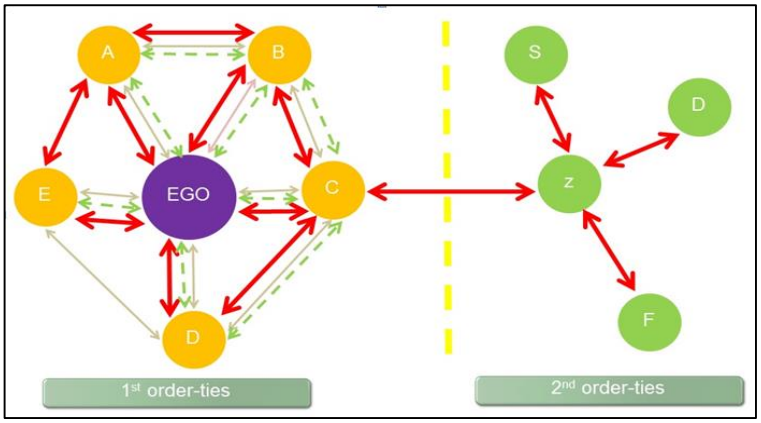


Figure 3.3 The social network showing the first and the second order tie

In figure 3.3, the ego is placed in the middle of the social network. In the 1st order-ties, the ego anchors its individuals/nodes with straight lines. Each line indicates the relationship between the ego (actor) and his ties.

Looking back to the 1st order-ties (zone), the individual C is regarded as a betweener/broker who connects the 1st order-ties network to the 2nd order-ties network. C can transmit the flow of information from the 2nd order-ties to the 1st order-ties. Conversely, Z is also sharing the same role as C by carrying information of the 2nd order-ties to the 1st order-ties as well.

Two aspects of the relationships of SNs are density and multiplexity. The 1st order-ties (in figure 3.3) reveal that most individuals have relationships with one

another. This type of relationship is called *density* in the network. Figure 3.3 illustrates a high-density network, since most people know all of the members in the network including the ego. The density rate can be measured from zero to one, and can reach a saturation point or score when every single member of the network knows all the other members. In addition, the 1st order-tie structure implies a close-knit or a strong/closed network as each shows a number of links to individuals. The close/strong network and related research are addressed in §3.7.1.1.

Secondly, the other kind of relationship is *multiplexity*. In figure 3.3, among the first order-ties each member has more than one straight line adhering to and representing a type of relationship. Several lines linking pairs to each other indicates several types of relationship between them. For example, each member of a pair can simultaneously be spouse, peer workers, classmates, members of the same sport club and rivals. For calculation, the number of roles (multiplexity), between the actor and each tie member, can range from one to infinity.

In figure 3.3, the 2nd order-tie structure is regarded as a loose-knit or weak network since all the nodes (members) adhere to the actor, although individual members do not know one another. It is only Z who anchors other individuals. It should be noted that this method was not applied in this research. The ego-centred network (personal network) was adopted instead and is addressed later. Open/weak networks and related research are addressed in §3.7.1.2.

Apart from density and multiplexity, quantitative SNA comprises three attributes (relationships) which play major roles in most SNA studies, namely the degree of centrality, the degree of closeness centrality and the degree of betweenness centrality. These important characteristics can enable us to use, point out and predict how the actors can access, possess or lose resources and information to some extent. These attributes can explain why some actors are the social influencers or bridgers of many network groups, quantitatively. All three attributes of SNA may be measured using a mathematical matrix analysis. Hanneman & Riddle (2005) identify the crucial role of these three attributes when the sociogram interacts with the focused actor. However,

these methods were not used in the present study (see a quantitative methodology in SNA in Appendix C).

### 3.7.1 Types of social network

In the next part, types and qualities of social network and their interactions with various types of factors are explored and discussed. The target type of SNA or the Ego-centred network which is operationalised in this current study is illustrated. Finally, related literature pertaining to SNA studies which involve other social factors and multivariate analysis models is reviewed.

Initially, two types of social network describe linguistic maintenance and shift: strong networks and weak networks. Each type leads to different implications, as follows.

#### 3.7.1.1 A strong network (see figure 3.3, in the 1st order-ties)

In a close-knit or strong network, speakers preserve the local linguistic norms, as found by Milroy & Milroy (1978) in the Belfast study. This functions as a norm enforcement mechanism in the society. By contrast, loose-knit ties are susceptible to linguistic innovation and encourage shift.

Milroy and Milroy examined the social network structures of suburban people by using two social network attributes, namely multiplexity and density, to create a social network strength measurement. In three working class communities (Ballymacarratt, Clonard and the Hammer) Milroy used the acquaintance or "friend of a friend" approach to people. She investigated the correlation between the integration of respondents into

such communities (the network strength) and their linguistic behaviour as shown by the variants they used (the rate of linguistic use).

Social network strength criteria, based on density and multiplexity, involved the following questions, with score ranges from 0 to 5, and the greater the strength of a social network (SNS) level, the higher the scores.

1) An actor who is a member of a high-density, territorial-based group (e.g. a bingo or a card game group);

2) An actor who has a substantial tie of kinship with more than 2 households in the neighborhood;

3) An actor who works at the same place(s) as at least 2 others from the same neighborhood;

4) An actor who works at the same places as at least 2 others of the same sex; and,

5) An actor who associates voluntarily with workmates in leisure hours.

There were five variables, namely (ai), (a), (ɪ), (θ), (ʌ) and (e). In vowel variables, the scores of variants ranged from one to five, based on the degree of retraction and back-raising in vowels. The interdental variants of (θ) were binary, including the full interdental variant and the deletion of it as a variant. The non-standard variants were marked forms of these three areas. The social predictors involved age, sex and location (3 areas).

The study found that a high degree of use of non-standard variants often correlated with a high SNS score, determined by density and multiplicity based on the five criteria. The close-knit/strong networks promoted language maintenance, leading to linguistic homogeneity and resisting change and innovation from outside influences, while weak networks revealed the opposite result of language shift.

This SNS method shed light on explaining how and why language changes, or rather why a vernacular dialect has not given way to a standard one in Belfast, other than from demographic/social and phonological factors.

### 3.7.1.2 Weak network

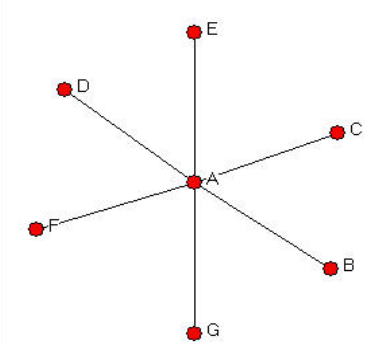


Figure 3.4 A loose-knit/weak network

A weak network is also known as a star network[15], an open network, or a loose-knit network. Most early studies in SNA were concerned with strong ties/networks, however, weak network ties also exert major influences in linguistic change. Granovetter (1973) illustrated weak ties/networks as bridges connecting different groups, as well as their importance in transmitting certain entities, information and innovative forms from close-knit groups to other communities. Sociolinguistically, this concept is useful to explain linguistic innovation and predict linguistic change.

Granovetter (1973: 1361) proposed four major attributes of the strength of social network ties to an actor, for measuring the advantages of strong and weak ties in networks, namely:

1) An interaction frequency (the amount of time contacting ties), in which the higher the frequency of contact, the stronger a relation or network.

2) An emotional level (emotional intensity): the higher the level of positive emotion between interlocutors, the stronger the ties.

[15] http://faculty.ucr.edu/~hanneman/nettext/C10_Centrality.html

3) An intimacy level (mutual confiding): the higher the level of intimacy between interlocutors, the stronger the ties.

4) Mutual benefit (reciprocal services between ties): the higher the level of both beneficiaries gaining reciprocally, the stronger the network.

These four network properties were defined independently of one another although they seemed to be correlated, and Granovetter required empirical justification about any degrees of dependency. He found that these proposed attributes were expected to be positive and symmetric, although with an asymmetric factor, because each social network might be varied, unique and/or skewed.

This was supported by Milroy and Milroy (1978)'s Belfast study, with a strong network leading to linguistic maintenance and a loose-knit network behaving inversely. Weak network ties proved vulnerable and susceptible to linguistic change, allowing incoming influential information to interfere with the network (see also Chambers 1994). Milroy and Gordon (2002: 563) describe linguistic innovators as those likely to be in a position to contact many weak ties. Linguistic innovations result from a weak network as well.

### 3.7.2 Social network and social class interaction

Chambers (1994: 556) stated that the structures of strong and weak networks are often associated with different social classes. The loose-knit (weak) network is associated with socially and geographically mobile groups who are mainly middle class, while close-knit (strong) ties align with the highest and the lowest social classes. In terms of linguistic change, a weak network is often associated lower middle class (LMC) and higher working class (HWC) speakers. This is in accordance with Labov's principle (1981) that linguistic innovating groups are found in these class groups, as also asserted by Kerswill and Williams (1999), that "interior classes" (the LMC and the HWC) were found to be more susceptible to language change in Reading and Milton Keynes.

Chambers (1994) pointed out another aspect of social network strength, as giving rise to local cohesion, such as the strong and closed networks in Belfast (Milroy, 1987) or the Detroit suburbs (Eckert, 1997). A strong network leads to overall segregation in the wider community. By contrast, a weak network contributes to linguistic uniformity across large territories, as described by Chambers (1994) in Canada, and Labov (1973) in Harlem. [16] This approach to linguistic diversity (or maintenance) and uniformity (or shift) by SNA study, is appropriate for predicting the dialect shift and maintenance in the NTIE zone in Thailand.

Most sociolinguistic work in SNA deals with either density or multiplexity, however in Bortoni-Ricardo (1985), the personal (ego-centred) network approach using mathematical matrix analysis was applied, when investigating a community where speakers are socially and geographically mobile, and with less concern for the density and multiplexity criteria of most SNA studies. The degree of integration of people into a new community, from rural to urban, was the SNA factor instead, focussing on the speakers' mobility and the integration of immigrants into the new society. Bortoni-Ricardo investigated a Brazilian rural community, undergoing an urbanization process after migration to the suburban area of Brazlandia. They spoke the Caipira dialect, regarded as a local stigmatized dialect. This revealed a negative correlation: speakers with high social network scores tended to show low rates of use of this stigmatised dialect's variants, and higher use of the urbanized forms instead. The more the migrants moved away from their insulated (strong) kin-network and pre-migration acquaintances, the more hetero-geneous or integrated the network level became. The study presented a diffusion of dialect mixtures in which certain phonological features were found. Maternal females exhibited a high level of linguistic diffusion, adopting forms from their grownup off-spring undergoing the urbanization process, with a transition or intergenerational process from the younger to the older.

Jingjing (2007) carried out a SNA study of immigrants to Beijing to classify and measure the types (the four SNA attributes) of relationships of actors' networks and

[16] See the Philadelphia study for strong ties, Labov (1986). See the Harlem study by Labov (1968) of African American Vernacular English in South Harlem for weak ties (lames).

their contacts' behaviour, and compared which attributes were the strongest for the immigrants in this context. The SNS was implied as social capital (Bourdieu, 1986) of Chinese migrant workers. This means that those who have (certain) types of strong networks can benefit from them in many ways. 300 internal immigrants to Beijing answered the questionnaires.

A number of relationships between the ties (individuals) and the actor were classified into four categories and rated, in accordance with the four SN attributes. Thus, such ties as parents, distant spouses and close friends had a high level of interaction frequency, emotion, intimacy and mutual benefit. In contrast, the bosses might be classified with low level interaction, emotion and intimacy, but show a high level of mutual benefit.

The types of people (family, close friends and relatives) frequently contacted by the actor were associated with only the last three attributes (the emotion, intimacy and mutual benefit factors). The scores of these last three properties were extremely similar and overlapped. These people (ties) gained the highest score of around 50% on average, and these three attributes showed highly positive correlated trends to one another.

The interaction frequency attribute was independent of the remaining three attributes. Work peers were frequently contacted, but the actors showed low scores in the last three attributes. Therefore, I argue that these four attributes need to be reconsidered regarding their worth in research operations as mentioned earlier.

The SNA interpretation in Jingjing (2007) tended to emphasise the benefit of the weak ties, following Granovetter (1973). Some respondents showed they disfavored, and tried to distance themselves from, their (local) strong ties. Jingjing argues that even though the strong ties could provide those three emotional values to the actor, the close-knit network revealed drawbacks. The closed network of family and relatives did not allow for moving outside the circle to new resources (finances or opportunities), nor to acquiring new knowledge for improvement. By contrast, loose networks can open doors to benefits, especially in prospective careers, and this contributed to the immigrant influx to urbanized or industrialised zones. These weak network findings by Jingjing

were not based on any statistical evidence, but from the case study interviews of the beneficiaries, who sought to opt out of their strong suburban networks.

### 3.7.3 Ego-centred network methods (personal network)

Patrick (2013) differentiates between ego-centred networks (the personal network) and other types of SNA. A single individual (focal actor) anchors an ego-centred network, or as it was called a personal network. An ego-centred network is more limited in scope and interpretation because it does not examine the actual network structure of strong-ties networks, as shown in the African American English Vernacular study in South Harlem (Labov, 1966), and in Eckert's study in Belten High (Eckert, 2000). A distinction is then made between ego-centred network and social network analysis (SNA), that SNA arises when all actors can have ties to all relevant other actors, but the ego-centred approach deals with the ego's ties alone.

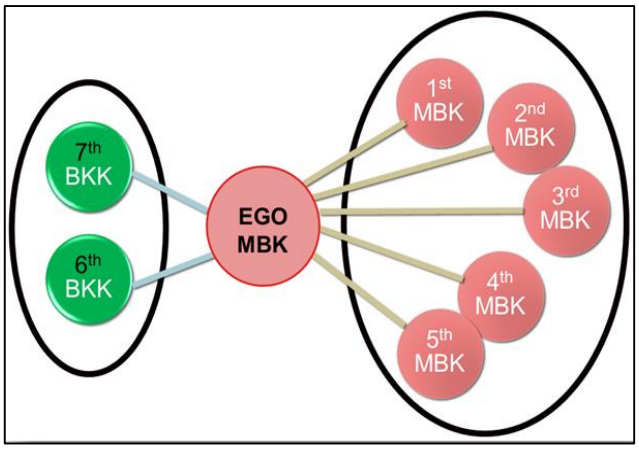


Figure 3.5 Ego-centred /personal network adapted from Hirano (2013: 102)

Figure 3.5 illustrates the ego's social relationship to their ties (individuals). The ego/actor can connect to individuals by several straight lines, radiating from the ego. The figure shows that each member/tie does not know the other, while all individuals connect only with the ego.

The ego-centred network can be beneficial for a loose-tie network structure, in particular, in a situation of short-term migration, such as temporary constructed communities (e.g. children's behaviour in school) or highly mobile communities, as in Hirano (2012), Bortoni-Ricardo (1985), Milroy (1987), Li (1994) and Cheshire et al. (2008). Thus, the ego-centred network is appropriate to my current research in the NTIE community in the northern part of Thailand. The instances of some SNA studies are elaborated as follows.

Hirano (2013) examined the role of social networks (Milroy & Milroy, 1978), including loose-knit/weak networks (Granovetter, 1973) and (short-term) accommodation theory (Trudgill, 1986), which had an effect on the linguistic shift found in teachers who were native speakers of English (NsE) teachers, namely Americans, British and New Zealanders. These exchange NsE teachers had one-year contracts teaching in Japan. She hypothesized that some NsE teachers would accommodate/adjust their speech style to the more standard variety of English language because they were frequently in contact with their Japanese students at school, as well as the pressure of the "teacher/ foreign talk" expectation to speak English clearly and accurately by using the standard/formal styles rather than their local English varieties. Conversely, NsE teachers who experienced less contact with locals might resist change and maintain their vernacular throughout.

Hirano proposed a new ego-centred network analysis method, which I have extended in my current work. Ten ties associating with the ego were collected. The most frequently-contacted persons gained a full score (5), while the less frequent ones received a lower score (from 4 to 1). These sets of scores were multiplied by the actual face-to-face (f2f) contact and the non-face-to face (non-f2f, e.g. by telephone) contact

frequency scores. The non-f2f score weight was half of the f2f one, presumably due to its lower quality.

In a panel study, the pre-test (prior to starting the teaching programme) and the post-test (after 1 year in the teaching post) were conducted to observe linguistic demeanors of those NsE speakers during the Japanese contact. The 39 participants of these NsE educators were similar in number (13 each). The NsE teacher samples were young, approximately 25 years old.

One of the sociolinguistic variables included the postvocalic alveolar stop (t), with variants glottal stop [ʔ], flap [ɾ] and alveolar stop [t], such as *about*; /t/ preceded by a vowel or /r/, as in *neatly* or *partly*; and /t/ before a plural morpheme such as *lots*, possessive –s, as in *Kate's*, or the third person singular –s, as in *meets*.

Hirano categorised the people who came into contact with the NsE lecturers into two network groups, namely the NsE network (the British, the American and the New Zealander) and three groups from the non-NsE networks (the local Japanese who spoke only Japanese, the Japanese who spoke English fluently, and the Japanese teachers of English).

After subtracting the pre-test scores and the post-test scores, all NsE speakers employed the glottal stop [ʔ] most of the time, according to Pearson's correlation. Other phonetic variants were minute in number. Except for the Americans, other NsE respondents still scored high in their vernacular use, over time. This implied that, apart from the Americans, the groups favoured their NsE speaker networks more. They resisted the norm to change to the formal English variety. In American teachers, in the postvocalic position, the glottal stop [ʔ] use rate dropped and was replaced by the alveolar [t] over time.

In terms of social network, the correlation of contact between the American network and the network of Japanese teachers of English is very high. Therefore, the heterogeneous networks had an influence on speaking behaviour to some extent. The Americans accommodated their speech more favourably towards lay people's

expectations, and to raise mutual intelligibility, in accordance with linguistic accommodation theory (Trudgill, 1986). Meanwhile other NsE English teachers showed the opposite results because their networks were more homogenous in terms of the ethnic variety.

Cheshire et al. (2008) examined whether different ethnicities of adolescent Londoners contributed to linguistic change and variation in the UK. This enabled them to identify the linguistic innovators. The research team created an English language corpus accounting for 1.4 million words, based on interviews of 100 working class participants from two age groups (adolescents and elderly) from two areas of London (Havering and Hackney). The numbers of participants from both areas were equal. The teenage speakers from Hackney, symbolic of Cockney accent, were the main focus of the synchronic study.

The social factors consisted of ethnicity, age, sex and social network (the degree of ethnic variety of adolescent friendship networks). Pertaining to linguistic variables, they comprised six short vowels and one long monophthong, four diphthongs, and four consonants, which were the markers of the Cockney accent, and a novel quotative construction 'this is + [subject]'. The degree of ethnic variety of adolescent friendship network scores ranged from 1-5. The full 5 score indicated that the ties of the actor were highly heterogeneous with regards to ethnic variety. By contrast, the lower scores indicated that the ethnicity of the actor's friends were homogeneous to him/her.

Synchronically, it was found that adolescent speech style deviated from that of the elderly, according to the addressed linguistic variables. The youngest group approached the RP fashion rather than the Cockney style[17].

With regard to SNA, this paper suggested that the friendship group was a prominent factor in the diffusion of linguistic innovations, and affected by ethnicity. What is more, the notion of the "broker" (Wenger, 1998) can be used to explain this phenomenon regarding adolescent introduction of any novel concepts, or even new

[17] Multicultural London English research project (Kerswill, P., Cheshire, J., Fox, S., and Torgersen, E., 2007-2010)

linguistic forms, into their friendship networks. The teenagers who were the linguistic trailblazers, tended to be the leaders of youth culture, highly respected and with a wide range of networks. In my view, the friendship and ethnicity criteria contributing to the SNA score in Cheshire et al. (2008) need to be reconsidered in terms of quality. A high score of SNA means that the actor has many friends from a wide ethnic range. The researchers created a social network strength (SNS) score by counting the tie frequency of each actor, based on a similarity or difference of ethnicity of the ties, compared to the actor him/herself. If the ties of some actors are ethnically heterogeneous, the actor would gain a high score in SNS, and vice versa in homogeneous ethnicity. This methodology appears to be problematic. The rate of ethnic similarity or difference of the ties compared to the actor/ego does not equate to the quality of their conversations, or the quality of friendship between the ego and the ties/friends. The proposed quality of score weights might be problematic. The actor might not have interacted with them much or equally. Therefore, the contact rate of actor (ego) might not be well-distributed. Cheshire et al. (2008)'s criterion may not present a valid friendship network distribution. That is to say, the quantity of the ethnicity of their friends cannot be compared and does not correspond to the degree of friendship quality or the amount of time they spend with the network, accordingly. Therefore, I think that Hirano's model of face-to-face contact, and my model of actual contact frequency and quality of contact, can serve as a better model in the SNA study of factors in linguistic change and maintenance in such a community.

Gal (1987) conducted research on language choice in Oberwart, a German-Hungarian bilingual community in Austria, on a border adjacent to Hungary. The study showed that a new generation of bilingual women were not interested in suburban men who were peasants, poor, and could not speak German. They favoured and tended to get married to the men who could speak German because they were more likely to have financial advantages and social prestige. These attributes indicated why the people formed two different networks, the German based network and the Hungarian based network. To note, even if this work is not a full scale quantitative SNA, this classic work can shed light on further investigations in SNA filed later.

An implicational scale (a scalogram) presented the language choices between Hungarian (H) and German (G) female speakers, from young to old, in various activity domains. Speaking domains ranged from the least to the most formal contact with their interlocutors, and the scalogram showed a wide range of interactions between the speaker and her interlocutors. The conversations ranged from the most personal issues (i.e. talking to the priest), to the most formal issues (i.e. consulting a doctor). In terms of language choices, it was obvious that the younger the speakers were, the more they adopted (G) rather than (H). In many activity domains, female speakers also used both languages, and showed the transition or switching between two languages, in both (G) and (H), but the trend was dominated by (G) which the young speakers considered as the default.

The study found that the working-class peasants, especially men, used (H). Meanwhile the lower middle class men, who worked in the industrial companies, used (G) instead. It was implied that the new generation females, who favoured (G), wished to marry men who could speak German as a prestige language. Unfortunately, those males who could only speak (H) tended to either get married to the women who could speak only (H) or had no chance of marriage. Differences between people's social network structures were formed and showed a difference of direction between these two groups of people. The speakers' networks in Oberwart were based on their language choices which correlated with their marriages. It was predicted that speakers of (H) would shift to (G), and (H) would eventually be lost in the next generation.

Li Wei (1994) carried out a study of an association between social network and language choice in a multilingual Chinese-British community in England. The study examined the ethnicities of the speakers (Chinese and non-Chinese/Mandarin Chinese), over three generations (young, adult and elderly), and SNA based on three network types. The SNA types consisted of: 1) exchange network (a strong tie with high influence, such as close relatives and spouse who could give high rewards to the actor physically and mentally); 2) interactive network (a weak tie with low influence such as shopkeepers and peers who had low reward for the actor); and 3) passive network (a highly influential tie who could provide the actor with high rewards but were absent

from regular contact or lived too far away from the actor). The linguistic factor was the language choice people made between Mandarin and English.

The study was carried out by asking 58 actors to recall 30 of their ties/friends. ANOVA was used to measure whether these three SN types were different or not. It was found that the actors whose exchange networks (along with another two SNA types) are homogeneous tended to use the same language as their networks. The Chinese actors who gained high scores in three of these SNA types tended to have the same Chinese ties. Conversely, others whose ties were heterogeneous (mixed ethnicities) preferred English.

In the exchange network, if the actors and the ties shared the same age range, the actors conformed to the linguistic group's norm. Actors (mostly elderly) who belonged to the same age range and had a high score in the exchange network showed signs of Chinese linguistic maintenance. Likewise, if this condition was found in bilingual English networks, the actors would use English instead of Mandarin. This consequently led to a linguistic shift.

The attributes of Li's three SNA types cast some doubt for various reasons. Firstly, the attributes of the exchange network type and the passive work type might overlap. The only distinction results from the distance. In reality, people nowadays are extremely mobile. Therefore, the real distance between the actor and ties might not have different values to the actor. It might not reflect the actual contact situation among modern people, especially in the UK, where the Chinese communities tend to be weak.

Secondly, Li focused more on the negative impression of ties that influenced the networks. This might not always be the case, in my view. The valued ties which are recalled by (or retrieved from) the actor(s) tend to be beneficial to the actor(s). Therefore, this might be slightly counter-intuitive. It is true that rivals might have strongly negative effects on the actor's life and perception. However, in the actor's positive network circle, the actor can simply reject these unfriendly/hostile individuals in his/her important networks. Even if those negative people are influential, such as in the workplace, they will belong to interactive network ties that gain low scores due to their minimal recognition of the actor. Thus, is it necessary to involve these type of

negative ties in the actor(s)'s network? This might be very interesting in psycholinguistic tests or cognition studies using an SNA model.

Finally, the power of explanation in terms of score weight and calculation might require some adjustments. Li generated only two scales – high and low – across the three SN types. A wider interval score range, such as a likert scale of from 1 to 5, might be a good measure; or perhaps it should display the contact frequency. Thus, these issues have raised concerns to my own SNA research methods and score measurements. Finally, I have developed a new research model of my SNA study in §4.7.

Apart from linguistic shift and maintenance relevant to SNA, there is research associated with foreign language acquisition. Dewey, Belnap, & Hillstrom (2013) employed SNA to examine how learners of the Arabic language improved their linguistic competence in Saudi Arabia. Each actor was asked the number of Arab friends with whom s/he was acquainted. It was found that the number of new acquaintances varied from lowest score (1 person) to the highest (6 persons). There were another two factors contributing to the competence improvement in Arabic. The first was the English competency level of the actor's friends. This means that if the actor's ties had a good command of English, they would encourage the actor to improve their Arabic linguistic competence, such as in translation skill. Secondly, if the ethnicities of the outsider friends and that of the actor were different, these new friends would enhance the actor's skill of the Arabic language. This is regardless of the actor's host family, who had a different ethnicity, and the actor's close friends with the same ethnicity. The more the actor interacted, the more their Arabic skills developed. In my view, this context is in relation to the loose-knit network and the benefit of weak ties. Thus, in order to improve language skill, it is suggested for the actor that they ought to have weak-ties so as to acquire new information from many ethnically heterogeneous networks.

## 3.8 Social factors: style

Holmes (1992) explained the concept of style which shows that in one speaker, a person is able to convey the same information differently. People can shift style of their speech by the condition of addressee and the context of speaking. The measurement of style involves the range of speech from the formal to informal dimensions[18] of speaking. Apart from the content, style can reflect a number of speaker identity features and behaviours such as age, ethnicity, sex and other social background.

### 3.8.1 Characteristic of speech style

Labov (1972) coined the concept of style in a variationist study. Style is associated with several social and demographic factors, such as social class, sex, and so forth. Analysing style-shifting, Labov (1972:208 ) postulated that styles can be arranged along a single dimension, measured by the amount of attention paid to speech.

Labov developed an approach for eliciting the data from the informants by different speech styles by using the attention to speech model.[19] Labov invented many different language tasks, which were designed to focus an increasing amount of attention on speech. Variations of these tasks have been used in hundreds of sociolinguistic studies, including the present one (see §4.5.3).

[18] This is one common view but others including Labov, Bell and Eckert disagree.
[19] Criticisms of this model include that it is difficult to quantify attention paid to speech and the model suggests that a speaker has only one style for a given level of formality.

### 3.8.2 Other principles of style shifting

Apart from Labov's speech style model, which is based on consciousness, there are other explanations for internal speech style shifting, e.g. speech/communication accommodation theory (SAT/CAT) (Giles and Coupland, 1991; Trudgill, 1986, 2006) and the audience design model (Bell, 1984).

Giles and Coupland (1991) introduced the speech accommodation theory (SAT)[20], which explained how speakers' style was influenced by their interlocutors. Speakers can adjust their speech style by making it akin to the interlocutors'. The purpose was to make the hearers pleased or to promote positive attitudes towards the speakers. Giles and Coupland (1991) explained that speech convergence can emerge in several linguistic levels and degrees, including speech rate, utterance length, pausing, phonological variants, smiling, gaze and other linguistic demeanors/cues that the speakers accommodate their speech to the hearers. In contrast, SAT divergence can happen as well. SAT divergence benefits include evoking the listeners' social approval, attaining communicational efficiency between interactions, and maintaining positive social identities by making themselves more outstanding than others. However, to create an identity by alienating oneself from normative hearers could produce negative effects if the hearers did not accept the new identity.

Trudgill (2006) pointed out that style shifting in SAT is associated with the interaction between people, depending on the purpose, the degree of acquaintance, and the duration of time. These properties influenced how speakers shifted their speech styles. Trudgill (2006) asserted that SAT consists of two types: 1) short-term accommodation and 2) long-term accommodation. A short-term accommodation firstly occurs with a particular interlocutor in a particular setting. This linguistic adjustment is only transitory. If an accommodation takes place frequently enough and evolves over a longer period of time, modifications might become non-transitory and occur regardless

[20] Later it was coined as Communication Accommodation Theory (CAT).

of the interlocutor's cue or setting. This type of accommodation is called a long-term accommodation.

Secondly, a long-term accommodation results from the cumulative effect of countless acts of short-term accommodation that occur over a long period of time. Long-term accommodations can often be observed when immigrants who have different linguistic varieties from those of the locals accommodate themselves to the non-mobile locals, especially in regional dialect diffusion and contact situation. Later, once these immigrants have resided in such a community for a long time, these outsiders will have modified their dialects and maintained their new type of speech in that contact area. To some extent, the SAT in both short term and long term accommodations can also serve as an explanation for the linguistic variation, shift and maintenance in this study in NTIE.

Bell (1984) proposed a model that explained style via audience design. Bell explained that style shifting in a speaker can be influenced by the audiences whom they may not necessarily have face to face interaction with. For example, the stylistic variation used by New Zealand news reporters resulted from the fact that these reporters adjusted their speech styles according to what they perceived as a norm for their audiences (or expected addressees).

### 3.9. Sociolinguistic studies in Thailand, including rhoticity

Prasithrathsint (1988) reviewed much sociolinguistic research in Thailand dating from early 1970s to late 1980s. She found that most works done in the 1970s involved rough correlation between the target linguistic factors (basically phonological variables) and social or demographic factors, such as sex, age, level of education and occupation.

In the next phase of study, in the 1980s, the research covered larger areas, with a wider variety of linguistic variables. Apart from the mainstream phonological variation analysis, suprasegmental levels such as lexical tone variation were included because

they were salient features in Thai dialects. Other variables covered lexical variation and address-terms usage. For instance, some stylistic variation was examined with a couple of linguistic variables at once. These narrowed down the finding's implication but revealed the more in-depth results and implications. In addition, there was an attempt to compare BKK Thai dialect to other regional Thai dialects and to other minority languages in Thailand. In macro-oriented studies, other theoretical aspects attempted to indicate other issues in sociolinguistics, such as works on proposing better language policy and examined the multilingualism scenarios in Thailand, e.g. Warie (1979), Smalley (1988), Noss (1988) and others.

### 3.9.1 Rhotic consonant onset and consonant cluster onset variable studies

Beebe (1974) was regarded as a pioneer in variationist study in Thailand. Beebe investigated some sonorant initial consonant clusters in BKK Thai dialect variables of (Cr), (Cl) and (Cw). "C" stands for the first consonant forming the consonant cluster onset. The sonorant variables that follow "C" including /r/, /l/ and /w/ are the second phones constituting the initial consonant cluster onset. The independent (social) factors studied included age, occupational prestige level, sex. Stress type (i.e. light and heavy) is the only linguistic variable found in this study.

In (Cr) the rhotic /r/ is the second phone of the initial consonant cluster onset; its variables cover (pr), (tr), (kr), ($p^hr$) and ($k^hr$). Most of the time, the second phone is discarded in casual speech style. It was called a cluster reduction. For instance, (pr) variable becomes [p] only as its variant. This reduction rule was applied elsewhere in this study and was very predictable. Secondly, (Cl) has the lateral /l/ as the second phone of the cluster onset. Its variables are composed of (pl), (kl), ($p^hl$) and ($k^hl$). Likewise, their reduced forms were similar to those of (Cr). The process is done by deleting /l/, such as when (kl) becomes [k]. Thirdly, (Cw) consisted of ($k^hw$) and (kw) and their variants can be {kw}, [k], {$k^hw$} and [$k^h$]. Interestingly, a stigmatized [f] is also a

possible variant for (Cw) reduction. This stigmatised variant can be found in non-native Thais and suburban villagers who had low levels of education. Beebe used a percentage score to predict the level of association between the variant occurrences and the social factors. The comparisons of the scores' proportions are similar to the correlation implication.

In terms of social factors found for (Cr) and (Cl), people over 36 years of age were likely to retain the full cluster forms in all sonorant class variables. Other relationships between many social factors were relatively weak and obscure. (Cr) and (Cl) showed a striking age correlation. The older the speakers were, the more they used the full cluster onset. However the (Cw) variable distribution of {kw} and {$k^hw$} did not go along with other variables. The correlation trend between (Cw) and social factors is less predictable. Stressed syllables tended to have the full cluster pronunciation (Cr), (Cl) and (Cw) more than unstressed syllables.

Using education level as a predictor, Beebe (1974) categorised speakers into 4 tiers, namely, university, secondary school, vocational and primary school level. As expected, the university level and the secondary school level speakers favoured the full cluster forms in all 3 variables.

Cluster reduction was favoured by the speakers who are quite young in age (out of 2 groups) and the speakers who had low working prestige statuses. However, these factors were analysed separately and the implication was drawn from a combination of findings.

In Beebe's study, there are potential reasons why (Cw) does not show the correlations found in other variables. I argue that this might come from the low frequency in the distributions of lexical items. (kw) and ($k^hw$) cover the fewest possibilities for underlying forms: only 2 can emerge, namely, (kw) and ($k^hr$). (Cr) and (Cl) are most likely to occur as each of them comprise 5 possible variables and a number of variants, including (pr), (tr), (kr), ($p^hr$), ($k^hr$) while (Cl) contain 4 possibilities covering ($p^hl$) (kl), (pl), (phl) and (khl). On top of that the reduced forms emerge frequently,

which means the occurrence possibility is even greater. Therefore, the likelihood chance of (Cw)'s variants is the lowest when compared to other variables.

In the second place, surface structures between the reduced form of /Cw/ as {CØ}[21] and the full form {Cw} contribute to an entirely different meaning. Thus, they rarely use or make a mistake for the {CØ} form. However, in spoken language it is not easy to spot the differences between (Cr) and (Cl), when compared to (Cw). To elaborate, {CØ} surface forms tend to have their own meaning, which may be very different from the underlying form of {Cw}. The speakers and hearers might not be able to trace back its underlying meaning. This is in accordance with the concept of markedness, which suggests that outstanding forms or signs are salient in speaker's cognition and can be easily distinguished from the reduction form. In {Cw}, therefore, it may be used carefully and not be easily missed. Examples are กวาง {kwa:ŋ0} 'deer' to the simplified form กาง {ka:ŋ0} 'to spread out' or in ความ {kʰwa:m0} 'the state of' to the reduction form คาม 'house or city' and ขวาน {kʰwa:n4} 'axe' and ขาน {kʰa:n4} 'to address'.

As mentioned above, (Cr) and (Cl), in their reduced forms of {CØ}, usually bear no meaning. The similarity between the reduced form and the full form of (Cr) and (Cw) are greater than for (Cw). Thus, it is easier for the hearers to trace back what the underlying forms of those reduced forms are. Examples are ครอง {kʰrɔŋ0} 'possess or to dress' to คอง {kʰɔŋ0} 'Ø[22]', ครอบ {kʰrɔp2} 'to cover' to คอบ {kʰɔp2} and 'Ø', and แกลบ {klɛ:p1} 'paddy husk' to {kɛ:p1} แกบ 'Ø'.

As for [f] of (kʰw), it is in line with the markedness issue as previously addressed. However, its frequency rate was very low and was found among the elderly who had low educational levels, as in Ruangwatkee (2009). This phenomenon can be used to explain the (Cr) and (Cl) reduction form's variants to {CØ}. The distinction in sounds between the semivowel /Cw/ and the single fricative/f/ is by far greater than the difference between /Cr/ and /Cl/ and their cluster reduction forms. Furthermore, most [f] onset

[21] This refers to the fact that there is no second phone found in the consonant cluster onset. It is the cluster reduction.
[22] The notation means that it does not have any meaning in their surface representation.

variants that are derived from the (Cw) onset carry no meaning. For instance, ควาย {kʰwa:j0} 'water buffalo' and {fa:i0} 'Ø' or in ความ {kʰwa:m0} 'the state of' to the stigmatized reduction form {fa:m0} 'Ø'. Thus, the second phone of cluster (Cw), the semivowel /w/, is a crucial signal to retain the underlying target meanings of /Cw/.

In my study, I decided to discard the (kʰw) variable because it is obvious in Beebe's study that the use of (kʰw) is unusual, rare and only likely to be used by certain speaker cohorts. The obscurity of (r) and (Cr) are what I intend to examine in all types of conditions. In the second phone, the formation of the consonant cluster of (kʰw) or /w/ is not associated with /h/ phoneme in NT Thai dialect. However, /r/ and /l/ are likely to be related to /h/ in NT Thai dialect. Especially in the /r/ consonant onset, its underlying form possesses the [h] variant which can be used interchangeably in NT dialect in the MBK community. Moreover, (Cl) is also discarded in my study and should be examined later in future research. The underlying form of any /r/ is the focus of this study.

### 3.9.2 The study of the (r) rhotic consonant onset and consonant cluster onset variables

The interchangeability between the consonant cluster onset variants {kʰw} and [f] in Beebe (1975) is also found in Ruengwatthakee (2008)'s work. Ruengwatthakee focuses on Ayutthaya, the former capital city of Ayutthaya kingdom from 1351 to 1767, a period that precedes the kingdom of Siam or Thailand. In this study, she examines the variables of (kw) and (kʰw) and concludes that these variables share the same variants as found in Beebe (1974).

Sixty locals of Ayutthaya province participated in the study. Four social predictors were investigated, namely age (10-20, 30-40 and 60+ years), educational level (bachelor degree, high school and primary school), sex and styles (interviewing, passage reading and word-list reading styles). The reading of passages and word-lists was conflated into

one formal style. Percentages and chi-square tests were used to test the pairwise comparison of all factors. However, all social factors could not be tested for their associations, their significant orders in the rank and their interaction amongst those social predictors (in-group members).

The use of the {$k^hw$} variant of ($k^hw$) and the {kw} variant of (kw) as standard forms occurred much more frequently than non-standard variables. The social attributes that conditioned speakers to use the standard form were sex, education background, and formality. Young men who were highly educated tended to use these variants in formal contexts. Ruengwatthakee found that [f] was only favoured by the elderly who had low education levels. However, the frequency of [f], the stigmatised form for both phonemes, was extremely minimal when compared to other factors. Therefore, Ruengwatthakee's result corresponds to Beebe's in certain parts.

This study suggests that formal variants will increasingly be used in the near future. Both variables are conditioned by formal style. The [f] is likely to disappear according to this apparent-time diagnosis of change. In addition, the use of chi-square in explanation seems to be exaggerated: if the compared members are different, one of the members will be greater, but in fact, they can show only the power association of each compared pair. Due to this limited analysis capacity, variationists nowadays employ multiple logistic regressions via Varbrul and Rbrul software instead (Bayley & Preston, 1996; Guy, 1988; Johnson, 2009; Paolillo, 2002; Sankoff, Tagliamonte, & Smith, 2005; Tagliamonte, 2006). This allows the variationists to rank the most important predicators (based on the statistical significance level of each factor) and shows the direction of scores (i.e. favouring or disfavouring) by using factor weights or log-odds scores of each independent variable. Also, the rate of explained variation in the model or $r^2$ (variance, to show the fit in regression equations and how sturdy the statistical model is) can help explain the variance by percentage.

Chunsuvimol (1992) investigated an association between two BKK Thai variables and one English variable that shared attributes of rhoticity. Fifty-eight Thai participants, all staff of first-class hotels in Bangkok, were studied. All of the interviews were

conducted in BKK Thai. The first two BKK Thai variables included (r) rhotic consonant onset and (Cr) consonant cluster onset rhotic. The last one is rhotic consonant onset in English (r). The three social factors involved were sex, occupational hierarchy/level and the duration of time exposed to English language or communities.

In general [l] and and {CØ}, the cluster onset reduction of rhotics, occurred most often. Also, the alveolar approximant [ɹ], surprisingly, was preferred in both variables, namely the rhotic onset (r) and the cluster with rhotic onset (Cr). The frequency of trill [r] and flap [ɾ] in both variables was very low compared to the approximant which was adopted from English into Thai. Considering social factors, it was found that the rhotic [r] trill in Thai and [ɹ] approximant in English were the prestige forms. Both of these prestige forms from two languages were closely associated with female speakers, higher-level career positions and longer exposures to an English-speaking environment.

Chunsuvimol (1996) extended her study in 1992, from rhotic to lateral classes, and dealt with the same phonological variables, namely the (l) consonant onset and (Cl) consonant cluster onset. All participants, social factors incorporated and research protocols were similar. In general, in (l) and (Cl) variants, [l] and (CØ) were significantly outnumbered by the other variants flap [ɾ] and approximant [ɹ]. These rhotic occurrences in the /l/ or /Cr/ underlying forms were treated as hypercorrection forms by the speakers.

When social factors were considered, [l] and {Cl} were used most frequently among participants with more prestigious jobs. In contrast, the reduced form, {CØ} reveals the opposite trend of the {Cl}'s distribution.

Females categorically avoided the non-prestige forms (0%) while males used some hypercorrect forms, namely [ɾ] and [ɹ] in initial (l), but only minimally. However, for the cluster (Cl) both sexes employed the full cluster {Cl} (prestige form) and the reduced form {CØ} (non-prestige form). Interestingly, only males in the lowest ranking jobs performed hypercorrection by adopting {Cɾ} and {Cɹ} into this variable, whereas females never used them. Chunsuvimol (1996) suggested because of their economic hardship and lack of linguistic confidence, lower-middle-class speakers tended to

produce more hypercorrection than those from other social classes to some extent (Wolfram & Fasold, 1974, Labov 2001).

However, I have different ideas from Chunsuvimol (Cl)'s interpretation. Hypercorrection of (Cl) as {Cɾ} and {Cɹ} could have been caused by errors in speech production rather than economic hardship and lack of linguistic confidence. These lowest male cohorts were associated with low education and fewer chances to come in contact with foreign guests in the first-class hotel. Even at this level, however, females were very careful about these sounds and never hypercorrected. Research done around the world highlights the fact that women often assume both roles in language change: as linguistic trailblazers in change from below, and as social conservatives borrowing prestige forms in change from above. Here, females did not show any sign of that: they did not use the incoming rhotic forms more than males, or treat them as prestigious. Therefore, Chunsuvimol's discussion might cast some doubt and could be viewed differently.

My current variables are inspired by Chunsuvimol (1992) and Promparakorn (2005), namely rhotic consonant onset (r) and rhotic cluster consonant onset (Cr).[23] Promparakorn (2005)'s work mainly focuses on dialect contact while my work deals with variation, maintenance and shift. Our measures and protocols are also entirely different. She especially focuses on the new dialect formation or Koineization scenario[24] in the North Eastern (NE) Thai dialect in Ban Khong San (BKS) community, in Thailand. Geographically, BKS is located in Nakorn- Rachasima Province, which is close to the capital (Bangkok). In most regional provinces in NE Thailand, people use NE Thai dialect. BKS community is an entirely new habitat which is located in Nakorn-Rachasima province and close to Bangkok. Most are immigrants who moved from the areas affected by the construction of a dam in BKS community. Therefore, it was expected that speakers in this area had undergone the process of dialect contact and dialect leveling.

The 68 respondents speak two dialects, BKK Thai and NE Thai. They came from different birthplace backgrounds including three ethnic participant cohorts, namely 1)

[23] In consonant cluster onset notation, Promprapakorn (2005) uses (_r) (_l) (_Ø) instead of (Cr), (Cl) and (CØ) to avoid the brackets.
[24] Etymologically rooted from the Greek Koine (a common dialect in ancient times)

speakers from close to Bangkok who use BKK Thai natively, 2) NE region speakers who mostly had NE Thai as their mother tongue, and 3) BKS speakers, who tended to use both dialects in varying degrees. In this study, four phonological variables were included: (Cr), (Cl), (Cw) and the diphthong (ɯa) with [ia] and [ɯa] as its variants. There was one syntactic variable in this study, a negator which consisted of two variants: /maj/ is the BKK form while /bor/ is the NE Thai negator.

In initial consonant onset, the underlying form of /r/ in BKK Thai corresponded to /h/ in NE Thai. This phenomenon is very similar to the situation in the NTIE communities in Lamphun province. Promparakorn found that [l] was predominant amongst other variants while [r] and [h] were presumably levelling out or to be merged from [h] to [r]. Children, in particular, favoured the prestige form [r] and disfavoured the local form [h]. Other social factors showed no clear trend for the (r) onset variable.

Regarding the (Cr), (Cl) and (Cw) variables, the reduced form {CØ} was used prominently among speakers from all generations, regardless of origin. The elderly from the central region used the full forms of those three variables: {Cr}, {Cl} and {Cw}. The youngest group, on the other hand, mainly used the reduced forms across all social variables. Among the BKS people, who were the focus group, the full cluster variants were rarely used. Those full/standard cluster onsets were undergoing the processes of levelling and simplification. In NE Thai dialect, /ia/ corresponds to/ɯa/ in BKK Thai. For example, {kɯa1} “salt” in BKK Thai would be {kia1} in NE Thai. However, the [ia] was highly stigmatized and mostly employed by NE Thai people. As predicted, [ia] was less used among the children as well and is likely to be replaced by [ɯa].

The negator /bor/ was regarded as stigmatized and dominantly used among NE Thai people. Interestingly, BKS youngest group slightly prefered /bor/ to /maj/. The younger generations of BKS community tended to use /maj/ in the more formal context. It is possible that syntactic variables might be more stable and rigid than phonological variables, which are prone to shift after affected. However, each phonological variable behaves differently, with various degrees of change.

The dependent variables did not show any clear relationship in social factors, except sex. As for (Cw) and its negator amongst young people, females preferred {Cw} and /maj/ while males slightly favoured {CØ} and local /bor/. These variants seem to be competing and fit the profile of change in apparent time. The frequency of /bor/ may rise while /maj/ may undergo a process of reallocation in certain situations. Promparakorn (2005) indicated that this would mean that /bor/ will not disappear but will be used for specific purposes, with /maj/ used in more formal styles.

### 3.9.3 The Study of Tonal Variation in BKK Thai

Arunreung (1990) investigated whether the variation of falling tone correlated with the age of speakers in Bangkok Thai dialect, such as in {$t^h$a:n2} or the '2nd or 3rd person polite address term' and /$p^h$ɔʔ2/ 'father', or {ba:n 2} 'house'. The variants of the falling tone variable covered five forms, namely: mid-falling, high-falling, mid-rising-mid, mid-rising-falling, and mid-level with falling at the end. The social factors included age, educational level and speech style. The 30 Bangkokian speakers studied ranged from university lecturers to secondary school students. The age range included young speakers (15-20 years), adults (35-40 years), and elders (55-60 years). Arunreung found that adult and elderly speakers mostly employed the mid-falling meanwhile the youngest group preferred the mid-rising-mid variant. In addition, she discovered that the tonal variation was dependent upon style. In more formal styles, e.g. reading-passage, respondents in all age groups tended to use the mid-falling variant a great deal; in less formal styles, all speakers employed the mid-rising-mid tone variant most often.

### 3.9.4 Other consonant and vowel variation studies

Sapproong (1993) studied variation in nasalized glottal fricative (h̃) as the initial consonant in the Southern Thai dialect of Songkla province based on 100 respondents. There were 3 variants, namely [h̃], [h] and [ŋ]. The latter is an incoming variant derived from BKK Thai dialect. This study incorporated age as a social factor while dividing them into 4 age groups using the following decade criteria: 11-20, 21-30, 31-40 and 41 years old and beyond. The study showed that [ŋ] was used most frequently.

The local variant [h̃] was dominantly used by the elderly and reduced among younger speakers, while [ŋ] showed the reverse trend. The variant [h] was sporadically found and did not show any clear trend. Males used the local form [h̃] more than females. Perhaps females are more sensitive to prestige/incoming variants than their counterparts.

Finally, Sapproong also found that speakers with the highest educational level prefer the BKK Thai incoming variants to those two local variants. However, those local forms were favoured by speakers who have low education levels.

Homkaew (1997) investigated vowel variation among speakers of different ages. Homkaew focused on open-mid front vowel (ɛ) in BKK Thai, as found in [pɛn0] “to be” and [sɛn2] “line, strap”. The /ɛ/ in this BKK Thai dialect corresponds to /e/ in the southern Thai dialect variety. Social variables included age and attitude towards dialect use. The speakers read a wordlist with 30 items written in BKK Thai, which used /e/. The (ɛ) variable comprised 3 variants, namely [ɛ], the local variant, an intermediate (raised) form [ɛ̝], and [e], which is the incoming form derived from BKK Thai, respectively. Homkaew found that speakers favoured [ɛ] the most while the least favourable was [e]. This phonological variation was conditioned by age difference, that is, the elderly tended to use the local form [ɛ] while younger speakers progressively used them less and less. However, the incoming variant [e] did not show the reverse effect.

### 3.9.5 Lexical variation studies

Choophan (2004) investigated the association between lexical variation/word choice and age difference in Kho Sa Mui island, in Surat Thani province, Thailand. She observed the mixed use of numerous lexical items between Southern Thai and BKK Thai dialects. The 140 respondents were asked to pronounce 200 entries/terms of items using their own varieties. Examples are [tɕʰɔn4 jaj1] in Southern Thai, while in BKK Thai it was pronounced as [tap3 phi:0] for "ladle"; and [prok3] in Southern Thai while it is addressed as [ka1 la0] in BKK Thai, referring to "coconut shell". The local speakers consisted of two groups, the elderly (60-70 years old) and the youngest group (10-20 years old). As predicted, Choophan found that the elderly favoured the genuine local terms while the youngest group prefered the loan words from BKK Thai.

Chitbanchong (2002) investigated lexical variation (word choice) by age difference in the native speakers of Seak language in Thailand. The language is spoken in Nakorn Phanom province, in NE Thailand. It is hypothesised that several languages have been mixed into present-day Seak, namely the BKK Thai dialect, the Northeastern (NE) Thai dialect, the Yor language and the Seak language. To study this variation, 275 lexical items were tested by 18 Saek respondents. Age was classified into 3 groups: 15-25 years old young, 35-45 years middle-aged and 55-65 years for the elderly.

BKK Thai lexical items were dominant among other contacting languages. The elderly strongly contributed to linguistic maintenance as they employed more of the original Seak lexical entries. Furthermore, speakers tended to borrow a number of NE Thai lexical items from other contacting minority languages spoken in the areas adjacent to Nakon-Phanom. It was also found that the authentic patterns of Seak were gradually transformed. For example, many lexical items' syllables were reduced and the pattern of consonant clusters shifted. Chitbanchong also found that some terms underwent semantic extension.

### 3.9.6 Stylistic variation studies in Thailand

Treyakul (1986) examined the variation of consonant onset rhotics and laterals (r) and (l) and consonant cluster onsets with rhotic (Cr) and lateral (Cl) in BKK Thai dialect. 20 FM radio broadcasters were asked to take 4 stylistic tests starting from the most formal to the least formal style. It included: minimal pairs reading, reading passage, reading to broadcast in the radio and interviewing style. Treyakul found that for the (r) variable, speakers have the highest rate in use of trill [r] in the minimal pair test. As for the tap variant [ɾ], they mostly used it in the more formal styles found in the reading to broadcasting test and reading passage test. This was because these styles were relatively formal and the speakers were more aware while taking the tests. In contrast, [l] was found most often in interview style. For both cluster onset variables, {CØ} was dominantly in use amongst variants of (Cr), and in (Cl) result as well. The prestige forms, {Cr} and {Cl}, were used most often in the more formal styles.

Pirom (1999) investigated the hypercorrection of consonant onsets and consonant cluster onsets in lateral (l) for BKK Thai, as spoken by Channel 11 TV broadcasters. The hypercorrect variants of (l) included trill [r] and {Cr} in both initial consonant onset and consonant cluster onset. TV broadcasters were likely to use [r] and {Cr} in interview situations (less formal styles) rather than in the broadcasting situation (more formal styles). The broadcasters attributed the higher occurrence of [r] and {Cr} during "less serious" speech. In reading style, hypercorrection rarely occurred. This might have been because the readers were influenced by the orthography, or were familiar with them.

Pulsup (1994) studied the association of styles and phonological variation. The variables included the cluster onset with rhotics (Cr) and cluster onset with lateral (Cl) in BKK Thai dialect as spoken by secondary school female students in Bangkok. The five speech styles ranged from least to most formal styles including conversation, interview, reading passage, wordlist and minimal pair style as previously used in Labov's stylistic tests. The study revealed that both variables were, to some extent, associated with style.

The reduced forms {CØ} of both (Cr) and (Cl) were predominant across the three less formal styles. In contrast, in the reading list and minimal pairs styles, the full clusters with rhotic onset [r] and lateral [l] were used most often.

### 3.9.7 Other studies in macro-sociolinguistics regarding the NT Thai dialect and the BKK Thai dialect

Thatun (1997) studied the influence of the BKK Thai dialect among the Yong dialect-speaking secondary school students (from 12-15 years old) in Lamphun province, Thailand. The sample consisted of speakers who used the Yong dialect as their mother tongue and were capable of speaking BBK Thai and NT Thai in varying degrees as well. However, the monolingual policy in Thailand required that all lessons must be taught in BKK Thai even though most teachers were NT Thai-speaking locals. It was found that there was dialect mixing between Yong and BKK Thai on both phonological and syntactic levels. The 60 Yong students were tested for their BKK Thai pronunciation based on reading tests with 50 lexical entries, including diphthongs, cluster onsets with sonorants and rhotic onsets. Their casual speech was observed.

The study showed that students employed their marked Yong monophthongs which correspond to the BKK Thai diphthongs, namely [ə] to [ɯa], [o] to [ua], and [e] to [ia]. Also, cluster onsets with rhotics (Cr) and laterals (Cl) were simplified to {CØ}, such as /kʰroŋ0/ to /kʰoŋ0/ “possess, obtain” and /kʰloŋ0/ to /kʰoŋ0/ “canal”.

In casual styles, the BKK Thai lexical items were replaced by Yong items. Both clausal and word levels were found to be mixed, but not very frequently. However, the Yong lexical items were predominately used even when BKK Thai syntactic constructions were used. Interestingly, Yong final particles were added to replace BKK Thai final particles. Therefore, at all linguistic levels – from phonological to syntactic aspects – the Yong dialect had a great impact on the BKK Thai speech produced by Yong students. In Thatun’s study (1997) the situation of the Yong dialect was still very strong

but nowadays, it is observed that the influences of NT Thai and BKK Thai are much stronger.

In my current work, the influence of BKK Thai is the most powerful over NT Thai and Yong, respectively. In addition, it is interesting that NT Thai dominates the Yong dialect. However, my experimental tasks, research methods and statistical analyses greatly differ from Thatun's. After conducting the research, I found that students in Thatan's school almost gave up their Yong dialect and entirely switched to BKK Thai instead. If it were a valid trend study, it might indicate that the influence and power of BKK Thai is now much greater than in the past. Students favour the cluster of /r/ and /l/ more in formal speech. The colouring of Yong and the use of Yong as a mother tongue are gradually disappearing due to MBK locals and BKK immigration nowadays.

Another study which focused on attitudes toward dialect use is Kantawang (2012). She examined 117 speakers, undergraduates from Chiang Mai. The purpose was to learn about their motivation in using or not using NT Thai. The study revealed that the adoption of NT Thai was influenced by both internal factors (e.g. personal interactions that the speakers had with others such as their families and relatives) and external factors (e.g. media and schooling). It was also found that internal factors are more pronounced than external factors. Kantawang elaborated more about the internal factors, explaining that the participants' families and close relatives all used NT Thai, which was taught by their parents as a mother tongue and used at home. In contrast, young speakers chose not to use NT Thai for the same reasons with negative attitudes to their homes and relatives. Even though some undergraduates were exposed to BKK Thai content through numerous media, this did not much affect their dialect choice. Instead, the participants were most likely to use the same dialect that is used most commonly and consistently at home or spoken by their close peers.

In the next chapter, the research methodology and relevant statistic protocols are introduced and discussed.

# Chapter 4

# Research methodology

## 4.1 Introduction

In this chapter, the research methodology and relevant statistical analyses are described. These comprise the data sampling methodology emphasizing judgment sampling, attributes of respondents regarding demographic data stratification, data collection: the snowball or the friend-to-friend network technique, the role of researcher in the NTIE community and ethical issues, dependent variables covering the (Cr) onset and the (r) onset and their variants, coding protocols in Rbrul as factor groups, independent variables including social factors, social network (ego-centred network) and phonological factors, respectively.

### 4.1.1 Judgment sampling and its advantages

This study employs judgment sampling in the NTIE target area since it is appropriate for such a mobile community. Random sampling should be addressed first.

Milroy and Gordon (2003) discuss several sampling methods and show their advantages and disadvantages. They start with random sampling, which gives each potential subject an equal chance of being selected in the sampling frame. A good method of random sampling uses an electoral register or registration office. Another way is to pick the sample by using either odd number order (or vice versa) and select them randomly again several times until the number of subjects is met in order to find an unbiased representative sample of the population.

However, Milroy and Gordon (2003) argue that random sampling leads to drawbacks as well. Primarily, to reach the whole or exact population is extremely difficult or almost impossible. Secondly, if the chosen samples are missed out with unfortunate causes such as death or migration, it is impossible to know exactly that the population is stable or to do a panel study.

Thus, to avoid these problems, in sociolinguistics, the sample size is relatively small due to the nature of linguistic study, where dealing with enormous amounts of speech data is unnecessary as the pattern is very predictable, as argued by Labov (1966 rev. 2006). Labov claims that it is not necessary for linguistic research to reach large numbers of participants since linguistic behaviour seems to be shared across speakers. Linguistics is not similar to the medical or dietary field where research requires thousands of subjects to represent the population. Sankoff (1989: 51-52) also asserted that linguistic behaviour in certain communities seem to be more united and homogenous than other scientific and demographic studies. According to these, it is acceptable from previous research that the sampling size and data retrieval can be done using other methods with a high rate of success, as in Labov (1972), Macaulay (1977), Milroy and Milroy (1978), Chambers (1998) and Eckert (2000) who employed judgment sampling instead.

### 4.1.2 Judgment sampling

Milroy and Gordon (2003) defined judgment sampling, also known as quota sampling, as a type of non-random sample. It is based on selection driven by the experts' opinion. Sampling must be based on a defensible theoretical framework. The predetermined amount and types of speakers already have been identified in advance. Due to the unequal weight and frame of samples selected from the population, the sample's distribution might be nonrepresentative. Schilling (2013: 35) also added that the categories or cells in the table are filled unsystematically (stratified) based on

social/demographic factors according to the research's aims. Thus, it will be a subjective judgment. However, this sampling method has been widely and successfully used by many sociolinguists such as Labov (1981) in Philadelphia, Macaulay and Trevelyan (1977) in Glasgow, Milroy (1987) in Belfast, Eckert (1988) in Detroit, Horesh (2014) in Palestine, Alqahtani (2015) in Southern Arabia, Badia (2015) in Home Counties and London outskirts, and many others.

Judgment sampling can be done when the researcher knows the target communities and their respondents' nature very well or has studied in the target areas for a long time. Its benefit is to avoid redundancy once the researcher is acquainted with the respondents. As I can speak both NT Thai and BKK Thai and resided in Lamphun province more than 10 years, I am confident that I know the MBK community quite well and am capable of accessing relevant networks in the community.

### 4.1.3 Attributes of respondents regarding demographic data

In judgment sampling, one must balance the fundamental demographic factors across sampling. The four basic predictors here are age, sex, social/occupational class and place of origin/ethnicity (of MBK participants and BKK participants). According to Meyerhoff and Schleef (2010: 7-8), stratified sampling in sociolinguistics has specific social or linguistic questions in mind. In stratified sampling the samples are manipulated and managed according to the predetermined variables. Then the samples are divided into strata, accordingly. Tagliamonte (2006) also asserted that as a minimum requirement a sample should be stratified on the basis of age, sex, social class and/or educational level.

However, the problem of stratified sampling which has emerged elsewhere is also found in my work: there are too many factors to deal with, requiring many participants in each category. Milroy and Gordon (2003) pointed out the drawback of this technique was the over-multiplication of factors. Supposing there are 3 factors, such as education

level (3 levels), age (3 cohorts) and sex (2 sexes), the requirement is 3x3x2 or 18 cells. If at least 3 persons per cell are needed in order to avoid outliers, at least 54 persons are expected. This is already challenging to deal with in the timespan of PhD research.

There were two groups of respondents in this study, which further increases sample size. The focus was on the group of MBK s participants , leading to the major claims and arguments of the study. The reference group were BKK particpants (the internal-immigrants) who used to reside around Bangkok vicinity. If I had tried to balance these equally according to the criteria of strata, the number of subjects would have been at least 108 which was too challenging and resource-consuming.

After experiencing the community and carrying out data elicitation for some time, the BKK groups proved to be very scarce and it was difficult to complete the cells according to the strata. In addition, they came mostly from the working class and were mostly middle aged (40-54). It was very difficult to find BKK children. Therefore, I disregarded some cells of BKK participants. Also, during the holidays and special occasions, for example Songkran (the longest national holiday in mid-April), the BKK internal immigrants left the NTIE community for around 2 weeks. Thus, it was extremely difficult to contact and approach those BKK and central regional participants.

Hence, I reduced the sample size of BKK participants to only 1 per cell for middle aged respondents and excluded the other age groups. I gained more than I expected, amounting to 66 persons. In the end, there were 57 MBK informants and 9 BKK informants, with sex roughly balanced. Unfortunately, there is one MBK cell left blank which is the LMC female older MBK participants stratum. However, fortunately the actual number of participants found outnumbers the expected number in several cells. Oversampling can be useful in case one or more speakers in a cell prove anomalous.

In terms of logistic regression, a type of non-parametric statistical analysis, it is acceptable to run unequally-distributed data with non-normalized distribution. In table 4.1, the preceding number before parentheses is the expected number of participants. Meanwhile the actual number of speakers is in parentheses.

Table 4.1 The stratified sample in NTIE community

| **Social occupational class** | **Place of origins** | **MBK locals(focus group)** | | **BKK participants (reference group)** | |
|---|---|---|---|---|---|
| | **Age/Sex** | **Male** | **Female** | **Male** | **Female** |
| **WC (Working class)** | **Young (Y)** 15-24 yrs old | 3 (3) | 3 (5) | Ø (0) | Ø (0) |
| | **Adult(A)** 25-54 yrs old | 3 (2) | 3 (5) | 1 (1) | 1 (0) |
| | **Elderly (E)** 55 up yrs old | 3 (1) | 3 (1) | Ø (2) | Ø (0) |
| **LMC (Lower-middle class)** | **Young (Y)** 15-24 yrs old | 3 (5) | 3 (4) | Ø (1) | Ø (1) |
| | **Adult(A)** 25-54 yrs old | 3 (4) | 3 (5) | 1 (1) | 1 (1) |
| | **Elderly (E)** 55 up yrs old | 3 (2) | 3 (0)* | Ø (0) | Ø (0) |
| **MMC (Middle-middle class)** | **Young (Y)** 15-24 yrs old | 3 (4) | 3 (4) | Ø (0) | Ø (2) |
| | **Adult(A)** 25-54 yrs old | 3 (5) | 3 (2) | 1 (0) | 1 (0) |
| | **Elderly (E)** 55 up yrs old | 3 (2) | 3 (3) | Ø () | Ø () |
| **Sum respondents in each category** | | 27 (28) | 27 (29) | 3 (5) | 3 (4) |
| **Total** | | +54 (57) | | +6 (9) | |
| **Grand total** | | +60 (66 persons) | | | |

## 4.2 Data collection: the friend-of-a-friend technique and the role of the researcher as a humble man

I adopted the friend-of-a-friend method (Milroy and Gordon, 2003: 30-32) to access the community and gain participants. With the help of many generous brokers, I had several initial contacts to locate my potential participants. The success rate of gaining access was around 90 per cent. According to Milroy, this is expected when respondents trust the brokers based on their good credit and background as acquaintances and friends. Fortunately, many local people, teachers and other powerful leaders in the communities that I contacted prior to conducting the actual fieldwork were efficient brokers. Without them, it would have been impossible to gain easy access and to gather a number of people in such a short time. The brokers helped me to explain the aims of this study, its values and benefits (apart from obtaining my degree). I was surprised how willing the informants were to help.

### 4.2.1 Avoiding the observer's paradox

The friend-of-a-friend approach has advantages in avoiding the observer's paradox. As in Milroy (1980) or Cheshire (1982), I let the recording proceed by asking certain participants to help in terms of gaining natural vernacular data. The fieldworker attempted to create a friendly environment during the interview where the speakers and the researcher could speak informally at ease.

Hirano (2013) noted that even though people may feel relaxed and at ease with the researcher from long acquaintance, an issue of "audience design" effect (Bell, 1984) might remain, as the informants are aware that they were interviewed by a researcher and the sound recordings will be scrutinized. It was true that in the first 5 minutes, my respondents felt slightly nervous and alienated. However, with the great help of the network brokers who escorted and introduced me in a friendly manner, and my

personality as a very humble, extremely polite and relaxing person, I found that informants felt relaxed and satisfied enough to join the conversation with me after the broker left.

To note, I am a native speaker of NT Thai and all interviews were conducted in NT Thai. Thus, the quality of most of the talks was high with consistent and stable styles according to the task given throughout the interview.

In seeking the initial brokers who can connect to other ties, Tagliamonte (2012) claimed that the researcher should avoid those of official status, such as priests, community officers, teachers, and (entitled) community leaders since their characteristics, behaviour and networks might not represent the actual/legitimate community members. These people might be outsiders, not the local ones who know the communities and networks well, not inclusive. Their backgrounds and classes, especially their speech style, might be formal and use standard language as a basis.

I argue that community leaders in an Asian context are very powerful, well-known and have a wide-range of networks that enabled us to get the stratified samples and respondents we expected. They are also good representatives of the middle-middle class speakers by their own attributes. It is interesting that the community leaders do not even bother to care to speak BKK Thai even though they could; they never switched due to their ideology (covert prestige and linguistic capital, see chapter 6). They preferred to use NT Thai with a small range of style instead.

Apart from this, I have followed all ethical procedures according to the University of Essex's ethical approval of research involving human participants (see Appendix F).

### 4.2.2 The generous brokers (betweeners)

In adopting the friend-to-friend network, there were 4 main brokers who assisted me to approach MBK locals and BKK participants in NTIE community. These brokers' assistance and affected conditions were relatively different.

The first two were elderly persons aged around 65. Both of them were energetic, hospitable and powerful in the MBK community. With MMC status, they were quite wealthy but still functioned as leaders of community volunteers for several charity projects. Despite low payment or even no payment at all for those voluntary projects, they were very engaged and had a strong will to succeed. One female broker was a head of a healthcare unit but ran many businesses and lodges. The other was a male who had left the monkhood for a long time and was highly respected and acknowledged by people. These two brokers led me to a number of people in MBK directly by escorting me to see their locals, telephoning their networks for further help to reach their second ties of networks.

Likewise, the third broker was a female officer in NTIE. She was a native speaker of NT Thai who resided in the vicinity throughout her life. Because of her help, I could contact a number of middle aged workers in many classes. Both NT Thai and BKK Thai speakers came from her networks. I spent time for a month in her office interviewing people one by one during their break time or later after their work shifts. However, I discovered that finding middle class BKK participants was not that easy. It turned out that the majority of officers who worked in this industrial zone were primarily local/native people in Lamphun. These people varied in class and came from several districts in Lamphun and provinces nearby, accounting for 14 NT regional provinces such as Lampang, Chiang Mai, Chiang Rai and Tak. Therefore, to delimit the original MBK locals was very challenging in this large office. However, she greatly assisted me to find other people from her 2$^{nd}$ ties network.

Lastly, my fourth and the most important broker was a senior secondary teacher in the most famous school in Lamphun province. At first, I came across many obstacles finding young speakers in NTIE. I tried very hard to contact the local schools in MBK area, but many students were not MBK locals. Interestingly, it turned out that they often spoke minority languages, not NT Thai. Also, the number of students per school was so small, less than 100 persons. Based on my interview, MBK locals viewed these schools situated in MBK community as too newly established, with lower educational qualities and prestige compared to others. This made me realize that all schools located in the MBK communities were not for Lamphun people, actually they are for the other ethnic minority groups and migrant labourers who were in the WC, because there were no tuition fees to pay. If parents could subsidize their children, most parents in all social classes in MBK would either send them to study in the more prestigious expensive schools in Chiang Mai province as the first choice or send them to the famous school in Lamphun where my broker worked. It puzzled me that the ideology of new generation parents has shifted a great deal from the past. Unfortunately, I was barely able to collect those authentic local adolescents from schools in MBK community.[1]

Therefore, I shifted to contact the Lamphun province famous school, in which students were the local MBK participants as well as BKK immigrants . The distance from this school to MBK community was around 5 km which was not too far. This large-scale school served students from the 7$^{th}$ grade to 12$^{th}$, both high school and junior high school. It accounted for around 3,300 students. Hence, I could access the adolescent groups aged from 13 to 18 years old with ease.

There was some information to find pertaining to students' attributes and their location. Primarily, the higher level of education institutions, including grades 10-12 and

[1] Interestingly, the municipal office tried to gather a number of people from other provinces to become permanent residents in the MBK municipality. The objective is mainly for higher budget support from the government. If the registered residents according to civil registration reached 50,000 persons, they will gain another level of budget to develop the municipality. Thus, indirectly, the community tried to gather a number of other ethnic groups of people. These are parents who work in NTIE and also their children who will become local students to join the local schools as well. But strangely, apart from the children who can join the local nurseries in MBK, none of the locals who were originally born in MBK community entered the primary school and secondary school at all. Therefore, this contributed to the problem of scarcely finding authentic MBK locals.

vocational institutes and campus-colleges, were all located in Lamphun province's downtown, except for this target school. It was situated in the middle of the range between MBK community and Lamphun province's downtown. Secondly, to decide which social class a student belonged to, the criteria were based on their parents' careers. Those young adults at the university level were treated at least as LMC, incorporating also their parents' jobs in order to consider which social classes they finally belong in. Also, the salaries, properties and power in the community of their parents were observed and analysed, if I could visit their residences, so as to decide their social class.

### 4.3 Dependent variables: consonant cluster onset with rhotic (Cr) and rhotic consonant onset (r)

In the case of consonant cluster onsets with rhotic, the variable (Cr), the potential variants are:

{Cɾ}, consonant cluster onset with alveolar tap as a second phone

{Cr}, consonant cluster onset with alveolar trill as a second phone

{Cl}, consonant cluster onset with lateral approximant as a second phone

{CØ}, reduced cluster onset form without second phone

In the end, {Cɾ} and {Cr} were conflated as {Cr-1}.

In the case of the rhotic consonant onset (r) variable, the potential variants are:

[r], alveolar trill

[ɾ], alveolar tap

[l], alveolar lateral

[h], glottal fricative

In the end, [ɾ] and [r] were finally conflated as {r-1}.

In this study, consonant cluster onsets with rhotic (Cr) in words which are derived from loanwords from foreign languages, and other types of consonant cluster onsets, were discarded. This refers to the second phone that is not underlyingly a rhotic based on BKK Thai dialect. In general, these types of initial cluster onsets were rare to find in casual speech, and in an academic context of speaking as well. Therefore, /t$^{h}$r/, /br/, /dr/ and /fr/ were discarded from the study.

Table 4.2 consonant cluster onsets and loan words

| Words (from language) | BKK Thai dialect and NT Thai dialect |
|---|---|
| "sleep" (Sanskrit) | /nit3 t$^{h}$ra:0/ |
| "blonde" (English) | /bron0/ |
| "blur" (English) | /blɤ:0/ |
| "free" (English) | /fri:0/ |
| "fluke" (English) | /fluk3/ |
| "draft" (English) | /dra:f3/ |

In this thesis, the phonological rules adopted from BKK Thai and their possible variants found in MBK locals and BKK participants in NTIE community include the

following phones, namely /pr/, /pʰr/, /tr/, /kr/, and /kʰr/. The likely cluster occurrences are displayed below.

1. [p][r]+V+(C)
2. [pʰ][r]+V+(C)
3. [t][r]+V+(C)
4. [kʰ][r]+V+(C)
5. [k][r]+V+(C)
6. [p][l]+V+(C)
7. [pʰ][l]+V+(C)
8. [t][l]* +V+(C)[2]
9. [kʰ][l]+V+(C)
11. [k][l]+V+(C)
12. [p][Ø]+V+(C)
13. [pʰ][Ø]+V+(C)
14. [t][Ø]+V+(C)
15. [kʰ][Ø]+V+(C)

### 4.4 Coding protocol for Rbrul

The following table illustrates the coding of linguistic dependent variables, social and linguistic independent variables in Rbrul for logistic regression analyses. The (Cr) and (r) share the same predictive factors (see appendix C for the background).

[2] Johnson (2013) suggested the [t] clustering with the lateral may be a 'breach of phonological rules'. This combination is indeed dispreferred as a breach of OCP as the two sounds share a place of articulation. It does not occur tautosyllabically in e.g. English, French, Italian, German or Peninsular Spanish. However it is found in Mexican Spanish so is not entirely impossible (W. Johnson, p.c., 2013).

Table 4.3 Coding protocol for (Cr) and (r)

| No. | Code | Dependent variable (Cr) consonant cluster onset with rhotic as the second phone | Code | Dependent variable (r ) consonant onset of rhotic |
|---|---|---|---|---|
| **1** | | **Features of rhoticity onset** | **1** | **Features of rhoticity onset** |
| | Cɾ[3] | Consonant cluster onset with alveolar tap /ɾ/ as a second phone | ɾ | alveolar tap |
| | Cr | Consonant cluster onset with alveolar trill as a second phone | r | alveolar trill (tap + trill finally) |
| | Cl | Consonant cluster onset with lateral approximant as a second phone | l | alveolar lateral approximant |
| | CØ | Consonant cluster onset reduction form without second phone | h | glottal fricative |
| | | | | |
| | | **Linguistic/ Internal variables** | | **Linguistic/ Internal variables** |
| **2** | | **Vowel length** | **2** | **Vowel length** |
| | s | short vowel: V | s | short vowel: V |
| | l | long vowel: VV | l | long vowel: VV |
| | | | | |
| **3** | | **Type of coda (place of articulation)** | **3** | **Type of coda (place of articulation)** |
| | closed | closed syllable: CVC | closed | closed syllable: CVC |
| | open | open syllable: CV | open | open syllable: CV |
| | | | | |
| | | **Social/Demographic variables** | | **Social/Demographic variables** |
| | | | | |
| **4** | | **Life stage (emic style)** | **4** | **Life stage (emic style)** |
| | 1 | 15-24 yrs old | 1 | 15-24 yrs old |
| | 2 | 25-54 yrs old | 2 | 25-54 yrs old |
| | 3 | 55 yrs old or above | 3 | 55 yrs old or above |
| | | | | |
| **5** | | **Social occupational classes** | **5** | **Social occupational classes** |

[3] In the actual code in Rbrul, 't' notation was used to represent alveolar tap [ɾ].

| | | | | |
|---|---|---|---|---|
| | h | middle-middle class | h | middle-middle class |
| | m | lower-middle class | m | lower-middle class |
| | l | working class | l | working class |
| | | | | |
| **6** | | **Labovian stylistic tests and other experiments** | **6** | **Labovian stylistic tests and other experiments** |
| | C | casual speech/conversational style | C | casual speech/conversational style |
| | P | picture describing | P | picture describing |
| | A | animated short film describing | A | animated short film describing |
| | R | reading passage test | R | reading passage test |
| | M | minimal pair test | M | minimal pair test |
| | | | | |
| **7** | | **No. of speaker by code (66 participants)** | **7** | **No. of speaker by code (66 participants)** |
| | a-# | Starting from the 1st to the 66th respondents | a-# | Starting from the 1st to the 66th respondents |
| | | | | |
| **8** | | **Sex** | **8** | **Sex** |
| | m | male | m | male |
| | f | female | f | female |
| | | | | |
| **9** | | **Educational level** | **9** | **Educational level** |
| | p | primary school level | p | primary school level |
| | s | secondary school or vocational school level | s | secondary school or vocational school level |
| | b | bachelor degree level of above | b | bachelor degree level of above |
| | | | | |
| **10** | | **Place of origin of speakers/ Ethnicity background** | **10** | **Place of origin of speakers/ Ethnicity background** |
| | l | BanKlang municity Lamphun (MBK) | l | BanKlang municity Lamphun (MBK) |
| | b | Bangkok & its vicinity provinces | b | Bangkok & its vicinity provinces |
| | | | | |
| **11** | | **Types of speakers** | **11** | **Types of speakers** |

| | | | | |
|---|---|---|---|---|
| | O | outlier | O | outlier |
| | R | regular | R | regular |
| | | | | |
| **12** | | **No. of speaker by order** | **12** | **No. of speaker by order** |
| | 1-66 run | Starting from the 1st to the 66th respondents | 1-66 run | Starting from the 1st to the 66th respondents |
| | | | | |
| **13** | | **Social network strength (SNS) score/ MBK mean** | **13** | **Social network strength (SNS) score/ MBK mean** |
| | positive or negative score (+/-) | from 0 to 1 (continuous score) | positive or negative score (+/-) | from 0 to 1 (continuous score) |
| | | | | |
| **14** | | **Real age of speakers from 13 yrs old to 75 yrs old** | **14** | **Real age of speakers from 13 yrs old to 75 yrs old** |
| | positive or negative score (+/-) | from 0 to 1 (continuous score) | positive or negative score (+/-) | from 0 to 1 (continuous score) |

The analyses have approximately 30 independent predictors, including 10 linguistic factors. The only factors shown above are social and linguistic predictors which proved significant in regression models.

## 4.5 Independent variables

In this study, there are 10 major factors which include social variables and linguistic variables. Each independent variable is described regarding their attributes and their background. In fact, there were more than 10 factors which were input in the

regression analysis. However, it turned out that most of the phonological independent variables were not significant in the model. Other irrelevant factors are described in 4.5.11 at the end of this chapter.

These are 9 independent predictive factors and other linguistic factors that turned out to be not significant in the regression models as follow:

4.5.1 Life stage & real age

4.5.2 Social occupational classes

4.5.3 Speech styles/ type of experiments

4.5.4 Sex

4.5.5 Educational levels

4.5.6 Place of origin (ethnicity)

4.5.7 Social network strength and other statistical measures of SNA

4.5.8 Coda type

4.5.9 Vowel length

4.5.10 Other linguistic variables

### 4.5.1 Life stage & real age

According to (Milroy & Gordon, 2003: 29-30), there are two types of scores pertaining to age factors, namely 1) life stages, and 2) the real age. The three ranges of life stage used are:

- 13-24 years old
- 25-54 years old
- above 54 years old

Another measurement for age in the regression analysis was the real speakers' age, as a continuous variable. The measures were compared. The participants' age started from 13 years to 75 years.

For the three ranges of life stage, I employed an emic approach. This measurement was derived from the Thai social norm which was considered (a) during the time people pursue their education (though no speakers younger than 13 were recruited), (b) during their working life, and (c) time until the point of retirement. The possibility of an age range which was classified by decade was discarded since it cannot reflect the reality of ageing associated with people in Thai society.

Based on my observation, there are two trends of defining age stratification, firstly the late maturity group and secondly, the normal maturity group. Both of them contribute to a wider age range of the young group. The late maturity group has a stronger impact on Thai society, reflected in their lower child-birth rate and their readiness to join the workforce. Thus, an emic classification approach is more suitable for this age classification.

There are two indirect indicators relating to the late maturity group. Primarily, the younger generations get married very late compared to the past. Secondly, the late maturity cohort stays in the formal education system longer than the past. These people also live with their parents longer, until they start their own independent families/lives later.

Regarding the late marriage issue, for the LMC and other higher social classes, Thais got married relatively young in the past, approximately 18 to 28 yrs old. Later than this range was considered to be a late marriage before the 1980s; however, it seems to be ubiquitous currently. This circumstance seems to pressure Thai females a great deal since it is believed that they need to get married and have children before the age of 35.

This norm does not affect men at all. Thai men are allowed to have longer time involving intimate relationships and can start to have their own families at any time in their lives, which is similar to the past norm.

Conversely, the other cohort includes very young couples (less than 20 years old) who are not ready to start their own independent lives because of lacking financial stability, workforce readiness, higher education and status in a profession.

Due to poor sex education, and poor family planning resulting in failure in birth control, they often get pregnant too soon. Thus, these groups have to stay with their parents even longer than the very high educational level group and the late marriage group. Until these early couples graduate or get stable careers, they will live with their parents.

Referring to the first group again, the late marriage (typically LMC and MMC) group are likely to spend a longer time in formal education. To some extent, it starts from the continuous failure of the Thai educational system such that most adolescents do not know their potential and what they wish to do in the future with their lives. One of many failures is that the modern Thai young people do not get a chance to explore their future careers or proper aptitude guidance before and after finishing high school, or opportunities such as joining a gap year programme or having serious part-time job/internship. After graduating from high school, they invest at least 4 years for their bachelor degree. It is ubiquitous for a number of Thai adolescents to resign from one of the universities and switch to a new university in their first year. This results in multiple reapplications for favourable colleges. This college year extension is common. It delays the young graduates' entry into job markets and contributes to later maturity because of lacking experience in real life careers. If they pursue a postgraduate degree, it will take much longer[4]. Most graduates take at least full 3 years for the M.A. degree in Thailand.

[4] Thai people worship those who graduate from university a great deal because it signifies high class people who are smart. If they can pursue a PhD and finally achieve it, they will be greatly praised without even checking their study's quality. Currently, Thailand lacks highly skilled labourers. The Thai government is heavily publicizing and making numerous campaigns to encourage young people to join vocational studies or specific colleges in order to supply the high demand workforces which need skilled

This system has a domino effect. The longer young adults stay in formal education, the later they mature due to lacking work experiences. Late marriage is more likely and they still live with their parents too long due to weak financial stability. Chambers (1994: 181) added that the transition from childhood or adolescence to adulthood is prolonged in the *industrialisation + high mobility + urbanisation* scenario. It used to be much shorter in the past. Therefore, my assumption regarding the late maturity in Thais is relevant to language variation and change. This research's age criteria are very similar to the CIA World Factbook data[5] for Thailand which stratifies Thai people into five groups, namely 0-14 years, 15-24 years, 25-54 years, 55-64 years: 11.64%, and 65 years and over, respectively. To conclude, both of these referred groups are not financially independent until their 20s. This observation supports the upper bound of my age-emic classification for younger speakers.

### 4.5.2 Social occupational classes

Social occupational class factors (SOC) envelop 3 groups, namely the working class, lower middle class and middle-middle class. In fact, based on Chantavanich (1998), the SOC factor can be divided into 4 categories as elaborated in §3.4. I found out that in NTIE community, the highest class, i.e. the higher middle class, is really difficult to approach or seems to be rare because NTIE did not have universities or higher educational colleges. Also, physicians and senior police officers and those formal politicians (I contacted some of the local politicians) proved to be difficult to contact and possibly irrelevant to the focus on NTIE. Hence, I decided to disregard this group.

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workers in industries. However, the old values of Thais for higher education are very strong. Strangely, the fruitfulness of this campaign is low and studying vocational areas is still looked down on.

[5] https://www.cia.gov/library/publications/the-world-factbook/geos/th.html Accessed [12 April 2016].

### 4.5.3 Speech styles/ type of experiments

In this part, I adopt the approach from Labov (1972 rev. 2011) on stylistic tests. The tests were concerned with the degree of consciousness/awareness regarding speech which is aligned with the formality of speech style. The spectrum ranged from the least formal to the most formal speech style. The table below exhibits the structure of the stylistic tests/experiments which include five tests. It also shows the expected tokens which should be gained from each test per person. The total amount of interviewing time, based on 66 speakers, accounts for approximately 120 hrs.

Table 4.4 The structure of data collection and tasks

| **styles** | **Types of experiments** | **Both (r) and (Cr)** |
|---|---|---|
| Informal styles | 1.Conversational/ casual style | 40-50 tokens |
| | 2. Picture describing task (16 pictures) | 20-30 tokens |
| | 3. Animated film describing task<br>(8 stories, each story lasts for less than 2 minutes) | 20-30 tokens |
| | Grand total required tokens<br><br>The [h] variant is included. | Approx.<br>80-110 tokens |
| Formal styles | 4.Reading passage test | 41 tokens |
| | 5.Minimal pair test | 10 pairs |
| | Grand total required tokens<br><br>The [h] variant is excluded by default. | 51 tokens |

#### 4.5.3.1 Stylistic factor issues that lead to new data manipulation

A) Informal styles

As Labov explained about the crucial casual style that it can reveal the most natural vernacular of the speakers, this study focused on this speech type in order to predict dialect maintenance or shift based on speech variability. The casual style can exhibit the actual and authentic linguistic competence of the speakers. These informal styles consisted of 3 types of speech tasks, namely casual speech in interviews, the picture description task and the short animated film description task.

A.1) Casual speech/conversational style

In casual speech task, interviews lasted for around 50 minutes to 1.30 hour. After the interview arrangement, small talk had to be done prior to conducting the interview (the casual style). Therefore, the participants can recognise the interviewer and be acquainted to a certain degree with the help of the community's brokers. This would make both of the interviewer and the respondent(s) less awkward to one another. Surprisingly, the ice-breaking activities (such as, small talk and explanation regarding what I was doing and why ) always took time less than 5 minutes. The data I got in the interview were relatively natural and valid for data analysis. I think that the broker and several contacts via telephone enabled the researcher to approach the respondents far more easily than expected. In addition, the respondents were supportive and relaxed.

To make all data elicitation and transcription consistent and reliable, the first 40 minutes of casual speech was used to analyse the variationist study. Even though some talk was very interesting, it was not necessary to use all of the data. As shown in the data collection structure, the expected amount for each variable should be at least 50 tokens per participant. Otherwise, the number of tokens would be too many, redundant and

unnecessary according to Labov's claim in the nature of linguistic data's behaviour and its distribution.

At first, I was anxious that the interview issues might affect the data quantity and quality. Therefore, a variety of prepared issues and asking some spontaneous topics were prepared in order to avoid dead air and lack of information from the participants. I used a number of questions both of trivial issues with regard to their work and daily lives, and some tense topics which were introduced by Labov (1973) according to his study in Harlem. However, it turned out that there were not many problems during the talk. After the first five minutes of warm-up talk, participants were so attentive and enjoyed sharing their stories and opinions with me.

I tried my best to make the conversation go smoothly and did not disturb their privacy as much as possible. If I found out that certain questions accidentally made them uneasy, I promptly switched to other questions so as to make them relaxed and happy throughout the conversation. In general, my respondents were willing to talk a lot. Most of them even discussed important issues regarding their family and work concerns. I was quite surprised about their willingness to participate and the trust given to me as a researcher.

However, from time to time, prepared questions were shifted and switched. This depended upon the mood of both the participants and myself. Some days, it was very challenging during the scorching sun heat, extremely loud noise intervening from construction or rain pouring. Sometimes, the temperature rose to 45 degrees, and it was difficult for both of the interlocutors to focus. The interviewing sometimes required changing the place to converse. On many occasions, my respondents spotted that the interviewer felt so hot due to the heat in the NTIE zone during summer time. With their generosity, I found that in almost every house and office I stepped into, they continuously provided me some cold fizzy drinks, coffee and even huge plates of fruits and snacks in order to make both of the interlocutors happy during their talks. Surprisingly, I noticed that the interviewees suspected that I might get bored from listening (which I was not). The more they talked, the less I needed to ask and trigger

them to answer. They supplied me lots of snacks in order to make me feel happy and work smoothly, while my job was to keep them awake and entertained instead.

A.2) Picture description[6] (including [h]) for 16 pictures (c. 30 mins)

In this task, I initially hypothesised that the speech style would be more formal than the casual speech since it was more structure oriented. I used colour print-outs to show them. I then asked my participants to describe the selected 16 pictures. Most of them were modified from animations, cartoons and pictures of real people. Each picture contained protagonist(s) who acted and behaved a certain way in the situation. The respondents were expected to describe the story based on their imagination. I found that apart from describing the movement, action and expression of the protagonists, the respondents even narrated by telling short stories which fascinated me. Most of the people also criticised certain behaviours based on the tasks. It lasted around 30 minutes or less. On rare occasions, this task was shifted to first position prior to the long casual conversation. This was because the respondents were not engaged in the casual long talk yet. However, the shift would be carefully assessed, if the respondents could not talk very much at first. I would try to converse with them carefully by observing their moods and readiness at first. If the normal and trivial small talk lasting for more than 10 minutes were unable to make them talk a lot, I would switch to the tasks, both the picture and the animated film descriptions. The success rate was 100% in terms of encouraging the speakers to talk more, feeling more relaxed and fun. Later the respondents were more engaged and willing to converse more.

[6] We determined that it should belong to the set of informal speech styles. This is because the use of [h] appears, but it is not that high compared to the conversational style. Another result found that the trills and taps are very rare in these 3 informal categories while in the formal styles, these prestige variants appear a great deal.


Figure 4.1 Examples of picture description tasks[7] (casual style)

A.3) Short animated film description (including [h] variant) from 8 animated short film description tasks (c. 30 mins)

Like the picture description task, I initially expected to gain a more formal speech style than the casual speech task and the picture description task. All eight short films were viewed by using SAMSUNG tab 1.1 tablet and recording their sounds in WAV sound format, which is the highest quality of sound files. I found using a tablet screen was very useful due to its handy small size but the monitor was large enough to display short films clearly as well as the self-equipped speakerphones. Therefore, the earphones were not required and I could hear all along what the film said at the same time as my respondent heard and viewed it. I observed that the respondents were excited to participate when I used the gadget, every time. Sometimes, the respondents could not follow or understand the story line. They asked to pause or watched it again. I could do it easily by using the touch screen to control the story's running.

In addition, the occurrence of [h] is relatively high in animation task speech but lower than the conversational style and the picture description. Thus, the animated film description task tended to be slightly more formal than the other two informal tasks.

[7] Retrieved from: http://education.kapook.com/view51498.html
http://dcprosportsreport.com/redskins-thumbs-up-and-thumbs-down-week-13/

I adopted 8 short animated films from the Rollin' Safari series found on YouTube. The animation caricatures were vivid and easy to follow. Initially, in pilot efforts I used a Chaplin video and the pear story[8] in my pilot study. However, my WC participants associated with low educational levels did not understand them. I hypothesized that this might result from cross-cultural issues. People especially in these two groups could not understand the stories or proved barely capable of remembering them. Many of them asked what it was about. They seemed to get bored and sleepy during the tasks. Thus, I had to give up and decided to shift to stories that suited all the respondents. In addition, the lengthy stories affected older participants' memory retention.

In general, this experimental task which required watching something, retaining memory and narrating based on what they saw did not suit the WC who had low level of education or the elderly. In contrast, for higher educational level speakers, these tasks were easy. Their higher levels of literacy seemed to promote their ability to narrate and describe.

[8] Wallace Chafe (ed.), 1997. The Pear Stories: Cognitive, Cultural, and Linguistic Aspects of Narrative Production. Westport CT: Praeger.

Figure 4.2 Examples of scenes from 8 animated short film description tasks[9] (informal style) *Rollin' Safari* (5 stories) and *The Power of Union is Strength* (3 stories)

The 8 stories took around 2 minutes or less per story. One speaker normally spent approximately 30 minutes for describing and narrating all 8 short stories. It turned out that with their vivid friendly colour and slightly humourous tone, speakers were impressed and could retain all the main stories by narrating them accurately. Thus, the problems of forgetfulness or inattentiveness were solved. Participants were far more eloquent with the new tasks. I observed that once this task was accomplished, the respondents could deliver more information about their lives naturally. This might be

[9] Retrieved from:
https://www.youtube.com/watch?v=BOOljk_LOcs&list=PLSVpeq9wSpA76ufdP2QFJ0rlvTi_INvcP&index=2
https://www.youtube.com/watch?v=jop2I5u2F3U

because they felt relaxed, probably from laughing out loud at the surprising ending of each story, and the interview's activity was shifted from only talking to something else.

Regarding the level of consciousness, in Chand's study (2009), she placed the pear stories (Chafe, 1980[10]) as a formal speech style. However, my animated film description elicited informal speech instead. I found that prestige forms almost never occurred, less than five tokens of [r] in both describing tasks. Meanwhile the stigmatised and the local NT Thai forms were abundant. Participants were enthusiastic and relaxed and clearly enjoyed responding spontaneously. The sharp distinction between the formal style (reading passage and minimal pair) and the animated film and the picture descriptions was so great that they could not plausibly belong to the same style group (see figure 4.3, also table 4.5 and table 4.6 below).

In the regression analysis and the grand total analysis by percentage, I attempted to analyse all tasks together. However, this analysis proved implausible since all prestige form frequencies, for both {Cr-1} and {r-1}, were found only in the most formal style tasks (reading passage and minimal pair). In combined analysis, their scores were averaged (mean score) with the first three informal tasks where the prestige form almost never appears. Conversely, the local form [h] was predominantly found only in the three informal styles (the first three tasks) and never occurred in the formal styles (reading passage and minimal pair; see table 4.5 below). When [h] frequency was averaged with other tasks it led to inaccurate conclusions and implications as well. Then once all five styles (tasks) were run as a single unit, the regression model showed entirely wrong results. Thus, the data required me to manage the analysis differently by conflating the first three tests into one informal style group, and combining the other

[10] "The pear stories" is a 6-minute short film, produced and developed by Wallace Chafe in 1975. Initially, it was used to test speakers of English, Japanese, Chinese, German, Greek, and Mayan. Those different ethnic groups were asked to watch the short film and then describe what they view. The film narrated a story about a boy who stole a full basket of pears from the orchard's owner who occupied with picking pears from a tree. While taking flight from the owner, the boy accidentally fell off his bike and spilled pears all over the ground. With the help of another three boys who walking past, the boy gave some pears to them for their kindness. Then, when the orchard's owner finished his work, he found out that one basket of pears was gone. It was exactly the same time when he saw the three boys eating his pears. http://www.pearstories.org/docu/narrative.htm [accessed 12 December 2017].

two as formal style. The regression analysis results were then valid. The new stylistic grouping was conducted as follows.

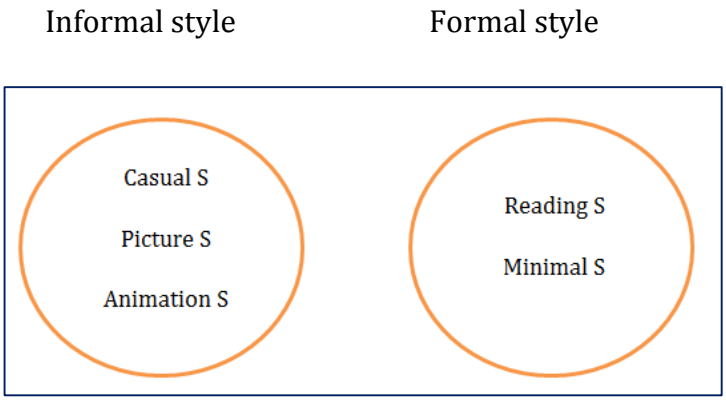


Figure 4.3 New data management: 2 groups of styles

Compared to Chand's study (2010) with more serious stories, this current task (pictures and animated films) were designed to be more cheerful and light in tone.[11] This might be the main reason why these tasks provoked informal style speech rather than the more formal style found in Chand's study instead.

B) Formal styles

B.1) Reading passage (around 700 words)

The reading passage tasks representing the formal style contained around 700 words in total and ran 2 pages in length. All words covered both dependent variables

[11] This should be further examined by controlling other types or genres of narrations such as comical story, and ghost story. It is hypothesized that stylistic variation can emerge so one could compare each style and their degree of consciousness across various types of narrations.

consonant cluster with rhotic onset (Cr) and rhotic consonant onset (r), producing 41 and 42 tokens, respectively. Labov's (1972) classic stylistic spectrum consisted of 5 tests, namely casual speech style, interview style, reading passage style, word-list and minimal pair style, respectively. However, I did not attempt to distinguish between casual speech and interview speech, and discarded the word-list style since it is a transitional task which could not carry a clear distinction amongst other tasks. For instance, the difference between the word list test result and the minimal pair test result (Labov, 2001) was minute in my pilot data. It was not worth doing them. To show a sharp distinction amongst styles, there were only three addressed styles and the additional experiment tasks (the picture description and the short film animated task) finally.

B.2) Minimal pair test (10 words)

In this task, the (Cr) and (r) tokens were tested separately. I used the minimal pair token set of /Cl/ to contrast with the /Cr/ set. It was hypothesised that the readers would be highly aware of their orthographic and sound differences. The tests comprised 10 pairs of tokens, 10 pairs. The rhotic variant forms were the only focus, not the lateral ones. (see Appendix A)

In the same vein as (Cr), the minimal pair test for (r) was designed to differentiate between /r/ and /l/. The tokens comprised 10 pairs, 20 words. The rhotic tokens were again the only focus for analysis, not the lateral ones (see Appendix C). To note, the /h/ "ฮ" phoneme cannot be tested here due to the problem of orthographical constraints. In terms of /h/ test, all sound production was categorical (100%) in pilot testing since the /h/ orthography triggered speakers to use only the [h] variant of (h) all the time. Thus, the character /h/ "ฮ" could not be used here. In contrast, BKK Thai orthography of words including the /Cr/, /Cl/, /r/ and /l/ variants produced a great variety of variants which were the focus of this study. Therefore, in both result chapters, it should be aware that [h] was examined in the pilot tests, but the formal data were finally excluded from

analysis because it produced categorical results. The /h/ orthography in BKK Thai triggered only [h] variants in the reading passage style (formal style).

There are some criticisms of stylistic tests according to the attention to speech model, e.g. Schilling (Schilling, 2013: 104-108, 137-138) notes that they might have a problem in terms of consistency and validity. Schilling (2013) mentioned that there might be no continuum of formal and informal styles such as Labov's classification suggests, but rather performance might be too discrete. Bell (1984), in proposing the audience design model, stated that the way of speaking or style might vary conditioned by the hearer. Speakers might accommodate themselves to topics, and especially, might adjust their speech style to the normative target audiences/hearers' class differences.

Tannen (1989 cited in Schilling, 2013: 138) suggested that speakers who narrate stories might not use their real voice. This refers to the authentic style that such speakers used as a norm or their identity. Speakers might replicate the protagonists in the stories, or directly quote the action of the story lines rather than use their real voices. They might even exaggerate or downplay/understate the content to some extent. However, I argue that these speech styles emerging based on narrative are the most discrete observed evidence. They are beneficial for their linguistic variability and demeanors naturally but still predictable. Thus, Tannen's claim seems to be circular because it is impossible to judge which is the authentic voice or style of speaker in narrating the story. As all information speakers perceived was subjectively contextualised (Gumperz 2002) and then recontextualised[12] (Linell, 1998), Tannen's claim seems to be circular and subjective as well.

The speech style definitely at least depends on the speaker's awareness and other factors that should be examined further based on the concrete data. Otherwise, too much control will result in unnatural data and observer's paradox effects. Thus, I tried my best to control the experiments and make both the picture description task and the animated

[12] A recontextualisation is a process where the original text, sign or meaning was extracted from its original context (decontextualisation) by aiming at introducing them into the new context with some new purposes. Because the meaning of texts and signs depends upon their first/original context and insertion into the later context, the recontextualisation is implied to change the text's sense. This is also relevant to the communicative purpose as well.

film description to be similar and manifest the same tones, moods of the story lines, and level, of difficulty as abovementioned.

#### 4.5.3.2 New data management

Initially, all independent variables had to be input in the regression analyses. In general, the data weights across all styles were well-balanced. To elaborate, in both variables, the proportion between the informal style data and the formal style data are similar, namely in (Cr) accounting for 3,585 vs. 3,365 and in (r) accounting for 5,265 vs. 3,432, respectively.

However, it was found that the style factor distorted the results in regression models a great deal, though not in the percentage distributions shown in table 4.5 and table 4.6. It became obvious that the style factor was the single most important predictive factor amongst all others for explanation of variability.

Table 4.5 Variants' distribution across styles in (r) variable n= 8,697

| Styles | Type of experiments | Freq/ % | Trill+tap {r-1} | Glottal fricative [h] | Lateral [l] | Raw frequency |
|---|---|---|---|---|---|---|
| Informal | Casual | Freq. | 5 | 536 | 2103 | 2644 |
| | | % | 0.2 | 20.3 | 79.5 | 30.4 |
| | Picture description | Freq. | 9 | 139 | 1114 | 1292 |
| | | % | 0.7 | 10.8 | 88.5 | 14.9 |
| | Animation description | Freq. | 7 | 118 | 1204 | 1329 |
| | | % | 0.5 | 8.9 | 90.6 | 15.3 |
| Formal | Reading passage | Freq. | 1118 | 0 | 1654 | 2772 |
| | | % | 40.3 | 0 | 59.7 | 31.9 |
| | Minimal pair test | Freq. | 448 | 0 | 172 | 660 |
| | | % | 73.9 | 0 | 26.1 | 7.6 |
| | Total | Freq. | 1627 | 793 | 6277 | 8697 |
| | | % | 18.7 | 9.1 | 72.2 | 100 |

Table 4.6 Variants' distribution across styles in (Cr) variable n= 6,950

| Style | Type of experiments | | {Cl} | {Cr-1} | {CØ} | Total |
|---|---|---|---|---|---|---|
| Informal style | Casual | Freq. | 1 | 3 | 2018 | 2022 |
| | | % | 0.0% | 0.0% | 29.0% | 29.1% |
| | Picture description | Freq. | 2 | 1 | 775 | 778 |
| | | % | 0.0% | 0.0% | 11.2% | 11.2% |
| | Animated film description | Freq. | 3 | 1 | 781 | 785 |
| | | % | 0.0% | 0.0% | 11.2% | 11.3% |
| Formal style | Reading passage | Freq. | 181 | 841 | 1682 | 2704 |
| | | % | 2.6% | 12.1% | 24.2% | 38.9% |
| | Minimal pair | Freq. | 108 | 417 | 136 | 661 |
| | | % | 1.6% | 6.0% | 2.0% | 9.5% |
| Grand total | | Freq. | 295 | 1263 | 5392 | 6950 |
| | | % | 4.2% | 18.2% | 77.6% | 100.0% |

It can be seen that the prestige forms [r] and {Cr} scores heavily only in the 2 formal styles (referring to table 4.5 and table 4.6, accordingly). Meanwhile, the non-prestige forms [h] or {CØ} occur almost exclusively in the informal data. The variants' distribution and their behaviour showed clear bimodal distribution. The problem arose when all five tests (styles) were run separately in the regression test with the input of "style" as the factor. The regression model showed aberrant results statistically. Not only the normality test for the variant distribution, but also the major error found in the regression models, indicated that the 5 styles (casual speech, picture description, animation description, reading passage and minimal pair test) should not then be analyzed together and included as one unit for generalization. Logically, thus, it was necessary to manage the data differently by conflating the first three tests into one informal style group as well as combined the rest two styles into one formal style group (figure 4.3 above). The regression analysis then gave plausible results which are analysed in later chapters.

### 4.5.4 Sex

In this research, the sex factor is actually speaker sex, namely male and female. This is based on speakers' biological/physiological differences. The other sense of sex with relation to the social role and the gradient scale of sexual orientation based on Kinsey's scale (1948) in psychology were discarded (see also 3.2.1.

### 4.5.5 Educational levels

Education was categorized into three levels, namely (1) only primary education, (2) only secondary or vocational education, and (3) some higher education level at least. The undergraduate students who have not obtained their bachelor degree yet belong to

this third category as well. With regard to the secondary school level speakers, they ranged from Matthayom (grade 7 in junior high school) 1 to Matthayom 6 (grade 12 in Senior high school). There are two levels of vocational education, namely vocational certificate and high vocational certificate, respectively. However, if the speakers had already graduated from the secondary school level or vocational school level but they did not pursue higher education at undergraduate level, they still belonged to this group. It should be noted that all young age people in this research acquire secondary school level. The young generation predicts education for most people.

### 4.5.6 Place of origin (ethnicity)

In terms of ethnicity or place of origin factor, there are two groups of participants, namely, first, the MBK locals in Lamphun and second, the BKK participants from Bangkok and nearby provinces who reside in Lamphun. The sense of the place of origins is effectively equal to the ethnicity of the speakers. That is, although Lamphun province includes distinct ethnicities (e.g. the Yong people discussed in Chapter 2), most were excluded, as described earlier. Similarly, although various ethnicities exist among BKK participants, all of them differ ethnically from the MBK locals' ethnic identity. However, this research focuses on the MBK natives who have been living in this community for 10 years and recognized themselves as local or native residents by birth. These 57 persons of the study group are heavily emphasized in the thesis so as to shed light on their linguistic variation and the estimation of dialect shift and maintenance. Meanwhile, the BKK group covers 9 participants. This group is regarded as the reference group, who have been resident in MBK community for at least 2 years (though often much longer, see section).

As a community-based study, the target area for retrieving respondents came from the eastern zone of the NTIE industrial site only. The focus area would be interpreted as the place of origin/ethnicity for the MBK participants. Also, this study

would take only the BKK immigrants who could be found in this eastern area. This is the limitation of this study. Geographically, the NTIE industrial site comprises two zones, separated by a superhighway, into eastern and western areas. The western zone incorporates two super-malls, department stores, government offices related to NTIE involving the industrial sectors, electric plants and some recreation such as nightclubs. The dialect spoken in the western zone of NTIE (in the Muang Ngna sub-district, Sriboon Yuen village) is relatively different from the eastern zone where MBK locals speak NT Thai. West of the superhighway people also speak Yong which is dissimilar to the NT dialect in certain diphthongs and reduced vowels. Meanwhile, in the eastern zone many MBK participants use the NT Thai dialect. The eastern zone is where most NTIE factories, accommodation, dormitories and markets are located. However, for control of the participants cohorts, and for protecting against other confounding factors interfering with explanations of linguistic shift or maintenance, the only focus is on the MBK area and the close-by vicinity of the eastern zone with its native NT Thai speakers.

### 4.5.7 Social network strength and other statistical measures of SNA

In my study, the model was firstly developed from Hirano (2012) by using the ego-centred network or the personal network because it is suitable for the types of my respondents, many of whom are immigrants and very mobile. Hirano (2013: 95) addressed the benefits of this approach, in that it enables us to understand how networks affect individuals and finally can imply generalizations as to how social structure affects language use. In the process of analysis, the frequency of contacts will be converted to the ranks of strength of closeness of the relationship between the actor/ego and their ties.

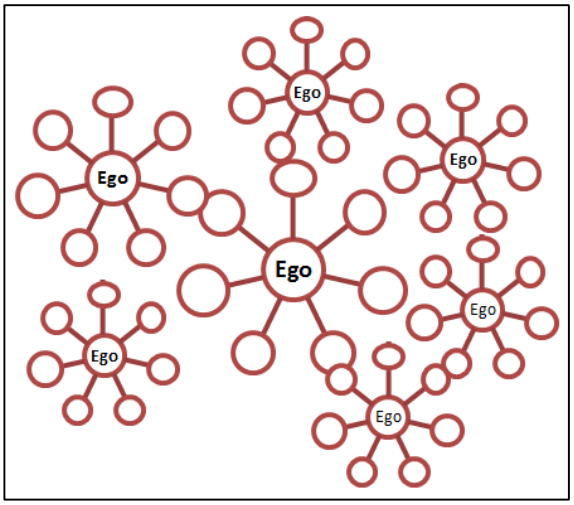


Figure 4.4 The sampling universe of NTIE, each respondent (Ego) and their links

Figure 4.4 illustrates individual networks and the links of each respondent. Thus, when large groups of individuals are investigated, it emerges that they construct a universe of networks within the NTIE community, and this finding may lead to an eventual generalisation.

This model also shares common ground with methods used by Milroy (1980) and Cheshire, Fox, Kerswill, and Torgersen (2008). However, in terms of operationalizing, it is very different. Milroy (1980) involves friendship networks with density and multiplexity calculations for working class respondents reflecting the solidarity and closeness of people and their linguistic maintenance in strong tie networks for three communities. Cheshire et al. (2008)[13] deals with different ethnic group comparisons among London adolescents who employ certain linguistic features deviating from the norm, and shows the degree of homogeneity and heterogeneity.

[13] They calculated the friendship/social network score by using the degree of different ethnicity contacts with such respondents individually (similar to the ego-centric approachI employ to some extent), with a range from 1 to 5, converted into percentage afterward. For foreign ethnic friends in the Multi-ethnic London context, their method entails that the more the ego/speakers have different/varied ethnic group peers and contacts, the more the percentage goes up. As they claim for the friendship network among teenagers, they control this study by using only respondents aged from 17-19 years old, as well as anticipating that the links of each respondent should share the same age range. They did not study degrees of centrality, betweeness or closeness as many classical social network approaches do.

According to my observations of the NTIE, it was found that even though the participants from different ethnic groups/places, particularly Bangkok province and its periphery, have been settled in this place for at least 2 years since 2014, people from the two different origins seemed to have little contact with each other. The network links between them are loose-knit, with a low degree of contact between the MBK locals and the internal immigrant BKK participants. This was contrary to what I had expected, which was that people from elsewhere should have conformed or adapted to the norms of the local community, and vice versa: that the high status locals would have cultivated links with BKK immigrants due to the national prestige of their dialect. However, this turned out not to be so. Thus, this situation requires a different approach to the classical one used in Milroy (1980).

Most of the Ego-network SNA works deal with degree of the ethnic differences of the network members (homogeneity and heterogeneity) of the ego. The degree of these SN ethnic difference's score is the cause of making the Ego(s)/ actor(s) use certain linguistic variant(s), as found in Hirano (2013), Sharma (2017) and Wassink (2016). However, this characteristic of ethnicity differences did not work in this NTIE community context in Thailand. One reason is attributed to the MBK locals in the NTIE community being highly homogenous than I expected. The number of the so-called different ethnic groups is not much. Thus, different ethnicity might play a small role in this speech community.

I found that later, surprisingly, other internal immigrants apart from the BKK participant groups share a similar ethnicity and speak the NT Thai dialect. They came from the nearby provinces adjacent to Lamphun and all NT region provinces rather than coming from the very different regions such as the Central part, the southern part or the North-eastern part of Thailand. This might be due to socio-economic reasons. However, to contact these groups of people are very difficult which is a limitation of this study. Thus, our major reference groups are the BKK and the BKK vicinity participants who speak BKK Thai.

Other regions have industrial estates as well. Presumably, other ethnic groups might tend to join to work in those nearby industrial zones instead. They might not come to this NTIE in Lamphun province as I have expected. Therefore, after finding out this during data collection, I aimed to measure other attributes of SN instead (quality of contact, psychological aspect of contact and quantity of contact). This measurement is distinct from Hirano (2013), Sharma (2017) and the Wassink (2016). The social network configuration development and its analysis structure are explained in detail as follows.

#### 4.5.7.1 How I calculated social network strength (SNS)

The social network strength[14] (SNS) score ranges from 0 to 1. Therefore, it is in a continuous score (ratio). If the SNS reaches 1, it indicates the highest contact rate between the Ego(s) and their ties. The related properties and criteria are then described.

#### 4.5.7.2 Arguments and the niches in SNA in relation to speech community

This current work is an extension of Hirano (2013)'s model of Ego centred network analysis. However, Hirano has not explored other dimensions as suggested here (intimacy dimension and real-life contact dimension) and the quality of the contact (namely by talk frequency and by talk quality, respectively). This research attempts to separate these issues for further explanation regarding network relationships which is

[14] Initially, a correlation between the SNS score and phonological variation frequency was expected. On one hand, this study aimed to investigate the expected high correlation between homogenous ethnicity of ties/nodes and high frequency in use of certain local variants. On the other hand, the reverse trend of correlation between high ethnic heterogeneity and high use of the incoming variant was expected. However, I came across statistical problems, as a result of which finally the 4 types of contacts had to be conflated and interpreted slightly differently from Hirano (2011)'s accounts, but it still manifests the same general trajectory of answers. Referring to the problem faced, a fundamental statistic requirement has to be met by employing the normality test and the multicollinearity test prior to combining these 4 types of scores/contacts into the regression analysis.

in accordance with Granovetter's work (1973). Therefore, this brings forth important differences and leads to other implications.

According to Gumperz (1968 cited in Meyerhoff, 2013: 36) the MBK community in this study can be regarded as a speech community. Meyerhoff (2013: 36) summarizes that it can at least defined on subjective or objective criteria.

> 'Objective criteria would group speakers together in a speech community if the distribution of a variable was consistent with respect to other factors, such as style. Subjective criteria would group speakers as a speech community if they shared a sense of and belief in co-membership'. Meyerhoff (2013: 36)

Gumperz (1968) emphasised interface communication and determined that the notion of consistent, repetitive and predictable interactions and contact is necessary for a speech community to exist. He argued that regardless of the linguistic similarities and differences,

> '…the speech varieties employed within a speech community form a system because they are related to a shared set of social norms'.
>
> (Gumperz, 1968: 220)

According to this, this study treated the MBK community as a speech community in order to understand the linguistic variation and the structure of its social network.

#### 4.5.7.3 SNA property model developed from Granovetter (1973) and Hirano (2013)

This research emphasizes Granovetter's work (1973: 1361). He addressed the advantages of strong and weak network properties even though most of the time, the weak ties were indicated as having no benefit. Intuitively, he then proposed four

properties of the strength of the network as a ground for SNA which are covered as follows:

(1) an interaction frequency (F), or the amount of time contacting ties; the implication is the higher the frequency of contact is, the higher the strength of relations or network.

(2) an emotional level or intensity (E); this means that the higher the level of positive emotion engaged between the interlocutors, the stronger the ties are (psychological aspect).

(3) an intimacy level, or mutual confiding (I); this indicates that the higher the level of intimacy between the interlocutors is, the stronger the ties are (psychological aspect).

(4) a mutual benefit or reciprocal services between the ties (B); this denotes that the higher the level of both beneficiaries' gain, reciprocally, the stronger the network is.

Granovetter suggested that each network property is relatively independent even though these properties seem to be highly intracorrelated intuitively as a whole. He mentioned that empirical study needed to be done in order to justify whether these properties are dependent or not. Weighted scores and association tests might be applied to verify the idea quantitatively. These properties of SN are indicators for measuring the actor(s)/ego(s) with regards to their social structures: whether they have strong ties or weak ties or the absence of ties in the SN quantitatively. These properties were expected to be either positive and symmetric or asymmetric as well.

However, I would like to argue that these four criteria, even though they are robust, might have problems in terms of operationalisation in the research. In my justification, the interaction frequency (I) might be independent from other properties. Meanwhile an imbrication of the other three properties (E), (I) and (B) is found, especially in the emotional level (E) and intimacy level (I). These properties suggest a problem in conducting research and calculation.

To consider this further, in (B) the mutual benefit/reciprocal service attribute lies in the grey area. It can be either overlapped or irrelevant if it is interpreted as the result of properties (E) emotion level and (I) intimacy level. The reciprocal benefit can possibly emerge either with (E) and (I), or lack both of them, logically. However, (B) tends to occur with (E) and (I) more if it associates to close friends and family. Referring to property (F), particularly, the reciprocal beneficiaries are not related to any high or low contact frequency.

Therefore, I aimed to test the independence amongst these four properties of social networks (Granovetter, 1973). I propose to conflate some attributes (E), (I) and (B) and called it "intimacy relationship type" accompanied "by contact quality" (see §4.5.7.10), due to their highly overlapped and dependent nature. Meanwhile I categorise the frequency of contact in general into 2 things: "contact frequency" (F) and call "daily routine contact type[15] (B)".

This is also supported by Jingjing's work (2007) (see §3.7: 35-36), where it is deduced that the last three (E), (I) and (B) properties were overlapped and highly positively correlated while the contact frequency (F) is independent, showing fluctuating trends.

Finally, I create the new attributes of SNA as follow:

1) by contact frequency (focusing on the frequency of contact per week),

2) by contact quality (focusing on the quality of the talk that impacted on or impressed in the actor),

3) in intimacy relationship type, the ties who are important to the actor's life – including both face-to-face and non-face-to-face contact, and

4) daily routine contact type (the ties whom the actor needs to see daily).

[15] The real life contact is opposed to the intimacy contact. The real life contact refers to the situation that people contact with one another by chance, having small talk regularly, or contact each other by their jobs which draw them to interact with one another. However, they might be not important people to one another, i.e. people whom the actors are acquainted or feel intimate with.

The relationships among the four social network properties are presented in these Euler diagrams:

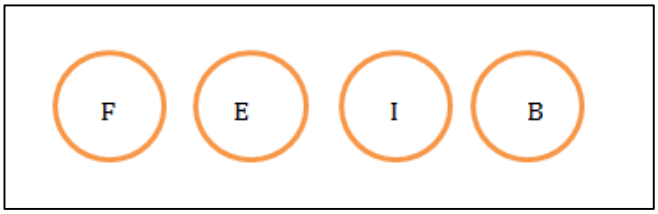


Figure 4.5 Independent property (Granovetter, 1973)

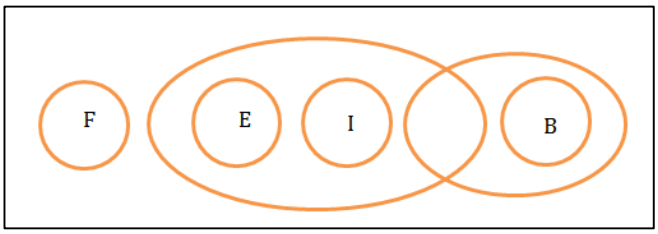


Figure 4.6 Partially independent property (Panyaatisin, 2017)

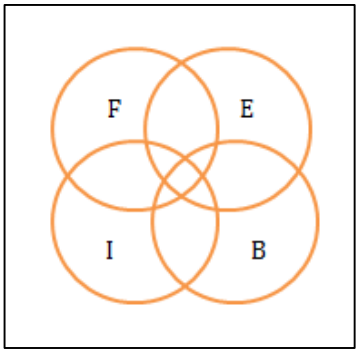


Figure 4.7 Highly interrelated and highly dependent (Panyaatisin, 2017)

Notations:

F = frequency of contact property

E = emotion level property

I = intimacy level property

B = mutual benefit property

The SNA questionnaire was administered two times. The first round is rated by (1) “contact by intimacy”, and the second round is rated by (2) “contact by the real life contact situation”. Both enquiries use the same questionnaire form as below (with two different occasions based on the type of speakers as abovementioned (1) and (2).

Table 4.7 The SNA questionnaire

| order | Name/code | face-to-face contact | | non-face-to-face contact (score is divided by 2) | | Ethnicity / place of origin | sex | type of relationship |
|---|---|---|---|---|---|---|---|---|
| | | By talk frequency (out of 7) | By talk quality (out of 5) | By talk frequency (out of 7) | By talk quality (out of 5) | | | |
| 1st | | | | | | | | |
| 2nd | | | | | | | | |
| 3rd | | | | | | | | |
| 4th | | | | | | | | |
| 5th | | | | | | | | |
| 6th | | | | | | | | |
| 7th | | | | | | | | |

In table 4.7, the rightmost column “type of relationship” is left open in terms of the ego’s relationship to their members/ties. However, the 3 most common relationships

might come from, namely 1) relatives, 2) best friends and their (new/ own) family's members.

#### 4.5.7.4 The structure of SNA questionnaire(s)

The questionnaires were elicited twice with different perspectives based on A) and B) rounds.

Primarily, the names or codenames for the first 7 ties of actor were requested.

Secondly, the other questions were requested regarding the types of ranking which consist of two types of relationship, namely

- Rank these 7 people by **"(A) intimacy relationship type"** (e.g. family and close friends). (The most intimate person will gain a full 7 score and the others will gain lower scores which are reduced by 1. This is conditioned by their ranks. Then, the 7th person in the rank will gain only a score of 1).
- Rank these 7 people by **"(B) daily routine contact type"** (e.g. peer workers) in the second handout. The score of each tie (from 7 persons) in (B) applies the same calculation as (A).

The following questions are requested in both (A) and (B). The ego is asked for two times. One person requires at least 30 minutes in both questionnaires.

1) Types of contact[16]

1.1) face-to-face (x5), (found in both (A) and (B))

1.2) non-face-to-face (x2.5), (found in both (A) and (B))

2) Attributes of the ties' contacts

2.1) by talk frequency (out of 7/week)

[16] Subjective

This is found in both F2F and non-F2F contacts and found in both (A) and (B)

2.2) by talk quality[17] (out of 5 – likert scale), this is regarded as a psychological aspect.

This is found in both F2F and non-F2F contacts and found in both (A) and (B)

3) Ethnicity/ place of origin (found in both (A) and (B))

4) Sex of interlocutors (found in both (A) and (B))

5) Types of relationship (multiplexity)[18], ultimately discarded in the analysis (found in both (A) and (B), this is regarded as an objective aspect.

Each individual will be asked to report the 7 people in two types of relationships, namely

(A) In intimacy relationship type[19] (or closeness), this is regarded as an objective aspect.

(B) Daily routine contact type (or the number of times they interact and contact routinely).

#### 4.5.7.5 Scoring of SNA calculation according to speakers' closeness and recall in their memory

Table 4.8 Scoring of SNA calculation

| Rank | Panyaatisin (2017) | Scores Hirano (2013) |
|---|---|---|
| 1st person | 7 | 5 (the 1st 20% close person) |
| 2nd person | 6 | 4 (the 2nd 20% close person) |
| 3rd person | 5 | 3 (the 3rd 20% close person) |
| 4th person | 4 | 2 (the 4th 20% close person) |
| 5th person | 3 | 1 (the 5th 20% close person) |
| 6th person | 2 | - |
| 7th person and other close acquaintances | 1 | - |

[17] Psychological aspect
[18] Objective
[19] Psychological aspect

To note, based on the preliminary interview, it is observed the 7 persons are those the respondents most quickly recall in their memory retrieval. Even though they might name all 7 acquaintances, all of these are not similar in terms of contact frequency weight. The most frequent contact ties often fall among only the highest 3-4 people in rank. These few ties should get higher scores than other close friends. In Hirano (2013), the 10 participants were involved presenting a weak tie network.

#### 4.5.7.6 Scoring of the frequency of actual meeting (face-to-face (f2f) and non-face-to-face (non-f2f))

| Frequency | Scores for meetings in both face-to-face and non-face-to-face (the non-f2f score will be divided by 2) |
|---|---|
| 7 times a week | 7 |
| 4-5 times a week | 6 |
| 2-3 times a week | 5 |
| 2-1 times a week | 4 |
| Less than 1 a week | 3 |
| 3-4 times a month | 2 |
| 1-2 times a month or less | 1 |

Based on 7 days a week, if the actor contacts their ties every day, those ties will gain 7 points out of 7. The other ties will gain regressive scores according to the frequency and score criteria shown respectively. This measurement was adjusted from Hirano (2013). To note, Hirano uses only 5 points score based on a week instead of 7. Hirano used the contact frequency ranges from contact every day to less than once a month, the tie gained full 5 points for the highest score and subsequently one point if the actor reaches the tie less than once a month.

#### 4.5.7.7 Calculation formula according to the network relationship (adapted from Hirano)

$$\text{Score for each relationship} = \text{rank order score} \times \left[(\text{f2f contact}) + \frac{(\text{non} - \text{f2f contact})}{2}\right]$$

Note: "f2f" refers to face-to-face and "non-f2f" refers to non-face-to-face, respectively.

According to the 2 questionnaires (A) and (B), these account for 14 people in total. Later, the samples were asked to rank them from the first to the seventh closest members. The member/ties of Ego might overlap in two types of relationship. For instance, parents who are counted as ties of the Ego might appear in both 1) intimacy/closeness and 2) daily routine contact. This always happens when the egos are adolescents who were dependent and under control by their guardians. In contrast, it will be different in the case of the more mature Ego's respondents, e.g. if they do not live at home

#### 4.5.7.8 Two attributes of the ties' contacts, by talk frequency and by talk quality

It is suspected that the quantity of actor(s) talk to their ties and the quality of that talk might be two different measurements entirely. It can lead to different and non-correlated outcomes. This means that even a single contact/talk of their links might be valued a great deal for the actor; the actor might recognize the high quality or the impact of the talk. Conversely, some highly frequent contacts (at least 15 min) per week might not persuade the actor to accommodate their linguistic behaviour, if the talk is routine and impersonal (e.g. a call-centre caller's routine sales pitch). Thus, a high rate of contact frequency might not correlate or equate with the quality of contact. The types were explicitly separated into different categories with different measures, namely

1) by talk frequency (out of 7), and

2) by talk quality (out of 5).

Firstly, the talk frequency measure is operated by counting the real frequency of contacts per week. It focuses on only the contact frequency. The full score will be 7 (out of 7) approximately. Second, the measure of talk quality used a Likert scale to measure the satisfaction that the ego(s) felt this conversation typically brings to them. The full score is 5 (out of 5). It focuses on the quality of the talk with the actor's ties one at a time, regardless of the frequency.

I decided to elicit information for 7 ties because it is very challenging for respondents to recall more than 7 persons. This phenomenon is similar to the digits that the human cognitive system in terms of digit memory is typically able to remember: the salient number is very limited, around 7- 10 digits only. With a wide range of people in social classes and education, to recall more than 6 to 7 ties made people very frustrated in the pilot and caused inconsistency. Therefore, this research limits the number of ties of each ego/speakers to only 7 people. This might relate to the prototype based on Rosch (1973) regarding the representative sample of friends when people were asked to recall their friends.

#### 4.5.7.9 Calculation and example

Rating frequency methods can be divided into two folds by respondents' recalling behaviour. Firstly, for talk frequency the ego has to rate the real contact frequency from 1-7 on a weekly basis, using a Likert scale. This means that if the Ego(s) contact their target ties every day, that tie will get the full 7 score.

For each time of contact which accounts for 1 point, I only counted cases where the Ego(s) and their ties conversed with each other for at least 15 minutes. This can ensure that both of them can gain enough degree of interactional content exchange and

reciprocal quality (Granovetter, 1973). This also connects with linguistic accommodation theory in terms of duration of contact that shifts respondents' linguistic behaviour (Trudgill, 2006), see §3.8. To strengthen the social network calculation model, the frequency of contact reported by the Ego (respondents) directly might have a crucial role in explaining language variation as well. Therefore, this study wishes to show the recall report from the Ego explicitly.

In terms of calculation, **by talk frequency (out of 7)**, the Fibonacci weighted point system was employed. The Ego reports all their 7 participants and rates the contact frequency of their first to seventh ties, the first tie's frequency score will be multiplied by 7. The consecutive participants in the rank (from 2nd to 7th) will be multiplied by lower scores one at a time. For example, the first tie (the closest person) of the ego, might gain contact frequency score at 7. Therefore, that score, 7, will be multiplied by 7 and this tie will gain 49 points, from 7x7 = 49. The second person (tie) in the rank might get only 3 score based on the Ego's report. Hence, this tie will only be multiplied by 6, and accounting for 18 (3x6 = 18). Thus, each participant in the rank will be multiplied by their different scores regressively (from 7 to 1). We also applied this method to the second part, the qualitative rating scores as well.

Secondly, for **by talk quality (out of 5)**, the same Egos have to rate their quality of contact with ties by giving a score weight qualitatively based on their perception, using a Likert scale (from 1 to 5). I am aware that some Egos might by chance talk to their best friend(s) only once a week (low score, as 1), but they might end up talking with them for a very long time. This might imply that a long contact time or a meaningful/impressive interaction reflects the high contact quality, so this tie will gain the full 5 score. Thus, to reduce the bias between these two types of recalled score reports (a false priming which might mislead and distort the latter test(s) to some extent), we need to compare: 1) the quantitative rating score, from the real counting contact frequency on a weekly basis (1-7), and 2) the qualitative rating score, from the quality and feeling measurement of conversation reciprocity (1-5). Thus, it can be assured that the respondents are aware that these two tests are different. Its goal is to

check whether the 1) “by talk frequency” and the 2) “by talk quality” are associated or not.

I created a different likert scale measure and denominator in 1) “by talk frequency” and 2) “by talk quality” because I discovered that, in my pilot study, samples tended to be unaware of the distinction between these two types of questionnaires. They might carelessly or unintentionally rate them in two ways: either both high scores or both low scores, accordingly. These might result in distorting the scores and generalisability a great deal. My aim of these two tests was to assess the difference between the 1) “by talk frequency” and the 2) “by talk quality” as well as their association. Thus, I decided to use different questionnaires’ rating scores to be out of 7 in test no. 1) and out of 5 in test no. 2), respectively. The difference of the rating would signal and warn my respondents to at least be aware that these two types of questionnaire are very semantically different.

Fortunately, even though these two types of rating scale did not share the same denominators, the results exhibited clear trends (table 4.11). Scores in the 1) “by talk frequency” and the 2) “by talk quality” always revealed the same trends in both speakers’ traits and were in accordance with their ethnicities. This means that the MBK participants (NT Thai native) respondents showed a high positive correlation between the 1) score and 2) score while the BKK (and BKK’s vicinities) participants showed a low negative correlation between the 1) score and 2) score, respectively. Thus, the differing denominators between the 1) “by talk frequency” and the 2) “by talk quality” are no longer a problem since ethnicity (MBK locals vs. BKK participants) has already determined the score’s polars and their linear score’s trends differently.

The table 4.9 below shows examples of the SNA score’s calculation. The first round is “(A) intimacy relationship type” and the second round is rated by “(B) daily routine contact type”.

## Examples of calculations (Participant no.20)

Table 4.9 Questionnaires and the raw scores based on the types of relationship

| **(A)[20]**<br>**In intimacy relationship type** | | | | | | | |
|---|---|---|---|---|---|---|---|
| order | name/ codename | Sex | Type of relationship / closeness | Face-to-Face | | Non-Face-to-Face | |
| | | | | (f2f) | | (non-f2f) | |
| | | | | 'by talk frequency' (from 7 to 1) | 'by talk quality' (from 5 to 1) | 'by talk frequency' (from 7 to 1) | 'by talk quality' (from 5 to 1) |
| 1 | father | m | father | **7** | **5** | **3** | **3** |
| 2 | mother | f | mother | **7** | **5** | **3** | **3** |
| 3 | Beam | f | classmate | **5** | **4** | **7** | **5** |
| 4 | Lukkate | f | classmate | **6** | **5** | **7** | **5** |
| 5 | Pai | f | classmate | **5** | **5** | **7** | **5** |
| 6 | Fun | f | classmate | **5** | **5** | **7** | **5** |
| 7 | Mali | f | classmate | **5** | **5** | **7** | **5** |

| **(B)**<br>**In daily routine contact type**<br>**(assumed scores that are equal to the first questionnaire)** | | | | | | | |
|---|---|---|---|---|---|---|---|
| order | name/ codename | Sex | Type of relationship / closeness | Face-to-Face | | Non-Face-to-Face | |
| | | | | (f2f) | | (non-f2f) | |
| | | | | 'by talk frequency' (from 7 to 1) | 'by talk quality' (from 5 to 1) | 'by talk frequency' (from 7 to 1) | 'by talk quality' (from 5 to 1) |
| 1 | father | m | father | **7** | **5** | **3** | **3** |
| 2 | mother | f | mother | **7** | **5** | **3** | **3** |
| 3 | Beam | f | classmate | **5** | **4** | **7** | **5** |
| 4 | Lukkate | f | classmate | **6** | **5** | **7** | **5** |
| 5 | Pai | f | classmate | **5** | **5** | **7** | **5** |
| 6 | Fun | f | classmate | **5** | **5** | **7** | **5** |
| 7 | Mali | f | classmate | **5** | **5** | **7** | **5** |

[20] This refers to 4.5.7.4 The structure of SNA questionnaire(s)

The first four ties are local friends of the actor. The last three ties (no.5, 6, and 7) of the actor no. 20 came from Bangkok and vicinity provinces.

Table. 4.10 Calculation of the derived scores based on the types of relationship

| **(A)** **In intimacy relationship type** | | | | | |
|---|---|---|---|---|---|
| 'by talk frequency' (from 7 to 1) | | | 'by talk quality' (from 5 to 1) | | |
| **Order x#** **(f2f + non f2f)** | MBK ties | BKK ties | **Order x#** **(f2f + non f2f)** | MBK ties | BKK ties |
| **7x(7+3/2)** | 59.5 | - | **7x(5+3/2)** | 45.5 | - |
| **6x(7+3/2)** | 51 | - | **6x(5+3/2)** | 39 | - |
| **5x(5+7/2)** | 42.5 | - | **5x(4+5/2)** | 32.5 | - |
| **4x(6+7/2)** | 38 | - | **4x(5+5/2)** | 30 | - |
| **3x(5+7/2)** | - | 25.5 | **3x(5+5/2)** | - | 22.5 |
| **2x(5+7/2)** | - | 17 | **2x(5+5/2)** | - | 15 |
| **1x(5+7/2)** | - | 8.5 | **1x(5+5/2)** | - | 7.5 |
| **Total** | 191 | 51* | **Total** | 147 | 45* |

| **(B)** **In daily routine contact type** **(assumed scores that are equal to the first questionnaire)** | | | | | |
|---|---|---|---|---|---|
| 'by talk frequency' (from 7 to 1) | | | 'by talk quality' (from 5 to 1) | | |
| **Order x#** **(f2f + non f2f)** | MBK ties | BKK ties | **Order x#** **(f2f + non f2f)** | MBK ties | BKK ties |
| **7x(7+3/2)** | 59.5 | - | **7x(5+3/2)** | 45.5 | - |
| **6x(7+3/2)** | 51 | - | **6x(5+3/2)** | 39 | - |
| **5x(5+7/2)** | 42.5 | - | **5x(4+5/2)** | 32.5 | - |
| **4x(6+7/2)** | 38 | - | **4x(5+5/2)** | 30 | - |
| **3x(5+7/2)** | - | 25.5 | **3x(5+5/2)** | - | 22.5 |
| **2x(5+7/2)** | - | 17 | **2x(5+5/2)** | - | 15 |
| **1x(5+7/2)** | - | 8.5 | **1x(5+5/2)** | - | 7.5 |
| **Total** | 191 | 51* | **Total** | 147 | 45* |

As stated above, this study aimed to see the level of correlation between degree of ethnic homogeneity (the same – only MBK – or different, mixed-ethnicity ties such as BKK where the ego is MBK) and the frequency in use of certain variants (the local variant or the incoming variant). According to the score types I have now, it means that the high scores of contact in MBK networks might correlate highly with the use of local variants. In contrast, the BKK network might show the reverse trend. To strengthen this method, I united the quantity and the quality of contact types (f2f and non-f2f) into a single measurement, rather than solely showing the degree of ethnic homogeneity of the ties of each Ego.

Ultimately, there were 8 main types of SNA score at hand. Unfortunately, it turned out that all of them are highly correlated. This problem is a multicollinearity effect. However, they show strong positive correlations, meaning that the high degree of homogeneity and frequency of contacts (in all types) is associated with the frequency in use of certain phonological variants. Therefore, a manipulation of these scores is required. The types of scores can be illustrated as follows: These score will be multiplied by the ranking orders as well.

It should be noted that these 8 types were used in two major relationship types, namely 1) by intimacy/closeness relationship and 2) by real life contact relationship[21]. Therefore, the scores will be doubled according to two different aspects of relationship, resulting in a total of 16 types of scores.

1) F2F 'by talk frequency' in MBK network only (out of 7)
2) F2F 'by talk quality' in MBK network only (out of 5)
3) Non-F2F 'by talk frequency' in MBK network only (out of 7)
4) Non-F2F 'by talk quality' in MBK network only (out of 5)
5) F2F 'by talk frequency' in BKK network only (out of 7)

[21] It is found that some of individuals found in the real life relationship can overlap the intimacy/closeness relationship. This is because the highly intimate people have both means of contact to the ego. Therefore, this behaviour is typical in some individuals who have a multiplicity of role-relationships to the ego.

6) F2F 'by talk quality' in BKK network only (out of 5)
7) Non-F2F 'by talk frequency' in BKK network only (out of 7)
8) Non-F2F 'by talk quality' in BKK network only (out of 5)

Another problem I came across concerns the BKK participants' data. It was found that all 4 types of scores in BKK ethnic groups failed the normality test, which means that it causes a problem in terms of comparison to the MBK group (See Appendix H).

For statistical reasons, the BKK network scores across all categories were quite low, indicating not only few links (both to members of the MBK group, and indeed with each other internally within the BKK group) but also low in both of the score in the *intimacy relationship type* score and the *daily routine type* score. Because of these characteristics, combined with multicollinearity and non-normal distribution, it was not possible to compare them with the MBK locals. *Therefore, all BKK score types need to be disregarded by the model.* Thus, out of the two groups of people's ethnicity (MBK and BKK participants), the MBK score ((1) to (4) above) is the only group which can be retained for study. In addition, this score can be interpreted and generalized to show that most of the MBK network (linked to the MBK Egos) are ethnically homogenous in their social networks.

Although the MBK SNS scores passed the normality test ($x > 0.05$), they still come across the multicollinearity effect in all four types of scores. All these scores are required to be conflated as a single group in order to avoid errors of type I & II in statistics. All four scores in MBK SNS were thus combined as follows:

**(A) In intimacy relationship type**

1. ranking x [f2f + (non f2f/2)[22]] 'by talk frequency' (out of 7) (combine all 1st to 7th participants) total = 294
2. ranking x [f2f + (non f2f/2)] for intimacy with 'by talk quality' (out of 5) (combine all 1st to 7th participants); total = 210

**(B) In daily routine contact type**

3. ranking x [f2f + (non f2f/2)] 'by talk frequency' (out of 7)

(combine all 1st to 7th participants); total = 294

4. ranking x [f2f + (non f2f/2)] 'by talk quality' (out of 5)

(combine all 1st to 7th participants); total 210

(A) + (B)

**Grand total = 1. + 2. +3. +4. categories =**

**294+ 210+ 294 + 210 =**

**1008 as the denominator**

Finally, the grand total score is 588+420 = 1008. The denominator of 1008 will be converted into a percentage from 0 to 1 as stated at the very beginning. Hence, the SNS score has to be categorised as a continuous score type, and finally be input into the regression model. Thus we can see the association among (1) the target linguistic variant orientation, (2) SNA trajectory with continuous score, (3) the relevant linguistic factors, and (4) social predictors describing linguistic variation. These are shown in the findings in chapter 6 (r) and interpreted in the discussion section in chapter 7.

[22] This '/2' denotes division by 2 because the non-f2f score weight is rated lower than the actual f2f score weight.

### 4.5.7.10 SNA raw scores, combined raw scores in MBK group ties only and the correlation scores

The below table shows the SNA raw score based on MBK ego and their MBK ties only. The BKK ties of MBK egos were discarded; likewise the BKK ties of BKK egos were also discarded. However, any BKK egos who have MBK ties remain in the model; there were no BKK egos who had exclusively BKK ties, but if there had been any they would now be excluded.

Table 4.11 MBK ties' SNA raw score of MBK ego

| Type of network for MBK only | **(A)MBKInt7** intimacy relationship type by talk frequency | **(B)MBKInt5** intimacy relationship type talk quality | **(C)MBKRL7** daily routine contact type by talk frequency | **(D)MBKRL5** daily routine contact type by talk quality | Grand total score (out of 1008) | **SNS score used in the analysis (out of 1)** |
|---|---|---|---|---|---|---|
| Max score in each category (denominatio n) | 294 | 210 | 294 | 210 | 1008 | **1** |
| 1 | 246 | 182.5 | 136.5 | 100.5 | 665.5 | **0.66** |
| 2 | 106.5 | 124 | 224 | 196 | 650.5 | **0.65** |
| 3 | 223.5 | 167.5 | 186.5 | 161 | 738.5 | **0.73** |
| 4 | 258.5 | 200.5 | 201 | 177 | 837 | **0.83** |
| 5 | 196 | 145 | 187.5 | 133 | 661.5 | **0.66** |
| 6 | 139 | 99 | 125.5 | 92.5 | 456 | **0.45** |
| 7 | 113 | 97.5 | 113 | 97.5 | 421 | **0.42** |
| 8 | 191.5 | 113.5 | 216.5 | 172.5 | 694 | **0.69** |
| 9 | 214.5 | 119.5 | 214.5 | 119.5 | 668 | **0.66** |
| 10 | 182 | 147 | 182 | 147 | 658 | **0.65** |
| 11 | 84 | 117 | 101.5 | 152.5 | 455 | **0.45** |
| 12 | 188 | 147.5 | 188 | 147.5 | 671 | **0.67** |
| 13 | 256 | 157 | 244.5 | 168.5 | 826 | **0.82** |
| 14 | 130 | 148.5 | 130 | 148.5 | 557 | **0.55** |
| 15 | 158.5 | 110.5 | 158.5 | 110.5 | 538 | **0.53** |
| 16 | 176.5 | 158.5 | 176.5 | 158.5 | 670 | **0.66** |
| 17 | 96 | 57.5 | 96 | 57.5 | 307 | **0.30** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 18 | 210 | 157 | 188 | 185.5 | 740.5 | **0.73** |
| 19 | 180 | 150 | 223 | 182.5 | 735.5 | **0.73** |
| 20 | 191 | 147 | 181.5 | 143.5 | 663 | **0.66** |
| 21 | 209 | 162 | 222.5 | 170.5 | 764 | **0.76** |
| 22 | 173.5 | 128.5 | 186.5 | 151.5 | 640 | **0.63** |
| 23 | 236 | 178.5 | 188 | 159.5 | 762 | **0.76** |
| 24 | 133.5 | 94.5 | 94 | 73 | 395 | **0.39** |
| 25 | 94 | 94.5 | 110 | 98 | 396.5 | **0.39** |
| 26 | 224.5 | 172 | 224.5 | 172 | 793 | **0.79** |
| 27 | 243 | 173 | 210 | 168 | 794 | **0.79** |
| 28 | 249 | 189.5 | 110.5 | 97.5 | 646.5 | **0.64** |
| 29 | 224 | 119 | 114.5 | 65 | 522.5 | **0.52** |
| 30 | 173 | 137.5 | 97 | 77 | 484.5 | **0.48** |
| 31 | 129.5 | 132 | 182 | 140 | 583.5 | **0.58** |
| 32 | 31.5 | 18 | 247.5 | 113.5 | 410.5 | **0.41** |
| 33 | 196 | 157.5 | 95 | 77.5 | 526 | **0.52** |
| 34 | 70 | 67 | 149 | 118.5 | 404.5 | **0.40** |
| 35 | 193.5 | 141 | 123 | 151 | 608.5 | **0.60** |
| 36 | 175.5 | 123 | 224 | 168 | 690.5 | **0.69** |
| 37 | 213.5 | 210 | 213.5 | 210 | 847 | **0.84** |
| 38 | 160 | 118 | 236 | 181 | 695 | **0.69** |
| 39 | 167 | 124 | 167 | 124 | 582 | **0.58** |
| 40 | 138 | 93.5 | 138 | 93.5 | 463 | **0.46** |
| 41 | 167 | 128.5 | 184 | 150.5 | 630 | **0.63** |
| 42 | 261 | 202 | 215 | 166.5 | 844.5 | **0.84** |
| 43 | 179 | 150 | 161.5 | 165.5 | 656 | **0.65** |
| 44 | 217 | 162.5 | 233.5 | 174.5 | 787.5 | **0.78** |
| 45 | 174.5 | 135 | 174.5 | 135 | 619 | **0.61** |
| 46 | 170 | 142 | 170 | 142 | 624 | **0.62** |
| 47 | 180 | 139 | 224 | 168 | 711 | **0.71** |
| 48 | 187.5 | 154.5 | 205 | 166.5 | 713.5 | **0.71** |
| 49 | 147 | 113 | 147 | 113 | 520 | **0.52** |
| 50 | 112 | 162 | 175 | 178.5 | 627.5 | **0.62** |
| 51 | 131 | 103 | 225 | 169 | 628 | **0.62** |
| 52 | 294 | 210 | 294 | 210 | 1008 | **1.00** |
| 53 | 127 | 136 | 222.5 | 131.5 | 617 | **0.61** |
| 54 | 132.5 | 101.5 | 128.5 | 101.5 | 464 | **0.46** |
| 55 | 143 | 92.5 | 143 | 92.5 | 471 | **0.47** |
| 56 | 256.5 | 181.5 | 176.5 | 114 | 728.5 | **0.72** |
| 57 | 207 | 159.5 | 207 | 159.5 | 733 | **0.73** |
| 58 | 63 | 49.5 | 63 | 49.5 | 225 | **0.22** |
| 59 | 0 | 0 | 0 | 0 | 0 | **0.00** |
| 60 | 95.5 | 52.5 | 95.5 | 52.5 | 296 | **0.29** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 61 | 217.5 | 178 | 217.5 | 178 | 791 | **0.78** |
| 62 | 160.5 | 116.5 | 160.5 | 116.5 | 554 | **0.55** |
| 63 | 234.5 | 173 | 234.5 | 173 | 815 | **0.81** |
| 64 | 223 | 164.5 | 223 | 164.5 | 775 | **0.77** |
| 65 | 101 | 75 | 101 | 75 | 352 | **0.35** |
| 66 | 87 | 74 | 87 | 74 | 322 | **0.32** |

Other descriptive statistics for the 66 participants regarding their SNS scores for BKK participants only:

| **Descriptive Statistics** | | | |
|---|---|---|---|
| | Mean | Std. Deviation | N |
| (A)in7 | 170.34 | 59.426 | 66 |
| (B)In5 | 132.35 | 43.412 | 66 |
| (C)r7 | 170.83 | 54.480 | 66 |
| (D)r5 | 134.57 | 43.638 | 66 |

Table 4.12 Correlation amongst four MBK participants -types and qualities

| | | **(A) MBKInt7** intimacy relationship type by talk frequency | **(B) MBKInt5** intimacy relationship type talk quality | **(C) MBKRL7** daily routine contact type by talk frequency | **(D) MBKRL5** daily routine contact type by talk quality |
|---|---|---|---|---|---|
| **(A) MBKInt7** intimacy relationship type by talk frequency | Pearson Correlation | 1 | .886** | .554** | .549** |
| | Sig. (2-tailed) | - | .000 | .000 | .000 |
| | N | 66 | 66 | 66 | 66 |
| **(B) MBKInt5** intimacy relationship type talk quality | Pearson Correlation | .886** | 1 | .559** | .707** |
| | Sig. (2-tailed) | .000 | | .000 | .000 |
| | N | 66 | 66 | 66 | 66 |
| **(C) MBKRL7** daily routine contact type by talk frequency | Pearson Correlation | .554** | .559** | 1 | .857** |
| | Sig. (2-tailed) | .000 | .000 | | .000 |
| | N | 66 | 66 | 66 | 66 |
| **(D) MBKRL5** daily routine contact type by talk quality | Pearson Correlation | .549** | .707** | .857** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | |
| | N | 66 | 66 | 66 | 66 |

Table 4.13 Correlations between each pair of speakers based on their MBK ties' relationship

| No. | Paired scores for correlation test | Pearson correlation results (all highly positive correlated) |
|---|---|---|
| 1 | (A) vs. (B) | .886 |
| 2 | (A) vs. (C) | .554 |
| 3 | (A) vs. (D) | .549 |
| 4 | (B) vs. (C) | .559 |
| 5 | (B) vs. (D) | .707 |
| 6 | (C) vs. (D) | .857 |

Table 4.13 shows four types of SNA measures for speakers with MBK ties (i.e., for all 66 speakers). E.g., type (a) is the overall measure of intimacy by talk frequency for all speakers with MBK ties. Naturally it correlates completely with itself as a measure (the first square has a value of 1); and it correlates to a lesser degree with the other measures (B, C and D). Table 4.13 restates this more simply, showing all six possible combinations of A, B, C and D. It is clear that all measures are highly correlated – even the lowest score is above +0.500. This results in multicollinearity problems (VIF[23]). Therefore, the SNS scores of MBK participants needed to be combined and recalculated as percentages.

[23] The Variance Inflation Factor (VIF) measures the impact of collinearity among the variables in a regression model. The Variance Inflation Factor (VIF) is 1/Tolerance, it is always greater than or equal to 1. There is no formal VIF value for determining presence of multicollinearity. Values of VIF that exceed 10 are often regarded as indicating multicollinearity, but in weaker models values above 2.5 may be a cause for concern. In many statistics programs, the results are shown both as an individual R2 value (distinct from the overall R2 of the model) and a Variance Inflation Factor (VIF). When those R2 and VIF values are high for any of the variables in your model, multicollinearity is probably an issue. When VIF is high there is high multicollinearity and instability of the b and beta coefficients. It is often difficult to sort this out. http://www.researchconsultation.com/multicollinearity-regression-spss-collinearity-diagnostics-vif.asp Accessed [10 April 2015].

### 4.5.8 Coda type

The details of coda type and vowel length have already been explained in the phonological sections. The attribute details of these two independent variables are elaborated and tested as linguistic factors, to see whether the dependent variables, namely onset (r) and onset {Cr}, are conditioned by them or not, as follows.

Table 4.14 Coda type in both NT Thai and BKK Thai

| | Labial | Alveolar | Palatal | Velar | Glottal |
|---|---|---|---|---|---|
| Nasal | [m] | [n] | | [ŋ] | |
| Stop | [p] | [t] | | [k] | [ʔ] |
| Approximant | [w] | | [j] | | |

Coda type is thus organised by place of articulation. It should be noted that, in the coda position, the vowel length of so-called short vowels always co-occurs with the glottal stop /ʔ/. However, Naksakul (2013) mentioned that in multi-syllabic words, the short vowel syllable might have no need of a glottal stop coda. This means that in multi-syllabic words, that short vowel syllable can be an open syllable, rather than a closed syllable. This might contribute to the continuity of the connected syllables in the multi-syllabic word patterns/forms.

### 4.5.9 Vowel length

This independent variable may influence the likelihood of using more rhotic onset [r] and cluster with rhotic onset {Cr}. This is the related interacting (indirect) factor to coda type. There are two types of vowel length, namely short and long vowel words. The

monophthongs can be either short or long. The short vowels mostly cooccur with glottal stop /ʔ/ coda in a closed syllable (but see above). The long vowels can occur in open syllables. The vowel systems of both NT Thai and BKK Thai were shown in 4.2 and 4.3, respectively. It should be noted that the dipththong words can be realised as either short vowels or long vowels as well, for instance:

เรียน [rian] or [ri:an] “to study”,

รวม [ruam] or [ru:am] “to collect/ to combine ”

เครือ [kʰrɯa] or [kʰrɯ:a] “bunch/ pedigree”

Most of the salient words which have short diphthong vowels are onomatopoetic words. Therefore, the vowel length (both of monopthongs and diphthongs) can be either short or long. However, the vowel length measurement is impressionistic, based on researcher’s judgement from listening to the actual sounds. Therefore, the reliability of the measurement seems to be subjective to some extent. To note, Pittayaporn et al. (2016) claim that currently in BKK Thai, neither the short nor the long vowel forms systematically reflect their historical short and long vowels in the orthography. Their evidence is based on comparison between Thai classical literature and the actual speech of modern Thai speakers.

### 4.5.10 Other linguistic variables

The following linguistic (independent) variables did not show statistically significant effects on the dependent variables in the regression model (as opposed to the coda type and vowel length, which were strong explanatory factors).

In this study, the voicing attribute of codas is irrelevant to predicting the (r) and the {Cr} variables, since all codas in both NT Thai and Bangkok Thai are devoiced. Lexical tone proved too complex to operationalize as a linguistic predictor in this study. Word frequency was not pracxtical as a predictor given that there is no corpus of NT Thai which might be used to establish normative frequencies.

The dark highlight bars in Table 4.15 refer to the phonological/morphological (internal linguistic) conditions regarding the target phoneme. In some cases, the position of internal linguistic conditions and the target forms can be the same. Clause/phrase examples of each internal linguistic condition are shown right below the codes. Elements underlined in the examples are the target forms.

Table 4.15 Coding protocol for (Cr) and (r)

| No. | Code | Dependent variable (Cr) consonant cluster onset with rhotic as the second phone | | Code | Dependent variable (r ) consonant onset of rhotic |
|---|---|---|---|---|---|
| | | | | | |
| 1 | | Is the preceding syllable open or closed? | 1 | | Is the preceding syllable open or closed? |
| | c | closed | | c | closed |
| | o | open | | o | open |
| | | (1) เขาใส่แกบ แกบ แล้วก็ใส่ ใส่กะสอบ แล้วก็เอาขาย เจ้า<br>kʰaw4 saj1 klap1 klap1 lɛ:w3 kɔ:2 saj1 kaʔ1 so:p1 lɛ:w3 kɔ:2 ʔaw0 kʰa:j4 tɕʰaw2<br>He puts some rice husk into sacks. Then he sells them. | | | (1) จีดเจ้า ถ้ามันฮ้อน แบบเปิด<br>tɕʰi:t1 tɕa:w2 tʰa:2 man0 hon3 bɛ:p1 pɤ:t1<br>Yes. We have to spray it on. It is an open-air (device). |
| | | | | | |

| 2 | | What is the vowel length of preceding syllable? | 2 | | What is the vowel length of preceding syllable? |
|---|---|---|---|---|---|
| | s | short | | s | short |
| | l | long | | l | long |
| | | (2) เอ่อ บางคนก็ครบครัน ครั่นคร้ามไม่ล่วมห้องค่ะ<br>ʔʊ:0 ba:ŋ0 kʰon0 kɔ:2 kʰrop3 kʰran0 kran2 kra:m3 maj2 luam2 hoŋ2<br>Well. Someone is very well prepared. (But) they might be terrified and do not wish to join the class. | | | (2) ฉีดเข้า ถ้ามันฮ้อน แบบเปิด<br>tɕʰi:t1 tɕa:w2 tʰa:2 man0 hon3 bɛ:p1 pʊ:t1<br>Yes. We have to spray it on. It is an open-air (device). |
| | | | | | |
| 3 | | Is the word single-syllable? | 3 | | Is the word single-syllable? |
| | s | a single syllable word | | s | a single syllable word |
| | m | a multi-syllable word | | m | a multi-syllable word |
| | | (3) เอ่อ บางคนก็ครบครัน ครั่นคร้ามไม่ล่วมห้องค่ะ<br>ʔʊ:0 ba:ŋ0 kʰon0 kɔ:2 kʰrop3 kʰran0 kran2 kra:m3 maj2 luam2 hoŋ2<br>Well. Someone is very well prepared. (But) they might be terrified and do not wish to join the class. | | | (3) คาบเก้ามีเลียน คาบเก้าเลียนอังกิดเพิ่ม เลียนกับคนสก๊อต ฮ่าๆ<br>kʰa:p2 kaw2 mi:0 li:an0 kʰa:p2 kaw2 li:an0 ʔaŋ0 kit1 phʊ:m2 li:an0 kap1 khon0 saʔ1 kot3<br>(We) have class on the 9th period. This time it is about the English supplementary course. (We) study with the Scoths. (Laugh) |
| | | | | | |
| 4 | | Does it have only 1 meaning in the word? | 4 | | Does it have only 1 meaning in the word? |
| | S | a single meaning in a word | | S | a single meaning in a word |
| | M | a multi-syllabic word to form one meaning | | M | a multi-syllabic word to form one meaning |
| | | (4) เธอร้องครวญครางไม่หยุด | | | (4) แม่ทำงานลับลาชก้านเจ้า ที่บ้านไฮ่ง |

| | | | | | |
|---|---|---|---|---|---|
| | | tʰɤ:0 rɔ:ŋ4 kʰrua:n0 kʰra:ŋ0 maj2 jut1<br>She screamed at the top of her lungs for a long time. | | | mɛ:2 lap3 lat2 tɕʰaʔ1 ka:n4 tɕaw2 tʰi:2 ba:n2 hoŋ2<br><br>My mother works as the civil servant officer at Baan Hong municipality office. |
| 5 | | For preceding syllable, does it begin with a cluster? | 5 | | For preceding syllable, does it begin with a cluster? |
| | y | begin with cluster | | y | begin with cluster |
| | n | not begin with cluster | | n | not begin with cluster |
| | | (5) เธอร้องครวญครางไม่หยุด<br>tʰɤ:0 rɔ:ŋ4 kʰrua:n0 kʰra:ŋ0 maj2 jut1<br>She screamed at the top of her lungs for a long time. | | | (5) แม่ทำงานลับลาชก้านเจ้า ที่บ้านโฮ่ง<br>mɛ:2 lap3 lat2 tɕʰaʔ1 ka:n4 tɕaw2 tʰi:2 ba:n2 hoŋ2<br>My mother works as the civil servant officer at Baan Hong municipality office. |
| | | | | | |
| 6 | | For following syllable, does it begin with a cluster? (y, n) | 6 | | For following syllable, does it begin with a cluster? (y, n) |
| | Y | begin with cluster | | y | begin with cluster |
| | N | not begin with cluster | | n | not begin with cluster |
| | | (6) เอ่อ บางคนก็ครบครัน ครั่นคร้ามไม่ล่วมห้องค่ะ<br>ʔɤ:0 ba:ŋ0 kʰon0 kɔ:2 kʰrop3 kʰran0 kran1 kra:m3 maj2 luam2 hoŋ2<br><br>Well. Someone is very well prepared. (But) they might be terrified and do not wish to join the class. | | | (6) เธอร้องครวญครางไม่หยุด<br>tʰɤ:0 rɔ:ŋ4 kʰrua:n0 kʰra:ŋ0 maj2 jut1<br>She screamed at the top of her lungs for a long time. |
| | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| 7 | | For following syllable, does it begin with lateral onset as the second phone? | 7 | | For following syllable, does it begin with lateral onset as the second phone? |
| | Y | begin with lateral onset | | y | begin with lateral onset |
| | N | not begin with lateral onset | | n | not begin with lateral onset |
| | | (7) เอ่อ บางคนก็ครบครัน ครั่นคร้าม ไม่ล่วมห้องค่ะ<br>ʔʁ:0 ba:ŋ0 kʰon0 kɔ:2 kʰrop3 kʰran0 kran1 kra:m3 maj2 luam2 hoŋ2<br><br>Well. Someone is very well prepared. (But) they might be terrified and do not wish to join the class. | | | (7) เธอร้องคราญคร่างไม่หยุด<br>tʰʁ:0 rɔ:ŋ4 kʰrua:n0 kʰra:ŋ0 maj2 jut1<br>She screamed at the top of her lungs for a long time. |
| | | | | | |
| 8 | | For preceding syllable, what is initial phoneme? (manner of articulation) | | | |
| | r | rhotic (trill and tap) | | | |
| | l | lateral | | | |
| | h | glottal fricative | | | |
| | g | glottal stop | | | |
| | o | other obstruent sounds (stop, affricate and fricative) | | | |
| | s | other sonorant sounds (nasal and semi-vowel) | | | |
| | | (8) เขาใส่แกบ แกบ แล้วก็ใส่ ใส่กะสอบ แล้วก็เอาขาย เจ้า<br>kʰaw4 saj1 klap1 klap1 lɛ:w3 kɔ:2 saj1 kaʔ1 so:p1 lɛ:w3 kɔ:2 ʔaw0 kʰa:j4 tɕʰaw2<br>He puts some rice husk | | | |

| | | | | | |
|---|---|---|---|---|---|
| | | into sacks. Then he sells them. | | | |
| | | | | | |
| 9 | | For following syllable, what is initial position phoneme? (manner of articulation) | | | |
| | r | rhotic (trill and tap) | | | |
| | l | lateral | | | |
| | h | glottal fricative | | | |
| | g | glottal stop | | | |
| | o | other obstruent sounds (stop, affricate and fricative) | | | |
| | s | other sonorant sounds (nasal and semi-vowel) | | | |
| | | (9) เอ่อ บางคนก็ครบครัน ครั้นคร้ามไม่ล่วมห้องค่ะ<br>ʔʊ:0 ba:ŋ0 kʰon0 kɔ:2 kʰrop3 kʰran0 kran1 kra:m3 maj2 luam2 hoŋ2<br><br>Well. Someone is very well prepared. (But) they might be terrified and do not wish to join the class. | | | |
| | | | | | |
| 10 | | Is the first phone of preceding syllable a glottal stop? | | | |
| | Y | The first phone is a glottal stop. | | | |
| | N | The first phone is not a glottal stop. | | | |
| | | (10) เขาใส่แกบ แกบ แล้วก็ใส่ ใส่กะสอบแล้วก็เอาขาย เจ้า<br>kʰaw4 saj1 klap1 klap1 | | | |

| | | | | | |
|---|---|---|---|---|---|
| | | lɛ:w3 kɔ:2 saj1 ka?1 so:p1<br>lɛ:w3 kɔ:2 ʔaw0 k$^{h}$aj4<br>tɕ$^{h}$aw2<br>He puts some rice husk into sacks. Then he sells them. | | | |
| | | | | | |
| 11 | | What is the first (pre-rhotic) phone of the cluster?<br>(place of articulation) | | | |
| | p | Vl. unaspirated bilabial stop /p/ | | | |
| | P | Vl. aspirated bilabial stop /p$^{h}$/ | | | |
| | t | Vl. unaspirated alveolar stop /t/ | | | |
| | k | Vl. unaspirated velar stop /k/ | | | |
| | g | Vl. unaspirated velar stop /kh/ | | | |
| | | (11) เขาใส่แกบ แกบ แล้วก็ใส่ ใส่กะสอบแล้วก็เอาขาย เจ้า<br>k$^{h}$aw4 saj1 klap1 klap1<br>lɛ:w3 kɔ:2 saj1 ka?1 so:p1<br>lɛ:w3 kɔ:2 ʔaw0 k$^{h}$aj4<br>tɕ$^{h}$aw2<br>He puts some rice husk into sacks. Then he sells them. | | | |

In the next chapter, the findings of the variables of (Cr) and (r) are demonstrated and discussed in detail.

# Chapter 5
# Findings of variable (Cr) consonant cluster with rhotic onset

## Introduction

This is the first of two chapters giving results from multiple logistic regression analyses to shed light on linguistic variability and linguistic maintenance and shift in the NTIE community. The variables include: 1) clusters with rhotic onset (Cr), in Chapter 5, and 2) initial rhotic onset (r), Chapter 6. Each variable has three variants in the final analysis, giving 6 cases.

## 5.1 Setting of (Cr) and the variant forms

As noted in 1.3.2 and 4.3, the consonant cluster with rhotic onset variable (Cr) is composed of $C_1C_2V_1$ ($V_2$) (C), where $C_2$ is underlyingly rhotic. In BKK Thai dialct, (Cr) has its prestige form with {Cr-1}[1] as the variant. Below I combine the variants of cluster with trill onset, and cluster with tap onset, all together as {Cr-1}, because early results showed that both these rhotic variants are perceived as the prestige form. Thus, from now on, {Cr-1} implies the conflating of these two prestige rhotic forms.

This variable can generate the standard form as variant {Cr-1}, or consonant cluster with trill [r], or with tap [ɾ] (Iwasaki & Horie, 2005). The variants also include {Cl}, the cluster with lateral, and {CØ}, the cluster with zero form, which can be called the reduction form[2]. Some variant examples of (Cr) are illustrated below.

---

[1] I use {curly brackets} instead of square brackets [x] to refer to different variants, i.e. distinct realisations of the variable. Throughout the thesis, {Cr-1} denotes the conflation of an initial cluster with [r] onset and an initial cluster with [ɾ] onset only. Other variants also use the curly bracket, namely {Cl} for the cluster with lateral, and {CØ} for the cluster with zero form, since 'C' stands in for various phones. For the rhotic onset (r) variable, {r-1} refers to the conflation of [r] and [ɾ]; other variants of (r) are expressed by using IPA in square brackets, namely [l] and [h].

[2] Grunwell (1987, cited in Lacoste, 2012: 69) differentiates concepts between reduction form and simplification. Reduction signifies the articulatory removal of one or more segments within a consonant

Table 5.1 Example of (Cr) variable generating 3 variants

| Bangkok Thai orthography | transcriptions[3] | Translations |
|---|---|---|
| ครับ, คลับ, คับ | [krap3]/ [kɾap3], [klap3], [kap3] | male polite final particle (n.) |
| ตรง, ตลง, ตง | [troŋ0]/[tɾoŋ0], [tloŋ0], [toŋ0] | straight (adj./adv.) |
| พร้อม, พล้อม, พ้อม | [pʰrom3]/[pʰɾom3], [pʰlom3], [pʰom3] | ready (adv.) |

## 5.2 The basic term of cluster reduction form: agreement

Prior to addressing how I selected the application values[4] (or the targeted variants) I note some basic concepts of the cluster zero form or reduction form {CØ}, as it is the most frequently occurring form in (Cr). I demonstrate that underlying forms of {CØ}, phonologically, must have derived from either /Cr/ or /Cɾ/, or as I conflated them, {Cr-1}. The underlying form can surface with the representation {Cl} as well. Therefore, all variants which are derived from the underlying rhotic form of (Cr-1) or phonologically /Cr/ comprise, namely

cluster. However, based on McLeod et al. (2001), 'simplification' pertains to a non-adult production of a cluster sequence where the syllabic shape of a word is retained. We can see that this is the perspective of child language acquisition. However, I partly agree with this definition of simplification because it involves attitudinal judgments on maturity. Thus, the term 'reduction' is used to imply a phonological judgment. I prefer to use cluster 'reduction' to describe this phonological process in lieu of employing 'simplification' as adopted in Beebe (1974).

[3] The single notation numbers which are tagged following each phonetic transcription refer to the Bangkok Thai tones. The single numbers in the brackets, such as (1) will be used because of convenience and to reduce errors in tone coding. There are five tones in Bangkok Thai: mid tone 33 or (0), low tone 21 or (1), falling tone 43 or (2), high tone 45 or (3) and rising tone 323 or (4). I adopt this tonal marker tagging from Phanthumetha (2011: 99).

[4] *Application value* is a specific term for VARBRUL and RBRUL analysis. It means that the focused variant which is compared with the other variants of the dependent variable. It represents the "application" of a variable rule.

(1) {Cr-1},
(2) {Cl}, and
(3) {CØ}.

The four variants of the rhotic /r/ in (Cr-1) (namely, [r], [ɾ], [l] and {Ø}) do not comprise a single phoneme in BKK Thai or NT Thai. However, there are examples where occurrence of one variant proves distinctive in referential meaning, and generates a separate lexical item. In other words, the definition of a linguistic variable as variable in form but constant in meaning (L-Thongkum, et al., 2011) does not apply to such examples. Thus they must be excluded from the envelope of variation. I have excluded all such lexical items, and they are not counted among the instances of variation.

However, there are problems when the variants which are members of {Cr-1} have their own lexical meanings under various combinations of the second consonant C2 in the forming of an initial consonant cluster, as in the examples below (homophony). All these words have different meanings when co-occurring with the different second consonant sounds in the initial cluster.

(1) consonant cluster with rhotic onset

คราญ [k$^{h}$ra:n0] = (adv.) “beautifully”

คลาน [k$^{h}$la:n0] = (v.) “to crawl”

คาน[k$^{h}$a:n0] = (v.) “to counter balance” or (n.) “pole”

In some cases, the varied forms of {Cl} do not possess any denotative meaning semantically, as shown below คลู [k$^{h}$lu:0]. In this case, it was necessary to reconsider the context’s meaning to ensure validity.

(2) consonant cluster with lateral onset

ครู [kʰru:0] (n.) “teacher”

คลู [kʰlu:0] does not have any denotative meaning, but the occurrence is possible.

คู [kʰu:0] (n.) “ditch”,

Similarly, representation of cluster reduction, {CØ}, whose underlying form is {Cr-1}, does not have any denotative meaning, but the occurrence is possible, as shown in an example:

(3) consonant cluster reduction onset

พร้อม [pʰrɔ:m3] (adj.) “ready”

พล้อม [pʰlɔ:m3] does not have any denotative meaning, but the occurrence is possible.

พ้อม [pʰɔ:m3] does not have any denotative meaning, but the occurrence is possible.

NT Thai and BKK Thai syntax both conform to subject–verb–object word order (SVO). Both of them are isolating languages which contain very small numbers of derivational morphemes but lack inflectional morphemes. They have no overt tense, case, mood, voice, gender or number markings, even though both dialects adopt a number of addressed attributes from many languages that have inflectional morphemes such as Pali and Sanskrit. Therefore, to specify each word’s function in the sentence, the context of the sentences, both preceding and following, are crucially required to indicate their covert morphological functions and senses. In general, both BKK Thai and NT Thai are head-initial. The head precedes its modifier, such that “red shirt” in English is realised as “shirt red” in both languages. The modifiers are aligned and extended to the

right-hand side of the head. For example, "แม่น้ำกวง" /mɛ:2 na:m3 kuaŋ0/ *mother- water- Kuang* means "river".[5]

In casual speech, each lexical word possesses nuanced differences in terms of phonological representations. It was necessary to consider carefully whether they might have their own distinctive meanings, in a range of semantic or pragmatic contexts. I tackled these problems by considering the whole text adjacent to the targeted word or token. Semantically and pragmatically[6], this means that the preceding co-text/constituent/clause and the following co-text/constituent/clause can be an evidence for justifying the target word's sense, and to ensure that the targeted lexical words have clusters with rhotic onset {Cr-1} as their underlying form.

The cases below explore whether the second sound in the consonant clusters of the target tokens is correctly diagnosed as belonging to the variable (Cr). The following examples all use reduction forms {CØ}.

(4) cluster reduction {CØ} possesses its own meaning

ฆ่าคนตายประมาณเนี้ย

| | | | | |
|---|---|---|---|---|
| kʰa:2 | kʰon0 | ta:j0 | paʔ1 ma:n0 | niaj4 |
| kill | person | dead | estimate | final particle |

'(Someone) kills people, as an example.'

[5] However, NT Thai should be classified as head-final instead of head-initial, since there are examples such as "น้ำแม่กวง" / na:m3 mɛ:2 kuaŋ0/ *water-mother- Kuang* "river Kuang" in NT Thai instead of "แม่น้ำกวง" / na:m3 mɛ:2 kuaŋ0/ *mother- water- Kuang* in BKK Thai. The latter instance is head-initial since /mɛ:2/ "mother" and na:m3 "water" are conflated as a compound word [ [*mother- water*]- *Kuang*] which refers to "river". This word has undergone a conceptual metaphorical process. The target domain is "mother" (an abstract concept) which is metaphorically connoted as "a great one, who possesses lots of things and followers" (a concrete concept).The mapping of analogical reasoning is that both of them are the source of origin. This metaphor process contributes to connote the sense of "river" referring to the great (source of) water. Further research needs to be done to falsify the head-final language claim for NT Thai.

[6] On the other hand, these criteria can be considered as cohesion as well. Here we are looking at the cohesive devices found as a property of texts which they help to join together intelligibly (Trask, 2000).

In (4), [paʔ1] ปะ by itself refers to the verb “stitch”. In this case, after reconsidering the context, this syllable comes from a two syllable word which contains only one meaning, derived from [praʔ1], forming part of the serial verb construction [praʔ1 ma:n0] which means “to estimate”.

(5) a single cluster reduction {CØ} which has its own denotative meaning

พวกที่มีไว้ในคอบคองอยู่ในกฎหมายผิดกฎหมาย

| | | | | | |
|---|---|---|---|---|---|
| pʰua:k2 | tʰi:2 | | mi:0 waj3 | naj0 | kʰɔp2 kʰɔŋ0 |
| group | complementizer | | receive | in | possess |

| | | | | | |
|---|---|---|---|---|---|
| ju:1 | naj0 | kot1 ma:j4 | phit1 | kot1 ma:j4 | |
| in | law | wrong | against | law | |

‘The group of people who possessed them, under the law, (they) committed a crime.’

In this example, neither [kʰɔp2] nor [kʰɔŋ0] have any meanings by themselves. Their underlying forms are [kʰɔp2], [kʰɔŋ0] which mean “to possess”. These two form a compound word. Both of them have very similar meanings and they can be called weak reduplication words.

(6) {Cl} cluster with lateral which has its own denotative meaning

ลูกนกอยู่ในลัง ทีนี้ก็คือลังนี้จะเล็ก เพลาะว่ามีลูกเยอะ

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| lu:k2 nok2 | ju:1 | naj0 | laŋ0 | tʰi:0 | ni:3 | k ɔʔ:2 | kʰɤ:0 | laŋ0 | ni:3 | caʔ1 |
| nestling | stay | inside | nest | that | this | it | nest | that | this | will |

| | | | | |
|---|---|---|---|---|
| lek3 | phlɔʔ3wa:2 | mi:0 | lu:k2 | jɤʔ3 |
| small | because | possess | offspring | many |

‘Nestlings were in the nest. That is, this nest seems (too) small because she had too many of them.’

In this sentence, [pʰlɔʔ3] can have the meaning of “trench”. However, after reconsidering the context of the nestlings, the variant {Cl} should be replaced by /r/, i.e. [pʰlɔʔ3] which means “because”, functioning as a conjunction: that is, {Cr-1} instead of {Cl}. This sentence is composed of two clauses separated by the target word. Logically, the first clause’s meaning shows the result, and the second clause denotes the cause of this whole event. Thus, we can be sure that the target word means “because” rather than “trench”, which would derail the scene dramatically.

(7) cluster with lateral {Cl} does not have its own denotative meaning

คือเหมือนทำเค้าเตลียมที่จะกะทำความผิด

| | | | | | | |
|---|---|---|---|---|---|---|
| kʰɯ:0 | mɯa:n4 | tʰam0 | kʰaw3 | tliam0 | tʰi:2 | tɕaʔ1 |
| copula | seem | make | 1SBJ | prepare | that | will |

| | |
|---|---|
| kaʔ1 tʰam0 | kʰwa:m0 pʰit1 |
| commit | crime |

‘It was like he did (it). He prepared to commit the crime’.

The word *เตลียม* [tliam0] does not appear to have any denotative meaning. However, once we consider the context, the speaker – a police officer – indicated that he was doing his duty by investigating officially. I assume that this word should be the lexical word [triam0] *เตรียม* “to prepare”, functioning as a verb, rather than the non-existent *เตลียม* [tliam0], because “to prepare” can co-occur pragmatically with the phrase “committing the crime”.

Some problems might mislead us to select the wrong token. I would like to demonstrate that certain cases will not be included after considering the contextual criteria of the underlying form of {Cr-1}.

(8) {Cr-1} cluster with trill/tap onset occurrence, but the underlying form should be a cluster with lateral onset

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| rot3 | kʰan0 | ni:3 | du:0 mɯa:n4wa:2 | pʰraw0 | tɕaʔ1 | maj3 | kʰɔj2 | |
| car | classifier | this | seem | shaft | will | not | probably | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| di:0 | sia:ŋ4 | ʔia:t3 ʔa:t3 | daŋ0 | klop1 | pʰle:ŋ0 | paj0 mot0 | |
| well | noise | onomatopoeia | loud | drown out | song | entirely | |

'This car, it seems that its shaft is not in a good condition. Its screeching noise drowns out the music (to which we are listening).'

From this context, we can infer that there are some problems occurring when the driver drives his car. The speaker mentions at least two events. Firstly, driving a car and secondly, listening to the music. Thus, this context circumscribes the denotative meaning *เพลา* [pʰlaw0] 'a car's shaft' rather than another alternative one *เพรา* [pʰraw0] or 'basil'. In addition, the word *เพรา* [pʰraw0] or 'basil' must co-occur with [ka1] as [kaʔ1 phraw0] as well. [ka1] must never stand alone and must appear preceding the word เพรา [pʰraw0]. Hence, it is impossible to have "a basil" appearing in the context of driving. From this sentence, we can also see the hypercorrection from {Cl} to {Cr-1}.

This example was constructed, because such hypercorrect cases did not occur in the data. The hypercorrection here refers to the prolonging of the trilled phoneme with any vowel. Most of the time, in a normal BKK Thai trill /r/, the tip of the tongue will contact no more than 3 strikes against the alveolar ridge and the front of the hard palate. The hypercorrection of trill /r/ is identified when the strikes are more than three, as the criterion. This prolonged trill always interacts with the long vowels as well. However, it did not occur in this current study at all.

Therefore, all problems encountered, as found in the condition of {CØ} and {Cl}, can be solved by considering the meaning based on the contexts, semantically and pragmatically.

To sum up, all variants which are derived from the underlying rhotic form of (Cr-1) in BKK Thai include:

(1) {Cr-1},

(2) {Cl}, and

(3) {CØ}.

### 5.3 Envelop of variation: variable data set

A primary constraint of logistic regression is that the variants must be binary in order to be able to be compared and find the correlations. This means that the 4 variants must be combined into groups. For example, we might conflate all sonorant cluster onsets, {Cr}, [Cɾ] and {Cl} as the first group and pit them against cluster reduction {CØ}. Even though a number of sets of variants are possible, the selection needs to satisfy both phonological and sociolinguistic criteria. That is, forms grouped together need to be phonologically similar enough, and have similar sociolinguistic distributions.

There are 6 interesting cases (conditions) which can be supported on phonological grounds. The first 3 cases involve the study of the variable cluster with rhotic onset (Cr), and are described here. Recall that "{Cr-1}" includes both the tap {Cɾ} and trill {Cr} variants. Hence the cluster with rhotic onset cases generated 3 models:

**(i) {Cr-1} vs. {Cl} + {CØ}, only in formal style**

**(ii) {Cl} vs. {Cr-1} +{CØ}, only in formal style (Reading and Minimal Pair separated)**

**(iii) {CØ} vs. {Cr-1} + {Cl}, only in formal style**

Prior to examining each case, the distribution of (Cr) needs to be described. Table 5.2 below illustrates that style plays the major role in determining the selection of {Cr-1}. {CØ}, the reduction form shows the most frequent occurrence by far, except for minimal pairs.

It should be noted that the predictor 'style' is not part of the final multiple logistic regression analysis, because tokens of {Cr-1} and {Cl} are not well-distributed across each style according to the normality test: {CØ}'s frequency in the informal styles is almost categorical. Consequently, the data are divided into two 'style' groups in the analysis, as noted in §4.6 (c) referring to method and data management.

Only in the case of {Cl} can the predictor 'style' be inserted into the model, where it will distinguish between one formal style (reading passage test) and an even more formal style (minimal pairs test). Note that {CØ}'s frequency still dominates all other variants even in these two formal styles.

Table 5.2 Frequency of variants across different styles, showing both formal and informal styles.

| Style | Type of experiments | | {Cl} | {Cr-1} | {CØ} | Total |
|---|---|---|---|---|---|---|
| Informal style | Casual | Freq. | 1 | 3 | 2018 | 2022 |
| | | % | 0.0% | 0.0% | 29.0% | 29.1% |
| | Picture description | Freq. | 2 | 1 | 775 | 778 |
| | | % | 0.0% | 0.0% | 11.2% | 11.2% |
| | Animated film description | Freq. | 3 | 1 | 781 | 785 |
| | | % | 0.0% | 0.0% | 11.2% | 11.3% |
| Formal style | Reading passage | Freq. | 181 | 841 | 1682 | 2704 |
| | | % | 2.6% | 12.1% | 24.2% | 38.9% |
| | Minimal pair | Freq. | 108 | 417 | 136 | 661 |
| | | % | 1.6% | 6.0% | 2.0% | 9.5% |
| Grand total | | Freq. | 295 | 1263 | 5392 | 6950 |
| | | % | 4.2% | 18.2% | 77.6% | 100.0% |

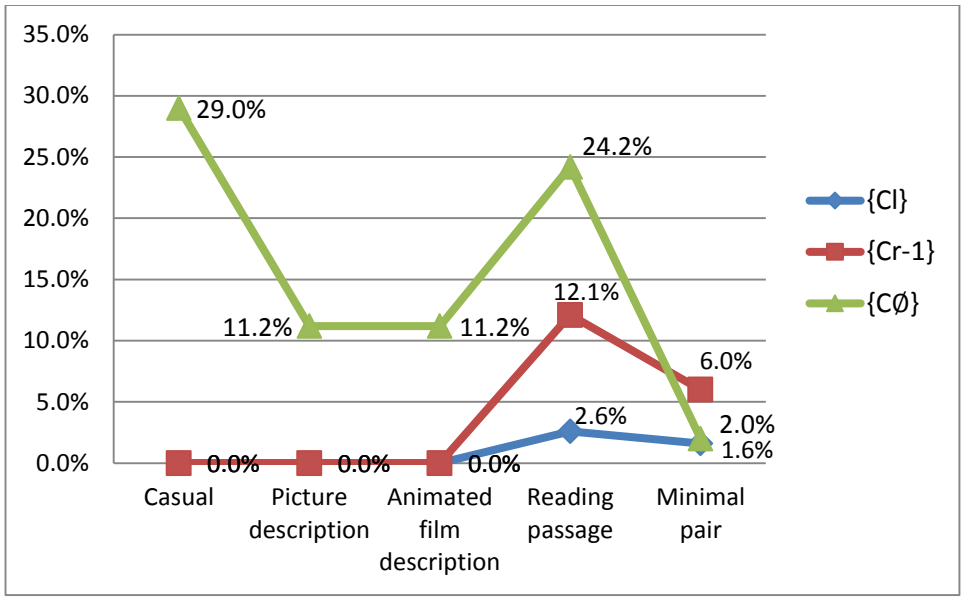



Figure 5.1 Frequency of variants of (Cr) across different speech styles, including both informal and formal data.

Let us examine each of these 3 cases in NTIE linguistic variation.

(i) {Cr-1} vs. {Cl} + {CØ}, only in formal style

Here style will not be included as a predictor in the analysis. This analysis pits phonetically rhotic forms (trill and tap) against non-rhotic ones (laterals {Cl} and reduction form {CØ}). Recall that {Cr-1} is regarded as the prestige form in Bangkok Thai dialect, so it is also a sociolinguistically coherent analysis.

(ii) {Cl} vs. {Cr-1} + {CØ}, only in formal style (Reading and Minimal Pair separated)

Here only a small subset of the data is analysed, all formal styles, but within that data-set style is a useful predictor. However, {CØ} is almost categorically present, and laterals vs. (rhotics + reduction) is not an ideal phonological arrangement of variants with the small number. So this analysis is of limited usefulness. The possibility that the

tap, trill and lateral variants are the products of various rule orders and derivations is considered below; the point here is that speakers producing the lateral might be striving to produce a rhotic. On the other hand, {Cr-Ø}, {Cr-1} and {Cl} might belong to different systems that can't be ranked in terms of production difficulty. Please refer forwards to the {Cl} results in § 5.5.

(iii) {CØ} vs. {Cr-1} + {Cl}, only in formal style

Again, style will not be included as a predictor in the analysis. Note that not all 3 forms necessarily give rise to zeroes by reduction, because the surface laterals are derived from underlying rhotics {Cr-1}. There are no underlying laterals. Thus, the "zero-L" cases are ultimately derived from "zero-trill" /Cr/ or "zero-tap" /Cɾ/.
I will illustrate each application value in this respect: {Cr-1}, {Cl} and {CØ}, respectively.

### 5.4 (i) regression model result of {Cr-1}

Condition

| {Cr-1} as application value vs. {Cl} + {CØ}, only in formal style; style will not be counted as a predictor in the analysis (including phonological factor groups) |
|---|

In this condition, I conflate the variants with {Cr} and {Cɾ} into the same group as {Cr-1}, as addressed in Labov (1973) for showing the range of rhotic variants. It is found that these two variants both carry social value as the prestige forms. I found no difference regarding which one is felt to be the better[7] based on my interviews. This

[7] A major difference of trill and tap can be distinguished by the lengthening of time and the number of times that the tongue tip contacts the alveolar ridge. The trill [r] often has a longer duration of time and higher frequency of contact of the tongue against the alveolar ridge than tap [ɾ]. The number of contacts can be observed by the quantity of straight lines in the spectrogram (figure 6.1, chapter 6). In the more detailed experiments regarding vowel length, trills and taps should be prominently different in terms of

model combines variant {Cl}, the cluster with lateral, and cluster reduction {CØ} together. Thus {Cr-1} is chosen as the application value in Rbrul (Johnson 2009), the multiple (logistic) regression software that works within the statistical environment R (see Chapter 3). It should be noted that in this case, I employ only the formal data covering reading passage and minimal pairs, testing across a range of independent variables in order to find which predictors or independent variables can account for the variability of the target application value.

After running other competing model {Cr-1} vs. {CØ}, by excluding {Cl} tokens as well as adding and discarding many demographic and linguistic independent variables through Rbrul (Johnson, 2009) software, this model (i) proved to be the best model. It revealed 14 percent for $r^2$ (the percent of variance explained by the model), which is still quite low. (Low values for $r^2$ in this chapter and the next are generally due to the fact that the model is simultaneously trying to account for formal and casual types of speech, which are more different from each other in Thai than in many other varieties, as found e.g. by Chand (2009) and Horesh (2014)). Finally, this model of {Cr-1} contained 10 predictors (which are sometimes called "factor groups" or "independent variables", but I will use "predictors" henceforth). The summary below identifies predictors that have been taken into account in model runs. It is followed by results for the first model.

vowel duration which is co-occurring with the coda position inherited with the sonorant sound such as /m/, /n/ and /ŋ/.

Table 5.3 A modelling summary and its input predictors for {Cr-1}

| Best model | Initial Inputs | final inputs (data) -best model | Selected as a predictor in the model | Significant outputs |
|---|---|---|---|---|
| DepV | Cr-1 | Application Value | n/a | n/a |
| | Cl | Ground | n/a | n/a |
| | CØ | Ground | n/a | n/a |
| Indep V | life stage | ✓ | ✓ | ✓ |
| | social occupational class | ✓ | ✓ | ✓ |
| | type of experiment | ✓formal | X | X |
| | sex | ✓ | ✓ | ✓ |
| | education | ✓ | ✓ | ✓ |
| | place of origin | ✓ | ✓ | ✓ |
| | social network strength (continuous) | ✓ | ✓ | X |
| | real age (continuous) | ✓ | ✓ | X |
| | type of coda | ✓ | ✓ | X |
| | vowel length | ✓ | ✓ | ✓ |

It should be noted that “Applicaiton Value” notation refers to the application value or the focused dependent variable.

The symbol "✓" in the dark boxes denotes information used in the regression model: the final output as the predictive factors[8].

Blank boxes with “X” in the “Selected” column refer to information that has not been input in the regression model (e.g. style, here called “type of experiment”).

[8] *Predictive variable, predictor, predictive factor, independent factor, factor group* refer to the same thing. They are the independent variables that the analyst inputs in the regression model.

The word inside the box 'formal' refers to the type of data which has been input in the regression model. In general, there are two types of data: formal style data and informal style data. However, in our results the best models will use either formal or informal data only.

In Table 5.3, the modeling summary for {Cr-1} is signaled: the rhotic form is the application value, i.e. results are expressed in terms of the ratio of {Cr-1} to the other forms {Cl} and {CØ}, here called the "Ground" values. The independent variables are all potential predictors in the model; however not all of them turn out to be statistically significant, hence some are marked "X" in the final column ("Significant outputs"). Throughout this analysis style is the strongest predictor, but so strong in many cases that it is necessary to separately analyse formal from informal data (§4.5.3.2). Above, only the dark boxes contain the statistically significant predictors selected in the final output.

In the results tables (e.g. table 5.4), log-odds are given for each predictor to indicate direction of effect, followed by the number of tokens and the proportion of the application value. The final column indicates factor weights, between 0 and 1, centred around 0.5. Rbrul also produces a statistic known as the variance inflation factor or "vif". As most values given for this were in the acceptable range between 0.1 and 10, I only note the vif for exceptional values.

Table 5.4 Factor weight/ Log-odds score of {Cr-1}

| **Predictor** | Factor | Log-odds | Tokens *(n= 3365)* | AppV/all tokens | centered factor weight[9] |
|---|---|---|---|---|---|
| **Class** | | | | | |
| | MMC | 0.363 | 1122 | 0.448 | 0.59 |
| | LMC | 0.157 | 1223 | 0.429 | 0.539 |
| | WC | -0.52 | 1020 | 0.225 | 0.373 |
| **Vowel length** | | | | | |
| | Long | 0.248 | 1782 | 0.423 | 0.562 |
| | Short | -0.248 | 1583 | 0.318 | 0.438 |
| **Life stage** | | | | | |
| | young | 0.496 | 1479 | 0.433 | 0.622 |
| | middle | 0.165 | 1325 | 0.395 | 0.541 |
| | old | -0.662 | 561 | 0.166 | 0.34 |
| **Education** | | | | | |
| | Bachelor | 0.347 | 866 | 0.516 | 0.586 |
| | Secondary/ vocational | -0.027 | 1887 | 0.379 | 0.493 |
| | Primary | -0.319 | 612 | 0.155 | 0.421 |
| **Place of origin** | | | | | |
| | Lamphun | 0.164 | 2906 | 0.387 | 0.541 |
| | Bangkok & BKK vicinity | -0.164 | 459 | 0.288 | 0.459 |

[9] "Factor weights" indicate the probability of the dependent variable occurring in that context. The closer these numbers are to 1, the more highly favouring the effect is. The range provides a non-inferential measure of the relative strength of the factor. Good practice also requires the analyst to report which factor groups selected are statistically significant (Tagliamonte, 2012:126). The "range" is a non-statistical measure of relative strength of the factor. It is just a number, not a factor weight (i.e. no decimals).

| **Sex** | | | | | |
|---|---|---|---|---|---|
| | Male[10] | 0.089 | 1682 | 0.398 | 0.522 |
| | Female | -0.089 | 1683 | 0.35 | 0.478 |

Model result of {Cr-1}

| n | df | intercept | overall proportion | |
|---|---|---|---|---|
| 3365 | 10 | -0.943 | 0.374 | |
| deviance | AIC | AICc | Dxy | $r^2$ |
| 4083.421 | 4103.421 | 4103.486 | 0.372 | 0.143 |

BEST STEP-DOWN MODEL:

class (5.68e-14) + vowel.length (4.71e-11) + life.stage (1.06e-09) + education (0.00292) + place.of.origin (0.00737) + sex (0.0247)

Ranking summary: {Cr-1} model in the informal style

| ranking | independent factors | attributes of independent factors | | | |
|---|---|---|---|---|---|
| | | (+) favour | | (-) disfavour | |
| 1 | class | +1st MMC | +2nd LMC | -WC | |
| 2 | vowel length | +long | | -short | |
| 3 | life stage | +1st young | +2nd middle | -old | |
| 4 | education | +Bachelor | | -1st Primary[11] | -2nd Secondary/ Vocational |
| 5 | place of origin | +Lamphun | | -Bangkok | |
| 6 | sex | +male | | -female | |

[10] Note that speaker sex does not play a role in predicting the variability.
[11] -1st is more disfavouring than -2nd.

The ranking summary illustrates the hierarchical order of the predictors from the strongest (1) to the weakest (6), according to the *p*-value. This order is derived from the "step-down" model, in which all predictors are initially included, and those which prove statistically insignificant are dropped. The best analysis is one in which step-down and step-up analyses match. The minus notation (-) preceding some components of each predictor means that certain factors disfavour those components whilst the (+) notations show the preference. Thus, each polar notations has to appear in at least one of the components. In the step-down model, the *p*-value for each predictor is shown after its label.

In this model, the 10 predictors have been included as shown in table 5.3, previously. After running the logistic regression, only 6 predictors turned out to be statistically significant in explaining the variability.

Below I report and comment on the predictors which influence use of this variant (again, only for formal data):

1) vowel length,
2) class,
3) life stage,
4) education,
5) place of origin, and
6) sex.

For ease of explanation I start with the linguistic factor of vowel length, and follow on with the social factors, even though the linguistic factor is not the strongest predictor in this {Cr-1} model, but the second strongest.

### 5.4.1 Vowel length

The only phonological predictor which contributes to explaining the use of {Cr-1} is vowel length. There are two components for this factor group, namely short vowels and long vowels.[12]

This predictor is ranked as the second in a hierarchy out of six. It shows strong explanatory power to estimate the variability of {Cr-1} in the regression model. It was found that the speakers favour the long vowel of the rhotic variants more than short vowels. The long vowel exhibits a positive score in log-odds (at 0.562) and a greater score in factor weight/probability (at 0.248). Meanwhile, the short vowel's log-odds and factor weight are lower, namely -0.248 and 0.478, respectively. The range between these two types of vowel length is not great, 0.13. However, it still shows the difference between these two types of vowel length.

This means that {Cr-1} co-occurs more often with long vowels than short. However, we cannot extend our conclusions for informal speech data, as there was almost no variability for {Cr-1}: the reduction of cluster onset to {CØ} was approximately 99%.

In an acoustic experiment, Rungpat (2002: 2) claims that the following phonological factors (the asterisked ones) promote vowel lengthening – namely,

stress (heavy*-light)

tone (contour* tone or level tone),

coda position (sonorant* - obstruent)[13]

The strongest favouring factors were /m/ and /n/. The final factor was vowel quality or position (low* vs. high, and back* vs. front) so that back-open vowels

[12] It should be recalled that diphthongs in NT Thai and BKK Thai do not necessarily surface as long vowels. The characteristics of short and long vowels were considered from their standard form in the language articulated by respondents. Potentially, some short vowels might be lengthened when they are positioned as final particles, or prolonged when placed utterance-finally. Hence vowel length was not coded for its surface manifestation, but for its underlying category.

[13] The sonorants tested were /m, n, ng, w and j/ and the obstruents were /p, t, k/.

encourage speakers to lengthen the short vowel.[14] Rungpat concluded that due to the negotiating of balance in articulation, sonorant codas (which tend to be characterized as longer sounds) will compensate/complement with short vowels and lengthen the targeted vowels. Therefore, short vowels tend to be lengthened by the following sonorant codas.[15] Also, there are underlying long vowels in Bangkok Thai as well (see appendix C).

### 5.4.2 Social occupational class

Social occupational class of respondents is the strongest predictor in this model (see its p-value above). The middle-middle class (MMC) and lower middle class (LMC) favour the variants {Cr-1}. This means respondents who work in the more prestigious careers (Chandrawanich, 1995).

The study found that both the MMC and LMC speakers favour {Cr-1} according to the positive score in log-odds (0.363 and 0.157, respectively). As predicted, the WC disfavours it with log-odds at -0.52. The two higher social classes present close factor weight scores accounting for 0.59 and 0.539, respectively. In the meantime, WC speakers show a low factor weight (probability) score at 0.373.

The range of factor weight between the higher social classes (MMC and LMC) and WC is great, which accounts for 0.16. Therefore, it is certain that the WC groups are relatively different from the two higher class groups. Table 5.5 demonstrates the contrasts in detail.

[14] The voicing was also an interesting predictor in terms of internal linguistic factor interaction.

[15] We might consider this combination of internal/linguistic factors as a co-articulation factor group. This means that once one quantity emerges phonologically, the other might arise synchronically (P. Patrick, p.c., 2012).

Table 5.5 Cross-tabulation: style and social class

| Style/social class | {Cr-1} | {Cl} | {CØ} | Grand total |
|---|---|---|---|---|
| Reading passage | | | | |
| WC | | | | |
| n | 141 | 62 | 616 | 819 |
| % | 17.2% | 7.6% | 75.2% | 100.0% |
| LMC | | | | |
| n | 354 | 66 | 563 | 983 |
| % | 36.0% | 6.7% | 57.3% | 100.0% |
| MMC | | | | |
| n | 346 | 53 | 503 | 902 |
| % | 38.4% | 5.9% | 55.8% | 100.0% |
| Total n | 841 | 181 | 1682 | 2704 |
| Total % | 31.1% | 6.7% | 62.2% | 100.0% |
| Minimal pair | | | | |
| WC | | | | |
| n | 89 | 48 | 64 | 201 |
| % | 44.3% | 23.9% | 31.8% | 100.0% |
| LMC | | | | |
| n | 171 | 46 | 23 | 240 |
| % | 71.3% | 19.2% | 9.6% | 100.0% |
| MMC | | | | |
| n | 157 | 14 | 49 | 220 |
| % | 71.4% | 6.4% | 22.3% | 100.0% |
| Total n | 417 | 108 | 136 | 661 |
| Total % | 63.1% | 16.3% | 20.6% | 100.0% |
| Grand total n | 1258 | 289 | 1818 | 3365 |
| Grand total % | 37.4% | 8.6% | 54.0% | 100.0% |

LMC and MMC speakers used {Cr-1}, the prestige variant, often in the reading passage style, 36.0% (LMC) and 38.4% (MMC), dramatically rising to 71.3% (LMC), and 71.4% (MMC) in minimal pairs. Recall that in casual styles the use of {Cr-1} was almost categorically absent across. Therefore, it appears that the speakers have a high awareness with regard to the prestige form, when the context of speaking/tests is more formal.

Social class interacts with the educational level factor to some extent. People of higher class occupations generally have more education as well, as shown in table 5.7 (below in section 5.4.4 on education). By virtue of this, they may consistently perform better in the target/prestige language. Recall that in the region of the spoken NT Thai dialect, people have to learn BKK Thai to access knowledge in school and other sources, as it is the medium of instruction rather than their native dialect (Thatan, 2005).

### 5.4.3 Age – life stage (change in progress in the more careful speech, not age-grading effect)

The life stage or age predictor is third in the ranking. It is apparent that young and middle aged speakers favour the prestige form {Cr-1} as supported by their positive log-odds scores, 0.496 and 0.165, respectively. The elderly disfavour {Cr-1} by showing a negative score (-0.662) which is quite large. The factor weight score comparisons of both younger groups, namely the adolescents (0.622) and the adults (0.541), are very different from those of the elderly (0.34), as shown in the wide range of factor weight (probability) scores at 0.2.

Table 5.6 Cross-tabulation: life stage and style

| Life stage/ speech styles | {Cr-1} | {Cl} | {CØ} | Grand total |
|---|---|---|---|---|
| Young | | | | |
| Reading passage test | | | | |
| N | 445 | 41 | 703 | 1189 |
| % | 37.4% | 3.5% | 59.1% | 100.0% |
| Minimal pair test | | | | |
| N | 196 | 55 | 39 | 290 |
| % | 67.6% | 19.0% | 13.5% | 100.0% |
| Total n | 641 | 96 | 742 | 1479 |
| Total % | 43.3% | 6.5% | 50.2% | 100.0% |
| Middle age | | | | |
| Reading passage test | | | | |
| N | 337 | 112 | 615 | 1064 |
| % | 31.7% | 10.5% | 57.8% | 100.0% |
| Minimal pair test | | | | |
| N | 187 | 34 | 40 | 261 |
| % | 71.7% | 13.0% | 15.3% | 100.0% |
| Total n | 524 | 146 | 655 | 1325 |
| Total % | 39.6% | 11.0% | 49.4% | 100.0% |
| Old | | | | |
| Reading passage test | | | | |
| N | 59 | 28 | 364 | 451 |
| % | 13.1% | 6.2% | 80.7% | 100.0% |
| Minimal pair test | | | | |
| N | 34 | 19 | 57 | 110 |
| % | 30.9% | 17.3% | 51.8% | 100.0% |
| Total n | 93 | 47 | 421 | 561 |
| Total % | 16.6% | 8.4% | 75.0% | 100.0% |
| Grand total n | 1258 | 289 | 1818 | 3365 |
| Grand total % | 37.4% | 8.6% | 54.0% | 100.0% |

The higher the degree of awareness, the more speakers employ the prestige form {Cr-1}. In all age groups, the use rate of {Cr-1} is almost doubled when the speakers

move from reading passage to the minimal pair style. However, it is interesting that the middle aged use {Cr-1} the most at 71.7%. By contrast, the older group use {CØ} quite frequently at 51.8%. It suggests a change in apparent time likelihood for {Cr-1} in both of the formal contexts of read speech, rather than an age-grading effect. The adult and teenage groups use more of {Cr-1} than the previous generation.

However, one should bear in mind that the above result refers to formal style only. Since informal style reflects the most natural language use of the speakers in the NTIE community, future generations may no longer use {Cr-1} because in casual style, all ages employ {CØ} predominantly more than 99%, nearly categorically, see figure 5.2.

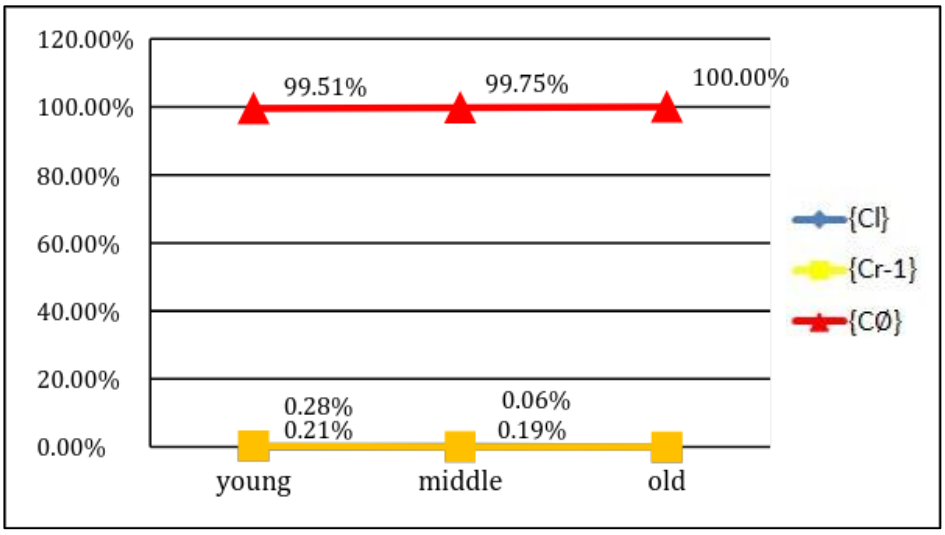



Figure 5.2 Distribution of (Cr) and age in informal style

Generally speaking, the young and middle aged groups were characterised by higher occupational class. It was a fundamental requirement for the young and middle aged to engage successfully in school life, a change from their parents' generation and its effect on their working life. In the school context, BKK Thai was the medium of instruction even though most of the teachers and students were native speakers of NT Thai. (Recall that the young pupils were categorised by their parents' occupational

classes.) Apart from these direct effects, BKK Thai also plays a prominent role for younger teens and young adults because of mass and social media, and all kinds of data/text that they digest every day.

### 5.4.4 Education

The educational level factor is significant in the regression model, ranking fourth in the hierarchy. Speakers with higher education (E3) show the highest occurrence of {Cr-1}. Only (E3) speakers show a positive score in log-odds at 0.347 and a higher factor weight at 0.586. The range of factor weights between (E3) and (E2) accounts for 0.09 which is quite small but still distinct.

Table 5.7 Cross-tabulation: class and education in the formal style

| Social class/ educational level | {Cr-1} | {Cl} | {CØ} | Grand total |
|---|---|---|---|---|
| WC | | | | |
| Primary (E1) | | | | |
| n | 60 | 44 | 253 | 357 |
| % | 16.8% | 12.3% | 70.9% | 100.0% |
| Secondary/ vocational (E2) | | | | |
| n | 170 | 66 | 427 | 663 |
| % | 25.6% | 10.0% | 64.4% | 100.0% |
| Total n | 230 | 110 | 680 | 1020 |
| Total % | 22.6% | 10.8% | 66.7% | 100.0% |
| LMC | | | | |
| Primary (E1) | | | | |
| n | 6 | 4 | 41 | 51 |
| % | 11.8% | 7.8% | 80.4% | 100.0% |
| Secondary/ vocational (E2) | | | | |
| n | 278 | 62 | 374 | 714 |
| % | 38.9% | 8.7% | 52.4% | 100.0% |

| | | | | |
|---|---|---|---|---|
| Bachelor (E3) | | | | |
| n | 241 | 46 | 171 | 458 |
| % | 52.6% | 10.0% | 37.3% | 100.0% |
| Total n | 525 | 112 | 586 | 1223 |
| Total % | 42.9% | 9.2% | 47.9% | 100.0% |
| MMC | | | | |
| Primary (E1) | | | | |
| n | 29 | 4 | 171 | 204 |
| % | 14.2% | 2.0% | 83.8% | 100.0% |
| Secondary/ vocational (E2) | | | | |
| n | 268 | 26 | 216 | 510 |
| % | 52.6% | 5.1% | 42.4% | 100.0% |
| Bachelor (E3) | | | | |
| n | 206 | 37 | 165 | 408 |
| % | 50.5% | 9.1% | 40.4% | 100.0% |
| Total n | 503 | 67 | 552 | 1122 |
| Total % | 44.8% | 6.0% | 49.2% | 100.0% |
| Grand total n | 1258 | 289 | 1818 | 3365 |
| Grand total % | 37.4% | 8.6% | 54.0% | 100.0% |

At the (E3) level both the LMC and MMC use {Cr-1} at similar rates, 50% approximately. For LMC speakers in E2 level, the frequency of {r-1} is lower, 38.9%. Thus, the higher the level of education, as well as the higher the social class status, the more the speakers use the prestige form, {Cr-1}.

### 5.4.5 Place of origin

The place of origin/ethnicity predictor is ranked only fifth in the model. The study unexpectedly found that Lamphun (MBK) speakers present a higher factor weight (0.541), favouring {Cr-1} more than Bangkok immigrants (0.459). The factor weight

range between these two ethnicities is quite low (0.09) but the groups contrast significantly.

Table 5.8 Cross-tabulation: place of origin and class in formal style

| Social class/place of origin | {Cr-1} | {Cl} | {CØ} | Grand total |
|---|---|---|---|---|
| WC | | | | |
| Lamphun | | | | |
| n | 215 | 86 | 566 | 867 |
| % | 24.8% | 9.9% | 65.3% | 100.0% |
| Bangkok and its vicinities | | | | |
| n | 15 | 24 | 114 | 153 |
| % | 9.8% | 15.7% | 74.5% | 100.0% |
| Total n | 230 | 110 | 680 | 1020 |
| Total % | 22.6% | 10.8% | 66.7% | 100.0% |
| LMC | | | | |
| Lamphun | | | | |
| n | 458 | 79 | 482 | 1019 |
| % | 45.0% | 7.8% | 47.3% | 100.0% |
| Bangkok and its vicinities | | | | |
| n | 67 | 33 | 104 | 204 |
| % | 32.8% | 16.2% | 51.0% | 100.0% |
| Total n | 525 | 112 | 586 | 1223 |
| Total % | 42.9% | 9.2% | 47.9% | 100.0% |
| MMC | | | | |
| Lamphun | | | | |
| n | 453 | 65 | 502 | 1020 |
| % | 44.4% | 6.4% | 49.2% | 100.0% |
| Bangkok and its vicinities | | | | |
| n | 50 | 2 | 50 | 102 |
| % | 49.0% | 2.0% | 49.0% | 100.0% |
| Total n | 503 | 67 | 552 | 1122 |
| Total % | 44.8% | 6.0% | 49.2% | 100.0% |
| Grand total n | 1258 | 289 | 1818 | 3365 |
| Grand total % | 37.4% | 8.6% | 54.0% | 100.0% |

In general, both participants from MBK and BKK show similar trends in use of {Cr-1}. The LMC speakers and the MMC speakers of MBK use {Cr-1} a great deal accounting for 45%, approximately equal to their use of {CØ}. The WC speakers employ {Cr-1} less by half at 24.8%. Thus, the higher the class, the more the speakers use the prestige form {Cr-1}.

These findings are in accordance with BKK immigrants as well. The main contrast is that the WC speakers from BKK use less {Cr-1} (9.80%).

Even in the formal style when MBK locals pay more attention to their speech, {CØ} occurrences are very high, particularly among WC speakers. The BKK immigrants reveal similar trends.

Except among the MMC, the BKK participants use cluster reduction {CØ} more than MBK participants and they use the prestige form {Cr-1} less. This is counter-intuitive since the BKK participants have BKK Thai dialect as their mother tongue. The proportion of BKK respondents mostly comes from the working class with lower levels of education. This may reflect social stratification among speakers of BKK dialect (please see 2.6.2).

It was found that respondents who originally come from Lamphun province tend to use the prestige form {Cr-1} more. This finding was quite striking, since prior to doing the fieldwork, I hypothesised that BKK Thai participants should produce the prestige form more often than MBK participants in the NTIE community. I considered whether this might be an effect of the central region speakers' small number (9 persons) compared to the focus group (57 persons), since this weighting was extremely unbalanced in terms of respondents. However, it was not as strong a confounding factor as the combination of occupation and educational levels. The MBK people were, perhaps unexpectedly, higher in these qualities. The production of {Cr-1} by MBK locals was definitely high compared to BKK participants.

### 5.4.6 Sex

The sex predictor is ranked last (sixth). Thus even though it is important in terms of contributing to linguistic variability in (Cr), its explanatory power is not strong.

This study found that male speakers favour {Cr-1} more than females. The log-odds and factor weight scores for males are 0.089 and 0.522, while females are -0.089 and 0.478, respectively. The range is relatively low (0.05). Therefore, the difference between these two sexes is not strong.

However, it is unusual for males to favour prestige forms more than females in the highest styles. This finding goes against the gender paradox hypothesis (Labov, 2001). If rhoticity is incoming as a change from above, with MBK participants under the influence of Bangkok Thai, one might expect female participants – especially of the interior classes, such as the LMC – to use more {Cr-1} than comparable males. However, it turns out that females in general use less {Cr-1} than males – even though it is formal speech.

It should be noted that females prefer the prestige form {r-1} of the variable (r). Therefore, sex patterns for (Cr) do not correspond to those of (r) in formal style. This is discussed in 6.1. Compared to the sex pattern of {Cr-1}, it will be seen that the predictive value of sex for (r-1) is much higher.

Table 5.9 Cross-tabulation: sex and class in formal style

| Social class/ sex | {Cr-1} | {Cl} | {CØ} | Grand total |
|---|---|---|---|---|
| WC | | | | |
| Female | | | | |
| n | 138 | 59 | 364 | 561 |
| % | 24.6% | 10.5% | 64.9% | 100.0% |
| Male | | | | |
| n | 92 | 51 | 316 | 459 |
| % | 20.0% | 11.1% | 68.9% | 100.0% |
| Total n | 230 | 110 | 680 | 1020 |
| Total % | 22.6% | 10.8% | 66.7% | 100.0% |
| LMC | | | | |
| Female | | | | |
| n | 247 | 69 | 245 | 561 |
| % | 44.0% | 12.3% | 43.7% | 100.0% |
| Male | | | | |
| n | 278 | 43 | 341 | 662 |
| % | 42.0% | 6.5% | 51.5% | 100.0% |
| Total n | 525 | 112 | 586 | 1223 |
| Total % | 42.9% | 9.2% | 47.9% | 100.0% |
| MMC | | | | |
| Female | | | | |
| n | 204 | 24 | 333 | 561 |
| % | 36.4% | 4.3% | 59.4% | 100.0% |
| Male | | | | |
| n | 299 | 43 | 219 | 561 |
| % | 53.3% | 7.7% | 39.0% | 100.0% |
| Total n | 503 | 67 | 552 | 1122 |
| Total % | 44.8% | 6.0% | 49.2% | 100.0% |
| Grand total n | 1258 | 289 | 1818 | 3365 |
| Grand total % | 37.4% | 8.6% | 54.0% | 100.0% |

The cross-tabulation table 5.9 shows a classic pattern of interaction between sex and class. In the WC and LMC, where use of {Cr-1} is generally less, females use it slightly more than males. However in the highest class, where this prestige form is used the

most, males produce it significantly more than females. LMC females favour {Cr-1} at about the same proportion as the LMC males. However, the MMC males use a higher proportion of {Cr-1} than their female counterparts.

To sum-up, there is considerable social stratification of the {Cr-1} form. MBK respondents in higher social occupational classes, with more education, and younger in age, are most likely to favour this variant {Cr-1}, with the $r^2$ value of around 14% referring to the regression analysis. Similar stratification is found among BKK respondents. Sex appears to interact with social class. The only phonological factor relevant in explaining this variant's distribution is that vowel length is likely to co-occur with {Cr-1}.

### 5.5 (ii) regression model result of {Cl}

Condition

| |
|---|
| {Cl} as application value vs. {Cr-1} + {CØ}, only in formal style (Reading & Minimal-Pair data separated), with style as predictor. (Includes phonological factor groups) |

The cluster onset with the lateral, {Cl}, appears in the more formal speech only. Only for this model was style employed successfully as a predictor (i.e. in Conditions 1 above and 3 below, when style was included, it did not improve modelling of variation). As ground, I conflated all other types of variants {Cr} + {C*r*} + {CØ} and pitted them against {Cl}, targeting it as the application value.

Table 5.10 A modelling summary and its input predictors for {Cl}

| Cl | Initial Inputs | final inputs (data) -best model | Selected as a predictor in the model | Best outputs |
|---|---|---|---|---|
| Dep | Cr-1 | Ground | n/a | n/a |
| | Cl | Application value | n/a | n/a |
| | CØ | Ground | n/a | n/a |
| Indep | life stage | ✓ | ✓ | ✓ |
| | social occupational class | ✓ | ✓ | ✓ |
| | type of experiment | ✓formal | ✓ | ✓ |
| | sex | X | X | X |
| | education | X | X | X |
| | place of origin | ✓ | ✓ | ✓ |
| | social network strength (cont.) | X | X | X |
| | real age (cont.) | X | X | X |
| | closeness | X | X | X |
| | vowel length | X | X | X |

Table 5.11 Factor weight/ Log-odds score of {Cl}

| **Predictor** | factor | Log-odds | Tokens *(n= 3365)* | AppV/all tokens | centered factor weight |
|---|---|---|---|---|---|
| **type of experiment** | | | | | |
| | Minimal pair | 0.509 | 661 | 0.163 | 0.625 |
| | Reading passage | -0.509 | 2704 | 0.067 | 0.375 |
| **Life stage** | | | | | |
| | middle | 0.295 | 1325 | 0.11 | 0.573 |
| | old | -0.027 | 561 | 0.084 | 0.493 |
| | young | -0.268 | 1479 | 0.065 | 0.433 |
| **Place of origin** | | | | | |
| | BKK | 0.259 | 459 | 0.129 | 0.564 |
| | Lamphun | -0.259 | 2906 | 0.079 | 0.436 |
| **class** | | | | | |
| | WC | 0.256 | 1020 | 0.108 | 0.564 |
| | LMC | 0.056 | 1223 | 0.092 | 0.514 |
| | MMC | -0.312 | 1122 | 0.06 | 0.423 |

Model result of {Cl}

| n | df | intercept | overall proportion | |
|---|---|---|---|---|
| 3365 | 7 | -1.997 | 0.086 | |
| deviance | AIC | AICc | Dxy | $r^2$ |
| 1873.705 | 1887.705 | 1887.739 | 0.343 | 0.089 |

BEST STEP-DOWN MODEL:

type.of.experiment (1.22e-13) + life.stage (0.000238) + place.of.origin (0.00196) + class (0.0021)

Ranking summary: {Cl} model in formal style

| ranking | independent factors | attributes of independent factors | | | |
|---|---|---|---|---|---|
| | | (+) favour | | (-) disfavour | |
| 1 | type of experiment | +Minimal Pair | | -Reading | |
| 2 | life stage | +mid | | -1st old | -2nd young |
| 3 | place of origin | +Bangkok | | -Lamphun | |
| 4 | class | +1st WC | +2nd LMC | -MMC | |

Generally speaking, it was found that {Cl} is relatively infrequent. It showed the same trend as in {Cr-1}. Even in the most formal context, the number of {Cl} tokens found was still minimal. Recall that neither the rhotic nor the lateral forms are native to NTIE – both are incoming from Bangkok and other dialects.

After having input 10 factor groups or independent variables, there are four factor group candidates that turned out to be significant in the model, namely

1) type of experiments,

2) life stage/age

3) place of origin (ethnicity), and

4) social class

### 5.5.1 Style (or the type of experiment)

This predictor is ranked as first. Style showed such powerful effects that we were forced to leave informal data out of the quantitative model. Here we have been able to include the predictor in order to contrast the two formal styles.

The study found that the minimal pair style presents a positive score in log-odds at +0.509 and greater score than the reading passage style in factor weight/probability at 0.625. This means that the minimal pair style, which is regarded as demanding more attention to speech, favours {Cl}. The factor weight range between these two styles is wide enough (0.25) to show a clear contrast.

As above in cross-tabulations (tables 5.5 and 5.6), in this condition (ii) we are able to see that as attention to speech increases, speakers used more of the target form (i.e. more lateral forms where rhotics are expected). Though we expected speakers' increased awareness should have resulted in lower use of {Cl}, in fact they developed more use of {Cl}, showing a positive trend just as they did with {Cr-1}. This means that the more they used {Cr-1} in the higher-style tasks, the more they also used {Cl}, whether by inadvertent error or with intention. It is unclear whether they were aware how often they pronounced the laterals instead of the prestige rhotic forms. According to my observation and direct questioning of respondents, speakers stated that sometimes they were aware that they did not produce the target rhotic forms but they strove to make them right, prescriptively. However, it turned out that they still produced lots of lateral forms. Thus, the {Cl} variant can be either interpreted as a defective form (from the point of view of the prescriptive norm), i.e. as an error during speech production.

### 5.5.2 Life stage

The secondary predictive factor lies in life stage. It was found that within the three stages of life, the middle aged group respondents (25 to 55 years old) favoured {Cl} most (positive log-odds at 0.295) while the rest show negative scores. The range of factor weights between the middle aged and the elderly is 0.08 which is quite low. Thus, the difference amongst the age groups is not strong. However, the study shows that middle aged speakers use {Cl} the most.

The lateral cluster onset variant is quite possibly a borrowing from BKK Thai, so perhaps a change from above. As speakers at this age were directly involved in a work environment, the pressure of engaging in the work force may have affected their life and, especially, their linguistic repertoire. If we reconsider the factor of class, this may link to the linguistic insecurity of people in the linguistic marketplace – especially interior class groups (such as the LMC in New York City, Labov 1966), who may need to accommodate their speech and adjust their linguistic repertoires a great deal in order to achieve social mobility in the workplace. Thus, these two factors, linguistic insecurity and life stage, which are often associated with age-grading effect, might be connected to each other.

### 5.5.3 Place of origin- ethnicity

The third predictive factor is place of origin (ethnicity). The study shows that BKK participants use {Cl} 12.9% of the time, more (with a positive log-odds at 0.259, and factor weight of 0.564) than MBK participants. The range of factor weight between the BKK participants and the MBK participants is 0.13 which is not wide. We should bear in mind that Lamphun speakers, also employ {Cl} 7.9% of the time. This weakly supports the interpretation of {Cl} as a borrowing from BKK Thai.

Table 5.12 Cross-tabulation: ethnicity

| Place of origin (or ethnicity) | {Cl} | {Cr-1} | {CØ} | Total |
|---|---|---|---|---|
| Lamphun (MBK) | | | | |
| n | 230 | 1126 | 1550 | 2906 |
| % | 7.9% | 38.8% | 53.3% | 100.0% |
| Bangkok BKK | | | | |
| n | 59 | 132 | 268 | 459 |
| % | 12.9% | 28.8% | 58.4% | 100.0% |
| Total n | 289 | 1258 | 1818 | 3365 |
| Total % | 8.6% | 37.4% | 54.0% | 100.0% |

MBK participants use {Cl} less than BKK participants. The trend of {Cl} complements that of {Cr-1} in formal style as well.

### 5.5.4 Social occupational class

Social occupational class is the least strong significant predictor for the {Cl} model, and is ranked fourth. The regression analysis indicates that both WC and LMC speakers favour {Cl}, showing positive log-odds 0.256 and 0.056, respectively. When the factor weight was considered, the range between the LMC speakers (0.514) and MMC (0.423) speakers is not great, at .09. Thus, in general, these three groups do not differ much in {Cl} frequency.

It is worth noting that the favoring of {Cl} by primary-school educated middle class speakers is associated with social mobility. This might be the social dimension which combines the relationship between education and occupation.[16]

[16] L. Hall-Lew, p. c. October 2017.

Referring to the cross-tab in table 5.13, the working and lower middle class groups play an important role in defining the use of {Cl}. In both groups, the {Cl} use rate accounts for 10%. The highest-status MMC group show significantly less usage of {Cl}. Recall that the speakers from Bangkok and nearby provinces mainly belong to the working or lower middle classes. So there are both regional-dialect and social reasons for BKK participants to favour this form, which is not prestigious in BKK repondents. Similarly, MBK locals of the middle and lower middle classes have dual motivations for using {Cl}: one is to borrow prestige from local BKK Thai participants, and the other is to actively avoid the least prestigious zero-form – recalling that MBK locals apparently have trouble producing the most prestigious rhotic form. Therefore, this form, {Cl}, might have two social meanings: this lateral form can be called either (1) a defective/error form or (2) a hyper-correct form since otherwise it is the same as a defective/error form. However, the hypercorrection form only has prestige for MBK locals because it is used by BKK participants – for whom it does not have prestige to some extent (see table 5.12).

Table 5.13 Cross-tabulation: education and class (calculated by row)

| Social class/ educational level | {Cl} | {Cr-1} | {CØ} | Grand total |
|---|---|---|---|---|
| Working class (WC) | | | | |
| Primary (E1) | | | | |
| n | 44 | 60 | 253 | 357 |
| % | 12.3% | 16.8% | 70.9% | 100.0% |
| Secondary/ vocational (E2) | | | | |
| n | 66 | 170 | 427 | 663 |
| % | 10.0% | 25.6% | 64.4% | 100.0% |
| Total n | 110 | 230 | 680 | 1020 |
| Total % | 10.8% | 22.6% | 66.7% | 100.0% |
| Lower middle class (LMC) | | | | |
| Primary (E1) | | | | |
| n | 4 | 6 | 41 | 51 |
| % | 7.8% | 11.8% | 80.4% | 100.0% |
| Secondary/ vocational (E2) | | | | |
| n | 62 | 278 | 374 | 714 |
| % | 8.7% | 38.9% | 52.4% | 100.0% |
| Bachelor (E3) | | | | |
| n | 46 | 241 | 171 | 458 |
| % | 10.0% | 52.6% | 37.3% | 100.0% |
| Total n | 112 | 525 | 586 | 1223 |
| Total % | 9.2% | 42.9% | 47.9% | 100.0% |
| Middle-middle class (MMC) | | | | |
| Primary | | | | |
| n | 4 | 29 | 171 | 204 |
| % | 2.0% | 14.2% | 83.8% | 100.0% |
| Secondary/ vocational | | | | |
| n | 26 | 268 | 216 | 510 |
| % | 5.1% | 52.6% | 42.4% | 100.0% |
| Bachelor | | | | |
| n | 37 | 206 | 165 | 408 |
| % | 9.1% | 50.5% | 40.4% | 100.0% |
| Total n | 67 | 503 | 552 | 1122 |

| | | | | |
|---|---|---|---|---|
| Total % | 6.0% | 44.8% | 49.2% | 100.0% |
| Grand total n | 289 | 1258 | 1818 | 3365 |
| Grand total % | 8.6% | 37.4% | 54.0% | 100.0% |

### 5.5.5 Development of {Cl} use

What is the source of the production of lateral forms {Cl}, and what is their status and evaluation for MBK locals? There are at least two possible ways for the variant {Cl} to emerge. One is to consider that NT Thai speakers (MBK locals) have partially acquired rhotic pronunciations {Cr}, {Cɾ} – which are not native to NT Thai, but have prestige in NT Thai as borrowings from BKK Thai. This acquisition is only partial since they never surface often (the highest of frequency of {Cl} is only 12%) even in formal speech, and are almost categorically absent in informal speech, the vernacular. This suggests that the {Cr-1} variants may be a classic case of change from above (Labov 2001), i.e. borrowing from a prestige source a sound that is not integrated into the vernacular. In this scenario, {Cl} forms might arise as a by-product of efforts to produce the partially-acquired {Cr-1}, e.g.

a) {Cr-1} -> {Cl} -> {CØ}

However it is not the case that BKK participantsuse only {Cr-1} variants where /Cr/ is underlying – they also frequently use {CØ} and {Cl}; in fact they use the lateral form more often than MBK participants in this study, and it may have higher prestige than the null form, though the picture is mixed, as we have seen. (However the {Cl} form is also disfavoured in higher styles for all speakers compared to {Cr-1}.) In this scenario, {Cl} forms might arise as direct borrowings from BKK dialect, alongside {Cr-1}. That is, where /Cr/ is underlying, {CØ} is nevertheless the norm, and knowledge of its low social value sometimes results in insertion of rhotic or lateral forms, especially when awareness is high:

b) {CØ} -> {Cl}

and {CØ} -> {Cr-1}

This also has two possibilities: it might be that MBK participants perceive the {Cl} forms as distinctly lateral (legitimate) variants of /Cr/ and target them for borrowing; or it might be that MBK locals do not systematically distinguish lateral from rhotic variants in /Cr/, so that the former are not explicitly targeted for borrowing.

It will not be possible in this thesis to explore all these (and possible other) pathways for the incorporation of {Cl} forms into NT speech in MBK. It is quite possible that {Cl} derives from several sources. However, a few comments may be worthwhile.

It is possible that increasing use of laterals in higher styles should be seen as quantitative hypercorrection by MBK participants. This would be particularly true for the lower middle class, being a marked group who might hypercorrect qualitatively, partly for reasons of linguistic insecurity concerning their local reduction form (Labov, 1973). However, this may suggest too high a degree of sociolinguistic structure for what could be an early and unsystematic phase of borrowing and variation.

I note too that some speakers said they consider {Cl} relatively difficult to perform, sometimes even more so than the rhotic variants. Thus, one possibility is to treat {Cl} as a *defective/error* form. If we consider the MBK-origin people in this village as a whole as a linguistic community, given their shared background and culture, speakers of NT Thai might be struggling to acquire the rhotic form {Cr-1}, but sometimes mispronounce it. Instead the form that they accomplish is {Cl}. In other words, NT Thai speakers would have no underlying rhotic or lateral and all liquids in {Cr-1} would be borrowed; while laterals would be inserted directly, not derived from rhotics. In this (b) scenario, the {Cr-1} forms are even less completely acquired than in (a), and there may be a considerable amount of unstructured/free variation across individuals.

Given the low levels of {Cl} compared to {Cr-1} in formal speech – across all classes, education levels and ethnic groups – it seems more likely that {Cl} is not a case of typical quantitative hypercorrection by MBK locals, i.e. that there is a low degree of

sociolinguistic structure involved in the choice between rhotic and lateral forms (if indeed speakers are choosing).

Based on my observation, both consonantal forms appear relatively difficult for MBK participants (and perhaps also BKK participants, given their frequent use of the null form, {CØ}) to articulate; but perhaps distinct social groups react differently to this difficulty.

A number of {Cl} combinations appear very hard to articulate. Some of them even breach the phonological rules – by the combination of a cluster of alveolar voiceless plosive [t] co-occuring with lateral [l], (Johnson, 2013)[17]. Although these variants are considered difficult to pronounce, some did occur in the data.

After the interview, I asked speakers straightforwardly regarding their feelings during the production of {Cl} for the underlying form of /Cr/, letting them try to measure the difficulty of articulation across all variants in (Cr). I found mixed trends. Some respondents suggested that to perform {Cl} in /Cr/ contexts was sometimes even harder than to perform {Cr-1} correctly here.

### 5.6 (iii) regression model result of {CØ}

In this model, I attempt to see what causes contribute to variation for the {CØ} variant. I pit {CØ} as application value against the overt categories combined: {Cr-1}, which here conflates {Cr-1}, the cluster with alveolar trill, and [C*ɾ*] the cluster with alveolar taps; and also {Cl}, the cluster with laterals. (When necessary to refer to these together, I will call them the "overt variants", or "C-Overt".) Note that these overt variants together form the ground value. Only formal speech data are employed in the analysis. The reason why I did not analyse informal speech all together, is that the

[17] The [t] clustering with the lateral as a 'breach of phonological rules' might not be accurate in all cases. This combination is indeed dispreferred as a breach of OCP as the two sounds share a place of articulation. It does not occur tautosyllabically in English, French, Italian, German or Peninsular Spanish (those are the ones I know about but I'm sure there are others). However it is found in Mexican Spanish so is not entirely impossible (W. Johnson, p.c., 2013).

occurrences of {CØ} are categorical, accounting for 98% of informal speech. The incorporation of these informal data would affect and distort the explanatory power of the analysis in regression model ($r^2$).

Condition

| |
|---|
| {CØ} as application value vs. {Cr-1} +{Cl}, only in formal style, style will not be counted as predictor in the analysis (including phonological factor groups) |

Table 5.14 Model A modelling summary and its input predictors for {CØ}

| CØ | Initial Inputs | final inputs (data) – best model | Selected as predictor in the model | Best outputs |
|---|---|---|---|---|
| Dep | Cr-1 | Ground | n/a | n/a |
| | Cl | Ground | n/a | n/a |
| | CØ | Application Value | n/a | n/a |
| Indep | life stage | ✓ | ✓ | ✓ |
| | social occupational class | ✓ | ✓ | ✓ |
| | type of experiment | ✓ formal | X | X |
| | sex | X | X | X |
| | education | ✓ | ✓ | ✓ |
| | place of origin | X | X | X |
| | social network strength (continuous) | X | X | X |
| | real age (continuous) | X | X | X |
| | closeness | X | X | X |
| | vowel length | ✓ | ✓ | ✓ |

Table 5.15 Factor weight/ Log-odds score of {CØ}

| **Predictor** | factor | Log-odds | Tokens *n=3365* | AppV/all tokens | centered factor weight |
|---|---|---|---|---|---|
| **Education** | | | | | |
| | Primary | 0.463 | 612 | 0.76 | 0.614 |
| | Secondary/ Vocational | 0.045 | 1887 | 0.539 | 0.511 |
| | Bachelor | -0.508 | 866 | 0.388 | 0.376 |
| **Vowel length** | | | | | |
| | Short | 0.281 | 1583 | 0.608 | 0.57 |
| | Long | -0.281 | 1782 | 0.48 | 0.43 |
| **Class** | | | | | |
| | WC | 0.303 | 1020 | 0.667 | 0.575 |
| | LMC | -0.11 | 1223 | 0.479 | 0.473 |
| | MMC | -0.193 | 1122 | 0.492 | 0.452 |
| **Life stage** | | | | | |
| | Old | 0.424 | 561 | 0.75 | 0.604 |
| | Middle | -0.117 | 1325 | 0.494 | 0.471 |
| | Young | -0.307 | 1479 | 0.502 | 0.424 |

Model result of {CØ}

| n | df | intercept | overall proportion | |
|---|---|---|---|---|
| 3365 | 8 | 0.348 | 0.54 | |
| deviance | AIC | AICc | Dxy | $r^2$ |
| 4335.743 | 4351.743 | 4351.786 | 0.335 | 0.106 |

BEST STEP-UP MODEL:

education (6.08e-08)+ vowel.length (8.59e-15) + + class (7.29e-06) + life.stage (5.04e-05)

Ranking summary: {CØ} model in formal style

| ranking | independent factors | attributes of independent factors | | | |
|---|---|---|---|---|---|
| | | (+) favour | | (-) disfavour | |
| 1 | education | +1 Primary | +2 Secondary/ Vocational | - Bachelor | |
| 2 | vowel length | +1 short | | -2 long | |
| 3 | class | +1 WC | | -1st MMC[18] | -2nd LMC |
| 4 | life stage | +1 old | | -1st young | -2nd middle |

Although it is normal to report rankings from the step-down run in Rbrul (Johnson, 2009), in this case there are good reasons to prefer the ranking from the step-up run which places education as the primary predictor. We can see by comparing the range of the log-odds, (app value/all tokens), and factor-weights results that in each case education has a more powerful effect than vowel length.

After having input 10 predictors, it turns out that only four of them proved significant, namely

1) education,
2) vowel length,
3) social class, and
4) life stage.

Finally, even though ethnicity is not significant in the model, it was worth investigating to see the distribution of {CØ} across two groups of people from different place of origin and ethnicity; and similarly for speaker sex.

[18] -1st is worse than the -2nd.

### 5.6.1 Vowel length

The vowel length constraint is ranked second in the model. However, I state this linguistic factor first and then present the social factors. The vowel length contains two components for long and short vowels. It turns out that cluster reduction {CØ} is favoured by short vowels. The factor weight's range is 0.14, thus there is a distinction between the types of vowel length to some extent.

One possible might come from that short vowels co-occur with the reduction of (Cr). By contrast, long vowels tend to appear alongside {Cr-1}, the cluster with trill. However, this does not mean that {CØ} never appears with long vowel tokens – {CØ} is relatively preferred with short vowels in this context.

### 5.6.2 Education

Educational level plays the most crucial role in how speakers employ the cluster reduction form. In this factor group, speakers at the primary education level (E1) use {CØ} the most, followed by those with only secondary education (E2). The range between (E2) and (E3) factor weights is intermediate at 0.13. The groups that favour {CØ} differ significantly from the highest educational level group.

This is somewhat in accordance with the logic of education, that the lower educated respondents are likely to articulate the non-standard form, while as vernacular speakers they perform phonological reduction to a higher degree. By contrast, it is predictable that the better educated speakers more often employ the full cluster of rhotic onset in lieu of the reduction form.

Table 5.16 Cross-tabulations: education and social class

| Factor | {CØ} | {Cl} | {Cr-1} | Grand total |
|---|---|---|---|---|
| Primary | | | | |
| WC | | | | |
| n | 253 | 44 | 60 | 357 |
| % | 70.9% | 12.3% | 16.8% | 100.0% |
| LMC | | | | |
| n | 41 | 4 | 6 | 51 |
| % | 80.4% | 7.8% | 11.8% | 100.0% |
| MMC | | | | |
| n | 171 | 4 | 29 | 204 |
| % | 83.8% | 2.0% | 14.2% | 100.0% |
| Total n | 465 | 52 | 95 | 612 |
| Total % | 76.0% | 8.5% | 15.5% | 100.0% |
| Secondary/ vocational | | | | |
| WC | | | | |
| n | 427 | 66 | 170 | 663 |
| % | 64.4% | 10.0% | 25.6% | 100.0% |
| LMC | | | | |
| n | 374 | 62 | 278 | 714 |
| % | 52.4% | 8.7% | 38.9% | 100.0% |
| MMC | | | | |
| n | 216 | 26 | 268 | 510 |
| % | 42.4% | 5.1% | 52.6% | 100.0% |
| Total n | 1017 | 154 | 716 | 1887 |
| Total % | 53.9% | 8.2% | 37.9% | 100.0% |
| Bachelor | | | | |
| LMC | | | | |
| n | 171 | 46 | 241 | 458 |
| % | 37.3% | 10.0% | 52.6% | 100.0% |
| MMC | | | | |
| n | 165 | 37 | 206 | 408 |
| % | 40.4% | 9.1% | 50.5% | 100.0% |
| Total n | 336 | 83 | 447 | 866 |

| | | | | |
|---|---|---|---|---|
| Total % | 38.8% | 9.6% | 51.6% | 100.0% |
| Grand total n | 1818 | 289 | 1258 | 3365 |
| Grand total % | 54.0% | 8.6% | 37.4% | 100.0% |

All types of social class speakers who have only a primary education favour {CØ} a great deal, accounting for more than 70% across all variants used. It is interesting that at this educational level {CØ} appears to be a prestige form: the WC speakers with only primary education use less {CØ} than the two higher social classes. For speakers with secondary education the opposite is true; for those with higher education there is little difference among classes. However, both groups with more education are negatively correlated with {CØ} occurrence.

### 5.6.3 Social occupational class

The third-ranked factor group is class. WC speakers favour {CØ} more than the two higher social classes. The range of factor weights between WC (at 0.575) and the LMC (at 0.473) is 0.10 which is low to intermediate. However, the lowest social class group is still different from the other higher classes according to the log-odds, which present a positive score at 0.303.

Class correlates with the primary factor, education as addressed earlier. Working class respondents favour using {CØ}, and thus disfavour overt forms {Cr-1}, significantly. However, the interesting fact is that – independent of their class or education – the elderly also favour cluster reduction a great deal. This significantly contrasts to middle aged groups, and younger groups, as we are about to see (table 5.17 below).

### 5.6.4 Life stage/ age

The age factor is the least strong factor in the {CØ} model. The elderly prefer {CØ} the most, with log-odds at 0.424 which is quite high and distinct from other age groups. The factor weight range between the elderly and middle aged is 0.13.

This {CØ} complements its variant counterpart {Cr-1}, in terms of age as a factor, since {Cr-1} favours the younger respondents, and progresses to the middle aged. The trajectory of speakers who are of younger age might extend to their use of the rhotic variant {Cr-1} when they are older.

This trend can be seen more clearly when looking at the cross-tabulation of age (or life stage) and style for {Cr-1} versus {CØ}. (The lateral variant {Cl} is shown but as rates are low it is not interpreted here; refer to the previous model §5.2 (ii).) The table below demonstrates both formal styles of speech, reading passage and minimal pairs.

Table 5.17 Cross-tabulation: life stage and style

| Life stage/ speech styles | {CØ} | {Cl} | {Cr-1} | Grand total |
|---|---|---|---|---|
| Young age | | | | |
| Reading passage | | | | |
| N | 703 | 41 | 445 | 1189 |
| % | 59.1% | 3.5% | 37.4% | 100.0% |
| Minimal pair | | | | |
| N | 39 | 55 | 196 | 290 |
| % | 13.5% | 19.0% | 67.6% | 100.0% |
| Total n | 742 | 96 | 641 | 1479 |
| Total % | 50.2% | 6.5% | 43.3% | 100.0% |
| Middle age | | | | |
| Reading passage | | | | |
| N | 615 | 112 | 337 | 1064 |
| % | 57.8% | 10.5% | 31.7% | 100.0% |
| Minimal pair | | | | |
| N | 40 | 34 | 187 | 261 |
| % | 15.3% | 13.0% | 71.7% | 100.0% |
| Total n | 655 | 146 | 524 | 1325 |
| Total % | 49.4% | 11.0% | 39.6% | 100.0% |
| Old age | | | | |
| Reading passage | | | | |
| N | 364 | 28 | 59 | 451 |
| % | 80.7% | 6.2% | 13.1% | 100.0% |
| Minimal pair | | | | |
| N | 57 | 19 | 34 | 110 |
| % | 51.8% | 17.3% | 30.9% | 100.0% |
| Total n | 421 | 47 | 93 | 561 |
| Total % | 75.0% | 8.4% | 16.6% | 100.0% |
| Grand total n | 1818 | 289 | 1258 | 3365 |
| Grand total % | 54.0% | 8.6% | 37.4% | 100.0% |

Table 5.17 shows that all age-groups of speakers use less {CØ} in minimal pairs than in reading passage, and correspondingly that all use more {Cr-1} in minimal pairs. (Recall that {CØ} is used categorically, i.e. 98% of the time, in informal speech.) The profile across age-groups is similar in both styles. There appears to be no strong contrast between the young and middle aged generations.

Table 5.18 Cross-tabulations: age and sex

| Factor | {CØ} | {Cl} | {Cr-1} | Grand total |
|---|---|---|---|---|
| Young age | | | | |
| Female | | | | |
| n | 415 | 63 | 338 | 816 |
| % | 50.9% | 7.7% | 41.4% | 100.0% |
| Male | | | | |
| n | 327 | 33 | 303 | 663 |
| % | 49.3% | 5.0% | 45.7% | 100.0% |
| Total n | 742 | 96 | 641 | 1479 |
| Total % | 50.2% | 6.5% | 43.3% | 100.0% |
| Middle age | | | | |
| Female | | | | |
| n | 329 | 87 | 247 | 663 |
| % | 49.6% | 13.1% | 37.3% | 100.0% |
| Male | | | | |
| n | 326 | 59 | 277 | 662 |
| % | 49.2% | 8.9% | 41.8% | 100.0% |
| Total n | 655 | 146 | 524 | 1325 |
| Total % | 49.4% | 11.0% | 39.6% | 100.0% |
| Old age | | | | |
| Female | | | | |
| n | 198 | 2 | 4 | 204 |
| % | 97.1% | 1.0% | 2.0% | 100.0% |
| Male | | | | |
| n | 223 | 45 | 89 | 357 |
| % | 62.5% | 12.6% | 24.9% | 100.0% |
| Total n | 421 | 47 | 93 | 561 |
| Total % | 75.0% | 8.4% | 16.6% | 100.0% |
| Grand total n | 1818 | 289 | 1258 | 3365 |
| Grand total % | 54.0% | 8.6% | 37.4% | 100.0% |

Young and middle age males and females all have similar rates of {CØ}, 50% approximately. By contrast, the elderly in both sexes enjoy using {CØ} more than 60%.

However for elderly females, the occurrence of {CØ} is almost categorical, 97.1%. Thus only the elderly show a significant sex contrast.

Table 5.19 Cross-tabulations: age and social class

| Factor | {CØ} | {Cl} | {Cr-1} | Grand total |
|---|---|---|---|---|
| Young | | | | |
| WC | | | | |
| n | 262 | 34 | 112 | 408 |
| % | 64.2% | 8.3% | 27.5% | 100.0% |
| LMC | | | | |
| n | 281 | 43 | 237 | 561 |
| % | 50.1% | 7.7% | 42.3% | 100.0% |
| MMC | | | | |
| n | 199 | 19 | 292 | 510 |
| % | 39.0% | 3.7% | 57.3% | 100.0% |
| Total n | 742 | 96 | 641 | 1479 |
| Total % | 50.2% | 6.5% | 43.3% | 100.0% |
| Middle aged | | | | |
| WC | | | | |
| n | 259 | 49 | 100 | 408 |
| % | 63.5% | 12.0% | 24.5% | 100.0% |
| LMC | | | | |
| n | 233 | 61 | 266 | 560 |
| % | 41.6% | 10.9% | 47.5% | 100.0% |
| MMC | | | | |
| n | 163 | 36 | 158 | 357 |
| % | 45.7% | 10.1% | 44.3% | 100.0% |
| Total n | 655 | 146 | 524 | 1325 |
| Total % | 49.4% | 11.0% | 39.6% | 100.0% |
| Old | | | | |
| WC | | | | |
| n | 159 | 27 | 18 | 204 |
| % | 77.9% | 13.2% | 8.8% | 100.0% |
| LMC | | | | |
| n | 72 | 8 | 22 | 102 |
| % | 70.6% | 7.8% | 21.6% | 100.0% |

| | | | | |
|---|---|---|---|---|
| MMC | | | | |
| n | 190 | 12 | 53 | 255 |
| % | 74.5% | 4.7% | 20.8% | 100.0% |
| Total n | 421 | 47 | 93 | 561 |
| Total % | 75.0% | 8.4% | 16.6% | 100.0% |
| Grand total n | 1818 | 289 | 1258 | 3365 |
| Grand total % | 54.0% | 8.6% | 37.4% | 100.0% |

Even though the regression model shows that the working class and elderly favour {CØ} the most, the cross-tabs show that in fact, the elderly across all social classes favour {CØ} much more than other age groups, and indeed there is little class difference among the elderly.

### 5.6.5 Ethnicity (not significant in the model)

Although place of origin/ethnicity is not statistically significant in the regression model, it is interesting to examine it using cross-tabs. Table 5.20 shows that NT Thai and BKK Thai speakers present similar trends of {CØ} use.

Table 5.20 Cross-tabulations: ethnicity and variants of (Cr)

| Factor | {CØ} | {Cl} | {Cr-1} | Total |
|---|---|---|---|---|
| Lamphun (MBK) | | | | |
| N | 1550 | 230 | 1126 | 2906 |
| % | 53.3% | 7.9% | 38.8% | 100.0% |
| Bangkok and its vicinity (BKK) | | | | |
| N | 268 | 59 | 132 | 459 |
| % | 58.4% | 12.9% | 28.8% | 100.0% |
| Total n | 1818 | 289 | 1258 | 3365 |
| Total % | 54.0% | 8.6% | 37.4% | 100.0% |

To conclude the result of the {CØ} model, it is found that the {CØ} variant is favoured by the elderly (especially older women), the working class and those with lower levels of education. The occurrence of {CØ} correlates with short vowel length.

I claim that {CØ}, cluster reduction, does not have the same social evaluation as {Cl}. (The lateral consonant cluster reduction onset can be regarded as a neutral form of the (r) variant, as will be argued in detail in § 6.4 (vi)). In spite of sharing some of the same qualities as {Cl} in terms of ease of production, and showing the highest rate of occurrence (77% over all styles), {CØ} is still treated as inferior to {Cl} socially. This is because the factor groups favouring {Cl} are all higher in social status attributes, such as educational level and class, while {CØ} is clearly seen to be used more by lower class people who did not acquire a high education level.

### 5.6.6 Result summary of the consonant cluster (Cr) with rhotic onset variants

It was found that for the (Cr) variable, most both of NT Thai speakers and BKK internal migrantsfavour the {CØ} variant. Its occurrence across all types of conditions was almost categorical, at around 98% in informal speech styles. However, when the speakers increase their attention to speech, the prestige form {Cr-1} was promoted. To summarize, each phonological variant of (Cr) variable can be elaborated as follows.

1) The {Cr} prestige variant was mainly favoured by MMC male speakers who were relatively young. Young and middle age speakers who favoured this prestige form often had the highest level of education and belonged to the MBK community in Lamphun province. Phonologically, the {Cr-1} variant was likely to appear in long vowel syllable contexts. The more speakers paid attention to their speech, the more they used {Cr-1}.

2) The {Cl} variant was regarded as either **a defective/error or a hypercorrection form.** Its distribution was unique and not in line with other variants in terms of their distribution and behaviour. {Cl} was preferred by adults who were Bangkokians or from the Bangkok vicinity provinces. WC and LMC speakers tended to favour it. Even though {Cl} score distributions presented a mixed trend in the cross-tabulation analyses, the rate of use in {Cl} gradually rose as speech styles became more formal.

3) Finally, the cluster reduction onset variant {CØ} can be assigned as the default form because it was widely used by all types of speakers in all conditions, and it clearly has the lowest social value. In informal styles, {CØ} was almost categorically produced. (We will see in the next chapter that this result is in accordance with the near-categorical use of the [l] variant of the (r) variable, see section 6.4). When speakers approached more formal styles, the proportion of {CØ} remained quite high. According to the regression model, {CØ} was favoured by the working class elderly speakers with lower levels of education. The education level factor was a strong indicator for using {CØ} in formal contexts. Lastly, {CØ} occurred more often in long vowel syllable contexts.

In the next chapter, the results of variants of the (r) variable are displayed and discussed.

# Chapter 6

# Findings of variable (r) consonant rhotic onset

## Introduction

This chapter analyzes the variably rhotic onset (r). As with {Cr-1}, after considering a number of potential cases, 3 cases will be analysed. The variants are composed of

1) {r-1}, the conflation of [r] trill and [ɾ] tap,

2) [l] lateral and finally

3) [h], the glottal fricative.

The rhotic {r-1} onset and lateral [l] onset are regarded as typical variants of Bangkok Thai dialect. The glottal fricative [h] is a distinctive form of Northern Thai dialects, including the NT Thai dialect of MBK locals (see appendix C). It should be noted that onset [l] is also found in NT Thai of the MBK locals. This raises problems which can be solved by the criteria discussed below. I argue that the [l] variant in NT Thai of MBK locals must have an underlying rhotic form, not the genuine lateral [l] which cannot easily correspond to [h].

The table below illustrates the distribution of (r) onset variation.

Table 6.1 Variation of (r) rhotic onset spoken in NTIE community

| Bangkok Thai orthography | transcriptions | Meaning |
|---|---|---|
| เฮา เรา เลา | [haw0] [raw0] [law0] | the first or second pronominal |
| เฮือน เรือน เดือน | [hɯan][rɯan] [lɯan0] | “residence, house” |
| ฮ้อง ร้อง ล้อง | [hɔ:ŋ3] [rɔ:ŋ3] [lɔ:ŋ3] | “to call, to sing” |

Table 6.1 illustrates the variation that occurs with {r-1}, [l] and [h]. Despite having different possible onsets, hearers generally have no difficulty identifying which lexical item is intended, as the context facilitates.

## 6.1 Criteria for (r) onset

I have exemplified and applied the criteria for (r) rhotic onset similarly to those for {Cr} clusters with rhotic onsets. In informal speech, some lexical items with distinctive meanings overlap in terms of phonetic representations, as noted above for {Cr} (see §5.4 (i)). These potential obstacles can be eliminated by analysing the text adjacent to the targeted word or token (see §5.2) semantically and pragmatically. This means that the preceding co-text, constituent or clause and following co-text, constituent or clause is the evidence to justify the target word’s sense, and to ensure that the targeted lexical words have the underlying form of rhotic onset {r-1}, as was addressed earlier in the {Cr} criteria.

The alveolar trill [r] and tap [ɾ] were combined because both forms mark the prestige/standard form of (r) in BKK Thai. At first, the occurrence rates of [r] and [ɾ] were calculated separately, but they posed some problems for the generalizability of interpretation. This is because the proportion or frequency in use between [r] and [ɾ] are quite similar, albeit both of them revealed relatively high frequency in use; and attitudes

towards them were very similar. Hence, the overall outcome by viewing these variants separately shows the dominance of Bangkok prestige forms less clearly than when they are combined.

Therefore, I conflate these two standard forms as one unit instead: {r-1}. However, some attributes of the rhotic onset (r) should be addressed.[1] The phonetic nature of alveolar trill [r] involves multiple contacts of the tongue against the alveolar ridge, as can be seen from several vertical lines appearing in the spectrogram below. By contrast, the tap /ɾ/ or an alveolar tap is characterized by a single contact of the tip of the tongue and the alveolar ridge. Hence, in the second spectrogram, only one straight line can be observed.

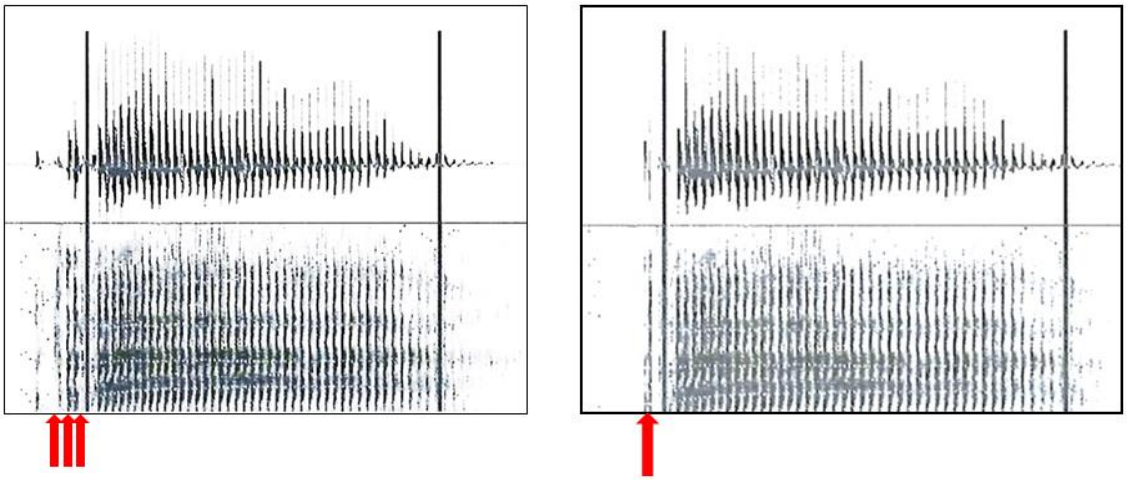


Figure 6.1 Spectrograms of /r/ trill and /ɾ/ tap in Bangkok Thai in the word [ra:0]. (adapted from L-Thongkum, et al., 2011: 24)

An organisation of the (r) onset result covers three cases, similar to the ones addressed above, with each variant having social meaning. I start from the model conditions (iv) to (vi), respectively, following conditions (i-iii) in 5.3:

[1] The review of all rhotic variants and their attributes appeared in §1.3.2 and §4.3

(iv) [r] + [ɾ] vs. [l], only in formal style

(v) [h] vs. [l], only in informal style

(vi) [l] vs. [h], only in informal style

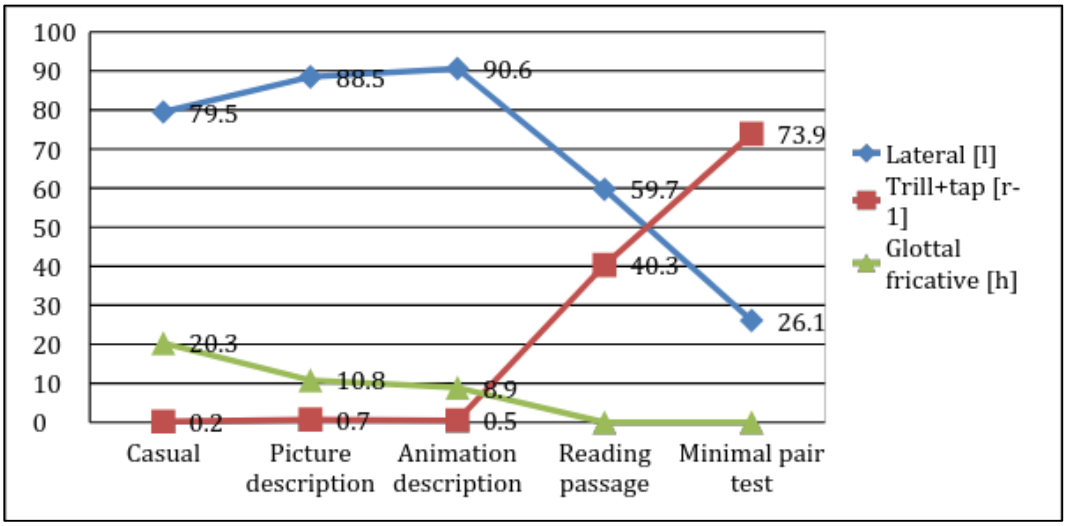
Prior to examining each case, the distribution of (r) is described. Table 6.2 illustrates that style again plays the major role in determining the selection of {r-1}.

Table 6.2 Distribution of the variants of (r) across styles (informal styles and formal styles) N = 8,697

| Styles | Type of experiments | Freq/ % | Trill+tap {r-1} | Glottal fricative [h] | Lateral [l] | Total freq/ % |
|---|---|---|---|---|---|---|
| Informal | Casual | Freq. | 5 | 536 | 2103 | 2644 |
| | | % | 0.2 | 20.3 | 79.5 | 30.4 |
| | Picture description | Freq. | 9 | 139 | 1114 | 1292 |
| | | % | 0.7 | 10.8 | 88.5 | 14.9 |
| | Animation description | Freq. | 7 | 118 | 1204 | 1329 |
| | | % | 0.5 | 8.9 | 90.6 | 15.3 |
| Formal | Reading passage | Freq. | 1118 | 0 | 1654 | 2772 |
| | | % | 40.3 | 0 | 59.7 | 31.9 |
| | Minimal pair test | Freq. | 448 | 0 | 172 | 660 |
| | | % | 73.9 | 0 | 26.1 | 7.6 |
| | Total | Freq. | 1627 | 793 | 6277 | 8697 |
| | | % | 18.7 | 9.1 | 72.2 | 100 |

Table 6.2 reveals all types of variants and speech styles, illustrating their rate of use in raw frequency and percentage, respectively. The lateral variant [l] was the most frequent, accounting for 72.2% across all five styles. The prestige form {r-1} is intermediate at 18.7% overall, while [h] has the lowest frequency at 9.1%.

In informal speech, {r-1} occurs less than 1% of the time, increasing dramatically in formal speech tasks which require reading. By contrast, [h] never appears in formal speech styles (reading passage test and minimal pair tests) since it cannot be tested. The orthography clearly distinguishes /h/ from {r-1}, with "ฮ" and "ร", respectively. The orthography indicates separate phonemes, rather than variant forms of /r/. A pilot study of the [h] orthography alone was trialed, and produced categorical results: when the orthographic representation of /h/ was the stimulus, respondents never produced any other variant other than [h]. Thus, it cannot be implied that when NT Thai speakers approached the more formal style contexts, they would nevert produce [h] as a variant form of underlying /r/; rather, the limitation of this study is that the rate of occurrence of variant [h] cannot be verified in reading-based formal style tests[2].




N = 8,697

Figure 6.2 Distribution of (r) variants across all speech styles

Let us examine each of the three cases.

[2] To some extent, thus, the /h/ might be tested by the more controlling and formal context, such as giving the respondent(s) give a speech. Or they will be conditioned by giving punishment or reward for respondent(s) during speaking or asking them to speak NT Thai very carefully at their best abilities. This is in order to promote their degree of consciousness. In general, based on figure 6.2, it might be assumed that in NT speakers use less [h] when the degree of awareness is raised.

First, in analysis (iv) I pit phonetically rhotic forms (trill [r]} and tap [ɾ]) against non-rhotic ones (laterals only, no glottal fricative) in formal data; and [h] is excluded by default as it does not occur in formal speech style.

Next, analysis (v) focuses on glottal fricative [h] versus laterals in informal style only, with rhotic sounds {r-1} removed (as they hardly occur in informal style), to explore the patterning of the [h].It is worth noting that the data from BKK speakers have not been excluded. The BKK speakers never produced any [h] for the underlying /r/ at all. Please refer to table 6.2 and figure 6.2.

Finally, analysis (vi) pits lateral [l] against all other variants, to explore the role of laterals as an intermediate form.

Despite the fact that the rate in the use of [l] in informal style is predominantly high (79-90%), it is still not as categorically strong as the result of {CØ} in variable (Cr), which was over 98%. Thus, it is still testable against other competing variants of the variable (r-1), namely [h] and {r-1}, in the informal speech styles.

### 6.2 (iv) regression model result for {r-1}

Condition

| |
|---|
| (iv) [r] + [ɾ] as an application value, or {r-1}, pitted against [l]. [h] is excluded by default as it does not occur in formal speech style. Style will not be input in the analysis as a predictor. |

### 6.2.1 How to run model analysis

Here I explain how the model of an application value of {r-1} was obtained. Initially, similar to the variable analysis of (Cr-1), I input 10 predictive variables given in Table 6.3. In terms of data weight, the formal speech styles together accounted for 3,432 tokens, or 39.5% of all tokens (n= 8,697) of (r).

As in the (Cr) analyses, style was not a predictor to be included in the regression models because it would distort the $r^2$ value in the model. The rate of use of {r-1} across all informal speech styles was extremely minimal. Compared to the formal speech styles, they were extremely unbalanced in both the distribution of {r-1} occurrence, as well as the grand total number between formal styles and informal style, which were relatively different, and which affected $r^2$ and predictive factors. It is required to separate the data into two groups as shown in figure 6.3, below.

### 6.2.2 Model summary of {r-1}

Table 6.3 Model summary of {r-1}

| r-1 | Code | Initial Inputs | Final inputs – best model | Selected as a predictor in the model |
|---|---|---|---|---|
| Dep | r-1 | Application Value | n/a | n/a |
| | l | Ground | n/a | n/a |
| | h | X | n/a | n/a |
| Indep | life stage | ✓ | ✓ | ✓ |
| | social occupational class | ✓ | ✓ | ✓ |
| | type of experiment | ✓ formal | X | X |
| | sex | ✓ | ✓ | ✓ |
| | education | ✓ | ✓ | ✓ |
| | place of origin | ✓ | ✓ | ✓ |
| | social network strength (cont.) | ✓ | X | X |
| | real age (cont.) | ✓ | X | X |
| | closeness | ✓ | ✓ | ✓ |
| | vowel length | ✓ | X | X |

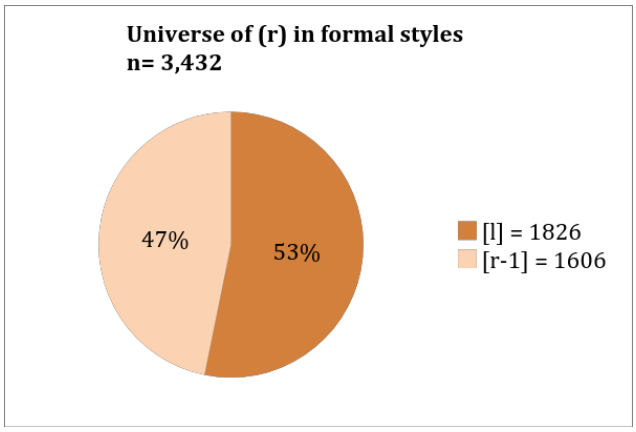



Figure 6.3 The proportion of variants in the {r-1} model shown as percentage

Figure 6.3 shows that the percentage and raw frequency of both competing variants are very close.

Table 6.4 Multiple regression analysis of {r-1}

| Predictors | Factor | Log-odds | Tokens N= 3,432 | AppV/all tokens | Centered factor weight |
|---|---|---|---|---|---|
| class | | | | | |
| | WC | -0.697 | 1040 | 0.254 | 0.332 |
| | LMC | 0.198 | 1248 | 0.551 | 0.549 |
| | MMC | 0.499 | 1144 | 0.572 | 0.622 |
| education | | | | | |
| | primary | -0.936 | 624 | 0.167 | 0.282 |
| | secondary/ vocational | 0.258 | 1924 | 0.467 | 0.564 |
| | bachelor | 0.678 | 884 | 0.683 | 0.663 |
| sex | | | | | |
| | male | -0.179 | 1716 | 0.45 | 0.455 |
| | female | 0.179 | 1716 | 0.485 | 0.545 |
| coda type | | | | | |
| | closed | 0.223 | 2970 | 0.48 | 0.555 |
| | open | -0.223 | 462 | 0.387 | 0.445 |
| place of origin/ ethnicity | | | | | |
| | Lamphun | 0.167 | 2964 | 0.483 | 0.542 |

| | | | | | |
|---|---|---|---|---|---|
| | Bangkok | -0.167 | 468 | 0.374 | 0.458 |
| life stage | | | | | |
| | young | 0.064 | 1508 | 0.496 | 0.516 |
| | middle-aged | 0.238 | 1352 | 0.544 | 0.559 |
| | old | -0.302 | 572 | 0.215 | 0.425 |

Model result of {r-1}

| n | df | Intercept | Overall proportion | Centered input probability |
|---|---|---|---|---|
| 3432 | 10 | -0.731 | 0.468 | 0.325 |
| deviance | AIC | AICc | Dxy | $r^2$ |
| 4156.855 | 4176.855 | 4176.919 | 0.475 | 0.211 |

BEST STEP-DOWN MODEL:

class (3.9e-26) + education (9.68e-15) + sex (6.2e-06) + closeness.52 (4.87e-05) + place.of.origin (0.00568) + life.stage (0.0139)

Ranking summary of {r-1} model in formal styles

| ranking | independent factors | attributes of independent factors | | | |
|---|---|---|---|---|---|
| | | (+) favour | | (-) disfavour | |
| 1 | class | +1st MMC | +2nd LMC | -WC | |
| 2 | education | +1st Bachelor | +2nd Secondary/ Vocational | -Primary | |
| 3 | sex | +female | | -male | |
| 4 | coda type | +closed | | -open | |
| 5 | place of origin | +Lamphun | | -Bangkok | |
| 6 | life stage | +1st mid-age | +2nd young | -old | |

Recall that {r-1} is the prestige form in BKK Thai. In the order in which they contribute to explaining variation, the explanatory factors consisted of 1) social occupational class; 2) education level; 3) sex; 4) coda type; 5) place of origin; and finally 6) life stage. Factor groups 1, 2, 3 and 5 were external and non-continuous factors. The only linguistic predictor found was 4) coda type, referring to whether the final sound position after a vowel was closed or open, i.e. CV(C). Since this is of low predictive value I address it last.

### 6.2.3 Social occupational class

The social occupational class factor was high-lighted as the strongest predictor. The results show that the respondents who produce {r-1} are mostly positioned in higher classes, not just the lower middle class. The factor weights of MMC and LMC were very similar, 0.622 and 0.549, respectively with a narrow range (.08). (However, cross-tabulation between sex and social class will show that LMC female speakers favoured {r-1} more than other groups, table 6.10 below.)

Table 6.5 cross-tabulates formal styles and social class. Even though in the casual style, {r-1} was almost categorically absent, LMC and MMC speakers use {r-1} a half to three-quarters of the time in formal styles. Therefore, {r-1} may be a change from above, a prestige borrowing which is used a great deal when the awareness of speakers is high.

Table 6.5 Cross-tabulation: formal styles and social class

| Style x Social class | {r-1} | [l] | Grand total |
|---|---|---|---|
| Reading passage | | | |
| WC | | | |
| n | 137 | 703 | 840 |
| % | 16.3% | 83.7% | 100.0% |
| LMC | | | |
| n | 506 | 502 | 1008 |
| % | 50.2% | 49.8% | 100.0% |
| MMC | | | |
| n | 475 | 449 | 924 |
| % | 51.4% | 48.6% | 100.0% |
| Total n | 1118 | 1654 | 2772 |
| Total % | 40.3% | 59.7% | 100.0% |
| Minimal pair | | | |
| WC | | | |
| n | 127 | 73 | 200 |
| % | 63.5% | 36.5% | 100.0% |
| LMC | | | |
| n | 182 | 58 | 240 |
| % | 75.8% | 24.2% | 100.0% |
| MMC | | | |
| n | 179 | 41 | 220 |
| % | 81.4% | 18.6% | 100.0% |
| Total n | 488 | 172 | 660 |
| Total % | 73.9% | 26.1% | 100.0% |
| Grand total n | 1606 | 1826 | 3432 |
| Grand total % | 46.8% | 53.2% | 100.0% |

In Labov's NYC study the LMC speakers exhibited a high rate in the use of incoming rhotic variants in formal styles and tried to avoid stigmatised forms at the same time. However, their linguistic insecurity was shown in some hypercorrection of forms (Labov, 2006). In this vibrant economic context, the MMC and LMC in NTIE MBK

might not show a great difference socially: they are close in the rankings.[3] However, while in the log-odds results both LMC and MMC show positive numbers, there is still a clear contrast between all three classes.

Except for the social occupational class factor, which was not a full fit to Labov's NYC pattern for rhoticity, almost all of the explanatory predictors for (r) in NT Thai of MBK were found to correspond to it. In other words, the prestige {r-1} in Bangkok Thai in the NTIE community shared a number of predictive factors showing prestige characteristics. The later explanatory factors are displayed below.

### 6.2.4 Education

In general, the educational level was ranked as the 2nd strongest group factor, based on the log-odds scores, and has consistently played a significant role in all prestige forms in this study, including {Cr-1} (see table 5.7). It can be seen that speakers with undergraduate (E3) and secondary school levels (E2) typically occupy the higher and lower middle class levels. Thus, both factors are relatively correlated with {r-1} onset.

Middle aged and younger speakers are also prone to favour {r-1}, as shown in tables 6.6 and 6.7 below. This factor too was associated with the other strong positive factors promoting the use of prestige {r-1}, namely, a high educational level and better class position. Thus, {r-1} is the most favoured form use by these social groups.[4]

[3] This may also be because of the amalgamation of several dialects in this area.

[4] Recall that the [h] variant could not be tested in some contexts; see section 6.2.

Table 6.6 Cross-tabulation: class and age in formal styles

| Class x age | {r-1} | [l] | Grand total |
|---|---|---|---|
| WC | | | |
| Young age | | | |
| n | 108 | 308 | 416 |
| % | 26.0% | 74.0% | 100.0% |
| Middle age | | | |
| n | 135 | 281 | 416 |
| % | 32.5% | 67.6% | 100.0% |
| Old age | | | |
| n | 21 | 187 | 208 |
| % | 10.1% | 89.9% | 100.0% |
| Total n | 264 | 776 | 1040 |
| Total % | 25.4% | 74.6% | 100.0% |
| LMC | | | |
| Young age | | | |
| n | 270 | 302 | 572 |
| % | 47.2% | 52.8% | 100.0% |
| Middle age | | | |
| n | 388 | 184 | 572 |
| % | 67.8% | 32.2% | 100.0% |
| Old age | | | |
| n | 30 | 74 | 104 |
| % | 28.9% | 71.2% | 100.0% |
| Total n | 688 | 560 | 1248 |
| Total % | 55.1% | 44.9% | 100.0% |
| MMC | | | |
| Young age | | | |
| n | 370 | 150 | 520 |
| % | 71.2% | 28.9% | 100.0% |
| Middle age | | | |
| n | 212 | 152 | 364 |
| % | 58.2% | 41.8% | 100.0% |
| Old age | | | |

| | | | |
|---|---|---|---|
| n | 72 | 188 | 260 |
| % | 27.7% | 72.3% | 100.0% |
| Total n | 654 | 490 | 1144 |
| Total % | 57.2% | 42.8% | 100.0% |
| Grand total n | 1606 | 1826 | 3432 |
| Grand total % | 46.8% | 53.2% | 100.0% |

Middle-aged speakers use {r-1} the most in the WC and LMC, while older speakers use it the least; however in the MMC, young speakers use {r-1} at the highest rate of all.

Table 6.7 Cross-tabulation: education and age in formal styles

| Education x age | {r-1} | [l] | Grand total |
|---|---|---|---|
| Primary (E1) | | | |
| Middle age | | | |
| n | 52 | 104 | 156 |
| % | 33.3% | 66.7% | 100.0% |
| Old age | | | |
| n | 52 | 416 | 468 |
| % | 11.1% | 88.9% | 100.0% |
| Total n | 104 | 520 | 624 |
| | | | |
| Total % | 16.7% | 83.3% | 100.0% |
| Secondary/ Vocational (E2) | | | |
| Young age | | | |
| n | 648 | 756 | 1404 |
| % | 46.2% | 53.9% | 100.0% |
| Middle age | | | |
| n | 179 | 237 | 416 |
| % | 43.0% | 57.0% | 100.0% |
| Old age | | | |
| n | 71 | 33 | 104 |
| % | 68.3% | 31.7% | 100.0% |
| Total n | 898 | 1026 | 1924 |
| Total % | 46.7% | 53.3% | 100.0% |
| Bachelor (E3) | | | |
| Young age | | | |
| n | 100 | 4 | 104 |
| % | 96.2% | 3.9% | 100.0% |
| Middle age | | | |
| n | 504 | 276 | 780 |
| % | 64.6% | 35.4% | 100.0% |
| Old age | 604 | 280 | 884 |

| | | | |
|---|---|---|---|
| n | 68.3% | 31.7% | 100.0% |
| % | 1606 | 1826 | 3432 |
| Total n | 46.8% | 53.2% | 100.0% |

The higher groups of education show similar scores in factor weights, namely 0.663 (E3) and 0.564 (E2), respectively. The comparison between the Bachelor level and the secondary level does not show much distinction. Therefore, it can be deduced that education is important in regression analysis, but both high levels of education are very distinct from the primary level of education (E1) which has a factor weight of 0.282. There is no consistent age pattern across the different levels of terminal education, but again at the highest level, young speakers use {r-1} the most.

Table 6.8 Cross-tabulation: education and sex in formal styles

| Education x sex | {r-1} | [l] | Grand total |
|---|---|---|---|
| Primary (E1) | | | |
| female | | | |
| n | 57 | 307 | 364 |
| % | 15.7% | 84.3% | 100.0% |
| male | | | |
| n | 47 | 213 | 260 |
| % | 18.1% | 81.9% | 100.0% |
| Total n | 104 | 520 | 624 |
| Total % | 16.7% | 83.3% | 100.0% |
| Secondary/Vocational (E2) | | | |
| female | | | |
| n | 555 | 485 | 1040 |
| % | 53.4% | 46.6% | 100.0% |
| male | | | |
| n | 343 | 541 | 884 |
| % | 38.8% | 61.2% | 100.0% |
| Total n | 898 | 1026 | 1924 |
| Total % | 46.7% | 53.3% | 100.0% |
| Bachelor (E3) | | | |
| female | | | |
| n | 221 | 91 | 312 |
| % | 70.8% | 29.2% | 100.0% |
| male | | | |
| n | 383 | 189 | 572 |
| % | 67.0% | 33.0% | 100.0% |
| Total n | 604 | 280 | 884 |
| Total % | 68.3% | 31.7% | 100.0% |
| Grand total n | 1606 | 1826 | 3432 |
| Grand total % | 46.8% | 53.2% | 100.0% |

Table 6.8 shows that the higher the education levels of the speakers, the more they use the prestige form {r-1}. In addition, females use more of the prestige form than males, but only at the higher levels (E3) and (E2).

### 6.2.5 Sex

Female factor weight scores are greater (0.545) than males (0.455) and the regression result shows an intermediate difference. Thus, educated females might be the linguistic innovators for {r-1}. Table 6.9 indicates that the frequency contrasts between males and females amongst the middle-aged and the young are very similar. However, the elderly have a negative log-odds score (-0.302) and a much lower usage rate.

Table 6.9 Cross tabulation: sex and age in formal styles

| Age x sex | {r-1} | [l] | Grand total |
|---|---|---|---|
| Young | | | |
| female | | | |
| n | 436 | 396 | 832 |
| % | 52.4% | 47.6% | 100.0% |
| male | | | |
| n | 312 | 364 | 676 |
| % | 46.2% | 53.9% | 100.0% |
| Total n | 748 | 760 | 1508 |
| Total % | 49.6% | 50.4% | 100.0% |
| Middle age | | | |
| female | | | |
| n | 392 | 284 | 676 |
| % | 58.0% | 42.0% | 100.0% |
| male | | | |
| n | 343 | 333 | 676 |
| % | 50.7% | 49.3% | 100.0% |
| Total n | 735 | 617 | 1352 |
| Total % | 54.4% | 45.6% | 100.0% |
| Old | | | |
| female | | | |
| n | 5 | 203 | 208 |
| % | 2.4% | 97.6% | 100.0% |
| male | | | |
| n | 118 | 246 | 364 |
| % | 32.4% | 67.6% | 100.0% |
| Total n | 123 | 449 | 572 |
| Total % | 21.5% | 78.5% | 100.0% |
| Grand total n | 1606 | 1826 | 3432 |
| Grand total % | 46.8% | 53.2% | 100.0% |

The age x education crosstabs in Table 6.9 show that the highest users of the {r-1} variant are female young and middle aged speakers. Among the older speakers – who

also generally have lower levels of education – men use {r-1} far more than women, however. I then consider the comparison between two sexes and three social classes.

Table 6.10 Cross tabulation: sex and social class in formal styles

| Social class x sex | {r-1} | [l] | Grand total |
|---|---|---|---|
| WC | | | |
| female | | | |
| n | 166 | 406 | 572 |
| % | 29.0% | 71.0% | 100.0% |
| male | | | |
| n | 98 | 370 | 468 |
| % | 20.9% | 79.1% | 100.0% |
| Total n | 264 | 776 | 1040 |
| Total % | 25.4% | 74.6% | 100.0% |
| LMC | | | |
| female | | | |
| n | 384 | 188 | 572 |
| % | 67.1% | 32.9% | 100.0% |
| male | | | |
| n | 304 | 372 | 676 |
| % | 45.0% | 55.0% | 100.0% |
| Total n | 688 | 560 | 1248 |
| Total % | 55.1% | 44.9% | 100.0% |
| MMC | | | |
| female | | | |
| n | 283 | 289 | 572 |
| % | 49.5% | 50.5% | 100.0% |
| male | | | |
| n | 371 | 201 | 572 |
| % | 64.9% | 35.1% | 100.0% |
| Total n | 654 | 490 | 1144 |
| Total % | 57.2% | 42.8% | 100.0% |
| Grand total n | 1606 | 1826 | 3432 |
| Grand total % | 46.8% | 53.2% | 100.0% |

In both the WC and LMC groups, women employ {r-1} notably more than men. The frequency of {r-1} dramatically increases in LMC speakers in both sexes, but the sex pattern is preserved. Conversely, the MMC male speakers favour this prestige form significantly more than MMC females, using it almost as often as LMC women. Thus for {r-1} there are interactions between sex and education, sex and age, and sex and class.

This finding partially matches Labov's Principle of Uniform Evaluation (Labov, 2001: 274): "In linguistic change from above, women adopt prestige forms at a higher rate than men." Earlier explanations of female speakers as typical leaders of linguistic change linked them to linguistic insecurity (Labov, 2001). Paradoxically, at the same time, women tend to be the most conservative linguistically for stable variables. This approach is best applied to the current data if one considers it to be change from above. In that light, the use of the incoming {r-1} may be led by young and middle-aged educated women, especially members of the LMC. This issue is discussed further in chapter 7, hypothesis 2.

To conclude, in this work, sex plays an important role in explaining the variability of {r-1} in the regression model.

### 6.2.6 Place of origin-ethnicity

Place of origin functioned as a significant predictor for {r-1} and ranked fifth in the hierarchy. Although I expected that the native speakers of BKK Thai should employ the BKK prestige variant more than MBK respondents, as with (Cr) the reverse trend occurs: the MBK Thais, or NT Thai speakers, as a whole employed *more* of the prestige variant {r-1} than the control group, BKK Thais, by 48.28% to 37.39%.

Table 6.11 Distribution of (r) by the place of origin

| Place of origin | {r-1} | [l] | Grand total |
|---|---|---|---|
| MBK | | | |
| n | 1431 | 1533 | 2964 |
| % | 48.3% | 51.7% | 100.0% |
| BKK | | | |
| n | 175 | 293 | 468 |
| % | 37.4% | 62.6% | 100.0% |
| Total n | 1606 | 1826 | 3432 |
| Total % | 46.8% | 53.2% | 100.0% |

Some confounding factors could explain this unexpected finding. As noted earlier, most of the BKK immigrants have lower educational levels. Three-quarters of their data comes from speakers with terminal at secondary/vocational educational levels, while there are no university graduates, as shown in table 6.12 below, which gives token numbers only; in contrast, 30% of MBK data is produced by university graduates. This could directly affect their awareness in the linguistic use of the standard form. This depressed level of {r-1} for BKK speakers thus does not provide the expected contrast to the usage of MBK participants.

Table 6.12 Cross-tabulation: place of origin, educational level and social class

| Place of origin X education class | WC | LMC | MMC | Total | Fraction of Total Data |
|---|---|---|---|---|---|
| MBK | | | | | |
| Primary | 260 | 52 | 208 | 520 | 17.5% |
| Secondary/ Vocational | 624 | 520 | 416 | 1560 | 52.5% |
| Bachelor | - | 468 | 416 | 884 | 30% |
| Total | 884 | 1040 | 1040 | 2964 | |
| BKK | | | | | |
| Primary | 104 | - | - | 104 | 22% |
| Secondary/ Vocational | 52 | 208 | 104 | 364 | 78% |
| Bachelor | - | - | - | - | 0% |
| Total | 156 | 208 | 104 | 468 | |
| Grand total | 1040 | 1248 | 1144 | 3432 | |

Secondly, the number of BKK speakers was quite small because they were not our focus group (only 9 participants). But I can at least be certain that the MBK participants, in far greater numbers (57 persons) covering a wider class and educational range, were likely to favour variants of {r-1} from the Bangkok Thai dialect more than the native BKK Thai speakers, in the study.

On the other hand, results might be interpreted in another way: that MBK locals try to acquire a salient feature of the higher status dialect (BKK Thai) rather than using native NT Thai variants. Hence, they have a higher awareness of using {r-1} as symbolic linguistic capital to pursue a better social and economic status. However, hyper-correction of {r-1} – which would take the form of a prolonged trill, and would co-occur with lengthened vowels (Panyaatisin, 2013) – was not found in this study, unlike Labov's NYC rhoticity data, suggesting this explanation may not be correct. In section 6.3, the social network make-up of the two groups is contrasted and I will return to this issue.

### 6.2.7 Life stage - age (change in progress)

With regard to life stage factors, the question has already been raised whether the rise of {r-1} constitutes change in progress or not.

When we consider the factor weights, the middle-aged speakers favour {r-1} the most (factor weight = 0.559), followed by the young (factor weight = 0.516).

Table 6.13 usage of (r) variants by age (formal styles)

| age | {r-1} | [l] | Total |
|---|---|---|---|
| young | | | |
| n | 748 | 760 | 1508 |
| % | 49.6% | 50.4% | 100.0% |
| middle | | | |
| n | 735 | 617 | 1352 |
| % | 54.4% | 45.6% | 100.0% |
| old | | | |
| n | 123 | 449 | 572 |
| % | 21.5% | 78.5% | 100.0% |
| Total n | 1606 | 1826 | 3432 |
| Total % | 100.0% | 100.0% | 100.0% |

It is found that both the young and middle-aged groups prefer {r-1} a great deal. The middle-aged group uses {r-1} only slightly more than the young, while {r-1} is much lower among elderly speakers (only 21.5%). Thus, change in progress is a possible conclusion, and the pattern does not resemble age-grading.[5] Figure 6.4 below illustrates

[5] Age-grading typically shows young people using a vernacular or stigmatised form while the middle-aged favour a standard form, during their decades in the workforce. However, elderly people also favour local or non-prestige forms, due to the lesser concerns of linguistic insecurity and linguistic capital/habitus (Bourdieu, 1973 cited in Goke-Pariola, 1993).

a possible trend of change in apparent time for {r-1} and [l.] (Note that as they rarely use [h], it would be quite difficult for the young group to shift from [h] to {r-1}.)[6]

Table 6.14 Age comparison for two formal style tests in (r)

| Style x age | {r-1} | [l] | Grand total |
|---|---|---|---|
| Reading passage | | | |
| young | | | |
| n | 521 | 697 | 1218 |
| % | 42.8% | 57.2% | 100.0% |
| middle-aged | | | |
| n | 519 | 573 | 1092 |
| % | 47.5% | 52.5% | 100.0% |
| old | | | |
| n | 78 | 384 | 462 |
| % | 16.9% | 83.1% | 100.0% |
| Grand total n | 1118 | 1654 | 2772 |
| Grand total % | 40.3% | 59.7% | 100.0% |
| Minimal pair | | | |
| young | | | |
| n | 227 | 63 | 290 |
| % | 78.3% | 21.7% | 100.0% |
| middle-aged | | | |
| n | 216 | 44 | 260 |
| % | 83.1% | 16.9% | 100.0% |
| old | | | |
| n | 45 | 65 | 110 |
| % | 40.9% | 59.1% | 100.0% |
| Total n | 488 | 172 | 660 |
| Total % | 73.9% | 26.1% | 100.0% |
| Grand total n | 1606 | 1826 | 3432 |
| Grand total % | 46.8% | 53.2% | 100.0% |

[6] Due to this limitation, regardless of [h] use in formal style, the {r-1} of BKK Thai might in the end become the default form.

Table 6.14 shows that the higher the awareness of speakers, the more the speakers use {r-1}. In Figure 6.4 below, the {r-1} variant exhibits symmetric trends for both the reading passage test and the minimal pair test, but its frequency is considerably higher in the more formal style. However, both {r-1} and [l] maintain their form across the styles. This suggests a possible change in apparent time for {r-1}, led by the young group and the middle aged group (c. 35% rise for both), across both of the formal contexts of read speech, rather than an age-grading effect. However, the absence of informal speech data makes this a tentative hypothesis.

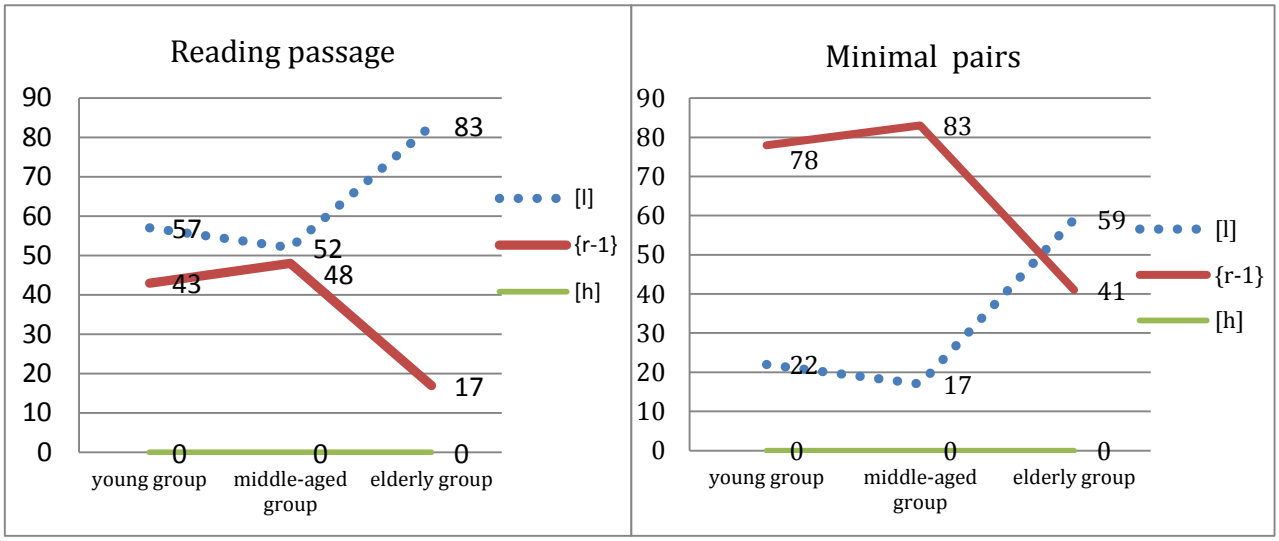



Figure 6.4 Age comparison for two formal style tests in (r)

### 6.2.8 Coda type

The last predictor which will be discussed for this model is the coda type. It was ranked fourth in the hierarchy. Closed codas favoured use of {r-1} (factor weight = 0.555). The closed quality refers to the final sound position after a vowel. The coda must

possess one of these attributes: 1) a glottal stop /ʔ/ after the vowel, or 2) obstruents /p, t, k/, or 3) sonorants and liquids /m, n, ŋ, w, j/ that seal the preceding vowel. (The same options apply in both BKK Thai and NT Thai dialects.) Any other characteristics were regarded as open codas. The words can contain either monophthongs or diphthongs.

I wished to investigate whether the closed quality might be motivated by a class of sounds (sonorants or obstruents). However, in the constraint for open coda, the vowel must be long – otherwise, if it is short, it must be followed by a glottal stop (L-Thongkum, 2011; Naksakul, 2013). Thus, there is an intersection between the coda type factor and the vowel length factor.

Rungpat (2002) sheds light on this in her experiment finding that sonorant codas, e.g. /n/, /m/ and /ŋ/, promote vowel lengthening. I hypothesized that this might also co-occur with the production of the trilled initial {r-1}, which sometimes seemed to be prolonged in production, but in the present data there were no prolonged trills to test this against.

The factor of vowel length proves not to be statistically significant in the model, which was ultimately not surprising. Since the type of coda (open or closed) often correlated with the type of vowel (short or long) – that is, short vowels often were closed, while longer ones were more often open – tests are unlikely to show both as significantly contributing to variation. With multiple careful analyses, it turned out that openness (of the coda type) was the only factor that could be taken into account.[7]

In addition, the fact that the consonants closing the coda mix distinct types (sonorant, obstruent, glottal stop) may help explain why it is never a strong predictor, and also make it difficult to understand why closed syllables promote rhoticity, coupled with the intersection with vowel length.

[7] The data in formal speech styles were relatively unbalanced. Distribution was uneven across open and closed categories, but they still passed the normality test, so logistic regression could be conducted. This was the limitation of this study, which might not be fully conclusive on these grounds.

### 6.2.9 Summary for {r-1}

Summing up the picture of independent predictors so far, helps to provide a description of the demeanor of {r-1}. These comprised social occupation, led by the MMC and LMC, followed by the respondents who acquired higher educational levels, females, and speakers in the middle and younger age groups – all favouring {r-1} over [l]. These speakers are expected to use standard Thai, and might be the persons with the highest exposure to information and mass media entertainment, which employs BKK Thai dialet as a lingua franca. It was found that MBK locals employ more of the {r-1} prestige variant than BKK Thais.

## 6.3 (v) regression model result for [h]

I next introduce the setting of the application value, and predictive factors, for the logistic regression model focusing on [h], the glottal fricative. This variant belongs to NT Thai as a native phoneme. The [h] variant has a strong relationship with variants [l] and {r-1} since it can alternate with them under certain conditions in NT Thai casual speech.

Condition

| |
|---|
| (v) [h] vs [l], [h] as an application value pitted against solely [l]. {r-1} variant was excluded as it almost never occurs. Only informal style data will be input. Again, style as a predictor will not be used in the analysis. |

As seen in table 6.2, the [h] variant is rather infrequent in all informal styles, namely casual style (20.3%), picture description (10.8%) and animated film description (8.9%); and did not appear in formal styles for orthographic reasons. In this model, the {r-1} variant is discarded. [h] frequency accounts for only 15% (793 out of 5,244) as

shown in figure 6.5. The rest of the data are all [l] (n= 4,451). Despite the frequency of [h] being quite low, its number is high enough to compare with [l] in the regression analysis as a non-parametric measurement.

Figure 6.2 also showed that [h] occurrence gradually falls as formality increased, from conversational style to picture description to animated film description. The two description tasks definitely require more attention, memory and narrative competence.[8] Possibly, these more difficult tasks might lead to producing a more emphatic speech style in which speakers use less [h].

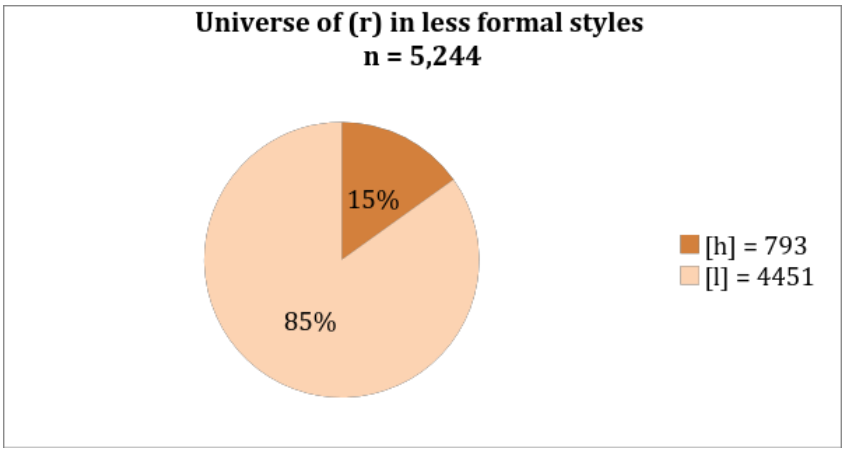



Figure 6.5 The proportional frequency of [l] and [h]

[8] It would be useful to trial several kinds of narrative/description tasks. Further psycholinguistic experiments should be done in future to cast light on the interrelation between the degree of attention paid to speech and the levels of linguistic cues, task difficulty or types of narrative tasks.

Table 6.15 Model summary for [h]

| h | Initial Inputs | Final inputs – best model | Selected as a predictor in the model | Significant outputs |
|---|---|---|---|---|
| DepV | r-1 | X | n/a | n/a |
| | l | Ground | n/a | n/a |
| | h | Application Value | n/a | n/a |
| Indep V | life stage | X | X | X |
| | social occupational class | ✓ | ✓ | ✓ |
| | type of experiment | ✓informal | X | X |
| | sex | ✓ | ✓ | ✓ |
| | education | ✓ | ✓ | ✓ |
| | place of origin | X | X | X |
| | social network strength (continuous) | ✓ | ✓ | ✓ |
| | real age (continuous) | ✓ | ✓ | ✓ |
| | vowel length | ✓ | ✓ | ✓ |
| | coda type | X | X | X |

Table 6.16 Multiple regression analysis of [h]

| | Predictors | Factor | Log-odds | Tokens *n*= 5,244 | AppV/all tokens | Centered factor weight |
|---|---|---|---|---|---|---|
| 1 | class | | | | | |
| | | WC | -0.010 | 1507 | 0.154 | 0.498 |
| | | LMC | -0.303 | 1952 | 0.095 | 0.425 |
| | | MMC | 0.313 | 1785 | 0.211 | 0.578 |
| 2 | vowel length | | | | | |
| | | short | 0.209 | 2315 | 0.188 | 0.552 |
| | | long | -0.209 | 2929 | 0.122 | 0.448 |
| 3 | real age | continuous | | | | |
| | | +1 | 0.017 | | | |
| 4 | education | | | | | |
| | | primary | 0.320 | 978 | 0.286 | 0.579 |
| | | secondary | -0.265 | 2898 | 0.104 | 0.434 |
| | | bachelor | -0.056 | 1368 | 0.156 | 0.486 |
| 5 | social network score (SNS) | continuous | | | | |
| | | +1 | 0.837 | | | |
| 6 | sex | | | | | |
| | | female | 0.108 | 2477 | 0.164 | 0.527 |
| | | male | -0.108 | 2767 | 0.14 | 0.473 |

Model result of [h]

| n | df | Intercept | Overall proportion | |
|---|---|---|---|---|
| 5244 | 9 | -2.858 | 0.151 | |
| deviance | AIC | AICc | Dxy | $r^2$ |
| 4135.36 | 4153.36 | 4153.394 | 0.359 | 0.122 |

BEST STEP-DOWN MODEL:

class (4.89e-09) + vowel.length (2.22e-07) + real.age (4.66e-07) + education (0.000244) + MBKmean (0.000473) + sex (0.0116)

Ranking summary: [h] model in informal styles[9]

| ranking | independent factors | attributes of independent factors | | | |
|---|---|---|---|---|---|
| | | (+) favour | | (-) disfavour | |
| 1 | Social occupational class | +MMC | | -1st LMC[10] | -2nd WC |
| 2 | Vowel length | +short vowel | | -long vowel | |
| 3 | Real age (continuous) | +continuous (progressive) | | | |
| 4 | Educational level | +primary | | -1st secondary | -2nd bachelor |
| 5 | Social network strength score (SNS) | +progressive | | | |
| 6 | Sex | +female | | -male | |

Six predictors are involved in explaining [h]'s attributes, namely, social occupational class, vowel length, real age, educational level, social network strength and sex. These predictive factors and their explanations are illustrated below, according to their shared characteristics:

[9] The reverse of the findings for this [h] model can be seen in 6.4, the [l] model, in (vi) below.
[10] -1st is worse than the -2nd.

1) vowel length,
2) social class,
3) age,
4) education,
5) social network strength,
6) sex, and
7) ethnicity.

### 6.3.1 Vowel length

In this study, there were two linguistic factors involved, namely, vowel length and type of coda. After running the model, it turns out that the only statistically significant factor is vowel length, with short vowels favouring [h]. In terms of the statistical importance hierarchy, this short vowel feature was very strong as it ranked in second place out of 10 predictor inputs. (I report it here first, in order to discuss social predictors together.) The factor weight range is 0.11, not large but still enough to distinguish them.

It should be noted that a number of lexical items of [h] onset with short vowels in MBK dialect varied. It was observed that [haw0] "the first or the second person pronoun", comprised a majority of the short vowel tokens with [a]. It also dominates other varieties of [h] onset lexical items. To elaborate, the frequency of [haw0] is 395 tokens or 0.075 per 5,265 tokens. It accounts for almost 50% of the total [h] occurrence in all informal styles. Other examples of [h] onsets are varied but they are minimal compared to /haw0/. The numbers in the brackets represent the ratio of those words per 5,265 tokens, these data below show only some examples of the lexical items

/hap3/ ฮับ “to receive” (0.010),

/hak3/ ฮัก “to love” (0.002), and

/haŋ0/ ฮัง “nest” (0.002).

This unbalanced lexical distribution is a limitation of the study which was only realized after data collection. The speech data were limited to the first 30 to 45 minutes of the conversation. Thus, the variety among [h] consonant onset tokens might be low. Also the pronominal [haw0] can be used in so many circumstances – it can be either a singular or plural pronoun; it is a relatively polite to neutral pronoun that NT Thai people use often – and is ubiquitous.

In general, the short vowel can co-occur with either type of coda position, namely open or closed words, CV or CVC. It seems that all the short vowel attributes co-occur with any kind of closed coda, as examples above have shown. Even glottal stop codas, which co-occur obligatorily with a short vowel sound, are closed syllable types.[11] However, it was unexpected that the closed coda attribute would not be a statistically significant factor for [h] onset, while vowel-length was regularly a strong predictor.

### 6.3.2 Social occupational class

MMC speakers favour [h] the most. The LMC and WC factor weight scores are close to each other but remain distinct.

In the next part, the cross-tabulation analyses are compared with the regression results. Note that the type of age predictor in the regression model was the continuous one based on the real age of the speakers. The age stratification used in crosstabs is a

[11] A study which phonetically analyses the occurrence and composition of glottal stop codas is desired for further research.

different measurement which separates speakers' age range into three groups. Both types of age factor were tested separately. Finally, I included only the best predictor in each model based on log-likelihood comparisons.

Table 6.17 cross-tabulates the social class and age factors. The [h] glottal fricative variant is much more frequently used by MMC elderly speakers (45.2%) than any other group, distantly followed by LMC elderly speakers (26.4%) and then the middle-aged of the MMC and, surprisingly, the WC. Possibly [h] possesses social meaning as a covert prestige for this high-status group (MMC older speakers). It is interesting that the elderly LMC and middle aged WC speakers also favour [h] a great deal as well.

Table 6.17 Cross-tabulation of [h]: social class by age in informal styles

| Social class x age | [h] | [l] | {r-1} | Grand total |
|---|---|---|---|---|
| WC | | | | |
| young | | | | |
| n | 71 | 466 | 11 | 548 |
| % | 13.0% | 85.0% | 2.0% | 100.0% |
| middle-aged | | | | |
| n | 144 | 496 | 2 | 642 |
| % | 22.4% | 77.3% | 0.3% | 100.0% |
| old | | | | |
| n | 17 | 313 | | 330 |
| % | 5.2% | 94.9% | 0.0% | 100.0% |
| Total n | 232 | 1275 | 13 | 1520 |
| Total % | 15.3% | 83.9% | 0.9% | 100.0% |
| LMC | | | | |
| young | | | | |
| n | 74 | 765 | | 839 |
| % | 8.8% | 91.2% | 0.0% | 100.0% |
| middle-aged | | | | |
| n | 68 | 882 | 1 | 951 |
| % | 7.2% | 92.7% | 0.1% | 100.0% |
| old | | | | |
| n | 43 | 120 | | 163 |
| % | 26.4% | 73.6% | 0.0% | 100.0% |
| Total n | 185 | 1767 | 1 | 1953 |
| Total % | 9.5% | 90.5% | 0.1% | 100.0% |
| MMC | | | | |
| young | | | | |
| n | 48 | 727 | | 775 |
| % | 6.2% | 93.8% | 0.0% | 100.0% |
| middle-aged | | | | |
| n | 135 | 448 | 7 | 590 |
| % | 22.9% | 75.9% | 1.2% | 100.0% |
| old | | | | |

| | | | | |
|---|---|---|---|---|
| n | 193 | 234 | | 427 |
| % | 45.2% | 54.8% | 0.0% | 100.0% |
| Total n | 376 | 1409 | 7 | 1792 |
| Total % | 21.0% | 78.6% | 0.4% | 100.0% |
| Grand total n | 793 | 4451 | 21 | 5265 |
| Grand total % | 15.1% | 84.5% | 0.4% | 100.0% |

### 6.3.3 The covert prestige and the stigmatised quality of variant [h]

At first, I hypothesised that the [h] variant would be strongly preferred by working-class speakers and would be a marker of stigmatization; and indeed young and middle-aged WC speakers use [h] quite often. Surprisingly, it turns out that MMC speakers favour it more than the WC speakers, overall (21.0% to 15.3%), please see table 6.17. This difference is entirely due to heavy use of these local forms by the older high status MMC people, as Figure 6.6 makes clear.

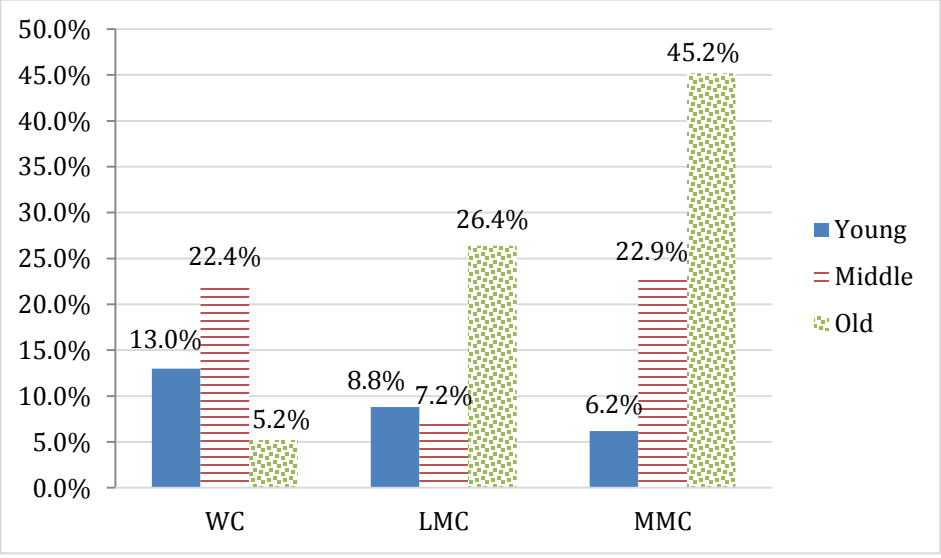



Figure 6.6 The cross-tab of class and age in the informal style

Except for the elderly, who use [h] quite a lot, the LMC adults employ it the least amongst the three social classes. This might reflect the linguistic insecurity in the LMC groups if they consider [h] as a stigmatized form, that is, the substrate dialect (NT Thai) which is lower in status than the BKK Thai dialect. This complex picture with interaction between age and class was unexpected.

Perhaps [h] then should be reconsidered to have two social meanings in lieu of one: i.e., a covert prestige function for the MMC adults, and a stigmatized value for the WC and LMC speakers, and for the young generally (see section 7.7 on local dialect maintenance). However, I observed and confirmed from the MMC speakers that they were also aware of [h]'s stigmatization, which is discussed in chapter 7. Thus, social occupational class plays a crucial role in [h] use, and evidently interacts with age.

### 6.3.4 Age (continuous data)

Another predictor of [h] user behaviour involves the speaker's real age, which is a continuous value. Older speakers favour [h]. An implication of apparent time change can be drawn. That is, the elderly may preserve this local form, while the younger generation may eventually not use it anymore. In that case, the [h] is likely to be replaced by [l] in informal speech.

### 6.3.5 Education

In the regression model, education is not a powerful explanatory factor, and its effect is not linear. Speakers with only primary level (E1) favour [h] the most; however, those at the secondary/vocational level use it the least, with university graduates also somewhat disfavouring [h]. This difference by education only emerges in the higher social classes, however, as there is an interaction of education and class.

Table 6.18 Cross-tabulation: education and social class in informal styles

| Social class x education | [h] | [l] | {r-1} | Grand total |
|---|---|---|---|---|
| WC | | | | |
| Primary (E1) | | | | |
| n | 89 | 463 | - | 552 |
| % | 16.1% | 83.9% | 0.0% | 100.0% |
| Secondary (E2) | | | | |
| n | 143 | 812 | 13 | 968 |
| % | 14.8% | 83.9% | 1.3% | 100.0% |
| Bachelor (E3) | - | - | - | - |
| Total n | 232 | 1275 | 13 | 1520 |
| Total % | 15.3% | 83.9% | 0.9% | 100.0% |
| LMC | | | | |
| Primary (E1) | | | | |
| n | 43 | 41 | - | 84 |
| % | 51.2% | 48.8% | 0.0% | 100.0% |
| Secondary (E2) | | | | |
| n | 90 | 1076 | - | 1166 |
| % | 7.7% | 92.3% | 0.0% | 100.0% |
| Bachelor (E3) | | | | |
| n | 52 | 650 | 1 | 703 |
| % | 7.4% | 92.5% | 0.1% | 100.0% |
| Total n | 185 | 1767 | 1 | 1953 |
| Total % | 9.5% | 90.5% | 0.1% | 100.0% |
| MMC | | | | |
| Primary (E1) | | | | |
| n | 148 | 194 | - | 342 |
| % | 43.3% | 56.7% | 0.0% | 100.0% |
| Secondary (E2) | | | | |
| n | 67 | 710 | - | 777 |
| % | 8.6% | 91.4% | 0.0% | 100.0% |
| Bachelor (E3) | | | | |
| n | 161 | 505 | 7 | 673 |
| % | 23.9% | 75.0% | 1.0% | 100.0% |
| Total n | 376 | 1409 | 7 | 1792 |
| Total % | 21.0% | 78.6% | 0.4% | 100.0% |
| Grand total n | 793 | 4451 | 21 | 5265 |
| Grand total % | 15.1% | 84.5% | 0.4% | 100.0% |

According to table 6.18, all speakers who are in the (E1) level tend to favour [h] a great deal – and the middle class speakers use it twice as much as any other group. Another group, surprisingly, who favours [h] are the MMC speakers with university (E3) education. WC speakers show a consistent rate of about 16%, but there are none with university education in the sample. Figure 6.7 shows this bimodal pattern.

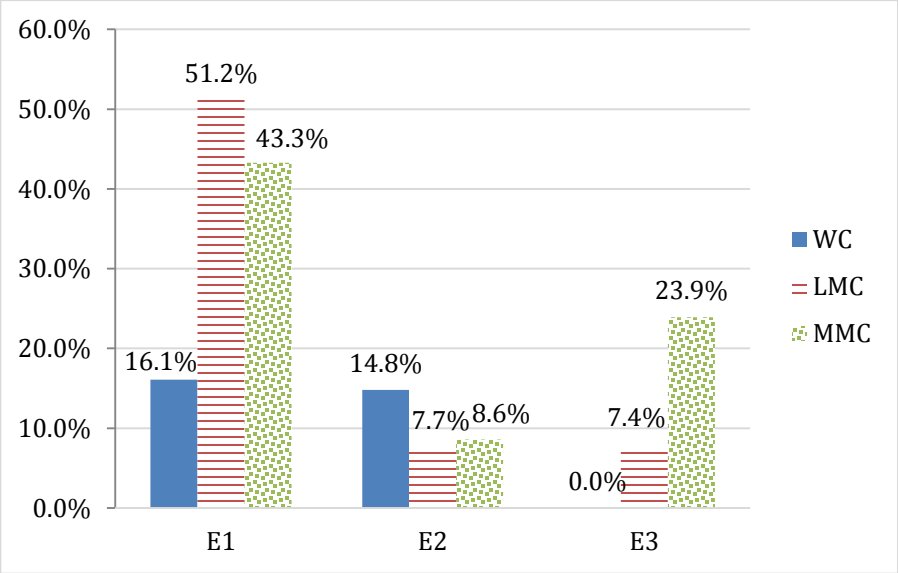



Figure 6.7 The cross-tabulation of class and education in informal style

I expected the MMC to have a higher level of education. However, from interviews I discovered that many (especially female) leaders have quite a low level of education, only primary school level. The elderly in the middle-middle class generally have high level careers, wealth, and a good reputation in the community, even though there was generally quite a low educational level. Interestingly, they are versatile in knowledge, quite erudite, have a strong network, and are recognised for their public spiritedness and generosity.

There is an explanation in terms of social mobility (Weber, 1946).[12] High educational levels do not characterise the MMC because of the confounding factor of age. In this community around 40-50 years ago, most laypersons were almost uneducated or even illiterate. Half of them claimed that the highest education levels they could achieve were grades 2 to 4 in primary school. Most of those people are at least 55 years old by now. The MMC were the only group who had the means to pursue secondary or vocational education, and this was considered prestigious at that time. It was very rare or almost impossible for these people to gain university education in such a suburban area as this small sub-district. As such, it would be misleading not to consider the changes in access to education in Thailand. Formal education at secondary, vocational or university level has only recently been institutionalized; formerly much schooling was temple-based (see 3.6.3.1), but this is no longer the case. Consequently, the number of years or level of education, and the social status involved, cannot be directly compared between generations.

### 6.3.6 Social network strength (continuous data)

Finally, this section associates the SNS scores of MBK ties with speaker age and the frequencies of the [h] (and the [l]) variant. Raw frequencies of [h] and [l] are retrieved from the informal style data only. The SNS score of MBK tie only and age of each participant has been demonstrated. All speakers (both MBK locals and BKK participants) are included in the table and charts, but only their ties with local MBK people (BKK ties with their scores of the 66 participants and graphs are demonstrated in appendix H).

[12] Max Weber's delineation (1946) is concerned with social mobility, the movement of people between or within social strata in a society. People move or struggle to change their social statuses with many causes, such as wealth, prestige, power, elevating of their educational levels, getting higher or lower status occupations, marriage, ethnicity or location of residence.

Table 6.19 has been ordered according to speakers' SNS scores, ranked from the smallest to the largest. (The leftmost column with speaker number thus indicates no social grouping, nor does it have any other meaning.)

Table 6.19 Association between SNS scores of MBK ties only, speaker age, and [h] and [l] frequency in informal speech styles

| Speaker No. | SNS score for MBK network only score | [h] | [l] | Speaker age (years) |
|---|---|---|---|---|
| 1 | 0 | 0 | 126 | 32 |
| 2 | 0.22 | 0 | 85 | 59 |
| 3 | 0.29 | 0 | 109 | 42 |
| 4 | 0.3 | 0 | 70 | 17 |
| 5 | 0.32 | 0 | 86 | 51 |
| 6 | 0.35 | 27 | 56 | 25 |
| 7 | 0.39 | 23 | 64 | 17 |
| 8 | 0.39 | 17 | 72 | 44 |
| 9 | 0.4 | 29 | 22 | 16 |
| 10 | 0.41 | 0 | 91 | 56 |
| 11 | 0.42 | 0 | 75 | 17 |
| 12 | 0.45 | 3 | 90 | 17 |
| 13 | 0.46 | 2 | 80 | 52 |
| 14 | 0.46 | 0 | 37 | 19 |
| 15 | 0.46 | 26 | 57 | 22 |
| 16 | 0.48 | 0 | 87 | 17 |
| 17 | 0.48 | 4 | 80 | 47 |
| 18 | 0.51 | 14 | 67 | 14 |
| 19 | 0.52 | 62 | 31 | 71 |
| 20 | 0.53 | 7 | 80 | 18 |
| 21 | 0.53 | 41 | 48 | 47 |
| 22 | 0.55 | 35 | 59 | 50 |
| 23 | 0.57 | 3 | 81 | 16 |
| 24 | 0.58 | 22 | 34 | 47 |
| 25 | 0.59 | 16 | 55 | 53 |
| 26 | 0.62 | 0 | 85 | 55 |
| 27 | 0.62 | 41 | 38 | 59 |
| 28 | 0.62 | 5 | 87 | 35 |
| 29 | 0.63 | 66 | 17 | 45 |
| 30 | 0.63 | 2 | 63 | 18 |

| | | | | |
|---|---|---|---|---|
| 31 | 0.63 | 0 | 115 | 19 |
| 32 | 0.64 | 0 | 90 | 16 |
| 33 | 0.65 | 0 | 62 | 16 |
| 34 | 0.65 | 0 | 49 | 14 |
| 35 | 0.65 | 20 | 70 | 29 |
| 36 | 0.66 | 0 | 79 | 41 |
| 37 | 0.66 | 0 | 62 | 29 |
| 38 | 0.66 | 8 | 55 | 13 |
| 39 | 0.66 | 0 | 52 | 17 |
| 40 | 0.66 | 0 | 86 | 14 |
| 41 | 0.67 | 7 | 80 | 17 |
| 42 | 0.67 | 28 | 42 | 18 |
| 43 | 0.68 | 0 | 71 | 17 |
| 44 | 0.69 | 0 | 79 | 20 |
| 45 | 0.69 | 45 | 22 | 41 |
| 46 | 0.69 | 31 | 54 | 66 |
| 47 | 0.71 | 8 | 43 | 28 |
| 48 | 0.72 | 0 | 69 | 29 |
| 49 | 0.72 | 0 | 91 | 45 |
| 50 | 0.73 | 1 | 89 | 51 |
| 51 | 0.74 | 14 | 71 | 59 |
| 52 | 0.74 | 12 | 53 | 17 |
| 53 | 0.75 | 19 | 64 | 17 |
| 54 | 0.76 | 4 | 82 | 18 |
| 55 | 0.76 | 3 | 49 | 17 |
| 56 | 0.77 | 43 | 41 | 58 |
| 57 | 0.78 | 0 | 71 | 25 |
| 58 | 0.79 | 17 | 52 | 60 |
| 59 | 0.79 | 13 | 62 | 54 |
| 60 | 0.79 | 0 | 115 | 49 |
| 61 | 0.81 | 2 | 84 | 15 |
| 62 | 0.81 | 9 | 68 | 49 |
| 63 | 0.84 | 3 | 52 | 15 |
| 64 | 0.84 | 16 | 76 | 47 |
| 65 | 0.86 | 0 | 79 | 61 |
| 66 | 1 | 45 | 40 | 64 |

The associations amongst the SNS scores, age of speakers (66 persons), and [h] variant frequency in informal styles can be seen in Figure 6.8.

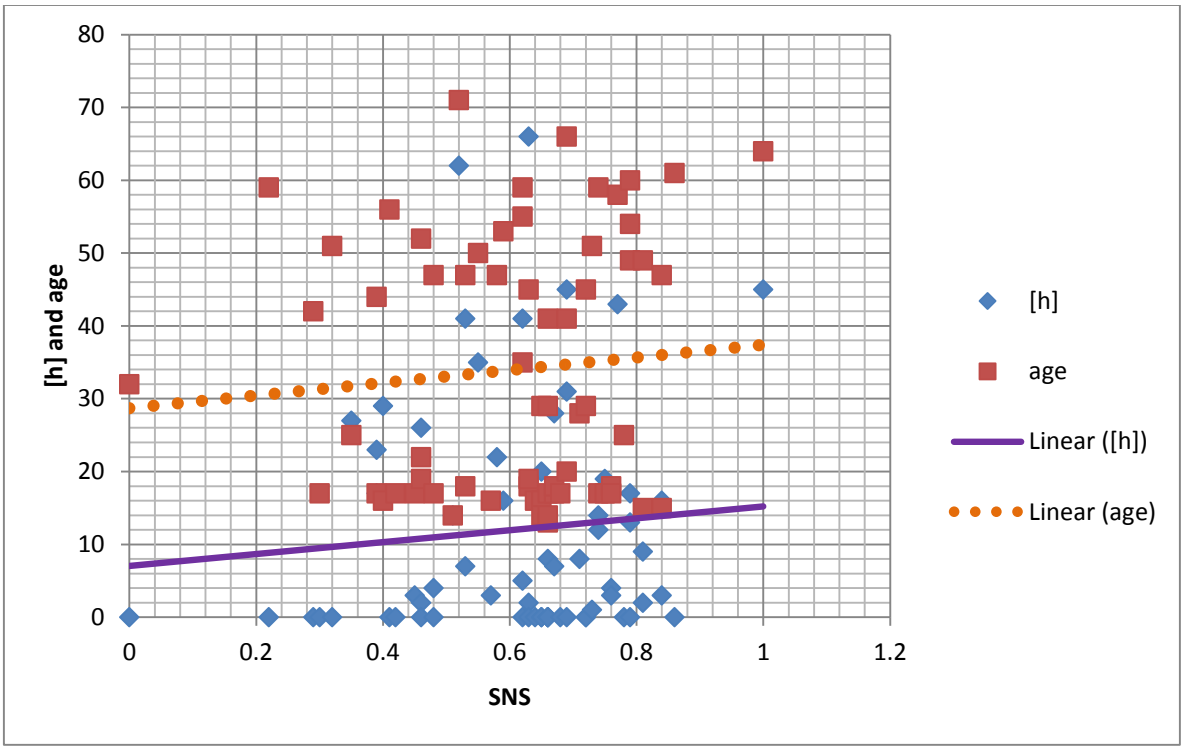



Figure 6.8 Association between the SNS scores, age of speakers, and [h] frequency in informal styles

Figure 6.8 reveals a slightly positive correlation (shown by the solid straight line) between [h] usage and strength of MBK ties. The correlation score, *r*, is 0.089. There is a similarly weak correlation between speaker age and strength of MBK ties. Thus, the stronger one's MBK network, the more likely one is to use [h] and to be an older person – to a slight degree.

Table 6.20 Correlation scores between SNS's MBK ties only and variants ([h] and [l], respectively)

| SNS score for MBK network only score | SNS score for MBK network only score | [h] | [l] | age (years) |
|---|---|---|---|---|
| | 1 | | - | - |
| [h] | 0.0884 | 1 | - | - |
| [l] | -0.247 | -0.693686 | 1 | - |
| age (years) | 0.0858 | 0.3990066 | 0.0731488 | 1 |

Recall that as the SNS measures for speakers' BKK ties did not pass the normality test threshold in the initial SNS analysis, they are not then used in the regression model, for either [h] in model (v), or [l] in model (vi) – see 6.4.5 below. The data and graphs for SNS of BKK ties which exhibit the scores' association and correlation scores are in appendix H.

Social network strength (SNS) was a significant predictor, fifth in rank in the regression model. Recall (4.8) that an ego-centred approach is used to analyse the two modes, i.e. MBK locals and BKK participants, but we are only able to look directly at results for the MBK group. To note, the BKK speech data (BKK speakers) has not been excluded. This analysis came from only BKK-ties. This is whether the BKK-ties are held by MBK locals or BKK participants. The BKK-ties were excluded from the SN data.

According to my initial observations of the NTIE, it was found that even though the participants from different ethnic groups/places, particularly from Bangkok province and its vicinity, had been settled in this place for at least 2 years,[13] people from the two different origins seemed to have little contact with each other. The network links between them seem to be loose-knit, with a low degree of contact between local MBK participants and internal immigrant BKK participants. This was contrary to what I had

[13] The NTIE was established in the 1980's, approximately 30 years ago.

expected, which was that people from elsewhere should have conformed or adapted to the norms of the local community, and vice versa: that local speakers of high status would have cultivated links with BKK immigrants due to the national prestige of their dialect. However, this turned out not to be so. Thus, this situation requires a different approach to the classical one used in Milroy (1980). (See 4.6.)

For statistical reasons (section 4.6), the BKK network scores across all categories were quite low, indicating not only few links (both to members of the MBK group, and indeed with each other internally within the BKK group) but also a low real-life contact and low intimacy scores. Because of these characteristics, combined with multicollinearity and non-normal distribution, it was not possible to compare these scores with the MBK network scores.

However, the high log-odds result of 0.837 for local MBK people suggests they are generally ethnically homogeneous as a network, and mostly show high numbers of real-life contacts with each other, and also high intimacy measures. The high (raw) score indicates the favouring of the MBK ties (a low score would have shown a disfavouring of the MBK ties, perhaps reflecting a preference for ethnic heterogeneity or a mixed-ethnicity network indirectly.)

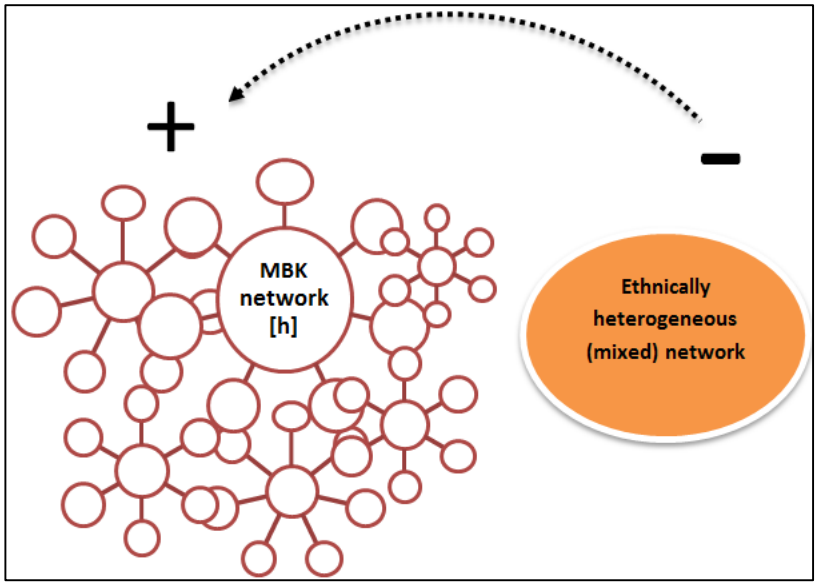



Figure 6.9 MBK network [h] and its positive trajectory

Figure 6.9 simulates respondents in the NTIE and shows how they react to the MBK network clusters by exploiting the SNS score. The dotted arrow reflects the nature of a continuous SNS score. The arrowhead reveals the direction of SNS scores towards the MBK network (positive trajectory). The other end refers to the negative score or the reverse effect.[14] Thus [h] is strongly favoured by the MBK SNS predictor, in a positive orientation (+) with 0.837 log-odds. This implies that the closer speakers are tied in to the MBK network sphere, the more they prefer the NT Thai variant [h] as a realization of underlying /r/.

The positive associations amongst the SNS data distribution, age of speakers and [h] use rate and a linear graph of it in appendix H.

The SNS findings reveal only the level or range of degrees of the network of MBK locals. They show the actual nature of the MBK local group – that in fact they inherit their strong MBK networks mainly from the same ethnic group. They may not even realise that although they might by chance make contact with many people from elsewhere,

[14] This will be shown in section §6.4, model (vi) of [l].

they often fail to recognize the internal immigrants as belonging to their links/network, according to the reports in the interviews.

### 6.3.7 Sex

Sex is the least powerful of the six significant predictors for this variant. Females use [h] the most overall; but the log-odds value is 0.108 which is quite a small number, and factor weight is 0.527, only slightly above 0.5. The factor weight range between the sexes is not great (.054). Thus, in general, it can be said that sex has an effect on the regression model that is significance, but the effect of sex is weak.

Table 6.21 The usage of [h] by sex in informal styles

| Sex | [h] | [l] | {r-1} | Grand total |
|---|---|---|---|---|
| female | | | | |
| n | 406 | 2071 | 13 | 2490 |
| % | 16.3% | 83.2% | 0.5% | 100.0% |
| male | | | | |
| n | 387 | 2380 | 8 | 2775 |
| % | 14.0% | 85.8% | 0.3% | 100.0% |
| Total n | 793 | 4451 | 21 | 5265 |
| Total % | 15.1% | 84.5% | 0.4% | 100.0% |

The overall rates of [h] use across sexes are close, and the same is also found in [l]'s distribution. However, it is common in sociolinguistics to find interaction between sex and class (as we saw above for {r-1} in 6.2.5). Thus the cross-tabulation between sex and social class is illustrated in order to gain a better view of [h]'s distribution.

Table 6.22 Cross-tabulation: sex and social class in informal styles

| Social class x sex | [h] | [l] | {r-1} | Grand total |
|---|---|---|---|---|
| WC | | | | |
| female | | | | |
| n | 191 | 521 | 13 | 725 |
| % | 26.3% | 71.9% | 1.8% | 100.0% |
| male | | | | |
| n | 41 | 754 | - | 795 |
| % | 5.2% | 94.8% | 0.0% | 100.0% |
| Total n | 232 | 1275 | 13 | 1520 |
| Total % | 15.3% | 83.9% | 0.9% | 100.0% |
| LMC | | | | |
| female | | | | |
| n | 87 | 829 | - | 916 |
| % | 9.5% | 90.5% | 0.0% | 100.0% |
| male | | | | |
| n | 98 | 938 | 1 | 1037 |
| % | 9.5% | 90.5% | 0.1% | 100.0% |
| Total n | 185 | 1767 | 1 | 1953 |
| Total % | 9.5% | 90.5% | 0.1% | 100.0% |
| MMC | | | | |
| female | | | | |
| n | 128 | 721 | - | 849 |
| % | 15.1% | 84.9% | 0.0% | 100.0% |
| male | | | | |
| n | 248 | 688 | 7 | 943 |
| % | 26.3% | 73.0% | 0.7% | 100.0% |
| Total n | 376 | 1409 | 7 | 1792 |
| Total % | 21.0% | 78.6% | 0.4% | 100.0% |
| Grand total n | 793 | 4451 | 21 | 5265 |
| Grand total % | 15.1% | 84.5% | 0.4% | 100.0% |

Table 6.22 shows that both sexes in the LMC use [h] with low frequencies. However in both the other class groups this is not the case, and their effect is opposed:

WC females use [h] the most, far more than WC men; but the opposite is true in the MMC, where males use strong levels of [h], about the same as WC females.

I argue that [h] may be a covert prestige form (as addressed in 6.3.3) since it is used a great deal by both sexes of the MMC. MMC male speakers of the MBK community may be linguistic maintainers for this feature of NT Thai, given their high rates of [h].

### 6.3.8 Ethnicity - place of origin

Another factor involving dialect contact is the place of origin factor. At first, I suspected the contact between BKK Thai and NT Thai speakers might lead to linguistic changes in NTIE, hypothesizing that BKK speakers would use {r-1} more than the locals. However, this proved not to be the case; while the fact that BKK speakers do not use [h] means the place of origin/ethnicity factor is not significant in the regression model results.

Table 6.23 The usage of (r) variants by place of origin in informal styles

| Place of origin | [h] | [l] | {r-1} | Total |
|---|---|---|---|---|
| Lamphun | | | | |
| n | 790 | 3592 | 21 | 4403 |
| % | 17.9% | 81.6% | 0.5% | 100.0% |
| Bangkok and its vicinities | | | | |
| n | 3 | 859 | - | 862 |
| % | 0.4% | 99.7% | 0.0% | 100.0% |
| Total n | 793 | 4451 | 21 | 5265 |
| Total % | 15.1% | 84.5% | 0.4% | 100.0% |

Lamphun respondents favour [h] far more than the Bangkokians, who almost never use it[15]. BKK speakers do not accommodate their speech attributes to NT Thai dialect. We also cannot assume that MBK locals accommodate their linguistic behaviour to BKK participants. In the next section, where we consider the lateral variant, it will be necessary to consider that an increase in [l] use might stem from other reasons, not straightforwardly from the contact with BKK immigrants.

### 6.4 (vi) regression model result of [l]

Condition

| |
|---|
| (vi) [l] as an application value pitted against all other variants, {r-1} and [h]. Only the informal data will be used, not the formal data. Style as a predictor will be disregarded in the analysis. |

This condition is the reverse effect of the [h] model. It deals with an application value [l] pitted against [h], while {r-1} and [ɾ] were disregarded in this analysis due to very low frequency of occurrence (< 1%). In this condition, I investigate the most frequently found variant in the informal styles.

[15] This is the reason why place of origin factor could not be used in the regression. The data is categorical.

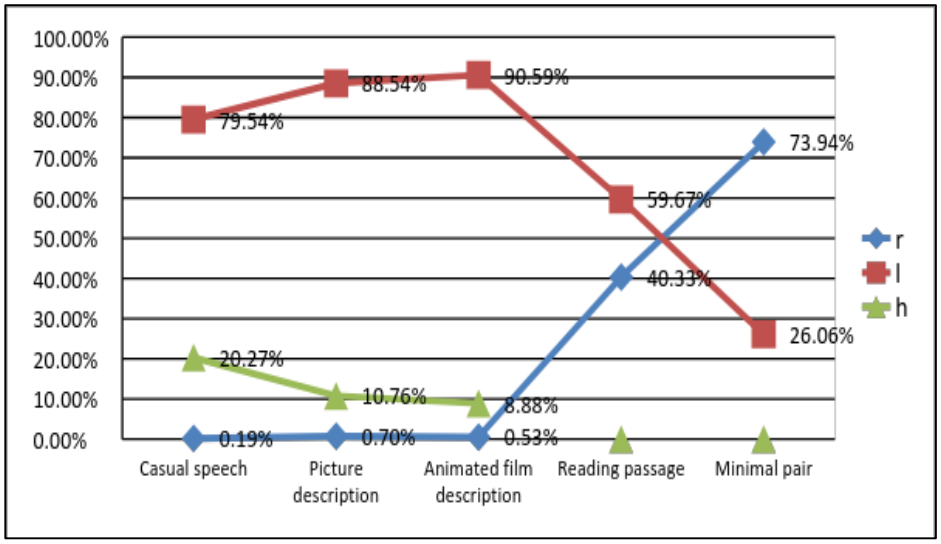



Figure 6.10 The distribution of (r-1) variants across speech styles (n= 8,697)

Figure 6.10, above, shows that the [l] variant is the most frequently found, and dominant, across all types of informal speech styles. A certain amount of [h] appears only in the categories of casual speech, where {r-1} is very rare. However, in careful styles, [l] frequency drops notably and {r-1} increases sharply, while [h] cannot be tested. The reason for {r-1} being excluded now is due to its near-categorical absence (only 21 tokens out of 5,265); the complementary distribution of [l] and {r-1} in casual styles makes quantitative modelling of the entire dataset unreliable.

Again, according to figure 6.5, in the preceding [h] model, when the {r-1} variant's frequency was disregarded, the [l] variant frequency outweighed the [h] variant, 85% to 15%. Despite the fact that the quantity of [h] is quite low, it is still high enough to compare with [l] in the regression analysis.

Table 6.24 Model summary

| l | Initial Inputs | Final inputs – best model | Selected as a predictor | Significant outputs |
|---|---|---|---|---|
| DepV | r-1 | X | n/a | n/a |
| | l | Application Value | n/a | n/a |
| | h | Ground | n/a | n/a |
| IndepV | life stage | X | X | X |
| | social occupational class | ✓ | ✓ | ✓ |
| | type of experiment | ✓informal | X | X |
| | sex | ✓ | ✓ | ✓ |
| | education | ✓ | ✓ | ✓ |
| | place of origin | X | X | X |
| | social network strength (continuous) | ✓ | ✓ | ✓ |
| | real age (continuous) | ✓ | ✓ | ✓ |
| | vowel length | ✓ | ✓ | ✓ |
| | coda-type | X | X | X |

Grand total = 5,244

Table 6.25 Multiple regression analysis of [l] in informal styles

| Rank | Predictors | Factors | Log-odds | Tokens N= 5,244 | AppV/all tokens | Centered factor weight |
|---|---|---|---|---|---|---|
| 1 | class | | | | | |
| | | LMC | 0.303 | 1952 | 0.905 | 0.575 |
| | | WC | 0.010 | 1507 | 0.846 | 0.502 |
| | | MMC | -0.313 | 1785 | 0.789 | 0.422 |
| 2 | Vowel length | | | | | |
| | | Short | -0.209 | 2315 | 0.812 | 0.448 |
| | | Long | 0.209 | 2929 | 0.878 | 0.552 |
| 3 | Real age | Continuous | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | -1 | -0.017 | | | |
| 4 | Education | | | | | |
| | | Secondary | 0.265 | 2898 | 0.896 | 0.566 |
| | | Bachelor | 0.056 | 1368 | 0.844 | 0.514 |
| | | Primary | -0.32 | 978 | 0.714 | 0.421 |
| 5 | Social network strength (SNS) | continuous | | | | |
| | | -1 | -0.837 | | | |
| 6 | Sex | | | | | |
| | | Male | 0.108 | 2767 | 0.86 | 0.527 |
| | | Female | -0.108 | 2477 | 0.836 | 0.473 |

Model result for [l]

| n | df | Intercept | Overall proportion | |
|---|---|---|---|---|
| 5244 | 9 | 2.858 | 0.849 | |
| Deviance | AIC | AICc | Dxy | $r^2$ |
| 4135.36 | 4153.36 | 4153.394 | 0.359 | 0.122 |

BEST STEP-DOWN MODEL:

class (4.89e-09) + vowel.length (2.22e-07) + real.age (4.66e-07) + education (0.000244) + MKBmean (0.000473) + sex (0.0116)

Ranking summary: [l] model in informal styles

| ranking | independent factors | attributes of independent factors | | | |
|---|---|---|---|---|---|
| | | (+) favour | | (-) disfavour | |
| 1 | Social occupational class | +1st LMC | +2nd WC | -MMC | |
| 2 | Vowel length | +long vowel | | -short vowel | |
| 3 | Real age (continuous) | | | -continuous (regressive) | |
| 4 | Educational level | +1st secondary | +2nd bachelor | -primary | |
| 5 | Social network strength score (SNS) | | | -continuous (regressive) | |
| 6 | Sex | +male | | -female | |

According to table 6.22 (model summary), out of 10 predictors six played crucial roles in explaining the variant [l]'s behaviour. The relative influence of the predictors corresponds to that in the [h] pattern:

(1) social occupational class;

(2) vowel length;

(3) real age;

(4) education;

(5) MBK mean; and

(6) sex.

However, the linguistic factor of vowel length is discussed first. Note that in the best model, place of origin and closeness (coda-type) were not significant predictors.

### 6.4.1 Vowel length

Vowel length is the 2nd strongest predictor in the model. The [l] result is the reverse finding of the [h] onset. Two linguistic factors used in the model were vowel length and type of coda. The only significant explanatory factor was vowel length, with the long vowel attribute favouring the [l]. The factor weights for this predictor present only an intermediate contrast in range at 0.11.

As the long vowel plays a dominant role in displaying [l]'s characteristics, these are some lexical examples:

'เลื่อง'-'เรื่อง' /lɯ:aŋ2/ "story or issue",

'เลียน'-'เรียน' /li:an0/ "to study",

'โรงเรียน'-'โรงเรียน' /lo:ŋ0 li:an0/ "school",

'ลูป'-'รูป' /lu:p3/ "figure", and

'ลา'-'ฮา' /la:0/ "fungus".

However, based on casual speech, there are a number of short vowel words appearing in the study as well, but the short vowel favours [h] instead, such as:

ลัง-รัง /laŋ0/ "nest",

ลวม-รวม /luam0/ "to include" or "to combine", and

เลา-เรา /law0/ "the first or the second personal pronoun".

All selected tokens can vary with either [h] or {r-1}. These examples show the [l] variant appearing in the initial position. The long vowel can co-occur with the open coda type as CVV. But the coda type does not have a significant role here for explaining the [l] occurrence.

In terms of the long vowel characteristics, it can co-occur with either type of coda position, namely open or closed words, CVV or CVVC. Thus, compared to the [h] result,

the [l] result occurs in a wider range of environments with a greater variety of coda types. Nevertheless, the distribution of both types of coda, open or closed, did not affect the model significantly.

### 6.4.2 Social occupational class

Social occupational class is the strongest predictor. [l] was favoured by the lower middle class (LMC) and the working class (WC), in a non-linear pattern. The factor weight range of 0.075 is close, but distinct.

The highest class (MMC) in NTIE (where NT Thai is the substrate dialect and BKK Thai is the superstrate, in diglossic conditions) preferred the local form [h] instead, as stated in §6.2. Recall that in 6.1 I argued that the [l] variant in NT Thai in MBK area must have an underlying rhotic form; while in Chapter 5 I noted that the lateral form in {Cl} may be either a defective form, or a borrowing incoming from BKK Thai (though in 5.5.5 I concluded it was unlikely to be a change from above). In Chapter 7 I argue that [l] may function as a socially neutral form. The preference for [l] by the LMC could signal this new status of [l].

### 6.4.3 Age (continuous data)

The third-ranked predictor, real age, could imply a change in apparent time. Its score is continuous with negative orientation (-0.017), meaning that the younger people are, the more they favour the [l] variant. This is the reverse of the finding for [h]. It implies that the elderly who retain the [h] now could be replaced in future with users of [l].

When the cross-tabulation between age and style is considered (table 6.26), it is found that speakers in all generations favour [l] a great deal. High occurrences of [l] appear across all generations and informal styles, led by the young. By contrast, the older the speakers are, the more frequently they use [h].

Table 6.26 Cross-tabulation of age and style in informal styles

| Age x style | [l] | {r-1} | [h] | Grand total |
|---|---|---|---|---|
| Young age | | | | |
| Casual speech | | | | |
| n | 858 | 2 | 105 | 965 |
| % | 88.9% | 0.2% | 10.9% | 100.0% |
| Picture description | | | | |
| n | 546 | 5 | 47 | 598 |
| % | 91.3% | 0.8% | 7.9% | 100.0% |
| Animated film description | | | | |
| n | 554 | 4 | 41 | 599 |
| % | 92.5% | 0.7% | 6.8% | 100.0% |
| Total n | 1958 | 11 | 193 | 2162 |
| Total % | 90.6% | 0.5% | 8.9% | 100.0% |
| Middle age | | | | |
| Casual speech | | | | |
| n | 921 | 3 | 247 | 1171 |
| % | 78.7% | 0.3% | 21.1% | 100.0% |
| Picture description | | | | |
| n | 443 | 4 | 58 | 505 |
| % | 87.7% | 0.8% | 11.5% | 100.0% |
| Animated film | | | | |

| | | | | |
|---|---|---|---|---|
| description | | | | |
| n | 462 | 3 | 42 | 507 |
| % | 91.1% | 0.6% | 8.3% | 100.0% |
| Total n | 1826 | 10 | 347 | 2183 |
| Total % | 83.7% | 0.5% | 15.9% | 100.0% |
| Old age | | | | |
| Casual speech | | | | |
| n | 324 | - | 184 | 508 |
| % | 63.8% | 0.0% | 36.2% | 100.0% |
| Picture description | | | | |
| n | 155 | - | 34 | 189 |
| % | 82.0% | 0.0% | 18.0% | 100.0% |
| Animated film description | | | | |
| n | 188 | - | 35 | 223 |
| % | 84.3% | 0.0% | 15.7% | 100.0% |
| Total n | 667 | - | 253 | 920 |
| Total % | 72.5% | 0.0% | 27.5% | 100.0% |
| Grand total n | 4451 | 21 | 793 | 5265 |
| Grand total % | 84.5% | 0.4% | 15.1% | 100.0% |

### 6.4.4 Education

Educational level is the 4th ranking predictor. Its non-linear pattern means that although speakers with only primary education disfavour [l], while those with secondary education prefer it, university education has only a very slightly favouring effect.

The [l] variant was the most frequent linguistic form amongst (r) variants, ubiquitously used across all social classes. Therefore, considering the groups of speakers who belong to the high social classes (LMC and MMC), and with high levels of education (Secondary and Bachelor), it is obvious that [l] has already been used as a default form, and a well-distributed one, across all types of people.

Table 6.27 Cross-tabulation: social class and education in informal styles

| Social class x education | [l] | [h] | {r-1} | Grand total |
|---|---|---|---|---|
| WC | | | | |
| Primary (E1) | | | | |
| n | 463 | 89 | - | 552 |
| % | 83.9% | 16.1% | 0.0% | 100.0% |
| Secondary (E2) | | | | |
| n | 812 | 143 | 13 | 968 |
| % | 83.9% | 14.8% | 1.3% | 100.0% |
| Total n | 1275 | 232 | 13 | 1520 |
| Total % | 83.9% | 15.3% | 0.9% | 100.0% |
| LMC | | | | |
| Primary (E1) | | | | |
| n | 41 | 43 | - | 84 |
| % | 48.8% | 51.2% | 0.0% | 100.0% |
| Secondary (E2) | | | | |
| n | 1076 | 90 | - | 1166 |
| % | 92.3% | 7.7% | 0.0% | 100.0% |
| Bachelor (E3) | | | | |

| | | | | |
|---|---|---|---|---|
| n | 650 | 52 | 1 | 703 |
| % | 92.5% | 7.4% | 0.1% | 100.0% |
| Total n | 1767 | 185 | 1 | 1953 |
| Total % | 90.5% | 9.5% | 0.1% | 100.0% |
| MMC | | | | |
| Primary (E1) | | | | |
| n | 194 | 148 | - | 342 |
| % | 56.7% | 43.3% | 0.0% | 100.0% |
| Secondary (E2) | | | | |
| n | 710 | 67 | - | 777 |
| % | 91.4% | 8.6% | 0.0% | 100.0% |
| Bachelor (E3) | | | | |
| n | 505 | 161 | 7 | 673 |
| % | 75.0% | 23.9% | 1.0% | 100.0% |
| Total n | 1409 | 376 | 7 | 1792 |
| Total % | 78.6% | 21.0% | 0.4% | 100.0% |
| Grand total n | 4451 | 793 | 21 | 5265 |
| Grand total % | 84.5% | 15.1% | 0.4% | 100.0% |

Table 6.27 shows that high rates of use of [l] are distributed across all three social classes (MMC, LMC and WC), though they are lower for middle-class speakers with only primary education. Speakers with the two highest levels of education (E3 and E2) use [l] a great deal; likewise, the speakers in the two highest social classes. The proportions of use amongst these groups range from approximately 75% to 92%. Interestingly, the WC speakers also show a high rate of use (table 6.27, previously). To conclude, the [l] variant is well-established in respondent vernacular speech, and is embedded in the socio-economic status.

### 6.4.5 Social network strength (continuous data)

In this section, the association between the SNS scores of MBK ties (only) and the frequency of the [l] variant is demonstrated first. After that, the regression analysis is illustrated and discussed. Please refer back to table 6.19 for the correlation of [l] raw frequencies with speaker age.

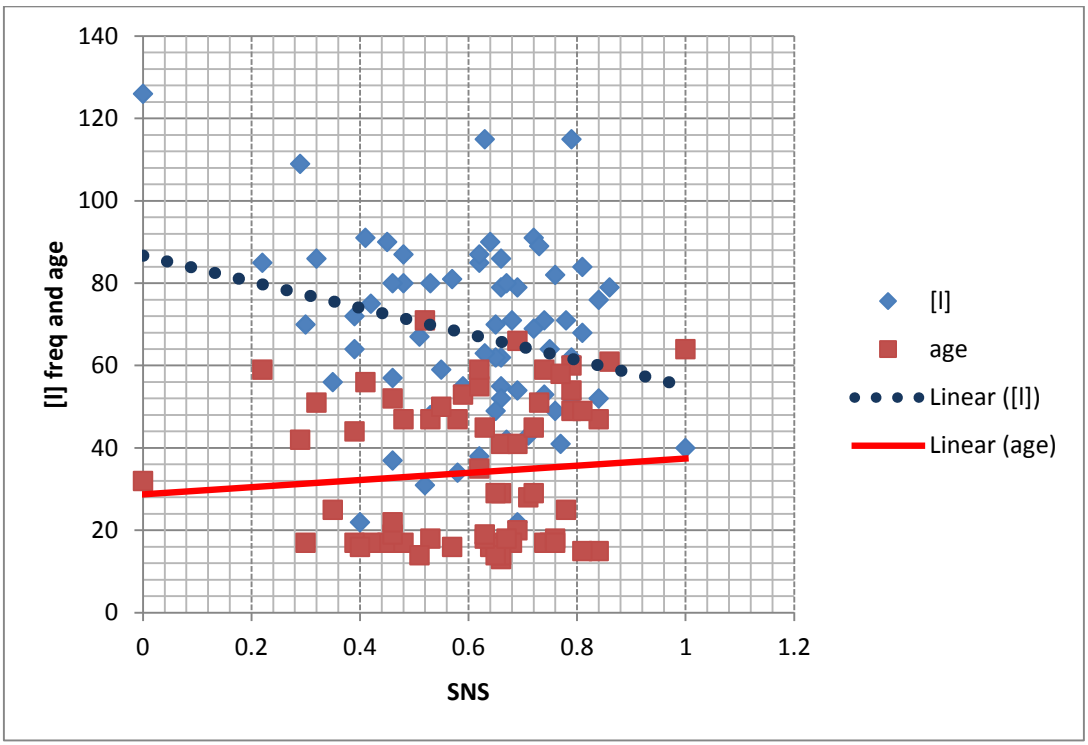



Figure 6.11 An association amongst the SNS score distribution, age of speakers and [l] use rate in informal styles

Figure 6.11 reveals the associations amongst the SNS score distribution, age of speakers (66 persons) and [l] variant frequency in informal styles. (The mild association between increasing age and higher SNS score is exactly as in Figure 6.8, above.) Unlike

[h], for [l] there is a stronger and negative correlation with SNS score (shown by the dotted straight line), thus the higher a speaker's SNS score the less likely they are to use [l]. The correlation score *r* between SNS's score of MBK ties (only) and [l]'s frequency is -0.248, as shown earlier in table 6.20. (Recall that as the SNS measures for speakers' BKK ties did not pass the normality test threshold, they are not used in the regression model.)

The fifth factor in rank is social network strength. Recall that [h] usage was favoured by the MBK SNS predictor. With a positive orientation (+1), the cluster of MBK networks show a negative or regressive trajectory (-0.837), indicating that the more people move away from the MBK network sphere of the NT Thai dialect community, the more they favour the lateral variant and reject the local NT dialect [h] form. . This result is the reverse finding to [h].

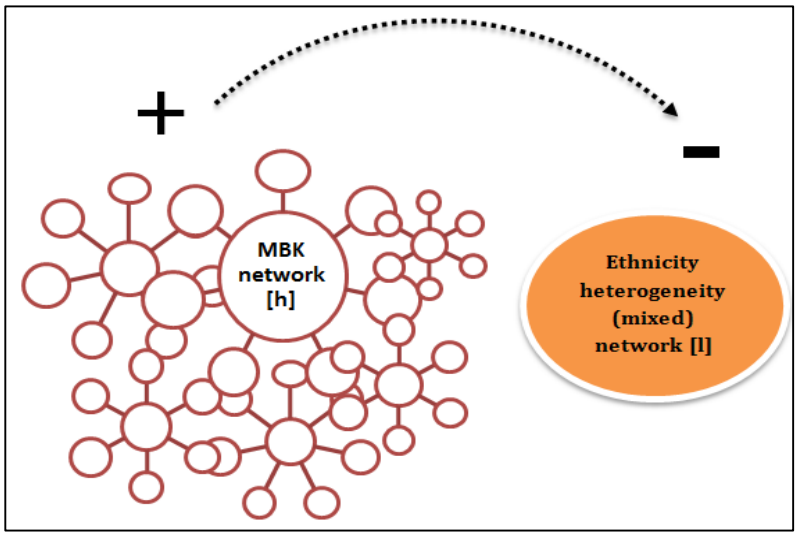



Figure 6.12 MBK network [l] and its negative trajectory

While MBK locals whose social characteristics are typically older, MMC, lower in education and female, were the linguistic maintainers of the [h] variant, the canonical speakers who favour the increasingly-used [l] variant are younger or middle-aged,

working or lower-middle class, higher in education and male.[16] Note that as the weight of the sample concentrates on these [l]-favouring speakers – two of three age groups, two of three social classes, and two of three education levels – it is not surprising that the [l] tokens significantly outnumber the [h] ones by a great deal (85% to 15%). The more these [l]-favouring speakers are in contact with non-locals in their social networks, including the BKK-speaking newcomers, the less they use the form linked to local identity, [h]. Therefore, along with the majority of local MBK participants in NTIE, it can be said that they reject or are excluded from the homogeneous MBK network identified above, which implies that they develop a mixed network open to BKK speakers. It may turn out that they favour loose-ties, and acquire features of the BKK Thai dialect, in the future.

### 6.4.6 Sex

Sex is last in rank and weakest of the significant constraints. The regression analysis showed an unanticipated result: males actually favour the neutral form [l]. (Recall that females mildly favoured [h], interacting with social class, 6.3.7.) This is one more indication that the apparent increase in the use of [l], though it may be a borrowing from BKK Thai, is not a typical change from above, as it is not led by females.

To conclude, the analysis indicated that the lateral variant is favoured by the young and educated, especially from the lower-middle and working classes, with a slight tendency for males, and those who distance themselves from the MBK network, to use it more often.

[16] Of course younger speakers are more likely to be highly educated, as noted above, but this association does not naturally hold for class, network or sex. According to table 6.21 (the usage of [h] by sex in informal styles), previously, both sexes use [l] in a similar proportion, 83% in females and 86% in males.

## 6.5 Consonant rhotic onset (r) results summary

Based on regression analysis, this chapter has revealed that for the (r) onset variable, most speakers favour [l] as the default form (approximately 85% of the time, while [h] accounts for around 15% in informal speech styles. The rhotic {r-1} variant's occurrence is very minimal, less than 1% in casual speech. The best models according to the three variants found in the NTIE context are summarised below:

1) Firstly, the {r-1} prestige rhotic variant is favoured in formal styles by local MBK (Lamphun) females who are relatively young in age. Both young and middle aged speakers who produced this prestige form had relatively high levels of education and typically belonged to the middle-middle class. It is quite clear that all attributes of the social predictors are positively interrelated. The {r-1} variant is likely to appear in closed coda syllable contexts.

2) Secondly, the lateral variant [h] appears to be a covert-prestige local variant enjoyed by elderly speakers, especially females. Its speakers are likely to be middle-middle social class, socio-economically powerful but with low levels of educational background. The positive social network score (SNS) indicates that the people who have a homogeneous Northern Thai network use [h] quite frequently. Finally, this form mostly appears in the short vowel syllable context. It should be noted that [h] can be viewed as a stigmatised form among WC speakers as well. The latter interpretation, and the social meanings of the phonological variants, and the relationship between both rhotic variables are discussed in 7.7 and 7.10.1.

3) Finally, the neutral variant [l] shows the reverse effects to [h]. The lateral variant [l] is preferred by young male speakers who belong to the two lower classes, namely LMC and WC, with higher levels of education. The negative social network score (SNS) associated with this form implies that speakers with heterogeneous ethnic

networks and loose ties use [l] more than those whose ties are of the same ethnicity (NT Thai) as them. The [l] occurred most in long vowel syllable contexts.

# Chapter 7

# Conclusions and discussion

## Introduction

The main findings of this study on dialect variation, shift and maintenance in the NTIE community in Thailand were presented in chapter 5 (Cr) and chapter 6 (r). In this chapter, I evaluate the research hypotheses (1.2) which were developed from the research questions (1.3). The outline of the conclusions and discussion starts from the likelihood of linguistic change, moving to consider stylistic factors, social networks and other and demographic factors (7.1 to 7.4), language change and maintenance according to the main results (7.5 to 7.9), the relationship between the two sociolinguistic variables (7.10) and, finally, other related issues, limitations of this study, and further research possibilities (7.11 to 7.13). Finally, I summarise all the findings based on the research questions, in order to have a holistic view of the entire study (7.14).

## 7.1 The NT Thai dialect will progressively shift to be similar to the BKK Thai dialect.

Currently, the language situation of the NT Thai dialect is interfered with and dominated by BKK Thai. Is it possible that NT Thai will gradually shift until it becomes structurally similar to BKK Thai, based on the evidence examined above? Here I can only comment on the basis of the two phonological features studied. (See also 7.8 below.)

The evidence rests with such data from the younger and middle-aged speakers, based on the regression analysis and cross-tabulations. In the most formal minimal-pair speech style, for both variables, the incoming rhotic forms ({Cr-1} for the (Cr) onset and {r-1} for the (r) onset) from BKK Thai are in greater use than the reduction form {CØ} and the lateral [l], respectively. The two younger groups reveal a positive correlation with use of the prestige forms {Cr-1} onset and {r-1} onset (see tables 5.6 and 6.14). This is especially true of higher social classes (tables 5.5 and 6.5). This suggests that prestige rhotic forms are being borrowed when the awareness of speakers is high, and may mark the beginning of changes from above.

It must be emphasised that in informal styles, however, speakers of all types overwhelmingly produce a default form that is not rhotic: {CØ} for underlying initial clusters (Cr), figure 5.2; and [l] for underlying /r/-onsets (r), figure 6.10. There is clearly no age trend for these variants as all ages heavily favour them. Thus any evidence for change towards incoming rhotic forms comes almost entirely from formal, reading-based speech styles. Since even young speakers show categorical absence (less than 0.5%) of rhotics in all informal styles, and the default forms are used more than or equivalent to the rhotic ones even in the formal reading passage style – with (r) appearing more advanced than (Cr) here – there is no evidence yet for the incoming rhotic forms becoming integrated into the vernacular.

The main trend identified for (r) onset is instead for the loss of [h], which has a negative correlation with age, and is mostly maintained by older MMC speakers. The younger and the middle aged generations appear likely to adopt [l] onset instead. For (Cr), the cluster reduction onset variant {CØ} remains widely used but with the lowest social value; while the {Cl} variant occurs with low frequency, only in formal styles, and is favoured by the middle-aged; so no other changes appear likely at present. According to Labov (2001), the change in apparent time can be predicted by using vernacular speech, which is regarded as the most natural language for estimating language change and variation. Thus, in casual speech styles, the next generations of MBK locals are

generally likely to use [l] onset and {CØ} onset. Nevertheless, when the awareness is raised, they will shift to using the BKK prestige rhotic forms instead.

### 7.2 Stylistic factors play an important role in the form selected.

It is clear from the results that the stylistic factor is the strongest predictor influencing speakers to use the prestige forms {r-1} and {Cr-1}. The more respondents had their awareness raised concerning their speech, the more they would exploit formal linguistic forms, as in the New York study of Labov (1972) to some extent. The trend of use is shown in the cross-tabulation between the styles and variants (tables 5.2 for (Cr) and 6.2 for (r) and figure 4.3).

Style has a crucial role in controlling the use of prestige forms. It is obvious that style (level of awareness) can determine how each variant is distributed across each type of experiment. The use of {Cr-1} dramatically goes up in the more formal speech styles. By contrast, {CØ} drastically decreases. {Cl} frequency is gradually increasing in the formal styles, but never found in the informal styles. The use of {r-1} dramatically rises in formal speech styles; by contrast, [l] frequency rises and [h]'s occurrence is gradually reduced in informal description tasks, compared to casual speech.

### 7.3 Social network structure predicts dialect shift. Strong MBK networks predict dialect maintenance.

Social network strength (SNS) is an explanatory predictor that reveals the dialect shift from NT Thai to BKK Thai. On the other hand, SNS can reveal that NT Thai speakers resist the change to BKK Thai dialect, which leads to dialect maintenance of some forms.

SNS is not a strong predictor, as was hypothesised. As shown in the [h] and the [l] regression models of (r) in informal styles (model v and model vi), SNS is ranked fifth

out of six factors. Likewise, for any variants of (Cr), SNS is not significant in any model in casual styles. In formal styles for both (Cr) and (r), SNS is not significant in any model.

For (r), SNS reported a positive score, meaning that speakers who favour [h] possess primarily homogeneous networks of NT Thai speakers. By contrast, the SNS score is negative in the [l] model, showing that speakers who favour [l] do not possess strong NT Thai networks/ties. (Their networks may logically be highly mixed, or predominantly BKK; in this case it was the former.)

Apart from these findings, other aspects to be addressed and discussed concern the social networks in the NTIE community. In general, I argue that social networks in the NTIE community are weak and akin to typical urbanised social structures. This is because the BKK speakers' contact rate with others is minimal (4.5.7.9 in calculation and example of SNA) and they do not have many contacts in the non-BKK networks, such as the MBK local network. This made me finally discard all BKK contact frequencies in the correlation tests and regression models. This finding leads to the implication in social network theory (Granovetter, 1973) that the attributes of SNA are highly dependent and interrelated.

### 7.3.1 The SN characteristic of NTIE community is weak and is similar to urbanised social structures.

It was surprising, that the MBK network was primarily characterised by NT Thai homogeneous ethnic ties. MBK local ties include their family, acquaintances and peer workers, who mostly reside in the Northern region provinces. Nevertheless, it should be noted that this SNS score characterises only 15% of the data.

The NTIE community social networks are generally characterised as weak, scattered, and resembling a typical urbanised social structure. This is based on 85% of the data. The BKK-origin group does not affect local speakers who favour [h] (see figure

6.3). Thus, the NT Thai speakers can exclusively maintain a homogenous MBK network, as shown in figure 7.1. The MBK network (the actors and their ties) floats on the massive ocean of internal immigrants, metaphorically. The outsiders, who are in more mixed networks, or who do not even have such links with one another, might attempt to spread and intrude, but this does not affect the MBK network.

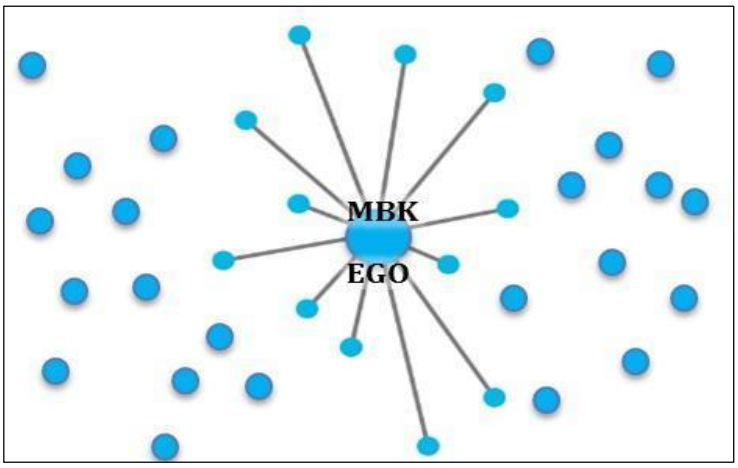



Figure 7.1 The social network structure of local MBK people in NTIE community

Figure 7.1 implies that BKK immigrants (many single and scattered dots across the whole picture) mostly stay alone and have little contact with others, failing to form a strong network. This is because of the social context in NTIE which cannot promote a sense of community, and the poor social structure in the industrialised zone.

Based on the interviews, there are a number of social problems in the industrial community (§2.4). The NTIE community is similar to many urbanised/industrialised social structures which have been suffering from a low sense of community. The drawbacks include poor relationships between people and low quality of well-being in life, even though this community used to be a suburban one with a strong sense of

community and a strong network (section 2.8). Finally, it is hypothesised that this MBK network will gradually become more disengaged and dissipated.

### 7.3.2 The implications of social network theory: rethinking of the SNA's attributes

Secondly, it is found that the attributes of SNA are highly dependent and interrelated (Granovetter 1973). My new calculation criteria revealed that they are as positive as Granovetter's claim. In addition, the attributions are highly correlated (interrelated) amongst one another.

Recalling the four main features in this SNA study based on my work, four major attributes are highly correlated, namely:

1) contact frequency (focusing on the frequency of contact per week),

2) contact quality (focusing on the quality of the talk that impacted on, or impressed in the actor),

3) intimacy relationship type (the ties who are important to the actor's life – including both face-to-face and non-face-to-face contact), and

4) daily routine contact type (the ties whom the actor needs to see daily).

These are the attributes that I modified and extended from Hirano's SNS model (2013) and Granovetter (1973). Hirano did not have these four attributes presented here. She carried out the study by using contact frequency and the face-to-face or non-face-to-face contact only. Also, Granovetter suggested that these network properties are relatively independent of one another, even though these properties seem to be highly intercorrelated intuitively as a whole. I then verified other issues with regard to the four attributes derived from Granovetter's theory. I finally found that they are all highly interrelated and highly interdependent for the NTIE (see 4.5.7.3).

According to the four highly interrelated attributes in SNA, it can be implied that people's behaviour will become similar, depending on their high frequency contact rate and their high quality rate of talk. They will finally accommodate to each other and form a network to some extent. This is similar to communication accommodation theory (CAT). The CAT theory comprises two aspects, firstly, a convergent aspect means that the people's behaviour, including language, will become similar and secondly, a divergent aspect, which refers to people who do not comply with the group in order to show their identity or distinctiveness, and will finally desert the group.

However, as all SNA attributes are highly correlated and interdependent, I argue that no matter how much people attempt to be different, they will not be able to be different if they are still in contact with the network. The people who are still involved with the network will adopt their network's behaviour to some degree. This must be conditioned by those people still in contact with those networks, and who have not yet deserted the network. Thus, finally those people who share the same network will become somewhat similar in their mode of behaviour. It is interesting that this idea is in accordance with what the Buddha addressed more than 2,560 years ago, that:

jaŋ ve: se:vaʔtiʔ ta:t$^{h}$iʔso[1]:

'You will be like the one with whom you are acquainted.'

This means that the more people acquainted with/in contact with certain kinds of people, the more those people will become like them. This social network research implication can reconfirm what Buddha preached a long time ago, as supported by the study that both the quantity and quality of contact plays a major role in people's lives, behaviour and especially in language use.

It is worth noting that this research contains at least four main SN attributes which involve several concrete issues, psychological behaviour, density and

[1] http://www.84000.org/tipitaka/read/v.php?B=27&A=8466&Z=8533 Accessed [30 May 2017].

multiplexity[2] concepts. I believe that the number of the SN attributes can be infinite, qualitatively. However, as this research reveals there are highly correlated trends in all four attributes, therefore these attributes *might share some underlying features* in common or might overlap. I believe that the SNA core attributes can be finite in number, which may lead to the improvement of the SNA standard theory in the near future. This requires further studies in both qualitative SNA (Ego-centred SNA, the implied network) type and quantitative/mathematical SNA (the actual network) type which employ mathematical matrices. Finally, these two types may compare and synthesise their attributes in order to prove claims in the future.

However, this study has dealt with only a single linguistic community (NTIE) which is progressively becoming a weak network to some extent. Thus, to prove this claim requires more research in many different contexts and different linguistic communities (e.g. conservative and remote areas in Thailand) and comparing them.

## 7.4 Other demographic factors provide explanations for dialect shift and maintenance.

Social occupational class is the most important social explanatory factor for both (Cr) and (r), setting aside style. The interactions amongst many independent linguistic and social factors have been considered. The higher social class respondents tend to favour prestige rhotic forms, while lower class speakers use the local form [h], the neutral form [l] and the null form {CØ}. (MMC speakers exceptionally also favour the [h] form of (r), which carries covert prestige meaning for this group.)

Age correlates with some of the variants, positively (indicating maintenance by the old) for [h] and negatively (indicating possible adoption led by the young) for the rhotic variants incoming from BKK. However, the patterns are complex, as summarised

[2] This denotes a connection between the ego(s) to many links, not the multi-relationships between the ego(s) and their links in many dimensions of their relationship).

earlier, and age is a factor of intermediate strength for (Cr), but only a weak factor for (r).

Speakers of high educational levels favour the prestige/standard (BKK Thai) rhotic forms. Education is a strong factor for (r), just behind social class, but a weak one for (Cr). Also, as is often the case, a high level of education is associated with both youth and higher social classes. I found that the neutral variants [l] and {CØ} were frequently used in the higher social class and higher educational level.

It was found that both sexes can be linguistic innovators or maintainers. For example, while MMC speakers of both sexes used the local form [h] fairly often, WC females also used it heavily (see §6.3.7, table 6.22). It was found more generally, though, that females tended to favour {r-1} and males preferred {Cr-1}. Sex was an intermediate factor for (r) but a weak one for (Cr). However, patterns were again complex, showing interaction of sex with age, education and class.

Finally, place of origin/ethnicity also influenced speaker choice. MBK locals unsurprisingly favour [h] more than internal immigrants (BKK speakers). However, for both (Cr) and (r), MBK locals also unexpectedly used rhotic forms more often than BKK speakers. The place of origin predictor was only a weak factor for predicting the rhotic variants, and was not significant in some regression model findings.

## 7.5 The linguistic innovators are the lower middle class females

This is weakly true in the formal speech style but only for one variable, (r). When rhotic variants are regarded as the innovative forms derived from BKK Thai, LMC female speakers lead males in the use of {r-1}, but MMC males are close behind with a similar lead over their female classmates. There is no such pattern for (Cr), where MMC males are the leading users.

It is generally true that middle class speakers are the linguistic leaders for rhotic forms, which might be considered change from above – but also for maintenance of local form [h]. The former finding corresponds to Labov's (2001) study. The motivation for

females as linguistic leaders is relatively obvious for LMC or MMC females who reside in the NTIE scenario. The NTIE context draws them to work in the industrial zone.

However, the working lifespan of women tends to be much shorter than their male counterparts. According to my interviews, I found that females tended to resign from their careers because of childbearing conditions or maternity leave. In addition, because of the age issue as well, especially WC females reported that it would be very difficult for them to return to work. Thus, females across all social classes tend to have equal chances to contact outsiders at an early age, and then the opportunities dramatically dip after their resignation or during maternity and childcare.

One reason male speakers might be leading the incoming variants {Cr-1} is because most older MMC males are likely to have had different education than the MMC females (which works differently in Thailand for the young people, however). Most of them have been ordained in monkhood in Buddhism, with BKK Thai as the medium of instruction. Therefore, these incoming forms from the BKK Thai dialect might not be difficult for them to acquire. It was anecdotally observed that these MMC males are multidialectal and have a wider linguistic repertoire than the female speakers. Their working conditions and the chance to contact people in the NTIE community are similar to that of the females. Education via the medium of BKK Thai is more evenly shared among the young.

To conclude, sex has an effect in contributing to linguistic change, but there is no simple pattern in terms of identifying which sex is the linguistic innovator.

## 7.6 The linguistic conservatives are the elderly local males.

It is true that elderly local males are the linguistic conservatives. The MBK elderly males favour the [h] form. These people are the linguistic maintainers in the NTIE context.

In addition, the respondents who favour [h] can be divided into two groups, namely the local MMC elderly and the local WC elderly. According to Prasithrathsint's remark (2013), she hyphothesised that the WC speakers in Thailand, especially those who use regional dialects, might use the local form[3] more than other social classes. However, this study found that the MMC speakers use the local form [h] even more than the WC speakers do. It should be noted that the WC speakers still use the local form a great deal but less than the MMC, who are recognised as the highest social status group in the NTIE community. The reason for the local MMC elderly favouring [h] might result from their wealth, erudition and generosity. They are also aware of their strong network in MBK locals and have less concern with the social norms.

It was observed that the MMC elderly had a broad range of linguistic repertoire (i.e. NT Thai, BKK Thai and Yong dialect). However, they seem to favour NT Thai the most, according to my observations and interviews. At the start of the interview, the MMC speakers employed BKK Thai dialect, but revealed some NT Thai accent coloring in the first few minutes. Right after that, they switched to use NT Thai constantly throughout all three experiments, namely in casual speech, the reading passage and the minimal pair test. Interestingly, when the MMC elderly shifted to the more formal style tests (reading passage and minimal pair test), they mostly used the prestige BKK Thai rhotic variants.

I observed that they were neither worried whether the hearer (the researcher) would understand it or not, nor nervous about mistakes once they switched to BKK Thai.

[3] The variant [h] tends to be a stigmatised form in gthe eneral view of local speakers (A. Prasithrathsint, p.c., 2013).

During the interview, these MMC elderly did not feel insulted or ashamed to speak the NT Thai dialect, as was found in the WC local speakers. They did not hesitate to feel self-censorship for using the NT Thai dialect.

This difference in linguistic security might result from the elderly MMC people's social superiority and differences on various grounds, such as economic status, networks, education and public spiritedness.

The following are some discourse examples of an NT Thai MMC senior male speaker in NTIE community. He used only NT Thai and never switched to BKK Thai or any other dialects throughout, even though he had those linguistic repertoires. It was observed that he was outstanding with regard to his linguistic and cultural preservation mindset, contribution to the society and generosity to outsiders. He also emphasised that even though he was a volunteer, he had a major role in local politics and was a resourceful and beneficial community asset. Without him, this village would suffer a great deal from difficulties, and not be united as it used to be.

'...มันก่อ... เฮาว่าคนตี้เป๋นนักก๋านเมือง คนตี้ลงสมัครก๋านเมือง ต้องมาถามเฮาว่าจะเอาจะใด...'

'...man0 kɔ:1 ... haw0 wa:2 $k^h$on0 ti:2 pen4 nak3 kan4 mɯ:aŋ0 $k^h$on0 ti:2 loŋ0 saʔ2 mak3 ka:n4 mɯ:aŋ0 to:ŋ2 ma:0 $t^h$a:m4 haw0 wa:2 tɕa:ʔ1 ʔaw0 tɕaʔ1 daj0'

"…It is like, those who are the current local politicians or those who want to run for the next election, they must come to ask for my advice about what should they do and what I want."

'...เฮาเป๋นอาสาสมัครดูแลเลื่องน้ำในชุมชน ถ้าว่าชุมชนเฮานิถ้าขาดคนอย่างเฮาไปน่ะ...'

'...haw0 pe:n4 ʔaʔ0 saʔ4 saʔ1 mak3 du:0 lɛ:0 lɯ:aŋ2 nam3 naj0 tɕʰum0 tɕʰon0 tʰa:2 wa:2 tɕʰum0 tɕʰon0 niʔ3 tʰa:2 kʰa:t1 kʰon0 ɲa:ŋ1 haw0 paj0 naʔ1'

“I am a volunteer in charge of water supplies in the village. If we realise what will happen in this community, if this community does not have me… (the village will encounter many problems).”

'...เอ้า เปิ้นมาถามเฮาก่อมาเญี๊ยะก่า (นักวิจั๋ย) เญี๊ยะ มาเฮาก่อละบายไปอี้ บางคนก่อถามน้อย บางคนก่อถามนัก'

'...ʔaw2 pʂn2 ma:0 tʰa:m4 haw0 kɔ:1 ɲi:a3 ka:1 nak3 wiʔ3 tɕʰaj4 ɲi:a3 ma:0 ha:w0 kɔ:2 laʔ3 ba:j0 paj0 ʔi:3 ba:ŋ0 kon0 kɔ:2 tʰa:m4 nɔ:j3 ba:ŋ0 kon0 kɔ:2 tʰa:m4 na:k3'

“Well, (other researchers) came to visit me and interviewed me. (When they asked and) did their research, I always helped and explained issues to them and told them as much as possible. Some (researchers) asked a lot in details, some not much.”

'...คนเฮาวัฒนธรรมนี่มันละเอียดอ่อนนะคับ’

'...kʰon0 haw0 wat3 tʰaʔ2 naʔ0 tʰam0 ni:3 man0 laʔ3 ʔiat1 ʔɔ:n1 naʔ3 kʰap3'

“Folks, the cultural issues are very delicate and sophisticated.”

‘...ไผจะไปเนี่ยในชุมชนเฮา ถ้าว่าเฮาบ่าจ่างอู้จ่างหยัง มันก่อมีทุกอย่าง'

'...pʰaj3 tɕaʔ1 paj0 ni:a2 ŋaj0 tɕʰum0 tɕʰon0 haw0
tʰa:2 wa:2 haw0 ba:1 tɕa:ŋ2 ʔu:2 tɕa:ŋ1 ɲa:ŋ4 man0 kɔ:1 mi:0 tʰuk3 ɲa:ŋ1'

> "Whoever comes and goes in this village (and researchers need to know something). If I was not that well-rounded and resourceful, (it would look bad for the village as a whole). I have everything (to support and provide others in terms of data.)"
>
> (No. 52, 64 years old, elderly male, MBK local)

This situation was relatively similar to the Indian English elite in Indian context. Chand (2011) addressed a case in which the Elite Indian English speakers did not conform to anything pertaining to the national language policy. However, it should be noted that the backgrounds of India and Thailand are very different. A long history of colonisation led to people valuing English as more sophisticated than Indian languages. The Indian LMC, MMC and HC are currently required to learn Hindi and other native regional languages. In the past 60 years after India's independence led by M.K. Gandhi, Indians were no longer required to have a good command of English. All over the country, they enjoyed exploiting Hindi and other regional languages. Being affected by this national pressure, the elite shows awareness of being so poor in Hindi and other Indian languages, while they still insist on holding their ground by using Indian English as their mother tongue, instead of conforming to the majority. The reason why this higher class in India has not shifted to use Hindi or other Indian languages appears to result from their better-off status, and English being a global language and high-status symbol, reflecting their erudition and power. To some extent, they do not feel the need to bother to learn the other languages (summarizing Chand 2011).

This situation in which the elite and powerful people do not comply with the majority, is similar to what was found in the local MBK elderly who preferred [h] to some extent. Because of these qualities, there was no need to accommodate other lower status groups, or even to adopt the BKK Thai dialect {r-1}.

However, this is in contrast to the WC speakers of NT Thai (MBK lcoals), especially in the formal stylistic tests, and the local MBK elderly who have a low level of education background. They frequently apologised to me concerning their low level of literacy and BKK Thai dialect competence, especially the elderly females. I present an example below from an MBK elderly female with low education level. She used NT Thai primarily but tried very hard to accommodate herself to the researcher by switching and mixing dialect codes between NT Thai and BKK Thai.

She narrated what had happened in the past, which contributed to her low level of BKK Thai literate competency. At the end, she noted that her BKK Thai language skill improved later when she was an adult. She humbly stated that her highest education level was only grade 4. At that time, she had not mastered BKK Thai language yet, especially in reading and writing skills.

‘...เพาะยายบ่าได้เฮียนหนังสือ ค่ะ บ่าได้เฮียนหนังสือดี ตอนนั่นป้าก่อไปเลียนหนังสือ บ่าได้ไปพ่อง ตอนตี้เป๋น เด็กๆ นั่นน่ะ ตอนตี้เฮียนหนังสือนี่จะบ่าฮู้เลื่องเลย ถ้าทำนาก่อฮื้อมาเลี่ยงควาย บ่าได้ไปโฮงเฮียนน่อ’

‘...pc:4 ɲa:j0 ba:1 daj2 hi:an0 naŋ4 sɯ:4 kʰaʔ1 ba:1 daj2 hi:an0 naŋ4 sɯ:4 di:0 ton0 nan2 pa:2 kɔ:1 paj0 li:an0 naŋ4 sɯ:4 ba:1 daj2 paj0 pʰɔŋ2 ton0 ti:2 pen0 dek1 dek1 nan2 naʔ1 ton0 ti:2 hi:an0 naŋ4 sɯ:4 ni:2 tɕaʔ1 ba:1 hu:3 lɯ:ŋ2 lʊj0 tʰa:2 tʰam0 na:0 kɔ:2 hɯ:3 ma:0 li:aŋ3 kʰwa:j0 ba:1 daj2 paj0 ho:ŋ0 hi:an0 nɔ:2’

“...This is because I (*addressing herself as a grandma, with a sense of shyness and mitigating*) haven’t had a chance to go school in order to learn things formally (including the standard (BKK) Thai dialect) when I was a kid.

“Also, I think I was not good at studying, too, very bad at learning things. In addition, if it was time for farming in the rice paddy field, we sometimes couldn’t go to school anyway. As a child, we at least had to take care of water buffaloes and cattle in the field. I couldn’t go to school, well.”

‘ถ้าส๋นใจ๋ก่อคงจะฮู้อยู่ ถ้าได้เฮียนหนังสือเมื่อก่อนก่อดี ...เพิ่งมาอ่านได้เมื่อเพิ่งโตนิ เลียนปอสี่’

‘tʰa:2 son4 tɕa:j4 kɔ:2 kʰoŋ0 tɕaʔ1 hu:3 ɲu:1 tʰa:2 da:j2 hi:an0 naŋ4 sɯ:4 mɯ:a2 kɔ:n1 kɔ:2 di:0 ...pʰɯaŋ2 ma:0 ʔa:n1 daj2 mɯ:a2 pʰɯaŋ2 to:0 niʔ3 li:an0 pɔ:0 si:1’

“If I had been more interested in studying, I might have been better in BKK Thai. It would be great for me. (That was a pity and I didn’t have that opportunity.) ...I have just been literate in reading skills in BKK Thai since I was adult. My highest educational level is grade four.”

(No. 3, 59 years old, elderly female, MBK local)

**7.7 Local dialect maintainers will use [h] instead of {r-1}.**

Local dialect preservers use [h] instead of {r-1}. Referring to 7.6, the [h] form might have a social meaning of covert prestige or localness. The regression model (v) supports this implication.

The resistance to change from NT Thai to BKK Thai is in accordance with what Labov found in Martha’s Vineyard for locally-valued forms (Labov, 1963), and what Trudgill (1972) found in Norwich, that males valued under-reported speech as covert prestige, because they had pride in their dialect and wished to make themselves distinct from others, as a folk identity. Trudgill illustrated further that covert prestige pertained to certain linguistic forms, mostly local ones, as used by a group of people who share a sense of community and solidarity. To some extent, it reflects the sense of identity and inclines speakers to reject an incoming variant as well. However, the sex patterns in the local MBK people’s data are more complex.

It should be noted that although the WC speakers and the LMC speakers employ [h] regularly, the regression model indicated that they relatively disfavoured [h] compared to the MMC, as addressed above. Thus, based on the evidentiary support in regression model (v), I would like to propose that [h] should at least generate two social

meanings: as a covert prestige form and a non-prestige form. However, both of these constructed meanings share the sense of localness.

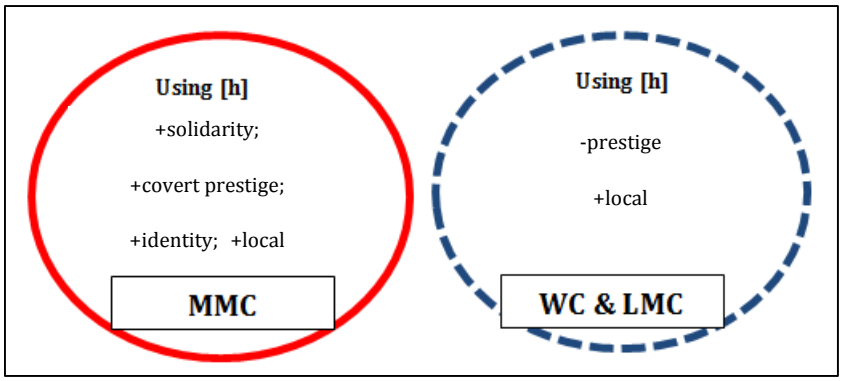



Figure 7.2 Social meaning of [h] in the underlying form of /r/

This figure illustrates that the relationship between the two groups of speakers is differentiated according to social occupational class. On the one hand, the solid circle identifies the group of MMC people who favour [h] forms, implying a social meaning of covert prestige, solidarity, local and identity in the same group. On the other hand, the dotted circle illustrates the other group of participants who disfavour [h]. Using [h] might be seen as employing the local and non-prestige (almost stigmatised) form for WC and LMC respondents.

It is worth noting that the sex predictor (or the effect of gender difference to dialect variability, shift and maintenance) does not play much of a role in this study. This might come from the force of the social and geographic mobility and the economic factors (for internal immigrants or even the locals themselves) that push people to reside in NTIE community. Thus, even this important covert prestige variant is not strongly correlated with speaker sex. This current study might be in line with Zhang (2005) and McCafferty (2001) that the immigrant inundation approaches to the NTIE community in order to

survive and seek for new opportunities for their life well-being. Thus, the socio-economic mobility and drive factor (motive) tend to be the more important factor in the industrialised and urbanised context, not the sex predictor.

### 7.8 In general, standard rhotic variants {r-1} and {Cr-1} will not replace [l] and {CØ} in informal speech.

In informal styles, the {CØ} cluster reduction onset form and [l] onset are unlikely to give way to prestige/standard rhotic variants {Cr-1} and {r-1} in the near future.

In chapter 5, for the (Cr) variable, {CØ} is employed almost categorically in informal styles and far outnumbers other variants (figure 5.1). However, the use of {Cr-1} dramatically goes up once the speakers articulate in the more formal speech styles. By contrast, {CØ} drastically decreases when the degree of consciousness increases in these formal styles.

In the same vein in chapter 6, for (r) variants across all speech styles (figure 6.2), the result reveals that [l] is employed a great deal across all informal styles; though not categorically, it does account for 90.56% among the young. As vernacular speech is based on the informal styles, it is confirmed that in general, there is no change appearing to the situation of people using [l] more than any other variant.

When considering the social network strength factor, a change in progress away from [h] towards [l] may be predicted. MBK respondents in general were expected to employ [h] but it turned out that nearly all of them use the [l] variant instead, as found in 6.3.6. Based on regression model (iv) for [h] and model (vi) for [l] (sections 6.4 and 6.5), the BKK people in NTIE will be reinforced in their use of the [l] form, due to contact with local MBK participants who are not part of the exclusive older MBK network. In addition,

even MBK locals, most of whom are also not part of the MBK network, may come to use more [l], as the proportion of [l]'s score is already extremely high (at 85%).

According to the complexity of the [l] variant, thus, the pathway of using the underlying form of /r/ in NT Thai speakers might be from [h] as the covert/stigmatised local form to [l], as a neutral form, and in formal styles to {r-1} as the prestige form, respectively.

**Covert prestige form > neutral form > prestige form**

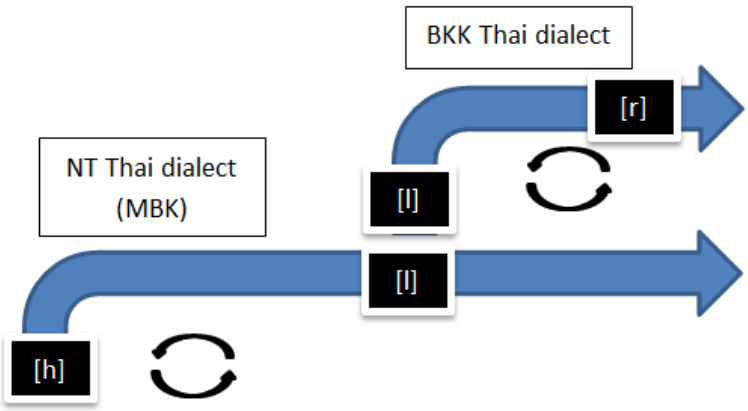



Figure 7.3 A model from substrate (NT Thai) towards superstrate (BKK Thai)

Figure 7.3 reveals the phonological development of (r) onset in the NTIE community for the high dialect (BKK Thai) and low dialect (NT Thai) dialect strata. It could be said that NT Thai dialect of MBK locals is a vernacular with lower status, compared to BKK Thai which occupies the prestige position. This situation is very similar to what Fasold (1984) called a "diglossic community". I predict that NT Thai dialect forms might finally give way to BKK Thai forms to some extent. Meanwhile, some elderly conservative local MBK people will preserve the [h] form to some extent. Fasold's model does not predict that NT Thai will give way to BKK Thai. Rather it predicts that

both will continue to coexist for some time, short or long, and that rather than a straight dialect loss, there will be a gradual erosion of functions in which the NT dialect is the dominant choice, with the BKK Thai dialect picking up more functions[4] (and perhaps more code-mixing between them). This is highly plausible and much more likely than the NT dialect being replaced by BKK in a generation or two, given the strong stylistic constraint on which variants are used, which has been shown as a powerful feature of this study.

### 7.9 All generations, particularly younger ones, are likely to use [l] in casual styles since it is a consensus form that occurs in both dialects in contact.

It has been found that all generations use [l] onset in casual speech style. Even in the elderly group, the frequency of [l] is still much greater than [h]. The reason why [l] is dominant in all types of speakers and styles might be because it is not a stigmatised form. Instead I argue it is a neutral/consensus form (see 7.10), based on my observations.

Referring to the regression model (vi) in 6.3, [l] is favoured by LMC speakers and then by MMC speakers. In terms of age, the younger the speakers are, the more they prefer [l]. In addition, [l] is used a great deal by the two groups of speakers with the highest levels of education, namely (E2) (secondary/vocational level) and (E3) (bachelor level), respectively. Pertaining to sex, males are likely to use this form more than females.

The reason why NT Thai speakers employ [l] rather than [h] might be illuminated by this interaction between social class, education and sex. Thanks to the development of educational policies, lay people tend to have better education and thus have become

[4] The NT Thai dialect in MBK zone might be undergone the contact-induced reallocation process. Britain and Trudgill (2005) define the process of the reallocation that it happens in which two or more variants in the dialect mix survive the levelling process, but they are refunctionalised. Then they are evolved and possessed new social or linguistic functions in the new dialect. In fact, a refunctionalised process of such variants will happen when the two or more dialects contact under the Koineisation emergence. I think this is a partially similar phenomenon in terms of function of the variant.

more literate than in the recent past. Since the introduction of the National Education Act in 1979, it has been enforced that children in Thailand must have at least the basic level of education (until Matthayom 3, or grade 9 in the UK system). In reality, most young people nowadays (even if they belong to the WC) will further pursue education either on a general or vocational route. In addition, BKK Thai is the medium of instruction in all levels of schooling. Thus, to maintain using [h] or NT Thai dialect is quite difficult even for the modern MBK younger generations. The middle-aged generation underwent Thailand's educational system reform[5] in 1978, which required that all subjects were standardised by using the same textbooks written in BKK Thai. Many loanwords from BKK Thai have been borrowed into and influenced NT Thai speech. Thus, all speakers who use BKK Thai dialect except the oldest MBK locals are prone to naturally use [l] in the underlying form of /r/ by default, rather than the original /h/ of NT Thai dialect. (Recall that the older speakers have the lowest use of [l], no {r-1} and the highest use of [h].)

In addition, it is found that speakers with high levels of education also employ the [l] variant a great deal. The [l] variant is ubiquitously used across higher levels of social class and education (see 6.4.4). The speakers who belong to the LMC and MMC, and the high (E2) and (E3) clearly favour [l]. Therefore, [l] has emerged here as a neutral/consensus form rather than a stigmatised form.

### 7.10 (Cr) and (r) are related in terms of their linguistic behaviour.

In this section, I briefly compare the outline of the (r) onset and (Cr) onset sociolinguistic variables in order to see their similarities and differences. Firstly, the

[5] To note, it is interesting to see that if BKK Thai became the educational standard in 1978 (2521 B.E. (Buddhist calendar) according to the Thailand Educational act), whether the age predictor delineates between those who had this education and those who didn't did not or not. In this point, it is still unclear. It can only be said that people born in 1972 whose education had BKK Thai are in middle of middle-age group now. It might cast a doubt that using the 1972-birth as an age-group boundary might not be the best referent point of age range/ interval. This point needs further research.

relationship of these two variables and their variants is considered. Secondly, a comparison of all independent predictor weights across all dependent variants is explained and discussed. Finally, the issue of social factors tending to be more important than linguistic factors is raised.

The variants of (Cr) and (r) are interrelated. The study showed that the results from regression models are mostly in accordance with the cross-tabulation analyses. The social meanings have been inferred from the data distribution. Even though each variant of (Cr) and (r) is distinct, they can be grouped since some of them share similar variation patterns and social meanings in broad terms. These inferences are based on the variants' distribution and interviews with regard to speakers' views.

### 7.10.1 The relationship between the rhotic variables of (Cr) and (r)

{Cr-1} and {r-1} may be either incoming variants engaged in change or prestige forms borrowed from BKK Thai, based on the results in model (i), section 5.3, and model (iv), section 6.2.

On the one hand, [h] may be a covert prestige form for the local MBK elderly. On the other hand, [h] appears to be a stigmatised form for the LMC and WC speakers, due to their negative attitudes towards [h] (see 6.5, model (v)).

{CØ} and [l] should be viewed as neutral/consensus forms. They are viewed as stigmatised forms in BKK Thai dialect, especially [l]. Nevertheless, they are widely used in informal speech across the higher education levels and higher social class statuses, rather than only by the less educated speakers and the WC.

Finally, {Cl} can have two social meanings. It can be either a hypercorrect form of {Cr-1} (see 5.5.1) or a defective form. The first meaning results from the fact that the more speakers pay attention to speech, the more they use {Cl}. {Cr-1} shows a stronger trend in terms of stylistic stratification. Secondly, however, the distributions of {Cl} also reveal mixed trends across many social factors. {Cl} might be attributable to articulatory

errors that speakers make when attempting to use /Cr/ instead. In such instances, it might not show a clear social profile (see 5.5.5). To sum up, the relationships amongst each variant can be displayed as in figure 7.4.

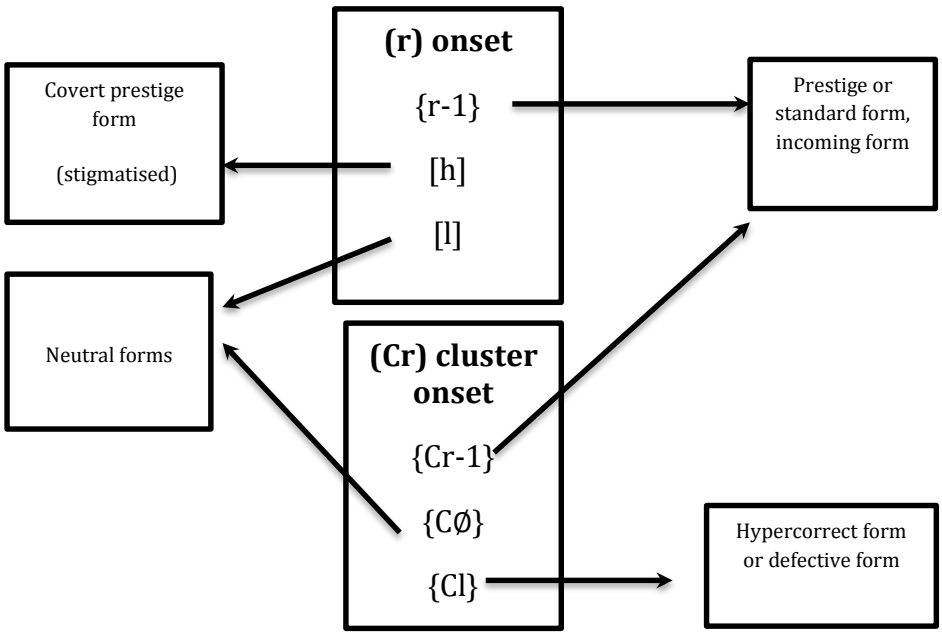



Figure 7.4 Relationships amongst the variables in (Cr) and (r) with regards to their social meanings

### 7.10.2 Comparison of predictors across all variants

It is important to compare all predictors and their members in order to see whether the social predictors are stronger than the linguistic predictors. (Style is left out of this comparison.) The most frequently used factor groups include: (1) social occupational class (significant in all 6 models); (2) linguistic predictors (closeness/vowel length in 5 cases);[6] (3) educational level (5 cases); and (4) life stage/real age (5 cases). It can be seen that the predictive factors are relatively similar across both the (Cr) and (r) variables in table 7.1.

Table 7.1 Total number of rankings and significant levels for each independent variable

| Order | Independent variables/factors | Total number of Rankings (hierarchy point) | Total instances of significance |
|---|---|---|---|
| 1 | Class | 27 | 6 |
| 2 | Vowel length and coda type | 22 | 5 |
| 3 | Age | 17 | 6 |
| 4 | Education | 17 | 5 |
| 5 | Sex | 7 | 4 |
| 6 | Place of origin | 6 | 3 |
| 7 | SNS | 4 | 2 |

[6] In the {Cl} model this predictor was discarded.

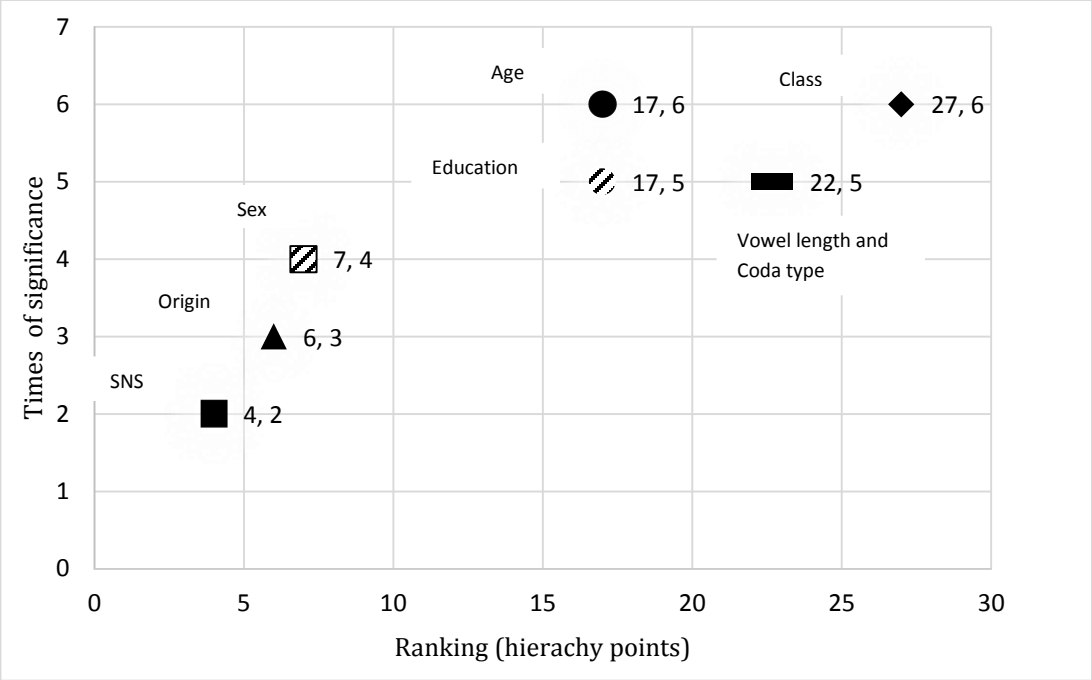



Figure 7.5 Rankings and significance levels for each independent variable[7]

Figure 7.5 shows that three social factors dominate the rankings, especially class, which accounts for 27 points in the hierarchy category and 6 points in the significance category. However, the linguistic factors are also important as they rank second on the scale. It should be noted that the stylistic factor is by far the strongest factor in lieu of the social occupational class, but as it cannot be input in the models it is not represented here.

[7] The points plotted in the figure were assigned by the number of significant difference scores (on y-axis) and the total numbers of ranking (on x-axis) according to the regression models.

### 7.10.3 Social factors (including stylistic factor) are more important than linguistic factors.

The style effects are clearly greater than e.g. social class effects in this current study. Bell (1984) predicts, and Preston (1991) claims empirically, that the reverse is true: style effects are less than and derived from social class effects. However, this research found the opposite trend, though the social class effects, and the style effect, might be weakly dependent on each other to some extent.

According to figure 7.5, the social factors play a more important role than the linguistic factors studied in general. This might be due to the social structure that affects the linguistic structure, especially in these Tai/Kadai family and related non-Western languages. The style and social factor elements are an important determinant of linguistic structure.

Studies of Indian English by Chand (2009, 2010, 2010a) and of Mandarin Chinese rhotacisation variation in Taiwan by Liao (2010) found that social predictors tend to be more prominent than linguistic predictors are. This contrasts with the default analytical assumption in variationist analysis that linguistic factors might explain more of the variation. My current study also finds the same. Interestingly, even though the language investigated in Chand's study (2009) is the English used by Indian speakers, the South Asian/Indian cultural context implicitly plays a crucial role in explaining the finding that style and other social factors are more important than the linguistic factors when it comes to explaining linguistic variability. However, in order to further support this claim, this observation requires further investigation in other Asian languages (including linguistic typological studies) and communities using English as a secondary language in Asian countries (Kachru, 1982).

### 7.11 No hypercorrection found in this current study

It is significant that hypercorrection of {Cr-1} and {r-1} did not occur in my data, apart from the {Cl} issue. Other types of rhoticity onset such as approximant [ɹ] (which is similar to English /r/), retroflex [ɻ], and the prolonged vowel occurring with consonant trill onset [r] and cluster with trill onset [Cr] might have been found, but are not. This might result from the fact that NT Thai dialect is the substrate dialect here to BKK Thai, which is the incoming influence and considered to be superior. However, the influence of the NT Thai vernacular is still stronger than that of the incoming dialect (BKK Thai). In addition, in this bidialectal situation, hypercorrection might occur less than in a monolingual situation. If a variation study of (Cr) and (r) was conducted in Bangkok, the BKK Thai speakers might use many varieties of hypercorrection found elsewhere (prolonged trill [r]), as shown in Chunsuvimol (1996), Pirom (1999) and Panyaatisin (2013).

It should be noted that the quantitative hypercorrection of (Cr) as {Cl} might happen, as in the model (ii), section 5.5. However, it was not confirmed whether this is hypercorrection. This is because the two groups of speakers (MBK and BKK participants) had not been tested for their BKK Thai literacy level prior to the interview. Thus, it is not certain whether instances of {Cl} resulted from hypercorrection of {Cr-1}, or errors producing it as the defective form.

## 7.12 Limitations of this study

1) The researcher cautions that the number of speakers, ethnic varieties and the balance of the numbers of the speakers of different ethnicities could be improved. In fact, in the MBK community, there are other ethnic groups in addition to the MBK and BKK participants. However, the numbers of these groups were not that high. Besides, these minorities tend to reside in dispersed settlements and are hard to find. By contrast, the study group, the NT Thai locals (MBK) and the reference group (BKK) are the more prominent groups, who are easily spotted. The other groups comprise speakers from Chiang Mai (who use NT Thai) and from the northern regional provinces around the Lamphun's vicinity such as Lampang, Prae, Mae Hon Son, Chiang Rai and Tak province. Their regional dialects are similar to the NT Thai dialect spoken by MBK locals. Yong speakers, who are the dominant speakers in Lamphun province, were also disregarded. It is very challenging to take up all of these linguistic varieties in a full-scale variationist study. If all of these ethnic groups based on their geographical differences were covered, this study would have taken far longer. One would need to compare other linguistic levels (ranging from the phonological to syntactic systems) as well as their pairwise similarities and contrasts, and to overcome the financial and time constraints.

2) Some attributes (e.g. the demographic stratification in table 4.1) were not completed. This study does not have older female MBK locals of the LMC. The lack of this data might slightly distort the result.

3) The number of the BKK speakers is small. Ideally, the number of BKK Thais should be equal to that of the local MBK respondents. Some cells went unfilled.

4) The researcher would like to have been more acquainted with the local people and stayed in the area longer. Due to time constraints, the researcher had only 6 months to conduct the interviews and experiments. The first two months dealt with contacting the betweeners. In some cases, I needed to re-interview subjects because sometimes their moods and conditions changed due to the extreme heat in summertime, when the

average temperature was usually as high as $45^0$C. If the researcher had more time, the data might have been more complete.

5) I realised and acknowledged later, that some of the MBK locals and BKK speakers have different levels of linguistic competence in the standard BKK Thai dialect. Therefore, with respect to the defective forms, such as {l} in underlying form /r/ and {CØ} in /Cr/, both MBK and BKK participants might have been influenced by the low level of education that affects the acquisition of the BKK Thai dialect among local MBK participants, or the vernacular use of it among BKK speakers. This reason might distort some results since the researcher could not test and find out whether any speakers were illiterate in the BKK dialect, or even innumerate in basic mathematical tasks, in the SNS questionnaires. If we could test the level of the BKK Thai dialect competence of both of the MBK locals and the BKK speakers (either before or after) with regards to quantitative hypercorrection in {Cl}, we might be reassured as to whether the potential hypercorrection comes from the struggle of people to produce the prestige form or not. However, it is still acceptable that we have classified these groups as having a low level of education, which is also true in reality.

## 7.13 Future research studies

1) It would be interesting to compare three communities that are close to the NTIE radius, namely, Chiang Mai, Yong people of Lamphun and this current MBK community, in the future, by using a full-scale variationist approach.

2) A diachronic/comparative study focused on the evidence of dialect borrowing from Pali-Sanskrit into the NT Thai dialect, especially in the /l/ and /h/ alternation from underlying (r), would be desirable.

3) Also desirable would be a study of the syntactic variation (lexical variation) in NT Thai in this area, such as negators (namely, /ma2j/, /baʔ1/, /ba:1/, /bɔʔ1/, and /bɔ:1/),

and the co-occurrence patterns of the NT Thai negator(s) with perfective aspect markers which are grammaticalised, namely, /da:j2/ and /daj2/. Such evidence from a different linguistic level could prove a useful crosscheck and be informative in its own right.

4) Language choice, according to the code-mixing aspect in both written and spoken languages, should be studied.

5) Social network analysis focusing on the properties of centrality, between-ness and closeness would be very useful. This SNA modelling can be run in UCINET, which employs a mathematical matrix.

6) It would be interesting to incorporate other factors of the ties (not just the actor) which can be found in the SN questionnaires, such as sex, age and role (between the ties and actor). In addition, if each type of relationship of the network (namely, intimacy relationship and daily routine contact) can be constructed using psychological and knowledge-based factors, the SNA results may show further interesting implications concerning human behaviour.

7) This study contains at least four main SN attributes; I believe that the number of the SN attributes can be infinite. It would be interesting to compare and contrast methods in the previous SNA studies, such as in Milroy (1987), Li (1994), Cheshire, et al. (2008) and other classic sociolinguistic works. I believe that the SNA core attributes can be finite in number, which might leads to the improvement of the SNA standard theory.

8) In the aspect of psycholinguistic and sociolinguistic interfaces, other types of narrative tests associating stylistic predictors ought to be explored. This would reveal the association amongst the types of narration or styles, degree of awareness and linguistic variation. Apart from the narration type test and classical Labov methods of stylistic tests (Labov, 1972), it is interesting to explore the whole range of awareness (with other experimental designs) of speakers interacting with linguistic variation.

9) It would be interesting to research lexical tonal variation across the three main dialects, BKK Thai, NT Thai and Yong dialect in this area, particularly in the vowel shift from diphthongs to the high or front monopththongs. It is interesting to observe the centralisation, especially in the low front vowels as well.

10) The power difference between the interlocutors is worth studying. It was found that the MMC speakers did not bother to accommodate by switching away from their dialect. This is in contrast to the WC or LMC speakers. Thus, the different power level between the interviewer and the interviewee(s) might influence dialect choice and code-switching in the interviewees.

11) The issues of social and geographic mobility, industrialisation, urbanisation and globalisation (the globalised and the globalising circumstances, Coupland, 2013) are interesting to investigate more qualitatively. This will shed light on further implications of the social structure in NTIE in Thailand in a macro-sociolinguistic study which could be compared to other countries later.

## 7.14 Summary of the study based on the research questions

Finally, the research questions are answered and summarised as below.

*1) How stable is the linguistic situation of the NT Thai dialect found in NTIE community? Can either dialect maintenance or shift be identified by applying a variationist approach?*

It is predicted that the linguistic situation of the NT Thai dialect will continue to shift towards the BKK Thai dialect, with the latter gaining new functions, even though there is some weak resistance by the higher-class elderly maintainers. In addition, this prediction brings in diglossic issues: rather than a complete shift, some functions will switch from substrate dialect (L) to superstrate dialect (H) to some extent (Fasold, 1984). Based on the potential apparent time change, the next young generation may shift significantly towards BKK. The primary factors contributing to dialect change lie in stylistic and other demographic factors, which appear to be very strong predictors in some Asian language communities. The sharp stylistic contrasts that have long characterised diglossic communities may give way quickly to the spread of the standard BKK dialect.

*2) How are social contact patterns between migrants and long-time local MBK residents affecting the NT Thai dialect? Can social network analysis (SNA), using an Ego-centred approach (focusing mainly on actor-/ego-centred speakers and their individual ties) shed light on dialect contact and change?*

The SNS is an important predictor but it is not strong compared to others in this study. It is observed that other confounding factors, such as Pali-Sanskrit language borrowing and the BKK Thai media influences, play a major role in dialect shift away from the NT Thai dialect. However, the SNS enables us to better understand the linguistic situation. On one hand, the homogeneity in ethnicity (MBK speakers' ties) resists some changes from the BKK Thai dialect. On the other hand, it illuminates the overall dialect shift from NT Thai to BKK Thai, based on ethnically heterogeneous networks. In addition, other demographic factors are important to show the linguistic variation patterns. The LMC women are the linguistic innovators in {r-1}. The MMC local elderly men are the linguistic maintainers, then the LMC locals, followed by the WC locals, in using the [h] form, with different underlying social meanings.

*3) What linguistic patterns emerge with respect to (non-)adoption of rhotic sounds in the MBK dialect? Are there parallels between the two rhotic variables?*

The patterns can be categorised into three aspects pertaining to the local forms of NT Thai and the incoming forms of BKK Thai. The relationship between variable (r) and (Cr) exhibits weak associations, and is not likely to be entirely parallel, due in part to the contrasting sets of variants and their distinct sociolinguistic histories. Firstly, the nature of {Cr-1} and {r-1} are relatively similar in terms of their social meanings but the explanatory factors are somewhat different. Secondly, the pattern of the cluster reduction form {CØ} aligns with the lateral [l]: they are both socially neutral variants. Thirdly, the covert prestige form [h] is highly favoured by the local MMC elderly speakers who are the dialect maintainers, and the WC speakers. Finally, the {Cl} usage

pattern is not similar to that of the other lateral form [l]. {Cl} can be regarded as either (1) a hypercorrect form (a form that speakers consciously attempt to pursue for an accurate form, but cannot systematically produce), or (2) a defective form, (a form that the speakers produce by mistake which is derived from a lack of linguistic competence in the BKK Thai dialect).

Finally, the main contribution of this variationist study is that it enables us to understand dialect shift and maintenance in the NT Thai dialect scenario and its essentially diglossic situation (Fasold, 1984). This research incorporates a full scale ego-centred approach to social network analysis which has included a number of important facets in SNA theory. Also, this study employs statistical multivariate analyses, such as regression analyses, and other related non-parametric tests. Both of these are innovations in Thai dialect contact studies. Therefore, with the combination of predictive factors ranked in their hierarchy of effects, and the interaction tests pairwise amongst numeral predictors, they have revealed subtle and important dimensions of the findings, including the key roles of style differentiation, localness, age, class and sex in their sometimes complex interactions. This study can be a good exemplar of the quantitative variationist research for future work on Thai.

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## Appendix A

## Reading passage test for rhotic onset and cluster with rhotic onset

นัก**เรีย**นชั้นประถมศึกษา**รุ่นแร**กในคราวนั้นล้วนเป็นเด็กน่า**รัก** แม้**โรงเรีย**นจะอยู่ห่างไกล เด็กๆ ก็ได้**รับ**การดูแลจากครูอย่างดี คณาจารย์ได้อบ**รม**สั่งสอนให้ผู้**เรีย**นตรงต่อเวลา ตระเตรียมบท**เรียน**ก่อนทุกครั้ง มีตา**ราง**กำหนดชัดเจน ทุกๆ คนก็ดูครื้นเครงสนุกสนาน เป็นเด็กที่มีอา**รม**ณ์ดี และ**รู้**จักว่าอะ**ไร**ควรมิควร

เด็กๆ โดยมากจะหิ้วกระเป๋าหนักประมาณหนึ่งกิโลกรัมใส่อาหารปรุงเสร็จ หนังสือเต็มเพียบ เดินเท้าเปล่าบ้าง ใส่**รอง**เท้าบ้าง มักไม่ได้เป็นผู้มีฐานะ**ร่ำรวย** เด็กๆ หน้าตาไม่คร่ำเคร่ง **หรือ**เครียดเลย มีความสุข และสนใจใคร่**รู้**

ปกติครูผู้สอนจะประชุมกันอย่างพร้อมเพรียงเพื่อตรวจตราความ**เรีย**บ**ร้**อย จัดประเภทของสื่อเอกสารอย่างดี และมักปรับปรุงเครื่องมือชุดการสอนเป็น**ระ**ยะเพื่อให้น่าสนใจและประเทืองปัญญา

นัก**เรีย**นได้**รับ**การอบ**รม**ให้ครองตนเป็นคนดี **รู้**จักคิดวิเคราะห์**เรื่อง****ราว**หนักเบาตามสมควรแก่เหตุ เข้าใจประเพณี และวัฒนธรรมอันงดงามของชาติบ่อยครั้ง เหล่าครูจะมีการประชุมนัก**เรียน** สอบถามความเห็นเกี่ยวกับ**เรื่อง**ต่างๆ นัก**เรียน**ก็จะมากันอย่างพร้อมพรั่ง

ใครที่มาช้า เพื่อนก็จะ**เร่งเรียก** ให้**รีบ**มาช่วยกันแสดงความเห็นอย่างเ**สรี** เป็นที่สนุกสนาน หัว**เรา**ะงอหายกัน บางคราวก็นึกสนุก จัดเป็นการประกวดประชันกัน อาทิ โต้วาทีบ้าง กล่าวสุนท**รพ**จน์บ้าง อย่างไม่เป็นทางการนัก มักมีการเสนอความเห็น**ร่วม**กันอย่างน่าสนใจ แม้เด็กๆ จะมีความ**รู้สึก****ร่วม**อย่างยิ่งในการสนทนา แต่ก็หาได้ใช้ถ้อยคำที่**รุน****แรง** ล้วนแต่กลั่นกรองคำพูดที่น่าฟังทั้งสิ้น

## Translation of the reading passage test

นัก**เรีย**นชั้นประถมศึกษา**รุ่นแร**กในคราวนั้นล้วนเป็นเด็กน่า**รัก** แม้**โรงเรีย**นจะอยู่ห่างไกล เด็กๆ ก็ได้**รับ**การดูแลจากครูอย่างดี คณาจารย์ได้อบ**รม**สั่งสอนให้ผู้**เรีย**นตรงต่อเวลา ตระเตรียมบท**เรียน**ก่อนทุกครั้ง มีตา**ราง**กำหนดชัดเจน ทุกๆ คนก็ดูครื้นเครงสนุกสนาน เป็นเด็กที่มีอา**รม**ณ์ดี และ**รู้**จักว่าอะ**ไร**ควรมิควร

nak3 ri:an0 tɕʰan3 praʔ1tʰom4 suk1 sa:4 run2 rɛ:k2 naj0 kʰra:w0 nan0 lua:n3 pen0 dek1 na2 rak3 mɛ:3 ro:ŋ0 ria:n0 tɕaʔ1 ju:1 ha:ŋ1kla:j0 dek1 dek1 kɔ:2 da:j2rapɜ ka:n0 du:0 lɛ:0 tɕa:k1 kʰru:0 ja:ŋ1 di:0 kʰaʔ3na:0 tça:n0 daj2 ʔɔp1rom0 saŋ1sɔ:n4 haj2 pʰu2ri:an0 troŋ0 tɔ:1 we:0la:0 traʔ1triam0 bot1rian0 kɔ:n1 tʰuk3 kʰraŋ3 mi:0 ta:0raŋ0 kam0not1 tçʰat3tɕe:n0 tʰuk3tʰuk3 kʰon0 kɔ:2 du:0 kʰrɯ:n4kʰre:ŋ0 saʔ1nuk1saʔ1na:n4 pen0 dek1 tʰi:2 mi:0 ʔa:0rom0 di:0 lɛ4 ru:4tɕak1 wa:2 ʔa1raj0 kʰuan0 miʔ3 kʰuan0

Nostalgically, our first primary school students were quite good. Even though the school location was in the remote place, quite far away from the downtown, students had been treated so well from their educators. With the well-planned class schedules, teachers could train them the fundamental study skills such as punctuality and self-preparation prior to the classes. Students looked so joyful and in a good-tempered. On top of that, they were all disciplined.

เด็กๆ โดยมากจะหิ้วกระเป๋าหนักประมาณหนึ่งกิโลกรัมใส่อาหารปรุงเสร็จ หนังสือเต็มเพียบ เดินเท้าเปล่าบ้าง ใส่**รอง**เท้าบ้าง มักไม่ได้เป็นผู้มีฐานะ**ร่ำรวย** เด็กๆ หน้าตาไม่คร่ำเคร่ง **หรือ**เครียดเลย มีความสุข และสนใจใคร่**รู้**

dek1dek1 do:j0ma:k2 tɕaʔ1 hiw2 kraʔ1paw4 nak1 praʔ1ma:n0 nɯŋ1 kiʔ1lo:0kram0 saj1 ʔa:0ha:n4 pruŋ0 set1 naŋ4sɯ:4 tem0 pʰia:p2 dɯ:n0 tʰa:w3pla:w1 baŋ2 saj1 rɔ:ŋ0tʰa:w3 baŋ2 mak3 maj2da:j2 pen0 pʰu2 mi:0 tʰa:4naʔ3 ram2ruaj0 dek1dek1 na:2ta:0 maj2 kʰram2kʰrɛŋ2 rɯ:4 kʰri:at2 lɤ:j0 mi:0 kʰwa:m0 su:k1 lɛ:2 son4tɕaj0 kʰraj2 ru:3

During walking to school, most students carried their school bags which weigh around 1 kg with their lunchboxes. Some walked to school on foot and some even on go to school on their bare foot. Most students were not come from wealthy-off families but this economic condition did not seem to affect their self-esteem. Their faces smeared with smiles and were very happy with their lives. They were such enthusiastic and conscientious children.

ปกติครูผู้สอนจะประชุมกันอย่างพร้อมเพรียงเพื่อตรวจตราความ**เรียบร้อย** จัดประเภทของสื่อเอกสารอย่างดี และมักปรับปรุงเครื่องมือชุดการสอนเป็น**ระ**ยะ เพื่อให้น่าสนใจและประเทือง**ปัญญา**

pok1kaʔ1tiʔ1 kʰru:0 pʰu:2so:n4 tɕaʔ1 praʔ1tɕʰum0 kan0 ja:ŋ1 pʰrɔ:m3pʰri:aŋ0 pʰɯ:2 truat1tra:0 kʰwa:m0 ri:ap2rɔ:i3 tɕat1 praʔ1pʰe:t2 kʰoŋ4 sɯ:1 ʔe:k1kaʔ1sa:n4 ja:ŋ1 di:0 lɛʔ2 mak3 prap1pruŋ0 kʰrɯa:ŋ2mɯ:0 tɕʰut3 ka:n0so:n4 pen0 raʔ3jaʔ3 pʰɯa2 haj2 na:2son4tɕaj0 lɛʔ3 pra1tʰɯaŋ0 pan0ya:0

Instructors were likely to hold the meeting regularly and participate willingly in order to review and assess their works. Regularly, they tried to improve and neatly their teaching material array with the aimed for educational intellect and interestingness for such lesson.

นัก**เรียน**ได้**รับ**การอบ**รม**ให้ครองตนเป็นคนดี **รู้**จักคิดวิเคราะห์**เรื่อง****ราว**หนักเบาตามสมควรแก่เหตุ เข้าใจประเพณี และวัฒนธรรมอันงดงามของชาติ บ่อยครั้ง เหล่าครูจะมีการประชุมนัก**เรียน** สอบถามความเห็นเกี่ยวกับ**เรื่อง**ต่างๆ นัก**เรียน**ก็จะมากันอย่างพร้อมพรั่ง

nak3ri:an0 da:j2rap3 kan0 ʔop1rom0 haj2 kʰrɔ:ŋ0ton0 pen0 kʰon0di:0 ru:3tɕak1 kʰit3 wiʔ3kʰrɔʔ3 rɯ:ŋ2ra:w0 nak1baw0 tam0som4kʰuan0 kɛ:1 het1 kʰaw2 tɕaj0 praʔ1pʰe:0ni:0 lɛʔ3 wat3tʰaʔ3naʔ0tʰam0 ʔan0 ŋot3ŋa:m0 kʰo:ŋ4 cha:t2 bɔʔ1kʰraŋ3 la:w3 kʰru:0 tɕaʔ1 mi:0 ka:n0 praʔ1tɕʰum0 nak3rian0 sɔ:p1 tʰa:m4 kʰwa:m0hen4 kiaw1kap1 rɯaŋ2ta:ŋ1ta:ŋ1 nak3rian0 kɔ:2 tɕaʔ1 ma:0 kan0 ja:ŋ1 pʰrɔ:m4pʰraŋ2

Students had been trained to have a good manner which aiming to be a good citizen for the future. The life skill comprises analysis skills, critical thinking as well as understanding and realising of national culture and traditions' value. Very often, teachers would ask students to set up meeting so as to ask them regarding their opinions in various current issues. Most students enthusiastically participated in with joy.

ใครที่มาช้า เพื่อนก็จะ**เร่งเรียก** ให้**รีบ**มาช่วยกันแสดงความเห็นอย่างเสรี เป็นที่สนุกสนาน หัว**เราะ**งอหายกัน บางคราวก็นึกสนุก จัดเป็นการประกวดประชันกัน อาทิ โต้วาทีบ้าง กล่าวสุน**ทรพจน์**บ้าง อย่างไม่เป็นทางการนัก มักมีการเสนอความเห็น**ร่วม**กันอย่างน่าสนใจ แม้เด็กๆ จะมีความ**รู้สึก****ร่วม**อย่างยิ่งในการสนทนา แต่ก็หาได้ใช้ถ้อยคำที่**รุนแรง** ล้วนแต่กลั่นกรองคำพูดที่น่าฟังทั้งสิ้น

kʰrai0 tʰi2 ma:0 tɕʰa:3 pʰɯ:an2 kɔ:2 tɕaʔ1 reŋ2 ri:ak2 haj2 ri:p2 ma:0 tɕʰuaj2 kan0 saʔ1dɛ:ŋ0 kʰwa:m0 hen4 ja:ŋ1 se:4ri:0 pen0 tʰi:2 saʔ1nuk1 saʔ1na:n4 huaw4rɔ0 ŋɔ:0haj4 kan0 ba:ŋ0 kʰraw0 kɔ:2 nɯk3 saʔ1nuk1 tɕat1 pen0 ka:n0praʔ1kuat1 praʔ1tɕʰan0 kan0 ʔa:0tʰi2 to:2wa:0tʰi:0 ba:ŋ2 kla:w1 sun4tʰɔʔ0raʔ3phot3 ba:ŋ2 ja:ŋ1 maj2 pen0 tʰa:ŋ0ka:n0 nak3 mak3 mi:0 ka:n0 saʔ1nɤ:4 kʰwa:m0hen4 ruam2kan0 ja:ŋ1na:2son4tɕai0 mɛ:3 dek1dek1 tɕaʔ1 mi:0 kʰwam0ru:3sɯk1 ruam2 ja:ŋ1yiŋ2 naj0 ka:n0son4tʰaʔ2na:0 tɛ:1 kɔ:3 ha:4 daj2 tɕai3 tʰɔj2kʰam0 tʰi:2 run0rɛ:ŋ0 luan3 tɛ:1 klan1kro:ŋ0 kʰam0pʰut2 tʰi:2 na:2faŋ0 tʰaŋ3sin2

If there were some late comers, their friends would be hurry to call them to join in. They were eager to share their opinions liberately. Sometimes, some discussed issues were ridiculous. They laughed aloud. Even some occasions, they tried to escalate their meetings to be a full competition, such as holding a debate and speech competitions but not in a dramatically stressful one orientation. They were all united and shared lots of good and interesting ideas in the friendly way. Even though, students were seemingly to be active and enthusiastic, they would never show bullying actions or employ such hate-speech. Those eloquent talks were gentle and beautifully polished.

**Minimal pair test for the cluster with rhotic onset**

| No. | Word (Cr) | Thai character | meanings | No. | Word (Cl) | Thai character | meanings |
|---|---|---|---|---|---|---|---|
| 1. | prɛːŋ0 | แปรง | brush’ | 1. | plɛːŋ0 | แปลง | transform |
| 2. | $p^h$ruː0 | พรู | abundant | 2. | $p^h$luː0 | พลู | a herb of the betel family Piperaceae |
| 3. | krot1 | กรด | acid | 3. | klot1 | กลด | umbrella |
| 4. | $k^h$rɔŋ0 | ครอง | to possess/ to dress | 4. | $k^h$lɔŋ0 | คลอง | canal |
| 5. | $k^h$raːt2 | คราด | rake | 5. | $k^h$laːt2 | คลาด | miss |
| 6. | prɛː0 | แปร | to vary | 6. | plɛː0 | แปล | translation/ to translate |
| 7. | kroŋ0 | กรอง | to sieve | 7. | kloŋ0 | กลอง | drum |
| 8. | $p^h$rik2 | พริก | chili pepper | 8. | $p^h$lik2 | พลิก | twist/ flip |
| 9. | praːj0 | ปราย | to glance | 9. | plaːj0 | ปลาย | edge |
| 10. | krap1 | กรับ | a Thai classical wooden rhythm instrument | 10. | klap1 | กลับ | turn, return |

**Minimal pair test for rhotic onset**

| No. | Word (r) | Thai character | meanings | No. | Word (l) | Thai character | meanings |
|---|---|---|---|---|---|---|---|
| 1. | ra:t2 | ราด | 'to pour', 'to top' | 1. | la:t2 | ลาด | 'to pave, to tilt' |
| 2. | ri:p2 | รีบ | 'Hurry' | 2. | ri:p2 | ลีบ | 'to wither/ to be emaciated' |
| 3. | rɯ:n2 | รื่น | 'refreshing/ ecstatic' | 3. | lɯ:n2 | ลื่น | 'slippery' |
| 4. | rɔ:j0 | รอย | 'trace' | 4. | lɔ:j0 | ลอย | 'float' |
| 5. | rɯ:ŋ2 | เรื่อง | 'issue, story' | 5. | lɯ:ŋ2 | เลื่อง | 'rumour' |
| 6. | rom0 | รม | 'to smoke' (the food) | 6. | lom0 | ลม | 'wind' |
| 7. | rat2 | รัด | 'to fasten, to tight' | 7. | lat2 | ลัด | 'shortcut' |
| 8. | ria:p2 | แร้ว | 'a trap for a tiger' | 8. | lia:p2 | แล้ว | 'perfective aspect, to be done' |
| 9. | rɛ:w3 | เรียบ | 'smooth' | 9. | lɛ:w3 | เลียบ | 'to approach, to make an overture' |
| 10. | ro:2 | โร่ | 'obviously' | 10. | ro:2 | โล่ | 'shield' |

## Appendix B

### Social occupational classes based on respondents' careers in Thailand

According to Chandhrawanich (1998), the following occupation lists stratify speakers in this community by social occupational class with Thai attitude towards type of work. 3 out of the 4 classes are chosen in this project.

1) middle-middle occupational class (MMOC), (30 jobs) (prestige score range: 48.2-64.7 out of 100)

School teacher, physical scientist, general (senior) office manager; businessman, district-chief officer, director of certain department; member of the Provincial Council, aerial officer, lieutenant; Police Colonel, biological scientist, entrepreneur, economist; auditor, farmland administrator, sociologist; historian; political scientist, statistician; analyst, hotel manager; restaurateur; bar, social (welfare) worker, middle tier governance officer, rancher, foreman, priest, noncommissioned officer, TV or radio staff, purchasing (dealer) manager, wealthy person (mostly entrepreneur or rich merchant), artist, artistic painter, photographer, computer officer, poet; novelist; musician; singer; actor, professional athlete, head of clerk, lower tier of agriculturist, journalist and writer

2) lower-middle-occupational class (LMOC) (31 jobs) (prestige score range: 36.1-47.3)

Sub-district headman; village headman, goldsmith; jeweler, accountant/book-keeper, transportation officer, quarter master; sergeant, typewriter; stenographer, cook, assemble mechanical technician, miner, operator; telegrapher, apartment/ building administrator, small agriculturist, mechanic, chemical officer, postman, tailor, metallic technician, sale representative; broker; agent, terracotta craftsman; glass designer; musical instrument craftsman, furniture craftsman, printer, transportation device officer, fisherman; huntsman, blacksmith, lifeguard; security, clerk, hairdresser/maker, rubber; paper plastic maker, carpenter; brick; terracotta maker; painter, factory worker (molding, weaving, dying and twining/knitting).

3) working/ Low occupational class (WOC). (16 jobs) (prestige score range: 34.9-16.7)

Small (or local) manager, pawnbroker, transferring material worker, shoe and leather maker, vendor, tobacco leaf maker, peasant; (casual) farmer, farm tenant, waiter; bellboy, lumberjack, launderer, servant; janitor, unskilled labourer, other related service worker, astrologer; fortune teller, ticket taker, prostitute.

## Appendix C

## Phonological systems of the Northern Thai (NT) dialect and the Bangkok (BKK) Thai dialect

In this part, the phonological systems of two target dialects are discussed below as this research aims at understanding the blending between two dialects leading to linguistic variation.

### 1. Northern Thai phonological system

In this part, the phonological systems of two target dialects are discussed below as this research aims at understanding the blending between two dialects leading to linguistic variation.

With regard to its history, NT Thai/Muang people have shared their history with the central Thai or Siam people for a long time. NT Thai people first established their Lanna dynasty by King (Phaya[1]) Meng Rai in 1440 A.D. It covered the most of northwestern (NW) part of Thailand and some provinces in Myanmar. The kingdom sovereignty was lasted for 263 years. Until 1558 A.D and 200 years later, Lanna Kingdom was colonized by many other stronger kingdoms nearby and finally be one part of Siam (Thailand). In 1933 A.D. (in King Rama V) finally proclaimed that all 8 NW provinces of Lanna Kingdom were fully united into Siam (Thailand).

Regarding Thai ideology reflecting on regional dialect, Smalley (1994, pp. 88-92) addressed that all Thai regional dialects which are segregated based on geography are never seen to be a problem for being inclusive as 'Thai language' is based on political unity and non-divisive grounds. The differences between other Tai spoken languages are often minimized by the belief that "we are the same Thai willingly". This is because NT Thai is perceived as another kind of Thai language even though NT Thai dialect is very different in phonology, grammar and lexicon. This belief affects all dialects across Thailand. Other regional dialects are recognized as being one of the Thai dialects and belong to the 'Thai-ness ideology".

[1] Phaya refers to the great or king not Praya which denotes the aristocratic ranking of civil servant in Thai society

This notion is supported by Rappa & Wee (2006). They suggest three ranking factors in relation to forming a sense of Thai unity and ideology, namely, 1) a desire to be absorbed or assimilated into Thai society, 2) a sense of respect for the King and other members of the royal family; and finally, 3) where certain dialects were concerned, a willingness of producing the sense of Thai-ness has been constructed for those dialects.

Rappa & Wee added that other factors of the Thai-ness unification derived from social class and Buddhism. First, the national unification issue might result from the lower level of education, with less power of rural people who use other provincial varieties compared to the Bangkokians who speak BKK Thai and are viewed as better off. Using BKK dialect indexes a better level of education and socio-economic status. Secondly, Around 95% of Thai people are Buddhist[2] according to CIA the World Fact Book (2017). Thus, the shared belief in Buddhism for people in Thailand is the strong ground that unites people to become "Thai" and bear "Thai-ness" even though some of them might be ethnic minority groups. What's more, to use BKK Thai translation and BKK Thai accent in Buddhist sermons, chanting and preaching are regarded as formal practice. Even though the people in each region in Thailand have their own regional dialects to convey the Buddhist Dharma content,[3] using BKK Thai dialect version and being educated in Buddhist universities from Bangkok leads to prestige, creditability, standard and acknowledgement.

In this section, the phonological system of NT Thai is explained in detail.

[2] https://www.cia.gov/library/publications/the-world-factbook/geos/th.html

[3] Especially in NT Thai version which has their own Tipitaka and underwent several revisions before Siam for many hundred years. The process of revision was conducted by the grand council held by Buddhists for the purpose of revising the Tipitaka. The contributors and the collaborators wereonly monks as a norm. Therefore, this strong BKK influence is also the main factor for dialect shift a long time ago in NT speakers (this is discussed in Chapter 7 regarding the lost and preserved sounds of /l/ and /r/ in NT Thai, not the direct evidence of language contact or urbanization and industrialization only. It has gradually deteriorated for more than 70 years at least since King Rama IV.

Table a The NT Thai consonant phoneme inventory adapted from Wangsai (2007) Rungrueangsi (2004) and Pankhuenkha (1982)

| Places of articulation/ manner of articulation | Voicing and aspiration | Bilabial | Labio-dental | Alveolar | Alveolar-palatal | Palatal | Velar | Glottal |
|---|---|---|---|---|---|---|---|---|
| Stop/Plosive | Voiced | b | | d | | | | |
| | Voiceless unaspirated | p | | t | | | k | ʔ |
| | Voiceless aspirated | $p^h$ | | | | | | |
| Nasal | voiced | m | | n | | ɲ | ŋ | |
| Fricative | voiceless | | f | s | | | x[4] | h |
| Affricate | Voiceless unaspirated | | | | tɕ | | | |
| Approximant | voiced | *w | | | | j | | |
| Lateral Approximant | voiced | | | l | | | | |

(*) Tingsabadh and Abramson (1993) treated /w/ as a velar approximant in BKK Thai dialect while in NT Thai dialect and Yong dialect, /w/ was treated as a lateral bilabial instead.

However, in NT Thai and Yong, the phoneme /x/ and /k/ are contrastive phonemes. Both NT Thai and Yong do not have /$k^h$/ in the phonological system. But the younger generation cannot differentiate between the /x/ and the /$k^h$/ as found in many previous studies (Khemmuk, 2007, and Pankhuenkha, 1982). This might result from BKK Thai influence. The distinction of /x/ and /k/ is greater (more difficult in perception) than as /$k^h$/ and /x/ in general.

[4] (Khemmuk, 2007) uses /$k^h$/ instead of /x/ and /c/ instead of /tɕ/ and posseses / ɲ / both /j/ and /ɲ/ while (Pankhuenkha, 1982) employ /c/ instead of /tɕ/, /$k^h$/ to/x/, /j/ to /ɲ/.

In general, Wangsai (2007) addressed that there are 20 initial phonemes[5] in Northern Thai and also confirmed by other works in namely /p/,/t/, /k/,/ʔ/,/pʰ/,/tʰ/,/x/,/b/,/d/,/tɕ/,/f/,/s/,/h/,/m/,/n/, /ɲ/,/ŋ/,/l/, /w/ and /j/.

In terms of final consonants, there are 9 phonemes that could serve as the coda, namely /p/,/t/, /k/,/ʔ/, /m/, /n/, /ŋ/, /w/ and, /j/ . It should be noted that NT Thai dialect does not have /tɕʰ/ and trill [r] or tap [ɾ] which appear in BKK Thai dialect (Pankhuenkha, 1982). Conversely, /ɲ/ and /x/ do not exist in Bangkok Thai phonological system while NT does.

NT Thai dialect[6] consists of 11 consonant cluster phonemes followed by /w/ and located in the initial position of the word, namely, /kw/, /xw/, /sw/, /tw/, /tʰw/, /tɕw/, /ʔw/, /nw/, /ɲw/, /lw/ and /jw/. The first two clusters are the most frequently found. NT Thai dialects do not have any consonant clusters followed by /l/ or /r/ as found in Standard Thai or (Cr) or (Cl) variables, as examples of /kr/ or /kl/, etc.

Pankhuenkha (1982) addressed that NT Thai dialect is composed of 18 phonemic vowels which are the same as Standard/ BKK Thai[7] as shown below. They also contrast by their vowel length, short and long. It is composed of 6 diphthongs[8] which contrast by vowel length as well, namely, /ia/, /iːa/, /ua/, /uːa/, /ɯa/, and /ɯːa/□□

| Position/Height | Front | | Central | | Back | |
|---|---|---|---|---|---|---|
| High | i | iː | ɯ | ɯː | u | uː |
| Mid | e | eː | ɤ | ɤː | o | oː |
| Low | ɛ | ɛː | a | aː | ɔ | ɔː |

In terms of lexical tones, NT Thai dialect consists of 6 tones which are quite different from standard Thai and Yong dialect. Examples of lexicon tones derived from (Pankhuenkha, 1982, p. 4)

[5] As found in Sunthrakool (1962) and (Pankhuenkha, 1982)
[6] Like the Yong dialect
[7] Also found in Yong dialect
[8] Yong dialect is different from Kammuang and Standard Thai in that it does not have any diphthongs.

In the six NT Thai lexical tones, there are some nuanced differences regarding their contour tone behaviour. Ultimately I decided to use the standard NT Thai which belongs to Chiang Mai province. After conducting the analyses, I found that this system bears the closest resemblance to MBK NTIE locals in Lamphun province. Also, in terms of areas' closeness, NTIE area is very close and adjacent to the Muang district or the city of Chiang Mai province. It is found that even though NT Thai consists of 6 lexical tones, all the five major tones in NT Thai are similar to BKK Thai's. The exception is the high-falling with glottal stop closure (44ʔ).

**NT Thai lexical tones**

| Tones | Tones' symbols | Examples in this theses, numbering system was adopted here |
|---|---|---|
| 1. Mid-level (33) marked as '0' | unmarked tone | /maj/ or /maj0/<br>'stinging weapon of insect' |
| 2. Low (21) marked as '1' | ˋ | /màj/ or/maj 1/ 'to be new' |
| 3. Falling (42) marked as '2' | ˆ | /mâj/ /maj2/ 'to feel sorry' derived from /hom1 maj2/ |
| 4. High (45) marked as '3' | ˊ | /máj/ or /ma3/ 'wood' |
| 5. Rising (24) marked as '4' | ˇ | /mǎj4/ 'to fine', derived from /sin4 maj4/ |
| 6. High-falling with glottal closure (44ʔ) marked as '5' | ˍ | /māj5/ 'to burn' or /law5/ 'alcohol drink' |

**Sound correspondence in Bangkok Thai to NT Thai dialect**

Pankhuenkha (1982, pp. 6-12) investigated the sound correspondence rules between NT Thai dialect and BKK Thai dialect for their initial consonant phonemes and lexical tones. Most of them shift from aspirated sounds in BKK Thai to unaspirated sounds in NT Thai. Some sound correspondences are conditioned by aspiration features and lexical tone as well. Except all loan words which are derived from BKK Thai language and other languages, the original phonemes in BKK Thai and others are still retained.

Another exception also emerges in loanwords with rhotic /r/ underlying forms in both consonant onset and consonant clusters onset in BKK Thai, which is our principal object of study. In NT Thai, these abovementioned BKK loanwords composed of /r/ and /Cr/ phonemes will be shifted to /l/, while the corresponding words in NT Thai will display /h/. The cluster consonants will be simplified by consonant reduction (CØ). A number of exceptions occur due to the high amount of BKK Thai word influx, but most of the rule are still valid.

**Sound correspondence in consonant phonemes**

1) All aspirated phonemes in BKK Thai correspond to unaspirated phonemes in NT Thai dialect by the condition of mid tone (0), falling tone (2) and high tone (3), respectively.

| BKK Thai | Examples | NT Thai | Examples | meanings |
|---|---|---|---|---|
| /pʰ/ | /phan0/ | /p/ | /pan0/ | 'thousand' |
| /tʰ/ | /tʰa:ŋ0/ | /t/ | /ta:ŋ0/ | 'road' |
| /tɕʰ/ | /tɕa:ŋ3/ | / tɕ/ | /tɕa:ŋ3/ | 'elephant' |
| /kʰ/ | /kʰam0/ | /k/ | /kam0/ | 'word' |

2) The phoneme /r/ in BKK Thai will be shifted to /h/ in the corresponding words in NT Thai. However, loan words especially in Pali, Sankrit or other languages in BKK Thai ( found in Tipitaka -Buddhist primary cannon) /r/ onset will change into /l/. In terms of consonant clusters with /r/ in BKK Thai, the corresponding sound in NT will be cluster simplification by /r/ or /ɾ/ will be discarded. Only the first sound of the cluster is retained.

| BKK Thai | Examples | NT Thai | Examples | meanings |
|---|---|---|---|---|
| /r/ | / rot3/ | /h/ | / hot3/ | ‘to pour water on’ |
| | / ra:0/ | | / ha:0/ | ‘fungus’ |
| | /rɯan0/ | | /hɯan0/ | ‘resident or house’ |

**Sound correspondence in lexical tones between NT Thai and BKK Thai**

3) Mid tone (0) in BKK Thai will be a rising tone (4) in NT Thai in syllables with initial consonants of /p/, /t/,/k/, and /tɕ/ and in other NT Thai mid tones elsewhere.

| BKK Thai | Examples in BKK Thai | NT Thai | Examples in NT Thai | meanings |
|---|---|---|---|---|
| Mid tone (0) | /pi:0/ | Rising tone (4) | /pi:4/ | ‘year’ |
| | /pan0/ | | /pan4/ | ‘to give |
| | /kaw0/ | | /kaw4/ | ‘to scratch’ |

4) Low tone (1) in BKK Thai will be high tone (3) in NT Thai with a short vowel accompanied by voiceless stop and in other NT Thai low tones elsewhere.

| BKK Thai | Examples in BKK Thai | NT Thai | Examples in NT Thai | meanings |
|---|---|---|---|---|
| Low tone (1) | /kap1/ | High tone (3) | /kap3/ | 'with' (prep) |
| | /kaʔ1/ | | /kaʔ3/ | 'to estimate' |
| | /lap1/ | | /lap3/ | 'to sleep' |

5) Falling tone (2) in BKK Thai will shift to high-falling tone with glottal closure (5) in NT Thai in open syllables or words followed by /m/, /n/, /ŋ/, /w/, and /j/.

| BKK Thai | Examples in BKK Thai | NT Thai | Examples in NT Thai | meanings |
|---|---|---|---|---|
| Falling tone (2) | /kʰa:m2/ | high-falling tone with glottal closure (5) | /ka:m5/ | 'to cross' |
| | /ba:n2/ | | /ba:n5/ | 'house' |
| | /sa:ŋ2/ | | /sa:ŋ5/ | 'to build' |

6) High tones (3) and rising tones (4) in BKK Thai are preserved as the high tone (3) and rising tone (4) in NT Thai.

| BKK Thai | Examples in BKK Thai | NT Thai | Examples in NT Thai | meanings |
|---|---|---|---|---|
| High tone (3) | /wat3/ | High tone (3) | /wat3/ | 'temple' |
| rising tone (3) | /si:4/ | Rising tone (3) | /si:4/ | 'colour' |

In the next section, the phonological system of the BKK Thai which is the most influential dialect in Thailand is expressed.

## 2. Phonological system of Bangkok Thai dialect

Tingsabadh & Abramson (1993, pp.1) stated that Bangkok Thai (BKK) dialect is used by over 20 million people and regarded as the standard and official language for all of those who speak regional dialects in Thailand, NT Thai dialect or Southern Thai dialect as examples. In terms of Bangkok Thai phonological system and its background and influence in brevity.

Smalley (1994, pp.31-33) described the origin of BKK or standard Thai dialect was historically attached to the previous kingdom of Ayutthaya in which located up north to Bangkok nowadays. In fact, the Ayutthaya people possess their own dialect which is contrast to BKK speakers by their tone distinctions and their accurate pronunciation in rhoticity and clusters onsets. It is believed that the actual BKK Thai dialect was firstly spoken by the royal family, intellectuals, the courts and religious leaders in Siam (Thailand) in Ayutthaya period (A.D. 1350-1767)[9]. In terms of Thai (or called Siam at that time) orthography, it was created and transformed much earlier by King Ramkamhaeng, the third king of Sukhothai kingdom in 1283 around 700 years ago. The written forms were evolved and became far much easier.

In terms of linguistic situation and policy in Thailand, Rappa & Wee (2006) stated that Bangkok Thai is an official language or lingual Franca even though Thailand is heterogeneity with and multilingual speakers and several regional dialects. As a agricultural based country, around 80% of speakers reside in the rural area use other dialects and languages other than BKK Thai. Other 3 million uses Malay and are multilingual in the south. There are also a great number of Chinese diaspora who are at least bilingual living in the provinces' downtowns. Other ethnicities are also multilingual, such as hill tribe people. They use their own minority language as mother tongue mixing with regional dialects and BKK Thai.

[9] Another hypothesis argues against that, BKK Thai dialect were the simplified dialect of many central provincial dialects surrounding Bangkok province (Ieosiwong, 2016). It is the language of commercial and trading. Thus, if this claim is accurate to some extent, BKK Thai dialect is likely to be undergone the process of levelling from several dialect contacts or even resulted from the koineisation. This is because the Thai/ Siam Royal Kingdom was newer compared to Ayuddhaya kingdom. People moved downwards to the south for many times due to severe destruction and landscape erosion problems.

Smalley (1994, pp.14) stated that even though Thailand which has more than 80 languages, many dialects and varieties which lead to an extremely high in linguistic diversity, Thailand is still a remarkably unified country that BKK Thai is the dominance language. BKK Thai dialect is an important symbol of Thai nationality and identity. This is next to the king along with the Buddhist religion.

Other languages, specifically English gradually becomes significant in Thailand during the colonization period that all countries in south East Asia were colonized by many western countries during late King Rama 4th period (1851-1865) and throughout the reign of king Rama the 5th(1868-1910).

Wongsothorn (2000 cited in Rappa & Wee 2006) stated that, however, English is only function as the only the foreign language of and for outside world. Even though schooling systems currently tried to impose more classes by using English as a medium of instruction and English language, English is still has a minor role and being a language symbolizing higher classes only but never have the actual use in the insider Thailand community due to linguistic competency in English of Thai speakers are relatively low.

Noss (1984 pp.92).BKK or standard Thai is the primary language which is used inside Thai society as the insider. It is the medium of schooling and attach to Thai culture. In the formal events and in the offices for administration, BKK Thai is the only language which is allowed to use to work. Mass media such as TV, radio and newspapers employ BKK Thai as a basis orally or in written. Thus, other languages or dialects are obsoleted

In terms of Phonological system in BKK Thai, it is a tonal language which is composed of 21 consonantal phonemes in the initial position of the word, and 9 phonemes in final position while the 9 final consonants are found, namely, /p/,/t/, /k/,/ʔ/, /m/, /n/, /ŋ/, /w/ and, /j/ . The table below illustrates the BKK Thai dialect inventory.

Table b The 21 BKK Thai dialect consonant inventory adapted from (Tingsabadh & Abramson, 1993)

| Places of articulation/ manner of articulation | Voicing and aspiration | Bilabial | Labio-dental | Alveolar | Alveolar-palatal | Palatal | Velar | Glottal |
|---|---|---|---|---|---|---|---|---|
| Stop/ | Voiced | b | | d | | | | |
| Plosive | Voiceless unaspirated | p | | t | | | k | ʔ |
| | Voiceless aspirated | $p^h$ | | $t^h$ | | | $k^h$ | |
| Nasal | voiced | m | | n | | | ŋ | |
| Fricative | voiceless | | f | s | | | | h |
| Affricate | Voiceless unaspirated | | | | tɕ | | | |
| | Voiceless aspirated | | | | $tɕ^h$ | | | |
| Trill | voiced | | | r | | | | |
| Approximant | voiced | | | | | j | w | |
| Lateral Approximant | | | | l | | | | |

For rhotics which are the focus in this study, Iwasaki & Horie (2005) mentioned the rare cases of fully trilled or tapped /r/ production, the lateral liquid /l/ and the trill or tap /r/ are all distinguished in the orthography and pronounced differently in very carefully articulated speech based on a number of sociolinguistic studies in Bangkok Thai. However, in most casual speech /r/ is pronounced /l/.

L-Thongkum, et al. (2011, p. 25) observes that the variants of /r/ phoneme in BKK Thai dialect comprise trill [r], tap [ɾ] not flap (but flap was claimed by Palakornkul (1975) and Noss (1964)), retroflex [ɻ], alveolar approximant [ɹ] and lateral [l]. However, in this thesis, the variants of /r/ based on BKK Thai dialect phonology cover trill [r], tap [ɾ], and glottal fricative [h]

as initial consonant. Meanwhile, the consonant cluster onsets with rhotic as a second phone (Cr), other variants of the second phones and cluster reduction can be plausible regardless of [h].

Referring to the table b. consonant cluster onsets comprise 11 consonant clusters in Bangkok Thai dialect, in the initial position as follows: /pr/, /pl/, /$p^h$r/, /$p^h$l/, /tr/, /kr/, /kl/, /$k^h$r/, /$k^h$l/, /kw/ and /$k^h$w/ . Iwasaki and Horie (2005) state some nuance of consonants in Bangkok Thai that /$t^h$r/ is possible, but very rare. /fr/ and /tl/ also appear in some recent foreign loan words. These are, however, it is decided to exclude here.

Regarding vowels, there 18 phonemic vowels or they can be called as the 9 short vowels and 9 long vowels. This vowel phoneme's pattern is similar to Muang and Yong dialect.

| | front | | central | | Back | |
|---|---|---|---|---|---|---|
| High | i | i: | ɯ | ɯ: | u | u: |
| Mid | e | e: | ɤ | ɤ: | o | o: |
| Low | ɛ | ɛ: | a | a: | ɔ | ɔ: |

Similar to NT Thai dialect, it consists of 6 diphthongs which can be contrasted by short and long vowels. These are the diphthongs in Bangkok Thai: /ia/,/i:a/, /ɯa/, /ɯ:a/, /ua/, and /u:a/.□In terms of lexical tones, it is composed of 5 phonologically tones as mid tone, low tone, falling tone, high tone and rising tone. The below table shows the marking system and example of words and their tone markers.

The five BKK Thai lexical tones adapted from (Iwasaki & Horie, (2005, pp. 5)

| Tones | Tones' symbols | Examples |
|---|---|---|
| 1. Mid-level (33) marked as '0' | unmarked tone | /$k^h$a: 0/ 'to be unsettled' |
| 2. Low (21) marked as '1' | ` | /$k^h$a:1/ 'galangal root' |
| 3. Falling (42) marked as '2' | ˆ | /$k^h$a:2/ 'to kill' |
| 4. High (45) marked as '3' | ´ | /$k^h$a:3/ 'to trade' |
| 5. Rising (24) marked as '4' | ˇ | /$k^h$a:4/ 'leg' |

**A quantitative methodology in social network analysis (SNA)**

Quantitative SNA comprises three attributes (relationships) which play major roles in most SNA studies, namely the degree of centrality, the degree of closeness centrality and the degree of betweenness centrality. These important characteristics can enable us to use, point out and predict how the actors can access, possess or lose resources and information to some extent. These attributes can explain why some actors are the social influencers or bridgers of many network groups, quantitatively. All three attributes of SNA may be measured using a mathematical matrix analysis. Hanneman & Riddle (2005) identify the crucial role of these three attributes when the sociogram interacts with the focused actor.

**1) Centrality degree**

In general, Hanneman & Riddle (2005) state that the actor who has more than two SN ties can benefit from this social structure because of his "centrality" position. The strongest centrality degree refers to the actor(s) who have many individuals and ties (other network ties) in their universe, and who benefits from the centrality (actor). On one hand, the actors can have more channels and options to satisfy his needs, and draw a lot of information and resources from the ties actors possesses. On the other hand, the actors tend to be less dependent[10] on other ties/individuals, compared to other actor(s) who have a small number of ties. The actor(s) with a high degree of centrality will probably have access to more resources from the networks both directly and indirectly. Those actor(s) gain benefits from the adjacent most crucial node (in the direct way), or from the broker who can supply resources and information from outside the first order-

[10] In terms of transitioning and exchanging resources amongst members in a network, the more the ego(s)/actor(s) have ties, the more independent the ego(s) become and vice versa. This means that when the actor(s) have many friends, those friends can assist them when they are in trouble. The probability of dependency on each friend is low if their demands are well-distributed across a number of friends. This connection quality/ friendship is more securely healthy than someone who has few ties/friends. In contrast, if the actor(s) have a few ties, the dependency rate will be extremely high. All demands will fall into those few accessible ties/friends they possess. However, in my view, this argument is still debatable regarding humanist ideology and altruism. The quantity of SN cannot be compared with the quality of SN the actor(s) have in reality/ actual situation. This knowledge can be applied to understand the language as a capital or asset as well as how other new /dialect(s) or language(s) from one network can transmit to the other network to some extent.

ties (the indirect way), revealing who the most connected people in the SN is. This can indicate who tend to be the most popular, the most informative or who have the widest range of social networks, although these actor(s) are not always the most powerful influencer(s).

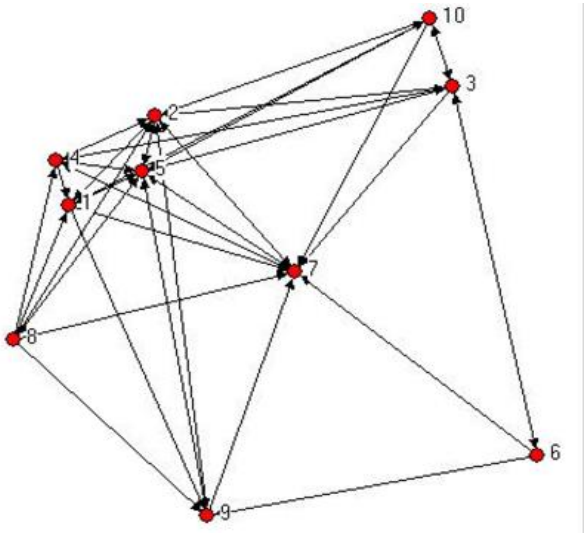



Figure 3.4 A social network calculated using a mathematical matrix[11]

**2) Closeness (centrality) degree**

Hanneman & Riddle (2005) argued that the centrality attribute was considered to be only the frequency of immediate ties/individuals directly adjacent to the focused actor(s)/ego(s). This measurement not only disregards other indirect ties/individuals but also the distances between the individuals and the main actor.

If a research problem is different as well as the SN structure is more sophisticated, the most centred actor(s) might not be the right candidate. Sometimes, the main actor(s) might have links to a number of individuals who do not adjacently adhere to one another right away, although most individuals (in relation to the actor(s)) might

[11] http://faculty.ucr.edu/~hanneman/nettext/C10_Centrality.html Access [10 April 2016].

link with one another. The actor(s) might connect only to their local neighborhood ties. The centrality degree (previously addressed in 3.7.1) might not be good enough to point out the best centre of the network, if the data, such as ties (range calculation and the number of ties) are skewed. Thus, the most centred actor in the network cannot represent the most powerful influencers, or those who gain the highest benefits from the SN.

A better approach might lie in a closeness centrality indicator which places emphasis on the distance of the actor(s) to all individuals in the entire network, calculating the distances between the actor(s) and all other individuals and showing the shortest paths amongst the ties. It assigns to each tie a score based on the summation of shortest paths. The benefit of the closeness measure is to find the best broadcasters and the shortest way to the most powerful influencer in certain conditions. It should be noted that the optimal centrality actor(s) and the optimal closeness actor can be the same person(s)/actor(s), depending on who is the closest to the target groups/ties.

**3) Betweenness flow (centrality) degree**

Another SNA concept which can shed light on linguistic variation, its behaviour in order to predict the diaelct shift and maintenance in this study is a betweenness concept. The betweenness (centrality degree) is also known as the *broker* or the *betweener*, referring to a person who interacts with the community in the social network. The betweener has a bridging role between two or more networks. According to Hanneman & Riddle (2005), the betweener is the one who stands between the main actor (in one network) and the target person (in another network), and who can exchange information flowing between these two networks. The actor cannot contact the target ties directly and the betweener assists him/her to link to such ties, making the betweener very powerful when gaining resources and data. In real life, this is similar to

an intermediary or middleman who links demanders and suppliers. Therefore, brokers have a crucial role as bridge or link of actor to target, and vice versa.

The broker's calculation comprises two parts: firstly, to identify all possible shortest paths, and secondly, to measure the frequencies of all ties (incorporating actor(s) and individuals in any surrounding networks) that link to the betweener. Therefore, the betweener[12] has an important role in seeking out influences and resources through a broker's pathway to other networks and vice versa, for the actor.

Other interesting attributes of the betweener suggested by Granovetter (1973) directly impacts on variationist and SNA studies is firstly, when the broker(s) can benefit from their sensitiveness to the change, and allow a flow of novel information to their weak and open network. Secondly, their resistance(s) to the incoming knowledge or influence are low. The broker(s) usually introduce new information to certain networks that they belongs to because of their weak network strength. These concepts and attributes with regards to SNA are developed for use later, such as in Milroy and Milroy (1978). Milroy and Milroy summarised based on their studies that the brokers/ betweeners can be leaders of linguistic change in the community as well.

[12] The shortest-path broker might not always be the most effective in terms of acquiring data and resources. Other longer-path brokers with appropriate tactics may have better approaches.

**Appendix D**

## Social network's questionnaires

Relationship degree orders and Contact frequencies (SNS)

**1) Rank by intimacy relationship type**

E.g. Girl/Boyfriend or significant others, parent, close friend and beloved boss, etc.

**Note:** In column 3 and 4 (f-2-f and Non-f-2-f columns), please provide both scores (scale score and raw frequency score): 1) according to Likert scale, this will illustrate the high to low frequency of contact. The highest score represents, like 5, the highest contact frequency with your members linking to you. In contrast, regressively, fewer score, like 1, will mark the low frequency of contact. In addition, in column (3 & 4) please provide the real frequency number of your contact with your links, or vice versa in the duration of one week period. To note, the minimum period of relationship should be at least 2 years.

| order | name | gender | type of relationship | face-to-face | | non-face-to-face | | Ethnicity/ place of origin | Which lg they speak to use? |
|---|---|---|---|---|---|---|---|---|---|
| | | | | quanti/ obj (7) | quali/ subj(5) | quanti/ obj (7) | quali/ subj(5) | | |
| 1st | | | | | | | | | |
| 2nd | | | | | | | | | |
| 3rd | | | | | | | | | |
| 4th | | | | | | | | | |
| 5th | | | | | | | | | |
| 6th | | | | | | | | | |
| 7th | | | | | | | | | |

## 2) Rank by in daily routine contact type

E.g. Peer, classmate, playmate, roommate, boss, supervisor and landlady, etc.

With disregard to 1)'s realisation, this aspect deals with the persons who link you by the condition of a real life contact. The contact for each time's conversation should have good quality to some extent. That is to say, small talk or greeting will not be counted. The conversation with those links should be at least 10-15 mins per time in order to make you gain certain meat of the talk and lead to information exchange, reciprocally, between you and your interlocutors/ links. To note, the criteria of f-2-f and Non-f-2-f will be the same as 1) in (column of 3 and of 4).

| order | name | gender | type of relationship | face-to-face | | non-face-to-face | | Ethnicity/ place of origin | Which lg they speak to use? |
|---|---|---|---|---|---|---|---|---|---|
| | | | | quanti/ obj (7) | quali/ subj(5) | quanti/ obj (7) | quali/ subj(5) | | |
| 1st | | | | | | | | | |
| 2nd | | | | | | | | | |
| 3rd | | | | | | | | | |
| 4th | | | | | | | | | |
| 5th | | | | | | | | | |
| 6th | | | | | | | | | |
| 7th | | | | | | | | | |

* Persons addressed in 2) might be the same persons in 1).

Note:

**Appendix E**

## Pictures for the stylistic test task (Stimulus pictures for the experiment tasks)

Please note that these pictures were modified for the educational purposes only.

No.1

Retrieved from: [10 April 2014] http://pixshark.com/scolding.htm [10 April 2014]

No.2

Retrieved from: http://imgarcade.com/1/parents-yelling-at-kids/ [10 April 2014]

No.3

The man who refuses a present

Retrieved from: http://www.pinellascountyfloridacriminallawyerblog.com/2014/11/14/dui-refusal-breath-test/ [10 April 2014]

The present

Retrieved from: http://stingybee.deviantart.com/gallery/ [10 April 2014]

No.4

Retrieved from: http://stopdrinkingalcohol.com/blog/ [10 April 2014]

No.5


The boy

Retrieved from: http://www.reumors.typepad.com/ [10 April 2014]

The mother

Retrieved from: http://depositphotos.com/13573790/stock-illustration-cartoon-woman-explaining.html [10 April 2014]

No.6

Retrieved from: http://chemistry.about.com/od/healthsafety/ig/Laboratory-Safety-Signs/Do-Not-Eat-or-Drink-Sign.htm [10 April 2014]

No.7

Retrieved from: http://dcprosportsreport.com/redskins-thumbs-up-and-thumbs-down-week-13/ [10 April 2014]

No.8


The girl

Retrieved from: http://www.seppo.net/cartoons/displayimage.php?pid=1131 [10 April 2014]

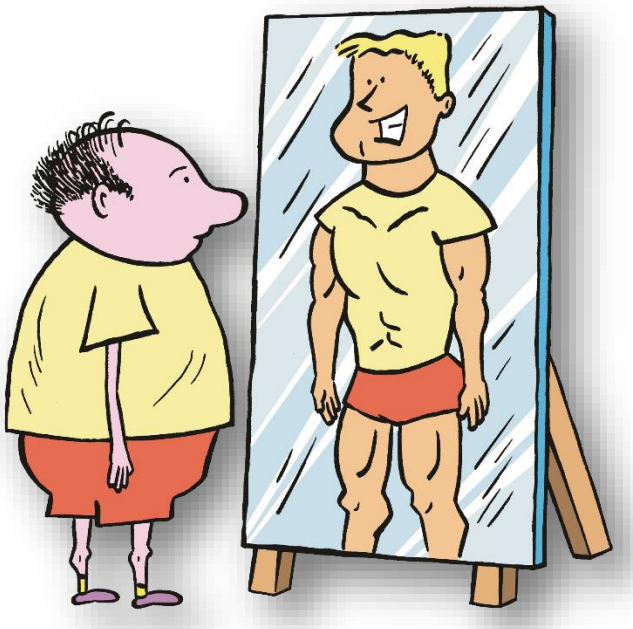
The dog

Retrieved from: https://www.flickr.com/photos/seafoodpunch/4129451247/ [10 April 2014]

No.9

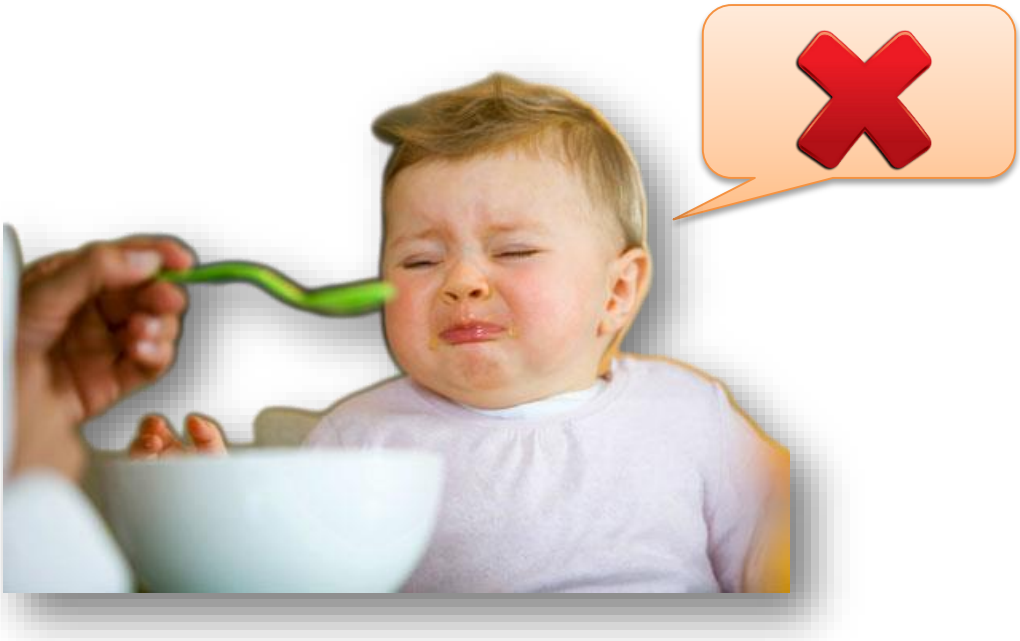
Retrieved from: http://pixgood.com/will-you-marry-me-cartoon.html [10 April 2014]

No.10



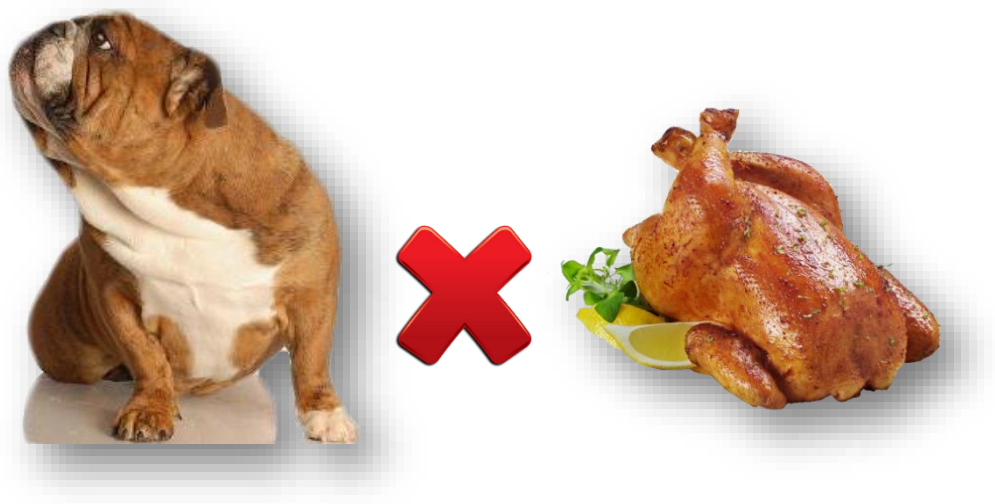
Retrieved from: http://www.pri.org/stories/2011-12-05/cartoon-putin-looking-kind-weak [10 April 2014]

No.11



Retrieved from: http://pandawhale.com/post/30118/what-foods-do-you-avoid-experts-explain-why-they-wont-eat-these-8-foods-loaded-with-toxins-and-chemicals [10 April 2014]

No.12



The dog

Retrieved from: http://www.dogaware.com/articles/wdjinappetence.html [10 April 2014]

The roast chicken

Retrieved from: http://www.theguardian.com/lifeandstyle/wordofmouth/2010/apr/29/perfect-roast-chicken [10 April 2014]

No.13


Retrieved from: http://education.kapook.com/view51498.html [10 April 2014]

No. 14


Retrieved from: http://www.uofmmedicalcenter.org/healthlibrary/Article/86314 [10 April 2014]

**Appendix F**

## Application for Ethical Approval of Research Involving Human Participants

This application form should be completed for any research involving human participants conducted in or by the University. 'Human participants' are defined as including living human beings, human beings who have recently died (cadavers, human remains and body parts), embryos and foetuses, human tissue and bodily fluids, and human data and records (such as, but not restricted to medical, genetic, financial, personnel, criminal or administrative records and test results including scholastic achievements). Research should not commence until written approval has been received (from Departmental Research Director, Faculty Ethics Committee (FEC) or the University's Ethics Committee). This should be borne in mind when setting a start date for the project.

Applications should be made on this form, and submitted electronically, to your Departmental Research Director. A signed copy of the form should also be submitted. Applications will be assessed by the Research Director in the first instance, and may then passed to the FEC, and then to the University's Ethics Committee. A copy of your research proposal and any necessary supporting documentation (e.g. consent form, recruiting materials, etc) should also be attached to this form.

A full copy of the signed application will be retained by the department/school for 6 years following completion of the project. The signed application form cover sheet (two pages) will be sent to the Research Governance and Planning Manager in the REO as Secretary of the University's Ethics Committee.

1. Title of project:

   (previous title)The Koineisation in Lanna Thai: Dialect Contact in the New Industrial Community in Northern Thailand

   (recent title) Dialect maintenance, shift and variation in a Northern Thai industrial estate

2. The title of your project will be published in the minutes of the University Ethics Committee. If you object, then a reference number will be used in place of the title.
   Do you object to the title of your project being published? Yes / ☐ / No ☑

3. This Project is: ☐ Staff Research Project ☑ Student Project

4. Principal Investigator(s) (students should also include the name of their supervisor):

| Name: | Department: |
|---|---|
| (Principal investigator/student)<br><br>Mr. Kosin Panyaatisin | PhD. student in Linguistics in the department of language and linguistics, University of Essex |
| (Supervisor)<br><br>Prof. Dr. Peter L. Patrick | Professor in Linguistics in the department of language and linguistics, University of Essex |

5. **Proposed start date**: 17 April 2013
6. **Probable duration**: 20 July 2014

7. Will this project be externally funded? Yes ☐ / No ☑

   If Yes,

8. What is the source of the funding?

   N/A

9. If external approval for this research has been given, then only this cover sheet needs to be submitted

External ethics approval obtained (attach evidence of approval) Yes ☑/ No ☐

---

**Declaration of Principal Investigator:**

The information contained in this application, including any accompanying information, is, to the best of my knowledge, complete and correct. I/we have read the University's *Guidelines for Ethical Approval of Research Involving Human Participants* and accept responsibility for the conduct of the procedures set out in this application in accordance with the guidelines, the University's *Statement on Safeguarding Good Scientific Practice* and any other conditions laid down by the University's Ethics Committee. I/we have attempted to identify all risks related to the research that may arise in conducting this research and acknowledge my/our obligations and the rights of the participants.

Signature(s): .....

Name(s) in block capitals: ....Mr.KosinPanyaatisin.....

Date: ....12 March 2013.....

---

**Supervisor's recommendation (Student Projects only):**

I recommend that this project falls under Annex B / should be referred to the FEC (delete as appropriate).

Supervisor's signature:.....

---

**Outcome:**

The Departmental Director of Research (DoR) has reviewed this project and considers the methodological/technical aspects of the proposal to be appropriate to the tasks proposed. The DoR considers that the investigator(s) has/have the necessary qualifications, experience and facilities to conduct the research set out in this application, and to deal with any emergencies and contingencies that may arise.

This application falls under Annex B and is approved on behalf of the FEC ☐

This application is referred to the FEC because it does not fall under Annex B ☐

This application is referred to the FEC because it requires independent scrutiny ☐

Signature(s): .....

Name(s) in block capitals: .....

Department: .....

Date: .....

---

The application has been approved by the FEC ☐

The application has not been approved by the FEC ☐

The application is referred to the University Ethics Committee ☐

Signature(s): .....

Name(s) in block capitals: .....

Department: .....

Date: .....

**Details of the Project**

1. **Brief outline of project** (This should include the purpose or objectives of the research, brief justification, and a summary of methods. It should be approx. 150 words in everyday language that is free from jargon).

This PhD sociolinguistics research project aims to investigate the dialect contact phenomenon emerging in a novel industrial community of Lamphun province, Thailand. The contact effects on the local northern Thai dialect in this province, Yong, will be focused. This study will shed light on the linguistic situation of whether Yong dialect is being maintained or undergoing changes from other dialects' influence, namely Bangkok Thai dialect and KamMuang (Chiang Mai) dialect. Thus, comparisons of the frequencies of use from both natives and immigrants in terms of marked linguistic variables across target demographic variables will be analysed, namely age, sex and geographical origin.

There are three groups of participants including the young/adolescent, adult and elderly group. Each group will be interviewed informally by asking about common questions regarding their daily life. This method will encourage the researcher to obtain their natural spoken data.

Finally, findings will help the researcher designate what the current process and stage of dialect in contact (koineisation) are in this Lanna linguistic community.

**Participant Details**

2. Will the research involve human participants? (indicate as appropriate)

   Yes ☑ No ☐

3. Who are they and how will they be recruited? (If any recruiting materials are to be used, e.g. advertisement or letter of invitation, please provide copies).

   There are three groups of participants. They inhabit this local community, in Lamphun province, Thailand. The first group is the young generation (youngsters and adolescents) aged around 10-17 years old. The second group is adult participants who age around 30-50 years old. The last group including elderly are aged around or more than 60 years old. All three groups of participants will be informed about the project and will be asked for their permissions to interview. In case of participants aged below 18 years old, the permission from their parents or guardians must be granted prior to proceeding the interview. Then, they will be interviewed informally in order to elicit their linguistics' data. It should be noted that this community is the birthplace of the researcher himself as well. Hence, neighbors and some participants might be familiar with him or know his background quite well.

   Will participants be paid or reimbursed?

   No.

4. Could participants be considered:

   (a) to be vulnerable (e.g. children, mentally-ill)? Yes [☑ No ☐

   (b) to feel obliged to take part in the research? Yes ☐/ No ☒

   If the answer to either of these is yes, please explain how the participants could be considered vulnerable and why vulnerable participants are necessary for the research.

   According to question no.3, children and adolescents aged from 10-17 years old will be one group of participants in this study. In order to make them at ease to participate and make sure that they do not feel pressure from being interviewed, the researcher will inform their parents or guardians regarding the detail of his PhD. research project and will ask for their permission to conduct the interviews

afterwards. The consent form will be signed by their parents/ guardians.

It should be noted that Thailand does not have an official form similar to the CRB check. In this case, thus, the researcher will use this consent form which will be taken from the parent/guardian as evidence for this project. This consent form will be also translated into Thai language. Local community practice will be followed, and if schools are involved in data collection, school principals will be consulted for their advice and permission.

The reason why children and adolescents are very crucial in this research is, since this study will focus on synchronic change or language variation and change study. Thus, children and adolescents' speech data will be compared with the adults and elderly accordingly in order to see how language is changing in that community, following standard apparent-time methods. In addition, in terms of arguing against or confirming the theory of 'koineisation', children's language plays a key role since they will help us notice how languages have been shifted or newly formed. We can observe this phenomenon by compare child language with older generation ones.

It should be noted that informal/ casual interviews will be done in this research. Only simple children's games and normal daily life conversations and questions will be employed.

**Informed Consent**

5. Will the participant's consent be obtained for involvement in the research orally or in writing? (If in writing, please attach an example of written consent for approval):

Yes ☑ No ☐

How will consent be obtained and recorded? If consent is not possible, explain why.

The consent will be processed in writing. The researcher has already consulted his supervisor regarding informed consent form preparation for his future participants. The model and language in the consent form has been edited and corrected by his supervisor.

It should be noted that one informed consent form will be collected by the researcher as the evidence. Also a copy of it will be given to each participant as a reference in case of that participant has already agreed to participant in the study. Both consent forms will be signed by the participants and researcher himself. The model consent form (in English) has been attached. A separate form will be used for

parents/guardians in the case of children below age 18.

Please attach a participant information sheet where appropriate.

**Confidentiality / Anonymity**

6. If the research generates personal data, describe the arrangements for maintaining anonymity and confidentiality or the reasons for not doing so.

In this research project, when the researcher has collected data, all participants'

names and other personal data from them will be confidential. The researcher will treat the people's real names by using pseudonyms in all reports and presentations.

**Data Access, Storage and Security**

7. Describe the arrangements for storing and maintaining the security of any personal data collected as part of the project. Please provide details of those who will have access to the data.

There are two types of data for this research project and I will make them safely stored. First, hardcopy, such as papers and related documents, will be locked in the drawers in the researcher's room. Second, digital data such as digital recording, paper files and digital photo files, will be stored safely on my laptop/ PC. A password-protected for laptop/PC will be used and be changed regularly. Also, the laptop will be safely placed by placing in the researcher's room only. Only the researcher, Mr. Kosin Panyaatisin and his supervisor, Prof. Peter L. Patrick can gain access for both hardcopy data and digital data.

It is a requirement of the Data Protection Act 1998 to ensure individuals are aware of how information about them will be managed. Please tick the box to confirm that participants will be informed of the data access, storage and security arrangements described above. If relevant, it is appropriate for this to be done via the participant information sheet ☐ ☑

Further guidance about the collection of personal data for research purposes and compliance with the Data Protection Act can be accessed at the following weblink. Please tick the box to confirm that you have read this guidance (http://www.essex.ac.uk/records_management/policies/data_protection_and_researc aspx) ☐ ☑

**Risk and Risk Management**

8. Are there any potential risks (e.g. physical, psychological, social, legal or economic) to participants or subjects associated with the proposed research?

   Yes ☐ No ☑

   If Yes,

| Please provide full details and explain what risk management procedures will be put in place to minimise the risks: |
|---|
| N/A |

9. Are there any potential risks to researchers as a consequence of undertaking this proposal that are greater than those encountered in normal day-to-day life?

   Yes ☐ No ☑

   If Yes,

| Please provide full details and explain what risk management procedures will be put in place to minimise the risks: |
|---|
| N/A |

10. Will the research involve individuals below the age of 18 or individuals of 18 years and over with a limited capacity to give informed consent?

    Yes ☑ (Please see question 4) No ☐

If Yes, a criminal records disclosure (CRB check) within the last three years is required.

Please provide details of the "clear disclosure":

| | |
|---|---|
| Date of disclosure: | Please see answer to question 4 |
| Type of disclosure: | |
| Organisation that requested disclosure: | |

11. Are there any other ethical issues that have not been addressed which you would wish to bring to the attention of the Faculty and/or University Ethics Committees

| |
|---|
| No. |

# UNIVERSITY OF ESSEX

FORM OF CONSENT TO TAKE PART IN A RESEARCH PROJECT

**CONFIDENTIAL**

**Title of project:** Documentation of northern Thai language and culture

**Name of principal investigator:** Mr. Kosin Panyaatisin

**Brief outline of project, including an outline of the procedures to be used:**

This projects aims to collect data on Thai language that will contribute to a more understanding about language, culture and demography in Lamphun province in Thailand. We would like you to participate in a number of language activities both individually and in pairs or groups.

We aim to collect the following kind of data on Thai:

(i) General issues in works, daily life and demographic information
(ii) stories and folklore
(iii) conversations about different activities you do
(iv) information about your main activities and traditions

This data will be recorded using a recorder. Some pictures will be taken of some of the activities in your community. Certain demographic information concerning participants will be asked.

**Name and contact details of the principal investigator:**

[Name] Kosin Panyaatisin [Institution] University of Essex, the UK. [Position] PhD. Candidate

[Date & Signature of principal investigator or fieldworker]**.....**

2 April 2013 – 26 May 2013

[Postal Addresses]

1) Flat 69 Einstein house, Avonway, Colchester, Essex, CO4 XXX, the UK

2) 1XX/XX Moo.X Muangnga sub-district, Muang District, XXXXX, 5XXXX, Thailand

[Telephone contact number]

0044-69XXX☺X☺X (in the UK)

0066-XXX6969XXX (in Thailand)

[Email address] kosinXXXX@XXXXX.com

[Contact of Supervisor] Prof. Dr. Peter L. Patrick

Department of Language and Linguistics, Colchester, CO4 3SQ, the U.K.

**Participant's consent**

I agree to take part in **all of the activities** in (i-iv): Yes / No

I agree to take part only in ……. activities (select from i-iv)

I agree to be recorded: Yes / No

I agree for my recordings to be displayed on a website open to the public for academic purposes:

Yes / No

I agree for my recordings to be stored and remain available for academic use for an unlimited period of time: Yes / No

I ……. (**Participant's** full name) agree to take part in the above named project and for the data generated to be used only as specified above.

The details of the project have been fully explained to me and described in writing.

I understand that I can withdraw from the study at any time, without giving reasons and without penalty.

I have had the opportunity to ask any questions.

Details relating to anonymity and confidentiality of the information I provide have been explained to me.

**Name and contact details of participant:**

Signed..... Date .....

# UNIVERSITY OF ESSEX

FORM OF CONSENT TO TAKE PART IN A RESEARCH PROJECT

**CONFIDENTIAL**

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(iii) conversations about different activities you do
(iv) information about your main activities and traditions

This data will be recorded using a recorder. Some pictures will be taken of some of the activities in your community. Certain demographic information concerning participants will be asked.

**Name and contact details of the principal investigator:**

[Name] Kosin Panyaatisin [Institution] University of Essex, the UK. [Position] PhD. Candidate

[Date & Signature of principal investigator or fieldworker].....

2 April 2013 – 26 May 2013

[Postal Addresses]

1) Flat 69 Einstein house, Avonway, Colchester, Essex, CO4 XXX, the UK

2) 1XX/XX Moo.X Muangnga sub-district, Muang District, XXXXX, 5XXXX, Thailand

[Telephone contact number]

0044-69XXX☺X☺X (in the UK)

0066-XXX6969XXX (in Thailand)

[Email address] kosinXXXX@XXXXX.com

[Contact of Supervisor] Prof. Dr. Peter L. Patrick

Department of Language and Linguistics, Colchester, CO4 3SQ, the U.K.

**Parent/Guardian's consent**

I agree for my child (Name:.....) to take part in **all of the activities** in (i-iv): Yes / No

I agree for my child (Name: .....) to take part only in ……. activities (select from i-iv)

I agree for my child (Name: .....) to be recorded: Yes / No

I agree for recordings of my child (Name: .....) to be displayed on a website open to the public for academic purposes:

Yes / No

I agree for recordings of my child (Name: .....) to be stored and remain available for academic use for an unlimited period of time: Yes / No

I …… (**Participant's** full name) agree for my child

(Name: .....) to take part in the above named project and for the data generated to be used only as specified above.

The details of the project have been fully explained to me and described in writing.

I understand that I can withdraw my child (Name: .....) from the study at any time, without giving reasons and without penalty.

I have had the opportunity to ask any questions.

Details relating to anonymity and confidentiality of the information I provide for my child

(Name: .....) have been explained to me.

**Name and contact details of participant:**

**Name and contact details of parent/guardian:**

Signed..... Date .....

## Appendix G

Participants' basic demographic information (66 persons)

| no. | Social occupational class | gender | age | place of origin for coding | years spending in NTIE community | SNS score for MBK ties only |
|---|---|---|---|---|---|---|
| 1 | lower-middle class | male | 41 | MBK | 20 | 0.66 |
| 2 | working class | female | 29 | MBK | 12 | 0.66 |
| 3 | middle-middle class | female | 59 | MBK | 59 | 0.74 |
| 4 | middle-middle class | female | 15 | MBK | 15 | 0.84 |
| 5 | lower-middle class | male | 13 | MBK | 13 | 0.66 |
| 6 | lower-middle class | male | 17 | MBK | 17 | 0.45 |
| 7 | lower-middle class | female | 17 | BKK | 6 | 0.42 |
| 8 | lower-middle class | male | 20 | MBK | 18 | 0.69 |
| 9 | middle-middle class | male | 16 | MBK | 16 | 0.65 |
| 10 | lower-middle class | male | 17 | MBK | 10 | 0.66 |
| 11 | lower-middle class | male | 17 | BKK | 6 | 0.48 |
| 12 | working class | male | 17 | MBK | 17 | 0.67 |
| 13 | middle-middle class | female | 15 | MBK | 15 | 0.81 |
| 14 | middle-middle class | female | 16 | BKK | 6 | 0.57 |
| 15 | working class | male | 18 | MBK | 18 | 0.53 |
| 16 | working class | male | 17 | MBK | 17 | 0.68 |
| 17 | middle-middle class | male | 17 | MBK | 17 | 0.3 |
| 18 | lower-middle class | male | 17 | MBK | 17 | 0.75 |
| 19 | lower-middle class | female | 17 | MBK | 17 | 0.74 |
| 20 | lower-middle class | female | 14 | MBK | 14 | 0.66 |
| 21 | lower-middle class | female | 18 | MBK | 18 | 0.76 |
| 22 | middle-middle class | female | 16 | BKK | 10 | 0.64 |
| 23 | working class | female | 17 | MBK | 17 | 0.76 |
| 24 | working class | female | 17 | MBK | 17 | 0.39 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 25 | working class | female | 16 | MBK | 16 | 0.4 |
| 26 | working class | female | 60 | MBK | 60 | 0.79 |
| 27 | middle-middle class | male | 54 | MBK | 54 | 0.79 |
| 28 | middle-middle class | female | 14 | MBK | 14 | 0.65 |
| 29 | middle-middle class | female | 14 | MBK | 14 | 0.51 |
| 30 | middle-middle class | female | 47 | MBK | 47 | 0.48 |
| 31 | middle-middle class | female | 53 | MBK | 53 | 0.59 |
| 32 | lower-middle class | male | 44 | MBK | 44 | 0.39 |
| 33 | lower-middle class | female | 47 | MBK | 47 | 0.53 |
| 34 | working class | male | 56 | BKK | 15 | 0.41 |
| 35 | working class | male | 55 | MBK | 55 | 0.62 |
| 36 | working class | female | 41 | MBK | 41 | 0.69 |
| 37 | lower-middle class | male | 61 | MBK | 61 | 0.86 |
| 38 | working class | female | 66 | MBK | 66 | 0.69 |
| 39 | working class | female | 47 | MBK | 47 | 0.58 |
| 40 | lower-middle class | female | 52 | MBK | 20 | 0.46 |
| 41 | working class | male | 45 | MBK | 45 | 0.63 |
| 42 | lower-middle class | female | 47 | MBK | 47 | 0.84 |
| 43 | lower-middle class | female | 18 | MBK | 18 | 0.67 |
| 44 | lower-middle class | male | 25 | MBK | 25 | 0.78 |
| 45 | working class | female | 59 | MBK | 59 | 0.62 |
| 46 | working class | female | 18 | MBK | 18 | 0.63 |
| 47 | lower-middle class | male | 28 | MBK | 15 | 0.71 |
| 48 | lower-middle class | female | 29 | MBK | 16 | 0.72 |
| 49 | middle-middle class | male | 71 | MBK | 71 | 0.52 |
| 50 | lower-middle class | female | 29 | MBK | 13 | 0.65 |
| 51 | middle-middle class | male | 19 | MBK | 19 | 0.63 |
| 52 | middle-middle class | male | 64 | MBK | 64 | 1 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 53 | lower-middle class | female | 35 | MBK | 20 | 0.62 |
| 54 | working class | female | 19 | MBK | 19 | 0.46 |
| 55 | middle-middle class | male | 22 | MBK | 17 | 0.46 |
| 56 | working class | male | 45 | MBK | 45 | 0.72 |
| 57 | middle-middle class | male | 51 | MBK | 51 | 0.73 |
| 58 | working class | male | 59 | BKK | 30 | 0.22 |
| 59 | lower-middle class | male | 32 | BKK | 7 | 0 |
| 60 | lower-middle class | female | 42 | BKK | 9 | 0.29 |
| 61 | working class | male | 49 | BKK | 20 | 0.79 |
| 62 | middle-middle class | male | 50 | MBK | 50 | 0.55 |
| 63 | working class | female | 49 | MBK | 49 | 0.81 |
| 64 | lower-middle class | male | 58 | MBK | 58 | 0.77 |
| 65 | lower-middle class | male | 25 | MBK | 25 | 0.35 |
| 66 | middle-middle class | male | 51 | MBK | 51 | 0.32 |

**Appendix H**

SNS scores of BKK ties only (excluded the MBK ties) for all 66 respondents

Raw frequencies of [h] and [l] are retrieved from the informal style data only. The SNS score and age of each participant has been demonstrated. (The numbers of SNS scores of BKK tie only have been ranked from the smallest to the largest. Thus, the order of the participants has not been ordered, on the most left side of the table).

Table A. Participants' data for SNS scores of BKK tie only in [h] and [l] in the informal speech style

| No. | SNS BKK ties (out of 1) | [h] | [l] | age |
|---|---|---|---|---|
| 1 | 0 | 0 | 79 | 41 |
| 2 | 0 | 0 | 62 | 29 |
| 3 | 0 | 14 | 71 | 59 |
| 4 | 0 | 3 | 52 | 15 |
| 5 | 0 | 8 | 55 | 13 |
| 6 | 0 | 3 | 90 | 17 |
| 7 | 0.00 | 0 | 79 | 20 |
| 8 | 0.00 | 0 | 62 | 16 |
| 9 | 0.00 | 0 | 52 | 17 |
| 10 | 0.00 | 0 | 87 | 17 |
| 11 | 0.00 | 7 | 80 | 17 |
| 12 | 0.00 | 2 | 84 | 15 |
| 13 | 0.00 | 3 | 81 | 16 |
| 14 | 0.00 | 19 | 64 | 17 |
| 15 | 0.00 | 12 | 53 | 17 |
| 16 | 0.00 | 4 | 82 | 18 |
| 17 | 0.00 | 3 | 49 | 17 |
| 18 | 0.00 | 17 | 52 | 60 |
| 19 | 0.00 | 13 | 62 | 54 |
| 20 | 0.00 | 4 | 80 | 47 |
| 21 | 0.00 | 16 | 55 | 53 |
| 22 | 0.00 | 45 | 22 | 41 |
| 23 | 0.00 | 0 | 79 | 61 |
| 24 | 0.00 | 31 | 54 | 66 |
| 25 | 0.00 | 22 | 34 | 47 |
| 26 | 0.00 | 2 | 80 | 52 |
| 27 | 0.00 | 66 | 17 | 45 |

| | | | | |
|---|---|---|---|---|
| 28 | 0.00 | 16 | 76 | 47 |
| 29 | 0.00 | 28 | 42 | 18 |
| 30 | 0.00 | 0 | 71 | 25 |
| 31 | 0.00 | 41 | 38 | 59 |
| 32 | 0.00 | 2 | 63 | 18 |
| 33 | 0.00 | 0 | 69 | 29 |
| 34 | 0.00 | 62 | 31 | 71 |
| 35 | 0.00 | 20 | 70 | 29 |
| 36 | 0.00 | 0 | 115 | 19 |
| 37 | 0.00 | 45 | 40 | 64 |
| 38 | 0.00 | 0 | 37 | 19 |
| 39 | 0.00 | 26 | 57 | 22 |
| 40 | 0.00 | 0 | 91 | 45 |
| 41 | 0.00 | 1 | 89 | 51 |
| 42 | 0 | 0 | 115 | 49 |
| 43 | 0 | 35 | 59 | 50 |
| 44 | 0 | 9 | 68 | 49 |
| 45 | 0 | 43 | 41 | 58 |
| 46 | 0 | 27 | 56 | 25 |
| 47 | 0 | 0 | 86 | 51 |
| 48 | 0.00 | 29 | 22 | 16 |
| 49 | 0.01 | 0 | 91 | 56 |
| 50 | 0.04 | 5 | 87 | 35 |
| 51 | 0.05 | 0 | 90 | 16 |
| 52 | 0.06 | 7 | 80 | 18 |
| 53 | 0.08 | 8 | 43 | 28 |
| 54 | 0.09 | 0 | 71 | 17 |
| 55 | 0.10 | 0 | 85 | 55 |
| 56 | 0.13 | 41 | 48 | 47 |
| 57 | 0.14 | 14 | 67 | 14 |
| 58 | 0.18 | 0 | 75 | 17 |
| 59 | 0.20 | 23 | 64 | 17 |
| 60 | 0.20 | 0 | 109 | 42 |
| 61 | 0.21 | 0 | 86 | 14 |
| 62 | 0.24 | 0 | 49 | 14 |
| 63 | 0.28 | 17 | 72 | 44 |
| 64 | 0.29 | 0 | 126 | 32 |
| 65 | 0.44 | 0 | 70 | 17 |
| 66 | 0.50 | 0 | 85 | 59 |

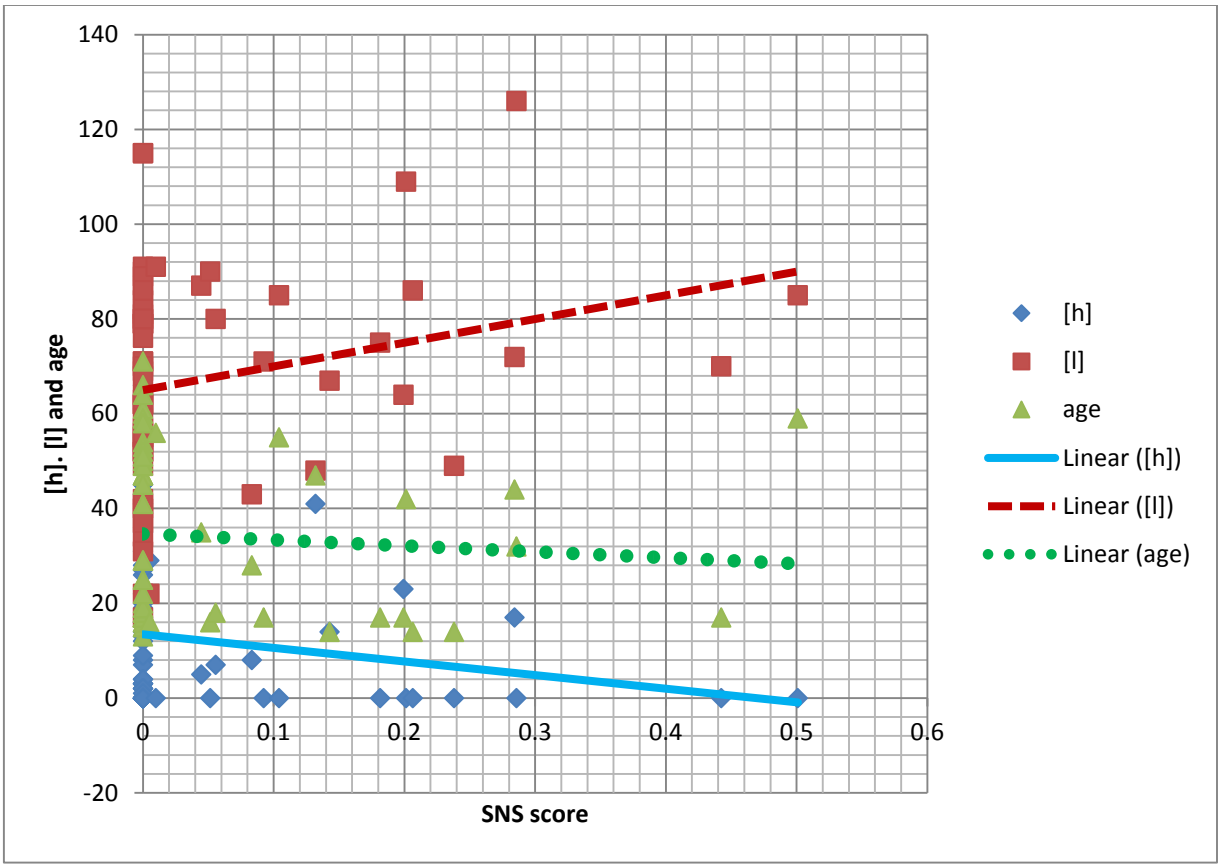


Figure A. An association amongst the SNS score's distribution, age of speakers and [h] use rate in the informal style

The linear graphs above demonstrate the associations amongst the SNS score of each speaker, age and [h] distribution (demonstrated by the straight line). The graph reveals a slight negative (almost neutral) trend of these factors interaction. In terms of [l] linear trend, referring to the dotted line, reveals the slight positive trend. However, these data cannot pass the normality test and the data numbers are very small. Thus, they cannot be used in the regression models.

The below table reveals the [h]'s and the [l]'s correlation coefficient scores in the informal speech context of the BKK SNS ties only.

Correlation coefficient scores of [h] and [l]

| | SNS BKK ties | [h] | [l] | age |
|---|---|---|---|---|
| SNS BKK ties | 1 | | | |
| [h] | **-0.1868868** | 1 | | |
| [l] | **0.23679099** | -0.69369 | 1 | |
| age | -0.0741413 | 0.399007 | -0.07315 | 1 |

SNS BKK ties vs. [h], *r* = -0.1868

SNS BKK ties vs. [l], *r* = 0.2367