Lexical and tonal variation in Khorat Thai
by age group and ease of communication

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บทคัดย่อ

งานวิจัยนี้ศึกษาการแปรของคำศัพท์และวรรณยุกต์ในภาษาไทยถิ่นโคราชตามรุ่นอายุ
และความสะดวกของการคมนาคม พบว่าการแปรของคำศัพท์เกิดขึ้นเร็วกว่าวรรณยุกต์ การยืม
คำศัพท์จากภาษาไทยถิ่นกลางในรุ่นอายุ 15-20 ปีสูงกว่า 60 ปีขึ้นไปอย่างมีนัยสำคัญ ในรุ่น
อายุ 15-20 ปีเท่านั้นที่มีความแตกต่างอย่างมีนัยสำคัญระหว่างผู้ที่อาศัยในตำบลที่การคมนาคม
สะดวกกับตำบลที่การคมนาคมไม่สะดวก วรรณยุกต์ในภาษาไทยถิ่นโคราชยังคงเดิมในทุกรุ่น
อายุในทั้งสองตำบล

Abstract

This study investigates lexical and tonal variation in Khorat Thai by age group and
ease of communication. It is found that lexical change occurs faster than tonal change.
Lexical borrowing from Central Thai is significantly higher in the 15–20–year–olds group
than in the 60–year–olds and over group. It is only in the 15–20–year–olds group that usage
of Bangkok Thai lexical items in the tambon with easy access is significantly higher than that
in the tambon with not so easy access. Khorat Thai tones, however, remain unchanged in all
age groups in both locations.

1. Introduction

Khorat Thai is spoken widely in Nakhon Ratchasima, a province situated on the
border between the northeastern region and the central plain of Thailand. It is also spoken
in some parts of the two neighboring provinces: Buriram and Chaiyaphum (Sawangwan,
1991). This variety of Thai has been investigated quite intensively due to its special status
as a hybrid variety between Central Thai and Northeastern Thai, also known as Lao. The
status is judged on the basis of its lexical items and tone system. While its lexical items

are mostly the same as Central Thai, its tone system has traits similar to the Northeastern Thai system. Brown (1965) has proposed that Khorat Thai is a variety of Lao that has adopted lexical items from Central Thai. Akharawatthanakun (2003) has classified Khorat Thai as a deviant variety of Lao and argued that the tone system of Khorat Thai which was originally Lao, has been modified through its intensive contact with Central Thai to contain features of both Northeastern Thai and Central Thai.

The tone system of Khorat Thai has been investigated by Brown (1965), Rinprom (1977), Pudhitanakul (1979), Phanupong (1984), and Komontha (1995). Using the tone box method, all of these studies have found that different patterns of tone merges and splits exist in Khorat Thai resulting in a number of sub-varieties having between four and six tones. There are a few lexical studies of Khorat Thai (Phanupong, 1984; Biadnok, 1989), as well as a study of classifiers (Chantrasupawong, 1985) and one of final particles (Chullaprom, 1991). The lexical studies have revealed that Khorat Thai has a number of lexical items that are distinct from both Central Thai and Northeastern Thai (see Table 1).

Table 1. *Examples of Khorat Thai Lexical Items Compared with Central Thai and Northeastern Thai*

Meaning	Khorat Thai	Central Thai	Northeastern Thai
"custard apple"	/nɔi^Tnɛɛ^T/	/nɔi^Tnaa^T/	/bak^Tkhiap^T/
"dragon fly"	/mɛɛŋ^T faa^T/ . /mɛɛŋ^T phui^T/	/maʔ^Tlɛɛŋ^Tpɔɔ^T/	/mɛɛŋ^T kaʔ^Tsoo^T/
"calf of leg"	/khɛɛŋ^Tnɔɔi^T /	/nɔŋ^T/	/bii^Tkhɛɛŋ^T/
"broom"	/maai^Tthap^Tthaa^T/	/maai^T kwaat^T/	/fɔɔi^T/
"drizzle"	/fon^Ttok^Tlaʔ^Tlɯm^T/	/fon^Ttok^Tprɔi^Tprɔi^T/	/fon^Tlin^T/

The question addressed in this study differs from those of the previous studies of Khorat Thai. Over the past decade linguists have become interested in processes of ongoing change. Khorat Thai is a good candidate for investigating this process since its speakers regularly communicate with speakers of Central Thai and Northeastern Thai and every person in the province speakers at least two of the three varieties. In this study, variation in lexical items and tones were investigated to see how far Khorat Thai has changed and to see if there is any discrepancy between lexical and tonal variation. The social variables selected for this study were age group and ease of communication. The informants belonged to three age groups: 60 years old and over, 40–45 years old, and 15–20 years old. Two tambons were selected, one with easy access and the other with not-so-easy access.[3] It was expected that Central Thai would have more influence on Khorat Thai than Northeastern Thai since it is close to Standard Thai. The speech of the 60–year–

olds and over was expected to retain full features of Khorat Thai; that of the 40–45–year-olds, to have features of both Khorat Thai and Central Thai; and that of the 15–20–year-olds, to have lost all of the features of Khorat Thai. The speech of the inhabitants of the tambon with easy access was expected to retain fewer features of Khorat Thai than that of the inhabitants of the tambon with not-so-easy access. Moreover, the results of a previous study on Samui Thai (Tingsabadh et al. 2007) suggested that while lexical change would most likely occur, tonal change would not.

2. Methodology

2.1 Selection of the Study Locations and the Informants

Non Thai District, Nakhon Ratchasima Province, was selected for the study location, as Phanupong (1984) confirmed that Khorat Thai was spoken in that district. On the basis of the information obtained from the district office and the recommendation of the officers, Tambon Ma Kha was selected as the location with easy access and Tambon Ban Lang as that with not-so-easy access. Ten informants per age group were selected in each location. Altogether, 60 informants were interviewed in this study; 10 in each age group at each location.

2.2 Questionnaire.

The questionnaire consisted of three parts; personal information, lexical questionnaire, and tonal questionnaire. The lexical questionnaire consisted of 50 semantic units which were selected from the previous lexical studies of Khorat Thai (Phanupong, 1984; Biadnok, 1989). All 50 semantic units were represented by different lexical items in Khorat Thai, Central Thai, and Northeastern Thai (see examples in Table 1). The tonal questionnaire was constructed using the tone box method (Gedney, 1972; Tingsabadh, 2001). Short checked syllables were not included in this study. Therefore, only 16 monosyllabic words with minimal differentiation were selected (see Table 2). Each of these 16 words appeared at random 10 times in the questionnaire.

Table 2. The Tone Box Showing the Words Used to Elicit the Tone of Each Cell

	A	B	C	DL
1	ขา /khaa^{A1}/	ข่า /khaa^{B1}/	ข้า /khaa^{C1}/	ขาด /khaat^{DL1}/
2	ปา /paa^{A2}/	ป่า /paa^{B2}/	ป้า /paa^{C2}/	ปาก /paak^{DL2}/
3	บาน /baan^{A3}/	บ่า /baa^{B3}/	บ้า /baa^{C3}/	บาด /baat^{DL3}/
4	คา /khaa^{A4}/	ค่า /khaa^{B4}/	ค้า /khaa^{C4}/	คาด /khaat^{DL4}/

2.3 Data Collection and Analysis

The items in the lexical and tonal questionnaires were elicited by showing pictures, asking questions, or making gestures. The words themselves were not uttered by the interviewer.

For the lexical analysis, the frequency of Khorat Thai, Central Thai, and Northeastern Thai words in the 50 semantic units was counted and compared for the different age groups in the two locations. Statistical analysis, i.e., chi-square, was carried out with the criterion for finding significant difference among groups set at the 0.01 confidence level.

For the tonal analysis, the fundamental frequency of five tokens of each word was analyzed using Cool Edit Pro and the Praat speech analysis software. Results were averaged, and the averages were interpreted as the value of the tone for that word and displayed as a line graph using Microsoft Excel. Examples of the line graphs for all of the tones in the system of each speaker are shown in figure 6.

3. Results

3.1 Lexical Variation

Overall, Central Thai lexical items occur most frequently, followed by Khorat Thai (see Table 3). Very few Northeastern Thai lexical items were elicited in this study.

Table 3. Frequency of Each Variety in the Lexical Items

Variety	Frequency	Percentage
Central Thai	1,694	56.46
Khorat Thai	1,208	40.27
Northeastern Thai	98	3.27
Total	3,000	100

A comparing of lexical variation in Khorat Thai by age group (see Table 4 and Figure 1) shows that the 15–20–year–olds used Central Thai lexical items most frequently, followed by the 40–45–year–olds and the 60–year–olds and over. The frequency of Khorat

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Thai lexical items reveals the reverse of this trend: the 15–20–year–olds used them least frequently, while the 40–45–year–olds and the 60–year–olds and over used them more frequently. Northeastern Thai lexical items were used less than 5% of the time in all three groups.

Statistical analysis shows that, overall, variation by age group is significant (χ^2 = 21.553, d.f. = 4, p < 0.01). However, when age groups are compared two at a time, the only pairing that differs significantly is the 15–20–year–olds with the 60–year–olds and over (15–20 paired with 40–45: χ^2 = 8.82, d.f. = 2, p > 0.01; 15–20 paired with 60 and over: χ^2 = 20.562, d.f. = 2, p < 0.01; 40–45 paired with 60 and over: χ^2 = 2.29, d.f. = 2, p > 0.01).

Table 4. *Lexical Variation in Khorat Thai by Age Group*

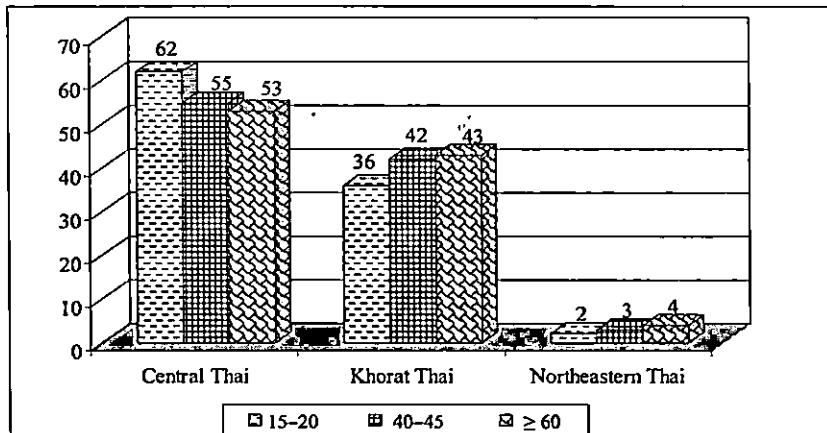| Age group / Variety	15–20		40–45		≥ 60	
	Frequency	%	Frequency	%	Frequency	%
Central Thai	616	61.6	553	55.3	525	52.5
Khorat Thai	362	36.2	415	41.5	431	43.1
Northeastern Thai	22	2.2	32	3.2	44	4.4
Total	1,000	100	1,000	100	1,000	100

χ^2 = 21.553   d.f. = 4   p < 0.01

Figure 1. *Lexical variation in Khorat Thai by age group*

A comparison of lexical variation in Khorat Thai by ease of communication (see Table 5 and Figure 2) shows that the Central Thai lexical items occurred more frequently than the Khorat Thai items at both locations. The Northeastern Thai ones occurred in not more than 5% of the cases. It is interesting to see that Khorat Thai lexical items occurred marginally more frequently in the tambon with not-so-easy access than in the tambon with easy access.

Statistical analysis shows that lexical usage in the two locations did not differ significantly (χ^2 = 1.7, d.f. = 2, p > 0.01). Therefore, this study finds that, overall, ease of communication does not play a role in influencing lexical usage in Khorat Thai. It should be noted that in Nakhon Ratchasima province, where Khorat Thai is spoken, every tambon can be reached by road; Tambon Ban Lang is only slightly more difficult to reach than Tambon Ma Kha.

Table 5 . Lexical Variation in Khorat Thai by Ease of Communication

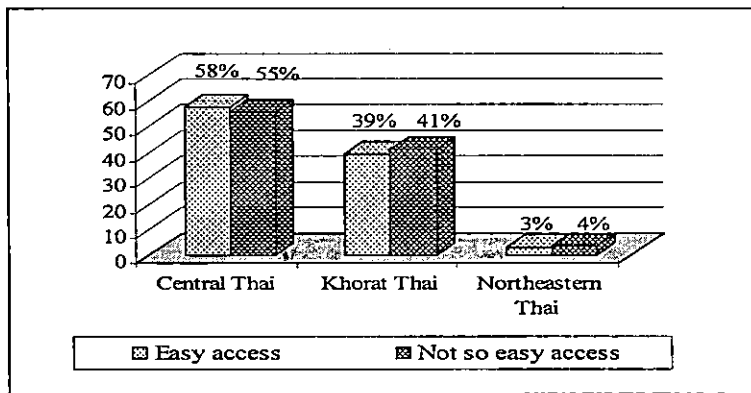| Communication Variety	Easy access (Tambon Ma Kha)		not-so-easy access (Tambon Ban Lang)	
	Frequency	%	Frequency	%
Central Thai	863	57.53	831	55.40
Khorat Thai	592	39.46	616	41.06
Northeastern Thai	45	3.00	53	3.53
" Total	1,500	100	1,500	100

χ^2 = 1.7 . d.f. = 2 p > 0.01

Figure 2. Lexical variation in Khorat Thai by ease of communication

A comparison of lexical variation in Khorat Thai by age group when controlling for ease of communication (see Table 6 and Figure 3) shows that Central Thai was used more frequently than Khorat Thai in all cases. It is noticeable that, at each location, the younger the speakers were, the more Central Thai lexical items and the fewer Khorat Thai items were used. The one exception to this occurred in the tambon with not so easy access, where the frequency of the Khorat Thai lexical items in the two older groups appeared to be the same.

Statistical analysis shows that age group significantly influences variation in lexical usage in the tambon with easy access (χ^2 = 16.76, d.f. = 4, p < 0.01) but not in the tambon with not-so-easy access (χ^2 = 6.984, d.f. = 4, p > 0.01). Moreover, when age groups are compared two at a time in each location, the only pairing that differs significantly is the

15–20 and 60 and over groups in the tambon with easy access ($\chi^2 = 16.4$, d.f. $= 2$, p < 0.01). The other two pairings in the same tambon do not differ significantly (15–20 paired with 40–45: $\chi^2 = 6.62$, d.f. $= 2$, p > 0.01; 40–45 paired with 60 and over: $\chi^2 = 2.26$, d.f. $= 2$, p > 0.01). In the tambon with not-so-easy access, none of the three pairings of age groups differs significantly (15–20 paired with 40–45: $\chi^2 = 2.68$, d.f. $= 2$, p > 0.01; 15–20 paired with 60 and over: $\chi^2 = 6.4$, d.f. $= 2$, p > 0.01; 40–45 paired with 60 and over: $\chi^2 = 1.248$, d.f. $= 2$, p > 0.01).

Table 6. *Lexical Variation in Khorat Thai by Age Group When Controlling Ease of communication*

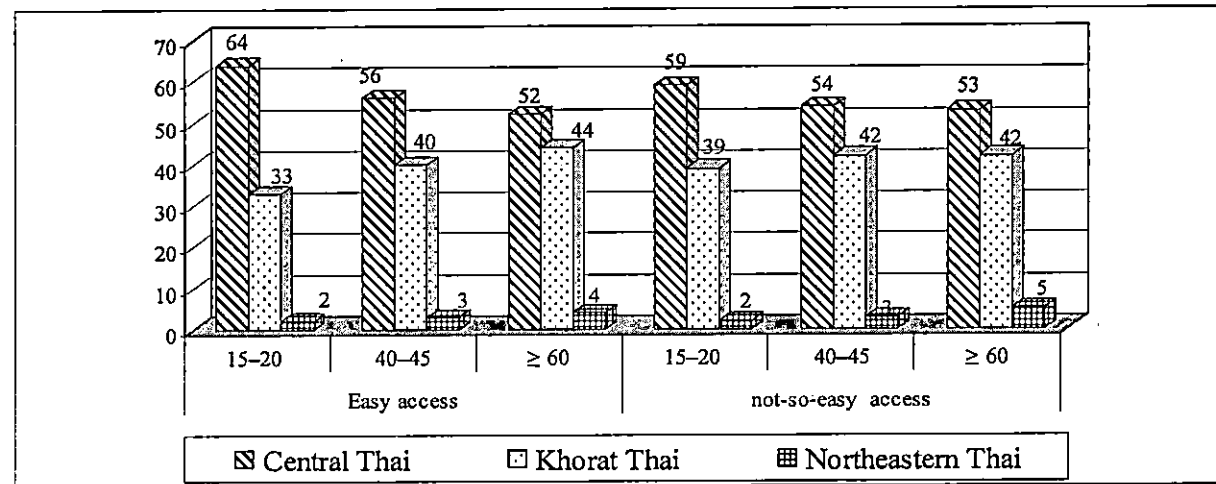| Social variables	Easy access						not-so-easy access					
	15–20		40–45		≥ 60		15–20		40–45		≥ 60	
Variety	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Central Thai	321	64.20	282	56.40	260	52.00	295	59.00	271	54.20	265	53.00
Khorat Thai	169	33.80	203	40.60	220	44.00	193	38.60	212	42.40	211	42.20
Northeastern Thai	10	2.00	15	3.00	20	4.00	12	2.40	17	3.40	24	4.80
Total	500	100	500	100	500	100	500	100	500	100	500	100

Figure 3. *Lexical variation in Khorat Thai by age group when controlling ease of communication*

Table 7. Lexical Variation in Khorat Thai by Ease of Communication When Controlling Age Group

Social variables	15–20				40–45				≥ 60			
	Easy access		not-so-easy access		Easy access		not-so-easy access		Easy access		not-so-easy access	
Variety	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%	Frequency	%
Central Thai	321	64.2	295	59	282	56.4	271	54.2	260	52	265	53
Khorat Thai	169	33.8	193	38.6	203	40.6	212	42.4	220	44	211	42.2
Northeastern Thai	10	2	12	2.4	15	3	17	3.4	20	4	24	4.8
รวม	500	100	500	100	500	100	500	100	500	100	500	100

15–20 χ^2 = 16.64, d.f. = 2, p < 0.01; 40–45 χ^2 = 0.592, d.f. = 2, p > 0.01; ≥ 60 χ^2 = 0.523, d.f. = 2, p > 0.01
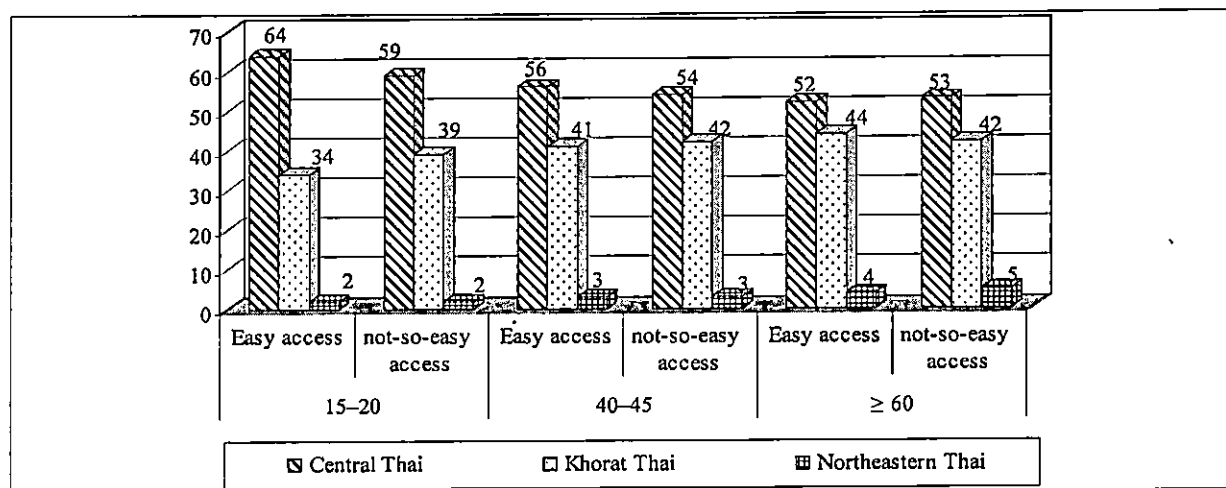

Figure 4. Lexical variation in Khorat Thai by ease of communication when controlling for age group

A comparison of lexical variation in Khorat Thai by ease of communication when controlling for age group (see Table 7 and Figure 4) shows that the frequency of Central Thai and Khorat Thai lexical items used by the 40–45 and 60–year–old and over groups in the two types of tambon are similar, whereas there seems to be some difference between the respective 15–20–year–old groups. This observation is confirmed by statistical analysis. The 15–20–year–old groups at the two locations differ significantly in their lexical usage ($\chi^2 = 16.64$, d.f. = 2, p < 0.01), while the other two age groups at the two locations do not (40–45: $\chi^2 = 0.523$, d.f. = 2, p > 0.01; 60 and over: $\chi^2 = 0.592$, d.f. = 2, p > 0.01).

In view of the foregoing, we conclude that ongoing change is taking place in Khorat Thai lexical usage. Since we included only semantic units that have Khorat Thai representations in the questionnaire, this study shows that Khorat Thai speakers no longer use many of the lexical items that originally belonged to this variety. At the time of this study, they have been replaced by Central Thai items. The 15–20–year–old group, especially those living in the tambon with easy access, has dropped the Khorat Thai lexical items more than the other age groups.

An analysis of the 50 semantic units used in this study organizes them into 5 groups according to the frequency with which the Khorat Thai lexical items occur in a particular semantic unit.

Group 1. The Khorat Thai lexical items are still widely used by almost all of the speakers. There are 12 semantic units in this group, for example:

Meaning	Khorat Thai	Central Thai
"hide and seek"	/suk^T/, /$\textipa{P}\varepsilon$t^{T}sa$\textipa{P}^T$phai^T/	/sɔɔn^{T}haa^T/
"custard apple"	/nɔi^{T}nɛɛ^T/	/nɔi^{T}naa^T/
"drizzle"	/fon^T tok^{T}la$\textipa{P}^T$lɯm^T/	/fon^T tok^{T}prɔi^{T}prɔi^T/

Group 2. The Khorat Thai lexical items are used by more than half of the speakers. There are seven semantic units in this group, for example:

Meaning	Khorat Thai	Central Thai
"to gossip"	/phuut^{T}dɤɤm^T/	/nin^{T}thaa^T/
"whirlwind"	/lom^{T}hua^{T}duan^T/	/lom^{T}baa^{T}muu^T/
"to feel nauseated"	/waai^{T}thɔɔŋ^T/	/khlɯɯm^{T}sai^T/

Group 3. The Central Thai lexical items are used in preference to the Khorat Thai items by about half of the speakers. There are seven semantic units in this group, for example:

Meaning	Khorat Thai	Central Thai
"dragon fly"	/mɛɛŋᵀfaaᵀ/, /mɛɛŋᵀ phuiᵀ/	/maʔᵀlɛɛŋᵀpɔɔᵀ/
"broom"	/maaiᵀpatᵀ/	/maaiᵀkwaatᵀ/
"to feel better"	/waʔᵀ/	/khɔiᵀjaŋᵀtchuaᵀ/

Group 4. The Central Thai lexical items are used in preference to the Khorat Thai items by a majority of the speakers in eighteen semantic units, for example:

Meaning	Khorat Thai	Central Thai
"to cover the head with a big piece of cloth"	/pokᵀ/	/khlumᵀ/
"to throw a flat object"	/rɛnᵀ/	/rɔnᵀ/
"to be familiar with"	/tceenᵀ/	/khunᵀ/

There are two other semantic units in this group which are represented by Central Thai and Northeastern Thai words: "an insolent person" and "buffalo swamp". In the former the Northeastern Thai word /khonᵀnaaᵀlɯmᵀ/ is used more frequently than the Central Thai word /khonᵀthaʔᵀlɯŋᵀ/; in the latter both types, /nɔɔŋᵀ khwaaiᵀ nɔɔnᵀ/ (Central Thai) and /nɔɔŋᵀ khuaiᵀ nɔɔnᵀ/ (Northeastern Thai) are used with equal frequently.

Group 5. The Central Thai lexical items are used in preference to the Khorat Thai items by all of the speakers. There are four semantic units in this group, as follows:

Meaning	Khorat Thai	Central Thai
"Solanum torvum"	/maʔᵀkhɯaᵀlaʔᵀkhɔnᵀ/	/maʔᵀkhɯaᵀphuaŋᵀ/
"gecko"	/totᵀtooᵀ/	/tukᵀkɛɛᵀ/
"brown sticky rice"	/khaauᵀdɔɔkᵀmaʔᵀkhaamᵀ/	/khaauᵀniauᵀdɛɛŋᵀ/
"gourd"	/fakᵀ toonᵀ, fakᵀ tɕiŋᵀ/	/fakᵀ/

It is clear that lexical choice can vary greatly from one semantic unit to another. At this point we do not yet see the reasons for the maintenance or the loss of the Khorat Thai lexical items. It is not yet possible to explain why the Khorat Thai lexical items for "custard apple" and "drizzle" are still used by all of the speakers but dropped completely for "solanum torvum" and "gecko". The issue may be related to frequency of usage and proximity to local culture. Further studies are required on this issue.

3.2 Tonal Variation

While the inhabitants in Tambon Ma Kha and Tambon Ban Lang appear ready to abandon the Khorat Thai lexical items, this study shows that they are still preserving the

Khorat Thai tone system. Analysis shows that every speaker uses the same system of four tones with two patterns of tone splits and mergers in the tone box (see figure 5). Only the pattern of Tambon Ban Lang has been reported in a previous study (Phanupong, 1984), while the pattern of Tambon Ma Kha is reported here for the first time. In fact, these two patterns are not identical to the main patterns of Khorat Thai. Figure 6 shows the patterns that occur in most varieties of this dialect. The common Khorat Thai varieties and the two varieties studied here differ in columns B and C. The most important difference involves the merger between C1 and DL123 that occurs in the common varieties of Khorat Thai but does not occur in the dialects analyzed in this study. There is no evidence to show that the Standard Thai tone system has influenced the development of this discrepancy. It is most likely that this phenomenon merely represents a local variation.

Figure 5. *The pattern of tone splits and mergers in the tone system of all of the speakers in the two study locations*
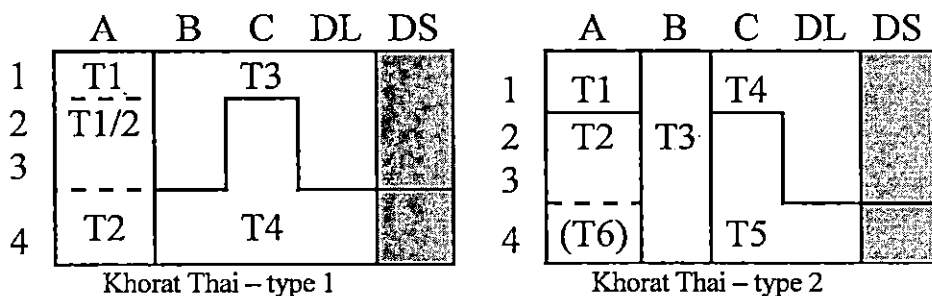

Figure 6. *The pattern of tone splits and merges in most varieties of Khorat Thai (adapted from Phanupong, 1984)*
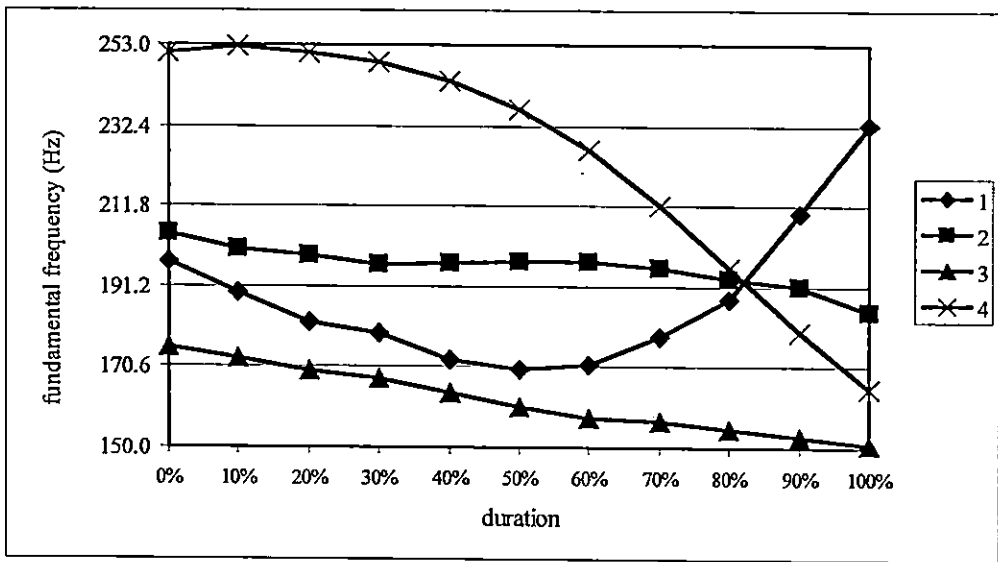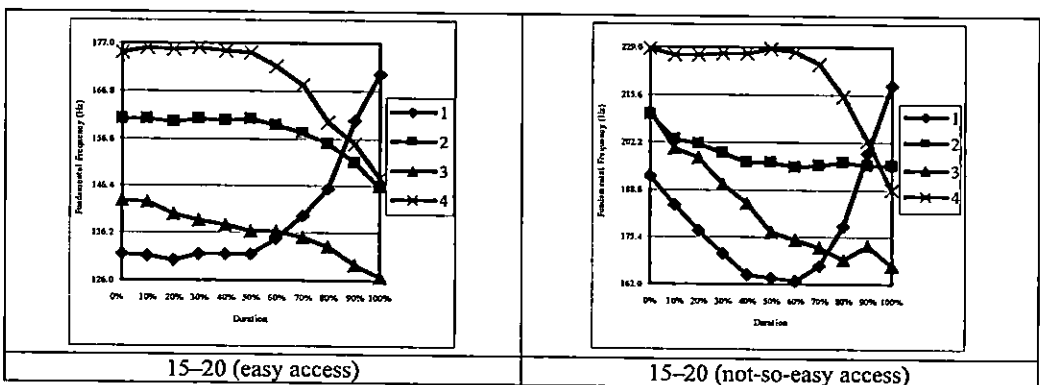
Figure 7. *The characteristics of the four tones in Khorat Thai*

A comparison of the tonal characteristics of the four tones in the speech of all of the informants reveals variation in some cases, but it cannot be related to either age group or ease of access (see Figures 7 and 8). Tone 1 occurs in either A1 or A1-2-3. It is a low rising tone whose end point reaches the high level in most cases. In a few cases it reaches only the mid level. Tone 2 occurs in either A2-3-4 or just A4. It is a mid tone. Its shape is either mid gliding, mid level-falling, or mid rising-falling. Tone 3 occurs in B1-2-3 and DL1-2-3, in all cases. It is a low gliding tone. Tone 4 occurs in B4, C1-2-3-4, and DL4, in all cases. In most cases, it is a high falling tone. The end point is either low or mid. This tone usually maintains its height for the first half before falling. In one or two cases, it is realized as a rising-falling tone.
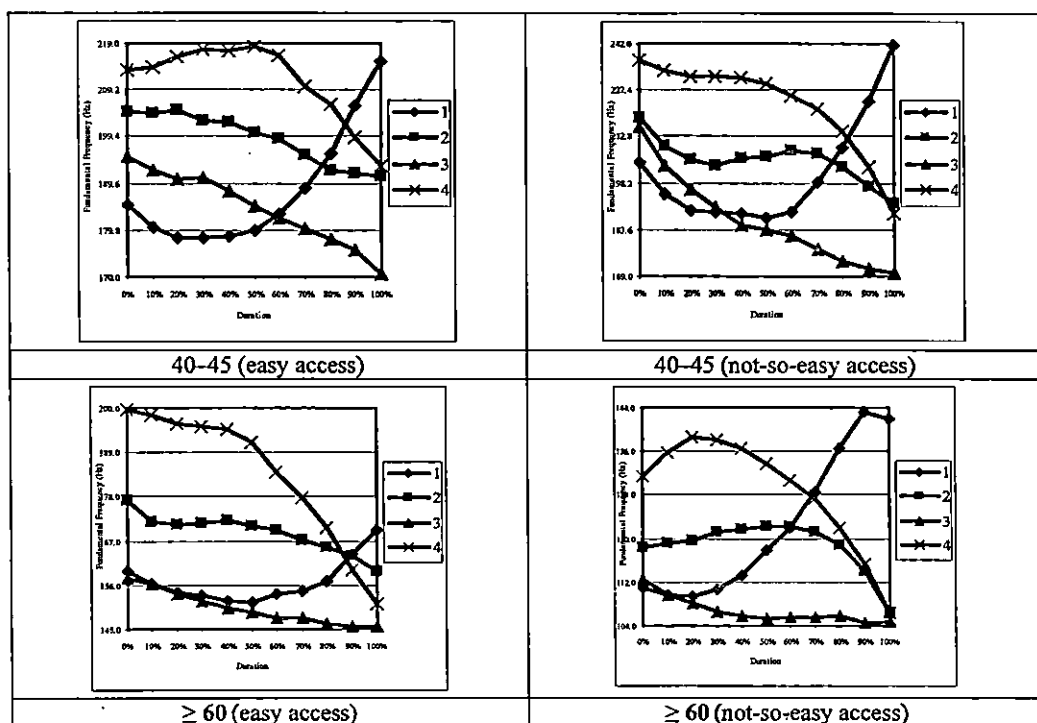

| 15–20 (easy access) | 15–20 (not-so-easy access) |

40–45 (easy access)	40–45 (not-so-easy access)
≥ 60 (easy access)	≥ 60 (not-so-easy access)

Figure 8. *Characteristics of the four tones of Khorat Thai for three different age groups and two locations with different ease of communication: two speakers per category*

4. Conclusion and Discussion

This study shows that, in Khorat Thai, lexical change is occurring faster than tonal change. While the Central Thai lexical items have encroached on Khorat Thai in the speech of the Khorat speakers, Central Thai tones have not had the same influence. We have found that the 15–20–year–old group is most susceptible to the influence of Central Thai in their lexical usage. Ease of access plays a role in the speech of this group, i.e., the 15–20–year–old speakers living in the location with easy access use the Central Thai words more frequently than those living in the location with not-so-easy access. The words that have replaced the Khorat Thai ones probably derive from Standard Thai rather than Central Thai. The expanding influence of the Standard Thai through the mass media must be the main cause of this change. The Khorat Thai tones, however, remain the same - both the pattern of tone splits and mergers and the tonal characteristics. A new pattern has been found in this study, in the tambon with easy access, which differs slightly from that of the tambon with not so easy access.

We realize that the elicitation technique used to obtain the lexical and tonal data in this study, i.e., prompting the informants to say monosyllabic words, may have influenced

the results of this study. Another method should be designed in the future that allows the analysis of connected speech in everyday conversation. It would be very interesting to see the extent to which the Central Thai lexical items, tone system, and tonal characteristics have influenced Khorat Thai in that context.

Acknowledgment

Notes

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[3] It is not possible to find a location in Nakhon Ratchasima province with difficult access. All of the tambons are accessible, although some are more isolated than others.

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