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THE STATUS OF /-w-/: A PERSPECTIVE FROM KHAMPHUAN – A THAI LANGUAGE PLAY

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Abstract

This article aims to show how to understand a language phenomenon through the language play of the Thai. The data is based on Tamjai (2003): Mechanisms and Patterns of Reversed Speech in Bangkok Thai, Northern Thai, Northeastern Thai, and Southern Thai Dialects. There are 334 utterances used to analyze the status of /-w-/. The Thai speakers of three dialects, Bangkok Thai, Northern Thai, and Southern Thai dialect speakers, interpreted the status of /-w-/ in five different types when reversed the utterances. Firstly, the second phoneme of an initial cluster: /-w-/. Secondly, the single phoneme of an initial consonant: /w/. Thirdly, the property of vowel: /u/. Fourthly, the vowel: /u/. Finally, the zero: /ø/. The results according to McMahon (1994) about the stages of sound change. Moreover, the status of /-w-/ from reversing the utterances show how the sound changed from Proto South-Western Tai to Modern Tai; Yuan, Lao, and Siamese.

Introduction

Language plays are frequently used as evidence in many aspects of linguistics, especially phonological analysis (Laycock, 1972; Surintramont, 1973; Vago, 1985; Davis, 1994). /kham33 phuan24/ (lit.) 'Word-reverse' is a type of Thai language play which distorts normal speech by rearranging syllable components². This mechanism yields 3 different patterns of word-reversing: rhyme and tone interchange, only rhyme interchange, and rhyme interchange with an addition of tone or vowel-length change. Each pattern is illustrated below.

1.1 Rhyme and Tone Interchange

Q: /ma.naaw33-ʔa.raj33-maa33-
klaj33-thii42sut11/
lime-what-come-far-most
'What lime has traveled the
furthest?'

A: /ma.naaw33-taaj11dut55/
lime-nonsense
'Nonsense'

² Syllable structure in Thai consists of 3 components. They are (1) onset, (2) rhyme which is composed of nucleus and/or coda, and (3) tone.

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...naaw ...dut > ...nut ...daaw
 ...naaw ...dut > ...nut...daaw
 $\begin{array}{cc} \vee & | \\ \underline{M} & \underline{H} \end{array} \quad \begin{array}{cc} | & \vee \\ \underline{H} & \underline{M} \end{array}$

On reversal, /ma.naaw33-taaj11dut55/ becomes /ma.nut55-taaj11daaw33/. In this example, the rhyme and tone of /naaw33/ interchange with the rhyme and tone of /dut55/. Thus, the answer to the question "What lime has traveled the furthest?" is /ma.nut55-taaj11daaw33/, which means 'alien'.

1.2 Only Rhyme Interchange

Q: /maa24-ʔa.raj33-choɔp42-
 kin33-baj33maaj55/
 dog-what-like-eat-leaves
 'What kind of dog likes to eat leaves?'

A: /maa24-phɛɛn33dii42/
 dog-nonsense
 'Nonsense'

maa ...dii > mii ...daa
 $\begin{array}{cc} || & || \\ \underline{LH} & \underline{HL} \end{array} \quad \begin{array}{cc} || & || \\ \underline{LH} & \underline{HL} \end{array}$

Here, only the rhyme of /maa24/ and /dii42/ interchange while the tones remain intact. /maa24-phɛɛn33dii42/ becomes /mii24-phɛɛn33daa42/ which means 'a panda,' an animal that likes to eat leaves.

1.3 Rhyme Interchange with an Addition of Tone or Vowel-Length Change

1.3.1 Rhyme Interchange with an Addition of Tone Change

A person who is falling in love with everything new is described as /bæ33 haa42/ 'number five', which on reversal is /baa42 hæ11/ 'crazy about new thing'.

bæ haa > baa hæ
 $\begin{array}{cc} \vee & || \\ \underline{M} & \underline{HL} \end{array} \quad \begin{array}{cc} || & \vee \\ \underline{HL} & \underline{L} \end{array}$

Here, we witness not only rhyme interchange but also tone change: /bæ33 haa42/ > /baa42 hæ11/

1.3.2 Rhyme Interchange with an Addition of Vowel-Length Change

A: /phuu42chaaj33-khon33-nan55-
 naɲ42-khɔɔj33-ʔa.raj33/
 man-classifier-that-sit-wait-what
 'What is that man sitting there waiting for?'

B: /khɔɔj33-phian42-maɲ55/
 wait-friend-particle
 'Waiting for his friend, I guess.'

A: /maj42chaj42-khaw24-
 naɲ42-khɔɔj33-huaj42-juu11/
 no-he-sit-wait-nonsense-progressive
 'nonsense'

khɔɔj huaj > khuaj hɔɔj
 $\begin{array}{cc} \vee & || \\ \underline{M} & \underline{HL} \end{array} \quad \begin{array}{cc} \vee & \wedge \\ \underline{M} & \underline{HL} \end{array}$

The fun here lies in /khɔɔj33-huaj42/ 'nonsense' which when reversed becomes

/khuaj33-høj42/ 'hung penis'. Note that in the reversed utterance, in addition to rhyme interchange, the vowel sounds /ɔɔ/ > /ɔ/ are also interchanged.

In all these patterns, every speaker must separate each syllable between onset and rhyme before modifying it.

/m a.naaw33   taaj11   d ut55/ >

/m a.nut55   taaj11   d aaw33/

/m aa24   phæn33   d ii42/ >

/m ii24   phæn33   d aa42/

/b əə33   h aa42/ >

/b aa42   h əə11/

/kh ɔɔj33   h uaj42/ >

/kh uaj33   h ɔj42/

Data

Tamjai Awirutthiyothin (2003) has extensively studied Khamphuan in Bangkok, Northern, Northeastern, and Southern Thai dialects. In collecting the data by interviewing, (1) devised utterances aiming to check the potential reversing mechanisms and patterns, and (2) genuine utterances were used. Ten speakers of each dialect were asked to reverse these utterances. The study revealed that only one reversing mechanism was used; that is, rearrangement of syllable components, which yields three different patterns as discussed in section 1 above.

The analysis of the status of /-w-/ in this article is based on Tamjai's devised utterances. His devised utterances yield 1,240 reversed utterances and only 334

utterances which contain the phoneme /-w-/ (see appendix). 43 utterances are taken from Bangkok Thai dialect, 261 utterances from Northern Thai dialect, 30 utterances from Southern Thai dialect, and none from Northeastern Thai dialect since its phonological system lacks the cluster /-w-/.

Table 1: Number of Reversed Utterances Containing /-w-/ in each Dialect

Dialect	Number of Reversed Utterances	
	Total	With /-w-/
Bangkok	340	43
Northern	320	261
Northeastern	220	0
Southern	360	30
	1,240	334

Results

3.1 The Status of /-w-/ in reversed utterances

We have seen in the previous section that reversed utterances involve the separation of onset and rhyme. In this section we will see that different ways of onset-rhyme separation in reversed utterances reflect different status and syllable structure of the second phoneme of an initial cluster /-w-/. /kwaaj33 naw42/ 'deer-rotten' is given as an example.

3.1.1 As the second phoneme of an initial cluster: /Cw/ > /Cw/

/kw aaj33   n aw42/ >

/kw aw42   n aaj33/

Figure 1: Syllable Structure of /-w-/

In this case /-w-/ is still interpreted as the second phoneme of an initial cluster /-w-/; the second phoneme of an initial cluster fastens onto the first phoneme of an initial cluster, together acting as one unit.

3.1.2 As a single initial phoneme: /Cw/ > /w/

Figure 2: Syllable Structure of /w/

Here /-w-/ is interpreted as a single initial phoneme because the initial /k/ is deleted. In the reversed version /-w-/ appears as a single initial phoneme /w/.

3.1.3 As a property of a vowel: /Cw/ > /C_u/ ³

Figure 3: Syllable Structure of /_u/

This time /-w-/ is interpreted as a property of a vowel: /_u/. Thus, it attaches to the rhyme and moves with it when reversed. Due to its attaching and moving with rhyme, it is interpreted as a property of vowel.

3.1.4 As a vowel: /Cw/ > /Cu/

³ /-w-/ and /_u/ have a similar pronunciation. But /-w-/ is a property of onset and /_u/ is a property of rhyme. Although they are similar in pronunciation, they differ in syllable structure.

Figure 4: Syllable Structure of /u/

In this example /-w-/ is interpreted as a vowel: /u/, and moves with the rhyme when reversed.

3.1.5 As a zero: /Cw/ > /Cø/

/k waan33   n aw42/ >
/k aw42   n aan33/

Figure 5: Syllable Structure of /ø/

/-w-/ is interpreted as zero. It disappears in the reversed utterances.

The percentages of the interpretation of the phoneme /-w-/ in each dialect are given in figure 6.

Figure 6: Different Interpretations of /-w-/ in each Dialect

As can be seen in figure 6, /-w-/ is interpreted as a second phoneme of an initial cluster outstandingly both in Bangkok Thai dialect (74.41%) and Southern Thai dialect (86.67%). In these two dialects the status of /-w-/ as the second phoneme of a cluster is relatively stable. On the contrary, the interpretation of /-w-/ in the Northern Thai dialect varies extensively, ranging from a single initial phoneme (1.54%), a vowel (2.68%), the second phoneme of a cluster (27.2%), a zero (31.8%), and a property of vowel (36.78%). From this variation, it can be predicted that /-w-/ in Northern Thai dialect tends to change its status from the second phoneme of an initial cluster to a (property of) vowel and zero. Wantanee (1983) found two main sub-dialects of Khammuang which match this article. Western and Eastern Khammuang have variations in pronunciation. 'A village chief' is pronounced /khween42/ (according to 3.1.1) in Chiang Mai, Chiang Rai, and Lam Phun but the same word is pronounced /kheen42/ in Lam Pang (according to 3.1.5).

3.2 Different Status of /-w-/ and the Stage of Sound Change

Weakening (sometimes called lenition or laziness) is the technical term to explain the language phenomenon which is a relaxation in articulation effort (Hock, 1991). McMahon (1994: 16) has proposed the sequences of weakening sound change whereby the strongest optimal consonants shift to the weakest optimal vowels and then to zero.

Weakening: voicing > fricative/glide > vowel > zero

The different status of /-w-/ in reversed utterances seems to neatly fit McMahon's sequences of weakening change as shown in table 2.

3.3 Evidence to Support Sound Change from Proto south-Western Tai (Proto SWT) to Modern Tai

There are 5 statuses of /-w-/ in reversing and all of these statuses match the development of sound change in Modern Tai, Yuan, Lao, and Siamese, sub grouping from Proto SWT.

Table 2: The Sequences of Weakening Change and the Different Status of /-w-/

Sequences of Weakening Change	glide		vowel	zero
Status of /-w-/ in Reversed Utterances	/-w-/, /w/	/ɰ/	/u/	/ø/

Table 3: Comparing /-w-/ Status in Reversing and the Cognates of Modern Tai

	glide		vowel	zero
The /-w-/ Status in Reversing	/-w-/ /w/	/u/	/u/	/ø/
Proto SWT *swaaj	/swaaj21/ (Yuan)	-	/suaaj24/ (Lao)	/saaj24/ (Siamese)

*swaaj/ 'late in the morning' is reconstructed from /swaaj21/ in Yuan, /suaaj24/ in Lao, and /saaj24/ in Siamese. Though, */sw/ does not occur in Li (1977)'s Proto Tai reconstruction but */s/ and */uai/ are similar to */swaaj/. Hence the statuses of /-w-/ in reversing is useful to show how the phoneme from Proto SWT developed to Modern Tai.

Conversely, in reconstruction from cognates in many Modern Tai dialects, if the words have the vowel /ua/, /u/ should be considered as /-w-/ because this article found that /-w-/ can develop to /u/. The development of /-w-/ from Proto SWT to Modern Tai and the reconstruction of */-w-/ from cognates in Modern Tai to Proto SWT are related as in figure 7 and 8.

Figure 7: Development of /-w-/

Figure 8: Reconstruction of /-w-/

Discussion

The results show that the second phoneme of an initial cluster /-w-/ could change to the vowel /u/. This phenomenon *consonant > vowel* seems unusual because they are different types of sound. The

important reason that /-w-/ could change to /u/ is because both of them have the following similar distinctive features:

Table 4: The Similar Distinctive Features of /-w-/ and /u/

/w/	/u/
-syllabic	+syllabic
+sonorant	+sonorant
+high	+high
+back	+back
+round	+round

Adapted from Schane (1973: 31)

The distinctive features in table 4 show that the main factor of the sound change from /-w-/ > /u/ is internal. All of the distinctive features (based on phonetic characteristics) are similar except $\pm$ syllabic feature (based on functional characteristics): /-w-/ has -syllabic but /u/ has +syllabic. Therefore, the second phoneme of an initial cluster /-w-/ could

change to the vowel /u/ as in the phonological system in Northeastern Thai. For example, /kwaŋ³³/ 'deer' in the Bangkok Thai dialect is pronounced /kuaŋ³³/ 'deer' in Northeastern Thai. So, the change from /-w-/ in Proto SWT to /u/ in Modern Tai is usual.

The variation in the synchronic study can be applied to describe the development in the diachronic study.

**Figure 9: The Variation
in One Point of Time**

**Figure 10: The Development
in Many Points of Time**

The horizontal line (figure 9) represents one point of time. Rotating the horizontal line to the vertical line (figure 10) will represent many points of time, so the first status will occur in the first point of time and the second status will occur in the later point of time.

This article investigates the data like the synchronic study, so the findings can describe the state of /-w-/ in the Thai language at one point in time. Moreover, the variation of /-w-/ status in reversing can be used to support the diachronic study, such as the reconstruction of Proto SWT.

Conclusion

The findings of Language Play can be evidence to support the linguistic theory or linguistic phenomena. None of the people

who study language play know what the beneficial findings will be until they have finished. Some thought this topic is playful, so research in this field is rare. By the way, the finding of this article can be used (1) to support the stages of sound change hypothesis and (2) to show development of the second phoneme of an initial cluster from Proto SWT to Modern Tai.

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Appendix

Devised utterances	Reversed utterances	Status	Quantity
Bangkok Thai Dialect			
1. /kwaan ³³ naw ⁴² /	/kwaw ⁴² naan ³³ /	-w-	6
	/kwaw ³³ naan ⁴² /	-w-	2
	/kaw ³³ nwaan ⁴² /	u	1
	/kaw ⁴² naan ³³ /	ø	1
2. /sia ²⁴ khwit ¹¹ /	/sit ¹¹ khwa ²⁴ /	-w-	6
	/swit ¹¹ khia ²⁴ /	u	1
	/sit ¹¹ khia ²⁴ /	ø	3
3. /kwaan ³³ khwit ¹¹ sia ²⁴ /	/kwa ²⁴ khwit ¹¹ saan ³³ /	-w-	5
	/kwa ³³ khwit ¹¹ saan ²⁴ /	-w-	2
	/kia ²⁴ khwit ¹¹ swaan ³³ /	u	1
	/kia ³³ khwit ¹¹ saan ²⁴ /	ø	2
4. /kroot ¹¹ kwaan ³³ r ^h ²⁴ wen ⁴² /	/kloot ¹¹ kwen ⁴² l ^h ²⁴ waan ³³ /	-w-	4
	/kloot ¹¹ kwen ⁴² l ^h ²⁴ waan ³³ /	-w-	1
	/ken ⁴² kwaan ³³ l ^h ²⁴ woot ¹¹ /	-w-	1
	/kwen ⁴² koot ¹¹ l ^h ²⁴ waan ³³ /	-w-	1
	/koot ¹¹ ken ³³ l ^h ²⁴ waan ⁴² /	ø	1
5. /yæ ⁵⁵ khwit ¹¹ ɲæy ³³ den ⁴² /	/yæ ⁵⁵ khwen ⁴² ɲæy ³³ dit ¹¹ /	-w-	4
	/yæ ⁵⁵ khen ⁴² ɲæy ³³ dwit ¹¹ /	u	1
Northern Thai Dialect			
1. /ɲwaam ⁴² biaw ⁵¹ /	/ɲiaw ⁵¹ bwaam ⁴² /	u	4
	/ɲiaw ⁵¹ buam ⁴² /	u	3
	/ɲiaw ⁵¹ baam ⁴² /	ø	3
2. /ɲwaay ³³ cæ ⁴² /	/ɲwæ ⁴² caay ³³ /	-w-	2
	/ɲwæ ³³ caay ⁴² /	-w-	2
	/ɲæ ⁴² cwaay ³³ /	u	3
	/ɲæ ³³ cwaay ⁴² /	u	3
3. /ɲwaay ⁵⁵ niip ¹¹ /	/ɲwiip ⁵⁵ naay ¹¹ /	-w-	1
	/wiip ¹¹ naay ⁵⁵ /	w	3
	/ɲiip ⁵⁵ nwaay ¹¹ /	u	4
	/ɲiip ¹¹ nwaay ⁵⁵ /	u	1

Devised utterances	Reversed utterances	Status	Quantity
Bangkok Thai Dialect			
3. /ɲwaay ⁵⁵ niip ¹¹ /	/ɲiip ⁵⁵ naay ¹¹ /	∅	1
4. /cwa ⁴² fɪn ⁵⁵ /	/cwɪn ⁵⁵ faa ⁴² /	-w-	1
	/cwɪn ⁴² faa ⁵⁵ /	-w-	1
	/cɪn ⁵⁵ fwa ⁴² /	u	2
	/cɪn ⁴² fwa ⁵⁵ /	u	1
	/cɪn ⁵⁵ faa ⁴² /	∅	4
	/cɪn ⁴² faa ⁵⁵ /	∅	1
5. /khw ⁵¹ ween ⁵⁵ /	/khween ⁵¹ wan ⁵⁵ /	-w-	4
	/khween ⁵⁵ wan ⁵¹ /	-w-	2
	/kheen ⁵⁵ wan ⁵¹ /	∅	3
	/kheen ⁵¹ wan ⁵⁵ /	∅	1
6. /kw ¹¹ daaw ⁵¹ /	/kwaaw ⁵¹ den ¹¹ /	-w-	5
	/kwaaw ¹¹ den ⁵¹ /	-w-	3
	/kaaw ¹¹ den ⁵¹ /	∅	2
7. /lwa ³³ sook ¹¹ /	/lwook ¹¹ saa ³³ /	-w-	1
	/look ¹¹ swaa ³³ /	u	4
	/look ⁴² swaa ¹¹ /	u	1
	/look ¹¹ saa ³³ /	∅	3
	/look ⁴² saa ³³ /	∅	1
8. /swa ³³ ɲak ⁴² /	/swɪak ⁴² ɲaam ³³ /	-w-	1
	/swɪak ³³ ɲaam ⁴² /	-w-	1
	/sɪak ⁴² ɲwaam ³³ /	u	7
	/sɪak ⁴² ɲwaam ³³ /	u	1
9. /twa ³³ ɲoon ⁵¹ /	/twoon ³³ ɲaay ⁵¹ /	-w-	1
	/toon ³³ ɲwaay ⁵¹ /	u	6
	/toon ⁵¹ ɲwaay ³³ /	u	3
10. /ywa ¹¹ hɪɲ ²⁴ /	/yɪɲ ²⁴ hwaat ¹¹ /	u	5
	/yɪɲ ¹¹ hwaat ²⁴ /	u	1
	/yɪɲ ²⁴ huat ¹¹ /	u	1
	/yɪɲ ²⁴ haat ¹¹ /	∅	3

Devised utterances	Reversed utterances	Status	Quantity
Bangkok Thai Dialect			
11. /ɲwaam ₄₂ kuup ₁₁ thoʔ ₂₄ /	/ɲwoʔ ₂₄ kuup ₁₁ thaam ₄₂ /	-w-	1
	/ɲoʔ ₂₄ kuup ₁₁ thaam ₄₂ /	ø	2
	/koʔ ₂₄ thuup ₁₁ ɲwaam ₄₂ /	-w-	1
	/ɲoʔ ₂₄ kuup ₁₁ thwaam ₄₂ /	u	6
12. /ɲwaay ₅₅ khiŋ ₂₄ niip ₁₁ /	/ɲwiip ₅₅ khiŋ ₂₄ naay ₁₁ /	-w-	2
	/ɲwiip ₁₁ khiŋ ₂₄ naay ₅₅ /	-w-	1
	/khiip ₁₁ niŋ ₂₄ ɲwaay ₅₅ /	-w-	1
	/wiip ₅₅ khiŋ ₂₄ naay ₁₁ /	w	1
	/ɲiip ₁₁ khiŋ ₂₄ nwaay ₅₅ /	u	2
	/ɲiip ₁₁ khiŋ ₂₄ naay ₅₅ /	ø	2
	/ɲiip ₅₅ khiŋ ₂₄ naay ₁₁ /	ø	1
13. /ʔwaay ₃₃ yut ₂₄ ween ₅₅ /	/ʔeen ₅₅ yut ₂₄ waay ₃₃ /	ø	10
14. /cwaa ₄₂ biaw ₅₁ pəət ₁₁ /	/cwəət ₁₁ biaw ₅₁ paa ₄₂ /	-w-	1
	/cəət ₁₁ biaw ₅₁ pwaa ₄₂ /	u	3
	/cəət ₄₂ biaw ₅₁ pwaa ₁₁ /	u	1
	/cəət ₁₁ biaw ₅₁ paa ₄₂ /	ø	4
	/cəət ₄₂ biaw ₅₁ paa ₁₁ /	ø	1
15. /khwaa ₅₁ luak ₄₂ sook ₁₁ /	/khwook ₅₁ luak ₄₂ san ₁₁ /	-w-	1
	/khook ₁₁ luak ₄₂ swan ₅₁ /	u	2
	/khook ₅₁ luak ₄₂ swan ₁₁ /	u	1
	/khook ₁₁ luak ₄₂ san ₅₁ /	ø	3
	/khook ₅₁ luak ₄₂ san ₁₁ /	ø	3
16. /kwen ₁₁ chaa ₃₃ ʔəən ₅₁ /	/kwəən ₁₁ chaa ₃₃ ʔen ₅₁ /	-w-	3
	/kəən ₅₁ chaa ₃₃ ʔwen ₁₁ /	u	2
	/kəən ₁₁ chaa ₃₃ ʔwen ₅₁ /	u	1
	/kəən ₅₁ chaa ₃₃ ʔen ₁₁ /	ø	3
	/kəən ₁₁ chaa ₃₃ ʔen ₅₁ /	ø	1
17. /lwaa ₃₃ ɲaʔ ₅₅ cəə ₄₂ /	/ləə ₃₃ ɲaʔ ₅₅ cwaa ₄₂ /	u	4
	/ləə ₄₂ ɲaʔ ₅₅ cwaa ₃₃ /	u	3
	/ləə ₃₃ ɲaʔ ₅₅ caa ₄₂ /	ø	2
	/ləə ₄₂ ɲaʔ ₅₅ caa ₃₃ /	ø	1

Devised utterances	Reversed utterances	Status	Quantity
Bangkok Thai Dialect			
18. /swaam ₃₃ daaw ₅₁ hɨŋ ₂₄ /	/swɨŋ ₃₃ daaw ₅₁ haam ₂₄ /	-w-	1
	/sɨŋ ₃₃ daaw ₅₁ hwaam ₂₄ /	u	5
	/sɨŋ ₃₃ daaw ₅₁ haam ₂₄ /	ø	4
19. /twaay ₃₃ ŋiak ₄₂ məʔ ₅₅ /	/təʔ ₅₅ ŋiak ₄₂ mwaay ₃₃ /	u	2
	/təʔ ₅₅ ŋiak ₄₂ muay ₃₃ /	u	1
	/təʔ ₅₅ ŋiak ₄₂ maay ₃₃ /	ø	7
20. /ywaat ₁₁ fɨn ₅₅ tɔp ₂₄ /	/yop ₂₄ fɨn ₅₅ twaat ₁₁ /	u	6
	/yop ₂₄ fɨn ₅₅ twaat ₁₁ /	u	1
	/yop ₁₁ fɨn ₅₅ twaat ₂₄ /	u	1
	/yop ₁₁ fɨn ₅₅ taat ₂₄ /	ø	1
	/yop ₂₄ tɨn ₅₅ faat ₁₁ /	ø	1
21. /ɲwaam ₄₂ kwen ₁₁ məʔ ₅₅ thoʔ ₂₄ /	/ɲwaam ₄₂ kɔʔ ₂₄ məʔ ₅₅ then ₁₁ /	-w-	2
	/ɲwaam ₄₂ kwɔʔ ₂₄ məʔ ₅₅ then ₁₁ /	-w-	1
	/ɲwaam ₄₂ kɔʔ ₁₁ məʔ ₅₅ then ₂₄ /	-w-	1
	/ɲɔʔ ₂₄ kwen ₁₁ məʔ ₅₅ thwaam ₄₂ /	u	3
	/ɲɔʔ ₂₄ kwen ₁₁ məʔ ₅₅ thaam ₄₂ /	ø	2
22. /ɲwaay ₅₅ lwaa ₃₃ yut ₂₄ daaw ₅₁ /	/ɲwaay ₅₅ laaw ₅₁ yut ₂₄ daa ₃₃ /	-w-	3
	/ɲwaaw ₅₅ lwaa ₃₃ yut ₂₄ daay ₅₁ /	-w-	2
	/ɲwaay ₅₅ laaw ₃₃ yut ₂₄ daa ₅₁ /	-w-	1
	/ɲaaw ₅₅ lwaa ₃₃ yut ₂₄ daay ₅₁ /	ø	1
	/ɲaaw ₅₁ lwaa ₃₃ yut ₂₄ daay ₅₅ /	ø	1
23. /cwaa ₄₂ khiŋ ₂₄ sook ₁₁ biaw ₅₁ /	/cwaa ₄₂ khiaw ₅₁ sook ₁₁ biŋ ₂₄ /	-w-	3
	/cwaa ₄₂ khiaw ₂₄ sook ₁₁ biŋ ₅₁ /	-w-	1
	/ciaw ₅₁ khiŋ ₂₄ sook ₁₁ bwaa ₄₂ /	u	1
	/ciaw ₅₁ khiŋ ₂₄ sook ₁₁ baa ₄₂ /	ø	5
24. /khwaa ₅₁ fɨn ₅₅ phet ₂₄ kuup ₁₁ /	/khuup ₁₁ fɨn ₅₅ phet ₂₄ kɨn ₅₅ /	-w-	3
	/khuup ₅₁ fɨn ₅₅ phet ₂₄ kwan ₁₁ /	u	1
	/khuup ₁₁ fɨn ₅₅ phet ₂₄ kuan ₅₁ /	u	1
	/khuup ₁₁ fɨn ₅₅ phet ₂₄ kan ₅₁ /	ø	2
	/khuup ₅₁ fɨn ₅₅ phet ₂₄ kan ₁₁ /	ø	2

Devised utterances	Reversed utterances	Status	Quantity
Bangkok Thai Dialect			
25. /swaam ₃₃ cɛɛ ₄₂ niip ₁₁ ween ₅₅ /	/swaam ₃₃ ceen ₅₅ niip ₁₁ wɛɛ ₄₂ /	-w-	3
	/swaam ₃₃ ceen ₄₂ niip ₁₁ wɛɛ ₅₅ /	-w-	2
	/sween ₃₃ cɛɛ ₄₂ niip ₁₁ waam ₅₅ /	-w-	1
	/seen ₅₅ cɛɛ ₄₂ niip ₁₁ wuam ₃₃ /	u	1
	/seen ₃₃ cɛɛ ₄₂ niip ₁₁ waam ₅₅ /	ø	3
26. /twaay ₃₃ ɲaʔ ₅₅ ɲiak ₄₂ hɲ ₂₄ /	/twaay ₃₃ ɲɲ ₂₄ ɲiak ₄₂ haʔ ₅₅ /	-w-	4
	/twɲ ₃₃ ɲaʔ ₅₅ ɲiak ₄₂ haay ₂₄ /	-w-	1
	/tɲ ₃₃ ɲaʔ ₅₅ ɲiak ₄₂ hwaay ₂₄ /	u	3
	/tɲ ₂₄ ɲaʔ ₅₅ ɲiak ₄₂ hwaay ₃₃ /	u	1
	/tɲ ₃₃ ɲaʔ ₅₅ ɲiak ₄₂ haay ₂₄ /	ø	1
27. /ywaat ₁₁ chaa ₃₃ luak ₄₂ ʔoon ₅₁ /	/ywaat ₁₁ choon ₃₃ luak ₄₂ ʔaa ₅₁ /	-w-	5
	/ywaat ₁₁ choon ₅₁ luak ₄₂ ʔaa ₃₃ /	-w-	1
	/yoon ₅₁ chaa ₃₃ luak ₄₂ ʔaat ₁₁ /	ø	2
	/yoon ₁₁ chaa ₃₃ luak ₄₂ ʔaat ₅₁ /	ø	1
	Some informant can not reversed	-	1
Southern Thai Dialect			
1. /khwak ₂₂ ɲay ₄₅ /	/khway ₂₂ ɲak ₄₅ /	-w-	9
	/khway ₄₅ ɲak ₂₂ /	-w-	1
2. /kwaat ₂₁ khoom ₃₃ /	/kwoom ₃₃ khaat ₂₁ /	-w-	6
	/koom ₃₃ khwaat ₂₁ /	u	3
	/koom ₃₃ khaat ₂₁ /	ø	1
3. /khwak ₂₂ huay ₄₅ wəʔ ₄₄ /	/khwəʔ ₂₂ huay ₄₅ wak ₄₄ /	-w-	7
	/khwəʔ ₄₄ huay ₄₅ wak ₂₂ /	-w-	3