

Part II Phonology

1. Segmentals – Consonants
2. Segmentals – Vowels and Diphthongs
3. Suprasegmentals – Words Accents, Sentence Tonic, Rhythm
4. Suprasegmentals – Tones and Intonations

The English Consonants

Stops	p		t	tʃ	k
	b		d	dʒ	g
Fricatives	f	θ	s	ʃ	h*
	v	ð	z	ʒ*	
Nasals	m		n	ŋ*	
Approximate -nants	w		r, l	j	

* Consonants with limited distribution

The Thai Consonants

	p	t	c*	k	ʔ
Stops	ph*	th*	ch*	kh*	
	b*	d*			
Fricatives	f	s			h*
Nasals	m	n	ɲ		
Approximants	w	r*, l*	j		

*** Consonants with limited distribution**

Phonological Problem

There are 3 types of problem arising from the differences between the L1 and L2 Phonological System. These differences can be viewed as Language Interference. They are as follows:

1. Systemic Differences
2. Structural Differences
3. Differences in Phonetic Realization

Systemic Differences and Structural Differences

Systemic differences refer to the differences of the number and the types of the phoneme existing in L1 and L2. For example, in Thai there are only 3 fricatives /f, s, h/ whereas in English there are 9 fricatives. /f, v, θ, ð, s, z, ʃ, ʒ, h/

Structural differences refer to the differences of the structure of syllables and sequences of sounds in L1 and L2. For example, both Thai and English have the /f/ sound. In Thai this sound can only occur at the syllable initial position, but in English this sound can occur at any position of the syllable.

Differences Phonetic Realization

The differences in phonetic realization refer to the differences in the phonetic details of the phoneme in L1 and L2. For example, both Thai and English have the phoneme /r/. The phonetic realization of this phoneme in English is an alveolar approximant but in Thai it is an alveolar trill or tap.

The Consonantal Systemic Differences

Stop Consonants

English Stops	p b	t d	tʃ dʒ	k g	
Thai Stops	p ph b	t th d	c ch	k kh	?

Thai does not have the voiced velar [g] stop in the voiced set. However, looking at the overall system Thai has a richer system of stops.

The unaspirated and aspirated voiceless stops in Thai are similar to the allophones of the voiceless stops in English. The voiceless stop is aspirated at the initial position but unaspirated elsewhere .

The differences between Stops in Thai and English, that create the problems for Thai speaking English, are that, there are only 3 Stops in Thai that can occur at the final position. All these stops are unexploded and glottalized. The voiced and voiceless stops and affricates in English are pronounced as voiceless unexploded stops in Thai English. For example,

<My **dad** wears a **black** **coat** ..

[maj **dæ:t^ʔ** wæ a **blæk^ʔ** ko:t^ʔ

..and carries a **red** **bag**.>

ʔæ:n khæ:ri a **re:t^ʔ** **bæ:k^ʔ**]

The Consonantal Systemic Differences Fricative Consonants

English	f	θ	s	ʃ	h*
Fricatives	v	ð	z	ʒ*	

Thai	f*	s*	h*
Fricatives			

In terms of fricative consonants, Thai is very poor. There are only 3 fricatives and all of them have limited distribution, i.e., they occur only at the word initial position. However, in English, the distribution of the fricatives is not limited except the /h/ that can occur at word initial position and the /ʒ/ at any position except the word initial position.

The Thai language has only 3 fricative sounds /f, s, h/. None of them can occur at the final position. The systemic and structural differences between the fricatives in Thai and English create a major problem in Thai. For example,

<The man at the gas pump is ceasing to breath.>

/dʒ mə:n æt⁷ dʒ kæ:t⁷ pam i:t⁷ si:t⁷ siŋ⁷ thu: bri:t⁷/

<Please say the words: thin, shin, van, than, zoo, rouge.>

/ pli:t⁷ se: ðʒ wʒ:t⁷ t^hin tç^hin wæ:n də:n su: ru:t⁷

The Consonantal Systemic Differences

Nasals and Approximants

There are no systemic differences found between Thai and English nasals and approximants. They share the same nasals and approximants system as follows:

Nasals

m

n

ŋ

Approximants

w

r, l

j

However, there are structural differences found between the nasals and approximants of English and Thai. In English **/ŋ/** cannot occur at word initial positions. In Thai **/r, l/** cannot occur at word final positions.

The /r/ and /l/ in English creates a lot of problems for Thai speaking English. These problems exhibit very clearly in Thai English.

The /r/ in Thai can only occur in the initial positions. Its phonetic realization is either a tap, a trill, or a lateral. In the speech of the younger generation, most /r/ is realized as [l]. In clusters with /r/, the /r/ is often dropped.

<When the crab is boiled they will turn red.>

/ wen dʁ k^hæ:p⁷ i:t⁷ b@:i de: wiw t^hʁ:n le:t⁷

@ = low rounded back vowel, represented in IPA as an “open o”.

Like /r/, the /l/ in Thai can only occur in the initial positions. When it occurs in the final position it is realized as a /n/ after a back and mid vowel, a /w/ after a front vowel, or is deleted if it follows a diphthong.

<Bill has a ball and a pile

/biw hæ:t^ɾ a b@:n ʔæn a phaj

of papers in his bag.>

@:p p^he:p^hɯ: in hi:t bæ:k /

In conclusion the English consonants that can be very problematic from the systemic, structural, and phonetics differences and will be replaced by some other sounds in Thai as discussed are shown in pink.

Stops	p		t	ts	k
	b		d	dʒ	g
Fricatives	f	θ	s	ʃ	h*
	v	ð	z	ʒ	
Nasals	m		n	ŋ	
Approximants	w		r, l	j	

Outline

Part I Theoretical Framework and Preliminaries

1. Theoretical Framework
2. Scenario of the Use of English in Thailand

Part II Phonology

3. Segmentals – Consonants
4. Segmentals – Vowels and Diphthongs
5. Suprasegmentals – Words Accents, Sentence Tonic, Rhythm
6. Suprasegmentals – Tones and Intonations

Thai Vowel Systems

i, i:

ɯ, ɯ:

u, u:

e, e:

ɤ, ɤ:

o, o:

æ, æ:

a, a:

ɔ, ɔ:

Sequence of Vocalic Segments in Thai

i, i:

ɯ, ɯ:

u, u:

e, e:

ɤ, ɤ:

o, o:

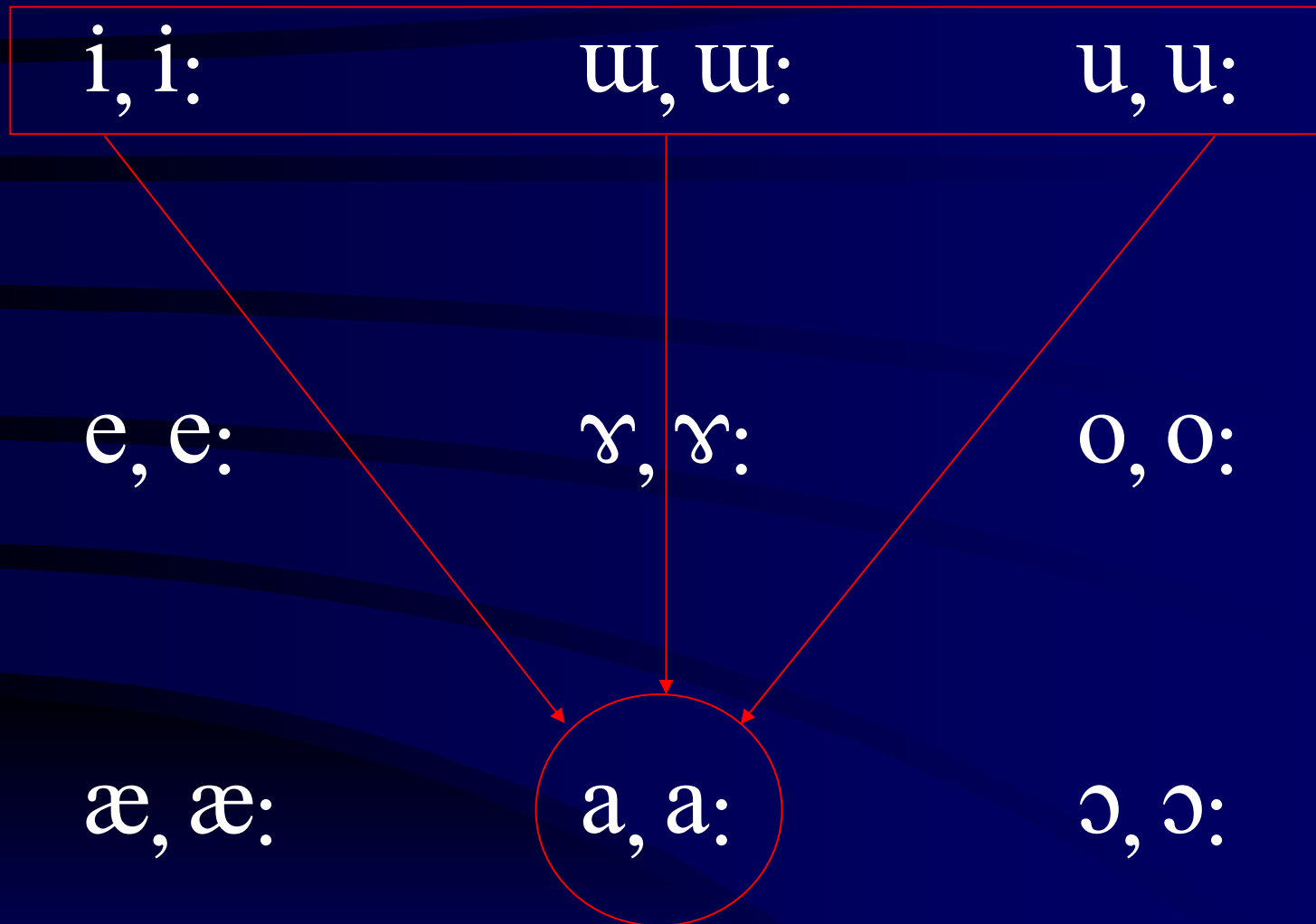
æ, æ:

a, a:

ɔ, ɔ:

○ Vowels that can occur as the second segment in the sequence of vowels (diphthong)

Thai Diphthongs



There are 6 opening diphthongs in Thai, all high vowels can be followed by central low vowel. All these diphthongs are falling diphthongs, I.e., the final segment is less prominent than the first.

Thai Sequence of Vocalic Segments (I)

i, i:

ɯ, ɯ:

u, u:

e, e:

ɤ, ɤ:

o, o:

æ, æ:

a, a:

ɔ, ɔ:

All the front and central vowels can occur as the first segment, gliding to high back vowels as the second segment. They can be considered rising-closing diphthongs, i.e., the second segment is more prominent.

Thai Sequence of Vocalic Segments (II)

i, i:

ɯ, ɯ:

u, u:

e, e:

ɤ, ɤ:

o, o:

æ, æ:

a, a:

ɔ, ɔ:

All the back and central vowels can occur as the first segment, gliding to high front vowels as the second segment. They can be considered rising-closing diphthongs, i.e., the second segment is more prominent.

English and Thai Monophthongs

English

Thai

i:, I	u:, U	i:, i	v:, v	u:, u
e	3:, 3	e:, e	ɤ :, ɤ	o:, o
æ	a:	æ:, æ	a:, a	@:, @

It is clear that Thai has a richer monophthongal system. The mapping of Thai vowels to the English vowels is easy.

The major problem in Thai English is that the English schwa /3/ which is a vowel found only in unstressed syllable is replaced by the mid central vowel /ɤ/ in Thai .

English and Thai Monophthongs

English

Thai

i: , ɪ	u: , ʊ	i: , ɪ	ɯ: , ɯ	u: , u	
e	ɜ: , ɝ	@: , o	e: , e	ɤ: , ɤ	o: , o
æ	ɑ:	æ: , æ	a: , a	@: , @	

It is still debatable whether English has a distinction between short and long vowels. The five vowels that are mostly described as long vowels in English are / **i:**, **ɜ:**, **u:**, **@:**, **ɑ:** /.

Their short pairs are different from them in qualitative as well as quantitative terms. Most transcriptions will use different symbols to mark the qualitative differences.

In Thai the short and long pairs of vowels are different only in quantitative terms. So in Thai English the short pairs of the English vowels: /**ɪ**, **ɝ**, **ʊ**, **o**, **a**/ is pronounced as /**ɪ**, **ɤ**, **u**, **o**, **a**/.

English and Thai Monophthongs

Another interesting phenomenon in Thai English is that, the Thai people are very sensitive to the length distinction found in the lengthening of vowels before voiced or lenis consonants in English. For example:

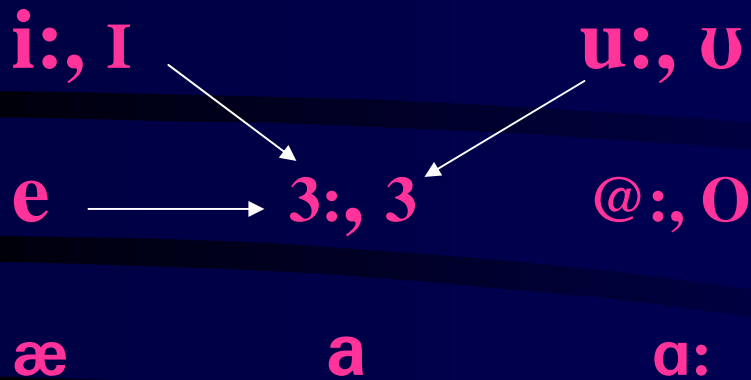
<bat>	/bæ̃t/	[bæ̃t]
<bad>	/bæ̃:d/	[bæ̃:d]

For most Thai speakers, these two words have different vowels, a short vowel in <bat>, and a long vowel in <bad>. It is surprised to find that the two words have the same vowels in the dictionary transcription.

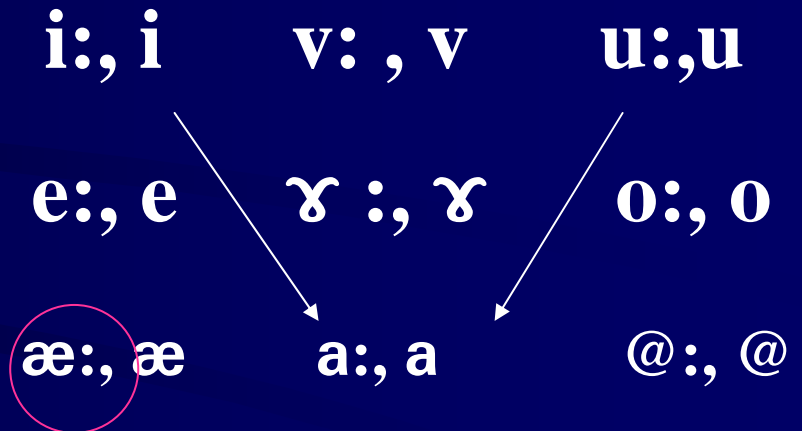
This perceptual ability has not created problems of intelligibility in Thai English. It is very helpful since the Thai cannot pronounce voiced final consonants. This vowel length distinction helps them to be close to the phonetic realization of vowels in words with voiced and voiceless ending consonants.

Thai and English Diphthongs

English



Thai



The $/eɜ/$ diphthong in English is pronounced as the long $/æ: /$ in Thai English, as in the word: **there, care, wear, share.**

The $/iɜ/$ and $/uɜ/$ diphthongs in English can be pronounced without difficulties, using the Thai $/i:a/$ and $/u:a/$. However, they are falling rather than rising, i.e. the second segment is less prominent than the first segment. For example, **here, cheer, near** and **poor, sure, film noir.**

Thai and English Diphthongs

English

Thai

i:, I		u:, U	i:, i	v: , v	u:,u
e ↗	ɜ:, 3	@:, O ↗	e:, e	ɣ :, ɣ	o:, o
æ	a	ɑ:	æ:, æ	a:, a	@:, @

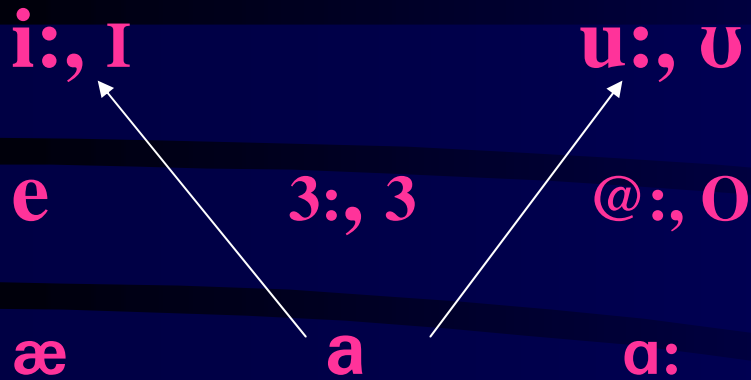
There is no front to front **/eɪ/**, and back to back **/oʊ/** diphthongs in Thai compared to English.

The **/eɪ/** diphthong in English is pronounced as the long **/e:/** in Thai English, as in the word: **day, say, play, way.**

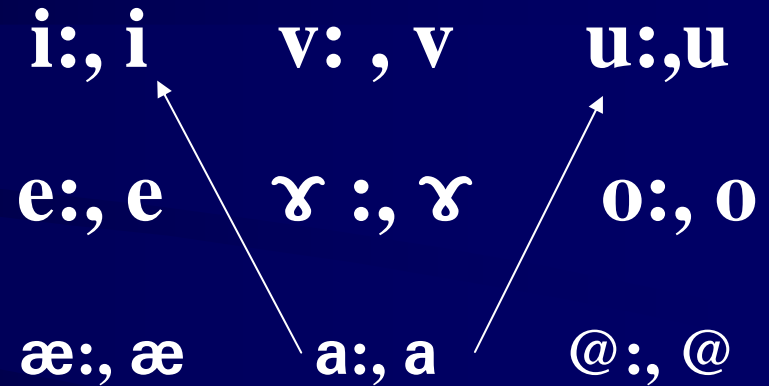
The **/oʊ/** diphthong in English is pronounced as the long **/o:/** in Thai English, as in the word: **no, go, show, pro.**

Thai and English Diphthongs

English



Thai



The **/aɪ/** diphthong in English can be mapped to the Thai **/ai/** in Thai English, as in the word: **high, shine, kind, white**.

The **/aʊ/** diphthong in English is pronounced as the Thai **/au/** in Thai English, as in the word: **now, cow, how, row**.

These **/aɪ/** and **/aʊ/** diphthongs in English can be pronounced without difficulties. However, they are rising rather than falling in Thai English, i.e., the second segment is more prominent than the first segment.

Part II Phonology

Suprasegmentals

1. Word Accents, Sentence Tonic and, Rhythm
2. Tones and Intonations

English Suprasegmentals

Lexical Tone None

Word Accent Free accentual system

Rhythm Stress-timed Rhythm

Intonation Tonality, Tonicity, Tune
The pitch pattern is a complex of the interplay between intonation, word accent and sentence stress.

Thai Suprasegmentals

Lexical Tone Kinetic tone language

Word Accent Fixed accentual system

Rhythm Stress-timed Rhythm

Intonation Tonality, Tonicity, Tune
The pitch pattern is a complex of the interplay between intonation, tone, word accent and sentence stress.

English and Thai Suprasegmentals

	English	Thai
Lexical Tone	none	<input checked="" type="checkbox"/>
Word Accent	<input checked="" type="checkbox"/> Free	<input checked="" type="checkbox"/> Fixed
Rhythm	<input checked="" type="checkbox"/> Stress Timed	<input checked="" type="checkbox"/> Stress Timed
Intonation	<input checked="" type="checkbox"/> Interplay with word accent sentence tonic	<input checked="" type="checkbox"/> Interplay with tones word accent and sentence tonic.

Word Accent, Sentence Tonic and, Rhythm

English -Thai Word Accent

Word accent is defined as the potentiality of the syllables in the word to be realized as stressed syllables. Stress is phonetically defined as the prominent quality of the syllable.

English

- (1) Accent can fall on any syllable of the word .
- (2) Content words are always accented and grammatical words are unaccented unless marked.
- (3) Accented syllables are mostly left handed.

Thai

- (1) Primary accent falls on the last syllable of the word only.
- (2) Content words are always accented and grammatical words are unaccented unless marked.
- (3) Accented syllables are always right handed.

Word Accent in Thai English

Thai is a Fixed Accent language. The primary accent always fall on the last syllable of the word. The secondary accent of the word is governed by rules relating to the syllable structures of the rest of the syllables composing the words. Linking syllables (l) are syllables with /a/ vowels and no final consonants are always unaccented. As can be illustrated below:

ó ó

ó l'

l ó

l l'

ó o ó

ó o l'

l ó ó

l ó l'

ó l ó

ó l l'

l' l ó

l' l l'

Thai English Word Accent

Word accent is the most problematic for Thai speakers speaking English. The accent in English words can fall on any syllable of a word. Although there are rules governing the English accent placement but one has to know the derivation of the words. Thai speakers then superimposed the Thai accentual system onto the English words. So we will find the patterns in 2-syllable words like:

/- =/ in <unlike> and /= =/ in <phantom>

or in 3-syllable words like

/- = =/ in <unkindly> and /= - =/ in <proposal>

or in 4 syllable words like

/= - - =/ in <propaganda> and /- = - =/ in <America>

(- refers to unaccented syllable, and = refer to the accented Syllable)

Thai English Tonic and Tonality

- The Tonic or the Sentence Stress in English Sentence is assigned to the **content word** that is semantically **most prominent** in the Neutral situation. For Example:

`This is the `house that `Jack **''built.**

- In Marked situation, tonic will be assigned to the contrastive or emphatic word. For example:

''This is the `house that `Jack `built.

- The Tonic in Thai is assigned to **the last word of the sentence**, either content word or function word. However, in Marked situation the tonic can fall on any word in the sentence but the last word of the sentence will also receive the prominent stress or tonic. We find this characteristic imported to Thai English, for example:

English English `Richard `came to `school `yester`day, `said **''Arthur.**

Thai English Ri **''chard** `came to `school `yester`day, `said Ar**''thur.**

Rhythm in Thai English

Both Thai and English are stress-timed rhythm. The rhythmic unit or the foot is structured by the stress. Each unit starts with a stressed syllable followed by one or more unstressed ones. The unit can be a one or more syllable foot. Each foot, no matter how many syllables it has, obtains almost the same interval of time.

English Rhythm

//One /two /three /four //

//One and a /two and /three and then a /four//

Thai Rhythm

//หนึ่ง /สอง /สาม /สี่ //

//หนึ่ง กับ /สอง /สาม กับ อีก /สี่ //

Rhythm in Thai English (continue)

Although Thai and English have the same type of rhythm. The problems in the English pronunciation of the rhythm in Thai speakers, arise from the accent placement. The English function words are stressed in Thai English. For example:

English English: //This should be a /perfect /match//

Thai English: //This /should /be /a /per/fect /match//

Conclusion

In conclusion, Thai English exhibits the interference of word accentual system.

The Fixed Accentual system influences the word pronunciation of English in Thai speakers.

This L1 transfer overcome the similarity between the type of rhythm shared by Thai and English.

It has a strong effect that many linguists mistakenly think that Thai is a syllable-timed language.

Part II Phonology

Suprasegmentals

1. Word Accents, Sentence Tonic and, Rhythm

2. Tones and Intonations

English and Thai Suprasegmentals

	English	Thai
Lexical Tone	none	<input checked="" type="checkbox"/>
Word Accent	<input checked="" type="checkbox"/> Free	<input checked="" type="checkbox"/> Fixed
Rhythm	<input checked="" type="checkbox"/> Stress Timed	<input checked="" type="checkbox"/> Stress Timed
Intonation	<input checked="" type="checkbox"/> Interplay with word accent sentence tonic	<input checked="" type="checkbox"/> Interplay with tones word accent and sentence tonic.

Tone Interference

Thai is a tone language. Tone is the property of the syllable. Every syllable in Thai acquires a tone. The syllable structures in Thai determine what tones the syllables can acquire.

There are 2 types of syllable in Thai

1. The Sonorant Ending syllables known as Live Syllables. They are syllables ending with non stop consonants /m, n, ŋ, w, j/. They can acquire all the five tones
2. The Obstruent Ending syllables known as Dead Syllables. They are syllables ending with stop consonants /p, t, k, ʔ/. They can acquire only 3 tones.

Thai Tones

There are 5 tones in Thai.

Three are relatively level and they are called the **Static Tones**. They are the low (L), the mid (M), and the high tone (H).

Two are relatively changing, the pitch moves up or down. They are called the **Dynamic Tones**. They are the fall (F), and the rise (R)

The tone distribution in the 2 syllable types are shown below

	Low	Mid	High	Fall	Rise
Sonorant Ending Syllable	/	/	/	/	/
Obstruent Ending Syllable	/		/	/	

Tones in Thai English

Tones have a strong influence in Thai English. In many Englishes of the tone languages, for example, Singaporean English, Hong Kong English, or Nigerian English. The stress patterns of the English language influence the tone assignments to the syllables of the words. The unstressed syllables receive low tones, and stressed syllables receive high tones.

In Thai English, tones are also assigned to the syllables of the words. The tone assignments in Thai English are not influenced by the stress patterns of the English language like other Englishes of tone language speakers.

Tone Assignment in Thai English

Tone assignments in Thai English are influenced by the syllable structures of the syllables in the English language. Tone assignments in Thai English are restricted to the distribution of tones in the Thai language.

Sonorant Ending syllables receive a mid or a fall tone.

Obstruent Ending syllables receive a low or a high tone.

	Low	Mid	High	Fall	Rise
Sonorant Ending Syllable		/		/	
Obstruent Ending Syllable	/		/		

Tonal Assignments in Obstruent Ending Syllables

English syllables ending with stops and fricatives are considered as Obstruent Ending syllables. For example: **tap, vat, check, reef, cheese, wish** etc. are pronounced with the high tones.

English syllables ending with stops and fricatives following the nasals are also considered as Obstruent Ending syllables. For example: **swamp, mint, milk, nymph, rinse, shrink** etc. are pronounced with high tones as in the first set.

Tonal Assignments in Sonorant Ending Syllables

English syllables ending with nasals and approximants, including the open syllables or syllables without final consonants are considered as Sonorant Ending syllables and will be pronounced with the mid tones. For example: **ram, ten, sing, row, sky, car**, etc.

These English syllables if they are the last syllables of the words, they will be pronounced with fall tones. For example: **washing, pattern, computer, simple**, etc.

Intonation in Thai

Although Thai is a tone language it also has intonation.

The pitch pattern of a Thai utterance is the realization of a complex of tone, stress, and intonation. The prosodists will illustrate these prosodies or supra-segmentals as in the diagram below



The Phi represents the prosodies, in Thai, it includes tone, stress, and intonation.

Intonation Universals

It is proposed that there are 3 intonation universals in languages of the world. The types of intonation contour and their semantic correlates are illustrated below.

Intonation Contours

Fall



Rise



Convolution



Semantic Correlates

Finality

Non-finality

Contrariety

Intonation in Thai English

Thai speakers can recognize the English intonation without problems. However, in the production of intonation in Thai English the interference comes from the constraints of pitch production in different types of syllables in the Thai language as discussed before.

If the last syllables of the sentence, that carries the tonic, is an Obstruent Ending syllable. Then the Fall, Rise, and Convolution are very difficult to produce because this type of syllables can only take the low and the high tone.

Intonation in Thai English (Continue)

If the last syllable of the sentence, that carries the tonic, is a Sonorant Ending syllable. Then the Fall, Rise, and Convolution are easy to produce because this type of syllable can take all the five tones the low, the mid, the high, the fall, and the rise.

It is suggested that to teach intonation to Thai speakers, the word “No” with all the intonation patterns will be a good start. The word “Yes” will be more difficult with all the intonation types.

Examples of Thai English with Tone Interference

English English

Passenger Richard Harris, Alan Mortimer,
Jennifer Ferguson. Please come to Gate Seven
immediately.

Thai English : HMLFR

pæ:t¹H sen^M cʌ:F ri?^H cha:t¹H hæ:M rit^H
a:M lan^M mo:M ti mʌ:F cen^M ni fʌ:F
fʌ:M ku:M san^F pli:t¹H k^ham^M t^hu:M ke:t¹L
se:M ven^F im^M mi:M di:at¹H li:F