

## SELECTED PHONOLOGICAL RULES FOR THAILAND LISU

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In Hope 1971 certain aspects of Lisu phonology were presented to show the impossibility of maintaining an adequately motivated unique assignment of phones to phonemes. The present article is an attempt to provide a partial generative description of that phonology so as to indicate the generative solutions to the major problems.

The set of universal distinctive features has been variously defined by different linguists and it is thus necessary to define the features adopted in this paper. Such definitions are given in informal articulatory terms and the name of the linguist responsible for the introduction of the feature into the inventory is indicated by the following abbreviations:

J = Jakobson, H = Halle, M = McCawley, W = Wang

### 1. THE DISTINCTIVE FEATURES

#### a. *Syllabic* (syl) (M)

This feature will distinguish true vowel segments (+) from all other segments (-). In hundreds of morphemes the correct specification of the segments for syllabicity will be provided by the MS rules, since the canonical form of morphemes is highly predictable (see section 2). The glides /y/ and /w/ are specified -syl. This treatment of these glides (rather than one which specifies them as +syl diphthongs) enables the MS rules to be generalised to an exceptionally high degree, and the analysis is thus highly motivated.

#### b. *Consonantal* (cons) (J)

True consonants are specified +cons and /h/ /ʔ/ /y/ and /w/ as -cons.

Vowel specification for this feature will be provided by the blank-filling rules.

	<i>vowels</i>	<i>consonants</i>	<i>y w h ?</i>
<i>syl</i>	+	-	-
<i>cons</i>	0	+	-

c. *Obstruent* (*obs*) (H)

This feature separates the class of stops, affricates and fricatives (+) from the class of nasal and lateral resonants (-). Vowels are specified (-) by the blank-filling rules.

d. *Grave* (*grv*) (J)

Peripheral consonants are +*grv* and central consonants are -*grv*. With vowels +*grv* refers to back articulatory position and -*grv* to any position forward of this.

e. *High/Low* (M)

The feature *high* applies to both consonants and vowels, but *low* is redundantly specified (-) for consonants. A +*high* consonant is one articulated in any position between alveopalatal and velar, while a -*high* one is articulated in any position between alveolar and bilabial. With vowels the feature refers to the usual high and low articulatory positions.

	<i>p</i>	<i>ph</i>	<i>b</i>	<i>f</i>	<i>v</i>	<i>k</i>	<i>kh</i>	<i>g</i>	<i>x</i>	<i>ɣ</i>	<i>t</i>	<i>th</i>	<i>d</i>	<i>s</i>	<i>z</i>	<i>ts</i>	<i>tsh</i>	<i>dz</i>	<i>m</i>	<i>n</i>	<i>ŋ</i>	<i>l</i>
<i>cons</i>		+						+							+				+	+	+	+
<i>obs</i>		+						+							+				-	-	-	-
<i>grv</i>		+						+							-				+	-	+	-
<i>high</i>		-						+							-				-	-	+	-
		<i>i</i>				<i>e</i>		<i>æ</i>		<i>u</i>			<i>u</i>		<i>a</i>							
<i>cons</i>		-				-		-		-			-		-				-			
<i>grv</i>		-				-		-		+			+		+				-			
<i>high</i>		+				-		-		+			-		-				-			
<i>low</i>		-				-		+		-			-		-				-			

f. *Continuant* (*cont*) (J) / *strident* (*str*) (J)

The feature *cont* opposes stops and affricates (-) to fricatives (+) and /h/ (+) to /ʔ/ (-).

The feature *str* distinguishes the affricates (+) from the stops (-) and is redundantly specified (+) for fricatives.

g. *Tense* (*tns*) (J)

This feature opposes aspirated to non-aspirated stops and affricates

when used with consonants, and indicates the tense:lax vowel contrast. With tense vowels the feature specification (+) is provided by the P-rules.

*h. Voice (vce) (J)*

The voiced:voiceless obstruent contrast is indicated by this feature.

*i. Lateral (lat) (H) / nasal (nas) (J)*

The *lat* feature distinguishes /l/ from other resonants which are redundantly specified +*nas*.

*j. Flat (flt) (J) / sharp (shp) (J)*

With vowels +*flt* indicates roundedness, -*flt* non-roundedness. The feature specification (+) is provided for /u/ by the blank-filling rules. With consonants the feature +*flt* indicates labialisation. The feature +*shp* refers to palatalisation. Only /w/ and /y/ among the -syl segments have (+) specifications for *flt* and *shp* respectively in the underlying specification of morphemes. Both palatalisation and labialisation are deemed to be derived by P-rules.

*k. Retracted articulation (retrac) (M)*

This feature is not specified in underlying forms, but indicates the labio-dental articulation of some forms of labialisation and the retraction of /i/ when labialised.

*l. Checked (chk) (J)*

This feature is specified (+) for the glottal stop by the blank-filling rules, and for glottalised vowels by the P-rules.

*m. HIGH (M) / LOW / RISE (W) / FALL (W)*

These are pitch features of which HIGH and LOW (a new feature to my knowledge) are the only distinctive ones in underlying forms. RISE and FALL specifications are provided by the P-rules.

*n. The systematic phonemes*

In the following charts the sequential constraints have been assumed to have applied. Such an assumption is necessary only to illustrate the true binary nature of the contrasts.

(see charts overleaf)

CONSONANTS

	k	kh	g	x	ɣ	p	ph	b	f	v	t	th	d	ts	tsh	dz	s	z	ŋ	m	n	l	
syl	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cons	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
obs	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-
grv	+	+	+	+	+	+	+	+	+	-	-	-	-	-	-	-	-	-	+	+	-	0	0
high	+	+	+	+	-	-	-	-	0	0	0	0	0	0	0	0	0	0	+	-	0	0	0
cont	-	-	-	+	+	-	-	-	+	+	-	-	-	-	-	-	-	+	+	0	0	0	0
str	-	-	-	+	+	-	-	-	+	+	-	-	-	+	+	+	+	+	0	0	0	0	0
vce	-	-	+	-	+	-	-	+	-	+	-	-	+	-	-	+	-	+	0	0	0	0	0
tns	-	+	0	0	0	-	+	0	0	0	-	+	0	-	+	0	0	0	0	0	0	0	0
lat	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	+

Features redundant: low  
 nas  
 flt  
 shp  
 retrac  
 chk  
 HIGH  
 LOW

NON-CONSONANTS

All syllabic segments will be specified for tone, and thus, since syllables rather than segments are distinguished by tone, the pitch features are not given as distinctive features of vowels in the following chart:

	vowels					semi-vowels				
	i	e	æ	u	u	a	y	w	h	?
syl	+	+	+	+	+					
grv	-	-	-	+	+					
high	+	-	-	+	-					
low	-	-	+	-	-					
						syl	-	-	-	-
						cons	-	-	-	-
						vce	+	+	-	-
						cont	+	+	+	-
						grv	-	+	0	0

Features redundant: vowels  
 obs  
 cons  
 str  
 tns  
 lat

semi-vowels  
 high  
 low  
 obs  
 cons  
 str