2.1 Sre Phonemes

The phonemes of Sre are as charted in the table below.

2.2 Description of Phonemes and Allophones

2.21 Non-Syllabics

There is a series of unaspirated, aspirated[1] and voiced stops at bilabial, alveolar, palatal and velar points of articulation respectively; there are two voiced imploded stops at bilabial and alveolar points of articulation respectively; and there is glottal stop. There are two voiceless fricatives, at alveolar and glottal points of articulation, respectively, and two liquids, a voiced alveolar lateral and a voiced alveolar trill. There are aspirated and unaspirated nasals at bilabial, alveolar, and palatal points of

Sre Phonemes

C O N S O N A N T S (28)

		Labial	Alveolar	Palatal	Velar	Glottal
STOPS	Vl	p	t	c	k	?
	Vl Asp	ph	th	ch	kh	
	Vd	b	d	j	g	
	Vd Imp	ɓ	ɗ			
FRICATIVES			s			h
LATERALS			l			
TRILLS			r			
NASALS	Unasp	m	n	ɲ	ŋ	
	Asp	mh	nh	ɲh		
GLIDES		w		y		

V O W E L S (10)

	Front	Back Unrounded	Back Rounded
HIGH	i	ɯ	u
MID HIGH	e	ə	o
MID	ɛ		ɔ
LOW	a	ɑ	

Vowel Tone and Quantity Features

/ / : (no marking); normal length

/ ˋ /: long (with predictable falling pitch)

Table 1.

articulation respectively and there is an unaspirated (but no aspirated) velar nasal. Finally, there are two glides: high, back, rounded; and high, front, unrounded respectively.

The voiceless stops may or may not have a slight aspirated release phrase-finally or in morphemes uttered in citation form. h is, as Smalley points out (1954:220) "a voiceless aspiration of neutral quality or of the quality of the following vowel when initial, and of the quality of the preceding vowel when final."

The r is realized as a flap ([ř]) when it is the second member of a consonant cluster; otherwise it is a trill.

The clusters /hy hw/ are realized as voiceless glides.

2.22 Syllabics

2.22.1 Vowel Length and Tone

Except in pre-syllables (see 2.6.1), all vowels in Sre are phonemically either normal in length or long, with low, falling pitch (in markedness terms the normal vowels being unmarked and the long vowels being marked). In principle, it would be possible to select either length or pitch as the phonemically crucial element and, whichever were selected, describe the other as a conditioned feature. However, in view of the general tendency for longer syllables to fall in pitch, it seems to make more sense to consider length as primary and low, falling pitch as a conditioned feature. This is the approach which will be followed in this study,

with the normal (unmarked) vowels indicated by plain vowel symbols and the long (marked) vowels indicated by vowel symbols with grave accents.

The unmarked degree of length has three conditioned allophones. It is realized as half-mora in length (and high, level in tone) preceding final obstruents; one mora in length (with high, level tone followed by a slight down-glide), preceding glides, liquids and nasals; and two moras in length (with high falling tone) in open syllables.

The marked degree of length (/V̀/) has a single realization, a phone two moras in length and low, falling in tone; and it occurs only before final consonants. This differs slightly from the corresponding length phoneme of Dialect C, both in tonal configuration and environment. Smalley (1954: 219) describes /V̀/ as a "two mora low-rising vowel in open syllables or syllables closed by voiceless consonants," but one mora in length and low-rising in tone before voiced finals.

2.22.2 Vowel Segments

The vowels present a feature which is rather difficult to deal with in a symmetrical way. The high front vowel /i/ is realized as [i] and [ɪ], while the mid-high front vowel /e/ is realized as [i], [ɪ] and [e^]. The higher allophones of these two phonemes generally occur in open syllables and before liquid and nasal finals; while the more lax allophones generally occur before obstruent finals. Thus it is not only possible, but in fact often happens, that in a minimal pair

where /ɨ/ and /e/ contrast, the allophones will be indistinguishable as far as tongue height alone is concerned, e.g., /ntɨŋ / 'bone' and /ntèŋ/ 'where', where the two vowels are both represented by a long, high, tense, front syllabic. There is, however, another articulatory factor at work here which serves to maintain the distinctiveness of these two vowel phonemes - the relative advancement of the tongue-root, resulting, in the case of neutral or advanced position, in an expanded pharyngeal cavity with concomitant deeper, breathy or "spooky" quality, or, in the case of retraction from neutral position, in a more tense, constricted kind of timbre[2]. With /ɨ/ there is always some degree, however slight, of tongue-root advancement while with /e/ there never is. The degree of tongue-root advancement in Sre is exceedingly subtle - not nearly as pronounced as in some other Mountain Mon Khmer languages spoken in South Vietnam.[3]

Moreover, although this expanded pharyngeal cavity in opposition to pharyngeal constriction is vital in keeping /ɨ/ distinct from /e/ (in the environments noted), it may also occur optionally with other vowels, though without phonemic consequences. /u/, for example, may be pronounced with the tongue-root in neutral position, much like English /u/, or it may be given a slightly "spooky" quality by advancing the tongue-root. The expanded pharyngeal cavity is not necessary to keep /u/ separate from /o/, though, since the heights of their respective allophones do not overlap, i.e., /u/ [u, ʊ], /o/ [o, oˆ]. However, there are three

vowels which can never be uttered with advanced tongue-root: /e, o, ɑ/. These vowels are tense (considerably more so than their nearest English equivalents) and involve some slight tension of the pharyngeal cavity as well. /ɑ/ never occurs in normal length, but is always long; /e/ and /o/ virtually always occur long: that is, out of thousands of technically possible monosyllables checked, non-long realizations of /e/ and /o/ only turned up a few times - nearly always in proper names. It appears that these three vowels are basically different from the rest in being markedly tense and in not permitting non-long realizations.

If this is correct, it appears that what we are dealing with here are two intersecting vocalic systems, one set of tense vowels /e, o, ɑ/ which can never (with the non-crucial exceptions noted above) occur non-long and can never be accompanied by expanded pharynx; and one set of non-tense vowels which may be either long or short and which may be accompanied by a pharyngeal articulation varying from neutral to slightly expanded. Since the latter can be produced with no, or only slight, movement from neutral position, we will consider these the unmarked set; while the latter, involving considerable tension of the muscles under the tongue as well as some tension in the pharyngeal cavity, we will consider marked.

In a sense, the covered/non-covered distinction[4] might be thought of, for Sre, as a kind of "reserve" phonemic

system which comes into effect (i.e., is rendered phonemic) when vowel heights converge too closely. Thus, in Dialect A, where the heights of the two high front vowels have gotten close, resulting in overlap of allophones, the covered/uncovered distinction "comes to the rescue" to keep them distinct. Elsewhere in Dialect A this reserve capacity is not exploited because it is not necessary. In Dialect B, however, /o/ has risen to the point where its allophones overlap with those of /u/; and here again the covered/uncovered distinction is triggered to keep them apart.

The main features of the vowel segments are as follows: /i/ and /u/ are high vowels, front and back respectively, both of which have lower allophones when preceding final voiceless consonants. /e/ and /o/ are upper mid vowels, front unrounded and back rounded respectively; /e/ (but not /o/) has higher allophones preceding final voiced consonants and in open syllables. /ɛ/ is realized as a mid front unrounded vowel with negligible variations; /ɔ/ is similarly represented by a narrow spectrum of mid back rounded vowels. /a/ is a low, front-central vowel which has a central allophone before velars and glottals. /ɑ/ is a low, back, slightly centralized, very slightly rounded vowel, with negligible allophonic variation. /ɯ/ and /ə/ are realized as unrounded back vowels, high and upper mid respectively, with negligible allophonic variation.

For Dialect C, the phonemes /ə/ and /ɑ/ appear to have coalesced. Smalley (1954:220) finds no /ɑ/ but describes /ə/ as having two allophones in complementary distribution: "[ə], mid, back, varying to central unrounded, which occurs with /ˊ/ [non-long vowels]; and [ɔ], low, open, back, slightly rounded, which occurs with /ˋ/." In Dialects A and B it is not possible to group these phones together because, while /ɑ/ occurs only long, /ə/ has both long and non-long realizations. Examples are /tət/ 'good, succulent-looking' (of fruit still on the branch); /tə̀t/ (female proper name); and /tɑ̀t/ (male proper name).

pă	/pa?/	'to break'
pà	/pà?/	'to give'
pa	/pa/	'new'

When glottal stop follows a glide, as the second segment of a two-consonant final cluster, the appropriate length marks are placed on the glide symbols, not on the vowels, e.g.,

glaì	/glày?/	'to punish'

as opposed to

ngàì	/ŋày/	'far, distant'

5. Glides

Glides /w/ and /y/ turn up in various orthographic guises depending on whether they are functioning as initial consonants, final consonants, or the second or third members of consonant clusters. The various environments, and corresponding orthographic shapes, are shown below.

Representation of /w/:

w: pre-vocalically in initial position; wă /wa?/ 'to understand'

o or u: postvocalically in final position, following /a/; hào /hàw/ 'to climb', cau /caw/ 'man, person'

u: postvocalically in final position, following /ɨ/; kliu /klɨw/ 'tiger'

ø: as the first segment of a major syllable immediately preceded by a pre-syllable ending in ə; tơèa /təwès/ 'harvest'