Lexicon and Description of Sui Adjective Intensifiers

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Sui, an indigenous minority language of southwest China, has an elaborate system of adjective intensification. Adjectives are intensified with word-specific, bound morphemes that usually either rhyme with the base or alliterate with the base. Stanford (2007) notes morpho-phonological patterns that suggest reduplication, rhyme, alliteration, The Emergence of the Unmarked (McCarthy & Prince 1994, Yip 2001), identity avoidance, and "Copy But Don't Repeat" (Kennard 2004). However, the adjective intensifiers defy a simple, fully predictable explanation in such terms; the intensifier lexicon may be best described as "patterned variety," a case of lexicalized poetry or a poeticized lexicon. Word formation is guided by general patterns, but each specific intensifier may vary within those overall guidelines. Many adjectives have multiple intensifiers that bear subtle semantic and pragmatic distinctions. The current paper serves as a complement to Stanford (2007) by providing a detailed lexicon of the Sui adjective intensifiers for future reference and further analysis. This lexicon is based on the author's fieldwork and represents the first detailed account of Sui adjective intensifiers for the wider linguistic community.

1. Introduction[1]

The Sui people are an indigenous ethnic minority of southwest Chin, numbering 346,000 in a 1990 census (He et al. 1992:1) and reported to be 406,902 in 2000 (Xuecun Wei, Chinese Academy of Social Sciences). The great majority (93%) live in southern Guizhou Province (Burusphat et al. 2003). The language, a member of the Tai-Kadai family, is isolating, tonal, and largely monosyllabic.

1.1 Sui Phonology

Sui consonants are given below following Li (1948), Shuiyu Diaocha Baogao[2] (1956), Zhang (1980), Luo (1992), Zeng & Yao (1996), Edmondson et al. (2004), as well as the author's observations of the specific village under investigation, Ljaj Ku Tsong (Zhonghe Township, Sandu Autonomous Sui County).

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[2]*Shuiyu Diaocha Baogao* [Report on Investigations of the Sui language] is an unpublished manuscript from 1956. A copy of the manuscript was acquired through the help of Jerold Edmondson.

p	t	ts	tɕ	k	q	ʔ
pʰ	tʰ	tsʰ	tʰ	kʰ	qʰ
ᵐb	ⁿd				
ʔb	ʔd				
m̥	n̥		ɲ̥	ŋ̥	
m	n		ɲ	ŋ	
ʔm	ʔn		ʔɲ	ʔŋ	
f	s		ɕ	x	
w	z			ɣ	ʁ
				ʔɣ	
	l		j		
ʔw			ʔj		

Table 1. Consonants[3]

Table 2 outlines the Sui tone inventory of Ljaj Ku Tsong Village. The inventory is based on the author's observations and comparison with *Shuiyu Diaocha Baogao* (1956), Zhang (1980), Luo (1992), Zeng & Yao (1996). The table follows Chao's (1930) 1-5 scale for contour tones (1=low, 5=high). Tone numbers are based on the traditional system used for areal languages (e.g. Li 1948, Zhang 1980, Edmondson & Solnit 1988). The even/odd distinction in tone numbers represents an interpretation of a historical tone split; even-numbered tones indicate syllables that are supposed to have had historically voiced onsets, while odd-numbered tones indicate syllables with historically voiceless onsets (Li 1948, Edmondson & Solnit 1988). Tones 7 and 8 represent "checked" syllables (defined in this transcription system as syllables ending in –*p*, -*t*, or –*k*). Finally, checked syllables are distinguished as S (short vowel) and L (long vowel).[4]

Tone 1	Tone 2	Tone 3	Tone 4	Tone 5	Tone 6	Tone 7S	Tone 7L	Tone 8S	Tone 8L
13	31	33	53	35	24	55	35	32	31

Table 2. Sui tones in Ljaj Ku Tsong village

[3]In the region under investigation, the sound represented by /w/ is usually perceived as having a labio-dental place of articulation when it occurs in syllable-initial position. It may be that it is a labio-dental approximant (cf. Edmondson et al. 2004). The underlying form is not yet entirely clear, so the sound is transcribed [v] in syllable-initial position in this study.

[4]Future study may reveal that the checked tones could be combined with corresponding unchecked tones into an underlying system of just six tones. Li (1948) opts to use all eight tones for clarity, and this transcription system is adopted here.

1.2 Sui Adjective Intensifiers

Sui has an elaborate system of adjective intensification that involves rhyme and alliteration. First, note that a generic, non-word-specific intensifier can be used to intensify adjectives, as exemplified in (1).

(1)   vɑ:ŋ¹   'tall'   →   vɑ:ŋ¹ ɕɔ³   'very tall'
       ʔnəm¹   'dark/black'   →   ʔnəm¹ ɕɔ³   'very dark/black'
       ʁoŋ⁵   'young'   →   ʁoŋ⁵ ɕɔ³   'very young'

However, intensifiers also commonly take the form of a word-specific, bound intensifier. Such intensifiers may be divided into two major classes that Stanford (2007) calls the Rhyming Class and the Alliterative Class. Examples of the Rhyming Class are given in (2).

(2)   a.   ʁɑ:t⁷   'agile'   →   ʁɑ:t⁷ tɕɑ:t⁸   'very agile'
       b.   ʔmɛj⁵   'selfish'   →   ʔmɛj⁵ tɛj¹   'very selfish' (often
                                                                 referring to a child)
       c.   fɑ:ŋ³   'wide'   →   fɑ:ŋ³ lʲɑ:ŋ²   'very wide'
       d.   tom¹   'dull'   →   tom¹ ʔnom¹   'very dull'
       e.   ᵐbu³   'bulging'   →   ᵐbu³ tɕʰu⁵   'very bulging'
       f.   ʔnəm¹   'dark/black'   →   ʔnəm¹ fəm²   'very dark/black'
       g.   lɑp⁷   'garrulous'   →   lɑp⁷ tɑp⁸   'very garrulous'
       h.   pʲɛ:k⁷   'dirty'   →   pʲɛ:k⁷ lʲɛ:k⁷   'very dirty'
       i.   m̥ow¹   'crude, rash'   →   m̥ow¹ low¹   'very crude/rash'
       j.   ᵐbʲɑ³   'blurry'   →   ᵐbʲɑ³ tɕɑ⁴   'very blurry'

Examples of the Alliterative Class are given in (3).

(3)   a.   ʁɑ:t⁷   'agile'   →   ʁɑ:t⁷ ʁow¹   'very agile'
       b.   ʔmɛj⁵   'selfish'   →   ʔmɛj⁵ ʔmʊ:t⁷   'very selfish' (general usage)
       d.   ɕu¹   'green'   →   ɕu¹ ɕiŋ⁵   'very green'
       e.   tɕʰoŋ⁵   'spicy'   →   tɕʰoŋ⁵ tɕʰat⁷   'very spicy'
       f.   zɑ³   'light'   →   zɑ³ zu¹   'very light/casual' (attitude)
       g.   zɑ³   'light'   →   zɑ³ zeŋ³   'very light' (weight)
       h.   qəm¹   'bitter'   →   qəm¹ qe⁵   'very bitter'
       i.   ɑ¹   'sharp'   →   ɕɑ¹ ɕɛn¹   'very sharp'
       j.   ʁəm¹   'muddled'   →   ʁəm¹ ʁoj¹   'very muddled'

In most cases, the intensifiers are word-specific, bound morphemes which are not attested elsewhere in the language. Homonymy with other lexical items outside the adjective intensifier lexicon occasionally occurs, but Sui speakers consider such rare homonyms to be coincidental and unrelated.

In addition to the two major classes of rhyming and alliterative intensifiers, some intensifiers do not show any phonological resemblance with their bases. For example, xom³ 'sour' → xom³ pʲɑ:t⁷ 'very sour'. Stanford (2007) suggests the possibility that such items represent historical compounds where the second syllable has lost its original status as a stand-alone word.

Comparing (2a-b) and (3a-b) above, note that a given base adjective may have more than one intensifier. Subtle semantic and pragmatic differences are often observed in such instances. Another example is given in (4).

(4)   tɕoŋ^3 'thin/skinny'   →   tɕoŋ^3 tɕɛn^1 'very thin/skinny' (most common/general)
                                  →   tɕoŋ^3 tɕop^7 'very thin/skinny' (derogatory, higher
                                                          intensity than *tɕoŋ^3 tɕɛn^1*)
                                  →   tɕoŋ^3 fʲoŋ^4 'very thin/skinny' (higher intensity than *tɕoŋ^3
                                                          tɕɛn^1*)

Finally, within the Rhyming Class, there is a subset of complex rhyming expressions involving three or more rhyming syllables. For example:

(5)   tʲəŋ   'full'
       tʲəŋ nʲəŋ   'very full'
       tʲəŋ nʲəŋ sʲəŋ   'extremely full'

2. Analysis

A summary of Stanford's (2007) analysis is given in §2.

2.1 The rhyming class

In the Rhyming Class of intensifiers (e.g. (2)), Stanford (2007) finds clear evidence of The Emergence of the Unmarked (McCarthy & Prince 1994), the process whereby unmarked forms "emerge" in environments such as reduplication where base-reduplicant identity is ranked lower than markedness constraints (in the Optimality Theoretic terms of Prince & Smolensky (1993).) Stanford follows Yip's (2001) analysis of reduplication in Chaoyang and other Chinese languages, finding that coronal onsets (i.e., unmarked onsets) are generally favored in the Sui intensifiers. Examples are given in (6).

(6) a.   vɑːŋ^1 'tall'   →   vɑːŋ^1 tɕɑːŋ^2 'very tall'
     b.   fɑːŋ^3 'wide'   →   fɑːŋ^3 lʲɑːŋ^2 'very wide'
     c.   ᵐbu^3 'protruding'   →   ᵐbu^3 tɕʰu^5 'very protruding'
     d.   ʔmɛj^5 'stingy'   →   ʔmɛj^5 tɛj^1 'very stingy'
     e.   xom^3 'sour'   →   xom^3 tom^4 'very sour'
     f.   qɔn^4 'short'   →   qɔn^4 ʔnʲɔn^3 'very short'
     g.   mət^7 'tight'   →   mət^7 tɕət^8 'very tight'
     h.   pən^1 'stupid'   →   pən^1 ʔnən^1 'very stupid'

Stanford reports that the intensifier has a coronal onset in 95% (56/59) of the cases where the base onset is non-coronal (as in (6)). For both coronal and non-coronal onset bases, the intensifier has a coronal onset in 88% (88/100) of the cases.

However, Stanford notes that identity avoidance also plays a role in the choice of intensifier onset. A base with a coronal onset, e.g. *ləŋ*, does not normally reduplicate as **ləŋ ləŋ*. Instead, it reduplicates as *ləŋ təŋ*; i.e., the intensifier remains coronal (following TETU), but the manner of articulation has changed. This suggests the presence of identity avoidance working in conjunction with TETU. Specifically, Stanford follows Yip's (1995a) use of *REPEAT

(*Identical syllables cannot be adjacent*) and Kennard's (2004) "Copy But Don't Repeat." In this way, a combination of TETU and identity avoidance is used to explain *ləŋ→ ləŋ təŋ* and *ləŋ→ ləŋ *ləŋ*.

As for tone, Stanford observes that rhyming intensifiers often copy the tone of their bases, although there are some cases where a non-falling-tone base has a falling-tone intensifier.

2.2 The alliterative class

Intensifiers in the Alliterative Class (e.g. (3)) do not show evidence of the TETU effects found in the Rhyming Intensifiers. The rhymes of alliterative intensifiers show a great deal of variety. Further, there is no apparent preference for unmarked forms as would be expected of TETU. Identity avoidance is clearly present since the intensifier rhymes differ from their base rhymes, yet the specific choice of rhyme appears to be quite flexible.

2.3 Patterned variety

Stanford concludes that Sui intensifiers represent a system of patterned variety that could be described as lexicalized poetry or as a poeticized lexicon. First, note in (7-8) that the presence of multiple intensifier options precludes the possibility of strict word formation rules for a given base.

(7) $p^h a^1$:

$p^h a^1$	'gray'	→	$p^h a^1\ p^h oj^1$	'very gray' (e.g. ash spots on clothing)
$p^h a^1$	'gray'	→	$p^h a^1\ p^h ən^1$	'very gray/pale' (especially referring to skin)
$p^h a^1$	'gray'	→	$p^h a^1\ p^h \varepsilon w^3$	'very gray'
$p^h a^1$	'gray'	→	$p^h a^1\ p^h ok^7$	'very gray' (often referring to a distant, misty scene)

(8) xom^3:

xom^3	'sour'	→	$xom^3\ tom^4$	'very sour'
xom^3	'sour'	→	$xom^3\ \textipa{P}nom^5$	'very sour'

The intensifiers (exemplified in (7-8)) follow general guidelines (rhyme, alliteration, TETU, "Copy But Don't Repeat"), yet the specific features of a given intensifier may vary within those general guidelines. For example, in rhyming intensifiers, TETU encourages a coronal onset, yet the specific choice of coronal varies.

Alliterative intensifiers further illustrate this patterned variety on the tonal level. Stanford observes that the tone of an alliterative intensifier and the tone of its base usually come from the same side of the tone split discussed above. In other words, both are usually either even-numbered tones or odd-numbered tones. Thus, the tones of alliterative intensifiers exhibit patterned variety: the specific choice of intensifier tone can vary, but it usually must stay within the same side of the tone split, even or odd.

Stanford's analysis may be confirmed through future cross-linguistic comparisons. Phenomena that appear to be at least generally similar to Sui adjective intensifiers have been reported in nearby Tai-Kadai languages such as Bouyei (Yu et al. 1994), but no data are

available for comparison. Vietnamese may also have similar adjective intensification (Thompson 1965, James Kirby personal communication). Thus, a cross-examination of the Sui data with other languages may yield further insights in the future.

3. The lexicon

The data entries provided here represent phonetic observation of the pronunciation of a native male Sui speaker in *Ljaj Ku Tsong* village, July 2004. The author collected 400 intensifiers from that speaker with the goal of providing the first detailed set of data representing a Sui speaker's intensifier system. Prior work includes Wei (1999), who provides an initial description of about 20 Sui intensifiers. Two general Sui dictionaries (Burusphat, Wei, & Edmondson 2003 and Zeng & Yao 1996) also include intensifiers in their entries. However, such collections sometimes have a mix of dialect variants or historical variants, especially since intensifiers can vary in subtle ways from village to village. Therefore, the author set out to establish a single, detailed intensifier lexicon representing the synchronic lexicon of a single speaker.

Future phonological analysis of Sui may provide insight into transcription decisions for features such as the length of /ɑː/ and the status of onset glides. The data set is divided into two main categories, the Alliterative Class and the Rhyming Class, and then further subdivided by morpho-phonological features. The small class of intensifiers with no base-reduplicant phonological resemblance is listed separately (the No-Pattern Class).

For all adjective intensifying expressions, the leftmost syllable is assumed to represent a monosyllabic adjective unless otherwise indicated. When an expression has more than two syllables, an underline is used to indicate which pair of syllables belong to the given category being analyzed in that section.

As noted above, a single base adjective often has more than one possible choice of intensifier. In such cases, each intensifier is listed in its appropriate category below. When available, further information is provided to show semantic/pragmatic contrasts between such different intensifier options for a single base adjective.

"Variant" refers to a minor alternation in pronunciation of a given entry that the consultant views as equivalent to his primary pronunciation.

3.1 The Alliterative Class

The intensifiers in the alliterative class are organized in the following groups (where "checked" refers to syllables with *–p, -t, -k* in syllable final position):

1. Checked base syllable, unchecked reduplicant syllable
2. Checked base, checked reduplicant
3. Unchecked base, checked reduplicant
4. Unchecked base, unchecked reduplicant:
    4.1 Nasal-final base, nasal-final reduplicant
    4.2 Nasal-final base, vowel/glide-final reduplicant
    4.3 Vowel/glide-final base, nasal-final reduplicant
    4.4 Vowel/glide-final base, vowel/glide-final reduplicant

In addition to the adjective intensifiers, a few alliterative nouns and other word classes are included for future analysis, e.g., ʔɲɛt^7 ʔɲɔ^3 'swing' (n.). Such words could share similar alliterative origins as the adjective intensifiers since Sui is otherwise largely monosyllabic.

3.1.1 Checked base, unchecked reduplicant

ʁaːt^7 ʁow^1	'very nimble, agile' (general use)
^{m}bɔːk^7 ^{m}bow^1	'very protruding, having many protrusions' (general use)
ʔɲɛp^7 ʔɲeŋ^3	'very narrow' (higher level of intensity than ʔɲɛp^7 ʔɲɛːt^7)
ʔɲɛt^7 ʔɲɔ^3	'a swing' (n.)
ʔbok^7 ʔbow^1	'very coarse' (for small objects or tabletops)
ʔdaŋ^1 t^{h}ɑk^7 t^{h}ɛj^1	'very bright' (ʔdaŋ^1 'bright')
ɲak^7 ɲen^1	'very coarse, rough'
ɲɛːt^7 ɲej^1	'sealed very tightly' (higher intensity than ɲɛːt^{7}ɲow^1)
ɲɛːt^7 ɲow^1	'sealed very tightly' (general use)
ɲɛt^7 ɲɛj^1	'sealed very tightly'
ɲit^7 ɲɔ^3	'very cold' (weather)
ʔjɛt^7 ʔjɔ^3	'very long ago'
lap^7 leŋ^5	'very chatty, talkative' (derogatory)
lʲɛk^8 lʲuj^2	'very strong' (general use)
lʲɛp^7 lʲu^3	'very remote, very faraway place' (lʲɛp^7 is not attested as a monosyllabic adjective)
lʲɛt^7 lʲaw^3	'hypocritical, false display of affection' (lʲaw^3 is not otherwise attested in this region, but it appears in other dialects as lʲaw^3 'proud')
lʲɛt^7 lʲom^1	'very proud'
lʲok^7 lʲɛn^1	'very sweaty'
mat^7 mɛw^1	'very dirty (derogatory, e.g., an animal or person's face)
mɔk^7 mom^2	'very fierce, brave' (can refer to actions, unlike mɔk^7 tɕɔk^8)
mɔk^7 mow^2	'very fierce, brave, greedy' (may be related to mow^2 in qʰaˀ^1 mow^2 'greedy')
paːk^8 pɔ^2	'very white' (often used to refer to skin)
paːk^8 pəŋ^4	'very white' (general use)
qʰop^7 qʰɛj^5	'very rugged' (of mountain) (qʰop^7 is not attested as a monosyllabic adjective)
qʰat^7 qʰow^1	'very bitter'
sʊt^7 som^1	'very hot'
sət^7 sɛw^3	'very pretty, cute' (esp. little animals or children)
tʲʊt^8 tʲaw^4	'very wrinkled' (e.g., clothes) (higher intensity than tʲʊt^8 tʲɛt^8)
tɕak^7 tɕom^3	'very stiff, inflexible' (general use)
tʰak^7 tʰaw^1	'very clear and bright' (less common than tʰak^7 tɛj^1) (tʰak^7 is not attested as a monosyllabic adjective)
tʰak^7 tʰɛj^1	'very clear and bright' (general use) (tʰak^7 is not attested as a monosyllabic adjective)

3.1.2 Checked base, checked reduplicant

ʔɲɛp^7 ʔɲɛːt^7 'very narrow' (general use)
ʔɲɛp^7 ʔɲʊːt^7 'very narrow' (can be derogatory, higher level of intensity than ʔɲɛp^7 ʔɲɛːt^7)
ⁿdʲop^7 ⁿdʲaːp^7 'very crafty, sly'
tɕak^7 tɕop^7 'very still, inflexible' (higher intensity than tɕak^7 tɕom^3)
tʲʊt^8 tʲɛt^8 'very wrinkled' (e.g., clothes) (general use)
tsʊːt^7 tsət^7 'very wrinkled or curly' (esp. hair)

3.1.3. Unchecked base, checked reduplicant

ɣɔ^2 ɣaːt^8 'very empty' (esp. empty-handed)
ⁿdəm^5 ⁿdɛːt^7 'very short' (height) (general use)
ⁿdəm^5 ⁿdʊːt^7 'very short '(height)
ⁿdʲiŋ^5 ⁿdʊːt^7 'very dark' (higher level of intensity than ⁿdʲiŋ^5 ⁿdom^1)
ʔɔ^3 lʲɔːk^7 'very clean/clear, wiped clean'
ʔɲam^1 ʔɲat^7 'very fierce'
ʔbaŋ^1 ʔbɛːp^7 'very thin'
ʔda^3 ʔdɔːt^7 'very hard'
ʔdʲɛj^5 ʔdʲɛːk^7 'very shallow' (general use)
ʔiːt^7 ʔɲaːt^7 'very cold'
ʔnəŋ^5 ʔnɔːt^7 'very salty'
ʔnəm^1 ʔnʊt^7 'very black/dark'(higher level of intensity than ʔnəm^1 ʔnej^1)
ʔmɛj^5 ʔmʊːt^7 'very stingy' (general use)
ʔna^1 ʔnɔːk^7 'very thick' (general use)
ʔom^5 ʔɔːt^7 'very humid, muggy weather' (higher intensity than ʔom^5 ʔoj^1)
ɕəŋ^2 ɕɔːt^8 'very straight or naïve/unintelligent' (general use)
ɲow^5 ɲɛt^7 'very ugly' (general use)
ɲaw^6 ɲɛt^8 'very slender, thin' (of a person) (ɲaw^6 is not attested as a monosyllabic adjective)
ɲoŋ^2 ɲɛt^8 'very muddled, confused'
ɲan^4 ɲɔk^8 'very bored'
ŋaw^3 ŋɔːk^7 'very cold'
kʰi^3 kʰop^7 'opened a little crack' (e.g., a window) (consultant is unsure if this is an adjective+intensifier pair or simply a two-syllable word; kʰi^3 means to open just a crack; kʰop^7 is not otherwise attested)
kɔ^1 kaːt^7 'very sparse'
koŋ^3 kət^7 'very dry' (esp. for skin)
koŋ^3 kop^7 'very dry' (esp. for physical objects which once held water/moisture)
lʲok^7 lʲaːt^7 'very sweaty'
lʲow^4 ljɔːk^7 'completely finished'
pʰa^1 pʰok^7 'very gray' (often referring to misty mountains)
pʰaj^3 pʰaːk^7 'very crooked' (pʰaj^3 'crooked' appears to be a variant of ʔbaj^3 'crooked')
pʰow^3 pʰɔp^7 'very swollen'
paj^6 pak^8 'very crooked'
pi^2 pʊt^8 'very fat' (only referring to people; has an intimate, 'cute' sense)
pʲaŋ^6 pʲap^8 'very shriveled, withered'; (note: there is a two-syllable word, pʲap^7 pʲɛ^1 with similar meaning)
pʲeŋ^2 pʲat^8 'very flat'

pu^1 pop^7 'very swollen, bulging'
qəm^1 qɑ:t^7 'very bitter' (often refers to vegetables)
qəm^1 qʊ:t^7 'very bitter' (general use)
qəm^5 qɑ:t^7 'very purple/dark' (often refers to dark skin; higher intensity than qəm^5 qɛj^1)
qəm^5 qʊ:t^7 'very purple/dark' (general use)
qɛn^5 qɔk^7 'very colorful' (higher intensity than qɛn^5 qɛw^1)
qaj^2 qək^8 'very crooked' (tends to be derogatory; higher intensity than qaj^2 tʲaj^1)
qom^2 qək^8 'having many protrusions, not level' (higher intensity than qom^2 qɛj^2)
sɑ^1 sop^7 'very itchy/prickly' (e.g., thorns) (higher intensity than sɑ^1 som^1)
sʲow^3 sʲɛ:t^7 'very few' (general use)
tɕaw^1 tɕak^7 'very curved' (e.g., curly hair) (indicates greater curvature than tɕaw^1 ŋʲɛw^3)
tɕɛ^5 tɕop^7 'very old' (of people) (general use)
tɕoŋ^3 tɕop^7 'very skinny' (higher intensity than tɕoŋ^3 tɕɛn^1; also tɕoŋ^3 tɕop^7 tends to be
                                                 derogatory; tɕoŋ^3 tɕɛn^1 and tɕoŋ^3 fˡoŋ^4 are not so derogatory)
tɕʰoŋ^5 tɕʰɑat^7 'very spicy' (general use)
taj^5 tɔk^7 'multicolored' (higher intensity, brighter colors than taj^5 tew^1)
tʲəm^6 tʲət^8 'very anxious, agitated' (status as an adjectival expression is unclear: tʲəm^6 is a
                                                 verb 'to stomp one's feet')
tʲɛn^2 tʲɔk^8 'very full' (of food)
tʲu^5 tʲɑ:t^7 'very tough, firm'
tsʰjaŋ^1 tsʰjɛt^7 'very attractive, good-looking' (general use)
xɔ^3 xɔ:t^7 'very poor'
xɑ:n^4 xit^8 'very slender, tall (of a person) or a long road'
xʊt^7 xat^7 'very skilled'
zaw^1 zak^7 'very numb, insensitive'

3.1.4 Unchecked base, unchecked reduplicant

3.1.4.1 Nasal-final base, nasal-final reduplicant

ⁿdəm^5 ⁿdeŋ^3 'very short' (height) (higher intensity than ⁿdəm^5 ⁿdɛ:t^7)
ⁿdʲɛn^3 ⁿdʲɔn^3 'very short' (length) (higher intensity than ⁿdʲɛn^3 ⁿdʲow^5)
ⁿdʲiŋ^5 ⁿdom^1 'very dark'
ʔnʲəm^5 ʔnʲom^3 'very dark'
ŋəm^3 ŋeŋ^3 'very dizzy'
ŋəm^3 ŋən^5 'very confused'
kʰiŋ^3 kʰən^1 'very brown' (general use)
koŋ^3 keŋ^3 'very dry' (esp. for pools of water or cooking pots which once held water)
lʷɔn^6 lan^6 'very disorderly, messy'
lʲan^5 lʲɛn^1 'very spicy'
lʲɛm^5 lʲɑ:ŋ^1 'very talkative'
pʰɑ:ŋ^3 pʰom^3 'very moldy' (higher intensity than pʰɑ:ŋ^3 pʰow^1)
tɕoŋ^3 tɕɛn^1 'very skinny' (general use)
tɕʰɛn^3 tɕʰeŋ^1 'very steep' (general use)
tɕʰoŋ^5 tɕʰaŋ^1 'very spicy' (less common than tɕʰoŋ^5 tɕʰɑ:t^7; higher intensity)

tʰeŋ³ tʰom¹	'puffed, bulging, not wrinkled' (general use)
təm⁵ tɔm³	'very dark' (weather)
vaŋ¹ vʲɛn⁵	'very tall' (vaŋ¹ vʲɛn⁵ does not include a sense of 'strong', unlike vɑ:ŋ¹ tɕɑ:ŋ²)

3.1.4.2 Nasal-final base, vowel/glide-final reduplicant

ɣɑ:ŋ⁵ ɣɑ:w¹	'very clean/clear/cool'
ʁəm¹ ʁoj¹	'very muddled, confused' (mental)
ʁoŋ⁵ ʁɛw¹	'very young' (general use)
ʁoŋ⁵ ʁɛw³	'very young' (higher intensity than ʁoŋ⁵ ʁɛw¹)
ᵐbʲam⁶ ᵐbʲɛ¹	'very damp/humid' (tends to refer to food, skin, or clothes; more limited usage than ᵐbʲam⁶ tɕam⁶)
ᵐbʲiŋ¹ ᵐbʲɛj¹	'very expensive'
ⁿdɑ:ŋ¹ ⁿdʷej¹	'very fragrant'
ⁿdʲɛn³ ⁿdʲow⁵	'very short' (length) (general use)
ʔɣom⁵ ʔɣi³	'very swollen'
ʔɲɛn³ ʔɲwej³	'very tender' (of objects or human heart)
ʔboŋ⁵ ʔboj¹	'very soggy, muddy'
ʔdʲɛn¹ ʔdʲoj¹	'very smooth, shiny'
ʔdʲɛn¹ ʔdʲɔ⁵	'very itchy' (ʔdʲɔ⁵ also appears as a verb 'pull')
ʔdʲɛn³ ʔdʲoj³	'very tender' (a variant: ʔnʲɛn³ ʔnʲoj³)
ʔjəm¹ ʔjɔ³	'very deep' (general use)
ʔjəm¹ ʔjɔj¹	'very deep' (often refers to dangerous situations, e.g., deep, opaque water)
ʔnəm¹ ʔnej¹	'very black/dark' (common, e.g., dark black clothes)
ʔnəm¹ ɳɛw¹	'very black' (esp. a portion of an object that is blackened)
ɕɛn⁶ ɕʷ̥ej²	'very tiring'
ŋəm³ ŋi³	'very dizzy' (described as being a reduced form of ŋəm³ ŋeŋ³)
ŋɑ:n⁵ ŋow¹	'very cold' (esp. for water)
ŋən⁴ ŋɔ³	'very stupid, stupefied' (ŋən⁴ is not attested as a monosyllabic adjective)
fɑ:n¹ foj¹	'very gentle flavor *or* very relaxed, easy'; fɑ:n¹ = 'slow')
fɑ:n¹ foj³	'very gentle flavor' (note that fɑ:n¹ foj³ doesn't have the secondary meaning 'relaxed, easy' found in fɑ:n¹ foj¹)
fin⁶ fʲu²	'very steep'
fom¹ fi³	'very still and quiet' (fom¹ is not attested as a monosyllabic adjective)
jɛn² joj²	'very orderly'
kʰən¹ kʰoj¹	'very diligent' (kʰən¹ is not attested as a monosyllabic adjective)
kɑ:n⁵ kej¹	'very white' (complexion)
kiŋ³ kʲu¹	'very pretty'
kom⁵ ki³	'very weak/sickly'
liŋ³ lʲow¹	'very clear/dry' (weather)
lʲɛŋ¹ lʲɛj¹	'all the same, all one kind' (grammatically required to have another corresponding syllable lʲɛŋ¹ at the beginning of the phrase: lʲɛ̠ŋ¹ ow⁴ lʲɛŋ¹ lʲɛj¹ 'only rice, nothing else' (ow⁴ = 'rice')
lʲɛn⁶ lʲoj²	'very sweet'
loŋ⁵ law¹	'very loose' (esp. referring to a loosely fitting object which distinguishes this intensifier from loŋ⁵ lɛw³)
loŋ⁵ lɛw³	'very loose, spacious' (e.g. very few people present during market day)
m̥an³ m̥uj³	'pure yellow'

m̥an^3 m̥ow^1 'deep yellow' (most common)

ʔom̥^{5} ʔoj^1 'very humid, muggy weather' (general use)

ɕəŋ^2 ɕɔj^2 'very stupid' (only referring to intelligence, not straightness of objects, cf. ɕəŋ^2 ɕɔːt^8)

ɲ̊əŋ^5 ɲɔ^3 'very worried'

nuɛn^6 nɛj^2 'very tender'

pʰaːŋ^3 pʰi^3 'very moldy' (higher intensity than pʰaːŋ^3 pʰow^1)

pʰaːŋ^3 pʰow^1 'very moldy' (esp. for objects, e.g. clothes)

pʰjɔn^5 pʰjow^1 'very barren, clear'

pən^1 poj^1 'very stupid' (general use)

qaːŋ^5 lʲaːŋ^5 lʲa^4 'very simple, crude' (e.g. a simple house) (the syllables are not otherwise attested)

qʰən^1 qʰoj^1 'very delicious'

qəm^1 qe^5 'very bitter' (higher intensity than qəm^1 qʊːt^7)

qəm^5 qəŋ^3 'very purple/dark'

qəm^5 qɛj^1 'very purple/dark' (often refers to dark skin)

qɔn^4 qow^2 'very short' (higher intensity than qɔn^4 ʔnʲɔn^3)

qɛn^1 qɛw^1 'very agile/nimble' (higher intensity than qɛn^1 qoj^1)

qɛn^1 qoj^1 'very agile/nimble' (general use)

qɛn^5 qɛw^1 'very colorful' (general use)

qom^2 qɛj^2 'having many protrusions, not level' (general use)

som^5 si^5 'very wet and very dirty' (neither syllable is otherwise attested in any similar context; this expression most commonly serves as an intensifier of another word such as pʰjaːt^7 'filled with blood')

tɕʰɛn^3 tɕʰu^5 'very steep' (higher intensity than tɕɛn^3 tɕʰeŋ^1)

tɕʷɔn^3 tɕɛw^3 'wound a lot (wire, string) or a very winding, curving (road)'

tɕɛn^6 tɕɛj^2 'very cheap'

tʰeŋ^3 tʰaw^1 'puffed, bulging, not wrinkled'

tom^1 tɛj^1 'very blunt, dull' (does not refer to intelligence)

tom^1 toj^1 'very blunt, dull' (does not refer to intelligence; higher intensity than tom^1 tɛj^1)

tsʰjaːŋ^1 tsʰjaw^3 'very attractive, good-looking'

tsəŋ^1 tsɛ^5 'very constricted, bloated'

tsən^2 tsʷej^2 'very sharp'

xɔŋ^1 xaw^1 'very hollow'

xəm^1 xu^3 'very early'

xən^5 xaːŋ^1 'very strong/healthy'

zən^1 zʷoj^1 'very heavy' (lower intensity than zən^1 ɲak^7)

3.1.4.3 Vowel/glide-final base, nasal-final reduplicant

ɣɔ^6 ɣaːŋ^4 'very leaky' (general use)

ᵐbu^3 ᵐbəŋ^1 'very protruding' (often refers to small objects, food)

ⁿdaw^5 ⁿdʲaːŋ^1 'to move around with rolling, rocking motion' (adjective/verb status unclear)

ʔɣaj^3 ʔɣəŋ^2 'very long' (general use)

ʔbʲa^5 ʔbʲɛn^3 'very smooth' (e.g., skin)

ʔdʲɛj^5 ʔdʲɛŋ^3 'very shallow' (higher intensity than ʔdʲɛj^5 ʔdʲɛːk^7)

ɕa^1 ɕɛn^1 'very sharp'

ɕu^1 ɕiŋ^5 'very green'

çu³ ça:ŋ¹   'very lively' (uncommon)
ȵow⁵ ȵɛŋ³   'very ugly' (humorous; less common than ȵow⁵ ȵɛt⁷)
ȵu¹ ȵiŋ³   'very smelly' (esp. of a child)
kɔ⁵ kiŋ¹   'not respectable, not decent, not honest' (most commonly occurs with məŋ⁴
                   'happy' in məŋ⁴ kɔ⁵ kiŋ¹ 'extremely happy'; kɔ⁵ is not attested as a
                   monosyllabic adjective)
lɔ³ ləŋ¹   'very bald' (hair or a barren mountain)
mɛj⁵ men³   'very new'
nʲɔ⁵ nʲiŋ¹   'very unrespectable' (general use) (nʲiŋ¹ also appears in nʲiŋ¹ sʲiŋ¹)
nʲɔ⁵ nʲiŋ³   'very unrespectable' (tends to refer to taboo behavior, higher intensity than
                   nʲɔ⁵ nʲiŋ¹)
pʰa¹ pʰəŋ¹   'very gray/pale' (esp. for a pudgy person with pale skin)
pʰʲɛj⁵ pʰʲɛŋ³   'very near'
pu¹ pəŋ¹   'very swollen'
qaw⁵ qəŋ¹   'very old' (physical objects)
qu⁵ lu⁵ ləŋ³   'very round' (tends to refer to smaller objects than qu⁵ lu⁵ su⁵ does) (qu⁵ lu⁵
                   = 'round')
sa¹ som¹   'very itchy/prickly' (general use)
sʲow³ sʲa:ŋ¹   'very few' (higher intensity than sʲow³ sʲɛ:t⁷)
sʲu⁵ sʲaŋ¹   'very dry'
tɕaw¹ tɕeŋ³   'very curved' (higher intensity than tɕaw¹ tɕak⁷)
taj⁵ tɔŋ³   'multicolored' (higher intensity than taj⁵ tɛw¹ but not as high as taj⁵ tɔk⁷)
tɕɛ⁵ tɕom³   'very old' (of people) (higher intensity than tɕɛ⁵ tɕop⁷)
tik⁷ mɔ⁵ mɔn¹   'very full'; higher intensity than tik⁷ ⁿdɛp⁸ (tik⁷ = 'full')
va³ vəŋ¹   'very stupid' (more derogatory than va³ voj³; slightly less intensity than va³
                   nja⁵)
za³ zeŋ³   'very light' (general use)

3.1.4.4 Vowel/glide-final base, vowel/glide-final reduplicant

ɣɔ⁶ ɣi³   'very leaky and dirty'
ɣai⁶ ɣɛw²   'very coarse, rough'
ᵐbʲa³ ᵐbʲow¹   'very blurry' (higher intensity than ᵐbʲa³ tɕa⁴)
ᵐbu³ ᵐboj¹   'very protruding' (higher intensity than ᵐbu³ tɕu⁵)
ᵐbu³ ᵐbow¹   'very protruding' (higher intensity than ᵐbu³ tɕu⁵)
ᵐbu³ tɕʰoj¹   'very protruding'(tends to refer to large thick objects)
ⁿdaw⁵ ⁿdʲow¹   'to move around with rolling, rocking motion (adjective/verb status unclear)
ʔȵaw¹ ʔȵɔ³   'to swing' (v.); ʔȵɔ³ also appears in ʔȵɛt⁷ ʔȵɔ³ 'swing' (n.)
ʔbʲa⁵ ʔbʲɛj¹   'very bored'
ʔbʲa⁵ ʔbʲuj³   'very smooth'
ʔdaj¹ ʔdɛw⁵   'very good'
ʔdi¹ ʔdʲu⁵   'very far'
ʔma³ ʔmɛw³   'very soft' (usually implies rotten)
ʔma³ ʔmi³   'very soft' (uncommon)
ʔma³ ʔmʷej³   'very soft' (most common)
ʔna¹ ʔnoj¹   'very thick' (implies both big and thick; higher degree of emphasis than ʔna¹
                   ʔnɔ:k⁷)
ʔne⁵ ʔnoj¹   'very tired'

$ça^1$ $çu^5$	'very sharp' (general use) ($çu^5$ also appears in the lexicon as 'really' (adv.), but the consultant views $ça^1$ $çu^5$ as having "a true intensifier here", not simply the adverb 'really')
$ɲaj^4$ $ɲɛw^1$	'very dirty/blackened'
fe^1 fi^3	'very late' (general use)
fe^3 foj^1	'very tired'
$k^hɑ^5$ k^hej^1	'vigorously blazing (a fire) *or* very greasy (food)'
$nɔ^2$ $nɔj^2$	'stupid, silly' ($nɔ^2$ also appears in tom^1 $nɔ^2$ $sɔ^2$ 'very stupid; $nɔ^2$ has been observed as an independent adjective)
$p^hɑ^1$ $p^hɛw^3$	'very gray' (esp. gray ash/powder spots on clothing) (variant: $p^hɑ^1$ $p^hɛw^1$)
$p^hɑ^1$ p^hoj^1	'very gray' (esp. gray ash/powder spots on clothing)
$p^hjɑ{:}t^7$ $\underline{sɔm^5}$ $\underline{si^5}$	'bleeding a lot' (adjective/verb status unclear) (variant: $sɔ^5$ si^5)
pi^5 $\underline{li^5}$ $\underline{ljoj^1}$	'very messy' (cf. pi^5 li^5 si^5 which includes the sense 'narrow') (variants: p^hi^5 li^5 $l^jɛj^1$ and p^hi^5 li^5 $l^jɛj^1$)
$qɑw^5$ qe^5	'very old' (physical objects) (higher intensity than $qɑw^5$ $qəŋ^1$)
$tçɑw^1$ $ŋ^jɛw^3$	'curved, bent' (not a very high degree of curvature)
$tɑj^5$ tew^1	'multicolored' (general use, but relatively shallow colors)
ti^3 ti^4	'very small' (general use)
ti^3 t^ju^4	'very small' (higher intensity than ti^3 t^ju^5 and ti^3 t^ju^4)
ti^3 t^ju^5	'very small' (general use)
tiw^3 $t^jɔ^5$	'very dry' (general use)
va^3 voj^3	'very stupid' (more subtle connotation than va^3 $vəŋ^1$)
za^3 zu^1	'very light' (also: flighty, frivolous attitude)
$zɑw^1$ ze^5	'very numb, insensitive' (less intensity than $zɑw^1$ $zɑk^7$)

3.2 The rhyming class

The intensifiers in the rhyming class are organized into six groups: intensifiers with labial onsets (Group 1), dorsal onsets (Group 2), glottal onsets (Group 3), coronal onsets (Group 4), fully reduplicated pairs (Group 5), and three-syllable expressions (Group 6). Within those groups, intensifiers are further differentiated as sets of intensifiers sharing similar onset feature changes. Finally, within some sets, intensifiers are differentiated into subsets of similar feature changes.

In a few cases where a pair of intensifiers rhyme with each other but do not rhyme with the base adjective, then the rhyming pair being analyzed in that section is underlined, e.g., tom^1 'dull' → tom^1 $\underline{nɔ^2}$ $\underline{sɔ^2}$ 'very dull'.

The third syllables of three-syllable rhyming expressions (e.g., mow^1 'rash (adj.)' → mow^1 low^1 'very rash' → mow^1 low^1 tow^2 'extremely rash') are analyzed as a separate set. The two rhyming syllables being analyzed in that section are underlined, e.g., mow^1 $\underline{low^1}$ $\underline{tow^2}$. In addition, for a few intensifiers where speakers report that the rhyming syllables cannot be separated, e.g., $p^jɑj^5$ $l^jɑj^5$ $s^jɑj^5$ 'extremely messy'; *$p^jɑj^5$ $l^jɑj^5$, then the whole expression is listed along with the more typical two-syllable expressions with the first two syllables underlined to show they are being analyzed in that section, e.g., $\underline{p^jɑj^5}$ $\underline{l^jɑj^5}$ $s^jɑj^5$.

Group 1. Labial base onsets

Set 1.1: Voiced labial becomes a voiceless coronal obstruent

Feature changes in this set:
[+voice] → [-voice]
[labial] →[coronal]
Variation in Onset Place: 7 cases of [tɕ], 1 case of [tj], 1 case of [tɕʰ], 1 case of [t]

^{m}bɔ:k^7 tɕɔ:k^8	'very protruding, having many protrusions'
^{m}bʲa^3 tɕa^4	'very blurry' (most common)
^{m}bʲam^6 tɕam^6	'very damp/humid' (general use)
^{m}bʲaw^3 tɕaw^4	'very muddled'
^{m}bu^3 tɕʰu^5	'very protruding, having many protrusions'
ʔbaj^3 tʲaj^4	'very crooked'
ʔbok^7 tɕʰok^8	'very coarse' (used for large objects such as rocks)
ʔmɛj^5 tɛj^1	'very stingy/selfish'
mət^7 tɕət^8	'very tight'
mɔk^7 tɕɔk^8	'very fierce, brave'
va:ŋ^1 tɕa:ŋ^2	'very tall'

Set 1.2: Voiceless labial becomes a voiced coronal sonorant

Feature changes in this set:
[-voice]→[+voice]
[labial]→[coronal]
[-lat]→[+lat] (exception: pən^1 ʔnən^1)

[-son]→[+son] (exceptions: m̥ow^1 low^1)

pən^1 ʔnən^1	'very stupid'
pi^2 pʲu^1 lʲu^1	'very fat' (pi^2 'fat') (pʲu^1 is not attested as a monosyllabic adjective)
pi^5 li^5	'messy' (e.g. a messy desktop) (pi^5 is not attested as a monosyllabic adjective)
pʲaj^5 lʲaj^5 sʲaj^5	'very messy' (e.g. messy writing or messy soup, differs from pi^5 li^5 si^5 or pʲa:n^6 lʲa:n^6 ɲa:n^6; pʲaj^5 is not attested as a monosyllabic adjective)
pʲa:n^6 lʲa:n^6 ɲa:n^6	'very messy' (e.g. a messed up pile of books) (pʲa:n^6 is not attested as a monosyllabic adjective)
pʲɛ:k^7 lʲɛ:k^7	'very dirty'
pʲeŋ^2 lʲeŋ^2	'very flat' (general use)
m̥ow^1 low^1	'very crude' (derogatory)
fa:ŋ^3 lʲa:ŋ^2	'very wide'
fa:n^1 lʲa:n^2	'very slow *or* gentle flavor' (e.g. alcohol) (Note that fa:n^1 lʲa:n^2 doesn't have the secondary meaning 'relaxed, easy' found in fa:n^1 foj^1)

Unclassified:
pʰɑj³ tɑj⁴   'very crooked' (the base may be in free variation with ʔbɑj³)
fɑːt⁸ ɣɑːt⁸   'very disheveled, weary' (fɑːt⁸ is not attested as a monosyllabic adjective)

Group 2. Dorsal base onsets

Set 2.1: Voiced dorsal becomes a voiceless coronal

Feature changes in this set:
[dorsal]→[coronal]
Other feature changes are listed below by subset.

Subset 2.1.1:
[+voice]→[-voice]
[+cont]→[-cont]

ʁɑːt⁷ tɕɑːt⁸   'very agile', also 'hurried, hasty'

Subset 2.1.2:
[+voice]→[-voice]
[-nasal]→[+nasal]

ʔɣɑj³ ɲɑj¹ 'very long'

Subset 2.1.3:
[+voice]→[-voice]
[+nasal]→[-nasal]

ŋɑːt⁷ tɑːt⁷   'very still and quiet' (ŋɑːt⁷ is not attested as a monosyllabic
                        adjective)
ŋət⁸ sət⁸   'very stupid'
tom¹ ŋɔ² sɔ² 'very dull' (of a knife), 'unintelligent' (of a person) (tom¹ 'dull')

Set 2.2: Voiceless dorsal becomes a voiced coronal

Feature change in this set: [dorsal]→[coronal]. Other feature changes are listed below by subset.

Subset 2.2.1:
[-voice]→[+voice]
[-cont]→[+cont]
[-lat]→[+lat]
[-son]→[+son]

In this subset, the bases are not attested as monosyllabic adjectives.

ʔdɑ³ qəŋ⁵ ləŋ⁵ səŋ⁵   ‘very hard’ (ʔdɑ³ ‘hard’)
ʔdɑ³ qət⁸ lət⁸   ‘very hard’
ʔdɑ³ qe⁵ le⁵ se⁵   ‘very hard’
məŋ⁴ kɔ⁵ lʲɔ⁵ lʲɔm¹   ‘very happy’ (məŋ⁴ ‘happy’)
qɔ⁶ lɔ⁶ sɔ⁶   ‘very bald’
qɔm⁶ lɔm⁶   ‘round’
qaŋ⁵ lʲaŋ⁵ lʲɑ⁴   ‘very simple, crude’ (e.g., a simple house)
qak⁷ lak⁷   ‘mysterious’
qɛw³ lɛw³   ‘clever, mysterious’
qu⁵ lu⁵   ‘round’ (for ball-like objects)
tɕoŋ³ kʷɛm³ lʲɛm³   ‘very skinny’; free variant: tɕoŋ³ kwɑm³ ljɑm³

Subset 2.2.2:
[-voice]→[+voice]
[-cont]→[+cont]
[-nasal]→[+nasal]
[-son]→[+son]

ʔmɑ³ kʷɛt⁸ nʲɛt⁸   ‘very soft’ (ʔmɑ³ ‘soft’) (kʷɛt⁸ is not attested as a monosyllabic adjective)
xət⁷ kʷɑt⁸ nɑt⁸   ‘very lazy’ (ʔmɑ³ ‘soft’) (kʷɑt⁸ is not attested as a monosyllabic adjective)
qɔn⁴ ʔnʲɔn³   ‘very short’ (general use)
xom³ ʔnom⁵   ‘very sour’ (higher intensity than xom³ pʲɑːt⁷)

Subset 2.2.3:
[-lat]→[+lat]
[-son]→[+son]

xɔ³ lʲɔ⁴   ‘very poor’
xop⁷ lʲop⁸   ‘very dizzy with success’ (xop⁸ is not attested as a monosyllabic adjective)

Subset 2.2.4:

pi² kɑ⁵ ⁿɖʲɑ⁵ ⁿɖʲom¹   ‘very fat’ (pi² ‘fat’) (kɑ⁵ is not attested as a monosyllabic adjective)

Set 2.3: Voiceless dorsal becomes a voiceless coronal obstruent

Feature changes are listed by subset below.

Subset 2.3.1:
[+cont]→[-cont]

xɑːn³ tʲɑːn²   ‘very red’ (can be derogatory)
xək⁷ tɕək⁸   ‘very crowded, constricted’ (general use)

xom³ tom⁴   'very sour' (higher intensity than xom³ pjɑ:t⁷)
<u>xom³ tom⁵</u> ʔnom⁵ som⁵   'very sour' (higher intensity than xom³ ʔnom⁵)

Subset 2.3.2:
[dorsal]→[coronal]
[-cont]→[+cont]
[-strid]→[+strid]

In this subset, the bases are not attested as monosyllabic adjectives.

kɔ⁵ sʲɔ⁵   'to be stunned, stupefied'
kən⁵ sən⁵   'can't help doing something, have no alternative'

Subset 2.3.3:
[dorsal]→[coronal]
[+asp]→[-asp]

kʰiŋ³ tiŋ⁴   'very brown'

Subset 2.3.4
[dorsal]→[coronal]
[+bk]→[-bk]

qɑj² tʲɑj¹   'very crooked' (tends to be derogatory)

Set 2.4: Voiceless velar fricative becomes a voiceless uvular stop

Feature changes in this set:
[dorsal]→[uvular]
[+cont]→[-cont]

xɔŋ¹ qɔŋ²   'very hollow' (Another version, xɔŋ¹ tɕɔŋ², is observed in the Shuilong region)
xok⁷ qok⁸   'very hurriedly, not carefully' (adverbial)

Set 2.5: Voiceless velar stop becomes a voiced velar fricative

Feature changes in this set:
[-cont]→[+cont]
[+asp]→[-asp]
[-voice]→[+voice]

kʰoj³ ɣoj⁴ 'very hollowed, sunken (object) *or* greedy'

Set 2.6: Tone change only

koŋ^2 koŋ^6 koŋ^3 'very much' (only used when speaking to a child in a silly manner)

Group 3. Glottal base onsets

Feature change: [glottal]→[coronal]

ʔom^3 tom^4 'very hunchbacked'
ʔom^5 tom^2 'very humid' (weather)

Group 4. Coronal base onsets

Set 4.1: Voiceless coronal obstruent becomes coronal nasal (with same [back] feature)

Feature changes in this set:
[-son]→[+son]
[-nasal]→[+nasal]
[-voice]→[+voice]

pu^1 təŋ^1 ʔnəŋ^1 (also: pu^1 təŋ^1)	'very swollen' (e.g. an inflated basketball) (təŋ^1 is not attested as a monosyllabic adjective)
tʲəŋ^1 ɲəŋ^1	'very long' (time)
tʲəŋ^5 ɲəŋ^5	'very full' (of food)
tʲak^7 ɲak^7	'very broken'
tom^1 ʔnom^1	'very dull' (of a knife), also 'dumb' (of a person)
tow^5 ʔnow^5	'very dull, slow' (of ability to think)
xom^3 tom^5 ʔnom^5 som^5	'very sour' (higher intensity than xom^3 ʔnom^5) (ʔnom^5 is not attested as a monosyllabic adjective)
ɕəŋ^2 tɕoj^2 ɲoj^2	'very stupid' (ɕəŋ^2 'stupid') (tɕoj^2 is not attested as a monosyllabic adjective)
pi^2 tʲəŋ^2 ɲəŋ^2	'very fat' (pi^2 'far') (tʲəŋ^2 is not attested as a monosyllabic adjective)

The following intensifying expressions for ⁿdəm^5 'short' (height) bear close phonological resemblance. The consultant reports all four expressions, but it is unclear whether they should be classified as individual entries or "free variants" of a single entry. In addition, except for tʊ:t^7, the bases are not attested as monosyllabic adjectives.

ⁿdəm^5 tɛ:t^7 nɛ:t^7 'very short' (height) (ⁿdəm^5 'short' (height))
ⁿdəm^5 te^2 ne^2 'very short' (height) (ⁿdəm^5 'short' (height))
ⁿdʲɛn^3 tɔ:t^7 nɔ:t^7 'very short' (height) (ⁿdəm^5 'short' (height))
ⁿdəm^5 tʊ:t^7 nʊ:t^7 'very short' (height) (ⁿdəm^5 'short' (height); also the consultant reports that tʊ:t^7 can also function as an independent word meaning 'short')

Set 4.2: Voiceless coronal obstruent becomes a lateral

Feature changes in this set listed below by subset.

Subset 4.2.1:
Feature changes:
[-voice]→[+voice]
[-lat]→[+lat]
[-cont]→[+cont]

çən^2 tɛt^8 lɛt^8 'very straight' (can only refer to objects) (tɛt^8 is not attested as a monosyllabic adjective)

tɕɑ:t^7 lʲɑ:t^7 sʲɑ:t^7 'very disorderly, messy' (e.g., a messy dinner table) (tɕɑ:t^7 is not attested as a monosyllabic adjective)

xɑ:n^3 tʲɑ:n^2 lʲɑ:n^2 'extremely red' (higher intensity than xɑ:n^3 tʲɑ:n^2) (xɑ:n^3 'red')

Subset 4.2.2:
Feature changes:
[-voice]→[+voice]
[+strid]→[-strid]

sən^4 sop^7 lʲop^8 'very flustered, hurried' (sən^4 'flustered, hurried') (sop^7 is not attested as a monosyllabic adjective)

Set 4.3: Nasal or lateral coronal becomes a voiceless coronal obstruent (or voiceless nasal)

Feature changes listed by subset below.

Subset 4.3.1:
[+voice]→[-voice]
[+nasal]→[-nasal]
[-strid]→[+strid]
[+son]→[-son]
The bases in this set are not attested as monosyllabic adjectives.

^{n}dəm^5 ne^2 se^2 'very short (height)' (^{n}dəm^5 'short (height)')

nʲiŋ^1 sʲiŋ^1 'very filthy, unrespectable'

nʲiŋ^5 sʲiŋ^5 'very filthy, unrespectable'

nʲɔ^5 çɔ^5 'very filthy, unrespectable'

ɲoj^2 çoj^2 'very stupid'

Subset 4.3.2:
[+voice]→[-voice]
[+lat]→[-lat]
[-strid]→[+strid]
[+son]→[-son]

lət^8 sət^8 'Very blunt, stubborn'

Subset 4.3.3:
[+voice]→[-voice]
[+lat]→[-lat]
[+son]→[-son]
[+cont]→[-cont]

l^{w}ɔn^4 tɕɔn^2 'very blunt, dull' (e.g. a knife)
l^{w}ɔn^6 t^{w}ɔn^6 'very disorderly, messy'
ləŋ^5 təŋ^4 'very careless'
ləŋ^5 tɕəŋ^4 'very straight'
lɑp^7 tɑp^8 'very chatty, talkative' (derogatory)

Subset 4.3.4:
[+voice]→[-voice]
[+lat]→[-lat]
[+son]→[-son]
[-nasal]→[+nasal]
[+cont]→[-cont]

l^{j}ɑːn^6 ɲɑːn^6 'Very messy' (e.g. a pile of books) (l^{j}ɑːn^6 is not attested as a monosyllabic
          adjective)

Set 4.4 Voiced coronal obstruent onsets becomes another coronal obstruent

Subset 4.4.1:
[+voice]→[-voice]
[-strid]→[+strid]
[-cont]→[+cont]

ʔdɛːt^7 sɛːt^7 'Very quiet'

Subset 4.4.2:
[-cont]→[+cont]
[-lat]→[+lat]

ʔdɛːt⁷ lɛːt⁷ sɛːt⁷ 'very quiet' (higher intensity than ʔdɛːt⁷ sɛːt⁷)

Set 4.5: Coronal obstruent becomes an obstruent with different place of articulation

Feature changes listed by subset below.

Subset 4.5.1:
[-cont]→[+cont]
[coronal]→[dorsal]

tɕəm⁴ ɣəm⁴   'very fierce'
ɕəŋ² tʰu³ ɣu⁴   'very stupid' (ɕəŋ² 'stupid') (tʰu³ is not attested as a monosyllabic adjective)

Subset 4.5.2:
[+voice]→[-voice]
[coronal]→[dorsal, +labial]

ʔdɑːŋ¹ kʷɑːŋ²   'Very bright', esp. when light suddenly emerges (could be related Chinese
                guang 'light; ray; bright', but the Sui consultant views kʷɑːŋ² as a purely Sui
                intensifier and it is not otherwise attested in Sui. However, a similar word
                kʷɑːŋ¹ exists which means 'bright'.)

Subset 4.5.3:
[+voice]→[-voice]
[coronal]→[dorsal]
[-nasal]→[+nasal]

tom¹ tɔ² ŋɔ² sɔ² 'Very dull' (of a knife), 'very dumb' (of a person) (tom¹ 'dull') (tɔ² is not
                attested as a monosyllabic adjective)

Subset 4.5.4:
[-cont]→[+cont]
[coronal]→[labial]

tɕoŋ³ fʰoŋ⁴   'very skinny' (higher intensity than tɕoŋ³ tɕɛn¹)
tiw³ fiw⁴   'very dried up' (higher intensity than tiw³ tʲɔ⁵)

Subset 4.5.5:
[-cont]→[+cont]
[coronal]→[labial]
[+nasal]→[-nasal]

ʔnəm^1 fəm^2 'very black/dark'

Subset 4.5.6:
[-cont]→[+cont]
[coronal]→[labial]
[-voice]→[+voice]

tsɛːk^7 vɛːk^7 'very bright'

Subset 4.5.7:
[-cont]→[+cont]
[coronal]→[labial]

ʔd^{j}ɑːn^3 v^{j}ɑːn^3 'very shiny/glittering'

Set 4.6: Tone change only

ʔdɑ^3 ʔdɔːt^7 ʔdɔːt^8 'very hard' (ʔdɔːt^7 is not attested as a monosyllabic adjective)
ʔnɑ^3 ʔnɑ^4 'very far forward, frontmost'
ti^3 ti^4 'very small' (same meaning as ti^3 t^{j}u^4)
lən^2 lən^6 lən^3 'farthest behind' (only used when speaking to a child in a silly manner)

Group 5. Fully reduplicated pairs

The expressions in this set, primarily ABB full reduplication pairs, are considered distinct from the rhyming/alliterative intensifiers since (a) these ABB expressions are usually clearly onomatopoeic, unlike the rhyming/alliterative intensifiers and (b) these expressions usually occur as verb modifiers, unlike rhyming/alliterative intensifiers which apparently cannot modify verbs. (c) Further, note that the fully reduplicated pairs attach to phonologically distinct syllables (e.g., ku^1 'to laugh' → ku^1 ɕi^5 ɕi^5 'to laugh quietly'). Although rhyming/alliterative intensifiers occasionally attach to a phonologically distinct adjective (e.g., ʔdɑ^3 'hard' → ʔdɑ^3 qət^8 lət^8 'very hard'), such examples are uncommon among the rhyming/alliterative type. Thus, the fully reduplicated set shown here appears to represent a separate process.

ʔaw^1 lɔ^5 xæ̃ːt^8 xæ̃ːt^8 'sound of breathing' (ʔaw^1 lɔ^5 'to inhale')
ʔɲɛ^3 ɲɑ^2 ɲɑ^2 'sound of crying' (ʔɲɛ^3 'cry')
^{m}b^{j}aw^3 ^{m}b^{j}aw^3 'snow falling in sheets' (verb modifier)
^{n}dɑ^1 ɣɑːk^7 ɣɑːk^7 'many tears falling' (^{n}dɑ^1 'eye')

jɑːp⁷ jɑːp⁷	'talks a lot, talkative' (onomatopoeic; most commonly modifies verbs)
kiw¹ kʷʰit⁷ kʷʰit⁷	'sound of whistling' (kiw¹ 'whistle')
ku¹ çi⁵ çi⁵	'to laugh quietly' (ku¹ 'laugh')
ku¹ xɑ̃² xɑ̃²	'to laugh loudly' (ku¹ 'laugh') (xɑ̃² xɑ̃² also has the sense 'disrespectful')
kʷɑːŋ¹ lɑp⁷ lɑp⁷	'shining very brightly, strong light' (kʷɑːŋ¹ 'shining, bright') (ʔdɑːŋ¹ 'shining, bright') also: kʷɑːŋ¹ lip⁷ lip⁷ and ʔdɑːŋ¹ lip⁷ lip⁷
pʰʲɑːt⁷ vɔ² vɔ²	'to bleed a lot or filled with blood' (pʰɑːt⁷ 'blood, bleed')
pʰʲɑːt⁷ lʲiŋ¹ lʲiŋ¹	'to bleed a lot or filled with blood' (pʰɑːt⁷ 'blood, bleed')
sʊt⁷ ⁿdɑːt⁷ ⁿdɑːt⁷	'very scalding, scald a lot' (higher intensity than sʊt⁷ som¹) (sʊt⁷ 'to scald, scalding, hot')
tik⁷ meŋ⁵ meŋ⁵	'very full' (tik⁷ 'full') (meŋ⁵ may be related to Chinese *man* 'full')
tiw⁴ vɑːm⁶ vɑːm⁶	'sound of stomping feet' (tiw⁴ 'to stomp')
tow⁶ ju¹ ju¹	'very sharp' (e.g., of a knife) (tow⁶ 'sharp')

Group 6. Three-syllable rhyming expressions

In this section, the second and third syllable of three-syllable expressions are analyzed as base+reduplicant pairs. Neither of the syllables are attested as monosyllabic adjectives.

Set 6.1: Coronal lateral to voiceless coronal nasal
Features changed in this set:
[+voice]→[-voice]
[+lat]→[-lat]
[+cont]→[-cont]
[-nasal]→[+nasal]

pʲɑːn⁶ lʲɑːn⁶ n̥ɑːn⁶	'extremely messy' (e.g. a disorderly pile of books)

Set 6.2: Coronal lateral to voiceless coronal stop
Features changed in this set:
[+voice]→[-voice]
[+lat]→[-lat]
[+cont]→[-cont]
[+son]→[-son]

m̥ow¹ low¹ tow²	'extremely crude/rash' (m̥ow¹ 'crude/rash')
qom³ lom² tom²	'sound of thunder' (onomatopoeia) (included here for comparison)
qu⁵ lu⁵ tu⁴	'very round' (slightly different usage than qu⁵ lu⁵ su⁵; e.g. a person who has rolled into a ball; higher intensity than qu⁵ lu⁵)

Set 6.3: Coronal lateral to voiceless coronal fricative

Features changed:
[+voice]→[-voice]
[+lat]→[-lat]
[-strid]→[+strid]
[+son]→[-son]

ʔdɑ^3 qəŋ^5 <u>ləŋ^5</u> <u>səŋ^5</u>	'extremely hard' (ʔdɑ^3 'hard')
ʔdɑ^3 qət^8 <u>lət^8</u> <u>sət^8</u>	'extremely hard' (ʔdɑ^3 'hard')
ʔdɑ^3 qe^5 <u>le^5</u> <u>se^5</u>	'extremely hard' (ʔdɑ^3 'hard')
ʔdɛːt^7 <u>lɛːt^7</u> <u>sɛːt^7</u>	'extremely quiet' (ʔdɛt^7 'quiet')
ɕəŋ^2 tɛt^8 <u>lɛt^8</u> <u>sɛt^8</u>	'extremely stupid' (ɕəŋ^2 'stupid')
m̥ow^1 <u>low^1</u> <u>sow^1</u>	'extremely crude/rash' (m̥ow^1 'crude/rash')
pi̊^{2} pʲu^1 <u>lʲu^1</u> <u>sʲu^1</u>	'extremely fat' (pi^2 'fat')
pi^5 <u>li^5</u> <u>si^5</u>	'extremely messy', also includes the meaning 'narrow', e.g., a messy, narrow room (pi^5 li^5 'messy')
pʲaj^5 <u>lʲaj^5</u> <u>sʲaj^5</u>	'extremely messy', e.g., messy writing or messy soup, not the same meaning as pi^5 li^5 si^5 or pʲɑːn^6 lʲɑːn^6 sʲɑːn^6
pʲɑːn^6 <u>lʲɑːn^6</u> <u>sʲɑːn^6</u>	'extremely messy' (e.g. a disorderly pile of books)
pʲɛːk^7 <u>lʲɛːk^7</u> <u>sʲɛːk^7</u>	'extremely dirty' (pʲɛːk^7 'dirty')
pʲeŋ^2 <u>lʲeŋ^2</u> <u>sʲeŋ^2</u>	'extremely flat' (pʲeŋ^2 'flat')
qɔ^6 <u>lɔ^6</u> <u>sɔ^6</u>	'extremely bald'
qɔm^6 <u>lɔm^6</u> <u>sɔm^6</u>	'extremely round' (qɔm^6 lɔm^6 'round')
qak^7 <u>lak^7</u> <u>sak^7</u>	'extremely mysterious' (qak^7 lak^7 'mysterious')
qok^8 <u>lok^8</u> <u>sok^8</u>	'very round-wheel-like' (qok^8 lok^8 'wheel'(n.))
qu^5 <u>lu^5</u> <u>su^5</u>	'very round' (qu^5 lu^5 'round' (not wheels))
tɕɑːt^7 <u>lʲɑːt^7</u> <u>sʲɑːt^7</u>	'very disorderly'
tɕoŋ^3 kʷɛm^3 <u>lʲɛm^3</u> <u>sʲɛm^3</u>	'extremely skinny' (tɕoŋ^3 'skinny')
xɑːn^3 tʲɑːn^2 <u>lʲɑːn^2</u> <u>sʲɑːn^2</u>	'extremely red' (xɑːn^3 'red')

Set 6.4: Coronal nasal to voiceless coronal fricative

Subset 6.4.1:
Features changed in the onset:
[+nasal]→[-nasal]
[+son]→[-son]
[+voice]→[-voice]
[-strid]→[+strid]
[-cont]→[+cont]

ⁿdəm^5 tɛːt^7 <u>nɛːt^7</u> <u>sɛːt^7</u>	'extremely short (stature)' (ⁿdəm^5 'short' (height))
ⁿdəm^5 tʊːt^7 <u>nʊːt^7</u> <u>sʊːt^7</u>	'extremely short (stature)' (ⁿdəm^5 'short'(height); note similarity with ⁿdəm^5 tɛːt^7 <u>nɛːt^7</u> <u>sɛːt^7</u>)
ⁿdəm^5 te^2 <u>ne^2</u> <u>se^2</u>	'extremely short (stature)' (ⁿdəm^5 'short' (height))
ⁿdʲɛn^3 tɔːt^7 <u>nɔːt^7</u> <u>sɔːt^7</u>	'extremely short (length)' (ⁿdʲɛn^3 'short' (length))

ʔmɑ^3 kʷɛt^8 <u>nʲɛt^8 sʲɛt^8</u>   'extremely soft' (ʔmɑ^3 'soft')
pi^2 tʲəŋ^2 <u>nəŋ^2 sjəŋ^2</u>   'extremely fat' (pi^2 'fat')
pu^1 təŋ^1 <u>ʔnəŋ^1 səŋ^1</u>   'extremely swollen' (pu^1 'swollen')
tʲəŋ^1 <u>nəŋ^1 sʲəŋ^1</u>   'extremely long time' (tʲəŋ^1 'long time')
tʲəŋ^5 <u>nəŋ^5 sʲəŋ^5</u>   'extremely full' (tʲəŋ^5 'full' (of food))
tʲak^7 <u>nak^7 sʲak^7</u>   'extremely broken' (tʲak^7 'broken')
tom^1 <u>ʔnom^1 som^1</u>   'extremely dull' (tom^1 'dull')
tom^1 tɔ^2 <u>nɔ^2 sɔ^2</u>   'extremely dull' (tom^1 'dull')
tow^5 <u>ʔnow^5 sow^5</u>   'extremely slow (intelligence)' (tow^5 'slow in intelligence')
xom^3 tom^5 <u>ʔnom^5 som^5</u>   'extremely sour' (xom^3 'sour')
çəŋ^2 tɕoj^2 <u>noj^2 çoj^2</u>   'extremely stupid' (çəŋ^2 'stupid')
pi^2 tɛt^7 <u>nɛt^7 sɛt^7</u>   'extremely fat' (pi^2 'fat')
xət^7 kʷat^8 <u>nat^8 sat^8</u>   'extremely lazy' (xət^7 'lazy')

Subset 6.4.2:
Features changed in the onset:
[+nasal]→[-nasal]
[+son]→[-son]
[-strid]→[+strid]
[-cont]→[+cont]

ʔɣaj^3 <u>naj^1 sʲaj^1</u> 'extremely long (length)' (ʔɣaj^3 'long' (length))

Set 6.5: Voiced labial fricative to voiceless coronal fricative

Features changed in this set:
[+voice]→[-voice]
[labial]→[coronal]

tsɛ:k^7 <u>vɛ:k^7 sɛ:k^7</u>   'extremely bright' (light)
ʔdʲa:n^3 <u>vʲa:n^3 sʲa:n^3</u>   'extremely shiny, glittery' (ʔdʲa:n^3 'shiny, glittery')

3.3 The No-Pattern Class

Intensifiers in this class show no apparent phonological connection between base and reduplicant.

ʁəm^1 ⁿdʲiŋ^1 'very muddled' (referring to liquids, includes the sense 'dirty', cf., ʁəm^1 ʁoj^1)
qaj^2 pət^8 'very crooked' (for physical objects)
qaj^2 ɲɔ^2 'very crooked' (esp. for describing a child or little animal in a humorous sense,
                         e.g. a child walking in an unstable manner)
qaj^2 tʲək^8 'very crooked'
ɲu^1 ʔnak^7 'very smelly' (general use)
pi^2 ɲəŋ^2 'very fat' (for both farm animals and people)

tɕen^3 n̥ɛt^7	'very tight' (note that this intensifier is distinguished by vowel length from n̥ɛːt^7 in n̥ɛːt^7 n̥ow^1)
tik^7 ^{n}dɛp^8	'very full' (general use)
tʲu^3 ɲɔk^7	'very sticky' (most common; tʲu^3 ɲɑw^3 'very sticky' occurs rarely and indicates higher intensity)
xɑːn^3 səŋ^1	'very red' (general use, not derogatory; cf. xɑːn^3 tʲɑːn^2)
xom^3 pʲɑːt^7	'very sour' (general use)
zən^1 ɲak^7	'very heavy' (general use)
ʔɣaj^3 ɲɔ^3	'very long' (e.g., long rope or bamboo; more limited use than ʔɣaj^3 ʔɣəŋ^2)
ʔɣak^7 ʔbət^7	'very wet' (most common)
ʔɣak^7 ʔdɑːt^7	'very wet'
^{n}du^3 ɣoŋ^2	'very hot' (temperature)
lʲɛk^8 kʰəŋ^3	'very strong/healthy' (esp. referring to a child's health)
pɑːk^8 lʲən^2	'very white' (e.g. a line of white clouds)
pu^1 ɲɔ^1	'very swollen' (esp. swelling due to an insect bite)
xək^7 tɕɛ^5	'very crowded, constricted' (higher intensity than xək^7 tɕək^8)
kʰiŋ^3 ^{n}di^2	'very brown' (often humorous usage)
ʔdɑːŋ^1 tʰeŋ^3	'very bright' (e.g., a bright sunrise)
qom^2 fʲu^2	'having many protrusions, not level' (has a gentler connotation than qom^2 qɛj^2 and qom^2 qək^8)
ɕi^5 ʔɲej^1	'very dense and fine' (ɕi^5 is not attested as a monosyllabic adjective)
n̥u^1 ^{n}dʲɛn^1	'very smelly' (general use)

References

Burusphat, Somsonge, Xuechun Wei, and Jerold A. Edmondson. 2003. Sui (Shui) Chinese-Thai Dictionary, Mahidol University, Bangkok (Sui, Chinese, and English entries by Wei and Edmondson).

Chao, Y.R. 1930. A System of Tone Letters. La Maitre phonetique 45/24-27.

Edmondson, Jerold A., John H. Esling, Jimmy G. Harris, and James Wei. 2004. A Phonetic Study of the Sui Consonants and Tones. Mon-Khmer Studies 34/47-66.

Edmondson, Jerold A. and David B. Solnit (eds.) 1988. Comparative Kadai: Linguistic studies beyond Tai. Dallas, TX: SIL.

He, Jiquan, Pan Chaofeng, and Liu Zhiyang. 1992. Shuizu minsu tanyou (Exploring folk customs of the Sui people). Chengdu, China: Sichuan Minorities Publishing.Kennard, Catherine Hicks. 2004. Copy But Don't Repeat: the Conflict of Dissimilation and Reduplication in the Tawala Durative. Phonology 21/3.303-323.

Li, Fang-Kuei. 1948. The Distribution of Initials and Tones in the Sui Language. Language 24/2.160-167.

Luo, Shiwu. 1992. Sandu Shuizu Zizhixian Zhi [Sandu Sui Autonomous County Report]. Guizhou, China: Guizhou People's Publishing.

McCarthy, John and Alan Prince. 1994. The Emergence of the Unmarked: Optimality in Prosodic Morphology. NELS 24, Proceedings of the 24th Conference of the Northeast Linguistics Society. University of Massachusetts, Amherst, 333-379.

Prince, Alan and Paul Smolensky. 1993. Optimality Theory: Constraint Interaction in Generative Grammar, Ms., Rutgers University & University of Colorado, Boulder. Published 2004, Blackwell, Malden, Massachusetts and Oxford.

Shuiyu Diaocha Baogao (Report on Investigations of the Sui Language). 1956. Ms.

Stanford, James N. 2007. Sui adjective reduplication as poetic morpho-phonology. Journal of East Asian Linguistics 16/2.87-111.

Thompson, Laurence C. 1965. A Vietnamese Grammar. Seattle: University of Washington Press.

Wei, Xuechun. 1999. Shuiyu Xingrongci Houzhui Yanjiu [Research of Sui language adjective suffixes]. In Shuijiaxue Yanjiu Vol. 3. Guizhou, China: Guizhou Province Sui Association, 221-225.

Yip, Moira. 1995a. Identity Avoidance in Phonology and Morphology. Ms, University of California, Irvine.

Yip, Moira. 1995b. Repetition and its Avoidance: the Case of Javanese. In K. Suzuki and D. Elzinga (eds.), Proceedings of South Western Optimality Theory Workshop 1995 Arizona Phonology Conference Volume 5: University of Arizona Department of Linguistics Coyote Papers, 238-262.

Yip, Moira. 1996. Lexicon Optimization in Languages Without Alternations. In Jacques Durand and Bernard Laks (eds.) Current Trends in Phonology: Models and Methods, Vol. 2. Salford: University of Salford Publications, 757-788.

Yip, Moira. 1998. Identity Avoidance in Phonology and Morphology. In S. LaPointe, D. Brentari and P. Farrell (eds.) Morphology and its Relation to Phonology and Syntax. Stanford, CA: CSLI Publications, 216-246.

Yip, Moira. 1999. Reduplication as Alliteration and Rhyme. Glot International 4/8.1-7.

Yip, Moira. 2001. Segmental Unmarkedness Versus Input Preservation in Reduplication. In L. Lombardi (ed.), Segmental Phonology in Optimality Theory, Cambridge University Press, 206-230.

Yu Jiongbiao, Wil Snyder, and Donna Snyder. 1994. Two initial grammatical discoveries in the Fucun speech of Libo Buyi. In Stuart R. Milliken (ed.), SIL Occasional Papers on the Minority Languages of China vol. 1, Summer Institute of Linguistics, Hong Kong, 1-11.

Zeng, Xiaoyu and Yao Fuxiang. 1996. Hanshui Cidian [Chinese-Sui Dictionary]. Chengdu: Sichuan People's Publishing.

Zhang, Junru. 1980. Shuiyu Jianzhi [Sketch of the Sui language]. Beijing: Minorities Publishing House.

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