

## Special tone sandhi in Taiwan Southern Min and Taiwan Hakka

This study investigates special sandhi in trisyllabic reduplication in Taiwan Southern Min and Taiwan Hakka. I argue that the special tone sandhi in the two languages is not a consequence of floating high tone, as suggested by Myer and Tsay (2001), Zhang and Lai (2008) and Hsiao (2007, 2011), but a result of external factor, pragmatics in particular. Special tone sandhi in Taiwan Southern Min and Taiwan Hakka, as shown in Tables 1 and 2 below, refers to the condition that the first syllable in a trisyllabic reduplication AAA becomes a rising tone if it is a low tone after regular tone sandhi. This phenomenon has been discussed in Myer and Tsay (2001), Zhang and Lai (2008) and Hsiao (2007, 2011), and they suggested that the rising tone in the first syllable results from a floating high tone as in a phonological rule,  $L + (H) \rightarrow R$ . Despite the fact that a floating high tone partly expounds why special tone sandhi appears in the first syllable, this proposal causes more problems as indicated by Lin (2012), such as a) whether or not a floating high tone is edge-sensitive, and b) why there is no high level tone as the surface form.

Special tone sandhi in trisyllabic reduplication in Taiwan Southern Min and Taiwan Hakka is restrictive. First of all, special tone sandhi merely appears in AAA trisyllabic reduplication. Disyllabic reduplication, such as AA, or any other type of reduplication, ABB and AAB for instance, does not have special tone sandhi. Besides, this phenomenon is also limited to adjectives. Verbs and nouns do not have trisyllabic reduplication and therefore do not carry special tone sandhi. Finally, only the first syllable becomes a rising tone. The second and the third syllable in trisyllabic reduplication do not undergo special tone sandhi.

Since the proposal based on floating high tone does not provide a complete explanation, and special tone sandhi in reduplication is restrictive in its phonological environment, external factor other than phonology should be taken into account. This study suggests that it is pragmatics that leads to the special tone sandhi in Taiwan Southern Min and Taiwan Hakka, because trisyllabic reduplication often bears the function to intensify the meaning (Cheng 1997, Gu *et al.* 2002). In order to do that, one possible way is to lay extra stress on the first syllable so that the pitch of the first syllable is raised and the duration is prolonged. The higher pitch and longer duration not only attracts listeners' attention, but also leads to a rising tone.

This study, different from the proposal based on floating high tone, provides another analysis for the special tone sandhi in trisyllabic reduplication in Taiwan Southern Min and Taiwan Hakka, and suggests that the purpose to intensify the meaning in pragmatics leads to a phonological prominence, namely the rising tone in the first syllable.

**Table 1. Tone sandhi in trisyllabic adjective reduplication (Taiwan Southern Min)**

	Tone type	Tone Sandhi		Examples			
		2-syllable	3-syllable	Base tone		2-syllable	3-syllable
a	1	11 → 71	111 → R71	sin1	‘new’	sin7 sin1	sin(R) sin7 sin1
	7	77 → 37	777 → R37	ku7	‘old’	ku3 ku7	ku(R) ku3 ku7
	8	88 → 48	888 → R48	tit8	‘straight’	tit4 tit8	tit(R) tit4 tit8
b	2	22 → 12	222 → 112	ling2	‘cold’	ling1 ling2	ling1 ling1 ling2
	3	33 → 23	333 → 223	ts’au3	‘stink’	ts’au3 ts’au3	ts’au2 ts’au2 ts’au3
	4	44 → 84	444 → 884	kip4	‘quick’	kip8 kip4	kip8 kip8 kip4
c	5	55 → 75	555 → R75	ang5	‘red’	ang7 ang5	ang(R) ang7 ang5

**Table 2. Tone sandhi in trisyllabic adjective reduplication (Taiwan Hakka: Hailu)**

	Tone type	Tone Sandhi		Examples			
		2-syllable	3-syllable	Base tone		2-syllable	3-syllable
a	1	11 → 21	111 → 211	vu1	‘black’	vu2 vu1	vu2 vu1 vu1
	3	33 → 23	333 → 233	t <sup>h</sup> eu3	‘limpid’	theu2 theu3	theu2 theu3 theu3
	7	77 → 27	777 → 277	ngang7	‘hard’	ngang2 gang7	ngang2 ngang7 ngang7
	8	88 → 28	888 → 288	p <sup>h</sup> ak8	‘white’	phak2 phak8	phak2 phak8 phak8
b	2	22 → 72	222 → 722	lo2	‘old’	lo7 lo2	lo7 lo2 lo2
	4	44 → 84	444 → 844	kok4	‘every’	kok8 kok4	kok8 kok4 kok4
c	5	55 → 55	555 → 555	fung5	‘red’	fung5 fung5	fung5 fung5 fung5

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