

## Co-phonologies and morphological exponence in OT

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As work since Spencer (1998) points out, Optimality Theory redefines the exponence of reduplication in purely realizational terms. The input form of reduplicative morphemes in work since McCarthy & Prince (1993) is simply a label, RED, linking the reduplicative construction to reduplication-specific (B-R) Faithfulness constraints. The grammar defined by the interaction of B-R Faithfulness constraints with other constraints is what determines the reduplicative morpheme's output form (or exponence). It does not introduce an 'item' in the Hockettian (1966b) sense. The co-phonology approach to formalizing morphologically-conditioned phonology takes all morphological exponence one step closer to Anderson's (1992) amorphous goal. As Orgun (1996) and Inkelas & Zoll (2005) argue, in this theory all morphemes are defined as complexes of semantic, syntactic and phonological features. The phonological 'features' can consist entirely of a constraint grammar, or co-phonology.

The goal of this talk is to first provide a brief introduction to co-phonologies, summarizing the leading arguments in favor of co-phonologies over constraint indexing from other work (Inkelas 2008, Inkelas & Zoll 2007). New arguments in favor of co-phonologies will be introduced, based on case studies of reduplication in Squamish (Skwxwú7mesh) and Chichewa. What I will show is that indexed constraints cannot handle languages like Squamish, which have two (or more) reduplication patterns which are subject to complementary (rather than nested) markedness constraints. (The relevant data is in (1) on the next page.) Indexed constraints can also not easily handle tonal transfer (and non-transfer) in languages like Chichewa, where the same reduplicative construction applies to Bases subject to two (or more) morphologically-conditioned tone patterns. (The relevant data is in (2) on the next page.) An analysis for each case study requires the power of co-phonology. Each analysis emphasizes how OT in general and co-phonologies in particular provide a realizational (rather than item-based) definition of reduplication.

### References

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(1) Skwxwú7mesh (Squamish Salish) reduplication (cited in Downing 2006: 224)

[23] Skwxwú7mesh reduplication (Bar-el 2000a: figs. (7), (10))

(a) CaC reduplication		
p'əq <sup>w</sup> -p'əq <sup>w</sup>	'yellow'	
təc-təc	'skinny'	
k <sup>w</sup> əs-k <sup>w</sup> əs	'burn'	
təq <sup>w</sup> -təq <sup>w</sup>	'red codfish'	
(b) CV reduplication		
k <sup>w</sup> á-k <sup>w</sup> ay?	'very hungry'	
šé-siq	'fly'	
pó-pum?	'swell'	

(2) Verbal reduplication in two dialects of Chichewa (Downing 2003)

(a) Chichewa-AI and Chichewa-Sam, **stem High tone on penult** (‘[´ marks stem edge)

*Base stems of 3+ syllables - tonal transfer*

<u>Stem</u>	<u>Gloss</u>	<u>do X here and there</u>
ti-sa-[thandíz-e	let's not help	-[thandíze=thandíze
ti-sa-[vundikír-e	let's not cover	-[vundikíre=vundikíre
ti-sa-[fotokozér-e	let's not explain to	-[fotokozére=fotokozére

Dialect distinction, **stem High tone on final**

(b) **Chichewa-AI** - tonal transfer

ti-[thandiz-é	let's help	-[thandizé= thandizé
ti-[vundikir-é	let's cover	-[vundikiré= vundikiré
ti-[fotokozer-é	let's explain to	-[fotokozeré= fotokozeré

(c) **Chichewa-Sam** - tonal mismatch !

<u>Stem</u>	<u>Phrase-medial/Phrase-final</u>	<u>Gloss</u>	<u>do X here and there (phrase-final)</u>
ti-[thandiz-é... / -[thandíz-e		let's help	-[thandizé=thandíze
ti-[vundikir-é ... / -[vundikír-e		let's cover	-[vundikiré=vundikíre
ti-[fotokozer-é... / -[fotokozér-e		let's explain to	-[fotokozeré=fotokozére

*Base stems of 1-2 syllables*

(d) **Chichewa-AI**

stem High tone on penult - tonal mismatch

ti-sa-[phé	let's not kill	-[phé=i-phé
ti-sa-[ménye-e	let's not hit	-[ménye=menyé (*-[ménye=ménye)
ti-sa-[péz-e	let's not find	-[péze=pezé (*-[péze=péze)

(e) **Chichewa-Sam**

stem High tone on penult - no transfer!

ti-sa-[phé	let's not kill	-[phe=i-phe (*-[phé=i-phe)
ti-sa-[ménye-e	let's not hit	-[menye=ménye (*-[ménye=ménye)
ti-sa-[péz-e	let's not find	-[peze=péze (*-[péze=péze)