

The Syllable as Delimitation of the Base for Reduplication

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This paper argues in favor of the prosodic category *syllable* based on morpho-prosodic evidence involving reduplication, and claims specifically that the syllable can serve as a delimitation on the base for reduplicative copying.

The idea that the “base” for reduplicative copying can be delimited is not new. The limitation on copying only the initial foot in the trisyllabic words of Yidin^y is well-known from McCarthy and Prince (1986)—e.g. *mulari* > *mula-mulari* (**mular-mulari*) but *kintalpa* > *kintal-kintalpa* (**kinta-kintalpa*). Shaw (2005) elaborates on the idea of delimiting reduplicative bases, and proposes the Constituent Base Hypothesis—*viz.* that reduplicative bases may be defined according to independently-attested morphological or prosodic constituents of a given language.

This paper supports Shaw’s proposal by showing that one of the prosodic constituents predicted to be able to serve as a base for reduplication, i.e. the syllable, in fact does so in certain languages. The most common pattern of reduplication in Yaqui (Uto-Aztecan), for example, is that of “syllable-copy” reduplication, where words with word-medial consonant clusters (e.g. CVCCV) reduplicate the medial coda consonant (CVC), while words without a medial consonant cluster reduplicate only the first CV (*CVC), cf. (1); similar data are found in Yapese (Micronesian) (2). Such a pattern is straightforwardly accounted for as full reduplication if the base is simply defined as the first syllable of the stem (σ_1). The generalization accounting for this pattern could not be made in a theory that does not recognize the syllable as a prosodic unit.

The analysis of the base being limited to σ_1 of the stem is supported by variable reduplication patterns that appear in dialectal or idiolectal variants of Yaqui, where reduplicative forms sometimes omit a coda consonant from CVC initial stems (3), but never allow a coda consonant in CV initial stems (1a). That is, copying only takes place within σ_1 , and never σ_2 .

Similarly, the closely related language Mayo has two methods of creating heavy syllable reduplicants depending on the word class of the stem. The expected pattern of heavy syllable reduplication involves copying as much of the stem, the entirety of which is typically assumed to constitute the “base”, as possible, e.g. Ilokano *ag-bas-basa* (McCarthy and Prince 1986). This idea is codified in the OT constraint MAX-BR. The expected pattern is exactly what we find in the unaccented class of Mayo (4), but in the accented class reduplication only copies from the first syllable, with gemination being required to create the heavy syllable (5a,b). Hagberg (1993) proposes that the difference in reduplicant shape depends on different bases in these two classes. In the unaccented class the full stem serves as the base, but in the accented class, as in Yaqui, the base is limited to the first syllable. This limitation on copying only within σ_1 seems to be common to the Uto-Aztecan languages (Haugen 2005), and a variety of strategies to create a heavy syllable without copying into σ_2 of the stem can be employed by various languages (6).

Once again, these examples would be difficult to account for without a prosodic notion of *syllable* to serve as the constituent delimiting the base for reduplication in these languages.

Finally, I will show that the delimitation of the base as σ_1 is especially interesting in Yaqui because this delimitation seems to apply to the underlying (rather than the surface) form of the stem. In cases where certain affixes lead to stem-final vowel deletion and result in word-medial consonant clusters, the reduplicant does not copy what is in fact the first syllable of the surface form. For example, *noka* ‘speak’ plus *-taite* INCEPTIVE yields *noktaite*, which after reduplication yields *no-noktaite* and not **nok-noktaite*. This raises interesting issues for surface-based phonological theories such as Base-Reduplicant Correspondence, as the delimitation of the base as σ_1 in such cases seems to precede the vowel-deletion and consonant cluster-formation triggered by suffixation, thus resulting in an opacity.

DATA

(1) Syllable Copy Reduplication in Yaqui (Haugen 2003)

a. CV.CV-initial stems

i.	vu.sa	vu.vu.sa	* vus.vusa	'awaken'
ii.	chi.ke	chi.chi.ke	* chik.chike	'comb one's hair'
iii.	he.wi.te	he.he.wi.te	* hew.hewite	'agree'
iv.	ko.'a.rek	ko.ko.'a.rek	* ko'.ko'arek	'wear a skirt'

b. CVC.CV-initial stems

i.	vam.se	vam.vam.se	* va.vamse	'hurry'
ii.	chep.ta	chep.chep.ta	* che.chepta	'jump over'
iii.	chuk.ta	chuk.chuk.ta	* chu.chukta	'cut with a knife or saw'
iv.	bwalkote	bwal.bwal.ko.te	* bwa.bwalkote	'soften, smooth'

(2) Syllable Copy Reduplication in Yapese (Ballantyne 1999)

a.	tsu.ŋu:r	tsu.tsu. ŋu:r	* tsuŋ.tsu. ŋu:r	b.	te:j	te:j.te:j	* te-/te:.tej
	'to stare'	'to stare repeatedly'			'to slap'	'to slap hard'	
	ði.ʔaβ	ði.ði.ʔaβ	* ðiʔ.ði.ʔaβ		suɣ.ʔa:l	suɣ.suɣ.ʔa:l	* su. suɣ.ʔa:l
	'to cut'	'to slice'			'to be slow'	'to be very slow'	

(3) Dialectal and/or Idiolectal Variation in Yaqui Syllable Reduplication (Haugen 2003)

<u>Stem</u>	Reduplicated Form in Sonora Yaqui	Reduplicated Form in Arizona Yaqui	<u>Gloss</u>
hak.ta	hak.hak.ta	hak.hak.ta	'inhale'
huk.te	huk.huk.te	hu.huk.te	'choke on liquids'
b ^w ak.ta	b^wa.b^wak.ta	b^wak.b^wak.ta	'take out of'

(4) Mayo Unaccented class (Hagberg 1993)

<u>Stem</u>	<u>RED=σ_{un}</u>	<u>Unattested</u>	<u>Gloss</u>
a. no.ká	nok.nó.ka	* non.no.ka	'speak'
b. bwa.ná	bwan.bwá.na	* bwab.bwa.na	'cry'
c. bwi.ká	bwik.bwí.ka	* bwib.bwi.ka	'sing'
d. om.té	om.óm.te	* o'. 'om.te	'hate'

(5) Mayo Accented class (Hagberg 1993)

<u>Stem</u>	<u>RED=σ_{un}</u>	<u>Unattested</u>	<u>Gloss</u>
a. nó.ka	nón.no.ka	* nók.no.ka	'know a language'
b. yú.ke	yúy.yu.ke	* yúk.yu.ke	'rain'
c. wóm.te	wóm.wom.te	* wów.wom.te	'be frightened'
d. nók.wa	nók.nok.wa	* nón.nok.wa	'known language'

(6) Strategies to realize the second mora in heavy syllable reduplication

	<u>Hypothetical Stem</u>	<u>Reduplicated Form</u>	<u>Example Language*</u>
(a) continue copying into second syllable:	noka	nok.noka	Mayo (unaccented class)
(b) gemination:	noka	non.noka	Mayo, T. O'odham, et al.
(c) vowel lengthening:	noka	noo.noka	Nahuatl, T. O'odham
(d) epenthesis of an unmarked consonant:	noka	noʔ.noka	Guarijío, Nahuatl, Mono
(e) "nasal substitution":	noka	noŋ.noka	(Pohnpeian)
(f) pre-specified segment in coda:	noka	nor.noka	(Turkish)

[*All languages in this figure are Uto-Aztec except those in parentheses]