

Reduplication in Compounding Contexts: Morphological Doubling vs. Correspondence

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Given a compound construction Z, composed of two stems X and Y (thus, [X-Y]_Z), there are at least eight theoretically possible ways, ignoring infixation, for an inflectional process of reduplication to apply to Z (cf. 1 and 2). Four of these involve inflectional marking only at the edges of stem Z: on the left edge only (schematically depicted in 1a), the right edge only (1b), either the left edge or the right edge (1c), or obligatorily on both edges (1d). The strong lexicalist hypothesis (DiSciullo and Williams 1987) proposes that all word formation occurs in the lexicon and that the internal structure of words (including compounds) so formed should be inaccessible to the syntax, so, given this hypothesis, these should be the only methods available for inflectional reduplication.

However, the strong version of this hypothesis is too restrictive because the empirical data suggest that some languages access the internal structure of Z, i.e. their grammars must be able to recognize X and/or Y as sub-constituents of Z in order to target that sub-constituent for reduplication: e.g. when reduplication targets either member of the compound (2c) or both members of the compound (2d). Cases of partial reduplication which target either the leftmost or rightmost member of a compound (2a and 2b, respectively) are potentially ambiguous with actual edge-marking of the compound as a whole (cf. 1a and 1b). A case in point is reduplication with N-V (noun incorporation) compounds in Paiwan, which reduplicates a suffixal disyllable corresponding to the nominal member of the compound, but where the semantics of the reduplication applies to the compound as a whole (3).

An example of a language targeting *either* member of a compound is Pima, where reduplication of either member of a noun-noun compound indicates pluralization of the whole compound (4). An example of targeting *both* members of a compound is found in Chinese, where both members of an adjective-adjective compound reduplicate separately (5a), indicating the targeting of the sub-constituents of the compound, as opposed to Chinese verb-verb compounds which reduplicate both members together, indicating edge-marking of the disyllabic structure as a whole (5b). A mixed system is found in Yaqui, where reduplication in verb-verb compounds can apply to either or both of the verbal elements, and where the semantics of the reduplicant takes scope over the reduplicated verbal element only (i.e. the semantics of the reduplicant does not apply to the entire compound *qua* compound) (6).

The consequences of targeting sub-constituents of compounds for reduplication are addressed in two competing theoretical models of reduplication: Morphological Doubling Theory (MDT) (Inkelas and Zoll 2005) and Correspondence Theory (McCarthy and Prince 1995/1999).

Since its major premise is that reduplication itself is a kind of compounding construction, MDT ought to be ideally suited to account for reduplication in other morphological compounding contexts. MDT abandons the phonological copying approach inherent to most theories of reduplication and proposes instead that reduplication involves semantic (rather than phonological) identity between two (potentially identical) daughters in a compounding construction where both daughters and the construction itself have their own co-phonologies (7). This model works well for cases like Yaqui, where the semantics of the “reduplicant” (daughter X) is related to the verb stem it attaches to (daughter Y) (e.g. *speak-speak-want* vs. *speak-want-want* in 6). However, a language like Pima (4) poses a problem for this view, in that the reduplication of *either* of the nominal stems indicates plurality of the entire compound. In short, MDT proposes a semantic input along the lines of *salt-salt-tree* or *salt-tree-tree* for the plural of ‘tamarack’ in example (4), whereas the semantic contribution of the reduplication consistently involves quantification (not ‘salt’, ‘tree’, etc.). This is a very robust generalization cross-linguistically and applies to both entities and events (Moravcsik 1978). This is the first of several conceptual problems for MDT.

Correspondence Theory, on the other hand, was primarily designed to account for reduplication via phonological association of a reduplicative affix with the stem to which it attaches, i.e. its “base”. I argue that if we adopt Shaw (2005)’s Constituent Base Hypothesis, where specific “bases” for reduplication are defined as either morphological or phonological constituents (via an ANCHOR constraint), the attested patterns of reduplication in compounds can be accounted for. A necessary distinction must be drawn between *targets* (morphosyntactic units to which reduplication applies) and *bases* (potentially distinguishable phonological sub-constituents of targets; cf. the contrast between a-ii and b-ii in 8).

Figures and Data

(1) Reduplication targeting the edges of Z:*

- | | |
|-----------------------------|--|
| a. [XY[x-yy] _z] | c. [(X)[xx-yy] _z (Y)] ~ [XXY[xx-yy] _z] ~ [[xx-yy] _z XYY] |
| b. [[xx-y] _z XY] | d. [X [xx-yy] _z Y] |

(2) Reduplication targeting the sub-constituents of Z:*

- | | |
|-----------------------------|--------------------------------------|
| a. [X-[x-yy] _z] | c. [(XX)-[xx-yy] _z -(YY)] |
| b. [[xx-y] _z -Y] | d. [XX-[xx-yy] _z -YY] |

(3) Reduplication of Noun-Verb Compounds in Paiwan (Chang and Wu 2006)

sa-'uma=aken	→	sa-'uma-' uma =aken
go.to-<AF>-home=1s.NOM		go.to<AF>-home- RED =1s.NOM
'I went home'		'I am going home'

(4) Reduplication of Noun-Noun Compounds in Pima (Munro and Riggle 2004)

'ònk-'ús		'ò- 'onk-'ús	~	'ònk-' ú- 'us	~	'ò- 'onk-' ú- 'us
salt-tree		RED -salt-tree		salt- RED -tree		RED -salt- RED -tree
'tamarack'		'tamaracks'		'tamaracks'		'tamaracks'

(5)a. Reduplication of Adjective-Adjective Compounds in Chinese (Feng 2006)

ming-bai	'bright-white'	“clean”	→	ming -ming- bai -bai	“clear” (intensified)
qing-song	'light-loose'	“relaxed”		qing -qing- song -song	“relaxed” (intensified)

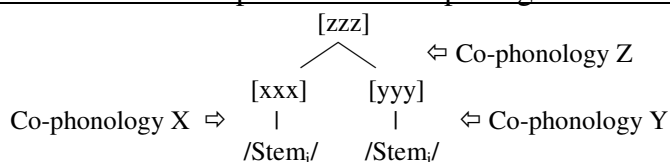
b. Reduplication of Verb-Verb Compounds in Chinese (Feng 2006)

yu-le	'entertain-enjoy'	“have fun”	→	yule -yule	“have some fun”
jie-shi	'explain-interpret'	“explain”		jieshi -jieshi	“explain a little”

(6) Reduplication of Verb-Verb Compounds in Yaqui (Harley and Haugen 2008)

nok-ii'aa	→	no -nok-ii'aa	→	nok- ii -ii'aa	→	no -nok- ii -ii'aa
speak-want		RED -speak-want		speak- RED -want		RED -speak- RED -want
'want to speak'		'want to be speaking'		'be wanting to speak'		'be wanting to be speaking'

(7) Schematic for Reduplication in Morphological Doubling Theory (Inkelas and Zoll 2005)



(8) Variable Reduplication in Mayo: Different Bases for Copying (Hagberg 1993)

a. Class 1 Verbs: Reduplicant = $\sigma_{\mu\mu}$; Target = Verb Stem; Base = Entire Verb Stem

- | | | | |
|-------------|---------------------|------------------------|---------|
| i. [om.té] | om .[óm.te] | * o' .['om.te] | 'hate' |
| ii. [no.ká] | nok .[nó.ka] | * non .[no.ka] | 'speak' |

b. Class 2 Verbs: Reduplicant = $\sigma_{\mu\mu}$; Target = Verb Stem; Base = 1st Syllable of Verb Stem Only

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|--------------|----------------------|------------------------|-------------------|
| i. [wóm].te | wóm .[wom].te | * wów .[wom].te | 'be frightened' |
| ii. [nón].ka | nón .[no].ka | * nók .[no].ka | 'know a language' |

*For purposes of clarity, linear ordering of the reduplicant and its target are ignored here, e.g.:

[[xx-y]_z-**Y**] ~ [xx-**Y**-y]_z etc.