Consonants in Malay rhythmic reduplication

Malay has a phenomenon called rhythmic reduplication, where the base is reduplicated with changes in vowels and/or consonants as in g[u]n[u]ng-g[a]n[a]ng 'mountain range', [h]erot-[b]erot 'very crooked' and li[a][n]-li[u][k] 'swaying'. Studies have shown that rhythmically reduplicated words are not governed completely by euphony, but they actually exhibit certain regularities (Abdullah 1974; Tham 1979; Hashim 1993; Boyé 2005; Mohd Yunus and Zaitul Azma 2011; Soh 2011). While a satisfactory level of understanding has been reached regarding the vowel changes involved in rhythmic reduplication, little is understood regarding the consonant changes. This study fills this gap in research.

A close investigation of the rhythmically reduplicated words discussed in previous studies and some others revealed that at least three generalizations can be made. First, only consonants that are native to Malay participate in the consonant alternation. These consonants and the positions in which they occur are summarized in (1). (2) shows all correspondence types attested in the dataset.

- (2) a. [p]indah-[r]andah 'to keep on moving about', tega[p]-tegu[n] 'robust'
 - b. [t]unggang-[l]anggang 'helter-skelter, topsy-turvy', go[t]ong-ro[j]ong 'mutual help'
 - c. [k]acau-[b]alau 'chaotic', [k]arut-[m]arut 'very messy'
 - d. $[\mathbf{g}]$ otong- $[\mathbf{r}]$ oyong 'mutual help'
 - e. [tf]irit-[b]irit/[tf]irit-[m]irit 'diarrhoea', ka[tf]au-ba[l]au/ka[tf]au-bi[r]au 'chaotic'
 - f. [s]aki-[b]aki 'remainder', [s]ayur-[m]ayur 'all kinds of vegetables', [s]enang-[l]enang 'very comfortable'
 - g. [l]auk-[p]auk 'all sorts of side dishes', la[l]u-lan[d]ang 'back and forth'
 - h. $[\mathbf{r}]$ emeh- $[\mathbf{t}]$ emeh- $[\mathbf{t}]$ emek 'unimportant', hi $[\mathbf{r}]$ uk-pi $[\mathbf{k}]$ uk 'uproarious', he $[\mathbf{r}]$ ot-be $[\mathbf{p}]$ ot 'in a mess'
 - i. [h]iruk-[p]iruk 'uproarious', reme[h]-ceme[k] 'unimportant', [h]erot-[b]erot 'in a mess', [h]ina-[d]ina 'the poorest'
 - j. $\mathrm{jeli}[\pmb{\eta}]$ - $\mathrm{jelua}[\pmb{t}]$ 'to ogle at', $\mathrm{lia}[\pmb{\eta}]$ - $\mathrm{liu}[\pmb{k}]$ 'swaying'

Second, the corresponding consonants differ in their manners of articulation, with a single exception of 'k-b' (2c). Third, when epenthesis (3a) or deletion (3b) occurs, a coda rather than an onset is targeted. These processes are thought to occur to avoid identity in the syllable structure between the base and the reduplicant (cf. Stanford 2007).

- (3) a. beli-bela[h] 'to shop', batu-bata[n] 'all sorts of stones', lalu-lala[η]/ lalu-la[n]da[η] 'back and forth', tu[η]kus-lumus 'industrious'
 - b. $\operatorname{gerak-geri}[\emptyset]$ 'movements', $\operatorname{licin-licau}[\emptyset]$ 'very smooth'

There are two well-defined classes of words that normally comply with the three generalizations but sometimes diverge from them slightly. One is compounds (e.g. anak-pinak 'descendants'), where both component parts are (or used to be) independent meaningful morphemes that contribute to the meaning of the whole word. The other class involves quasi-reduplication (e.g. aram-temaram 'dim'), where neither component part is an independent meaningful morpheme. These classes differ from genuine rhythmically reduplicated words in that the input is already reduplicated.