There are no "Glides" in Malay: An Optimality Theoretic Account

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1.0 Introduction

As is well-known, the sonority hierarchy plays a major role in determining the nucleus and margins of the syllable. Vowels are more sonorous than consonants, and therefore they make more harmonic nuclei and less harmonic margins. Within the vowels, the high vocoids are less sonorous than the non-high ones. Thus, in accordance with the Sonority Sequencing Generalisation\(^1\) (or Sonority Sequencing Principle) (Selkirk 1984:116), the high vowels can qualify as margins in the pre-, post- and intervocalic environments.

In the literature, high vowels occurring in the margins are commonly referred to as ‘glides’, and generally being classified as [-syllabic, -consonantal] segments in SPE (Chomsky & Halle 1968). There are however strong objections against the use of the SPE feature [± syllabic] for representing syllabicity. Syllabic alternations have been examined in numerous languages, and for the most part appear to be predictable and non-distinctive (Blevins 1995:221). Syllabic has been established to be a consequence of both segmental substance and relational adjacency. Thus, most phonological theories accept that syllable structures are not present in the lexicon, and are generated in the course of phonological derivation. In compliance with this assumption, a specification [± syllabic] becomes meaningless and therefore should be discarded. An obvious consequence of the ban on [± syllabic] is that there is no such thing as ‘glides’, if by ‘glide’ is meant a [-syllabic] high vowel (Roca 1997).

In the spirit of Roca (1997), I crucially claim that there are no such segments as ‘glides’ in Malay, as there are no phonological grounds for establishing them. This contradicts
the previous view about ‘glides’, which are regarded as members of the underlying inventory of contrasting phonological segments in the language (Abdullah 1974, Yunus 1980, Farid 1980, Teoh 1994). I suggest that there is no difference in phonological substance between ‘glides’ and high vowels, the distinction between the two arising exclusively from their respective syllabification.

In this paper, I attempt to show that the emergence of the so-called ‘glides’ in Malay is due to the syllabification of high vowels in the syllable margins. The present analysis is couched in the constraint-based approach of Optimality Theory (henceforth OT) (Prince & Smolensky 1993, McCarthy & Prince 1993a).

This paper is organised as follows. Section 2.0 displays some relevant examples illustrating surface syllabification of high vowels. Section 3.0 offers an OT account on the emergence of the so-called ‘glides’.

2.0 Data: Surface Syllabification of High Vowels

For the purposes of this paper, I primarily examine syllabification of high vowels within morphemes. To begin with, I lay out some of relevant examples illustrating surface syllabification of high vowels in three different positions, namely prevocalic, intervocalic and postvocalic, as listed in (1) below. For convenience, the occurrence of high vowels /i, u/ in margin positions is conventionally transcribed as [y, w].

1. Surface syllabification of high vowels morpheme-internally

   a. Prevocalic position - .HV(C).

\[
\begin{align*}
[\text{wa.ni.}] & \quad \text{‘fragrance’} \\
[\text{ya.ken.}] & \quad \text{‘to convince’} \\
[\text{yu.ran.}] & \quad \text{‘fee’} \\
[\text{waŋ.}] & \quad \text{‘money’} \\
[\text{kah.wen.}] & \quad \text{‘to marry’} \\
[\text{daŋ.wat.}] & \quad \text{‘ink’} \\
[\text{kas.wi.}] & \quad \text{‘a kind of cake’}
\end{align*}
\]
b. Intervocalic position - CV.HV(C).

(i)  [le.wat.]  ‘late’
    [la.wan.]  ‘enemy’
    [wa.yaŋ.]  ‘movie’
    [la.yu.]  ‘to wither’
    [ku.yu.]  ‘half closed eye’
    [se.wə.]  ‘rent’

(ii)  [bu.wah.]  ‘fruit’
    [ku.weh.]  ‘cake’
    [si.yap.]  ‘complete’
    [ku.wi.ni.]  ‘a kind of mango’
    [pi.yu.taŋ.]  ‘loan’
    [bi.ya.se.]  ‘usual’
    [mōŋ.ku.waŋ.]  ‘screw-pine’

(c. Postvocalic position - CVH.

    [pi.siaw.]  ‘knife’
    [gu.raw.]  ‘to joke’
    [pa.kay.]  ‘to wear’
    [pan.day.]  ‘clever’
    [sə.poj.]  ‘blowing softly’
    [do.doy.]  ‘lullaby’
    [taw.lan.]  ‘friend, comrade’
    [hay.ran.]  ‘surprised, wonderment’

The descriptive generalisations that are observed in (1) can be summarised as follows: (i) in morphemes with sequences of three vowels, the intervocalic high vowel is always parsed in the onset (1b) and (ii) in morphemes with sequences of two vowels, the high vowel is parsed tautosyllabically either in the coda (1c) or in the onset (1a), depending on whether it occurs in postvocalic or prevocalic position.
3.0 The Syllabification of High Vowels

It is apparent that heterosyllabic parsing of vowel sequences within a morpheme is disfavoured in the language. Underlying clusters with prevocalic, postvocalic and intervocalic high vowels cannot be syllabified heterosyllabically. For instance, underlying /HV, /VH/ or /VHV/ (i.e. V stands for vowel and H for high vowel) cannot be parsed as [H.V], [V.H] or [V.H.V]. The optimal way of resolving a hiatus is by syllabification that is by parsing the high vowels in the margin.

Within the OT framework, the process of syllabification is a matter of choosing the optimal output from among the possible analyses rather than algorithmic structure building (Prince & Smolensky 1993:15). Syllable structure is generated under Optimality Theory in the same way as any other grammatical property by the function GEN, which produces a set of candidates with various possibilities of syllable parsing from each unsyllabified input. These possible candidates are then evaluated in parallel by the function EVAL based on a language particular constraint hierarchy. As expected, a candidate that minimally violates the constraints in the hierarchy is termed optimal and pronounced as the true output.

The process of syllabification is primarily an interaction of the faithfulness constraints and the syllable structure constraints. The relevant formal constraints that belong to these two families are as follows:

2. Faithfulness constraints (McCarthy & Prince 1995)
   MAX-IO - every segment in the input must have a correspondent in the output
   DEP-IO - every segment in the output must have a correspondent in the input

3. Syllable structure constraints (Prince & Smolensky 1993)
   ONSET - Syllables must have onsets