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The minimal word in Seri

Stephen A. Marlett

*Data are presented in support of the claim that the minimal word and minimal root in Seri must be bimoraic. The bimoraicity condition may be met by rhymes that are heavy in more than one way.**

1. Introduction

It has been claimed that “in many languages words of one mora or one syllable are avoided: a minimal bimoraic/disyllabic requirement is imposed” (Kenstowicz 1994:640). An early survey of languages with minimal word requirements is given in Hayes (1995:88), and Hammond (1999:41) claims English is a language of this type. This short article presents evidence that such a restriction is found in Seri, a language isolate spoken in northwestern Mexico,¹ and, furthermore, that the restriction also applies to roots. The evidence is limited to the existence or nonexistence of particular types of words and roots.² It is claimed that the minimal word constraint requires bimoraicity in this language.

2. Data and discussion

While some languages require that a minimal word be disyllabic, it is obvious that this is not the case for Seri since many words are monosyllabic; see the data in tables 1-10. This fact indicates that if a minimal word constraint holds for Seri, it must require two moras and not two syllables.

The most common claim in linguistics has been that a syllable is bimoraic (or heavy) by virtue of having a heavy rhyme; see Gordon (2006) and the works cited there. (For argumentation that onsets may contribute to syllable weight in some languages, however, see Topintzi 2010.) A rhyme is heavy by having (a) a branching nucleus (a diphthong or a long vowel) or (b) a coda in addition to the nucleus. Seri has examples of both kinds of heavy rhymes.

As made explicit in (1), the two moras in Seri monosyllabic words may result from heavy nuclei of different types. Illustrative data are presented in the tables referenced in (1).³

*I thank Jim Roberts for his comments on an earlier version of this paper.

¹ISO 639-3 code [sei]. More information about the phonology of Seri may be found in E. Moser & M. Moser (1965) (an earlier analysis of various facts), Marlett (1981), Marlett & Stemberger (1983), Marlett (1988), Marlett, Moreno Herrera & Herrera Astorga (2005), and Marlett (2008).

²The data are presented here in broad transcription using the symbols of the International Phonetic Association (IPA 1999). Data are taken from Marlett (2008) and M. Moser & Marlett (2010). Marlett (2008) also provides additional discussion. Mollusk identifications have been updated to agree with C. Marlett (2014). The hyphens in words below indicate a morpheme boundary after the overt subject nominalizer prefix /k-/. It is also postulated, but irrelevant here, that a transitive marker /i-/ occurs underlyingly after the nominalizing prefix when the verb is transitive (such as example (f) in table 1, /kka:/, from underlying {k-i-ka:} (by standard assumptions of generative phonology). This prefix {i-} shows up phonetically only when the root begins with a short low vowel.

³This analysis was proposed in E. Moser & M. Moser (1965) and has been maintained in all work on Seri phonology since then. Such sequences of vowels are definitely perceived as being monosyllabic and hence taken as containing diphthongs; even in slow speech, these are *not* pronounced as two syllables.

- (1) Types of monosyllabic words with heavy nuclei and no coda
- a. Long vowel; see table 1.
 - b. Two short vowels; see table 2.
 - c. Long vowel followed by a short vowel; see table 3.
 - d. Short vowel followed by a long vowel; see table 4.

a.	'ʔa:	there (adverb)
b.	'ʔɛ:	antelope jackrabbit (<i>Lepus alleni</i>)
c.	'kɛ:	red-breasted merganser (<i>Mergus serrator</i>)
d.	'k-ɛ:	who says
e.	'k-i:	who hears it
f.	'k-ka:	who looks for it
g.	'ko:	shovelnose guitarfish (<i>Rhinobatos productus</i>)
h.	'k-pi:	who tastes it
i.	'tɛ:	wrinkled spineflower (<i>Chorizanthe corrugata</i>)
j.	'χa:	soon
k.	'χxi:	bottle gourd (<i>Lagenaria siceraria</i>)

Table 1 Monosyllabic words with long vowels and no coda

a.	'ʔai	head louse (unpossessed)
b.	'ʔai	air, wind
c.	'koi	still (adverb)

Table 2 Monosyllabic words with a vowel cluster and no coda

a.	'k-a:i	who makes it
b.	'k-a:o	who passes by it
c.	'k-o:i	who goes with the intention of acquiring it
d.	'ja:o	its path (a form related to /ka:o/ in (b))

Table 3 Monosyllabic words with a long vowel followed by a short vowel

Morpheme-internally, diphthongs occur only in the stressed syllable of the word; Syllables without onsets only occur word-initially. Other evidence supports this analysis as well. Seri would have “yes” for the first five parameters presented in Blevins (1995:218-219), assuming that word-initial onsetless syllables are permitted by a positive specification for the Obligatory Onset parameter. What is important to note here is that these parameters are not complete; Blevins points out (1995:239, note 35) that “for languages with complex nuclei, a further specification of one (unmarked) or two (marked) *additional* elements is necessary” (emphasis added — SM). This additional markedness in complex nuclei is clearly evident in the Seri data.

- a. 'k-ai: who is mature
- b. 'k-ai: who wakes up part way
- c. 'k-oi: who are standing
- d. 'toi: toward somewhere else (adverb)

Table 4 Monosyllabic words with a short vowel followed by a long vowel

As shown in (2), Seri monosyllabic words also may have two moras by having a coda. The types of words mentioned in (2c-e) are doubly heavy, but this seems to have no significance; they are included here simply for the sake of completeness.⁴

- (2) Types of monosyllabic words with heavy rhymes
 - a. Short vowel in the nucleus and a simple coda; see table 5.
 - b. Short vowel in the nucleus and a complex coda; see table 6.
 - c. Long vowel in the nucleus and a simple coda; see table 7.
 - d. Long vowel in the nucleus and a complex coda; see table 8.
 - e. Complex nucleus and a simple coda; see table 9.
 - f. Complex nucleus and a complex coda; see table 10.

- a. 'ak canvasback (duck) (*Aythya valisineria*)
- b. 'ʔap mule deer (*Odocoileus hemionus*)
- c. 'ʔax water
- d. 'kam a bark boring beetle
- e. 'kap palo blanco (*Acacia willardiana*)
- f. 'k-is what is raw
- g. 'kos a plant (*Maytenus phyllanthoides*)
- h. 'nas a small milkweed vine (*Matelea pringlei*)
- i. 'saʔ great horned owl (*Bubo virginiana*)
- j. 'stak coral
- k. 'tom money

Table 5 Monosyllabic words with a short vowel and a simple coda

⁴It is interesting to note that final consonants are considered extrametrical for the purposes of stress assignment in Seri (Marlett 2008). Thus there is a difference in the behavior of codas in the phonology of the language.

a.	'ʔant	land, earth, year
b.	'ʔast	stone, rock, mountain
c.	'ʔaxʔ	multicolored clam (<i>Leukoma grata</i>)
d.	'iskt	his/her/its lungs
e.	'k-aptx	what is wide
f.	'kops	lightning bug (<i>Lampyridae</i>)
g.	'koft	cricket (<i>Gryllidae</i>)
h.	'kotχ	brittle bush (<i>Encelia farinosa</i>)
i.	'ptkamn	Cortez spiny lobster (<i>Panulirus inflatus</i>)
j.	'χpɛ:tk	a seaweed (<i>Colpomenia tuberculata</i>)

Table 6 Monosyllabic words with a short vowel and a complex coda

a.	'ʔa:n	smooth Pacific Venus clam (<i>Chionista fluctifraga</i>)
b.	'ʔa:p	wild tepary (plant) (<i>Phaseolus acutifolius</i>)
c.	'ʔɛ:ʔ	mallard (<i>Anas platyrhynchos</i>)
d.	'ki:t	little heart shell (<i>Carditamera affinis</i>)
e.	'ko:ʔ	net bag
f.	'k-o:m	who is lying down
g.	'k-o:s	who sings
h.	'pɛ:n	carrying pole, yoke
i.	'ʃi:k	bird (general term)
j.	'χɛ:n	raccoon (<i>Procyon lotor</i>)

Table 7 Monosyllabic words with a long vowel and a simple coda

a.	'ka:mx ^w	western screech owl (<i>Megascops kennicottii</i>)
b.	'ka:nx	Gulf grouper (<i>Mycteroperca jordani</i>)
c.	'k-a:pʔ	what is cold
d.	'ka:tk	grasshopper
e.	'k-o:kp	what grows (like fruit)
f.	'k-o:kx	what are two
g.	'ʃɛ:mx	smoothhound shark (<i>Mustelus</i> sp.)
h.	'χa:sx	cardon (cactus) (<i>Pachycereus pringlei</i>)
i.	'χɛ:skʔ	desert lavender (<i>Hyptis albida</i>)
j.	'χto:ʃp	desert ground-cherry (<i>Physalis crassifolia</i>)

Table 8 Monosyllabic words with a long vowel and a complex coda

a.	k-a:iʃ	what is spacious
b.	k-a:ix	(the verb in the idiom for dizzy)
c.	k-a:oʃ	what is grooved
d.	k-a:om	who asks for a gift from him/her
e.	k-oa:n	what is murky
f.	koi:ʃ	a category of non-poisonous spider
g.	k-oi:x	what is tubular
h.	k-o:it	who dances
i.	pa:ix	narrowleaf willow (<i>Salix exigua</i>)
j.	jai:x	long sand dune

Table 9 Monosyllabic words with a complex nucleus and a simple coda

a.	k-a:isχ	who cleans it
b.	k-oa:ʃp	who jumps upwards
c.	koa:ʃt	whirlwind over land
d.	koε:pt	Gambel's quail (<i>Callipepla gambelii</i>)
e.	k-o:ipx	what is oval

Table 10 Monosyllabic words with a complex nucleus and a complex coda

We also note that there are virtually no nouns, verbs or adjectives without two moras.⁵ See (3) for a short list of “words” that represent a large set of unattested items whose absence in the language requires explanation.

- (3) Unattested major class words: 'pa, 'to, 'ki, 'sε, 'χa, 'sta, 'k-o, 'k-sa

Kenstowicz points out that “systems that impose minimal length restrictions typically allow deviations in the nonlexical vocabulary” (1994:640); see also the discussion in Hayes (1995:88). In Seri there are non-lexical words that do not have two moras, as shown in table 11. All of the items in table 11 are written as orthographic words in the community-based writing system although most are clitics.

⁵The passive stem of *vi*: ‘hear’, which has a prefix *p-* that conditions an ablaut process, has a short vowel for some speakers, as in /^htpe/ (‘it was heard ...’).

a.	ʔa, ka, pi	Auxiliary words (enclitics)
b.	ʔa, ʔi, ʔ, aʔ	Focus words (enclitics)
c.	'ʔε	I, we (independent pronoun) ⁶
d.	i	Certainty (enclitic)
e.	ma, ta	Different Subject markers (enclitics)
f.	'mε	you (sg., pl.) (independent pronoun)
g.	ʃo, ʃ	Singular indefinite article/pronoun ⁷
h.	'ʃo	how?
i.	χ	Unspecified Time (enclitic)
j.	χo	Emphatic (enclitic)
k.	'χo	but

Table 11 Non-lexical words that do not have heavy rhymes

McCarthy & Prince (1995:323) point out that there is “one important language-specific aspect” to prosodic word minimality, and that is “the level at which the minimality requirement is imposed.” In the case of Seri, it appears to be true that roots and not just words are subject to the minimality requirement. See the examples in (4) for another short list of “words” that represent a large set of unattested items whose absence in the language requires explanation,⁸ although there may be one or two exceptional verbs (not discussed here).⁹

(4) Unattested: 'k-a, 'k-i, 'k-o, 'k-ε, 'k-ta, 'k-ti, 'k-to, 'k-tε, 't-o-tim, i-'t-e-tim, i-t-'sa, i-jo-'sa-tox

3. Conclusion

The data presented in this article support the claim that prosodic words and even roots in Seri must be bimoraic. This statement could be refined even more if prosodic structure is directly related to foot structure (see McCarthy & Prince 1995:321, where it is claimed that a prosodic word must consist of a foot). If this were true, and given that Seri stress is quantity-sensitive (Marlett 2008), one could deduce that the minimal word in Seri will allow heavy monosyllables and disallow light monosyllables. Since Garrett (1999) argues that this direct relationship between foot structure and possible word cannot be maintained when a large sampling of languages is considered, a simple constraint on word (and root) minimality is adopted here.

⁶This word is distinguished orthographically from the word (b) in 1, but they are very similar phonetically. I also point out that while this pronoun and the second person pronoun below in this same table have traditionally been ambiguous for number, innovative plural forms ('ʔε-tax and 'mε-tax, respectively) have been documented in Larios Santacruz (2009).

⁷Preconsonantal and prevocalic allomorphs, respectively. The article, which is phrase final, “wrong-way” cliticizes to the word that follows.

⁸The (unattested) roots have been inflected here with common verb prefixes (/i-/ , /t-/ , /jo-/ , /k-/) and suffixes (/ -tim/ , / -tox/). The cluster /kt/ is one of many possible complex onsets in Seri. See Marlett (1988).

⁹The root glossed ‘move’ that is found in the verb /'mo-k-a/ ‘who comes’ (toward-SUBJECT.NOMINALIZER-move) is ostensibly monomoraic, but it only occurs in conjunction with a directional prefix; see also /(i)n'ti-k-a/ ‘who goes’ (away-SUBJECT.NOMINALIZER-move). This root is also unusual in that it requires that the stress be cast on a preceding syllable unlike the vast majority of roots in the language (on which stress must fall). The /i/ after the prefix {nt} in the direction ‘away’ form in /(i)n'ti-k-a/ ‘who goes’ is epenthetic and present only to receive the stress if there is no other vowel available.

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