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VOWEL EPENTHESIS AS A PARAMETER SETTING STRATEGY IN GICHUKA LOANWORDS

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Citation: Mbaka, N.W. (2016). Vowel Epenthesis as a Parameter Setting Strategy in Gichuka Loanwords. In: Isutsa, D.K. and Githae, E.W. *Proceedings of the Second Chuka University International Research Conference held in Chuka University, Chuka, Kenya from 28th to 30th October, 2015. 431-441 pp.*

ABSTRACT

Natural languages undergo changes at the phonological, morphological, lexical, grammatical and semantic levels. It is realised easily at lexical level occasioned by lexical borrowing. The study of loanwords has played an important role in the development of phonological theories and in cross-linguistic studies in recent years. Loanword phonology presents a rich empirical ground for examining topical question in phonology. Loanwords help linguists find more about native phonology, especially so in studying the role of native phonological contrasts in phonological processes. This study looked at vowel epenthesis as a phonological process used to adapt lexical items borrowed from English to Gichuka. The data were collected in Tharaka-Nithi County using interviews, observation and focused group discussions. The sample was based on 10 domains namely: education, agriculture, clothing, electrical goods and technology, religion, health, trade and industry, household goods, food and administration. The theory of Government Phonology was used in data analysis. The processes of vowel epenthesis in Gichuka loanwords can be explained using branching structure and domain-final empty nuclei. Vowel epenthesis is a parameter setting strategy in adapting lexical items that Gichuka has borrowed from English. Applicability of the theory of Government Phonology in the nativisation of loanwords will be reported.

Keywords: Government phonology Theory, Parameter, Vowel epenthesis

INTRODUCTION

Constituents in Government Phonology Theory

In GP the phonological word is divided into three constituents. These are the Onset (O), the nucleus (N) and the Rhyme (R). The Rhyme is the head of the nucleus and the nucleus is therefore the first projection of the rhyme (Cyran, 1995). An illustration of the onset, nucleus, and rhyme is shown in Figure 1(a) and 1(b).



(1)

Figure1: Onset, Nucleus, Rhyme Adapted from ‘ A government Approach to Automatic Speech Recognition’.by S. Ahern, 1999, p. 25.

Figure 1(a) shows the onset and Figure 1(b) shows that the left branch of every Rhyme is the nucleus constituent. The head of the nucleus is also the head of the rhyme.

Parameters in Government Phonology

In GP, the syllabic constituents: Onset, Nucleus, Rhyme are maximally binary, that is, they may contain up to two positions. However, not all languages exploit the binality of constituents. Kaye (1990) and Cyran (1995) propose that the choice between branching (languages that exploit binality of constituent) and non-branching constituents is parameterized across languages. The parameter on branching structure can be summarized as follows:

Branching

Onset	Yes/No
Nucleus	Yes/No
Rhyme	Yes/No

If in all the constituents there is no branching, then the language has a non-branching structure and the parameter is OFF. On the other hand, if there is any constituent that branches in a language, then the parameter is ON in that language. It is also proposed that languages that have branching onsets also have branching rhymes (Cyran, 1995). The other parameter is the parameter on domain final empty nuclei. If the final nuclei must always be realised in a language then the parameter is OFF, but if it is not always realised then the parameter is ON. This parameter is related to the coda-licencing principle. In languages where the parameter is ON, the slot is present but remains empty as shown in Figure 4 (a) and (b).

Kula (2002) argues for the representation of vowel-initial words by licensing empty onsets by using a universal parameter (like the domain-final nuclei). By so doing, parametrically, languages may p-license word initial onsets. This then introduces a third parameter on domain-initial empty onsets. If in the language words can start with a vowel, the parameter is ON but if they cannot, then the parameter is OFF. This brings the total number of parameters to three:

- (i) Parameter on branching structure
- (ii) Parameter on domain-final empty nuclei.
- (iii) Parameter on domain-initial empty onsets (Kula, 2002).

Gichuka Parameter Settings

- (i) Parameter on branching constituents [OFF]
- (ii) Parameter on domain-final empty nuclei [OFF]
- (iii) Parameter on domain initial empty onsets [ON]

The parameter on branching nuclei is OFF in Gichuka meaning that the two languages are represented with no branching constituents. The Parameter on domain-final empty nuclei is OFF in both languages meaning

that the final vowel is always realised. The parameter on domain-initial empty onset is ON meaning that some words in both languages start with a vowel.

English Parameter Settings

- (i) Parameter on branching constituents [ON].
- (ii) Parameter on domain-final empty nuclei [ON])
- (iii) Parameter on domain initial empty onsets. [ON] (Cyrus: 1995).

The parameter on branching nuclei is ON in English meaning English has branching constituents. The Parameter on domain-final empty nuclei is ON in English meaning that the final vowel is not always realised. The parameter on domain-initial empty onset is ON meaning that some words in English start with a vowel.

RESULTS

Vowel Epenthesis refers to the addition of one or more vowel sounds in the middle or final position of a word. Vowel epenthesis is a very common phonological process in loanword nativisation (Ziveng, 2005).and Uffman (2004) observe that vowels are epenthesized in loanword nativisation if the borrowing language has tighter phonotactic constraints than the donor language. The GP explanation is different.

In GP, this process occurs because languages vary parametrically on two parameters; branching/ non-branching structure and domain-final empty nuclei which may or may not be realised. Because the parameter on branching vs non- branching accounts for vowel epenthesis in middle position and the parameter on domain-final empty nuclei accounts for vowel epenthesis in final position, each epenthesis will be dealt with differently starting with vowel epenthesis in middle position.

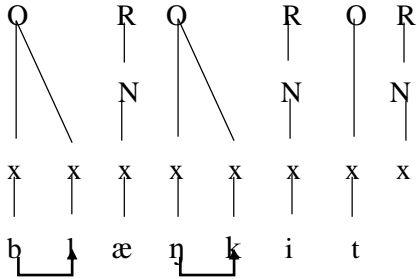
Vowel Epenthesis in Middle Position

Vowel Epenthesis in middle position takes place in adapting English loanwords into Gichuka in order to set the parameter on branching structure. Gichuka is a non-branching language while English is a branching language. The five examples given below illustrate the branching (English) and non-branching (Gichuka) nature of languages. As per the coda licensing principle, post nuclear rhymal positions must be licensed by a following onset. The empty nuclei in the structures in the structures that follow are sanctioned via the Empty Category Principle.

Arrows indicate government. In English, within constituents there is constituent government between the first branch (governing head) and second branch (governee) of a constituent. Constituent government proceeds from left to right. Also in English, there is inter-constituent government between a rhymal complement and a following onset. Inter-constituent government proceeds from right to left. In Gichuka there is inter- constituent government in a long vowel which will be presented on two timing slots and inter-onset government between two onsets separated by an empty nucleus allowed to remain empty under the Empty Category Principle (ECP) in the representation of NC clusters. Conditions on government apply, that is, strict directionality and strict locality. Branching nuclei are headed. Non branching nuclei are headless. In the Gichuka structures, the rhyme ceases to be a constituent because the language is represented on a non-branching structure.

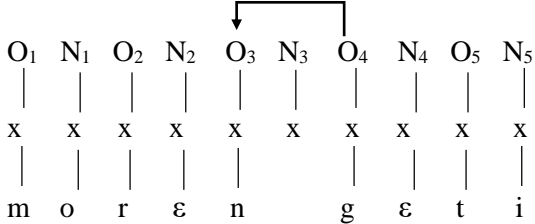
(1) Blanket

- a. English: / blæŋkit /
- b. Gichuka: / moreŋgeti /
- a. English : Branching Onsets in English (Parameter on Branching Structure- ON)



In the English word *blanket* /blæŋkɪt/, there are two branching onsets and the constituents in the branching onsets contract a constituent government relation where /p/ acts as the head which governs /l/ and /ŋ/ acts as the head which governs /k/ because constituent government proceeds from left to right. The domain final nucleus is empty and it is sanctioned through the Empty Category Principle (ECP). The ECP allows a position in the P⁰ to receive no phonetic interpretation because it is licensed through prosodic licensing (p-licensing). A domain final category is p-licensed through parameter.

b. Gichuka: Non- Branching (Parameter on Branching Structure- OFF)



/moreŋɛti/

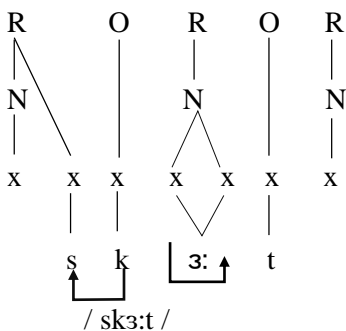
In the Gichuka word *morengeti* /moreŋɛti/ (1b), vowel epenthesis has occurred in the insertion of singular prefix *mo-*, which is a nominalizing prefix for class 2 nouns and the prefixation leads to the formation of the domain initial ON pair. The consonant cluster /bl/ is replaced by combining /r/ with /ɛ/ in the second ON pair. The second consonant cluster /ŋk/ is formed through nasal prefixation (NC). In Gichuka, the final vowel is always realised so the domain-final slot it is not empty. No government relations are contracted in the adapted word because Gichuka has a non-branching structure. Licensing relations are contracted between the ON pairs.

(2)

a. English /skɜ:t/

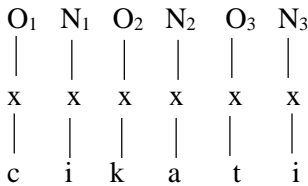
b. Gichuka /cikati/

a. English: Branching Onset and Nucleus (Parameter on Branching Structure- ON)



The English word skirt /skɜːt/ has a branching rhyme and a branching nuclei and there is inter-constituent government between /s/ and /k/ and constituent government between the long nuclei. /s/ is represented as a rhymal complement and /k/ as an onset and the nuclei slot is empty and p-licensed through magic licensing.

b. Gichuka: Non branching (Parameter on Branching Structure- OFF)



/cikati/

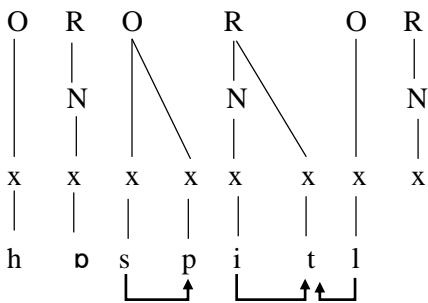
Vowel epenthesis in the middle position in the Gichuka word cikati /cikati/ gives a non-branching structure where the nuclei license the onsets in the ON pairs.

(3) Hospital

a. English /hɒspɪtl/

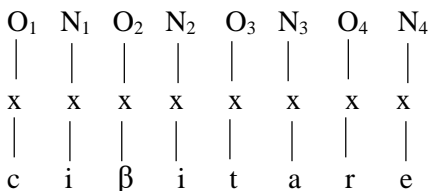
b. Gichuka /ciβitare/

a. English: Branching Onset and Rhyme (Parameter on branching structure-ON)



The English word hospital /hɒspɪtl/ has a branching onset and a branching rhyme. A constituent government is contracted between the segments in the onset /s/ and /p/ and also between /i/ and /t/ and an inter constituent government is contracted between the rhymal complement /t/ and the following onset /l/.

b. Gichuka: Non-branching (Parameter on branching structure OFF)



/ciβitare/

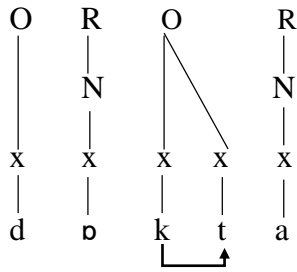
Vowel epenthesis in the middle position in the Gichuka word cibitare /ciβitare/ gives a non-branching structure where the nuclei license the onsets in the ON pairs.

(4) Doctor

a. English: /dɒkta/

b. Gichuka: /ndaɣetare /

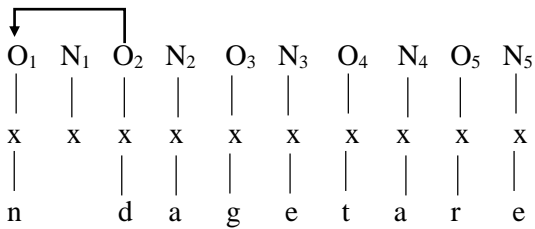
a. English : Branching Onset (Parameter on Branching Structure - ON)



/dɒkta/

The English word doctor /dɒkta / has a branching onset and there is a constituent government relation between the head / k / and the complement / t /.

b. Gichuka: Non-Branching (Parameter Branching Structure - OFF)



/ ndaɣetare /

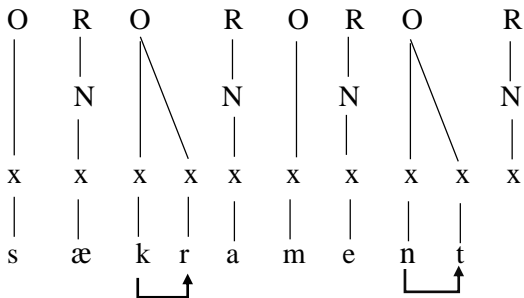
Vowel epenthesis in the middle position in the Gichuka word ndaɣetare / ndaɣetare / gives a non-branching structure where the nuclei license the onsets in the ON pairs. An inter-onset government relation is contracted between the nasal and the consonant in the NC cluster.

(5) Sacrament

a. English /sækrament /

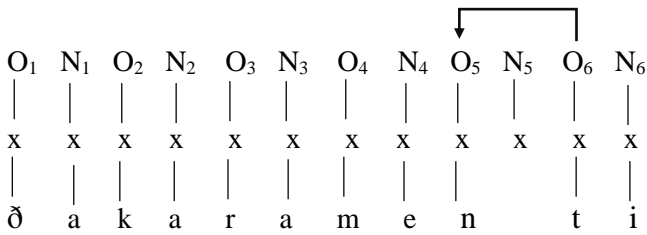
b. Gichuka / ðakaramenti /

a. English : Branching Onsets (Parameter on Branching Structure ON)

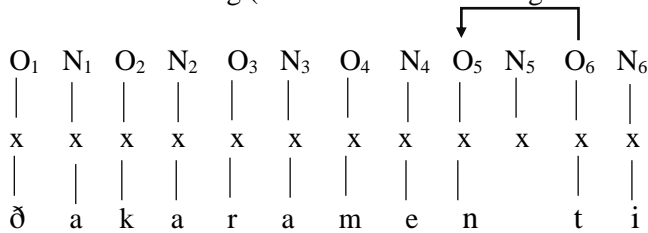


/sækrament /

The English word sacrament /sækrament / has two branching onsets within which constituent government is contracted within the branching constituents.



b. Gichuka : Non-branching (Parameter on Branching Structure ON)



/ ðakaramenti /

The epenthesis of the vowel / a / in the middle position in the Gichuka word thakaramenti / ðakaramenti / gives a non-branching language structure where the nuclei license the onsets in the ON pairs and in the NC (nt), the plosive / t / contracts an inter-onset government relation with the nasal / n /. The empty nuclei N₅ is licensed by N₆ at the nuclei projection and allowed to be empty under the ECP.

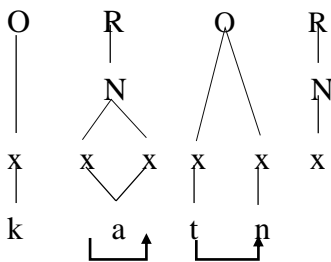
Vowel Epenthesis in Domain- Final Position

Vowel Epenthesis in domain final position is also a parameter across languages in GP. In Gichuka, the final vowel must be realized while in English the final vowel need not be realised. The parameter is OFF in Gichuka but ON in English. All the lexical items borrowed from English have the domain final nuclei realized. This is illustrated in the five examples analysed from 6-11. The Empty Category Principle and government conditions stated in section (12.1) apply in this section as well.

(6) Carton

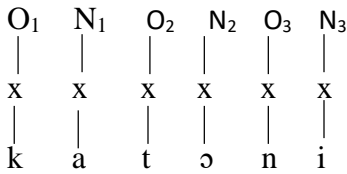
- a. English / ka:tn /
- b. Gichuka / ka:tɔni /

a. English : Unrealized domain final nuclei

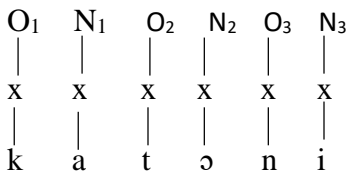


/ katn/

In the English word ‘carton’, the domain-final nucleus is unrealized. Constituent government is contracted in the branching rhyme and branching nucleus in the English word / katn /



b. Gichuka : Realized Domain final Nuclei



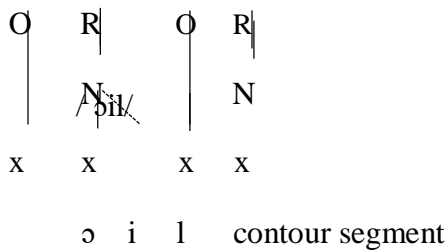
/ ka:tɔni /

In the Gichuka word ‘Katoni’, the domain-final nucleus is realized through epenthesis of / i /.

(7).Oil

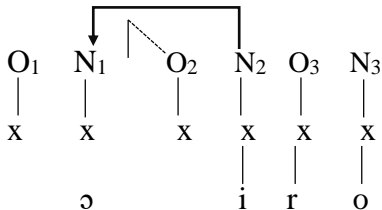
- a. English / ɔil /
- b. Gichuka / oiro /

a. English : Unrealized domain final nuclei



In the English word ‘oil’, the domain-final nucleus is empty.

b. Gichuka : Realized domain final nuclei



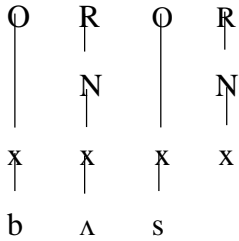
/ oiro /

In the Gichuka word oiro/ oiro /, the domain-final nucleus is realized through epenthesis of /o /. The empty onset in 8(b) is p-licensed (an onset within an inter-nuclear domain).

(8) Bus

- a. English /bʌs/
- b. Gichuka /mbaði/

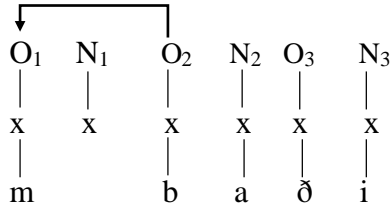
a. English : Unrealized domain final nuclei.



/ bʌs/

In the English word bus' /bʌs /, the domain-final nucleus is unrealized.

b. Gichuka : Realized domain final nuclei



Inter-onset government

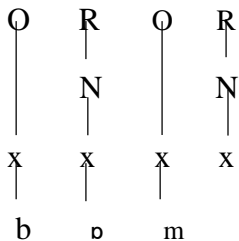
/mbaði/

In the Gichuka word mbathi/ mbaði//, the domain-final nucleus is realized through epenthesis of /i /.

(9) Bomb

- a. English /bɒm/
- b. Gichuka /mbɔmu/

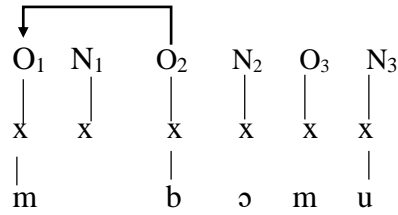
a. English : Unrealized domain final nuclei



/ bɒm /

In the English word bomb' /bɒm. /, the domain-final nucleus is unrealized.

b. Gichuka: Realized domain final nuclei



Inter-onset government

/mbɔmu/

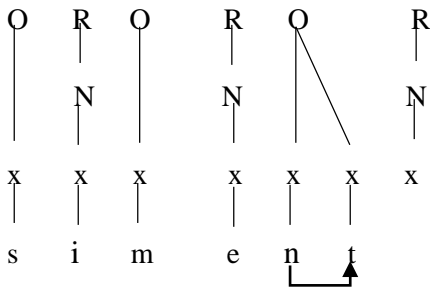
In the Gichuka word mbomu / mbɔmu /, the domain-final nucleus is realized through epenthesis of /u /

(10) Cement

a. English /siment/

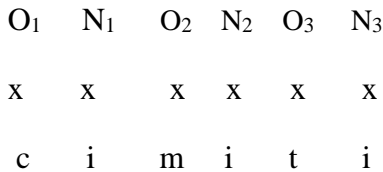
b. Gichuka / cimiti/

a. English : Unrealized domain – final nuclei



/siment /

In the English word cement /siment / the domain-final nucleus is unrealized.



b. Gichuka : Realized domain final nuclei



/cimiti /

In the Gichuka word cimiti / cimiti /, the domain-final nucleus is realized through epenthesis of / i /.

SUMMARY

Vowel epenthesis in Gichuka loanwords borrowed from English is a parameter setting strategy as explained using Government Phonology Theory. The parameter on branching and non-branching structure explains vowel epenthesis in middle-position while the parameter on domain-final empty nuclei explains for vowel epenthesis in domain-final position.

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