SYLLABLE WEIGHT IN DHOLUO

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This paper is about syllable weight in Dholuo, a Western Nilotic language spoken in south-western Kenya and the neighbouring northern tip of Tanzania. Dholuo has both open and closed syllables. as well as heavy and light syllables. A light syllable in Dholuo consists of CV, V, CVC or VC syllable structures (or V and VC rhyme structures), while a heavy syllable is composed of CV:, CVV, V:, VV, CV:C, CVVC, V:C or VVC syllable structures (or V:, VV, V:C, and VVC rhyme structures). The paper demonstrates that Dholuo is a type-B language, according to Katamba's (1989) classification of languages into type-A and type-B depending on their syllable weight. It is a type-B language because the coda does not count in the determination of its syllable weight. In a type-B language, both the onset and coda do not play a role in the determination of the weight of a syllable. The paper also shows that if a word ends in a closed syllable (in which case it has a coda) in utterance-final position, the vowel in that syllable gets lengthened and therefore becomes heavy and is hence stressed. If a non-monosyllabic, that is, a polysyllabic word ends in an open syllable in utterance-final position, it is its penultimate vowel that gets lengthened and, hence, becomes heavy and stressed. Therefore, though the coda is irrelevant in determining the weight of a syllable, it plays an important role in triggering vowel lengthening and, hence, stress placement in words occurring in utterance-final position in Dholuo.

1. INTRODUCTION

Dholuo belongs to the Western Nilotic branch of the Nilo-Saharan family of languages. It is the indigenous language of Siaya, Kisumu, Homa Bay and Migori counties in south-western Kenya (i.e. in the former Nyanza province) and of the neighbouring northern part of Tanzania. According to Oduol (1990), it has two main dialects: the Kisumu-South Nyanza (KSN) dialect (the one that will be discussed in this paper) and the Boro-Ukwala (B-U) dialect. Syllable weight is an important part of Dholuo phonology since it has been shown (see Oduor 2002) to have an effect on a number of phonological phenomena, among which are tone, stress and vowel processes. It is therefore necessary to discuss what constitutes syllable weight in Dholuo. But before that, a brief account of the study of syllable weight in the literature is necessary.

2. SYLLABLE WEIGHT IN THE LITERATURE

This section has two parts. The first part focuses briefly on the literature by researchers who have dealt with syllable weight while the second part is explains Katamba's classification of languages according to syllable weight.

2.1 General literature on syllable weight¹

Hyman (1975) had first identified an onset and a core in a CVC syllable, with C as the onset in a CVC syllable, and VC as the core. The core of a syllable is the same as its rhyme. He noted that:

In many languages, a syllable whose core consists of a short vowel (V) cannot be stressed and stress must pass to a neighbouring syllable. Such a syllable is said to be *light*. A syllable whose core consists of a long vowel (V:), a VV or VC sequence, or combinations of these, can be stressed and is said to be *heavy*. (p. 206)

Hyman (1975, p. 206), quoting Newman (1972), adds that the distinction (made in the quotation above) between a light and a heavy syllable is

¹ See section 3 of Oduor (2015b) for a brief discussion of syllable weight.

"therefore an important phonological variable in the statement of stress placement." In many languages, only heavy syllables can receive stress. In addition, he observes that:

[...] all languages with a heavy vs. light syllable dichotomy have a vowellength contrast, that is, CV contrasts with CV:, which patterns with CVC. If this were not the case, we would simply have a contrast between open (CV) and closed (CVC) syllables. Apparently no language requires that stress be assigned only to closed syllables. (p. 206)

Like Hyman (1975), Katamba (1989) notes that in many languages, syllable weight has an effect on the applicability of certain phonological rules.

Laver (1994) defines the concept of syllable weight in the following terms:

Syllable weight encompasses two types of syllable: "light" syllables and "heavy" syllables. A **light syllable** is one whose rhyme is made up of a nucleus consisting of a short vowel, followed by a maximum of one short consonant ... As a measure of syllable quantity, the phonological length of a light syllable has been called a **mora** (Trubetzkoy 1939). A **heavy syllable** is any other type of syllable, and its phonological length is greater than one mora. (p. 517)

Syllable quantity refers to the phonological length of each syllable. Light syllables have a shorter duration than heavy ones. The rhyme structure in heavy syllables can assume any of the four shapes specified in (1):

(1) (a) a long vowel

(b) a long vowel followed by a coda of any sort

(c) a short vowel followed by a coda consisting of two or more consonants

(d) a short vowel with at least a long consonant.

Dholuo, the language being focussed on in this paper, has both heavy and light syllables (Oduor 2002). In other words, some syllable structures in

Dholuo have a greater weight, and, hence, greater quantity, than others. However, the rhyme structures identified in (1c) and (1d) do not exist in Dholuo. Laver (1994) then takes the discussion beyond the mere classification of syllables into heavy and light ones by relating syllable weight to prominence. For him, concepts such as

[...] onset, nucleus, codas, light and heavy syllables, and moraic considerations [...] will be seen to be relevant in specifying the constraints for locating lexical stress in different languages [...] The phonetic realization of heavy syllables, with their longer nuclear vowels and/or their more substantial codas, stand out more prominently in perceived flow of speech than do light syllables. (p. 517)

Laver's words mean that heavy syllables tend to be more prominent (i.e. more noticeable) than light syllables.

For his part, Ryan (2014) states that "A variety of phonological phenomena invoke syllable weight distinctions, the two most discussed being weight-sensitive stress and quantitative poetic meter" (p. 309). In a later research, while using data from Latin, Ryan (2016) also notes that word stress is often sensitive to syllable weight. While referring to data from Dholuo, Oduor (2015a, 2015b) also acknowledges the fact that there is a relationship between syllable weight and stress placement in words and longer utterances, a relationship which cannot be ignored while discussing syllable weight, and which, in this paper, will be discussed briefly within the context of a phonological process known as vowel root-lengthening.

2.2 Katamba's classification of languages in terms of syllable weight

Katamba (1989) establishes a dichotomy between heavy-syllable and lightsyllable languages. The first class of languages, which has a syllable structure consisting of a short vowel as light, and a long vowel, a long vowel followed by a consonant (or consonants), or a short vowel followed

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by a consonant (or consonants), is considered to be heavy. Using Cs to refer to consonants and Vs to vowels, Katamba (1989) suggests that the rhyme of the first class of languages consists of a V, if it is light, and a V:, V:C(Cs), or VC(Cs), if it is heavy. It should be noted that in this class even a short vowel followed by a consonant is a heavy syllable. The second class of languages is that in which a syllable whose rhyme consists of a short vowel is considered to be light and a syllable whose rhyme consists of a long vowel to be heavy. In other words, the nucleus of the rhyme of a light syllable has a V while that of a heavy syllable has a V: or VV. The Cs in the rhyme are not considered to be part of the weight structure of syllables. Katamba (1989) refers to the first class of languages as type A and the second as type B^2 . The main difference between the first class and the second class of languages is that in the former, the existence of the coda, also known as margin, may or may not be important in determining the weight of a syllable, whereas in the latter the coda is completely irrelevant and does not count. This paper will argue that Dholuo belongs to the latter class of languages (i.e. that of type-B languages).

Katamba (1989) also distinguishes between heavy-syllable languages and light-syllable languages on the basis of rhyme. He states that "... a syllable is LIGHT if it contains a nonbranching rhyme [...] But a syllable is HEAVY if it contains a branching rhyme [...] The onset seems never to play any role in the computation of syllable weight" (p. 176).

In light of the differences established in the preceding paragraphs between light and heavy syllables, tree diagrams have been used to highlight those differences. To this effect, the symbols in (2) below are usually used to represent the weight structure of the syllables in various words.

(2)	Syllable boundary	σ - Syllable node	C-Consonant
	R - Rhyme	0 - Onset	V - Vowel
	N - Nucleus	M - Margin	l -Light syllable

² Hyman 2003 also recognises the light/heavy syllable dichotomy in languages.

h - Heavy syllable # - Word boundary

Below is an illustration of Katamba's classification, using hypothetical words. The syllable structures of the type-A languages are given in (3).

In this tree diagram, there are two syllables because there are two syllable nodes. The most important part of each one of them is the rhyme which is that part of a syllable that contains a vowel. The vowel is the only compulsory element in any syllable hence the rhyme is considered to be the more important part of a syllable than the onset. The onset (O) is optional. The coda, which is also optional, is usually part of the rhyme. In (3) the first syllable is branching because it has two immediate constituents, i.e. O and R. The second one does not since it has one immediate constituent which is R. It has no onset. For each of these two syllables, R does not branch because it immediately dominates only one element which is N which in turn dominates V in each case. V then dominates the actual sound segment itself. The two syllables represent the structure of light syllables in type-A languages.

The structures of heavy syllables in type-A languages are given in (4). According to Katamba (1989: 176), the rhyme contains:

[...] either

(i) a long vowel or diphthong optionally followed by one or more consonants;

or

(ii) a short vowel followed by at least one consonant.



(4a) and (4b) diagrammatically illustrate (i) in the quotation above while (4c) illustrates (ii). In (4c), the rhyme could have more than one consonant, though the tree diagram does not show this possibility. The bracketed sounds in (4a) and (4b) are optional elements. The rhyme of each syllable is branching in (4). For type-A languages, this branching could be at the level of the rhyme itself and the nucleus as demonstrated in (4a) and (4b) or at the level of the rhyme only in which case the nucleus does not branch as witnessed in (4c).

Type-B languages are slightly different from type-A because the rhyme of a light syllable in the former contains a short vowel only, or a short vowel and a consonant, while the rhyme of a light syllable in type-A languages only contains a short vowel. Consider the tree diagrams in (5), which are examples of light syllables in type-B languages.



In both (5a) and (5b) the vowels are short which means that the nucleus does not branch. Whereas (3) shows the syllable structures of a light

syllable in type-A languages, (5) shows those of light ones in type-B languages.

In type-B languages a heavy syllable has a rhyme which contains a diphthong or a long vowel, as illustrated in (4a) and (4b), respectively, "[the] presence or absence of any consonant in the margin being again irrelevant" (Katamba, 1989, p. 177). (4c) would therefore not count as a heavy syllable in type-B languages.

3. SYLLABLE WEIGHT IN DHOLUO WORDS

This section aims to show that Dholuo has both light and heavy syllables and that it is a type-B language (in terms of Katamba's [1989] classification). The section divides the discussion into monosyllabic, disyllabic, trisyllabic and other polysyllabic words.

3.1 Monosyllabic words

Monosyllabic words have the structures presented in the diagrams in (6).





In summary, the examples in (6) show that monosyllabic words in Dholuo have the rhyme elements indicated in (7) below, where I means 'light' and h means 'heavy'. The symbol resembling a colon, that is ':' shows that a vowel is long. In the tree diagrams in (6), vowel length is represented by two Vs that are dominating a single sound segment.

- (7) (a) V (a short vowel) (l);
 - (b) V: (a long vowel) (h);
 - (c) V: C (a long vowel followed by a consonant) (h);
 - (d) VVC (vowel sequence followed by a consonant) (h); and
 - (e) VV (a vowel sequence) (h).

The only other possible syllable rhyme missing in (7) is VC, where a short vowel would be followed by a consonant. It is missing because, in Dholuo, when a word ending in a consonant is uttered in isolation or in utterancefinal position, the vowel preceding this consonant is always lengthened. It should be noted that this process is known as vowel root-lenghthening. Vowel root-lenghthening refers to a phonological process involving the lengthening of a vowel that is part of the root of a word, i.e. the lengthening of a vowel in that part of a word that is usually left after all affixes have been removed. Okombo (1982), quoted by Ngala (1994: 139), states that: Dholuo vowels are phonemically short. However there is a rule, which lengthens a vowel when it precedes one or two consonants followed by either one or no vowel at all in utterance-final position. This affected vowel is what is called root vowel. In a consonant-final word, it is the last vowel; in a vowel-final word, it is the second last vowel in a word.

The lengthened vowel is said to have undergone root-lengthening. For Odhiambo (1981), the process is known as root-lengthening because the affected vowel is part of the root. The syllable that contains the vowel that has undergone root-lengthening becomes heavy. This lengthened vowel is the vowel that attracts stress which means that stress in Dholuo is realised through vowel lengthening. The main function of this stress is usually to mark the end of an utterance, in other words stress seems to have a demarcative function in Dholuo. Stress, which is realised through vowel lengthening in a vowel and on the last syllable in words or utterances ending in a vowel and on the last syllable in words or utterances, it must be lengthened or it must contain a vowe-vowel sequence; in other words, it has to be heavy (see Oduor 2015b).

3.2 Disyllabic words

Various combinations of light and heavy syllables are found in disyllabic words. The first set of examples, in $(8)^3$ and (9) below, illustrate a combination of a heavy first syllable and a light second one.



³ The representations such as the one in (8) are used to give visual configurations of what the syllables look like. For some sets of examples, I illustrate with a tree diagram followed by more examples in linear form. Others have examples in linear form only.

More examples of the light and heavy syllables in disyllabic words are given in (9).

(9)	(a)	maː-rɔ 'mother-in-law	'(b)	eː-ı 'inside'
		niː-ri 'girls'		a:-i ' I am wrestling'
	(c)	əː-lə 'to pour'	(d)	ba:-o 'wood (loan word)'
		o:-lo 'to tire'		
	(f)	luan-nı ' housefly'	(g)	ງນະ-rວ 'to laugh at'
		cuar-ni 'bedbug'		wuo-θo 'to walk'

In all the examples in (9), the first syllable is heavy, while the second one is light. This is because the rhyme of the first syllable in (9a), (9b), (9c), and (9d) has a long vowel while the second has a short vowel. In (9f), the rhyme of the first syllable has a vowel-vowel sequence followed by a consonant (a combination that makes a syllable heavy), while the second has a short vowel. Lastly, the rhyme of the first syllable in (9g) is heavy because it has a vowel-vowel sequence. Therefore, vowel length signals the heaviness in some syllables while a sequence of two different vowels within the same syllable does so for others.

More disyllabic words with different syllable structures are given in (10). Both syllables in each word are heavy. In (10a), the rhyme of the second syllable has a vowel-vowel sequence followed by a consonant, while in (10b) it has a long vowel followed by a consonant.

(10) (a) wuond-ruok 'pretence' (b) wuok-ti:c 'Monday' juag-ruok 'pleas / cries'

More disyllabic words with eleven different syllable structures are given in (11). The first set of words in (11a) has CV-CV:C syllable structure, which means that the first syllable is light while the second one is heavy. The second set of words in (11b) has CV-CVVC syllable structures, the weight pattern being similar to that of (11a). The third set of words, i.e. (11c) has V-CVV syllable structure. (11d), which is the fourth set, has CV-CVV syllable structures. The fifth set (11e) has CVC-CVVC syllable structures. (11f), being the sixth set, has CVC-CV:C syllable structures. The seventh and eighth ones ((11g) and (11h)) have V-CV:C and V-CVVC, respectively. The ninth and tenth ((11i) and (11j)) have VC-CV:C and VC-CVV, respectively. (11k) has CV-V:C syllable structures. Though all the different sets of words have different syllable structures, they all have a light syllable followed by a heavy one.

(11)	(a)	ra-lu:m 'green'	(b)	ra-buor 'brown'
		Jo-pu:r 'farmers'		
	(c)	ə-gue 'lizard'	(d)	Ja-luo 'a member of the
		o-juo 'caterpillar'		Luo speech community'
				ɨa-mua 'a non-Luo'
	(e)	cak-rook 'beginning'	(f)	wic-wi:l 'forgetfulness'
		kon-ciel 'half part'		wic-ba:r 'headache'
	(g)	a-bi:c 'five'	(h)	a-ŋuɛn 'four'
		o-pu:k 'tortoise'		o-ndiek 'leopard'
	(i)	ıc-ka:c 'stomach ache'	(j)	an-tie 'I am present'
		ıc-wa:ŋ 'anger/ annoya	nce'	

(k) ra-u:m 'cover'

The next syllable combination (a rare one in Dholuo), in the words in (12), is that of both syllables being light, by virtue of all the vowels involved being short. It is a rare combination because all the other disyllabic words have at least one heavy syllable.

(12) (a) a-ŋɔ 'what' (b) $pa-\theta_I$ 'child'

	o-jo 'name of a person'	da-pi 'water pot'
(c)	θ ir-no 'state of not growing'	
	pug-no 'to be fat'	

It transpires from the examples in this sub-section (3.2) that both the heavy and the light syllables in disyllabic words are not different from those in the monosyllabic words discussed earlier. To sum up, the various syllable combinations for disyllabic words in terms of light and heavy syllables are the following:

(13)	(a)	CV:-CV (h-l)	(b)	CV-CV:C (l-h)
	(c)	CV-CVVC (l-h)	(d)	V:-V (h-l)

- (e) CVV-V (h-l)
- (g) CV:-V (h-l)
- (i) CVC-CVVC (l-h)
- (k) V-CV:C (l-h)
- (m) CVVC-CV: C (h-h)
- (o) V-CV (l-l)

- (f) V:-CV (h-l)
- (h) CVV-CV (h-l)
- (j) CVC-CV:C (l-h)
- (l) CVVC-CVVC (h-h)
- (n) V-CVVC (l-h)

It is clear that only a few disyllabic words have a sequence of two light syllables or a sequence of two heavy syllables. Most of the disyllabic words contain a heavy syllable followed by a light syllable and vice versa.

3.3 Trisyllabic words

Trisyllabic words in Dholuo have a varied combination of syllables: all the syllable types occurring in monosyllabic and disyllabic words also do in trisyllabic words. Consider the examples in (14).



(b)	a-u:-ma 'name of a person' (c)	a-guː-lu 'pot'
	ɔ-ɔː-kɔ 'name of a person'	o-gaː-nda 'beans'
(d)	gik-moː-ko 'things/other things' (e)	ຼງວ-dວː-ŋgວ 'elders'
	mak-ma:-na 'if only'	ka-moː-ro
		'somewhere'
(f)	luo-ŋgu:-ru 'please call (plur.)' (g)	kaʊ-uː-ru 'please
	dvɔ-kuː-ru 'please return (plur.)'	ask for (plur.)
		kʊɔ-uː-ru 'please
		sew (plur)'

As can be seen in the examples above, all the vowels in the penultimate syllable are long. These syllables are prominent because they contain a long vowel. All the other syllables in (14a), (14b), (14c), (14d) and (14e) are light syllables consisting of a short vowel. In (14f) and (14g), the first syllable is an inherently heavy syllable because it consists of a CVV sequence, i.e. the vowel-vowel sequence is always part and parcel of this syllable unlike those heavy syllables that are created through the process of vowel lengthening. In other words, the vowel-vowel sequence is intrinsically part of the said inherently heavy syllables. The syllables with a vowel-vowel sequence are hence underlying heavy syllables that are not generated by vowel processes.

Another set of trisyllabic words are given in (15) below. The new aspect is that they end in a consonant and the last syllable of each is heavy unlike the trisyllabic words given in (14). These final heavy syllables have either the structure CV:C (i.e. a V:C rhyme), or CVVC (i.e. a VVC rhyme). The CV:C syllable is one that has acquired vowel length as a

result of being the final one in a closed syllable in utterance final position. For its part, the CVVC syllable is an inherently heavy one in utterance final position. In (15f) the second syllable is inherently heavy, making both the penultimate and ultimate syllables of this example inherently heavy. The prefix 'na:dr', which means, 'number of times', has a long vowel in the first syllable. It is prominent by virtue of its structure. However, even greater prominence is reserved for the last syllable of the words starting with this prefix. In (15i), the penultimate syllable has the structure CVV. As already stated, prominence is given to the last syllable. All the other syllables with a V or VC rhyme structure in (15)⁴ are light.

(15)	(a)	ka-la-taːs 'paper (loan)'(b)	ma-liŋ-liːŋ 'secretly'
		kʊ-lʊ-ndɛːŋ 'beetle'	ma-tin-tiːn 'small
			proportions/small in body'
	(c)	o-sip-tail 'hospital' (d)	ე-ეეეg-rაეk 'chameleon'
	(e)	ma-ra-buor 'brown one'(f)	o-die-cieŋ 'day time'
	(g)	ɲaː-di-biːc 'five times' (h)	ุกล:-di-ŋuen 'four times'
		na:-di-de:k 'three times'	na:-dɪʊ-cɪɛl 'six times'

The new aspect in the examples in (16) is that they all have a penultimate syllable containing a short vowel in a vowel final word unlike all the other trisyllabic words presented so far. The syllables in (16a), (16c) and (16d) are all short or light syllables. Some of the light syllables have a CV structure while others have a CVC structure. In (16b) the first syllable is inherently heavy because it has a rhyme structure consisting of a vowel-vowel sequence. This syllable is likely to be stressed because it is heavy.

⁴ Most of these examples are also found in Oduor (2015b, pp. 264-265).

 (c) θɔ-mɔr-nɪ 'safari ants'
(d) o-cup-no 'a kind of ant' lɪ-gaŋg-la 'sword'

A summary of the syllable weight patterns displayed by trisyllabic words is given in (17).

(17)	(a)	V-V:-CV (l-h-l)	(b)	V-CV:-CV (l-h-l)
	(c)	CV-CV:-CV (l-h-l)	(d)	CVC-CV:-CV (l-h-l)
	(e)	CVV-CV:-CV (h-h-l)	(f)	CVV-V:-CV (h-h-l)
	(g)	V-CVV-CV (l-h-l)	(h)	CV-CVV-CV (l-h-l)
	(i)	CV-CV-CV:C (l-l-h)	(j)	CV-CVC-CV:C(l-l-h)
	(k)	V-CVC-CV:C (l-l-h)	(l)	V-CV-CVVC (l-l-h)
	(m)	CV-CV-CVVC (l-l-h)	(n)	V-CVVC-CVVC(l-h-h)
	(o)	CV:-CV-CV:C (h-l-h)	(p)	CV:-CV-CVVC (h-l-h)
	(q)	CV:-CVV-CVVC (h-h-h)	(r)	CV-CV-CV (l-l-l)
	(S)	CVV-CV-CV (h-l-l)	(t)	CV-CVC-CV (l-l-l)

(u) V-CVC-CV

It transpires from the summary above that only a few trisyllabic words in Dholuo have a sequence of just light syllables only. Most of them contain one or two heavy syllables. One word ('na:-diu-ciel' which means 'six times') in the list of examples has a sequence of three heavy syllables. Once again, these rhymes are the same as those identified for monosyllabic and disyllabic words, which were described as being either heavy or light, the same ones that characterize type-B languages.

3.4 Polysyllabic words of more than three syllables

According to Oduor (2002, p. 149), polysyllabic words of four or more syllables are much fewer than monosyllabic, bisyllabic and trisyllabic words in Dholuo. Their syllable structures are basically the same as those found in words of one, two or three syllables. However, since some of the more-than-three-syllable words are reduplicative in nature (that is, a portion of the word, or a whole word, is repeated), it is worth analysing the few syllable combinations that they portray. They are in (18a). In addition, there are two words (forms of greetings) that are peculiar in that they contain light syllables only. They are in (18b). Consider the examples below.

The syllable structures of the words in (18) are summarized in (19).

- (19) (a) CV-CV-CV:-CV (l-l-h-l)
 - (b) V-CV-CV-CV (l-l-l-l)
 - (c) V-CVVC-V-CVVC (l-h-l-h)

4. CONCLUSION

The aim of this paper was to show that Dholuo is a type-B language according to Katamba's (1989) classification of languages in terms of syllable weight. The analysis of monosyllabic, disyllabic, trisyllabic and polysyllabic words involving more than three syllables has shown that Dholuo has both heavy and light syllables. Whereas a light syllable in Dholuo consists of a CV, V, CVC, or VC (corresponding to V and VC, in terms of rhyme structures), a heavy syllable is composed of a CV:, CVV, V:, VV, CV:C, CVVC, V:C or VVC (corresponding to V:, VV, V:C, and VVC, in terms of rhyme structures). As can be seen from the various syllable structures, all the light syllables have a short vowel while all the heavy syllables have either a long vowel or a vowel-vowel sequence. In briefly discussing vowel root lengthening, the paper has also shown that if a word ends in a closed syllable in utterance-final position, the vowel in that syllable gets lengthened

and thus becomes heavy. If a non-monosyllabic word ends in an open syllable (i.e. a word of a /-CV:CV/ structure) in utterance-final position, it is its penultimate vowel that is lengthened and, hence, is heavy thus changing from being a light syllable to being a heavy one. All the observations led to the conclusion that Dholuo is a type-B language, because the coda of its syllables does not play a role in the determination of syllable weight, and also because all its light syllables have a short vowel and all its heavy syllables have either a long vowel or a vowel-vowel sequence and are hence stressed. With the understanding of syllable weight in Dholuo, this paper would then serve as a prerequisite to Oduor (2015b) which discusses the relationship between syllable weight and stress in Dholuo.

Almost all words had both light and heavy syllables within them. However, a few of them had a sequence of light syllables only. It would be interesting to investigate why words which would be expected to have a lengthened vowel in the penultimate position defy this rule.

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