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TONAL PATTERNS OF ENGLISH SYLLABLE
STRUCTURE BORROWED INTO YORUBA

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Abstract

This paper investigates the patterns of tone inherent in foreign lexical items when they are borrowed into the Yoruba language with a particular focus on the highest ranked tonal patterns. The Yoruba language which is a tonal language is one of the three foremost indigenous languages in Nigeria; therefore, its early contact with English was not a coincidence. The data for the study are elicited from news items on local media houses, supermarkets and street hawkers. These data sources were chosen because they are believed to possess current information on the foreign societies. Analysis of data reveals that HLL tonal pattern with 26.81% is highly ranked among other tonal patterns of borrowed words. The implication of this is that,

words with High-Low-Low tonal pattern are the most common foreign words found in Yoruba. This tonal pattern is the most frequent in the process of borrowing because it corresponds to most of the English words present in Yoruba.

Introduction

It is stating the obvious that all languages vary their pitch to achieve different meaning. How each of the languages uses variations in pitch may not necessarily be uniform. For instance, the way English varies its pitch is quite different from Yoruba. Therefore, this paper answers the question of how pitch is represented in the adaptation of English words that are borrowed into Yoruba. We shall discover that the information about linguistic pitch is represented in terms of tones, and that tone, on the one hand, and vowels and consonants, on the other, are arranged on separate, parallel structural tiers (Durand 1992). Based on our data, the auto segmental status of tone will be considered and it will be revealed that the tonal patterns of words can be lucidly presented in a two-tier model. Also, on the basis of Goldsmith's *association convention* and the *no crossing constraint*, this paper will show the way tones are associated with other elements in the phonological representation.

Tone in Yoruba is associated not only to pitch but also to length, muscular effort, phonation and vowel feature (see Green 2002). Three different phonemic tones are attested in Yoruba, viz: high [H], mid [M], low [L]. The high tone is “sometimes slightly breathy, relatively long, high intensity and high pitch often with a fall before a pause”; “mid tone have medium duration, high intensity, and high, often slightly falling pitch”. The low tone has “medium duration, low intensity and low, often slightly rising pitch” (Chang 2004:16). Vowels in English loanword adaptations may carry any of these Yoruba tones. These tones are attested in the data as discussed in subsequent section.

It is also noteworthy that “within the SPE paradigm, tones were considered to be features on a par with other features” Durand

(1992:243). Therefore, in describing a language (for example Yoruba) that possesses three distinctive level tones (i.e. high, mid, low), the following features are selected; [H] for high tone, [M] for mid tone and [L] for low tone to analyze the contrast between three syllables [bá] (where the acute accent means high), [bà] (where the grave accent means low) and [bā] (where the macron accent connotes a mid tone but this is not usually indicated). These tone marks are demonstrated in the matrix below:

Table: 1 Tone Matrix

	b á (meet)	b à (perch)	b ā (hide)
Syll	- +	- +	- +
Cons	+ -	+ -	+ -
Son	- -	- -	- -
ant	+ -	+ -	+ -
Cor	- -	- -	- -
H [/]	- +	- -	- -
L [\]	- -	- +	- -
M [-]	- -	- -	- +

(Adapted from Durand 1992)

Tones are considered as features of vowels only in the above matrix. These features are irrelevant to the onset since they do not have no direct correlation with the onset, but all the same, this does not make them superior or more significant because other features (e.g. sonorant) which are not applicable to vowels are also considered. It is assumed in the matrix that tones are connected with the segments within syllables known as tone bearing units (TBU). These tone

bearing units are vowels but other types of segments (such as alveolar nasal and alveolar lateral) can also bear tone (Durand 1992, Laniran 1992, Bamisaye 2004). These tones are demonstrated in actual English loans in Yoruba in this study.

It is however important to say that when these foreign words are borrowed into Yoruba, their syllable structures are re-defined. That is, a word that originally belongs to the class of monosyllabic or disyllabic words can change to disyllabic and trisyllabic words respectively when they enter the recipient language. Therefore, in this section, the treatment of their tonal patterns will be based on their newly acquired status.

Co-Occurrence of High and Low Tones [HI]

Some English words that were borrowed into Yoruba manifest the co-occurrence of both H(igh) and L(ow) tones. The manifestations of these tonal adaptations vary apparently depending on the types of the syllables that bear them, such as disyllabic words, trisyllabic words, quadri-syllabic words and polysyllabic words. The following tonal patterns have been observed in English loans in Yoruba, namely: [HL, HLL, HHL, HHHL, HHLL, HHHLL, and HHHHLL]. These patterns are so unique in that tones are combined systematically. That is, the occurrences of tones are in series depending on the types of the syllable structures on which they occur. For example, in polysyllabic words, there is a cluster of high tones followed by a cluster of low tones. Thus, we have [HHHLL].

It must also be noted that when English lexical items are borrowed into Yoruba, they violate the restriction on the occurrence of high tone on the first syllable of initial vowel (Ufomata 2004).

HI-Sequence on Disyllabic Words

High and Low tones co-occur in disyllabic English words when they are adapted into Yoruba. This tonal pattern is demonstrated in actual words below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/ba:bə/	[bábà]	‘barber’
/kukə/	[kúkà]	‘cooker’
/teɪlə/	[telɔ]	‘tailor’
/lɔjə/	[lɔjà]	‘lawyer’
/letə/	[létà]	‘letter’
/leðə/	[lédà]	‘leather’
/bʌtə/	[bɔtà]	‘butter’
/ti:tʃə/	[tíjǎ]	‘teacher’
/ɔ:də/	[ɔdà]	‘order’
/rʌbə/	[rɔbà]	‘rubber’

Hll-Sequence on Trisyllabic Words

Trisyllabic words manifest the co-occurrence of High-Low-Low [HLL] tones in foreign words when they are adapted into the recipient language. This is demonstrated in the examples below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/fæn/	[fáànù]	‘fan’
/fɪlm/	[fínmù]	‘film’
/gəʊld/	[góòlù]	‘gold’
/gəvənə/	[gómìnà]	‘governor’
/gʌm/	[gɔmù]	‘gum’
/bæg/	[báàgì]	‘bag’
/ka:d/	[káàdì]	‘card’
/leɪs/	[léesì]	‘lace’
/kɔɪl/	[kɔéìlì]	‘coil’
/dʒi:p/	[dʒínpù]	‘jeep’
/raɪs/	[ráìsì]	‘rice’

HHL-Sequence on Trisyllabic Words

In this type of tonal adaptation, the occurrences of tones on syllable structures are H(igh) – H(igh) – L(ow) [HHL]. This is in opposition to what obtains in H(igh) – L(ow) – L(ow) [HLL] sequence (see 5.2.1.2). This tonal pattern is attested in the data as demonstrated below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/baɪbəl/	[bíbéli]	‘bible’
/bred/	[búrédi]	‘bread’
/draɪvə/	[dírébà]	‘driver’
/freɪm/	[fúré mù]	‘frame’
/grəmə/	[gírámà]	‘grammar’
/grævl/	[gíráfù]	‘gravel’
/vɪdiəu/	[fídíò]	‘video’
/pəstə/	[pásító]	‘pastor’
/treɪlə/	[túrélà]	‘trailer’
/gri:z/	[gírísì]	‘grease’

HHHL-Sequence on Quadri-Syllabic Words

Two types of quadri-syllabic tonal patterns are attested in the data. They are High-High-High-Low [HHHL] and High-High-Low-Low [HHLL]. This section discusses the former while the latter will be discussed under HHLL-Sequence on quadri-syllabic words, the occurrences of higher than low tone (it is three against one). Thus, high tone has the greatest proportion of the tonal distribution. This tonal pattern is described in various words below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/eɪndʒəl/	[áńgéli]	‘angel’
/di:kən/	[díàkónì]	‘deacon’
/eksɪdəs/	[ésóódù]	‘exodus’
/kæpentə/	[kákpéńta]	‘carpenter’
/kauntsələ/	[káńsélɔ]	‘councillor’
/kəstəmə/	[kəsítóma]	‘customer’
/lusɪfə/	[lúsíférì]	‘Lucifer’
/praɪməri/	[púràmàrí]	‘primary’
/pærədəis/	[páraádísè]	‘paradise’

HHLL-Sequence on Quadri-Syllabic Words

Tones in High-High-Low-Low tonal pattern are evenly distributed, (i.e. double high tones and double low tones). This tonal feature is

entirely different from the HHHL tonal feature discussed previously where high tone dominates the greater part of the quadri-syllabic words. Examples of this tonal pattern are shown below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/blɒk/	[búlɔ̀kì]	‘block’
/brɪkleɪjə/	[bíríkìlà]	‘bricklayer’
/bɪʃəp/	[bífɔ̀bù]	‘bishop’
/brʌʃ/	[búrɔ̀jì]	‘brush’
/drʌm/	[dúrɔ̀mù]	‘drum’
/gləʊb/	[gìlò̀bù]	‘globe’
/gærədʒ/	[gáreè̀dʒì]	‘garage’
/gælən/	[gáìlɔ̀nù]	‘gallon’
/kəlɛdʒ/	[kɔ̀léè̀dʒì]	‘college’
/klæs/	[kííáasi]	‘class’

HHHL-Sequence on Polysyllabic Words

The distribution of tones in this type of polysyllabic word is a sequence of three high tones and two low tones. Therefore, the combination of High-High-High-Low-Low tones gives us a word with multiple syllables. This tonal pattern is demonstrated in the examples below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/əlbʌm/	[áìlúbɔ̀mù]	‘album’
/bændeɪdʒ/	[báándéè̀dʒì]	‘bandage’
/ɪnvələp/	[énbílò̀d̀kù]	‘envelope’
/fri:dəm/	[fírìdɔ̀mù]	‘freedom’
/glʊkəʊs/	[gúlúkó̀ò̀sì]	‘glucose’
/dʒenezɪs/	[dʒénésí̀sì]	‘Genesis’
/mætres/	[mátíráasi]	‘mattress’
/mekənɪk/	[mékání̀kì]	‘mechanic’
/neɡeɪtɪv/	[négetí̀fù]	‘negative’

HHHHLL-Sequence on Polysyllabic Words

This is the occurrence of four high tones and two low tones in a polysyllabic word. This High-High-High-High-Low-Low [HHHHLL] tonal pattern is not commonly found in loanwords. There are only three instances in the data and they are demonstrated below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/ɔ:lmənək/	[álúmánáakì]	‘almanac’
/æmbuləns/	[áńbúláńsi]	‘ambulance’
/θəməstɑ:t/	[támósítáati]	‘thermostat’

In the data, the breakdown of the High and Low tonal patterns of different categories is as follows:

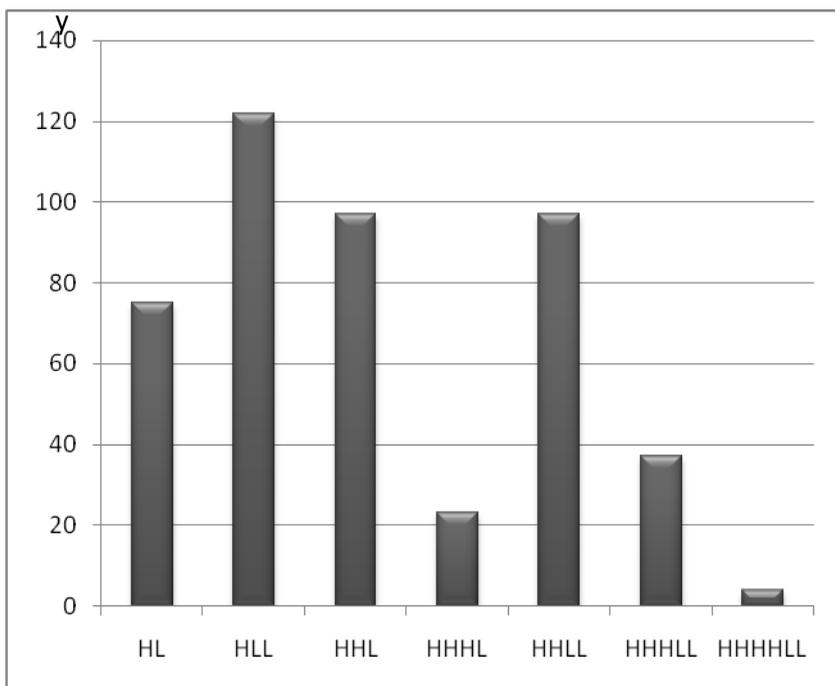
Table 2: Loanword Adaptation of HL Tonal Patterns

Tonal Pattern	Frequency	Percentage %
HL	75	16.48
HLL	122	26.81
HHL	97	21.31
HHHL	23	5.05
HHLL	97	21.31
HHHLL	37	8.13
HHHHLL	04	0.87
TOTAL	455	100%

Table 2 above represents the frequencies of tonal patterns in English words borrowed into Yoruba. From the approach of Optimality Theoretical analysis, the most commonly occurring tonal pattern of English loanwords in Yoruba is High-Low-Low [HLL] with ¹²²/₄₅₅ (26.81%) of the instances in the data. Therefore, it is ranked the

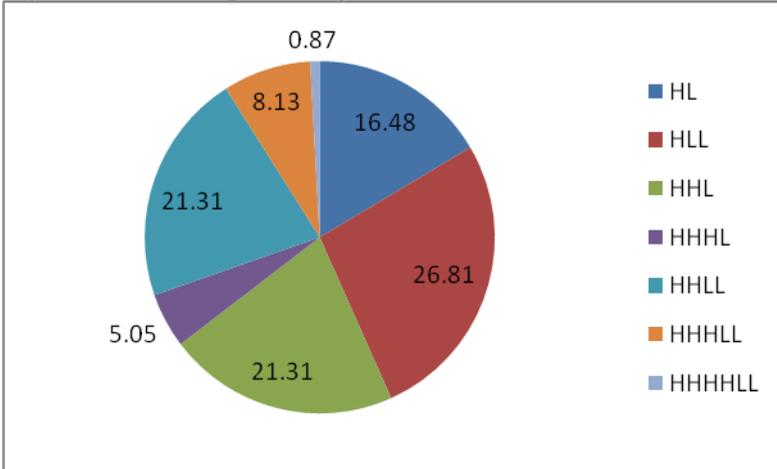
highest candidate. Second in rank is High-High-Low [HHL] and High-High-Low-Low [HHLL], the two are evenly distributed, they contribute $\frac{97}{455}$ (21.31%) instances while High-High-High-Low-Low [HHHLL] is ranked the least in the tonal patterns with $\frac{4}{455}$ (0.87%) of the instance therefore HHHLL is ruled out. These tonal patterns are presented in the bar chart below.

Fig. 1: Bar Chart of HL Tonal Patterns



For better understanding, accuracy and appropriateness, I have also described the above HL tonal patterns in the pie chart below. The pie chart, which has a circular shape, has divided the tonal patterns into seven different sectors whose angles are proportionate to the frequencies of their manifestation as observed in the data.

Fig 2: Pie Chart Representing HL Tonal Distributions



Co-Occurrence of Low, High and Mid Tones

Various patterns of low tone co-occurring with high and mid tones are treated in this section. The corpus of data collected reveals these various tonal patterns of English borrowed words into Yoruba. The tonal patterns are as follows: [LH, LLH, LHL, LHHL, LHLL, LLHL, LLHLL, LHHLL, and LLHHL].

LH-sequence on disyllabic words

When English lexical items are borrowed into Yoruba, Low-High tones co-occur. A few of this tonal pattern are obvious in the data and they are demonstrated in the examples below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/beɪbɪ/	[bèbí]	‘baby’
/gi:tə/	[gítá]	‘guitar’
/sɪgə/	[sìgá]	‘cigar’

high tones and ends with a low tone. Examples of this tonal pattern are demonstrated below in actual words.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/ædres/	[adírèsì]	‘address’
/kælenda:/	[kàléndà]	‘Calendar’
/kɪləumɪtə/	[kìlómítà]	‘kilometre’
/mætənɪtɪ/	[mètánítì]	‘maternity’
/ɔrɪdʒɪnəl/	[ɔrídʒínà]	‘original’
/rɪpɛərə/	[rìpíràrà]	‘repairer’
/pæetɪkjuləz/	[pàtíkúlà]	‘particulars’
/sɪment/	[síméntì]	‘cement’
/mæleɪrɪə/	[màléríà]	‘malaria’
/gɑ:rəntə/	[gàràńtò]	‘guarantor’

LHLL and LLHL-Sequence on Quadri-Syllabic Words

There are two different types of tonal patterns of quadri-syllabic words in this type of adaptation, viz: Low-High-Low-Low and Low-Low-High-Low. Though, the two patterns have common tones; the tones are distributed differently. These tonal patterns are demonstrated in the example below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS	PATTERN
/əla:m/	[àláàmù]	‘alarm’	LHLL
/dæmæsk/	[dàmáàsì]	‘damask’	LHLL
/əbsɔ:bə/	[àbùsɔbà]	‘absorber’	LLHL
/mædəm/	[màdáàmù]	‘madam’	LHLL
/rɪsɪ:t/	[rìsítì]	‘receipt’	LHLL
/səlæd/	[sàláàdì]	‘salad’	LHLL
/ekspraɪə/	[ésìpájà]	‘expire’	LLHL
/həutel/	[òtéèlì]	‘hotel’	LHLL
/rɪvaɪs/	[rífàìsì]	‘revise’	LHLL
/bræziə/	[bèrèsìà]	‘brassiere’	LLHL

LLHLL, LHLL and LLHHL–Sequence on Polysyllabic Words

These tonal patterns are also grouped together because of the limited data in each of them. These tonal patterns manifest differently in various polysyllabic English lexical items when they are borrowed into Yoruba. Examples of these tonal patterns are demonstrated below in actual words.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS	PATTERN
/ədʋæns/	[àlùbánsì]	‘advance’	LLHLL
/blænkɪt/	[bùlánkéèti]	‘blanket’	LHLL
/a:senbli/	[àséńbili]	‘assembly’	LHLL
/Inspektə/	[insìkpékítə]	‘Inspector’	LLHHL
/æpəstl/	[àkpósítèlì]	‘apostle’	HLLLH
/Iletrɪk/	[èléntíríkì]	‘electric’	HLLLH
/lætrɪn/	[làtírîni]	‘latrine’	HLLHH
/Igzekjutrɪv/	[èsékúfítù]	‘executive’	HLLLHH

Co-Occurrence of Mid, Low and High Tones

The tonal patterns in this group manifest variously in some English words when they are adapted into Yoruba. These tonal patterns take-off from mid tone and co-occur with low tone and high tone in English lexical items when borrowed into the recipient language (Yoruba). The tonal patterns include [MH, MHL, MMH, MHLL, MMHL, MLHL, MHLL, MMHLL, MMHHL, MHHLL, MMMHLL, MMMHLL and MMHLL]. These various patterns are discussed in subsequent sections.

MH-Sequence on Disyllabic Words

The co-occurrence of Mid-High [MH] is evident in disyllabic English words that are loaned to Yoruba. This is prominent in the pronunciation of Yoruba- English bilinguals and this is as a result of

the influence of their mother tongue on English. Examples of these tonal patterns are demonstrated below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/pa:tɪ/	[kpatí]	‘party’(social gathering)
/fa:də/	[fadá]	‘father’
/na:nɪ/	[naní]	‘nanny’
/gəʊlɪ/	[golí]	‘goalie’
/ka:kɪ/	[kakí]	‘khaki’
/tæli/	[talí]	‘tally’

MHL and MMH-Sequence on Trisyllabic Words

These two tonal patterns are paired together because of their few instances in the data. They are treated together because they manifest similar syllable feature (i.e. three syllables). The instances of Mid-High-Low (MHL) and Mid-Mid-High [MMH] tonal patterns are described in actual words below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS	PATTERN
/ta:pəlɪn/	[tapóli]	‘tarpaulin’	MHL
/həlɪdeɪ/	[ɔludé]	‘holiday’	MMH
/krɪəʊ/	[kirijó]	‘creole’	MMH
/sɪmɪmə/	[sɪnimə]	‘cinema’	MMH
/sɪstə/	[sɪsitá]	‘sister’	MMH
		(Rev.sister)	
/refri:/	[rɛfirí]	‘Referee’	MMH

MMHL, MHHL, MLML and MHLL-Sequence on Quadri-Syllabic Words

This is another group of tonal patterns that have similar syllable feature (i.e. four syllables). Though, they have different tonal patterns but the syllables that bear them all have mid tone as their initial tone.

In other words, their initial syllable tone is corresponding with secondary stress in the Standard English. Examples of these tonal patterns are listed below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS	PATTERN
/telɪvɪʒən/	[tɛlifíjɔ]	‘television’	MMHL
/dʒenereɪtə/	[dʒɛnɛrétɔ]	‘generator’	MMHL
/ʌmbrelə/	[abùradà]	‘umbrella’	MLML
/kəmɪʃənə/	[kɔmɪʃɔnɔ]	‘commissioner’	MHHL
/fənələdʒɪ/	[fɔnələdʒɪ]	‘phonology’	MHHL
/pəmeɪd/	[kpoméèdì]	‘pomade’	MHLL
/hɒspɪtəl/	[ɔsikpítù]	‘hospital’	MMHL
/kætəpɪlə/	[katakpílà]	‘caterpillar’	MMHL
/saɪlənsə/	[saléńsà]	‘silencer’	MHHL
/fətəkəpɪ/	[fotokəkpì]	‘photocopy’	MMHL

MMHLL-Sequence on Polysyllabic Words

The tonal pattern of this type of polysyllabic words is Mid-Mid-High-Low-Low [MMHLL]. The pattern is so rhythmic in such a way that it can be divided into three metres (rhyme), i.e. [MM/H//LL]. The instances of this tonal pattern are predominant in English lexical items borrowed into Yoruba. Some of the examples are demonstrated in actual words below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS
/kerəʊsi:n/	[karɔʃîní]	‘kerosine’
/bɪskɪt/	[bɪsɪkîti]	‘biscuit’
/kreɪɔn/	[kerejɔnù]	‘crayon’
/megəfəʊn/	[megafóðonù]	‘megaphone’
/petrəl/	[kpɛtɪrɔ̀òlù]	‘petrol’
/kəʊkeɪn/	[kookéèni]	‘cocaine’
/vəslɪn/	[fasilîni]	‘Vaseline’
/aɪədi:n/	[ajòdàìni]	‘iodine’
/kənfo:t/	[kɔnfɔ̀ɔ̀tì]	‘Comfort’
/tʃəkəleɪt/	[ʃokoléèti]	‘chocolate’

/dekəreit/ [dɛkərəèiti] ‘decorate’

Multifarious Tonal Occurrences on Polysyllabic Words

The remaining polysyllabic tonal patterns in the data are grouped together in this section; they are treated together because of the prefix (poly) that unites them together and for the fact that each of them has a few instances in the data. These tonal patterns include [MMMHHLL, MMHHLL, MMMHLL, MHHHLL, MMHHL and MMMHL]. They are variously demonstrated in the examples below.

ENGLISH	ENGLISH LOAN IN YORUBA	GLOSS	PATTERN
/əlu:mi:nəm/	[alumíníòmù]	‘aluminum’	MMHHLL
/eərəplein/	[ɛrɔkpúléèni]	‘aeroplane’	MMHHLL
/ɔ:təmətɪk/	[ɔtomátîki]	‘automatic’	MMHHLL
/tændʒəri:n/	[tandʒarîni]	‘tangerine’	MMMHHLL
/fətəgrəfə/	[fɔtɔgíráfà]	‘photographer’	MMHHL
/fətəlaɪzə/	[fataláísà]	‘fertilizer’	MMHHL
/græməfəʊn/	[giramofóònù]	‘gramophone’	MMMHHLL
/əgrɪkʌljə/	[agirikɔʃɔ]	‘agriculture’	MMMHL

Table 3 below summarizes the statistics of English lexical items bearing all the tonal patterns that I discussed above.

Table 3: Multifarious Tonal Adaptation of Polysyllabic Words

Tonal Pattern	Frequency	Percentage
LH	08	5.55
LLH	03	2.08
LHHLL	08	5.55
LHL	16	11.11
LML	01	0.69
LHHHL	02	1.38
LHHL	13	9.02

LHLL	15	10.41
LLHL	04	2.77
LLHLL	04	2.77
LLHHL	02	1.38
MH	03	2.08
MMMHL	01	0.69
MHL	02	1.38
MMH	06	4.16
ML	03	2.08
MHHL	04	2.77
MMHL	17	11.80
MLML	01	0.69
MHLL	02	1.38
MMHLL	19	13.19
MMHHL	03	2.08
MHHHLL	01	0.69
MMMHHLL	02	1.38
MMMHHLL	02	1.38
MMHHLL	02	1.38
TOTAL	144	100

From the table above, the highest ranked tonal pattern is [MMHLL] with $\frac{19}{100}$ (13.19%) of the instances. Second in rank is [MMHL] with $\frac{17}{100}$ (11.80) followed by [LHL] with $\frac{16}{100}$ (11.11). Five tonal patterns tied in that each of them scored $\frac{01}{100}$ (0.69) of the total instances in the data. Therefore, they are least ranked, hence, they are ruled out. The tonal patterns are; [LML], [LHHLL], [MMMHL], [MLML] and [MHHHLL].

Conclusion

It is obvious from the analysis of data that the correspondence of tone and stress in language contact demands a critical examination. There is a clear indication that when foreign and local languages come in contact, these two phenomena play key roles in the production of words.

It is evidently clear that language contact brings about a change in the status of lexical items. For instance, a foreign monosyllabic word becomes a disyllabic word when adapted in Yoruba. This is always so because local languages (such as Yoruba) do not exhibit stress and as a result, it is usually being replaced by tone (a feature of local languages). When this happens, an English word with only one syllable can become a Yoruba word with two syllables

It is also noteworthy that out of the various outputs of English words processed in Yoruba; those with HLL patterns constitute the majority with 26.81% instances. This percentage shows that the number of foreign lexical items borrowed into Yoruba is very far from the average. This portends that there are lots of English words still struggling to flow into Yoruba, especially, in this torrent modern technological development. And not only that, it is surprising that with the long contact between these two languages, only a few foreign lexical items could be said to have fully gained ground in Yoruba grammatical structure.

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