AN ANALYSIS OF THE YORUBA LANGUAGE WITH ENGLISH

Phonetics, Phonology, Morphology and Syntax

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1   Introduction

Yoruba is a tone language whose many varieties are spoken across West Africa with

about 20 million native speakers. It is spoken natively in Nigeria as well as the

neighboring countries of the Republic of Benin, Togo, Sierra Leone and Ghana

(Campbell 1991:1471). Yoruba is considered to be one of the four official languages of

Nigeria (Campbell 1991:1471). The other official languages are English, Hausa, and

Igbo. Okun and Oworo are the two main dialects in Yoruba. Specifically, the Yoruba

language is classified as a member of the Defoid category of the Benue-Congo subgroup

of languages, part of the Niger-Congo language family (Campbell 1991:1471). In the

Defoid group of languages, Yoruba is in the Yoruboid cluster which also includes Igala,

Itsekiri and Ife` and the Ede complex (Campbell 1991:1470).

        My informant for this analysis is a close relative who is almost 50 years old and

enjoys speaking Yoruba. As a native speaker, this relative was exposed to Yoruba since

the age of three. Growing up in Lagos, Nigeria, she was able to read, write and speak in

Yoruba and English mostly due to school and social interaction. Her proficient ability to

speak English may be one of the factors that could affect her Yoruba grammar since she

has lived in America for more than 20 years. I've realized that because of the English

speech sound [p] this relative doesn't produce the labiovelar [k͡p] anymore.

        In the following sections of this paper I will outline the major features of Yoruba

phonetics, phonology, morphology, and syntax. I will also point out the similarities and

differences with English. By the end of this paper, I hope to have given the reader a basic

acquaintance with the language. In the phonetic inventory, Yoruba speakers can produce

the two labiovelars [kp] and [gb] which are unfamiliar sounds in English and it also puts

a great emphasis on its tonal system. In the phonemic inventory, the missing phones were [n] and [ŋ]. The /r/ deletion as well as the /l/ and [n] alteration were the most common phonological processes. Yoruba has only 3 syllable types C, CV, and the syllabic nasal N. Pertaining to the morphology, since the typology is mostly isolating it has very little inflection; however, some derivational processes were present. Syntactically, some of the Yoruba trees are quite similar to the English trees except for the addition of the auxiliary. Yoruba forms a Yes-No question by adding a Q particle to the beginning of the sentence. It forms a content question by moving the object NP to the beginning of the sentence.

2 Phonetics

Yoruba's sound system is used to create many words that can form infinite linguistic patterns. In this system there are three sets of sounds that make up Yoruba words: consonants, vowels and tone (Lawal 2004:454). Although some speech sounds in Yoruba are universal; there are in fact some that are not found in English. Yoruba has 19 basic consonants with 12 vowel phones. As a tonal language, it uses different pitch patterns to distinguish individual words or grammatical forms of words. Uncontroversially, the number of consonants in a language varies from 6 to 95, with 23 being the average. Yoruba is below average with 19 consonants. Also, the number of vowels in a language varies from 3 to 46, with 5 being the average (Malhotra 2016a). Above average, Yoruba has 12 vowel phones. The charts below illustrate the phonetic inventory.

2.1 IPA Charts

FIGURE 1: YORUBA CONSONANT CHART

Phonetic Consonant Chart

Place of Articulation

		Labial	Alveolar	Palatal	Velar	Labio-velar	Glottal
Stop	Voiceless		t		k	k͡p	
	Voiced	b	d		g	g͡b	
Affricate	Voiced			d͡ʒ			
Fricative	Voiceless	f	s	ʃ			h
Nasal	Voiced	m	n		ŋ		
Liquid	Voiced		l r				
Glide	Voiced			j		w	

Manner of Articulation

FIGURE 2: ENGLISH CONSONANT CHART

(Mihaliček 2011:759)

	Bilabial	Labio dental	Inter dental	Alveolar	Alveo-palatal	Palatal	Velar	Glottal
Stop	p b			t d			k g	ʔ
Fricative		f v	θ ð	s z	ʃ ʒ			h
Affricate					tʃ dʒ			
Nasal	m			n			ŋ	
Lateral Approximant				l				
Retroflex Approximant				ɹ				
Glide	ʍ w					j		

Place of Articulation

Manner of Articulation

State of the Glottis

Voiceless	Voiced

FIGURE 3: YORUBA VOWEL CHART

Phonetic Vowel Charts

	Front	Central	Back
High	i		u
Mid	e		o
	ɛ		ɔ
Low		a	

	Front	Central	Back
High	ĩ		ũ
Mid	ɛ̃		ɔ̃
Low		ã	

FIGURE 4: ENGLISH VOWEL CHART
(Mihaliček 2011:759)
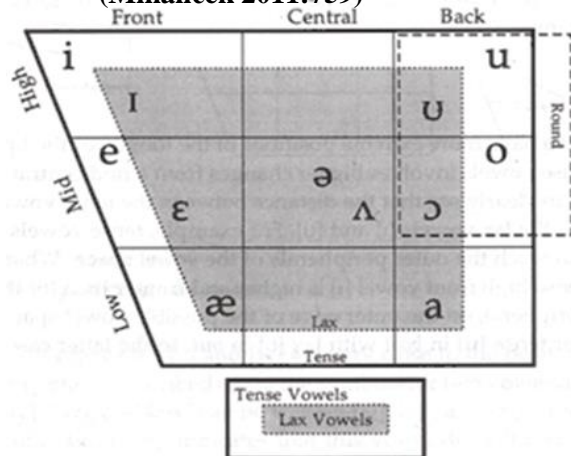
2.2 Similar Sounds

As comparing Figure 1 to Figure 2, there are some similar phones between the two charts. In English and Yoruba the stops are produced the same way. For some consonants, the air from the lungs is completely stopped from going out but this is only for a brief moment. There has been a debate about Yoruba having the palatal stop [ʃ] in its phonetics. This sound is similar and can be equivalent to the palatal affricate [ʤ] in English. Bamgbose (1966:86) notes that there is a variation among speakers between producing a stop and producing an affricate, so either classification is appropriate (Lawal 2004:410). In addition, the voiced liquid [r] is equivalent to the retroflex approximant [ɹ] in the English consonant chart. Also, the nasals in Yoruba are produced similarily to the nasals in English. The air from the lungs is passing out through the nose instead of the mouth. With similar sounds compared to English, one can say that the Yoruba consonants would be an interesting section to study in the Yoruba sound system.

In Figure 3, the oral vowels on the left, are produced when air passes out through the mouth only. These oral vowels are: [a], [e], [ɛ], [i], [o], [ɔ], [u]. Compared to Figure

4, these seven oral vowels correspond roughly to the following vowels of standard American English: [i] as in "Pete", [e] as in " bait", [ɛ] as in "bet", [a] as in "bott", [ɔ] as in "bought", [o] as in "boat", and [u] as in "boot" (Lawal 2004:420). It would then make sense for these seven oral vowels to be nasalized after nasal consonants. Also, in Figure 3 on the right, these nasal vowels are [ĩ], [ɛ̃], [ã], [ɔ̃], and [ũ]. The nasalization of the vowels is not at all caused by a preceding nasal consonant. In fact, these vowels may be produced after oral consonants (Lawal 2004:454).

(1) Examples: ikin, iyen, ikan, ibon, ikun (Lawal 2004:455).

      a.[ĩ]   [ikĩ]   'palm nuts'

      b.[ɛ̃]   [ìjɛ]   'that one'

      c.[ã]   [ikã]   'white ants'

      d.[ɔ̃]   [ìbɔ̃]   'gun'

      e.[ũ]   [ikũ]   'type of squirrel'

On the phonetic vowel chart in Figure 3, the position of these nasal vowels is roughly equivalent to the corresponding places of the oral vowels. Compared to Figure 4, these nasal vowels are in fact similar in pronunciation to the following vowels in American English (Lawal 2004:454).

(2) The examples below illustrate the similarity (Lawal 2004:455).

      a. [ĩ] in "mean"

      b. [ɛ̃] in "them"

      c. [ã] in "mom"

      d. [ɔ̃] in "dawn"

      e. [ũ] in "moon"

2.3 Unique Sounds

Compared to the English Consonant Chart in Figure 2, some sounds are similar to the

Yoruba Consonant Chart while others

are completely not found in the English

Consonant Chart. For instance, Yoruba has

a place of articulation that doesn't exist in

the English Consonant Chart in Figure 2,

called labiovelars. Labiovelars are produced

with your two lips as well as the back of the

tongue. The sounds [g͡b] and [k͡p] are two

FIGURE 5: ANATOMY OF SPOKEN LANGUAGE
(Mihaliček 2011:40)
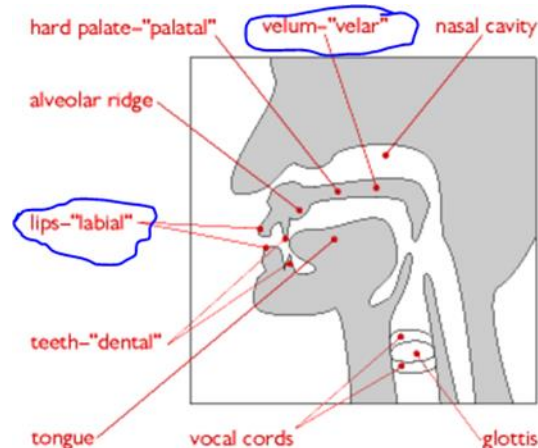
sounds that are unfamiliar to English speech. These two sounds are an example of double

articulations in which two sounds are pronounced at the same time. For instance, in [g͡b]

the sounds [g] and [b] are combined. In [k͡p] the sounds [k] and [p] are combined. Figure

5 above is used as a visual to demonstrate the articulatory phonetics. In these examples

below, the lips are pressed firmly together, and the back of the tongue is simultaneously

made to touch the rear of the roof of the mouth to form the labio-velars (Awobuluyi

1979:89).

(3)   a. [g͡b] [g͡bá]   'sweep'

        b. [k͡p] [k͡pa]   'kill'

        Unlike the English Vowel Chart in Figure 4, the Yoruba Vowel Chart in Figure 3,

doesn't make a clear distinction between lax and tense vowels. However, if one were to

compare it to the English Vowel Chart, one would be able to see which vowels could be

lax and which ones could be tense. The tense vowels could possibly be [i, e, o, u]

compared to English. The lax vowels would be [ɛ, ɔ, a]. Also, dipthongs aren't even present in Figure 3; compared to Figure 4, none of the vowels in Yoruba are made with two components to make a complex vowel such as a diphthong (Awobuluyi 1979:52).

2.4 Suprasegmental Features

Yoruba emphasizes tone as a suprasegemental feature in the language. There is no reference indicating the other suprasegemental features such as length and stress. Therefore, both stress and length are not considered to be insignificant suprasegmental features. In fact, in Yoruba the stress is evenly distributed on all syllables (Campbell 1991:1474). Yoruba is a register tone language which means it has level tones such as high. mid, and low. A high tone is when your pitch is higher as it produces a sound. A mid tone is when your pitch is at a medium level when it produces a sound. Lastly, a low tone is when your pitch is at a very low level when it produces a sound. Since these level tones signal meaning difference they can be called register tones (Malhotra 2016a). The high is marked with an acute accent (e.g. á), the low with a grave accent (à), and the mid tone usually left unmarked (a) (Bamgbose 1966:84). These marks are usually placed on the vowels. However, in some circumstances the mid tone is indicated with a 'macron'(ˉ). (4) These are examples of the register tones (Lawal 2004:200):

    a. [kó] (high tone) 'build'

    b. [ko] (mid tone)   'sing'

    c. [kò] (low tone)   'reject'

In these examples, tones of the Yoruba language use the pitch to distinguish a lexical meaning instead of a grammatical meaning.

3 Phonology

The phonetics and phonology of the Yoruba language may use the same phones; however, they use these phones in a different manner. The phonetics of the Yoruba language classifies these speech sounds while the phonology deals with the systemic relationships between them. My phonological analysis includes a phonemic inventory that has fewer sounds than my phonetic one. This is because the phonemic inventory just includes phonemes. Therefore, those missing phones could be an allophone of one of the phonemes in the phonemic inventory. My analysis also discusses the rules of common sound changes in Yoruba speech. The three common producing rules from my research were the /r/ deletion, the [l] and [n] alternation, as well as the vowel assimilation. Pertaining to the syllable structure, Yoruba has only three syllable types: V, CV and N. Therefore, from these syllable types it has been concluded that Yoruba has no closed syllables or consonant clusters.

3.1 Phonemic Inventory

FIGURE 6: YORUBA PHONEMIC CONSONANT CHART

Phonemic Consonant Chart

		Place of Articulation					
		Labial	Alveolar	Palatal	Velar	Labio-velar	Glottal
Stop	Voiceless		/t/		/k/	/k͡p/	
	Voiced	/b/	/d/		/g/	/g͡b/	
Affricate	Voiced			/dʒ/			
Fricative	Voiceless	/f/	/s/	/ʃ/			/h/
Nasal	Voiced	/m/					
Liquid	Voiced		/l/ /r/				
Glide	Voiced			/j/		/w/	

(Manner of Articulation)

FIGURE 7: YORUBA PHONEMIC VOWEL CHART

Phonemic Vowel Chart

	Front	Central	Back
High	/i/		/u/
Mid	/e/		/o/
	/ɛ/		/ɔ/
Low		/a/	

	Front	Central	Back
High	/ĩ/		/ũ/
Mid	/ɛ̃/		/ɔ̃/
Low			

3.2 Distinctive Features.

In Figure 6, Yoruba has 17 consonant phonemes, /b,f,m,t,d,s,l,r,dʒ,ʃ,j,k,g,k͡p,g͡b,w,h/. From these minimal pairs illustrated below one can recognize the place of articulation,

manner of articulation and voicing are distinctive features for these phonemes (Olmsted 1951:247):

(5)   a. /ba/ 'to alight'   i. /ʤa/ 'to fight'   q. /ha/ 'really?'

        b. /fa/ 'to pull'   j. /ʃa/ 'to pick'

        c. /ma/ 'to know'   k. /ja/ 'to give away'

        d. /ta/ 'to sell'   l. /ka/ 'to read'

        e. /da/ 'to overturn'   m. /ga/ 'to adjust'

        f. /sa/ 'to prepare'   n. /k͡pa/ 'bang'

        g. /la/ 'to be rich'   o. /g͡ba/ 'to take'

        h. /ra/ 'to buy'   p. /wa/ 'to dig'

The phonemes /b/ in /ba/ 'to alight', and /f/ in /fa/ 'to pull'for example, differ in manner of articulation but they have the same place of articulation; however, since they cause a contrast in meaning in these minimal pairs, they are distinct phonemes from each other. In addition, /s/ in /sa/ 'to prepare', /ʃ/ in /ʃa/ 'to pick' for example, differ in place of articulation but they have the same manner of articulation; however, since they cause a contrast in meaning in these minimal pairs they are distinct phonemes from each other. Lastly, the phonemes /k/ in /ka/ 'to read' and /g/ in /ga/ 'to adjust' for example, differ in voicing but the phonemes have the same place and manner of articulation; however, since they cause a contrast in meaning in these minimal pairs they are distinct phonemes from each other. These distinctions mentioned above are still seen in English if you look at the English Consonant Chart in Figure 2. However, if you look at the nasal vowel phonemes in Figure 7, nasalization is a distinctive feature in Yoruba vowels that is not recognized in English.

Nasalization is a distinctive feature in Yoruba since it can cause contrast in meaning. This can be seen in the nasal vowel phonemes /ĩ,ɛ̃,ɔ̃,ũ/. The minimal pairs illustrated in the example below establish the phonemic status of nasalization (Olmsted 1951:246).

(6)   a. /iri/   'dew'   /irĩ/   'working'

        b. /jɛ/   'to befit'   /jɛ̃/   'that'

        c. /ɛdɔ/   'liver'   /ɛdɔ̃/   'grief'

        d. /iku/   'death'   /ikũ/   'squirrel'

The only two exceptions that are not in the Phonemic Consonant Chart in Figure 6 are the sounds [n] and [ŋ]. The phoneme /l/ has two allophones the alveolar [l] before oral vowels, and the alveolar nasal [n] before nasal vowels. This [l] and [n] alternation is discussed more in depth in the phonological rules section of this analysis (Bamgbose 1966:6). The /m/ phoneme has the velar nasal [ŋ] as an allophone. When the phoneme /m/ precedes a vowel it becomes a velar nasal (Bamgbose 1966:7). The phone [m] is a syllabic nasal which can also occur before the phoneme /b/. Not only, is [ŋ] an allophone of the phoneme /m/ but it is also the allophone of another phoneme. The phoneme /ũ/ has the allophone [ŋ] after a velar plosive (Bamgbose 1966:8).

Out of all the nasal vowel phonemes mentioned in Figure 7 one is missing compared to the Phonetic Vowel Inventory in Figure 3. The sound [ã] is not in the Phonemic Vowel Chart in Figure 7 because it doesn't contrast with [ɔ̃] in the speech of many Yoruba speakers (Bamgbose 1966:8). Overall, the phonemic inventory of Yoruba is quite distinct from English.

3.3 Phonological Rules/Processes

Yoruba's most frequent phonological processes are consonant deletion as well as the [n]

and [l] alternation in terms of the allophone [n]. In fact, /r/ deletion tends to be the most

produced consonant deletion. These phonological rules are formal ways in which one

lucidly expresses the phonological changes occuring in different environments. The

purpose for most of Yoruba's phonological rules is to support the mental representation

as well as the surface representation.

The purpose of the /r/ deletion is mostly for fluent speech (Akinlabi 1993:144).

Deleting the /r/ phoneme makes one speech more efficent and easier to understand for

native Yoruba speakers. A rule for this phonological process would be:

/r/ → Ø / V(identical) ___ V(identical) or *V(high) __V or V___ V(high)

In prose, this rule means /r/ becomes deleted between identical vowels or /r/ can be

deleted before or after a high vowel. In general, this consonant deletion has to occur

between two vowels. The two examples below illustrate this change.

(7) Occurence between identical vowels (Akinlabi 1993:144)

    a. /èkuru/   →   [èkuu]   'cooked ground white beans'

    b. /kúkúrú/   →   [kúkúú]   'short'

(8) Occurence before or after high vowels (Akinlabi 1993:145)

    a. /àbúrò/   →   [àbúò]   'younger sibling'

    b. /àdúrà/   →   [àduà]   'prayer'

Awobuluyi (1979:149) describes this alternation by stating that the consonants [n]

and [l] are like two sides of the same coin: where you find one, you will not find the

other. In other words, [l] and [n] are in complementary distribution of each other. The

phoneme /l/ only occurs with oral vowels. However, the allophone *n* occurs with nasal

vowels only. In respect to this, one rule would be that if the following vowel is nasalized then /l/ takes the form of [n]. Another rule would be that if the following vowel is oral /l/ takes the form of [l].

(9) /l/ becomes [l] before oral vowels (Awobuluyi 1979:149)

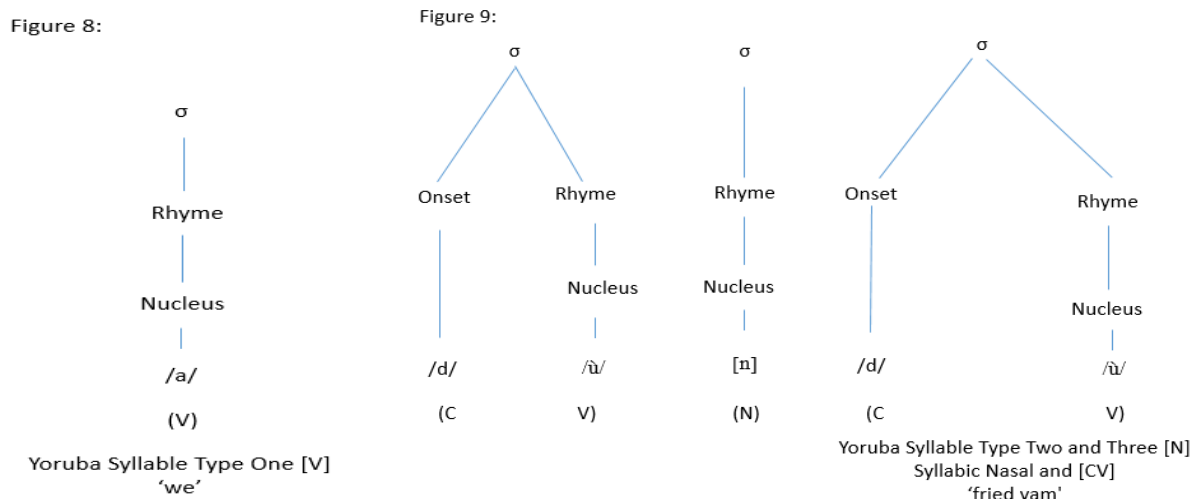   a. /bíbélì/ → [bíbélì]   'Bible'

   b. /lé/ → [le]   'to pursue'

 (10) /l/ becomes *n* before nasal vowels (Awobuluyi 1979:149)

   a. /li/ → [nĩ]   'to have'

   b. /lũ/ →[nũ]   'to wipe'

3.4 Syllable Structure

There are three syllable types in Yoruba: V, CV and N. V and C represent vowels and consonants while the N represents a syllabic nasal. Unlike English, a CCVC type would be infeasible to provide because Yoruba disallows consonant clusters as well as closed syllables. (Lawal 2004:460).

     The first type of syllable in Figure 8 is a V type that involves only a single vowel. This syllable doesn't have an onset or a coda. Therefore, the syllable in /a/ is onsetless and open. However, every syllable in Yoruba strictly has a nucleus. The nucleus in this

Figure 8:

Yoruba Syllable Type One [V]
'we'

Figure 9:

Yoruba Syllable Type Two and Three [N]
Syllabic Nasal and [CV]
'fried yam'

word is the vowel phoneme /a/. The second and third syllable types are CV and the

syllabic nasal [n] in Figure 9. In a CV type, it is made up of just the onset and the nucleus

as /d/ for the onset and /ù/ as the nucleus (Malhotra 2016b). In Yoruba, this is the basic

shape of simple verbs in the language because all the verbs in Yoruba begin with

consonants (Lawal 2004:460). Lastly, the syllabic nasal [N] occurs next to other

syllables. It is a nasal consonant that stands alone as a syllable, so it only has a nucleus.

The syllabic nasal here is represented by [n] in [dú-n-dù].

4   Morphology

Morphology is the study of how words are formed in the language with the use of

morphemes. Morphemes are indeed the smallest units of linguistic form and meaning in

morphology (Malhotra 2016c). The types of derivational and inflectional morphemes in

Yoruba will be reflected in this analysis as well as the morphological typology of the

language.

4.1 Inflectional Morphology

There are many types of inflection that can occur in languages such as: adjective

inflection, nominal inflection and verbal inflection. Nominal inflection is any

morphological process that can inflect a noun while keeping it in the same syntactic

category. However, languages that have very little indication of inflectional morphemes

such as Yoruba are classified as having an isolating/analytical morphological typology.

While a language such as Yoruba may be lacking in inflection there are other ways to

express its nominal and verbal inflection.

4.1.1 Nominal

One type of nominal inflection that can be conveyed in Yoruba is the plural formation of nouns. In Yoruba the plural is formed by the word [awɔn] which can be literally translated as 'they' (Wood 1879:14). Therefore, [awɔn] is used before an animate noun to make it plural. The examples displayed below show the pluralization of animate nouns in Yoruba that I have gathered from my informant.

(11) [okúnrìn]   [awɔn] [okúnrìn]

   boy   they   boy

  'boy'   'boys'

(12) [ómobìnrin]   [awɔn] [ómobìnrin]

   girl   they   girl

  'girl'   'girls'

Therefore, one can conclude that [awɔn] can express pluralization in a syntactic way. Since the word comes before the noun in each example to make it plural. However, according to (Tinuoye 2000:62), no allomorphic variation was found for making plurals in Yoruba. In English, a noun can be inflected with the morpheme '–s' for instance the noun 'book' becomes plurals by adding the –s morpheme to create 'books'. Some allomorphs in this morpheme would be '–ies' or '-es' because of the phonological environment in some nouns.

4.1.2 Inflectional

In Yoruba, verbal inflection can be expressed through the different aspects of the language. For instance, the progressive aspect of Yoruba can be expressed through the auxiliary prefix n- (Wood 1879:23). When the prefix n- is attached to a verb it can express the progression of an action or the continuance of an act. The data collection I

gathered from my informant illustrates the following verbal inflection for the progressive aspect.

(13)   [ʤɛ]   [n-ʤɛ]

       eat   PROG-eat

       'eat'   'eating'

(14)   [ri]   [n-ri]

       see   PROG-see

       'see'   'seeing'

Overall, unlike English, Yoruba is morphologically poorer since it lacks in nominal inflection. However, Yoruba can express its inflection in nouns and verbs with the help of auxiliaries and other words. Unlike English, Yoruba conveys the progressive aspect by adding the suffix '-ing' to the end of a verb. For instance, 'see' will become 'seeing' and 'eat' will become 'eating'. In fact, such a contrast, would make Yoruba an appealing language to study with respect to the lack of inflection.

4.2 Derivational Morphemes

There are many morphological processes that can create new words; some of them can be concatenative or non-concatenative (Malhotra 2016c). Tinuoye (2000:70) states that Yoruba's most commonly produced morphological processes include affixation, reduplication and compounding. With these morphological processes, Yoruba can make a verb into a noun, and two nouns into a compound noun.

4.2.1 Verb to Noun

With the use of affixation, Yoruba can change any verb into a noun that is related to the verb it was created from. In this case, Yoruba uses the prefix [–ì] to change the syntactic

category of a verb by attaching the prefix to the beginning of the root (Tinuoye 2000:46).

The examples below illustrate the derivation of a verb from a noun.

	VERB	**NOUN**
(15)	[kɔ̀wé]	[ì-kɔ̀wé]
	write	PRE-write
	'write'	'pen'
(16)	[pèjo]	[ì-pèjo]
	meet	PRE-meet
	'meet'	'meeting'

Therefore, from the data provided above, the verb derived from the noun is the verbal category of the noun itself. In example 1, the verb for "to write" is [kɔ̀wé]. When the prefix [–ì] is added to the verb it becomes the noun [ì-kɔ̀wé] "pen". The noun "pen" is related to the verb "to write" because a pen is used to initiate the process of writing. Lastly, in example 2, the verb for "to meet" is [pèjo]. When the prefix [–ì] is added to the verb, it becomes the noun [ì-pèjo] "meeting". The noun "meeting" is related to the verb "to meet" because in a meeting a person has to meet other people to discuss a common topic. Compared to English, one parallel process in the language would be the suffixation of the morpheme '-er' to a verb to make it a noun. Such as the verb 'help', when you add the morpheme '-er' it becomes 'helper'.

4.2.2 Nouns to Compound Nouns

With discrete morphology, Yoruba uses compounding as a morphological process to turn two nouns into a compound noun (Taiwo 2008). A compound word is merely just a word with two roots. In the Yoruba language, a compound noun can be derived from two or

more words. The examples below illustrate the compounding that can occur between nouns.

	N₁		N₂	N
(17)	[aso]	+	[ebì]	[asoebì]
	'cloth'		'family'	'family uniform'
(18)	[omo]	+	[èyìn]	[omoèyìn]
	'child'		'back'	'disciple

From the data, I have concluded the semantic implication depends on what the two nouns connote to the Yoruba speaker by convention (Tinuoye 2000:61). In fact, the compounds in the data above can be labeled as copulative since both of the two words in the compounds equally share the head. For instance, in example 1, [aso] 'cloth' and [ebì] 'family both share the head in the compound [asoebì] 'family uniform', since the 'family uniform is related to a type of clothing and the family that wears it. Lastly, in example 2, [omo] 'child' and [èyìn] 'back' both share the head of the compound [omoèyìn] 'disciple' because a disciple is a child of God whose back figuratively speaking always follows God. Compared to English, a similar compounding process can be used to form copulative compounds such as 'sleepwalk'; the nouns 'sleep' and 'walk' both share the head because 'sleepwalk' is the type of walk you do when you are asleep.

4.3 Morphological Typology

Based on its morphological type, Yoruba can be mostly classified as an isolating or analytical language. In other words, Yoruba is one of the many isolating languages that is on the far left side of the Index of Synthesis scale in Figure 10. In this case, Yoruba is morphologically poor

FIGURE 10: THE INDEX OF SYNTHESIS SCALE (Malhotra 2016c)
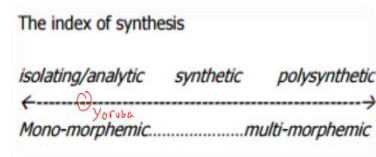
compared to other languages on the far right of the scale. Therefore, instead of expressing

grammatical meanings in terms of inflectional operations, Yoruba expresses it in terms of

independent words (Malhotra 2016c). For instance, when the inflection of Yoruba was

discussed in a previous section, it was stated that instead of an inflectional morpheme to

make a noun plural, Yoruba uses the word [awɔn] meaning 'they'. The data below

illustrates Yoruba's use for independent words in nominal inflection.

(19) [obɪnrɪn]

woman

'woman'

(20) [awɔn] [obinrɪn]

they woman

'women'

Overall, Yoruba is absent in some of the morphological processes, such as inflection;

however, it uses syntax as an alternative to convey the grammatical meaning.

5 Syntax

The syntactic analysis of Yoruba will focus on the sentential word order, noun phrase,

verb phrases and question formation. This also includes syntactic trees and sentential

examples to verify the syntactic claims.

5.1 Word-Order

In Figure 11, the sentence here is "Sarah has slept." From the syntactic tree, Yoruba

acknowledges the word "Sarah" as a Noun Phrase, so it would be the subject of the

sentence. The auxiliary word "has" is needed to form the past tense of many verbs in

Yoruba. Lastly, the verb phrase in this sentence is "slept". Based on the syntactic tree,

this sentence clearly follows the SVO word order, since "Sarah" is the subject and "has slept" includes the verb. However, this sentence doesn't need an object because "slept" is an intransitive verb. Compared to Figure 12, the syntactic trees look similar except for the auxiliary verb in the middle. In the English tree, auxiliary verbs are not required to make the syntactic tree for "Sarah slept" because of the past tense morphological marker 't'. Furthermore, the word order of the sentence is strict because 'has Sarah slept' would be an ungrammatical sentence in Yoruba. Also has a little side note, because of Yoruba's word order there are sentences an English speaker can understand that a Yoruba speaker wouldn't. For example, an English speaker would be able to distinguish "Sarah slept for two minutes" from "Sarah has slept for two minutes. A Yoruba speaker wouldn't be able to distinguish the two but would possibly add something at the end of the second sentence to compare to English's present perfect.

In Figure 13, the sentence here is "Christina has killed Mary". From the syntactic

FIGURE 11: YORUBA TREE

S

NP   VP

N   Aux   V

Sarah   ti   sun
Sarah   has   slept.
"Sarah slept."
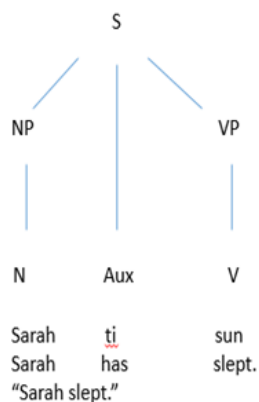
Phrase Structure Rules
S → NP Aux VP
NP → N
VP → V

FIGURE 12: ENGLISH TREE

S

NP   VP

N   V

Sarah   slept.
"Sarah slept."
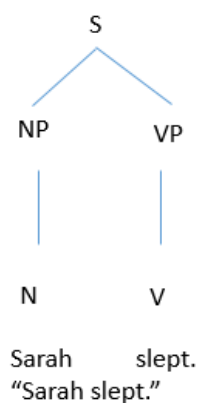
tree, 'Christina' is the noun phrase of this sentence, making it the subject. The auxiliary verb 'has' is used to form the past tense of the verb "laughed". Lastly, the verb phrase of this sentence comprises a verb and an object. "Killed" is the verb and "Mary" is the object of this sentence. This sentence has an object compared to the other Figures above

because "killed" is a transitive verb, meaning the verb has to take an object. Therefore,

Figure 13 clearly illustrates an SVO word order. My informant stated that the word order

is strict in Figure 9 because "has killed Mary Christina" is an ungrammatical sentence

when you switch the NP and the VP. Compared to Figure 14, the trees are similar except

for the auxiliary verb that is present in the Yoruba tree. Overall a general Phase Structure

Rule for the word order would be S→ NP (Aux) VP. The auxiliary verb in this phase

structure rule is optional because it is only needed to form the past tense of a verb.

5.2 Noun Phrase

FIGURE 13: YORUBA TREE   **FIGURE 14: ENGLISH TREE**
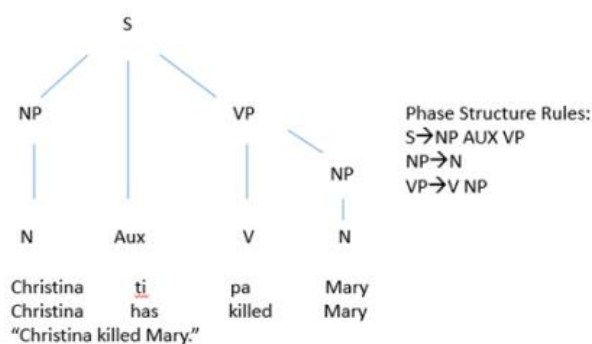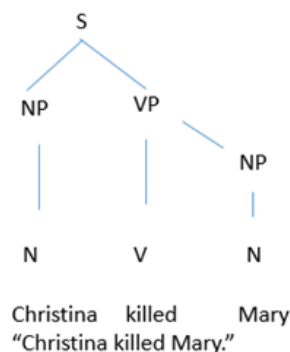
The structure of a Noun Phrase in Yoruba is quite different from English. In Yoruba, the

determiners such as articles, as well as adjectives, follow the noun, making the noun

phrase head initial. The examples below illustrate how a noun phrase in Yoruba is

constructed with regard to determiners and adjectives. In Figure 15, the noun phrase

displayed here is "woman the", in English, this can be closely translated as "the woman".

The word order of this noun phrase is noun "woman" first and determiner "the" second.

The order can be illustrated with the Phase Structure Rule next to Figure 15. This huge

NP constituent even contains a smaller NP constituent "woman" inside the tree.

Therefore, "woman" can stand alone as its own NP but, when it is attached with a

following determiner, it modifies the NP by making it a bigger constituent. However,

with English in Figure 16, the determiner always precedes the noun in the noun phrase, making it head final (Fasiku 2014:72).
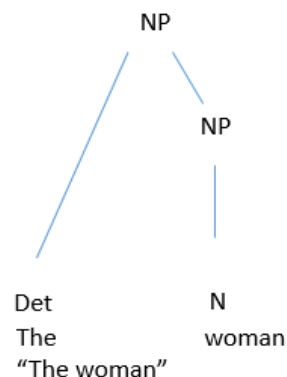
In Figure 17, the noun phrase here is "woman old the", in English, this can be

FIGURE 15: YORUBA NP TREE

FIGURE 16: ENGLISH NP TREE

closely translated as "the old woman". The word order of this noun phrase is noun, adjective, and determiner. The order can be illustrated with the phase structure rules right next to Figure 17. This huge NP constituent contains smaller NPs that modify the noun. The noun "woman" can stand alone as an NP in the sentence. The adjective "old" must follow the noun to form an AP that with an NP forms a larger NP constituent. When this large NP constituent "woman old" attaches with a determiner 'the' it forms an even bigger NP constituent. However, with the English Tree in Figure 18, the determiner and the adjective modifying the NP always come before the noun, making the NP head final. Overall, a general Phrase Structure Rule for all the NPs in the data would be NP → NP (Det).
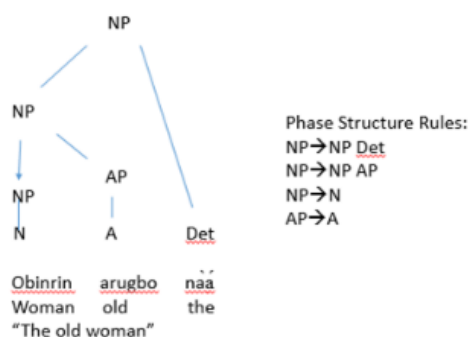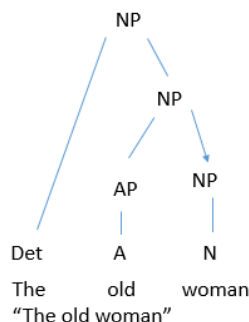
FIGURE 17: YORUBA NP TREE   **FIGURE 18: ENGLISH NP TREE**

5.3 Verb Phrase

A verb phrase is a constituent or a syntactic unit of a sentence that comprises a verb as well as its complements such as an object, or a modifier (PP) that can include adjuncts such as adverbs. There are 3 different types of VPs across all languages such as transitive, intransitive and ditransitive (Malhotra 2016d). The examples below illustrate the three different VPs found in the Yoruba language and how they are constructed with complements and modifiers.

5.3.1 Yoruba Transitive Verb

In Figure 19 below, the VP here is "met doctor" which can be closely translated as "met a doctor" in English. The verb "met" is a transitive verb because it comprises the object NP "doctor". The word order of the VP is a verb followed by an NP, its complement. This can be illustrated with the Phase Structure Rules right next to Figure 19. Unlike English, compared to Figure 20, Yoruba doesn't include an indefinite article in its NP like English does. The indefinite article "a" can't be literally translated in Yoruba according to my

informant. Yoruba makes the noun "doctor" a NP on its own without an indefinite article

to modify it.
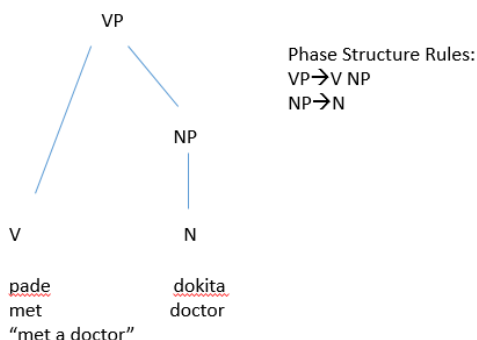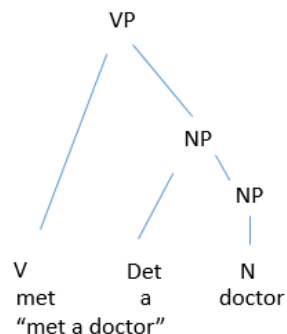
FIGURE 19: YORUBA TRANSITIVE VP TREE

FIGURE 20: ENGLISH TRANSITIVE VP TREE

Phase Structure Rules:
VP→V NP
NP→N

pade — dokita
met — doctor
"met a doctor"

"met a doctor"

5.3.2 Yoruba Intransitive Verb

In Figure 21 below, the VP here is "slept quietly". The verb "slept" is an intransitive verb

because it doesn't take an object such as an NP or a PP complement that complements the

V head. The word "slept" is its own VP and it can be modified by an adjunct to create a

bigger VP constituent. The adjunct in Figure 21, is the adverb "quietly" which follows

right after the VP it modifies. Therefore, the word order of the intransitive VP is an

intransitive verb phrase and then an adverbial phrase which is the adjunct and modifier.

Compared to Figure 22, trees are exactly alike.
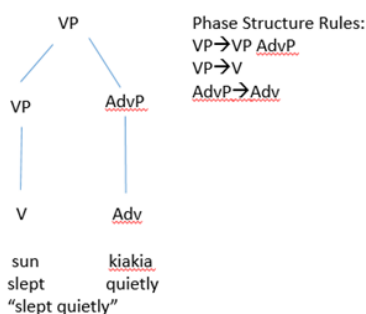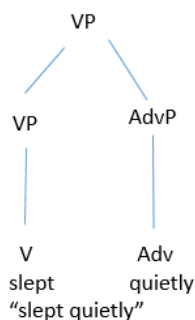
FIGURE 21: YORUBA INTRANSITIVE VP TREE

FIGURE 22: ENGLISH INTRANSITIVE VP TREE

Phase Structure Rules:
VP→VP AdvP
VP→V
AdvP→Adv

sun — kiakia
slept — quietly
"slept quietly"

slept — quietly
"slept quietly"

5.3.3 Yoruba Ditransitive Verb

In Figure 23, the VP here is "gave Lee to flower" which in English, is closely translated

as "gave flowers to Lee". The verb "gave" is a ditransitive verb because its complements include the object NP "Lee" and the indirect PP "to flower". Therefore, the word order of a ditransitive verb is a verb, a NP, and a PP. This can be illustrated with Phase Structure Rules next to Figure 23. In addition, the [ni] preposition in Yoruba is part of the post-marked construction of a ditransitive verb. The construction of a ditransitive VP always requires the preposition [ni] which follows after the object which is the recipient of the ditransitive verb, such as "gave" (Comrie 2011:123). Unlike English, compared to Figure 24, Yoruba puts a preference on the order of which the complements should come after the ditransitive verb. The recipient is always the preferred direct object when it comes to ditransitive verbs (Comrie 2011:123). Overall, a general Phase Structure Rule for all the VPs in Yoruba would be VP→ V (NP) (PP) (AdvP).
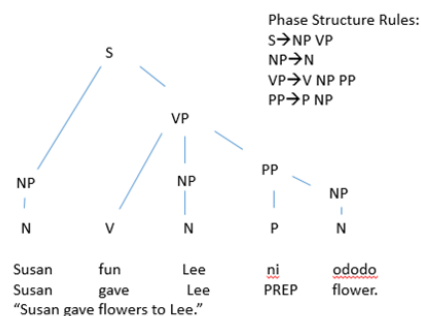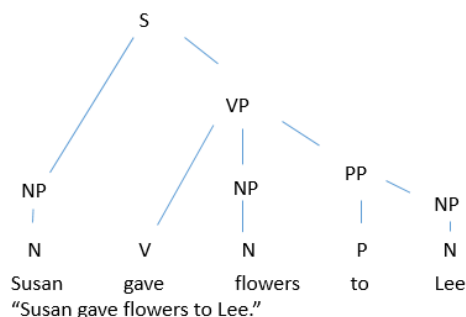
FIGURE 23: YORUBA DITRANSITIVE VP TREE   **FIGURE 24: ENGLISH DITRANSITIVE VP TREE**

Phase Structure Rules:
S→NP VP
NP→N
VP→V NP PP
PP→P NP

5.4 Question Formation

In syntax, a question shows merely just the surface of the sentence; however, the deep structure helps bring about the transformation. The deep structure of a sentence represents the underlying form of a sentence that is generated by Phase Structure Rules. A surface structure represents the outward appearance of a sentence that is derived from a deep structure due to a series of transformations (Malhotra 2016d). The examples below

illustrate how Yoruba forms Yes-No questions as well as Wh-questions, using

transformations that change it from a deep structure to a surface structure.

5.4.1 Content Questions

In Figure 25, the deep structure here is "cat big PROG chase

what be" which in English closely translates as "the fat cat is chasing what." The

sentence "cat big PROG chase what be" is a deep structure for wh-movement because no

transformations have occurred. The sentence merely represents what is beneath a Wh-

question, since the NP "what be" is the object of the verb "chase". In order to transform

this deep structure into a Wh-question Yoruba moves the "what be" to the beginning of

the sentence to form a higher NP, which attaches to a sentence to make a S'. Then in

Figure 25, the surface structure shown here is "what be cat big PROG chase?" because a

transformation has occurred and the NP "what be" was moved to the beginning of the

sentence to form a Wh-question. Overall, Yoruba's wh-movement is the same type of

movement that can be seen in English when the wh-word is moved to the beginning of

the sentence.

FIGURE 25: YORUBA WH-QUESTION

Deep and Surface Structure
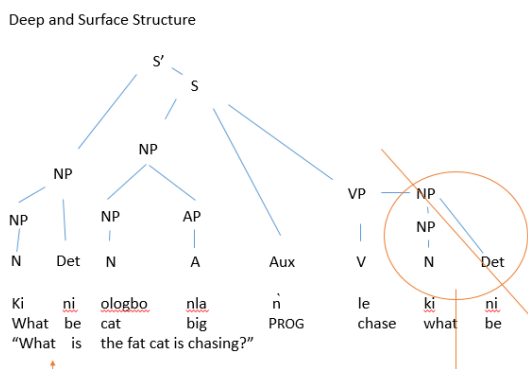
5.4.2 Yes-No Questions

In Figure 26, the deep structure here is "cat big PROG chase mouse". In English, this can

be closely translated as "the fat cat is chasing the mouse." The sentence "cat big PROG

chase mouse" is a deep structure because no transformations have occurred at this moment. In order to transform a deep structure into a Yes-No question Yoruba adds a Q Particle to the beginning of a sentence (Olumuyiwa 1857:110). In Yoruba, these Q particles could be [ndʒé] or [ʃé], either one of these Q particles are completely interchangeable, choosing which one to use depends on the preference of the speaker. Then, in Figure 26, the surface structure here is "is the fat cat chasing the mouse?" Therefore, unlike English, Yoruba doesn't need to switch the subject and the auxiliary verb to create a Yes-No question.

FIGURE 26: YORUBA Y-N QUESTION

Deep and Surface Structure
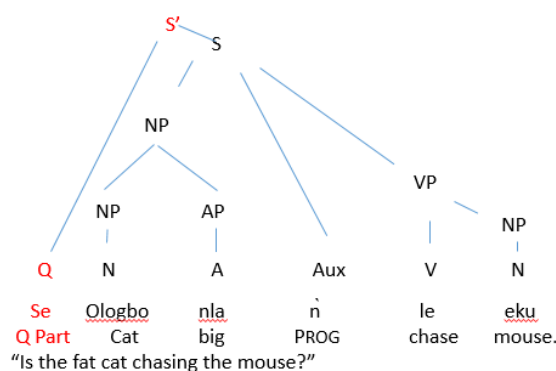
6   Conclusion

The analysis of the Yoruba language with English pointed out the apparent features that can be found in the phonetics, phonology, morphology and syntax of Yoruba.

When you look at the sounds of the language, pertaining to the Phonetics, Yoruba has some speech sounds that are unfamiliar to English. These sounds are the labio-velars [g͡b] and [k͡p] which are speech sounds made with the lips, the velum and the dorsal of the tongue. English just has the [w] as a possible labio-velar sound but it doesn't combine the [g] and [b] sounds together as well as the [k] and [p] sounds as one consonant. Yoruba also has tone, a suprasegmental feature that is not seen in English. These basic tones come in the form of high, mid and low. These are called level tones and each tone can

signify a different meaning in a word. Pertaining to the Phonology, Yoruba considers [n] to be an allophone of /l/ while English doesn't. The common phonological processes in Yoruba would be the /r/ deletion as well as the [l] and [n] alternation. Yoruba just has 3 syllable types: CV, V and the syllabic nasal N. Unlike English, the syllables in Yoruba are all open and it disallows consonant clusters.

In addition, when you look at the morphology of Yoruba there are some interesting features to highlight as well. For instance, Yoruba has very little inflection in its words. In order to make a noun plural a native speaker would add a word before the noun instead of inflecting it. However, some derivational processes are resent in order to create new words. Such as, prefixation to change a verb to a noun and compounding to take two nouns and make a compounded noun. The morphological typology of Yoruba is mostly isolating or analytic due to the very little inflection and the tonal system.

Lastly, the syntax of Yoruba has some interesting features as well. The word order of Yoruba is SVO and it's strict. All of the noun phrases in Yoruba are head initial. In fact, most VPs in Yoruba won't include a definite or indefinite article; all the VP cares about are the complements and the modifiers. Yoruba forms a Yes-No question by adding the Q particle [ndʒé] or [ʃé] to the beginning sentence. Yoruba forms a wh-question by moving the object NP to the beginning of a sentence to create a higher NP. Overall, this grammatical sketch of the Yoruba clearly highlights the phonetic, phonological, morphological and syntactic aspects of the language compared to English.

References

Akinlabi, Akinbiyi. 1993. Underspecification and the Phonology of the Yoruba /r/.

      Linguistic Inquiry 24. 139-160.   .

Awobuluyi, Oladele. 1979. *Essentials of Yoruba Grammar*. Ibadan: University Press Limited.

Bamgbose, Ayo. 1966. *A Grammar of Yoruba*. Cambridge: Cambridge University Press.

Campbell, George L. 1991. Yoruba. *Compendium of the world's languages*, 1474-1478.

      London: Routledge.

Comrie, Bernard. 2011. *Studies in Ditransitive Constructions: A Comparative Handbook*.

      Berlin: Deutsche Nationalbibliografie.

Fasiku, A. I. 2014. A Web Based English to Yoruba noun-phrases machine translation system.

      International Journal of English and Literature 5.71-78.

Lawal, Nike S; Sadiku, Matthew N.O; and Dopamu, Ade. 2004. *Understanding Yoruba Life*

      and Culture. Trenton, NJ: Africa World Press Inc.

Malhotra, Shiti. 2016a. *Linguistic analysis: Phonetics*. Lecture: Northeastern University.

Malhotra, Shiti. 2016b. *Linguistic analysis: Phonology*. Lecture: Northeastern University.

Malhotra, Shiti. 2016c. *Linguistic analysis: Morphology*. Lecture: Northeastern University.

Malhotra, Shiti. 2016d. *Linguistic analysis: Syntax*. Lecture: Northeastern University.

Mihalicek, Vedrana and Christin, Wilson (eds) 2011. *Language Files: Materials for an*

      Introduction to Language and Linguistics. Columbus: Ohio State University Press.

Olmsted, David L. 1951. *The Phonemes of Yoruba*. Chicago: Northwestern University

Olumuyiwa, Temitope. 1857. Yoruba Interrogative Proverbs. *European Scientific Journal*

      8.107-120.

Tinuoye, Mary. 2000. *A Contrastive Analysis of English and Yoruba Morphology*. Ilorin:

Univeristy of Ilorin.

Taiwo, Oye. 2008. Morphology Syntax Interaction in the Derivation of Nominal Compounds in

Yoruba. Pisa: University of Pisa. Online: http://www.humnet.unipi.it/slifo/vol10/

Taiwo10.pdf

Wood, J. B. 1879. *Notes on the Construction of the Yoruba Language*. Exeter: University of

Exeter.

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