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English Syllabic Consonants and Quantity Factor in Educated Yoruba Nigerian English (*Pp.45-55*)

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Abstract

This study aimed at investigating the duration and quantity in the realization of the unstressed syllables that have syllabic consonants as peaks in Educated Yoruba English (EYE), a sub-variety of Nigerian English. Three hundred Yoruba speakers of English with not lower than Ordinary National Diploma (OND) and Nigeria Certificate of Education (NCE) were used as samples for the investigation. The data, gathered by making the subjects read some prepared texts, were subjected to perpetual (auditory) and instrumental analyses. The perpetual analysis derived a generalization based on occurrence counting of sounds produced where syllabic consonants were expected. These were then converted to simple percentages, the highest percentage of each instance taken as norm. To corroborate the findings from perpetual analysis, the vowel sounds substituted for or inserted before the supposed syllabic consonants of two of the words produced by ten of the subjects were measured instrumentally with a PC based speech analysis system, Speech Filing System (SFS) developed at University College, London. The results confirm that syllabic consonants are hardly used as peaks of syllables by Educated Yoruba English speakers as it is the norm in Standard English. Rather, strong vowels are often inserted between the preceding consonant and the supposed syllabic consonant and in few instances substituted for them.

Nigerian English and its Stratification

There are many varieties of Nigerian English as established in the literature reviewed. Some varieties are identified on regional bases while others are educational and social. Hence we come across terms such as Yoruba English, Hausa English, Igbo English, Educated Nigerian English; Pidgin English etc (see Jibril 1982, Odumuh 1993, Udofot 2000, and Akinjobi 2004).

Banjo 1971 stratifies Nigerian English using points on a cline. This was done based on the extent of mother tongue influence and approximation to world standard. Variety I is said to have the greatest density of mother tongue transfer, Varieties II and III as being locally acceptable and internationally intelligible but obviously with variations that differ from the standard, and Variety IV as the spoken form of those that have been exposed to English in first language settings. He therefore recommends Varieties II and III as 'endonormative models since they are home-grown'.

Jibril (1982) stratifies Nigerian English using a 'geo-tribal' dichotomous approach. He therefore employs terms such as Hausa English, Southern English which he further stratifies into two as Yoruba and Igbo English (which he discusses as if they were sub-varieties of Southern English). He goes further to employ social terms such as Basic Hausa English and Sophisticated Hausa English, Southern and sophisticated Southern English, and even Southern-Influenced Hausa English. Educated Yoruba English as used in this investigation is therefore viewed as a sub-variety of Educated Nigerian English.

English Syllabic Consonants

A major area of deviation from Standard English usage for Nigerian speakers of English is in the realization of vowels and syllables that occur in unstressed positions. Ufomata (1990:15) claims that the most frequent sound in Standard English which is the schwa /ə/, is the rarest sound in Nigerian English. According to Gimson (1975:33) a crucial feature of English pronunciation is that unstressed syllables tend to have weak and obscure qualities. Therefore /ə/ and syllabic /l, ŋ, m/ occur typically in unstressed syllables. It is established in the literature reviewed on Standard Spoken English that a vowel occurring in an unstressed position is more often than not reduced to the schwa sound /ə/ or totally elided. In some instances, especially at word boundaries, the elided vowel is replaced by syllabic

consonants which then constitute the peak of that syllable (see Roach 1991: 78, Onuigbo 1990: 73). Syllables that have no vowels but rather have syllabic consonants as their peaks such as *student* /stju:dn̩t./ ‘apple’ /æpl̩/, ‘people’ /pi:pl̩/, and ‘hospital’ /ˈhɒspɪtl̩/ are usually located at word final boundaries.

Of high relevance to the present investigation is the perception of duration as an important correlate of stress. Phonetic investigations have revealed duration as next in importance to pitch modulation. Egbohkhare (1994: 69) proposes a hierarchy of the phonetic cues which listeners employ to identify stress on a syllable as abstracted from the investigations of Fry (1955) and Bolinger (1958). These in the order of their importance are pitch modulation, duration, intensity and segmental quality. Segmental effects such as vowel lengthening, vowel weakening, phoneme elision and consonant change are expected where duration is viewed as a correlate of stress. Consequently, an unstressed syllable with a syllabic consonant as its peak is expected to be short and non-prominent.

Research Methodology

This research is aimed at finding answers to a set of research questions: Do Educated Yoruba Speakers of English make syllabic consonants the peak of the syllables where they are typically found in Standard English? Since syllables with syllabic consonants as their peaks are typically unstressed, do EYE speakers make them short and obscure?

A text was read by three hundred Educated Yoruba speakers of English to find answers to the questions raised for this investigation. The three hundred subjects who were all born and nurtured in Yorubaland were persons with not less than OND and NCE and they spread across the dialectal sub-groups in Yorubaland. The Control, a native speaker of English, is a graduate of University of London.

The data were subjected to both perceptual and acoustic analyses. They were first sorted out into tokens of occurrences which were then counted. The instances of occurrence of each sound were then converted to percentages.

To corroborate the findings from the perceptual analyses, the vowels inserted or substituted for the expected syllabic sounds were measured on a PC based sound analysis system. The software consists of a suite of sound processing

packages including COOL Edit Pro, Sound Forge and speech acoustic software – Speech Filing System (SFS) developed at University College, London.

Perceptual Analysis

Table 1

Words	% of the instances of vowel insertion	% of the instances of Vowel substitution	% of the instances of the appropriate use of syllabic consonants	Words	% of the instances of vowel insertion	% of the instances of Vowel substitution	% of the instances of the appropriate use of syllabic consonants
<i>pebble</i>	79	15	6	<i>Peasant</i>	100	-	-
<i>bacon</i>	99	-	1	<i>little</i>	92	-	8
<i>sizzle</i>	87	-	13	<i>madden</i>	98	-	2
<i>hospital</i>	87	-	13	<i>principal</i>	92	-	8
<i>student</i>	100	-	-	<i>principle</i>	94	-	6
<i>passion</i>	86	-	14	<i>panel</i>	94	-	6
<i>happen</i>	97	-	3	<i>petal</i>	93	-	7
<i>television</i>	94	-	6	<i>ribbon</i>	91	-	9
<i>wrestle</i>	100	-	-	<i>bottle</i>	93	-	7
<i>muddle</i>	96	-	4	<i>total</i>	96	-	4

In Standard English, some words have syllables with syllabic consonants such as /n, l/ as peaks rather than vowels that are usually found in that position. Such syllables that always occur word finally are usually unstressed. It has been observed in the case of the Educated Yoruba subjects that rather than use syllabic consonants as the peak of such syllables, vowels were inserted between the preceding consonant and the syllabic consonant. Only few cases of the substitution of vowels for the syllabic consonants were found and this occurred with the word *pebble* /pebl/ which was produced as [pebu] 15% of the instances of occurrence. It has also been discovered in this investigation that the vowels inserted or substituted for the syllabic consonants by the EYE subjects were usually quantitative and strong.

In the production of the word *pebble*, 79% of the EYE subjects produced the unstressed syllable /-b| / as [-bul], 15% as [bu] and only 6% appropriately

produced [-b]. The **-con** of **bacon** was produced as [kɔn] by 66% of the EYE subjects while [kʊn] and [kɔn] were produced by 25% and 8% respectively. Only 1% of the subjects produced the appropriate [kɒ]. The [-zl] of **sizzle** was produced as [-zul] by 78% of the EYE subjects while [-sul] was produced by 9% and only a negligible 13% produced the appropriate [-zl]. In the production of the unstressed **-tal** of **hospital**, 34% uttered [-tul], 31% [-tal], 22% [-tɔl], 11% [-dl] and only an insignificant 2% rendered the Standard English [-tɪ]. A majority of the subjects inappropriately inserted different vowels in the syllable and the vowels inserted were perceived as strong vowels except in the case of just 22% of the subjects who inserted the weak sound [ə]. The **-dent** of **student** was rendered by 56% as [-dɛnt], 43% as [-dɪnt] and 1% as [-dɔnts]. It was observed here that those that attempted to produce the syllable as [-dnt] still inserted the vowel [ɪ] rather than appropriately produce the syllabic consonant /ŋ/.

The unstressed syllable /-ŋ/ of **passion**, was produced as [-ʃɔn] by 86% of the EYE subjects while only an insignificant 14% produced the appropriate [-ʃɪn]. 91% of the subjects also produced the /pɪn/ of **happen** as [-pun], 6% as [-pin] and only a negligible 3% produced the appropriate [-pɪn]. The /-ŋ/ of **television** was produced as [-ʃɔn] by 79% of the subjects, as [ʒɔn] by 15% and appropriately as [ʒɪn] by an insignificant 6%. None of the EYE subjects appropriately produced the /-sl/ of the word **wrestle**. While a significant 63% produced it as [-sul], 29% and 8% produced /-sl/ as [-stul] and [-zul] respectively.

The word **muddle** had its unstressed syllable /-d/ produced as [-dul] by 96% of the subjects while only an insignificant 4% produced the appropriate [-dl]. **Peasant** had its unstressed syllable /-znt/ produced as [-sant] by 90%, [-zant] by 10% while none of the subjects produced the appropriate [-znt]. The /-t/ of **little** was produced as [-tul] by a significant 74%, as [-rul] by 10%, [-dul] by 8%, and as the appropriate [-tɪ] by only 8% of the EYE subjects. The unstressed syllable /-dn/ of **madden** was produced as [-din] by 98% while only a negligible 2% produced the appropriate sound [-dn].

The /-p/ of **principal** was rendered as [-pal] by 92% of the EYE subjects while an insignificant 8% appropriately produced [-pɪ]. The [-pɪ] of **principle** was rendered as [-pul] by 94% and only as the Standard English [-pɪ] by 6%.

An interesting observation about the words **principal** and **principle** is that though they are homophones in Standard English, a possible spelling influence was observed in the EYE production of their word-final unstressed syllables, the **-pal** (/pl/) of **principal** being produced as [-pal] while the **-ple** (/pl/) of **principle** was produced as [-pul].

The /-n/ of **panel** was produced by 94% of the subjects as [-n] while only 6% produced the appropriate [-n]. The /-t/ of **petal** was rendered as [-tal] by 93% of the subjects with an insignificant 7% rendering the appropriate [-t] while the /-b/ of **ribbon** was rendered by 53% as [-bɒn], 38% as [-bin] and an insignificant 9% as the appropriate [-b]. The /-t/ of **bottle** was produced by 93% as [-tul] and by only 7% of the subjects as [-t] which is standard. **Total** has its unstressed **-tal** produced as [-tal] by 57% of the subjects, as [-tul] by 39% while the appropriate [-t] was rendered by only 4%.

Instrumental Analysis

The words **pebble** and **bacon** as produced by ten of the subjects were selected from the text read to corroborate, by the use of instruments, the findings from perceptual analysis that the EYE subjects did not conform to the Standard English norm of using syllabic consonants as peaks of some unstressed syllables. **Pebble** is selected because it has the few cases of vowel substitution discovered through the perceptual analysis while **bacon** is randomly selected from the other nine words with only instances of vowel insertion discovered by perceptual means.

The instrumental analysis attempted to find out the duration of the syllables with the syllabic consonants as peaks and the vowels that were either inserted before or were substituted for the syllabic consonants in the unstressed syllables by EYE subjects.

Table 2

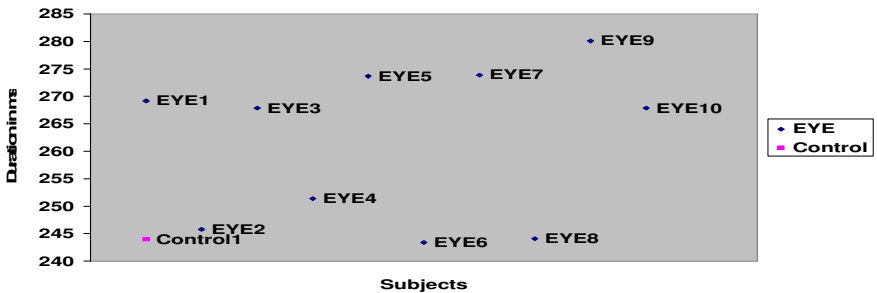
bl in Pebble /pebl/ and -kn in bacon / bekn/

Subjects	duration of the -bl of pebble	duration of the vowel inserted	duration of the vowel substituted	duration of the -kn of bacon	duration of the vowel inserted	duration of the vowel substituted
Control	244	-	-	257	-	-
EYE 1	269.2	145.7		284	187	-
EYE 2	245.8		201.6	289	157	-
EYE 3	267.9	108.9		281	156	-
EYE 4	251.4		071.9	265	146	-
EYE 5	273.7	149.1		272	121	-
EYE 6	243.3	092.9		254	086	-
EYE 7	273.9		228.9	334	185	-
EYE 8	244.1	112.8		275	123	-
EYE 9	280.1	143.4		276	150	-
EYE 10	267.9		150.1	265	142	-

It could be observed from the table above that the EYE subjects either inserted a vowel between the supposed syllabic consonant – ɫ in the unstressed syllable –bɫ of *pebble* and the preceding /b/ sound or substituted a strong vowel for the syllabic consonant /- ɫ/. The control has been observed not to have done either. Through instrumental investigation, six of the EYE subjects were discovered to have inserted vowels between the supposed syllabic consonant / ɫ/ and the preceding /b/ sound while four substituted vowels for the syllabic consonant - ɫ.

Figure 1

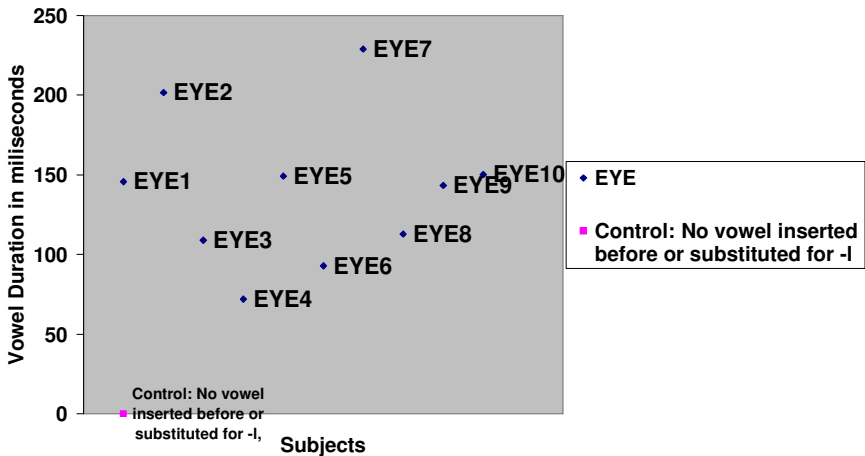
XY Scatter for the Duration of the Unstressed Syllable -bl of Pebble



Some of the EYE subjects have been observed from the scatter chart above to make the unstressed syllable */-bɪ/* of *pebble* which is supposed to be weakened and rendered obscure, quite quantitative.

Figure 2

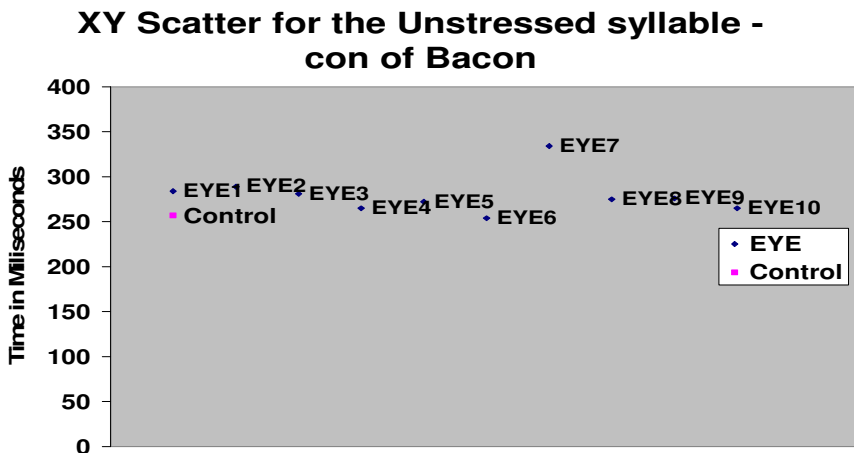
XY Scatter for the Duration of the Vowel Inserted before or Substituted for *-l* in *Pebble*



It could be observed from the scatter above that the EYE subjects inserted some vowels with remarkable production durations in the unstressed syllable *-ble / bɪ/* of *pebble* or substituted some vowels for the syllabic consonant */-ɪ/* of *pebble*. With the control however, it could be observed that no vowel was inserted in the syllable or substituted for the syllabic consonant.

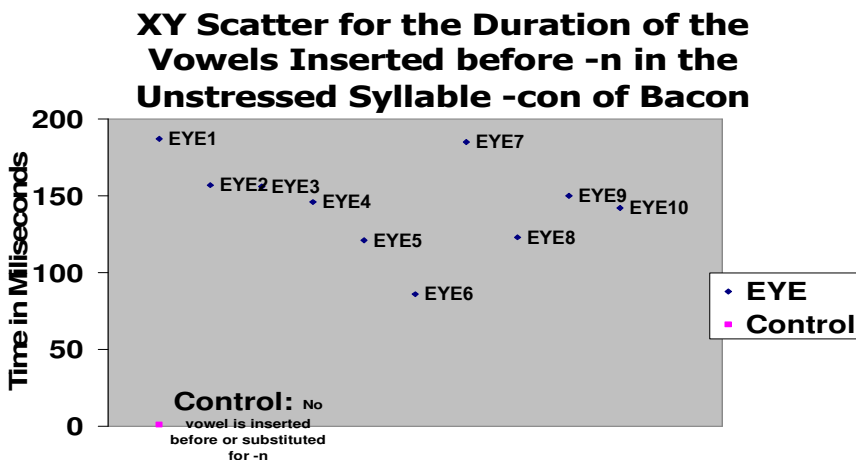
The word *bacon /beɪkən/* is supposed to have */-kən/* rendered unstressed and consequently less quantitative. It is observed from the table above that most of the EYE subjects produced the syllable with longer duration than the Control.

Figure 3



It is observed from the XY Scatter chart above that all the EYE subjects have higher duration in the production of the unstressed syllable /-kŋ/ of bacon /beIkŋ/ than the control.

Figure 4



It is observed from the scatter above that the EYE subjects all inserted one vowel or the other in the unstressed syllable /-kŋ/. The control is however observed not to have inserted any vowel in the unstressed syllable - the syllabic /-ŋ/ been the peak of that syllable for her.

Findings

The perceptual and instrumental analyses revealed that the EYE subjects rendered the syllables with syllabic consonants as peaks quantitatively whereas, in Standard English, these unstressed syllables are expected to be accompanied by a decrease in their duration among other correlates of stress.

The EYE subjects often inserted a vowel between the syllabic consonant and the preceding sound. A few cases of vowel substitution for the syllabic consonants were attested but the percentage is not remarkably significant. In these few instances however, the vowels inserted were often strong and quantitative. The control is found neither to have inserted a vowel between the syllabic consonant and the preceding sound nor substitute a vowel for the syllabic consonant.

These results further confirm the quantitative nature of Educated Yoruba English which may be one of the major factors responsible for the intelligibility problem encountered when Educated Yoruba English speakers have to communicate with native English speakers.

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