Brilliant or Brillian: Final Consonants in Nigerian and Cameroonian Englishes

Inyang Udofot
Nkereke Essien
University of Uyo, Uyo

Abstract.
This paper investigates the behavior of consonants in final positions in Nigerian and Cameroonian Englishes. Ten words and five sentences were read by ten Nigerians and ten Cameroonians who speak educated Nigerian and Cameroonian Englishes. The exponents were university men and women. The read word list and sentences were recorded and fed into a computer through a Mac Recorder and analysed perceptually and acoustically using the PRAAT Speech Analysis Software. The analysis revealed among other processes that both in Nigerian and Cameroonian Englishes there are devoicing and deletion of final consonants. Simplification of final consonant clusters was also observed. While final consonant non release, neutralization of voiced and voiceless alveolar plosives and simplification of final consonant clusters with the introduction of epenthetic vowels are peculiar to Nigerian English, Cameroon English simplifies final consonant clusters by deleting the last member of the cluster especially if they are plosives. The environments where these processes occur in both accents were also identified and discussed. These similarities can be traced to the fact that both Cameroonian and Nigerian Englishes are non native varieties and also accents of West African English and therefore collectively differ from RP in terms of final consonant processes.

Keywords: final consonants, devoicing, deletion, simplification, neutralisation

Introduction

The English Language came to West African countries such as Nigeria, and Cameroon through trade, colonialism and missionary activities. These West African countries had their indigenous languages. The coexistence of English with the languages spoken across West Africa has given birth to West African subvarieties which have many features in common. Writing about Cameroon English for instance Simo Bobda (2008) notes

> The CamE (Cameroon English) though still intelligible to mother tongue accents to a large extent is markedly different from several points of view. In fact it has reached a very high degree of autonomy. This autonomy ... is seen in the restructuring of the sound system of the mother tongue English. This restructuring results in the numerous and major splits and mergers of Wells (1982) lexical sets. Autonomy is also seen in the way CamE applies existing phonological rules... (p.131)

The above observation can also be made of English in Nigeria, Ghana and even Gambia. Gut (2008) writing about Nigerian English claims that 'There seems to be an intricate relationship between accents and tone not only because accents are very often produced with a phonetically high pitch. It has been suggested that Nigerian English accents are produced primarily with tone'. (p. 50). This assertion is corroborated by Udofot (2011) where it is observed that 'the Nigerian English speaker hardly uses stress the way it is understood by speakers of Germanic languages but more or less uses tone the way it is used in Nigerian languages'(p.16).

At the segmental level, the West African accents have much in common in terms of vowel quality, vowel epenthesis, substitution of indigenous sound phonemes for English phonemes and reduction of vowel length, monophthongisation of diphthongs and formation of glides from diphthongs and triphthongs. Certain consonant processes are seen to be common across the West African region while some are peculiar to certain countries. Huber (2008), for instance, notes that most West African languages do not have central vowel phonemes. Speakers of West African Englishes accordingly replace RP / ɜ: ə, ʌ/ with front or back vowels' (p.76) but that ' the.. substitution of the front vowel /e/ for RP / ɜ:/ in all contexts is one of the main characteristics that sets GhE apart from other West African Englishes' (p.76). Simo Bobda (2000) also observes that 'the replacement of / æ/ by /a/ is a feature common to all African Englishes: east, west and south' (p77).

Many of the peculiar differences between West African Englishes and RP are traceable to the indigenous languages spoken in West Africa. Many of these languages are also descended from the same origin. The

differences between the segmental and supra segmental processes of English and the West African languages are largely responsible for these general tendencies

The authors' aim in this paper is to examine actual utterances from educated Nigerians and Cameroonians and to analyse some of them perceptually and acoustically to examine the behaviour of final consonants in these West African accents of English and determine to what extent it can be used to characterise the West African accents. The basic assumption is that certain consonantal processes are common to west African accents. Consonant processes such as simplification of consonant clusters and final consonant deletion and non release have been attested in some West African accents (cf Simo Bobda 1994, 2008; Gut, 2002, 2008). This work will use both perceptual and acoustic evidence to identify the processes evident in the behaviour of final consonants in both Nigerian and Cameroon accents of English and account for their occurrences.

Research Methodology

Data Collection Procedure

The data for this study consisted of the productions of ten Nigerians and ten Cameroonians from reading a list of words and sentences. The subjects were university men and women. The productions were fed into a computer through a head phone .Ten words and five sentences were read by each of the subjects into the PRAAT recorder through a head phone microphone . Each production was saved as a wav file in the long sound file.

Analytical Procedure

The performance of all the subjects as regards production of final consonants in selected words were noted. The alternative productions of all the subjects on the isolated words and the words in connected speech were also shown for both the Nigerian and Cameroonian Subjects. For the acoustic analysis one utterance: *He is a brilliant student* was selected from the productions of six subjects, three Nigerians, and three Cameroonians. Wide band spectrograms of the utterances were extracted using the PRAAT Speech Analysis Software. This was to show the presence or absence of the final consonants. According to Ladefoged (2006) ' differences among vowels, nasals and laterals can be seen on spectograms , whereas it may be impossible to see these differences in waveforms… it

is also possible to tell many things about manner of articulation from spectrograms'(p.204).

The performance of Nigerian and Cameroonian subjects were then compared to isolate the differences and similarities before general observations were made about the final consonants in Nigerian and Cameroonian accents of English.

Presentation of Data

It was observed that many of the Cameroonian and Nigerian subjects could produce the word *brilliant* properly in citation form but deleted the final /t/ in connected speech or produced it with the /t/ unreleased. Spelling pronunciation was also observed among the two sets of subjects in the word *jumped* which was produces as [jÃmpd] instead of /jÃÃmpt/ and [dresd] instead of /drest/. Also, consonant clusters were simplified by dropping the last sound as in *last* and *told* which were produced as [las] and [tol] by both sets of subjects. Few subjects among the Cameroonian group simplified clusters by the introduction of epenthetic vowels as in [milik] instead of /milk/ and [jÃmped] instead of /jÃmpt/. Details of the findings from the perceptual analysis are presented in Tables 1-4 below:

Table 1: Performance in Citation Form – Nigerian Accent

Sound	Word	No Able	No Not Able	Comments
/nt/	brilliant	9	1	Last segment deleted by 1 = /brilian/
/mp/	jump	4	6	Last segment deleted by 6 = /jÃm/
/T/	fifth	7	3	Dental fricative replaced by labio dental fricative/f/
/ld/	told	2	8	Last sound deleted by 8 subjects = /to
/st/	last	9	1	Last sound deleted by 1=/las/
/p/	reap	0	10	All the subjects pronounced th unreleased /p̚/

/t/	mat	0	10	All the subjects pronounced unreleased -/t
/d/	mad	10	0	All subjects produced the s properly
/v/	Leave	0	10	All subjects devoiced the /v/ to /f
/lk/	milk	0	10	All subjects produced the cluster the /k/unreleased.

Table 2: Performance in Connected Speech: Nigerian English

Sound	Word	No Able	No Not Able	Comments
/nt/	Brilliant	6	4	Last segment deleted by 6 = /bilIiant/
/nt/	Student	0	10	Last segment deleted by al 10 = /studen
st/	Dressed	0	10	Voiceless alveolar plosive replaced by Voice alveolar plosive /d/
/st/	Toast	2	8	Last sound deleted by 8 subjects = /tos/
/st/	Last	9	1	Last sound deleted by 1=/las/
/mpt/	Jumped	0	10	Spelling pronunciation= /jÃmpd /
/p/	Rope	0	10	All the subjects pronounced the unreleased /- /
/ks/	Fix	0	10	All subjects produced the word with the unreleased /k/=/ks/
/v/	Leave	0	10	All subjects devoiced the /v/ to /f/
/lk/	milk	0	10	All subjects produced the cluster with th /k/unreleased.

Table 3: Performance in Citation Form – Cameroon English

Sound	Word	No Able	No Not Able	Comments
/nt/	brilliant	9	1	Last segment deleted by 1 = /brilian
/mp/	jump	0	10	Last segment deleted by all 10 = /jÃ
/T /	fifth	0	10	Dental fricative replaced by la dental fricative/f/
/ld/	told	0	10	Last sound deleted by all 10 subje = /tol/
/st/	last	9	1	Last sound deleted by 1=/las/
/p/	reap	10	0	All the subjects pronounced t unreleased /-/
/t/	mat	0	10	All the subjects pronounced t unreleased /-/
/d/	mad	10	0	All subjects produced the sou properly
/v/	Leave	0	10	All subjects devoiced the /v/ to /f/
/lk/	milk	8	2	2 subjects produced the cluster w the epenthetic /i/.

Table 4 Performance in Connected Speech: Cameroon English

Sound	Word	No Able	No Not Able	Comments
/nt/	brilliant	3	7	Last segmentdeleted by 7 = /bilIiant/
/nt/	student	0	10	Last segment deleted by al 10 /student/

st/	dressed	0	8	Spelling pronunciation= /sd/
/st/	toast	2	8	Deletion of the final /t/by8 =/tos/
/st/	last	9	1	Last sound deleted by 1=/las/
/mpt/	jumped	0	10	Spelling pronunciation= /jÃmpd / by all 10
/p/	rope	0	10	All the subjects replaced /p/ with /b/
/lp/	help	5	5	5 subjects deleted /l/= /hep/
/ks/	fix	0	10	All subjects produced the word with the unreleased /k/=/k -s/
/lb/	bulb	7	3	7 subjects deleted /l/ from the cluster= /bÃb/
/lk/	milk	0	10	All subjects produced the cluster with the /k/unreleased.

Observations on Perceptual Analysis

Tables 1 and 2 show that The Nigerian subjects performed better when the words are in citation form than when they occur in connected speech. For instance , the word *brilliant* was produced with the final cluster /nt/ by nine out of the ten subjects when it occurred in citation form but in connected speech only 6 produced it properly and all the subjects could not produce the same combination in the word student when it occurred in connected speech. Generally, the clusters were simplified by the deletion of the last sound when the sound is /t/as in t*oast* and *last*, *student*, and *brilliant*. At other times /t/ was replaced by /d/ if the word ends in /ld/ or /ed/ as in *dressed* and j*umped*. The influence of the orthography is evident here. Single final consonants were either devoiced as in *leave* where /v/ was changed to /f/ ; replaced with other sounds as in the case of /T/, a dental

fricative being changed into a labio- dental fricative /f/. Final plosives such as /p, b, k, d/ were also deleted in final positions or were unreleased . Typically final clusters were simplified by the deletion of either the last sound as in /t/ or /d/ the middle one as in /p / in /mpt/ which was generally produced as / jÃ md /.

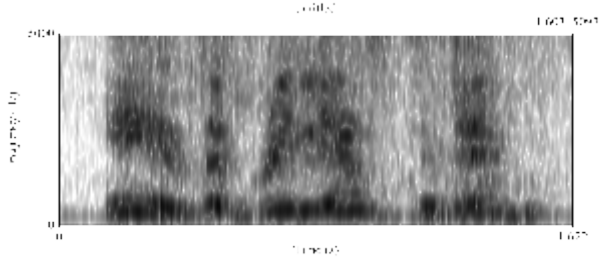
Tables 3 and 4 present the similarities as well as the peculiarities. With the Cameroonian subjects the performance in the citation form was not significantly different from the performance in the connected speech. The same processes of deletion of the last member of the cluster, devoicing of final consonant non release were observed with the stops. Two cases of simplification of the cluster by the use of epenthetic vowel in *milk* was attested in the data from the Cameroonians, single final consonants were also devoiced , replaced or unreleased as with the Nigerian English speakers. The tendency to delete the first rather than the last member of a cluster was also observed among the Cameroonian subjects as in *help* where /l/ rather than /p/ was deleted resulting in /hep/ and the deletion or non release of /k/ rather than /s/ in *fix* resulting in what sounded like /fis/.

Generally the performance of the Nigerian and Cameroonian Subjects with regard to the production of final consonants was largely similar with only slight peculiarities the fact that the Nigerian subjects were post graduate students of the Department of English notwithstanding. The Cameroon Subjects were however different in that they all produced /p/ in rope as /b/ and they also deleted the first member of the cluster in *help* and *fix /fIks/* which no Nigerian subject did. With regard to other processes they exhibited similar tendencies.

3.1 Presentation of Acoustic Findings

The productions selected for acoustic analysis were chosen by a systematic random sampling technique. The researchers decided to take the first , fifth and ninth subjects' productions for the analysis. That worked well in the Nigerian group but the fifth subject in the Cameroonian group was not audible enough and the ninth exhibited hesitation phenomena so the first , fourth and seventh were selected. The sound spectrograms of the selected productions are presented below:

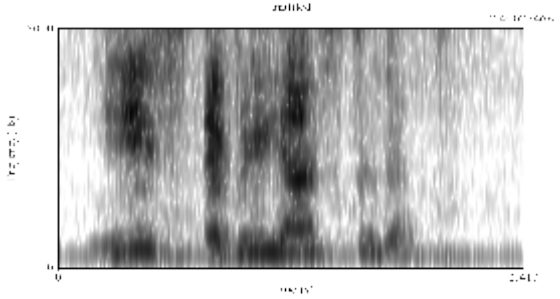
Ne1: He is a brilliant student



[h Iz E brillian studen]

Fig.1 Source: Authors' analysis of recorded speech of NE 1

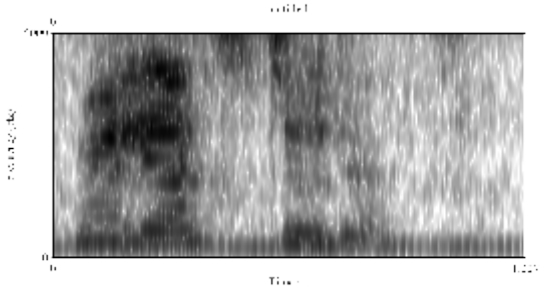
NE 5: He is a brilliant student



[h Iz E brillian studen]

Fig.2 Source: Authors' analysis of recorded speech of NE 5

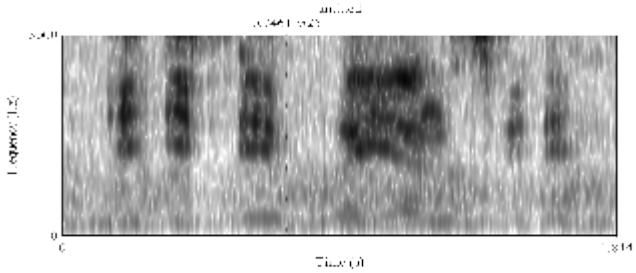
Ne9: He is a brilliant student



[h Iz E brillian studen]

Fig.3 Source: Authors' analysis of recorded speech of NE 9

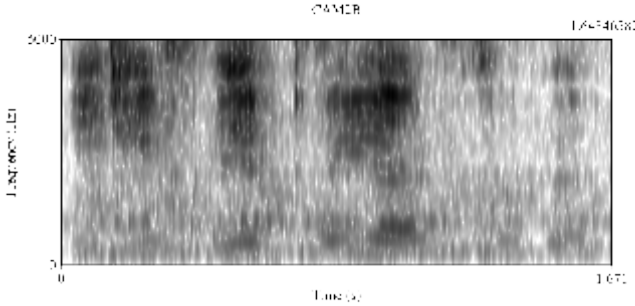
Ce1: He is a brilliant student



[h Is E brillian studen]

Fig 4. Source: Authors' analysis of recorded speech of CE 1

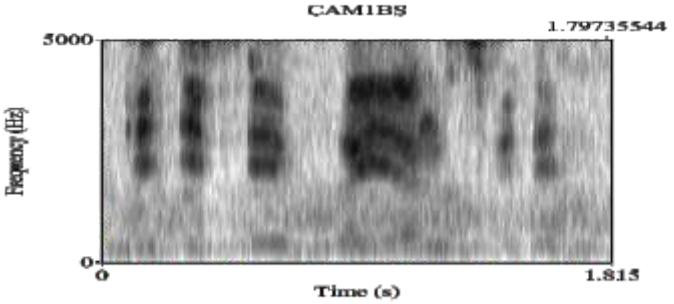
CE 4: He is a brilliant student



[h Iz E brillian studen]

Fig.5 Source: Authors' analysis of recorded speech of CE 4

CE 7: He is a brilliant student



[hIs E b ri lj Ian studen]

Fig.6 Source: Authors' Analysis of recorded speech of CE 7

Observations on Acoustic Analysis

In spite of the fact that the productions selected for acoustic analysis were chosen following a systematic random sampling technique the spectrograms reveal that all the subjects selected produced the final clusters in *brilliant* and *student* without the final /t/; the spectrograms of the six subjects reveal that the two words end in the nasal/n / not the plosive /t/; the formant structures at the end of the words are similar to that of a vowel but with the second and third formant lower and very faint. This corresponds with Ladefoged (2006, p.197) which observes that formant structure for nasals are similar to that of vowels but with nasal formants at about 250, 2500 and 3250Hz on a scale of 1000-5000Hz.as against stops which shows a gap in pattern followed by burst of noise for voiceless stops such as /t/.

4.0.**Discussion of Findings**

The basic assumption of this paper was that certain consonantal processes are common to west African accents. Consonant processes such as simplification of consonant clusters and final consonant deletion and non release have been attested in some West African accents (cf Simo Bobda 1994, 2008, Gut 2002, 2008). It has been shown in both our perceptual and acoustic analysis that both Nigerians and Cameroonians simplify final clusters by deleting one segment . Whereas the Nigerian subjects studied only dropped the final consonants some of the Cameroonian subjects deleted both the final and sometimes, the initial member of the cluster. At other times some Cameroon subjects introduced epenthetic vowels into the clusters. Though epenthetic vowels are often attested in Nigerian English none of the subjects used for this student showed this tendency, this could be due to the fact that Nigerian subjects used for this study were postgraduate students of English Department whereas the Cameroonian subjects were university men and women not necessarily students of English.

With regards to final consonant non release both the Nigerian and Cameroonian Subjects did not release final /p/ and /t/ in the words and sentences read. Final consonant non- release was also not by Udofot (2013) in Nigerian, Cameroonian and Ghanaian accents of English, it was also noted that final consonants and clusters produced in citation forms were not produced properly when the words occurred in connected speech. Another feature noted was devoicing of voiced sounds in final positions by

both Nigerians and Cameroonians and outright change from one sound to another as in the case where the voiceless dental fricative /Tby / was changed to /f/ by three of the Nigerian subjects and all the Cameroonian Subjects.. This substitution may be the result of the fact that the dental fricative is not a familiar sound in the inventory of the sound system of many west African languages.

5.0 Conclusion

Some of the observations made by Simo Bobda (1994, 2004) and Gut (2002, 2008) about Cameroonian and Nigerian accents of English have been upheld by this study. In addition we noted final consonant devoicing and substitution of other sounds which as close in place and manner of articulation to the substituted sounds. Perhaps a larger corpus would yield more similarities and differences. Finally we have noted the similarity between the Nigerian and the Cameroonian accents of English which though similar in some consonant processes are different enough to qualify as different accents. We put these similarities down to influences from the West African indigenous languages spoken in Nigeria and Cameroon

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