

ENGLISH WORLD-WIDE

A JOURNAL OF VARIETIES
OF ENGLISH VOL. 24:2 2003



Stress and rhythm in the Nigerian accent of English

A preliminary investigation

Inyang Udofot
University of Uyo

This paper undertakes the investigation of the disposition to stress of Nigerian users of English and the nature of spoken Nigerian English rhythm. The subjects of the study were sixty Nigerians of varied socio-economic, educational and ethno-linguistic backgrounds and a native (British) English speaker, whose productions from reading a passage and speaking freely for three minutes on a common topic were analysed metrically, acoustically and statistically, using a modified version of the Metrical Theory, the Wilcoxon Matched Pairs Signed Ranks Test and the Analysis of Variance (ANOVA). In spite of earlier classifications, the study assumes the existence of three varieties of spoken Nigerian English characterized by their disposition to stress and speech rhythm: the “Non-Standard”, the “Standard” and the “Sophisticated” varieties, which are individually different but collectively similar yet different from Standard British English, represented by the control’s performance. The existence of the three varieties is confirmed by the data. The common performance features include a tendency to stress more syllables in words than the native speaker. This feature, which is traceable to the influence of the syllable-timing rhythm of the subjects’ mother tongues, tends to characterize the Nigerian accent of English; but whereas the Non-Standard Variety conforms to the syllable-timing description the Standard and Sophisticated Varieties require further investigation.

1. Introduction

The English language, a generally accepted stress-timed language (cf. Pike 1945; Abercrombie 1967), which was introduced into Nigeria through colonialism

and missionary activities, is now routinely spoken in Nigeria, as in other African and South Asian countries which were colonized by the British. The many years of contact between English and the many indigenous Nigerian languages have resulted in a nativised variety, Nigerian English, which is one of the New World Englishes (cf. Platt et al. 1984). There have been a reasonable number of scholarly works on Nigerian English, a few of which deal with the phonology of this relatively young area. Some of these works, namely Tiffen (1974), Adetugbo (1977), Bamgbose (1982, 1995), Jibril (1982, 1986), Eka (1985, 1993) and Udofot (1993, 1997), have made reference to rhythm as the most acute problem area worthy of detailed study.

There have also been a few descriptions of the rhythm of Nigerian English. Adetugbo (1977: 12–5) describes it as syllable-timed because of the influence of the syllable-timing of Nigerian languages. This description is upheld by Bamgbose (1982: 42) and Jowitt (1991: 97). Jibril (1982: 275) disputes the description of Nigerian English as syllable-timed. He argues that English has a “tendency to re-distribute accents according to the length of the utterances so that two accents may not occur next to each other” (274) and that “this important difference from Nigerian English” is not fairly accounted for by the notion of stress- versus syllable-timing (275). The implication of this for the traditional description of Nigerian English as syllable-timed is clear.

Eka (1993: 1–11) also rejects the syllable-timing description and goes further to describe the rhythm of the educated variety of spoken Nigerian English as “inelastic-timed” because of a tendency to have more prominent syllables than the native speaker. The many prominent syllables are ascribed to an inability to “squeeze in” or “stretch out” the syllables in a given rhythm unit within the given time as a native speaker who uses elastic-timed rhythm would do. Eka’s (1993) subjects were penultimate year undergraduates studying English and Education with English as the major teaching subject. They are comparable to Banjo’s (1971) “Variety Three”, who approximate Standard spoken Nigerian English. Udofot (1993) studied the rhythm of the spoken English of final year secondary school students whose level of spoken English can be compared to Banjo’s (1971) “Variety Two”, which approximates Non-standard spoken Nigerian English. The analysis confirmed the preponderance of prominent syllables and a tendency towards a syllable-timed rhythm, not syllable timing in its pure form. Udofot (1997) also notes the proliferation of prominent syllables in the speech of Nigerians of varied socio-economic and educational backgrounds and puts this situation down to a tendency to speak both long and short vowels with equal duration. The study concludes that the

rhythm of spoken Nigerian English sounds more like the pulsations of an African drum, heard as rhythmic, but hardly varying its tempo.

The exact nature of the rhythm of the Nigerian accent of English therefore appears controversial. This study aims at contributing to an understanding of this rhythm as well as identifying the features of the rhythmic patterning. An attempt is also made to isolate differences between the varieties that constitute Nigerian English and to assess the contribution of stress placement to the overall rhythm of the varieties of the Nigerian accent of English.

Two of the most often quoted descriptions of spoken Nigerian English varieties are examined next.

The earliest varieties differentiation of Nigerian Spoken English was that of Brosnahan (1958). According to him, it is possible to isolate four varieties of spoken Nigerian English in an ascending order of quality. “Variety One” is spoken by those who have no formal education. This variety is equated with Pidgin English. “Variety Two” is identified as the one spoken by holders of the First School Leaving Certificate and this variety, according to the author, is the one spoken by most Nigerians. The third variety is associated with secondary school leavers and is characterized by greater fluency and a more elaborate vocabulary, while “Variety Four” is spoken by those who have had university education and is close to Standard British English.

Brosnahan’s pioneer work made two viable contributions: first, that the level of formal education is one criterion for assessing proficiency in spoken English in Nigeria because of perceivable standards of linguistic performance often characteristic of certain levels of education; next, that, all things being equal, the standard of oral performance in English improves with exposure to formal education, especially as English is the language of education in Nigeria. The present study recognizes and incorporates these parameters of assessing performance in spoken English in our selection of subjects, except that our emphasis is on level of education in English only, not the level of general formal education.

There are, however, some problems raised by Brosnahan’s classification. One is the description of the first variety as Pidgin English and a language of the uneducated. Attitudes commonly held by linguists in Nigeria and elsewhere assume that Nigerian Pidgin is not a variety of Nigerian English but a contact language which developed between Nigerians and European traders on the coasts, but which grew with urbanization and became important in some towns (Elugbe and Omamor 1991: 14–6). Nowadays, Pidgin is also used by university students, and secondary school students use Pidgin outside of the classroom. The classification of Nigerian Pidgin as a variety of Nigerian English is therefore

disputable. Also, the description of the second variety as the brand of English used by most Nigerians and equated with the language of those who have had primary education has been rendered obsolete by sociolinguistic realities. Our experience during data collection has shown that the average primary school leaver can hardly communicate in English. The situation may have been different in the 1950s and 1960s when, among other reasons, secondary and university education were accessible to only a few and, conversely, the curriculum of the primary school was quite elaborate.

A more realistic classification which is closer to the present-day realities is that of Banjo (1971), which also classifies the continuum of spoken Nigerian English into four varieties. The yardstick of classification again is formal education. According to this classification, "Variety One" is spoken by people with elementary school education and by semi-literate people. It features a high rate of negative transfers from the phonological system of the mother tongue and is unacceptable even nationally. "Variety Two" is associated with post-primary school leavers who exhibit minimum transfer from the mother tongue's sound system but do not, however, make vital phonemic distinctions. This brand of English is largely intelligible and acceptable nationally. "Variety Three" is associated with university education. It makes vital phonemic distinctions and is accepted and understood nationally and internationally. "Variety Four" is described as being identical with Standard British English and, though internationally acceptable, is ridiculed in Nigeria because it sounds affected.

Many scholars have a high regard for Banjo's classification: it is said to be realistic and a good starting point for many attempts in this regard. However, while Banjo's classification was adequate at its time of study, it is doubtful whether the varieties of Banjo (1971) can be said to aptly describe the levels of spoken English in Nigeria today. We need to consider Jibril's (1982, 1986) observation that some university lecturers speak the Non-Standard or "Basic" variety of Nigerian English and Banjo's (1996:78) amendment of his 1971 classification by including "home background and the quality of education at the primary and secondary levels" as very important factors which affect Standard ("Variety Three") performance.

The hypothesis of this study is that what is known as spoken Nigerian English is a continuum made up of at least three sub-varieties which we name the "Non-Standard", the "Standard" and the "Sophisticated" varieties, with the Non-Standard and Standard varieties corresponding to Banjo's (1971) varieties "One" and "Two", which are used by primary and secondary school leavers, respectively, and our Sophisticated variety corresponding to Banjo's Variety

"Three" and Jibril's (1986) "Sophisticated" variety, which is spoken by university and other tertiary institution leavers who also have additional training in the phonology of English. We reject Banjo's "Variety Four" or "Near-Native Variety" on the grounds that a variety of English that is completely free of Nigerianisms cannot be said to be a variety of Nigerian English. It is also assumed that the varieties, though different, are collectively different in rhythm from Standard British English, represented by the control's output, and that there are common core features which unite the varieties of Nigerian English.

2. Theoretical framework

We adopt the framework of Metrical Phonology in the representation of stress. This is based on the view of rhythm proposed by Liberman (1975) and later developed into a theory by Liberman and Prince (1977). In this system, syllables are represented only as having strong (S) and weak (W) stresses. Stress is defined on a tree structure where the nodes divide binarily into S (strong) and W (weak) branches. The labels S and W originate from a root R and are relationally defined, thus: S means "stronger than W" and W means "weaker than S". The assignment of strong and weak nodes are determined by two rules:

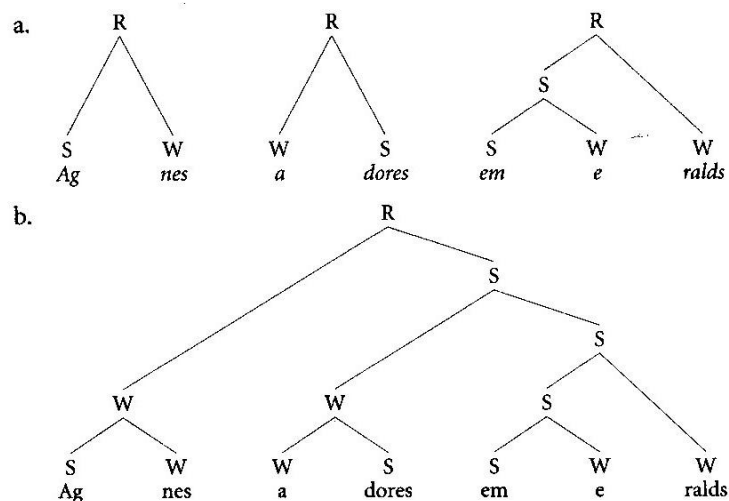
- a Lexical Category Prominence Rule (LCPR), which operates on simple and compound words, and
- a Nuclear Stress Rule (NSR), which covers phrases and sentences.

As explained in Liberman and Prince (1977:257), the theory stipulates that the rules apply as follows:

For any pair of sister nodes [N1 N2]:

- LCPR: If [N1 N2]L where L is a lexical category, then N2 is strong if (iff) N2 branches;
- NSR: If [N1N2]P where P is a phrasal category, then N2 is strong.

In a sentence like "Agnes adores emeralds" both rules (LCPR and NSR) are exemplified thus:



S occurs on the left branch in the lexical item “emerald” because the right branch does not itself branch (LCPR), but at the predicate and sentence levels S’s occur on the right branches (NSR). The primary stress is shown to occur on the syllables that are dominated by S’s (that is *em-* in the above example), often referred to as the Designated Terminal Element (DTE). This is the point of pitch change.

Metrical grids are also used to represent stress or show the rhythm of utterances. To construct a grid each syllable is assigned a number (stars are also used) at the first level. At the second level, the prominent syllables of each word in the utterance are given a number, and, finally, the tonic syllable is given a number, as shown below:

c.

Level 3					11		
Level 2	8		9		10		
Level 1	1	2	3	4	5	6	7
	Ag	nes	a	dores	em	e	ralds

Where two strong stresses occur together as in “thir’teen ‘men”, a clash of stresses is avoided by applying the Iambic Reversal Rule. By this rule the first stress moves to the left (first syllable) to yield “thirteen ‘men” (Liberman and Prince 1977:312). By so doing, metrical grids space out stress so that the notion of stress-timing in English is ultimately maintained.

There have been developments in the theory of Metrical Phonology. Schane (1979) accepts the superiority of the Metrical theory over generative approaches in the representation of rhythm, but he does away with “hierarchically ordered binary branching structures” and preserves the SW notation with an additional SWS (ternary system). He argues that hierarchically ordered, binary branching structures are “overly complex” (Schane 1979:596). S’s are assigned directly to base forms and suffixes, taking into account both syllable structure and morphological information (Schane 1979:600). The SW notation has also been used by Selkirk (1984), who also opts for a ternary structure and posits the Principle of Rhythmic Alternation (PRA) to break the monotony of configurations like SWWW and to maintain the appropriate rhythm. Selkirk (1984) also uses a grid-only representation in place of tree structures.

We have adopted the notation of Schane (1979). This means that we shall view rhythm as resulting mainly from the alternation between strong and weak syllables. Since this is a synchronic study, we do not apply the Iambic Reversal Rule and the Principle of Rhythmic Alternation where there are contiguous strong syllables, as this helps to highlight the similarities or differences between the performances of the experimental group and the control. We indicate the rhythm of the Nigerian accent of English using the notation of Schane (1979), where S and W are assigned directly to base forms and suffixes, taking into account both syllable structure and morphological information. Also, our notation admits ternary structures, as in Schane (1979) and Selkirk (1984).

3. Research procedure

The subjects of the study were sixty Nigerians of varied linguistic and socio-economic backgrounds, selected by a stratified random sampling technique from twenty linguistic groups in Nigeria, and a native (British) English speaker. The experimental group was selected using education in English as the main yardstick for stratification and the level of general education, linguistic group and age as intervening variables.

The subjects so selected were divided into three groups. “Group One” consisted of those who have been exposed to formal English learning and use for nine to twelve years, covering primary and post-primary education or training. “Group Two” comprised those who have had or were in the process of having tertiary education and have been exposed to English language learning and use for twelve to fifteen years. “Group Three” was made up of those who have

been exposed to English language learning and use for at least fifteen years and, in addition to having had tertiary education, have had some specialized training in the pronunciation of English and also use English for their daily official purposes. An attempt was made to reflect the multilingual nature of the Nigerian society by selecting the subjects from both federal and state establishments.

Our final sample consisted of twelve university lecturers, eighteen undergraduates, three college lecturers, four secondary school teachers, four administrative officers, five broadcasters, two bankers, two librarians, two television/radio programme producers, four clerical and technical staff, two fashion designers and two members of the National Youth Service Corps, who are fresh graduates from universities on national service outside their states of origin. Their educational qualifications ranged from the General Certificate in Education to the Doctor of Philosophy. They were aged between seventeen and sixty years, and they represent twenty linguistic groups in Nigeria, with all their mother tongues being syllable-timed. The sociolinguistic composition of the three groups is detailed in Table 1.

The control was a native (British) English speaker aged sixty years who was born and brought up in England. She had her primary, secondary and university education in England and her post-graduate education in America. She has a clearly distinguishable British Public School accent, although she has lived and worked in Nigeria for twenty years. We are aware of the fact that one control may not prove adequate for far-reaching conclusions, but since the interest of the paper is on the performance of Nigerian speakers of English, in the analysis and conclusions more attention is paid to the experimental group. The control in this test is therefore to be seen as representing what an expected native speaker's performance would be.

Each subject was required to speak freely on the topic "The high cost of living in Nigeria" for about three minutes, using a cartoon from Vanguard Newspaper of Friday, November 4, 1994 for guidance. Next, the subjects were required to read through the following passage, adapted from Chinua Achebe's novel *Things Fall Apart* (1958) at normal conversational speed:

He stretched himself and scratched his thigh where a mosquito had bitten him while he slept. Another one was wailing near his ear. He slapped the ear and hoped he had killed it. "Why do they always go for one's ears?" When he was a child, his mother had told him a story about it. Mosquito, she had said, had asked Ear to marry him, whereupon Ear fell on the floor in uncontrollable laughter. "How much longer do you think you will live?" she asked. "You are already a skeleton!" Mosquito went away humiliated; and anytime he passed her way, he told Ear that he was still alive. (Achebe 1958: 53)

Table 1. Socio-cultural groups of the subjects by varieties

	Group 1 Non-Standard	Group 2 Standard	Group 3 Sophisticated
Level of education			
SSCE/WASC attempted	2	—	—
GCE attempted	1	—	—
Teachers' Grade 2	1	—	—
SSCE/WASC	7	—	1
OND/NCE	4	—	—
Undergraduates	4	7	5
BA/BSC/HND	—	11	2
MA/MSC	1	1	4
Ph.D	—	1	8
Ethnic group/language			
Anaan	5	3	2
Efik	1	1	—
Hausa	—	2	—
Ibibio	9	5	5
Igbo	1	1	4
Igede	1	1	—
Kilba	—	1	1
Yoruba	1	2	2
other (1 each)	2	4	6
Professional status			
Students	4	7	5
Lecturers/teachers	2	4	12
Senior Administrative officers	—	2	—
Clerical staff/National Youth Service Corps	2	2	—
Technicians/businessmen/bankers/ accountants/librarians/broadcasters/ Civil Sergeants/fashion designers	7	5	3
Messengers, manual workers	3	—	—
Security staff	2	—	—
Sex			
Male	11	12	12
Female	9	8	8

SSCE: Senior School Certificate WASC: West African School Certificate
 GCE: General Certificate of Education OND: Ordinary National Diploma
 NCE: Nigerian Certificate in Education HND: Higher National Diploma

Each subject had five minutes to organize himself and get used to the passage before being tape-recorded.

The tape-recorded productions were played back. The stress patterns of each subject, both in the reading passage and the free conversation, were noted down by me and cross-checked by a colleague who is a professor of English but has had all his education in Nigeria and has never lived in a mother-tongue English-speaking area. No difference was made between primary and secondary stress. In the reading passage, the production of the control was used as expected frequency, and the difference between each subject's performance and that of the control was calculated using the Wilcoxon Matched Pairs Signed Ranks Test to test if there is a significant difference between the performance of the control and that of the experimental group. For the free conversation, the Analysis of Variance (ANOVA) statistical test was used to determine whether there is a significant difference between the performance of the varieties that make up the continuum of spoken Nigerian English. The ANOVA is preferred when there are more than two samples to compare (Butler 1985:129–35). Finally, a metrical representation of the stress patterns of three representatives of the three varieties and that of the control in selected utterances were compared to observe any differences in the stress patterns and therefore in rhythm.

To corroborate our perceptual analysis, we selected a sentence from the reading passage, *Mosquito went away humiliated*, and fed the productions of one representative of each of the varieties as well as the performance of the control through a Mac recorder into a Macintosh (Performa 450) computer. The choice of the sentence from the reading passage rather than excerpts from the spontaneous production was to make for uniformity. The productions of the experimental group members and the control were digitised and analysed using the FFT (Fast Fourier Transform) routine included in the Signalyze™ (Signal Analysis) Software. The durations of each of the syllables in the utterance, of the words *mosquito* and *humiliated*, and the overall duration of the utterance, as produced in connected speech by the representatives of the varieties and the control, were measured and compared.

4. Data analysis

4.1 Metrical analysis

We observed that in many words the stress patterns of our subjects were different from that of the control. In some words certain syllables were stressed

in positions other than those stressed by the control. For instance, for the word *humiliated* while the majority of subjects particularly of the Non-Standard Variety had *humilia'ted* (WWSWS), the control had *hu'miliated* (WSWWW). For the words *mosquito* and *landlord*, the majority of the subjects had *'mosquito* or *'mosqui'to* and *'land'lord* (SWW or SWS and SS) while the control had *mos'quito* (WSW) and *'landlord* (SW). Our subjects also showed a tendency to have more prominent syllables than the control in both the reading passage and the free conversation as can be seen in the metrical representations of three representatives of the three varieties compared with that of the control. Three utterances, two from the reading passage and one from the free conversation, which we have named UTT 1, UTT 2 and UTT 3, were selected for this purpose (cf. Table 2).

As previously noted, Nigerians tend to have a preponderance of stressed syllables in their spoken English. In rendering UTT 1, the control had five stressed and eight unstressed syllables. The subjects representing Variety Three had an extra stressed syllable on the average. Contiguous S syllables were also observed in the production of two members of Variety Three. The performance of Variety One representatives featured an average of four extra stressed syllables, with the performance of MS 14 featuring six extra stressed syllables, implying that this subject stressed eleven out of thirteen syllables in the utterance.

The control produced UTT 2 with four stressed and seven unstressed syllables. The stress pattern of only one representative of Variety Three, MS 45, was identical with that of the control. The other two subjects in Variety Three, MS 21 and MS 61, both produced an identical pattern for the word *humiliated* WSWSW as against the control's and MS 45's WSWWW. The greatest diversity was found in Variety One, where each member had a different stress pattern for the word *mosquito* and all were different from that of the control. MS 7 had SSS, MS 11 had WSS while MS 58 had SWS instead of the control's WSW.

The stress patterns in the third utterance, UTT 3, featured some differences but also the greatest level of correspondence in the presence of contiguous S's in the productions of all the subjects except MS45. It was observed that eight out of nine members of the experimental group had the pattern SS for *high cost*, and only the control and one member of Variety Three, MS 45, had the pattern SW. It must be noted that our study is not prescriptive but only observing a tendency of the occurrence of contiguous strong syllables in spoken Nigerian English which makes this pattern different from a mother tongue speaker's stress pattern. In this particular utterance, UTT3, almost all the subjects had the pattern SS for *high cost* though we slightly altered the selected representatives of

Table 2. Representative stress patterns of three utterances in the varieties under investigation

UTT 1	Ear	fell	on	the	floor	in	uncontrollable				laughter		
Control	W	S	W	W	S	W	S	W	S	W	W	S	W
Variety Three													
MS 21	S	S	W	W	S	W	W	W	S	W	W	S	W
MS 45	W	S	W	W	S	W	S	W	S	W	W	S	W
MS 61	S	S	W	W	S	W	W	W	S	W	W	S	W
Variety Two													
MS 9	S	W	W	W	S	W	S	S	S	S	W	S	W
MS 41	S	S	W	W	S	W	S	W	S	S	W	S	W
MS 59	S	S	W	W	S	W	S	W	S	S	W	S	W
Variety One													
MS 7	S	S	W	W	S	W	S	S	S	S	S	S	W
MS 14	S	S	S	S	S	W	S	S	S	S	W	S	S
MS 58	S	S	W	W	S	W	S	W	S	S	W	S	S
UTT 2	Mosquito		went away		humiliated								
Control	W	S	W	S	W	S	W	S	W	W	W		
Variety Three													
MS 21	W	S	S	S	W	S	W	S	W	S	W		
MS 45	W	S	W	S	W	S	W	S	W	W	W		
MS 61	W	S	S	S	W	S	W	S	W	S	W		
Variety Two													
MS 9	W	S	W	S	W	S	W	S	W	S	S		
MS 41	W	S	W	S	W	S	W	S	W	S	S		
MS 59	W	S	S	S	W	S	W	W	W	S	S		
Variety One													
MS 7	S	S	S	S	W	S	S	W	W	S	S		
MS 11	W	S	S	S	S	S	S	W	S	S	S		
MS 58	S	W	S	S	S	S	S	W	W	S	S		
UTT 3	high	cost	of	living	in	Nigeria							
Control	S	W	W	S	W	W	W	S	W				
Variety Three													
MS 22	S	S	W	S	S	W	S	W	S				
MS 45	S	W	W	S	W	W	W	S	W				
MS 61	S	S	W	S	W	W	S	W	S				
Variety Two													
MS 21	S	S	W	S	W	W	S	W	S				
MS 41	S	S	W	S	W	W	S	W	S				
MS 66	S	S	W	S	W	W	S	W	S				
Variety One													
MS 7	S	S	W	S	S	W	S	W	S				
MS 14	S	S	W	S	S	W	S	S	S				
MS 58	S	S	W	S	S	W	S	S	S				

MS=Main Study Subject

the groups in this case because the utterance, which was taken from the free conversation, did not feature as presented in the productions of some of the subjects. The incidence of additional stressed syllables featured again prominently in ascending order from Variety Three to One, so that there was an average increase of one stressed syllable in Variety Three, two in Variety Two and four in Variety One, which corresponds to the ratio of additional stressed syllables in UTT 2, which also was 1:2:4. Again we note that MS 45 is the only subject whose production was similar to the accentual pattern of the control. This subject has lived in England for ten years and in Canada for four years, where he had his tertiary education: Bachelor's, Master's degrees (England) and Doctorate degree (Canada). His performance may be explained by this influence.

From our documentation of the accentual patterns of the subjects in the three utterances presented above, we make some observations. First, we persistently note the presence of more stressed syllables in the productions of the experimental group than observed in the production of the native speaker, the control. Next, we observe variation in the arrangement of S and W syllables from that of the control resulting in a rhythmic pattern which does not alternate consistently between strong and weak syllables, as suggested by the Metrical Theory and exemplified by the production of the control. This suggests that the rhythmic pattern of spoken Nigerian English cannot, like that of the control, be said to be stress-timed. Also we have noted the tendency to stress almost all the syllables in an utterance in the productions of representatives of Variety One (the Non-Standard Variety), which is reminiscent of the syllable-timing description. Finally, the representatives of Variety Three (the Sophisticated Variety) produce patterns that are close to and sometimes identical with that of the control but with some identifiable differences.

4.2 Statistical analysis

Table 3 summarises the stress patterns observed in our investigation quantitatively. The overall sociolinguistic stratification of the number of stressed syllables in the varieties of Nigerian English compared, in particular in the more controlled environment of the reading passage, is perfectly clear and evident. The Wilcoxon Matched Pairs Signed Ranks Test, comparing each of the three groups as against the control's performance, confirms that the distribution is highly significant.

Table 3. Number of stressed syllables by three varieties and two styles

	Control	Variety Three (Sophisticated)		Variety Two (Standard)		Variety One (Non-Standard)	
		range	average	range	average	range	average
Reading passage	61	63–68	66	69–75	70.75	76–121	84.35
Free conversation	128	65–142	109	77–136	112.25	90–190	121.2

4.2.1 Reading passage

In the reading passage, the control stressed 61 syllables out of the 142 syllables in the passage. One subject in the Sophisticated Variety had 63 stressed syllables, which was the closest performance to that of the control, while the farthest performance from that of the control was 121 stressed syllables, recorded by a member of the Non-Standard Variety. None of the subjects had fewer stressed syllables than the control. In the Sophisticated Variety, the highest number of additional syllables was 7 (11.4%) more than that of the control. In the Standard Variety, the highest number of additional accented syllables recorded was 14 (23%) more than the performance of the control, while the lowest number of additional syllables recorded was 8 (one higher than the highest number in the Sophisticated Variety). Thus, the performance of the Standard Variety informants has shown roughly as much percentage difference from the Sophisticated Variety as the Standard Variety has deviated from the control's performance. The Non-Standard Variety showed the highest difference from the control's performance (between 15 and 60 additional stressed syllables, the highest value being 98% higher than that of the control). In other words, the Non-Standard Variety of spoken Nigerian English had subjects whose performances showed almost twice the number of stressed syllables in comparison with the control. This shows a tendency to stress almost every syllable in an utterance.

We also compared the performance of the three groups in the reading passage by means of the ANOVA statistical test to see if the variation in the performance of the three varieties of spoken Nigerian English is significant. The calculated (F1) value was 21.77, considerably higher than the F critical value at the 5% confidence level (at 2/57 df) of 3.15. This implies that the Non-Standard, Standard and Sophisticated Varieties are significantly different from one another and cannot be said to belong to the same normal population. We therefore suggest that the variations noticed in the performances of the individuals in each group are not due to chance but that the varieties of spoken Nigerian English identified exist and differ in their stress patterning and rhythm

from one another and from the performance of a native speaker. Our hypothesis that Nigerian spoken English is a continuum made up of three varieties which are significantly different from one another in terms of stress performance features is hereby upheld.

4.2.2 Free conversation

The performance in the spontaneous productions can be said to corroborate that of the reading passage; there were basically more stressed syllables than expected in each case. Each production was judged on its own merit; thus the percentage difference of each group from the control's performance was not calculated. As some of the subjects made longer speeches than others, we transcribed a maximum of one page of the production of each informant, and compared the number of stressed syllables. The results are summarized in Table 3 above.

The results largely confirm out earlier observations: The number of stressed syllables increases with decreasing sociostylistic rank across the three varieties compared. It has to be noted, however, that there is a great deal of idiosyncratic variation. In comparison with the reading passage, where the performances of the subjects in a group are relatively homogeneous, free conversation allows some individuals to use considerably more or, conversely, fewer stressed syllables than their respective group averages, with some overlap between the ranges observed in each of the three groups. However, this applies to some subjects from each group only, while the bulk of the subjects in each group represent the typical linguistic behaviour patterns of their group regarding stress and rhythm. Thus, our assumption that the three varieties of Nigerian English, though allowing for individual variation, can be established collectively on the basis of their stress and rhythm patterns is confirmed.

4.3 Acoustic analysis

This section reports the findings of our measurements of syllable duration, our main correlate of stress. We observed that of the six syllables in the utterance selected for analysis (which we name UTT 1: *Mosquito went away*), for the Nigerian speakers the syllable /went/ had the highest mean duration of 237.24 msec. This was followed by the syllable /mæs/ with a mean duration of 222.2 msec and /wei/ with a mean duration of 193.99 msec. The lowest mean duration was recorded for /kit/. Detailed syllable duration measurements for each of the selected representatives of the experimental group and for the control are shown in Table 4.

Table 4. Syllable duration in spoken Nigerian English (UTT 1, in msec)

Informants	[mæs]	[kɪt]	[əʊ]	[went]	[ə]	[weɪ]
Control: MS 62	198.73	139.83	154.30	197.25	75.31	251.08
Variety Three: MS 61	216.84	117.84	198.69	212.26	130.93	162.56
Variety Two: MS 52	201.74	57.90	123.56	247.12	140.01	201.01
Variety One: MS 53	248.02	113.41	182.69	252.34	168.95	218.40
Mean duration	222.20	96.25	168.31	237.24	146.63	193.99

4.3.1 Discussion of acoustic data

As can be seen from Table 4, the speakers in the experimental group required a mean duration of 222.2 msec for the syllable [mæs] as against the control's 198.73. For the other unstressed syllables of the utterance the proportions are similar: 168.31 msec for [əʊ] as against the control's 154.30, and 146.63 msec for [ə] as against the control's 75.31. This means that the experimental group took longer than the native speaker to produce unstressed syllables, which implies that little or no attempt is made to pronounce unstressed syllables quickly. Some variation between the performances of the group members can be observed. For instance, to produce the syllable [ə] MS61, the "sophisticated" speaker, took a shorter time than MS52 and MS53, who represent the Standard and Non-Standard varieties respectively, but almost (and MS53 more than) twice as long as the control.

With regard to the three stressed syllables in the utterance, the experimental group used the following durations on average, as compared to the control: 96.25 msec for [kɪt] as against the control's 139.83; 237.24 msec for [went] as against the control's 197.25; and 193 msec for [weɪ] as against the control's 251.08. Thus, the control took a longer time than the experimental group to produce the stressed syllables with long vowels, [kɪt] and [weɪ], and a shorter time to produce the syllable with the short vowel [went]. The experimental group, conversely, realised the syllables with long vowels in a shorter time and the one with a short vowel in a longer time than the control. As was the case with the unstressed syllables, the performance of MS61, the representative of the Sophisticated Variety, is closest to that of the control.

We suggest, therefore, that in the Nigerian accent of English the duration of unstressed syllables is longer than in a native variety, represented by the control, while the duration of stressed syllables is shorter, with both processes taken

together, resulting in a tendency to have more or less even syllable duration (cf. Jowitt 1991:97). Syllables that are not normally given prominence in a native speaker's speech are emphasised in the speech of the experimental group, which results in a proliferation of prominent syllables noted in non-native Englishes (cf. Bansal 1990; Lanham 1990; Udofot 1997). This tendency to stress more syllables than the native speaker is more pronounced as one descends the ladder of socio-stylistic strata from the Sophisticated to the Standard to the Non-Standard.

5. Discussion

This study has acknowledged the existing controversy over the description of the rhythm of the Nigerian accent of English and undertaken an investigation into the nature of Nigerian English rhythm. On the basis of metrical and statistical analyses certain general trends were observed. First, we noted the presence of more stressed syllables in the output of the experimental group than in that of the native speaker. This corroborates the observations made by Eka (1985, 1993), Udofot (1993, 1997), Jowitt (1991, 2000) and, most recently, Gut (2002). Next, we observed a difference in the arrangement of S and W syllables from that of the native speaker. This also recalls Jowitt (1991:93), who notes that in popular Nigerian English there is "a strong tendency to shift the primary accent to the right". The rhythmic pattern produced does not consistently alternate between strong and weak syllables, as suggested by the Metrical Theory and exemplified by the production of the native speaker. This suggests that the rhythmic pattern of spoken Nigerian English cannot, like that of the control, be said to be stress-timed.

The acoustic data has also shown that in Nigerian English syllable durations, of unstressed syllables in particular, are relatively longer than in a native variety of English. This rather long duration appears to be caused by the tendency to produce both reduced and short vowels with "normal" duration. This tendency gets less pronounced as one moves up the ladder of "performance quality" from Non-Standard to Standard to Sophisticated. We also note that the performance of our Standard Variety (Variety Two) representative is not identical with that of the control, contrary to Ufomata's (1990:215) assertion that the stress pattern of individual words in the speech of Nigerians who speak the "Standard" form of Nigerian English is generally the same as in RP.

If the rhythm of spoken Nigerian English were syllable-timed, as argued for by Eka (1993:1-11), a substantial proportion of the members of the experimental

group should have used double or close to double the time used by the control. However, this was observed by only some members of the Non-Standard Variety. It has to be understood that syllable-timing and stress-timing are terms referring to trends or underlying patterns. In the real world, neither the native speaker's speech is 100% stress-timed nor any Nigerian speaker's fully syllable-timed. The syllable-timed rhythm appears to be very much in evidence in the performance of Variety One, the Non-Standard variety of Nigerian English. This tendency decreases as one moves up the social ladder, but not even the performance of the Sophisticated speaker approximates stress-timing as in the control's speech.

Our statistical analysis showed that our three varieties are significantly different from one another and collectively different from the control's performance. On the other hand, the three varieties share a tendency to stress a larger number of syllables in an utterance. Clearly the syllable-timed description can be used to characterise the Non-Standard Variety but not the Standard or Sophisticated varieties. The exact nature of stress and rhythm in Nigerian English is thus not yet fully understood. We suggest, therefore, that more work be done on Nigerian English rhythm, using a wider population sample and more spontaneous speech, with a view to suggesting an alternative description of the rhythm of the Standard Nigerian accent of English. Gut (2002: 176–7), who studied rhythm as part of Standard Nigerian English prosodic aspects, has suggested that “compared to other varieties of English, Nigerian English speech rhythm is similar to Singaporean English with regard to the proportion of vocalic intervals across speech and stands between a stress timed intonation language and a tone language” but that Singaporean English has a smaller delta than Nigerian English (cf. Grabe and Low 2001). Udofot (1997) has noted that since syllable durations in the Nigerian accent of English hardly vary to reflect the distribution between full and reduced vowels, spoken Nigerian English sounds more like the pulsations of an African drum, heard as rhythmic but rarely varying its tempo.

References

- Abercrombie David. 1967. *Elements of General Phonetics*. Edinburgh: Edinburgh University Press.
- Achebe, Chinua. 1958. *Things Fall Apart*. London: Heinemann.
- Adetugbo, Abiodun. 1977. “Nigerian English: Fact or fiction?” *Lagos Notes and Records* 6: 128–41.
- Bamgbose, Ayo. 1982. “Standard Nigerian English: Issues of identification”. In Braj. B. Kachru, ed. *The Other Tongue: English Across Cultures*. Urbana: University of Illinois Press, 99–109.
- Bamgbose, Ayo. 1995. “English in the Nigerian environment”. In Ayo Bamgbose, Ayo Banjo and Andrew Thomas, eds. *New Englishes: A West African Perspective*. Ibadan: Musoro, 9–26.
- Banjo, Ayo. 1971. “Towards a definition of Standard Nigerian Spoken English”. *Annales d'Universite d'Abidjan*: 24–8.
- Banjo, Ayo. 1996. *An Overview of the English Language in Nigeria*. Ibadan: Ibadan University Press.
- Bansal, Ram Krishna. 1990. “The pronunciation of English in India”. In Ramsaran, ed.: 219–30.
- Brosnahan, L. F. 1958. “English in southern Nigeria”. *English Studies* 39: 97–110.
- Butler, Christopher. 1985. *Statistics in Linguistics*. Oxford: Blackwell.
- Denga, D. and A. Ali. 1989. *An Introduction to Research Methods and Statistics in Education and Social Science*. 2nd ed. Calabar: Rapid Educational Publishers.
- Eka, David. 1985. “A phonological study of Standard Nigerian English”. Unpublished Ph.D. dissertation, Ahmadu Bello University.
- Eka, David. 1993. “Timing in educated spoken Nigerian English”. *Journal of Humanities* 3: 1–11.
- Elugbe, Ben and Augusta Omamor. 1991. *Nigerian Pidgin: Background and Prospects*. Ibadan: Heinemann.
- Grabe, Esther and Ee Ling Low. 2001. “Durational variability in speech and the Rhythm Class Hypothesis”. In Carlos Gussenhoven and Natasha Warner, eds. *Papers in Laboratory Phonology* 7. Berlin: Mouton, 515–46.
- Gut, Ulrike. 2002. “Prosodic aspects of Standard Nigerian English”. In Dafydd Gibbon and Ulrike Gut, eds. *Typology of African Prosodic Systems*. Bielefeld: Bielefeld Occasional Papers in Typology 1, 167–78.
- Jibril, Munzali. 1982. “Phonological variation in Nigerian English”. Unpublished Ph.D. dissertation, University of Lancaster.
- Jibril, Munzali. 1986. “Sociolinguistic variation in Nigerian English”. *English World-Wide* 7: 47–75.
- Jowitt, David. 1991. *Nigerian English Usage: An Introduction*. Lagos: Longman.
- Jowitt, David. 2000. “Patterns of Nigerian English intonation”. *English World-Wide* 21: 63–80.
- Lanham, L. W. 1990. “Stress and intonation and the intelligibility of South African Black English”. In Ramsaran, ed.: 243–60.
- Liberman, Mark. 1975. “The intonational system of English”. Ph.D. dissertation, M.I.T. (Published 1980: Garland Press).
- Liberman, Mark and Alan Prince. 1977. “On stress and linguistic rhythm”. *Linguistic Inquiry* 8: 249–336.
- Pike, Kenneth. 1945. *The Intonation of American English*. Ann Arbor: University of Michigan Press.
- Platt, John, Heidi Weber and Mian Lian Ho. 1984. *The New Englishes*. London: Routledge and Kegan Paul.
- Ramsaran, Susan, ed. 1990. *Studies in the Pronunciation of English*. London: Routledge.
- Schane, Sanford A. 1979. “The rhythmic nature of English word accentuation”. *Language* 55: 559–602.

- Selkirk, Elisabeth O. 1984. *Phonology and Syntax: The Relation between Sound and Structure*. Cambridge, MA: M. I. T. Press.
- Tiffen, Brian. 1974. "The intelligibility of Nigerian English". Unpublished Ph.D. dissertation, University of London.
- Udofot, Inyang. 1993. "Rhythm and intonation: A study of performance by Ibibio speakers of English". *Journal of Humanities* 3: 19–27.
- Udofot, Inyang. 1997. "The rhythm of spoken Nigerian English". Unpublished Ph.D. dissertation. University of Uyo.
- Ufomata, Titilayo. 1990. "Acceptable models for TEFL (with special reference to Nigeria)". In Ramsaran, ed.: 212–6.

Author's address

Inyang Udofot
Department of English
University of Uyo
Uyo, Nigeria
e-mail: imudofot@yahoo.com