Prosodic aspects of Standard Nigerian English

Ulrike Gut
University of Bielefeld
gut@spectrum.uni-bielefeld.de

Abstract

Nigerian English is a variety of English which has often been suggested to differ significantly from other varieties of English, especially in the area of prosody. This paper analyses the prosody of Standard Nigerian English and compares it to the prosody of Southern British English. Read and semi-spontaneous speech was analysed acoustically. Significant differences were found in speech tempo and speech rhythm, where Nigerian English groups separately from British English. Furthermore, Nigerian English syllable structure is different from that of British English, and the tonal structure of Nigerian English shows a smaller pitch range and a distribution of tone similar to tone languages.

1.   Introduction

English in Nigeria has often been measured against the "norm" of British English. Recently, voices claiming a Nigerian English Standard variety with systematic differences from British English and from other new Englishes have become louder. Differences between the two varieties have been proposed for all areas of language: vocabulary, syntax, phonology and prosody. This paper focuses on prosodic aspects of Nigerian English, in particular speech rhythm, syllable structure and tonal patterns.

Quantitative models will be employed to measure prosody, serving both the purpose of comparison with British English prosody and the independent description of Nigerian English prosodic systems.

2.   English in Nigeria

In Nigeria, an estimated 400 different local languages are spoken (Bamgbose, 1971), with English being the medium of education, business, commerce and mass media. Diversity of English spoken in Nigeria in terms of phonology, vocabulary, and syntax is great, ranging from Pidgin English to a near approximation of Southern British Standard. Varieties differentiation within Nigerian English has been attempted on the grounds of native language (Jibril, 1986) or formal education (Eka, 1985; cf. Bambgose, 1982). Udofot (1997) takes a native speaker of British English as the yardstick of comparison and distinguishes three varieties of Nigerian English: Variety III, the "sophisticated" variety, is spoken by people with University education or special speech training and shows some systematic differences from British English in the areas of accentuation and intonation. Variety II, which Udofot calls the Standard, is spoken by speakers with tertiary education and shows significant differences from Variety III in terms of accentuation and intonation. Variety I is considered a non-standard variety and shows particular prosodic differences from British English and the other two varieties.

3.   Nigerian English Prosody

Various researchers (Bamgbose, 1971, 1982; Eka, 1985; Jibril, 1986; Ufomata, 1996; Udofot, 1997; Jowitt, 2000) have described the prosodic features of Nigerian English in the areas of stress, rhythm, and intonation. Comparisons in terms of British Standard English, it has been pointed out that, in Nigerian English, sentence stress is rarely used for emphasis or contrast and given information is not usually deaccented (Jibril, 1986; Ufomata, 1996; Jowitt, 2000). Moreover, a preference for "end-stress" in an intonation phrase, i.e. the placement of the nucleus, the

greatest stress, on the last word has been observed. In the dialogue (1) for example

(1a) Come on who'll volunteer.

(1b) I will, if you insist.

British English speakers put a nucleus on "I" in (1b), whereas Nigerian English speakers stress "will" most. In general, in Nigerian English many lexical items can receive stress that do not usually do so in British English (Eka, 1985). Udofot (1997) found that, when reading a passage of 143 syllables, Nigerian English speakers accentuated between 63 and 121 syllables whereas the British English control had accentuated 61. In spontaneous speech, differences between British and Nigerian English were even more pronounced. The number of extra accented syllables ranged from 5 to 33 in the Variety III group, from 7 to 34 in Variety II and from 15 to 90 in Variety I.

This propensity to stress more syllables in Nigerian English than in British English clearly contributes to the impression of differences in speech rhythm between the two varieties of English. It has been suggested that Nigerian English has a syllable-timed rather than stress-timed rhythm (Bambgose, 1982; cf. Udofot, 1997). The languages of the world have traditionally been divided into stress-timed and syllable-timed (Pike, 1945; Abercrombie, 1967) where rhythm is understood to be a periodic recurrence of events. In stress-timed languages these recurring events are stress beats and in syllable-timed languages syllables. Abercrombie (1967) proposes that in syllable-timed languages "chest-pulses, and hence the syllables, recur at equal intervals of time – they are isochronous" (p. 97). Syllables are assumed to be equal in length (p. 98), stress-pulses, on the other hand, are unevenly spaced. Abercrombie cites Yoruba, a Nigerian language, as an example for a syllable-timed language. Stress-timed languages such as English, in contrast, are supposed to have regular recurring stress beats. Since the number of syllables between two stress beats varies, their length is adjusted to fit into the stress interval – syllable length, hence is very variable in stress-timed languages.

One proposed reason for Nigerian English being more syllable-timed than British English

is that vowel reduction is less pronounced, which leads to a perceptual impression of more equal weight and length of each syllable. Udofot (1997) measured the duration of syllables in one read sentence and found that syllables containing reduced vowels were, on average, considerably longer in Nigerian English than in British English. The duration of a single schwa for example is almost double as long in Nigerian English than in British English. In accented syllables, those containing long vowels such as [i] were longer in British English and those containing short vowels such as [I] were shorter in British English than in Nigerian English. Thus, syllable durations across all syllable structures and phonetic types are more similar in Nigerian English than in British English. The overall speech tempo was faster for the British control than for the Nigerian English speakers; pauses between intonation groups, however, were shorter in Nigerian English than in British English. In general, Nigerian English speakers divided their utterances into more intonation phrases than the British English speaker.

In the area of intonation, equally, systematic differences between Nigerian English and British English have been described. Jowitt (2000) analysed the intonation of 30 dialogues read aloud by Nigerian final-year undergraduates. It was transcribed in the system used by O'Connor & Arnold (1973) for British English: The basic unit of analysis is the "tone", a specific pitch movement on a stressed syllable. The last stressed syllable in an utterance, which usually carries the main stress and a distinctive pitch movement, is called the nucleus. Nuclear types that are usually described for English include simple nuclei such as falls, rises and a level terminal pitch contour, complex nuclei include fall-rises, rise-falls and rise-fall-rises. The stretch from any stressed syllables preceding the nucleus up to the nucleus constitutes the head. Simple, multiple and compound heads are possible in English. Simple heads can have a falling, rising or level form. Multiple heads consist of a sequence of identical stressed syllables, e.g. three falling ones in a row. Compound heads contain a sequence of different tones on stressed syllables. Any unstressed syllables preceding the head - or the nucleus if there is no head - are called "prehead". They can be either low or high, with low being the neutral and high the marked

form. Only a high prehead receives a symbol, the ↑. Any stressed syllables following the nucleus are called the "tail".

Jowitt (2000) proposes the following characteristics of the Nigerian English intonation system:

- predominance of falling nuclei in statements, wh-questions and commands

- predominance of rising nuclei in yes-no questions and tag questions

- rare productions of complex nuclei

- high pitch on lexical words

Furthermore, he describes a "core pattern" of Nigerian English heads, which is an initial high pitch followed by a downdrift.

Udofot's (1997) study presents similar results. She described Nigerian English intonation using Pierrehumbert's (1980) transcription system. Intonational analysis within this approach postulates three kinds of discrete events that make up the pitch contour of an English utterance: Pitch accents, phrase accents and boundary tones. Pitch accents are characteristic pitch movements which are associated with prominent syllables. Phrase accents occur at the end of phrases, and boundary tones at the end of utterances. Two levels of tones are proposed, high (H) and low (L), which are the basic constituents of all accents and boundary tones.

Udofot's study revealed that, both in read and spontaneous speech, falling tones were predominant in Nigerian English (about 80%), rising tones relatively rare (about 10%) and fall-rises even rarer (about 9%), whereas rise-falling tones were only produced by Variety III speakers. Compared to the British English control, bi-directional tones (fall-rise) were produced significantly less in Nigerian English (9% compared to 32%). Furthermore, the pitch range across an utterance is smaller in Nigerian English than in British English. An acoustic analysis of the pitch movement in an utterance showed that, although Nigerian English speakers spoke on a higher average pitch than the British control did, the difference between pitch peaks and pitch valleys was less pronounced.

Very similar results were obtained by Eka (1985), who described Nigerian English intonation using a parametric model adapted from Crystal (1969). He found a distribution of 93.3% simple tones and 6.6% complex tones in read Nigerian English, compared to 22% complex tones in a British English control speaker. Moreover, the pitch range was smaller in the Nigerian speakers than the British speaker.

From impressionistic accounts it has been suggested that Nigerian English intonation reflects the prosodic structure of the speaker's native language in a way that stressed syllables are associated with a high tone and unstressed syllables with a low tone (Wells, 1982). In fact, proposals have been made to treat Nigerian English as a tone language with tone on every syllable. In that case, intonation transcription with systems developed for the prosody of intonation languages such as British English cannot capture the tonal structure of Nigerian English.

4.   Aims of the study

The aim of the study is a description of Nigerian English prosody. First, the rhythm of Nigerian English will be explored using a measurement based on durational variability of subsequent syllables and vowels. In addition, phrasing and syllabification in both read speech and semi-spontaneous speech will be investigated. The results will be compared to the speech of a British English speaker. Second, the tonal structure of Nigerian English will be explored without the presumption that description systems developed for intonation languages can be applied without alteration. Instead, the pitch height of each syllable will be labelled in order to arrive at a phonetic description of the intonation of Nigerian English. In addition, the pitch range of the utterances in the read speech will be measured.

5.   Method

5.1 Participants
Five speakers of Nigerian English, four female and one male, were recorded. The participants were chosen as speakers of Nigerian English Standard on the grounds of their education and linguistic history. All were born and educated

in Nigeria and hold university degrees. Although five of them are presently engaged in studies or research in Germany, none of them spent any extended period of time in any English speaking country other than Nigeria. Table 1 lists the linguistic background of all participants. Speaker E teaches in a Nigerian university and is currently living in Germany. She speaks Ibibio, Efik, English, some Igbo, and some Yoruba. Speaker I, teaches in a Nigerian university and is presently studying for a Ph.D in Germany. She speaks Igbo (mother tongue), English and German. Speaker G was born in Nigera of Efik parentage, did all her studies from primary to the Bachelor's degree in Nigeria and is presently studying for her Master's degree in Germany. She speaks Efik (mother tongue), English and German. Speaker B is a University teacher in Nigeria and does translation work from Edo into English and from English into Edo. She speaks Edo (mother tongue), Yoruba, and English. Speaker J did all studies from primary to first degree in Nigeria and is presently studying in Germany. He speaks Yoruba, English and German.

| speaker | sex | Speaker's native language | | |
		native language	tonal structure	syllabic structure
E	female	Ibibio	H L !H HL LH	V, N, CV, CVV, CVC, CVVC, CCV
I	female	Igbo	H L !H	V, N, CV, CVN
G	female	Efik	H L !H	V, N, CV, CVC, CCV
B	female	Edo	H L !H !L	V, N, CV
J	male	Yoruba	H M L	V, N, CV

Table 1 : *The Nigerian participants and their language background*

In addition, two male and one female speaker of British English were recorded. They were all born and educated in Great Britain and hold British University degrees.

5.2 Data

All participants read a story of 268 words for which they had as much time for preparation as they wanted. Subsequently, they were asked to retell the story in their own words. If they had difficulty with this they were encouraged to imagine telling the story to a child. Nigerian English speaker B did not do a retelling of the story.

5.3 Analysis

The data were analysed using ESPS/waves+. All syllables were transcribed phonetically in SAMPA and then converted into syllabic types where vowels were coded as V and stops, fricatives, liquids, nasals, glides, implosives and approximants were coded as C. The transcription reflects resyllabification processes present in the actual spontaneous speech. For the measurement of speech rhythm, phrasing and durational aspects were calculated. First, the read story and the retellings were divided into phrases by taking a pause to signal the end of a phrase. Pauses that preceded repairs were not considered to indicate phrasal boundaries and the reparandum, i.e. the to-be-repaired words, were not counted as a phrase.

Second, the length of each vocalic and consonantal interval was measured. Only the stable formant structure of vowels was included in the vocalic parts. Following Ramus et al. (1999), the proportion of vocalic intervals across all speech (%V) and the standard deviation of the length of the consonantal intervals (delta C) was calculated.

In order to test the assumption of syllable-timing in Nigerian English, the relationship between subsequent syllables in 10 read sentences of the story produced by the British English and the Nigerian English speakers were compared with the Rhythm Ratio (RR). The Rhythm Ratio (Gibbon & Gut, 2001) is based on the following formula:

$$RR = 100 \sum_{k=1}^{m-1} \frac{d_i}{d_j} / (m-1)$$

where $d_i=d_k$ and $d_j=d_{k+1}$ if d_i is smaller than d_j and $d_j=d_k$ and $d_i=d_{k+1}$ if d_i is not smaller than d_j. In other words, for each pair of adjacent syllables, the shorter is divided by the longer. The average of all these ratios is calculated and multiplied by 100. Thus, if the RR equals 100 subsequent syllables have exactly the same

duration. The lower the degree of similarity the lower the RR value.

The tonal structure of Nigerian English was transcribed using a ToBI-style (Silverman et al., 1992) system. The pitch or pitch movement of each syllable was marked as either high, low, mid, falling or rising according to the following conventions:

H	high level
L	low level
M	mid level
HL	falling
LH	rising

Transcription was based on a combination of instrumental analysis in the form of the automatically calculated pitch contour and an auditory verification. None of the labels have phonological status but reflect only phonetic tones.

In addition, the pitch range of all speakers was calculated. The value of initial high pitch, of the final low pitch and intervening peaks and valleys for each utterance were annotated. The maximal pitch range was determined by subtracting the mean value of the final low from the mean value of the initial high pitch and the small pitch range was calculated by subtracting the mean value of the valleys from the mean value of the peaks. All calculations were carried out automatically, using the TASX environment (Milde & Gut, 2001, 2002).

Accents produced by all speakers in the read story were marked by four trained phoneticians (all native speakers of German). No difference was made between primary and secondary stress. Agreement among raters (number of accents marked by all raters divided by number of accents marked by at least one rater) is 49.6 % for the British English speakers and 59 % for the Nigerian English speakers.

6. Results

6.1 Rhythm

Table 2 presents the number of pauses produced in the read text by all speakers, the average length of each phrase (in words) and

the average length of phrases in semi-spontaneous speech. The British English speakers divided the story into 36 to 41 phrases, the Nigerian English speakers produced between 43 and 52 phrases in the same text. The average length of a phrase ranges between 7.15 and 13.3 words for the British English speakers and ranges between 7.2 and 5.9 for the Nigerian English speakers. In semi-spontaneous speech, British English speaker H produces, on average, considerably more words per phrase than any other speaker and more than when reading the story aloud. All other speakers produce, on average, shorter phrases in semi-spontaneous speech than in read speech.

Speaker	Number of phrases in the read text	Average length of phrase in read text	Average length of phrase in semi-spontaneous speech
D (British English)	40	7.3	6.7
A (British English)	41	7.15	8.3
H (British English)	36	13.3	16.8
G (Efik)	43	7.1	8.9
E (Ibibio)	43	7	6.2
I (Igbo)	44	7.2	6.4
B (Edo)	49	6.5	--
J (Yoruba)	52	5.9	4.8

Table 2. *Number of pauses produced in the read text by all speakers, the average length of each phrase (in words) and the average length of phrases in semi-spontaneous speech.*

Figure 1 illustrates that Nigerian English speech rhythm (N), measured in the acoustic variables %V and delta C, groups distinctly from the speech rhythm of British English (BE).
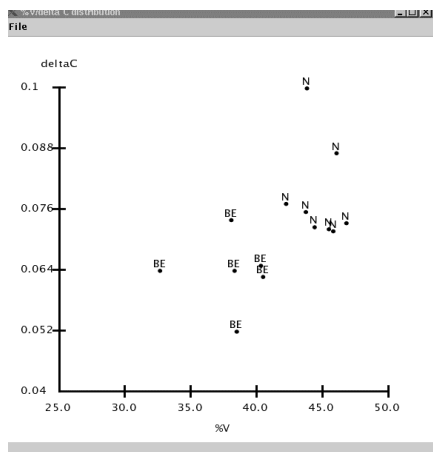
Figure 1: *Speech rhythm of the Nigerian English (N)speakers (read and re-telling) compared to the British English (BE) (read and re-telling) speakers.*

The overall percentage of vowels in Nigerian English is higher than in British English. Equally, delta C in Nigerian English is higher than that in British English.

Table 3 lists the percentage of the most frequent syllable types occurring in the read speech of all speakers. Compared to the British speakers, all Nigerian speakers except for speaker NE2 produce a higher percentage of CV syllables in the read story. In general, individual differences between the syllabification of the story are evident among the Nigerian speakers. Whereas Nigerian speaker NE2 is very similar to the British English speakers, the other Nigerian speakers differ from them.

Speaker	CV	CVC	VC	CVV	V	CVVC
D	28	19	11.7	7.9	5.7	5.3
A	24.5	18.5	11.1	7.3	6.6	4.5
H	23.5	22.1	11.2	4.6	3.8	2.4
G	36.5	20.7	12	5.5	8	3
E	28	20	15	6	5	4.5
I	37.5	16	10.6	6	8	5
B	40	19.5	10	4.7	8	3
J	36	17	12.5	5	8	4

Table 3: *Percentages of the most frequent syllable types produced by each British and Nigerian English spe aker in the read speech.*

Looking at the percentage of open and closed syllables in the speech of each speaker it can be seen that the British English speakers and Nigerian speaker NE2 produce fewer open

syllables than closed syllables. For the other Nigerian speakers, the reverse is true (see Table 4).

	Open syllables	Closed syllables	Number of syllables
D	44.7	55.2	315
A	38.4	61.6	286
H	31.8	68.1	295
G	53.3	46.4	309
E	42.1	57.8	330
I	53.9	46	330
B	55.5	44.4	317
J	52.9	47	319

Table 4: *Percentages of open and closed syllables produced by each British and Nigerian English speaker in the read speech.*

6.2 Tone

Figure 2 shows the percentages of level tones and contour tones on all syllables in both the read speech and the semi-spontaneous speech across all Nigerian English speakers. Contour tones or pitch movements on a syllable are very rare in Nigerian English. Between 92% and 98.5% of all syllables have a level tone. No differences between read speech and semi-spontaneous speech were found. The distribution of contour tones is highly restricted. Pitch movements on syllables occur predominately in pre-pausal syllables. This is the case for 82% of all pitch movements produced by speaker J, for 91% produced by speaker G, for 96% produced by speaker I, 75% produced by speaker B and 100% of all pitch movements produced by speaker E.
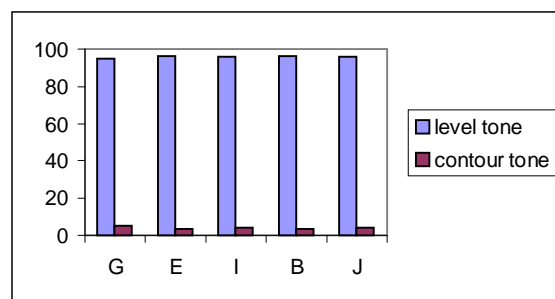

Figure 2: *Percentages of level tones and contour tones in Nigerian English read and semi-spontaneous speech.*

Pitch height of syllables in Nigerian English seems grammatically determined. The speakers

showed a tendency to associate different syntactic categories with particular tones. Articles, prepositions and conjunctions, for example, are always produced with a low or a mid tone. Verbs, adjectives and nouns, on the other hand, tend to be produced with a H. Table 5 illustrates this on the phrase « were walking in a field ».

	were	wal	king	In	a	field
G	L	M	H	L	L	HL
E	L	H	H	L	L	H
I	L	H	H	L	L	HL
B	L	H	H	L	L	H
J	L	H	H	L	L	HL

Table 5: *Pitch produced by the Nigerian English speaker in the phrase "a tiger and a mouse".*

However, not only the "stressed" syllable, the one that would be accented in British English, is associated with a high tone but all syllables of a multisyllabic word.

Tables 6 and 7 present the tonal structure of some multisyllabic words that did not occur phrase-initially or phrase-finally in the read story produced by all Nigerian English speakers.

	tiger	walking	lying	somewhere
G	HH	HH	HH	MM
E	HH	HM	HM	HH
I	HM	HH	HH	HL
B	HH	HH	LL	LL
J	HH	MM	HH	ML

Table 6*: Tonal patterns produced on multisyllabic words by the Nigerian English speakers.*

Despite inter-speaker differences, it can be seen that the syllables of a multisyllabic word are usually produced with equally (high) tone. "Tiger", for example, has two high tones in the majority of the recorded productions. The same holds true for "walking", "lying", and "something". These are all examples of multisyllabic words with primary word stress on the first syllable. Words with primary stress on the second or even later syllable demonstrate another tonal pattern (Table 7): the first "unstressed" syllable usually carries a

low tone, the "stressed" syllable carries a high tone, which is then continued throughout the rest of the word. Examples for this are the words "whatever", "continued", "remove", "enough" and "began". The data thus suggest a right-spreading rule for H on multisyllabic words, beginning with the first stressed syllable.

	remove	continued	enough	began
G	LH	LHH	LH	LH
E	LH	LHH	HM	LH
I	LH	MHM	MM	ML
B	MM	LHH	LH	LM
J	LH	LHH	LH	LM

Table 7*: Tonal patterns produced on multisyllabic words by the Nigerian English speakers.*

6.3 Pitch range

Pitch range is smaller for the Nigerian English speakers than for the British English speakers. The maximal pitch range (initial high minus final low) for the British English speakers ranges between 12.3 and 15 semi-tones ; for the Nigerian English speakers it ranges from8.05 to 11.6 (see Table 8)

	Maximal pitch range	Small pitch range
D	12.3	6.7
A	15	6.8
H	14.9	6
G	9	3.2
E	8.05	2.98
I	11.6	6.05
B	9.6	2.1

Table 8: *Maximal and small pitch range of the British English and Nigerian English speakers (in semi-tones).*

The same holds true for the small pitch range, which was measured between utterance-internal pitch peaks and valleys: except for speaker I, it is higher in British English than in Nigerian English.

6.4 Accent and stress

Accents were marked when at least three out of the four raters were in agreement. The number of accented syllables in the British English and the Nigerian English reading of the story is significantly lower (Table 9). An analysis of the word categories which were produced with an accent revealed that of the 106 nouns, verbs and adjectives in the text, the British English speakers accented 81, whereas the Nigerian English speakers accented 98.

	British English	Nigerian English
mean number of accents	101	115.6
range	90-103	103-129

Table 9: *Mean number of accented syllables produced by the British and the Nigerian speakers in the read story.*

The major difference in accent placement between the two groups was that in Nigerian English nearly all sentence-final words received an accent (%), whereas this was only the case in % for the British English speakers. No systematic differences in word stress were found between Nigerian English and British English.

7.   Discussion

The results show distinct prosodic differences between the varieties of English spoken in Southern Britain and in Nigeria. In general, Nigerian speakers divide a text into more phrases than British English speakers and consequently produce fewer syllables per phrase. The latter is also true for spontaneous speech. These factors probably contribute to the auditory impression of slower speech rate in Nigerian English (Udofot, 1997).

In terms of speech rhythm Nigerian English is different from the speech rhythm of British English. Especially the percentage of vowel intervals is greater in Nigerian English than in British English. Compared to other languages classified with Ramus et al.'s (1999) measurement of rhythm, Nigerian English groups with Spanish, Catalan, Italian and French, all of which are presumed to be syllable-timed, in terms of the vowel percentage, but shows a higher standard deviation of consonantal intervals than those languages. Compared to other varieties of English, Nigerian English speech rhythm is similar to that of Singapore English insofar as the %V is higher than in British English. Singapore English, however, shows a smaller delta C than Nigerian English (Grabe & Low, 2001).

Equally, syllabification is different in Nigerian English compared to British English. In the former, a higher percentage of CV syllables occurs and the ratio of open and closed syllables is different from that in British English. However, interindividual differences between the Nigerian English speakers become apparent.

The transcription strategy for intonation revealed inter-individual differences between the Nigerian English speakers. Whereas it was very easy to assign tone to each syllable for three speakers, the intonation of some utterances by two other speaker could sometimes have been transcribed better with ToBI (Silverman et al., 1992) categories. There were cases where pitch was descending gradually over a series of syllables between a H and a L. The majority of Nigerian English utterances, however, showed abrupt steps up or down between syllables and was therefore best transcribed by levels tones assigned to each syllable.

The results of this study suggest that contour tones on syllables are very rare in Nigerian English and only occur in very restricted environments, mainly on pre-pausal syllables. A tendency to produce stressed syllables with a high tone and unstressed ones with a low tone, as proposed in Wells (1982), was not found. Rather, words of particular grammatical categories seem to be associated with specific tones. Articles, prepositions and conjunctions tend to have a low tone, whereas nouns, verbs and adjectives are usually produced with a high tone. A special right-spreading tone rule was found for multisyllabic verbs and nouns, where "unstressed" syllables are associated with a low tone and the "stressed" syllable and all other following ones have a high tone. Nigerian English prosody is thus close to those tone languages that have tones associated with a grammatical rather than

lexically contrastive function than to the use of tone in intonation languages.

Pitch range in read speech speech is smaller for the Nigerian English speakers than the British English speakers. Both the range between the extremes first high pitch and final low pitch and the range between the utternace-internal peaks and valleys are considerably different. However, here again inter-individual differences among the Nigerian English speakers are evident.

Transcription of Nigerian English intonation was done phonetically in this study, but the analysis supports a first tentative proposal of Nigerian English intonational phonology: Tone in Nigerian English is grammatically determined with lexical words receiving high tone from the first "stressed" syllable on and non-lexical words receiving low tone. Two tones are sufficient to describe Nigerian English intonation: H and L. There is initial raising, which causes intitial low tones to appear phonetically as a mid tone. Equally, downstep lowers high tones on the second and subsequent lexical words to a phonetic mid tone. Nigerian English has two boundary tones: H% and L%, which may combine with the level tones to form the contour tones HL and LH. A low boundary tone can suppress the H of a lexical word. This proposal now needs to be tested with a wider range of speech types and speakers.

This study yielded inconclusive results regarding stress in Nigerian English. No differences in word stress were found, which is probably due to the simple vocabulary of the story. The raters found it easier to mark accents in Nigerian English than in British English, which might be explained by the facts that all syllables marked as accented in Nigerian English had a distinct high tone and that the speech tempo was slower in Nigerian English. Raters identified more accents in the story read by the Nigerian English speaker than the British English speakers, which reflects the fact that nearly every lexical word was perceived as an accent. These results support Udofot's (1997) findings, who also reported a higher rate of accentuation in Nigerian English.

All these findings suggest that Nigerian English prosody is typologically different from British English and stands "between" a stress-timed intonation language and a tone language.

Tone plays a much more important role, has a grammatical function and is closely interrelated with accents and stress. The tone inventory is reduced in Nigerian English compared to British English, but it is associated with every syllable.

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