A SOCIOPHONETIC INVESTIGATION OF STANDARD BRITISH ENGLISH CONNECTED SPEECH PROCESSES IN NIGERIAN ENGLISH

BY

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ABSTRACT

Connected speech processes (CSPs) account for sound modifications and simplifications in speech, while sociophonetics emphasises correlation between speech forms and social factors. Existing studies merely identified some CSPs that characterise Nigerian English (NE); studies that measure speakers' proximity to Standard British English (SBE) connected speech, especially in relation to social variation, are scarce. This study, therefore, investigated the incidence of assimilation, elision and liaison processes of SBE connected speech in NE with consideration for the region, gender and age of speakers. This is with a view to determining the level of NE speakers' approximation to or deviation from SBE.

The study adopted generative phonology to explain NE speakers' application of or deviation from the SBE rules, and variability concept to show the correlation between CSPs and social factors. The participants, who ranged between ages 18-65, were 180 male and 180 female NE speakers with a minimum of 2-3 years post-secondary education. They were drawn, through stratified and purposive techniques, from four regions in Nigeria: north (120), west (80), east (80) and south-south (80). All participants produced semi-spontaneous speeches (SSS), containing 31 utterances and a short passage, into digital recording devices and filled 360 copies of a structured questionnaire. Two educated native speakers served as control. The recordings were transcribed and the scores analysed, using percentages, MANOVA and Bonferroni's Post-hoc test. Portions of the SSS of eight participants (representing the social variables) and one native speaker were analysed acoustically, using PRAAT speech analyser (version 5120).

The overall incidence of the CSPs (assimilation, elision and liaison) of SBE for all categories of participants indicated 43.2% approximation and 56.8% deviation. However, incidence of each process varied. Three assimilation variants- regressive devoicing (99.2%), progressive devoicing (65.1%) and nasal assimilation (63.5%)- showed significant approximation to SBE, while four variants- progressive voicing (21.2%), voiceless alveolar stop assimilation (47.6%), voiced alveolar stop assimilation (3.2%) and yod coalescence (6.2%)- deviated significantly. Consonant elision, in all contexts, occurred significantly (61.5%), while the incidence of liaison-linking /r/ (8.1%) and intrusive /r/ (2.9%)- was extremely low. The speech waveforms, formants structure and voicing bars on the participants' spectrograms, in most cases, displayed considerable deviation from SBE. In terms of social variation, the combined dependent variable (assimilation, elision and liaison) was significantly affected by gender (Pillai's Trace=0.07,$F(3,342)$=8.12,$p<0.05$,η^2=0.07) and region (Pillai's Trace=0.11,$F(9,1032)$=4.29,$p<0.05$,η^2=0.04), but not by age or their interactions. Gender had significant effect on elision $F(1,344)$=22.21;$p<0.01$,η^2=0.06): males had higher mean performance (M=9.91;SD=2.84) than females (M=8.55;SD=2.58). Region was found to be significant in liaison $F(3,344)$=8.14;$p<0.01$,η^2=0.07): Eastern participants (M=1.38;SD=1.44) had the highest mean score, followed by South-South (M=1.10;SD=1.22), Western (M=1.05;SD=1.16) and Northern participants (M=0.57;SD=0.94). The Bonferroni's Post-hoc results indicated that only Eastern and Northern participants differed significantly from each other.

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Nigerian English speakers' mastery of Standard British English connected speech processes, irrespective of gender and regional variation, manifested, overall, more deviation from than approximation to SBE. This suggests Nigerian English speakers' relatively low level of competence in Standard British English connected speech processes, and has implications for intelligibility.

Key words: Connected speech processes, Elision, Assimilation, Nigerian English, Standard British English

Word count: 494

DEDICATION

This work is, to the glory of God, dedicated to

The first fruit of my 9 years of marriage

The reward of my trust in God

The proof of God's faithfulness:

Excellence, Ifeoluwase, Iyanuoluwa, Isaac, Oluwadara, Oladipupo.

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CERTIFICATION

I certify that this work was carried out by Mr. O. R. Oladipupo in the Department of English, University of Ibadan.

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SYMBOLS AND ABBREVIATIONS

Phonetic Symbols Used

Vowels

SBE	NE	keywords
/i:/ ⎤	/i/	f<u>ee</u>d
/ɪ/ ⎦		s<u>i</u>t
/e/	/ɛ/	b<u>e</u>d
/æ/ ⎤	/a/	c<u>a</u>t
/ɑ:/ ⎦		c<u>ar</u>t
/ɒ/ ⎤	/ɔ/	h<u>o</u>t
/ɔ:/ ⎦		p<u>or</u>t
/ʊ/ ⎤	/u/	g<u>oo</u>d
/u:/ ⎦		tw<u>o</u>
/ʌ/	/ɔ/	c<u>u</u>t
/ɜ:/	/ɛ/	b<u>ir</u>d
/ə/	/a/	<u>a</u>bout
/eɪ/	/e/	p<u>ay</u>
/aɪ/	/ai/	t<u>i</u>me
/ɔɪ/	/ɔi/	b<u>oy</u>
/əʊ/	/o/	g<u>o</u>
/aʊ/	/ao/	<u>ou</u>t
/ɪə/	/ia/	ch<u>eer</u>
/eə/	/ɛa/	<u>air</u>
/ʊə/	/uɔ/	p<u>oor</u>

Consonants

SBE	NE	keywords
/p/	/p/	<u>p</u>et
/b/	/b/	<u>b</u>ig
/t/	/t/	<u>t</u>ea
/d/	/d/	<u>d</u>ip
/k/	/k/	<u>c</u>ome
/g/	/g/	<u>g</u>et
/f/ ⎤	/f/, /v/	<u>f</u>all, <u>v</u>oice
/v/ ⎦		
/θ/ ⎤	/t/, /s/	<u>th</u>ink
/ð/ ⎦	/d/, /z/	<u>th</u>is
/s/	/s/	<u>s</u>ee
/z/	/z/, /s/	<u>z</u>oo
/h/	/h/, ø	<u>h</u>at
/ʃ/	/ʃ/, /s/	<u>sh</u>ip
/ʒ/	/ʃ/	<u>g</u>enre
/ʧ/	/ʧ/, /ʃ/	<u>ch</u>ick
/ʤ/	/ʤ/	<u>j</u>oy
/m/	/m/	<u>m</u>an
/n/	/n/	k<u>n</u>ow

/ŋ/	/ŋ/	ba<u>ng</u>
/l/	/l/	<u>l</u>ame
/r/	/r/	<u>r</u>at
/w/	/w/	<u>w</u>in
/j/	/j/	<u>y</u>es

Other symbols

/ /	phonemic/phonological representation
[ ]	phonetic representation
+	has the feature of
-	lack the feature of
→	becomes
/	in the environment of
——	position of the affected sound
〔 〕	square brackets (enclose distinctive features)
{ }	braces (enclose morphemes)
( )	optional element
A→B/C—	A becomes B after C
A→B/—C	A becomes B before C
A→B/C—D	A becomes B in between C and D
α	alpha (variable value)
ɓ	beta
Φ	bilabial fricative (substitution for /p/ or /f/ in Hausa)
/ɫ/	dark or velarized /ɫ/
˳	devoicing
ʷ	labialisation
´	high tone
`	low tone
ø	zero or null element
<	Less than
>	Greater than
$	syllable boundary
=	prefix-stem boundary e.g. pre = side
+	general morpheme boundary e.g *electric + ity*

#	word internal boundary (boundary between a base and a neutral suffix e.g. *advertise#d, dog#s*
##	full word boundary
//	phrase boundary, pause
$H_0: u_1 = u_2$	null hypothesis
$H_A: u_1 \neq u_2$	alternative hypothesis

Abreviations

Cj	cluster involving a consonant and a following /j/
V	vowel
C	Consonant
W/B	Word Boundary
M/B	Morpheme Boundary
RD	Regressive Devoicing
PV	Progressive Voicing
PD	Progressive Devoicing
VLASA	Voiceless Alveolar Stop Assimilation
VASA	Voiced Alveolar Stop Assimilation
NA	Nasal Assimilation;
YC	Yod Coalescence
YM	Young Male
AM	Adult Male
YF	Young Female
AF	Adult Female
ANOVA	Analysis of Variance
MANOVA	Multivariate Analysis of Variance
IV	Independent Variable
DV	Dependent Variable
RP	Received Pronunciation
SBE	Standard British English
GA	General American
NE	Nigerian English
EYE	Educated Yoruba English

IVE	Institutionalised Varieties of English
NNE	Non-Native Englishes
NNIVE	Non-Native Institutionalized Varieties of the English Language
WE	World Englishes
CSPs	Connected Speech Processes
ESNE	Educated Spoken Nigerian English

CHAPTER 1

1.0   Background to the study

1.1   English language in Nigeria: historical background

Nigeria, as a political unit, evolved following the sharing of African territories by the colonial powers in the 19th century. The present day Nigeria is, therefore, an amalgam of several ancient kingdoms of diverse cultures existing ever before the arrival of British imperialists (Attah, 1987). During the 19th century, the abolition of the slave trade provided an opportunity for the expansion of trade in agricultural produce from Africa to Europe, particularly palm oil from the West African coastal areas. In the 1880s, British control was extended to the Lagos hinter land, the Niger Delta, and Benin. Consequently, the territory of Lagos, a centre for expansion of British trade, missions, and political influence, eventually became a British colony in 1861. The end of the 19th century further witnessed Britain's aggressive military expansion in the north of the country, which resulted in the declaration of northern Nigeria as a protectorate in 1900 and later followed by the birth of the Southern Protectorate in 1906. Finally, in 1914, both Protectorates and the Colony of Lagos were merged into a single territory called 'Nigeria'.

The earliest history of the English language in Nigeria dates back to the end of 15th century when the Portuguese arrived in Benin to trade in pepper and slaves on the Nigerian coastal area. The contact thereby established with the natives resulted in a form of Portuguese based-Pidgin, mainly used for inter-ethnic communication and considered as the predecessor of present-day Nigerian Pidgin English. The Nigerian Pidgin word, 'sabi', for instance, is traceable to the Portuguese word, 'sabeir', which means 'to know' (Osa, 1986). Beginning from the mid 16th century, the British took over as major trading partners, and Portuguese-based Pidgin was then replaced with English-based Pidgin.

About the middle of the 19th century, the Christian Missionaries pioneered institutionalised Western education in Nigeria, and for about four decades after then, they were in charge of language education in the country (Taiwo, 1980; Fafunwa, 1974). Thus, the period (1842–82) witnessed intensive missionary activities and expansion, consequent upon which the first missionary stations were established in Badagry (near Lagos in the South West) and Calabar (in the South East) in 1843 and 1846 respectively (Awonusi, 2008). The missionaries were, however, not allowed to settle in the Islamic North of the country for religious reasons.

Having realised the need to train their converts to read the English Bible, the missionaries established schools, which exposed the natives to the English language. According to Adetugbo (1979), English dominated the curriculum under various sub-heads such as reading, writing, dictation, composition and grammar. Fafunwa (1974) also notes that the missionaries used English language as the language of instruction in schools, being the only language they understood; and the parents were not averse to it in any way as they wanted their children to learn and use English which had come to be regarded as the language of commerce, civilization and Christianity. Thus, Christian Education in Nigeria became a potent tool for spreading a type of Standard English (Ogu, 1992).

The British colonial government involvement in Education of the country began to be felt in the 1880s (Awobuluyi, 1996). This was necessitated by the manpower need of the colonial administration. For instance, literate Nigerians were needed to work as teachers, interpreters and clerks for schools, local native courts and the trading companies. Beginning from 1882 therefore, the colonial government promulgated various guidelines and ordinances to emphasize the learning of the English language.

First, English was declared the language of instruction in schools. Second, a pass in English language became a pre-requisite for certification which, invariably, presupposed that only those who passed and could speak English had access to job opportunities. And finally, effective learning and teaching of English language became one of the conditions the government spelt out for release of grants to schools (Ogu, 1992). These efforts encouraged the spread of English in Nigeria. In the long run, however, the missionary schools were unable to meet the demands for educated Nigerians, and the colonial government began to establish state schools, especially in

the northern part of the country where Christian education was not embraced as a result of the influence of the Islamic religion.

1.2   The Nigerian linguistic situation

The linguistic situation of Nigeria is a complex one. This relates to the fact that Nigeria is a country with an estimated population of over 140 million people (according to 2006 population census) with numerous languages and diverse geo-tribal groups. Nigeria has within her territory three of the four phyla into which African languages are classified. These are the Nilo-Saharan phylum with 3 members (e.g. Kanuri); the Afro-Asiatic with 103 (e.g. Hausa, Tera, Ngizim, Kaekeri, Angas, Mwaghavul, Bole, Bachama, Bade, Teshenawa, Kubi, etc.); and the *Niger*-Kordofanian with 286 (e.g. Bariba, Birom, Busa, Chamba, Bini, Urhobo, Efik / Ibibio, Fulani, Idoma, lgbo, ljo, Jukun, Kambari, Nupe, Tiv, Vere, Yoruba, etc.). The Khoisan is the only phylum not present in Nigeria (Hansford et al., I976; Yusuf, 2010). The corollary of this ethno-linguistic diversity in Nigeria, therefore, is pervasive bilingualism, multilingualism, code mixing, interference and other effects of language contact.

The actual number of languages spoken in Nigeria has been a subject of controversy. Tiffen (I968) puts it at 150, Hansford et al. (I976) identify as many as 394 indigenous languages, Crozier and Blench (1992) propose 440, while Bamgbose (1971) and Adegbija (1998) suggest about 400 languages. The current estimate, according to Lewis' et al. (2013) Ethnologue data, is 522 living languages. These languages, according to Awonusi (2007), are of unequal social, official and educational statuses. In order to appropriately capture this pluralistic tendency and imbalance therefore, scholars have devised a number of parameters for classifying them. Awonusi (2007) catalogues some of these parameters, as listed by other scholars and himself, based on origin, nativity and size (e.g. exoglossic, non-exoglossic, major, small languages, etc.); population, spread and related sociolinguistic indices (e.g. decamillionaire, millionnaire and minor languages) and constitutional legitimacy (e.g. official, national, etc.).

In view of this linguistic multiplicity, it has become difficult to adopt a particular indigenous language as the national language, as any language so chosen will be unacceptable to other ethno-linguistic entities. English has, therefore, benefited from this rivalry; assuming the position of a national and official language in Nigeria.

It cuts across ethnic boundaries, functioning as the lingua franca for Nigerians of diverse linguistic backgrounds and as the bridge between the different languages. It is, as such, seen as a symbol of national unity, a force binding all the different ethnic groups in the country together (Ogunsiji, 2004; Salami, 2001; Awonusi, 2004a).

Although the three major Nigerian languages: Hausa, Igbo and Yoruba are constitutionally recognized as national languages alongside English (Federal Republic of Nigeria, 1999), none of them is able to match the hegemonic status of English in the Nigerian society. In Awonusi's (2007:3) view, "It (English) is unarguably more widespread than others, attracts higher prestige among the elite and may be described as super-exoglossic in the face of other foreign or exoglossic languages". In Nigeria, English functions as the language of inter-ethnic communication, formal education, governmental administration, commerce and industry, of international communication, the media and national integration (Ogu, 1992; Akindele & Adegbite, 1999; Ogunsiji, 2004).

Nigerian Pidgin is another important and useful language in Nigeria, which transcends regional, ethnic and social boundaries. It is used primarily as a language of wider communication and lingua franca by a majority of Nigerians (though restricted to informal situations), and as a mother tongue for a population of about one million, especially in the South-South geo-political zone of the country (Simpson and Oyetade, 2007). According to Ihemere (2006), an estimated number of over 75 million people speak Nigerian Pidgin as a second language, while about 3 to 5 million speakers use it as a native language. In Faraclas' (1996) estimates, it is spoken by more than 40 million people as an L2 and more than 1 million as an L1. Although it does not have a standard or acceptable codified form yet, it features on television, on the radio, and in certain forms of literature.

1.3 New (non-native) Englishes

English is a member of the Germanic branch of the Indo-European family of languages, which comprises most of the present-day European languages. It is native to the United Kingdom, the United States, Australia, New Zealand and part of Canada. However, in the light of present realities, English is no more the exclusive property of the native English speakers (Graddol, 1997). As a matter of fact, by Crystal's (2003) calculation, non-native speakers have already outnumbered native speakers by a ratio of 3:1. Different peoples of the world now lay claim to the language, which spread into

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most parts of the world as a result of growth and expansion of the British Empire through colonialism and industrial revolution between 18th and 20th centuries, coupled with the United State's military, political, economic, technological, and cultural prowess since the late 19th century.

Apparently as a fulfillment of John Adam's 18th century prophecy (cited in Kachru, 1996:138) that "English will be the most respectable language in the world and the most universally read and spoken in the next century, if not before the close of this", English has incontrovertibly become the most widely used in the world today. It has often been referred to as a world language, the lingua franca of the modern era (Graddol, 1997). According to the British Council's (1995) English 2000 project:

> English has official or special status in at least seventy-five countries with a total population of over two billion. English is spoken as a native language by around 375 million and as a second language by around 375 million speakers in the world…Around 750 million people are believed to speak English as a foreign language. One out of four of the world's population speaks English to some level of competence… English is the main language of books, newspapers, airports and air-traffic control, international business and academic conferences, science, technology, diplomacy, sport, tourism, international competitions, pop music and advertising.

In addition to the above, English is an official language of the United Nations and many other international organisations, including the International Olympic Committee. It is also listed as the official or co-official language of over 45 countries and is spoken extensively in other countries where it has no official status.

Kachru, an ardent apostle of Institutionalised Englishes, in this regard, presents what he referred to as the three Concentric Circles of English (see Fig. 1.1) to capture the spread and diffusion of English. Explicating the model, Kachru says:

> The Inner Circle represents the traditional bases of English, dominated by the "mother tongue" varieties of the language. In the Outer Circle, English has been institutionalised as an additional language... and the Expanding Circle includes the rest of the world. In this [Expanding] Circle, English is used as the primary foreign language (1997: 214).
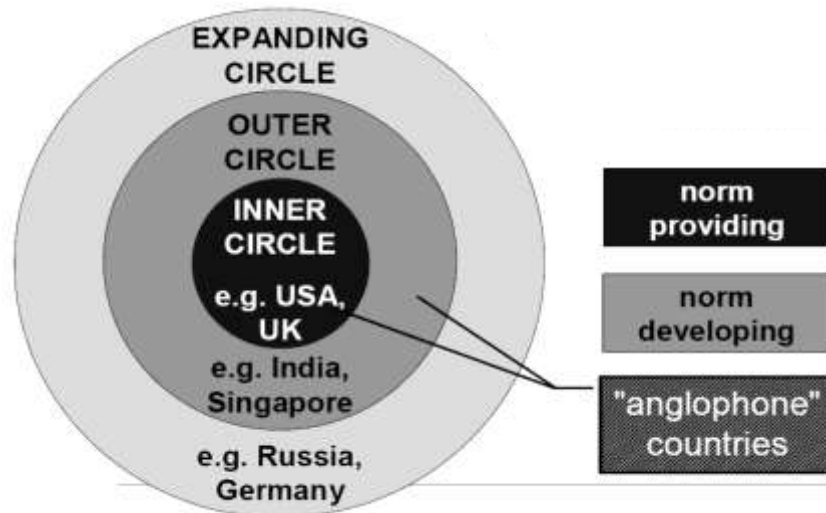
Fig. 1.1 Kachru's Model of Concentric Circles

(Source: Kachru, 1985)

Bhatt (2001:530) further elucidates the model as follows:

- The inner circle refers to the traditional bases of English, where it is the primary language, with an estimated 320-380 million speakers (Crystal, 2003).

- The outer circle represents the spread of English in non-native contexts, where it has been institutionalized as an additional language, with an estimated 150-300 million speakers.

- The expanding circle, with a steady increase in the number of speakers and functional domains, includes nations where English is used primarily as a foreign language, with an estimated 100-1000 million speakers (Crystal, 2003).

The corollary of the spread of English, therefore, is the birth of Institutionalised Varieties of English (IVE), also referred to as 'Non-native Englishes' or 'World Englishes', used in diverse sociolinguistic context. As the English language continues its spread and dominance, it keeps absorbing aspects of cultures worldwide. Its long time use by non-native speakers, thus, subjects it to structural changes (Muhlhausler, 1979). This trend is predicated upon Goodman's (1964) observation that any language removed from its native environment is likely to undergo severe changes in direct proportion to the degree of its psychological and sociological separation from its native speakers. Scholars are now agreed that there is not one English language anymore; rather, there are many (McArthur, 1998), which represent diverse linguistic, cultural, and ideological voices. Bhatt (2001:534) puts the phenomenon this way:

As the English language spread, through linguistic imperialism and linguistic pragmatism, to non-native contexts and came into close, protracted contact with genetically and culturally unrelated languages, it went through a process of linguistic experimentation and nativization by the people who adopted it for use in different functional domains, such as education, administration, and high society (cf. Kachru 1992a). Non-native English speakers thus created new, cultural-sensitive and socially appropriate meanings-expressions of the bilingual's creativity by altering and manipulating the structure and functions of English in its new ecology. As a result, English underwent a process of acculturation in order to compete in local linguistic markets that were hitherto dominated by indigenous languages. Given the linguistic and cultural pluralism in Africa and South Asia, linguistic innovations, creativity, and emerging literary traditions in English in these countries were immediately accepted.

In view of the fact that language reacts, adapts to and reflects the local ideas, attitudes and experiences of new linguistic environments it finds itself (Banjo, 1975), it was not a problem, then, for English to become acculturated, nativised and indigenised as it comes in contact with diverse languages and unfamiliar sociocultural contexts; in Asia with Indo-Aryan and Dravidian languages, in Africa with languages of the Niger-Congo family, and in Southeast Asia with Altaic languages (Kachru, 1996, Bhatt, 2001). This is what has resulted in the emergence of regional-contact varieties of English, e.g., Indian English, Malaysian English, Singaporean English, Philippine English, Nigerian English, Ghanaian English, etc.; with developed nativized discourse and style types and functionally determined sub-languages (registers), and are used as a linguistic vehicle for creative writing in various genres (Kachru, 1986). This is the type of variety Achebe (1966:22) refers to as "a new English, still in full communion with its ancestral home but altered to suit its new African surroundings".

Kachru (1986:19) classifies the prominent features of the non-native institutionalized varieties of the English language (NNIVE) that have evolved as follows:

a) An extended range of uses in the sociolinguistic context

b) An ongoing process of nativisation of the registers and styles

c) A body of nativised EL literature with formal and contextual characteristics marking it as localized.

1.3.1   Nigerian English

It is against this backdrop recognition is now given to the existence of Nigerian English as one of the Non-native Institutionalized Varieties of the English language (NNIVE), which Alo (2005) defines as:

> A domesticated variety of English, functioning within the Nigerian linguistic and socio-cultural setting as a second language (ESL). It manifests the linguistic (phonological, syntactic, semantic, pragmatic and socio-cultural) characteristics of the Nigerian environment (social and physical).

Although the reality of Nigerian English is no longer a subject of controversy, its concept is still beclouded with theoretical issues of definition, characterization, identification, standardization, classification, norm and intelligibility. As Jowitt (1991:29) puts it, "Of course, 'the accepted norms of usage' is precisely what is at issue". In this regard, various attempts have been made by scholars to describe the character of Nigerian English in sociological and linguistic terms with a view to codifying Standard Nigerian English. This has culminated in an avalanche of theses and learned articles, describing it in its inclusive (variety differentiation) and exclusive (standard variety) forms (Banjo, 1995).

So far, the journey to characterization and standardization of Nigerian English has not been a smooth one. Although it has been a subject of rigorous research in the last few decades, changing from one facet of analysis to another, and has produced volumes of studies, codification or standardization feat is yet to be achieved. This is because it has been an arduous task agreeing on what constitutes errors (random variation) and accepted usage (non-random variation).

According to Banjo (1996), the initial drive was towards error analysis. Some studies (e.g. Tomori, 1967) devoted to this research effort categorised and quantified deviations from British norms as errors which Nigerian English users must be encouraged to eradicate. Attempt to eliminate the errors identified led to the contrastive analyses approach (see Afolayan, 1968 and Banjo, 1969), which Banjo (1995) claims was meant to predict the probable difficulties that may be faced by Nigerian learners of English as a result of earlier exposure to mother tongue or to explain errors made in the course of learning the target language.

However, it was soon discovered that error analysis would be much more relevant in an environment where English is used as a foreign language rather than in a

second language situation, where there is natural tendency to appropriate English to suit the sociolinguistic norms and realities of the host community. Banjo (1996:73) puts it this way:

> It soon became clear that it was inappropriate to adopt the same attitude to all non-mother tongue users of English, if a clear distinction was to be made between the users as a second language and one as a foreign language…While any mother tongue English community could legitimately provide a standard for the learners of English as a foreign language (depending on the purpose of their learning the language), the immediate standard, for the learner as a second language, must be provided immediately from within the learning community itself. In other words, while all deviations in the former may legitimately be regarded as errors, some deviations in the latter must be regarded as part of the local norms.

Thus, it was not long before attention was shifted from error analysis and contrastive analysis to variety differentiation, which is considered more appropriate for the second language situation. However, according to Banjo (1995, 1996), this did not amount to a total adoption of errors as legitimate variants. Rather, any departure from the norms of the L2 standard variety was to be considered as errors. In view of this paradigm shift, scholars (e.g. Brosnaham, 1958; Banjo, 1971, 1993; Adesanoye, 1973, 1980; Adekunle, 1979; Bamgbose, 1982; Jibril, 1982, 1986; Jowitt, 1991) attempted to capture a variety typology of Nigerian English, using such criteria as education, occupation, ethno-linguistic consideration, mother-tongue transfer and social acceptability and international intelligibility, with a view to establishing the Standard Nigerian English variety.

Coupled with these are so many other articles (Adekunle, 1974; Adetugbo, 1977, 1987; Adeniran, 1979; Bamgbose, 1982; Obilade, 1984; Odumu, 1984; Afolayan, 1987, Igboanusi, 2001; Adegbija, 1989, 2004) which provide insights into core linguistic characterization of Nigerian English on phonological, lexico-semantic, idiomatic, syntactic and pragmatic levels. Meanwhile, work on codification and standardization of Nigerian English is still ongoing. As a matter of fact, the theme of the 27th Annual Conference of the Nigeria English Studies Association (NESA) held at Covenant University, Ota, from November 2nd to 5th, 2010 was in this direction; it was tagged, 'Towards the codification of Nigerian English'.

Therefore, in the absence of an acknowledged Standard Nigerian English on which basis this study may be carried out, we shall confine our research effort to the

educated variety of Nigerian English. This presupposes that we are concerned with speakers who are exposed to learning of English within the four walls of the Nigerian schools up to, at least, the post-secondary level, using the language for daily communication, academic activities and official purposes, and have achieved a level of mastery considered to be socially acceptable and internationally intelligible.

1.4 Connected speech processes

Except for a specific purpose, natural speech is not usually spoken with a gap between every word; but with one sound slurring into another. Thus, when sounds occur close to each other within a word, or at morpheme or word boundaries, various phonetic alterations and phonemic modifications, occasioned by the phonological environment of the phonemes or speaker's articulatory mechanisms, do occur (Cruttenden, 2001). There is, therefore, a wide difference between isolated words and the same words occurring in connected speech. The phenomena that account for such sound alterations and modifications are technically termed connected speech processes (henceforth CSPs). These are processes such as assimilation, elision, reduction in weak syllables, lenition, liaison, epenthesis, etc. Also included are rhythm and prosodic phenomena such as intonation and stress.

Typical phonological processes which cause sound modification in speech are language universal. This implies that they are "available to all languages, though not necessarily used by all" (Chomsky and Halle, 1968:178). According to Oyebade (1998:56), they are "motivated by the need to maintain euphony in a language or to rectify violations of well-formedness constraints in the production of an utterance". However, it has been observed that some of them are also language or dialect-specific: each language or dialect dictates which process to permit or prohibit and to what extent (Dressler & Wodak, 1982; Kerswill, 1985; 1987; Nolan & Kerswill, 1990; Roach & Widdowson, 2001).

For instance, French permits the kind of regressive assimilation of voice in which a word-final voiceless consonant usually becomes voiced if followed by a voiced sound, e.g. /avek/ becomes [aveg] in the phrase "avec vous": [aveg vu]. On the other hand, Standard British English does not allow this type of regressive voicing assimilation. What is rather commonly acceptable is devoicing whereby a word-final voiced consonant becomes voiceless when followed by a word beginning with a

voiceless sound, e.g., "I have to" is pronounced as [aɪ hæf tu:], not as [aɪ hæv tu:]; nice voice as [naɪs vɔɪs], not as [naɪz vɔɪs].

Even within the same language, CSPs may vary from one variety or accent to another. In this regard, Kerswill (1987) points out how CSPs in Durham English are significantly different from those of RP. According to him, Durham English permits the regressive voicing assimilation similar to what obtains in French, whereby the phrase "this village" is realized as [dɪz vɪlɪʤ] rather than [dɪs fɪlɪʤ] as in RP. Conversely, it is uncommon to find, in Durham English, cases of regressive assimilation of place whereby there is a loss of word-final alveolar sound as in RP, e.g. "had been", usually pronounced as [hæbi:n] in RP, is most likely to be realized as [haedbi:n] in Durham English.

1.5   Phonological processes in some indigenous Nigerian languages

In view of the divergence of phonological processes of languages, this section examines the operation of some of these processes in some indigenous Nigerian languages, so as to establish their peculiar manifestations in these languages vis-a-vis the English language. This will afford us the opportunity of effectively appraising the performance of NE speakers in the CSPs under consideration.

1.5.1   Assimilation

Assimilation has been described as the influence of one sound on another in the same neighbourhood to become alike. A vowel may assimilate another vowel or a consonant influence another consonant. Also, a vowel may acquire the features of a contiguous consonant and vice-versa. Depending on the language, this process may be regressive/anticipatory (where the first segment changes to become like the second one) or progressive/perseverative (where the second segment takes on the features of the first segment). Different types of assimilation known to some of these indigenous languages are discussed in the following sections.

1.5.1.1   Vowel -vowel assimilation

This is an assimilatory process in which a vowel takes on the features of another vowel in a contiguous environment. In connected speech, for instance, when a word precedes another word that begins with a vowel, assimilation usually occurs between the last vowel of the preceding word and the initial vowel of the second word.

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This may either be regressive or progressive. The process is exemplified below with Yoruba, Igbo, Uhrobo and Ikhin languages.

Regressive:

Yoruba (Source: Orie and Pulleyblank, 2002).

(i)   ọmọ ẹran /ɔmɔ ɛrã/   [ɔmɛɛrã]   goat-kid; son of a bitch

(ii)   ará ọ̀run /ará ɔrũ/   [arɔɔrũ]   citizen of heaven: masquerader

Igbo (Source: Yusuf, 2010:183)

(i)   nwá + ọ́ma   ŋwọ́ọ̃mã   'good child'

(ii)   úmù + áká   úmààká   'children'

Urhobo (Source: Yusuf, 2010:294)

(i)   èsíó + èsíó   /èsíésíó/   [èsjéèsjó]   'continuous pulling'

(ii)   èfá + èfá   /ɛ̀fɛ́ɛ̀fá/   [ɛ̀fɛ́ɛ̀fá]   'continuous flogging'

Ikhin, a language in Edo State (Source: Yusuf, 2010:49)

(i)   okpa   #   okpa   →   okpookpa   'one by one'

(ii)   eva   #   eva   →   eveeva   'two by two'

Progressive :

Yoruba (Source: Bamgbose, 1965).

(i)   ará ìlúˊ   aráàlúˊ   'townsman'

(ii)   ilé iséˊ   iléeséˊ   'office'

Igbo (Source: Yusuf, 2010:183)

(i)   ɔ́ bù yá   →   ɔ́ ɓù yá   ɔ́ ɔ̀ yá   'it's that'

(ii)   yá bù   →   yá ɓù   yá à   'that is...'

1.5.1.2   Consonant-consonant assimilation

This type of assimilation occurs when a consonant changes to become like another consonant in a neighbouring environment. Typical of this is homorganic assimilation whereby a nasal consonant becomes assimilated to the place of articulation of the consonant it precedes whether in the same or following word e.g.

Hausa (Source: Yusuf, 2010:141)

(i)   [m]   before bilabial   /gídán bàlá/   [gídám bàlá]   'Bala's house   '

(ii) [n]   before velars   /ango/   [aŋgo]   'groom'

Igbo (Source: Carnochan, 1948:423; Yusuf, 2010:184)
 (i)   [m]   before bilabial   [ɔ bhaara ya mbha]   'He rebuked him'
 (ii) [n]   before alveolars   /ńdù/ [ndu]   'life'
 (iii) [ŋ]   before velars   /nga/ [ŋga]   'prison'

Yoruba (Source: Owolabi, 2011:217)
 (i) [m] before bilabial e.g. Ó wà ní bodè   Ó wà ń bodè   [o wa m bode]
                                                          'He is at the gate'
 (ii) [ɱ] before labio-dental Ó kọ́ mi ní fonọ̀lójì Ó kọ́ mi ń fonọ̀lójì [o ko mi ɱ
                                                          fonoloji] 'He taught me phonology'
 (iii) [n] before alveolars   Ó dúró ní títì   Ó dúró ń títì   [o duro n titi]
                                                          'He stood in the street'
 (iv) [ŋ] before velars   Ó bú mi ní kòrò̀   Ó bú mi ń kòrò̀ [o bu mi ŋ koro]
                                                          'He disparaged at my back'

1.5.1.3   Consonant-vowel assimilation

This is a process whereby the features of a vowel are spread on a contiguous consonant as secondary articulation. Typical processes of this type are labialisation (in which lip rounding feature of a vowel is superimposed on an adjacent consonant) and palatalisation (whereby the tongue position of a front vowel is extended onto an adjacent consonant).

In Hausa, simple or plain velars [k, ƙ, g] may be labialised in the environment of a back vowel [u, o], i.e. when they are placed immediately before a back vowel. The following examples cited by Sani (1989:30) illustrate this process:

(i)   ma<u>k</u>o [mak^{w}o]   'a week'
(ii)   mu<u>g</u>u [mug^{w}u]   'a wicked man'

(The simple velars are actually pronounced with rounded lips).

This process is also found in Ebira as exemplified below:

(i)   tu   ɛvụ   →   t^{w}ẹvụ 'to beat a goat'
(ii) dụ   àzà   →   d^{w}àzà 'to chase people'

 (Source: Adive, 1985:56, cited in Yusuf, 2010:52).

Palatalisation is another common consonant-vowel assimilation process in Hausa; the alveolars 's', 'z', 't' and 'd' are commonly palatalised to 'sh', 'j' 'c', and 'j'

respectively when they precede the front vowel 'i' and 'e' (Yusuf, 2010:141; Sani, 1989:30), e.g.

Table 1.1 Palatalisation process in Hausa

Singular Noun	Root	Plural Suffix Added	Implication	Effect of Palatalisation
ƙásá 'country	ƙas-	-aCe (=ase)	kasase*	kásàshé 'countries'
buta 'kettle'	but-	-oCi (=oti)	butoti*	butoci 'kettles'
gída 'house'	gid-	-aCe (=ade)	gidade*	gídàjé 'houses'
maza 'males'	maz-	-aCe (aze)	mazaze*	mazaje 'husbands'

(Source: Sani, 1989:30).

This feature is equally found in Ebira as exemplified below:

   (i)   si ezí →   ʃezí   'to look for children'
   (ii) zi èva →   ʒẹva   'to hurt the oracle'
    (Source: Adive, 1985:56, cited in Yusuf, 2010:51).

1.5.2   Elision

Elision is concerned with the loss of a phoneme under some language-specific conditions. It affects vowels and consonants alike.

1.5.2.1   Vowel elision

Vowel elision is a process where a vowel which is normally pronounced in slow speech or in a word uttered in isolation is elided in connected speech. Vowel elision has been proved to be one of the means of resolving vowel hiatus- a sequence of vowels across a syllable boundary- which many languages prohibit (Orie and Pulleyblank, 2002). In instances of such vowel sequence, either of the two adjacent vowels is deleted. The following instances are taken from Yoruba, Igbo and Urhobo.

Yoruba (Source: Orie and Pulleyblank, 2002):

 (i)   owó kí owó → owók-ówó → owókówó   'any money at all/bad money'
       money any money

 (ii) aya ọba →   aya-ba →   ayaba 'queen'
       wife   king

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Igbo:

(i) uzọ amaka → uz-amaka → uzamaka 'road is good'

(ii) ije ọma → ij- ọma → ijoma 'safe journey'

Urhobo (Source: Yusuf, 2010:289):

(i) dὲ + úkó → d- úkó → [duko]
buy cup 'buy a cup'

(ii) ɔgɔ́ + óbiébì → ɔg- óbiébì → [ɔgobiebi]
bottle black 'a black bottle'

1.5.2.2   Consonant elision

Consonant elision is concerned with the deletion of adjacent consonants. Akinlabi (2004:466-477) discusses three most common and most predictable contexts of occurrence of this process in Yoruba. The first context describes deletion which occurs when two contiguous syllables contain similar consonants. In such a situation, the first of the two similar consonants is deleted and the vowels are assimilated, e.g.

(a) eguńguń   eéguń (masquerade)

(b) ὸtítọ́   ὸótọ́ (truth)

The second context concerns glides /w/ and /y/ which may be deleted between two vowels when followed by back vowels /u, o, ɔ/ and front vowels /i, e, ɛ/ respectively, e.g.

(a) àwùjọ   àùjọ (assembly of persons)

(b) adìyẹ   adìẹ (chicken)

The third context is r-deletion. This may occur when /r/ occurs between two identical vowels or /r/ is preceded or followed by a high vowel, e.g.

(a) wèrὲpὲ   wèὲpὲ (nettle)

(a) ὸrìsà   ὸòsà (god)

In the same vein, Yusuf (2010:48) cites the following examples of consonant elision from Ebira:

(i) awuru → aaru 'gown'

(ii) avaba → aaba 'all'

1.5.3   Epenthesis (Insertion)

Epenthesis is a phonological process which involves insertion of an extra segment to an utterance in order to break up a clustering of consonants not permitted by a language or to prevent a close syllable from ending a word. As Oyebade (1998)

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observes, epenthesis is commonly employed in many African languages to break up consonant clusters of loan words for smooth production. The following instances are cited by Yusuf (2010):

Loan words	Ebira	Edo	Yorùbá
bread	iburedi	eburedi	búrẹ́dì
belt	ibeliiti	ebeliiti	bẹ́líìtì
comb	ikoomu	ekoomu	kóòmù

From the foregoing discussion on phonological processes in indigenous Nigerian languages, it is obvious that the operational mechanisms of these processes differ from one language to another, though they are language universal. This informs the need to investigate how Nigerian speakers of English react to these processes in Standard British English connected speech, given that they had already formed a speaking pattern in their indigenous languages.

1.6   Statement of the problem

A large volume of research has concentrated on characterising Nigerian English sound segments (e.g. Adetugbo, 1977; Ekong, 1978; Jibril, 1986; Aladeyomi, 2002; Aladeyomi and Adetunde, 2007; Soneye, 2008) and suprasegmental features (e.g. Amayo, 1981; Atoye, 1991, 2005a; Udofot, 1997, 2004; Akinjobi, 2004; Gut, 2001; Jowitt, 2000; Olaniyi, 2007; Oladipupo, 2008) with particular reference to how they deviate from or approximate to Standard British English. On the contrary, such elaborate attention has not been paid to the sub-segmental (also contextual) features of connected speech (the effects of adjacent sounds on each other in a stream of connected speech). Yet, the human speech sounds are not so discrete, the prevalence of segmental and suprasegmental description notwithstanding. As a matter of fact, a segmental phonetic transcription is widely considered an abstract imposition on speech; sound segments actually behave in different ways in connected speech.

Frankly, if the question of intelligibility between native and non-native speakers must be adequately addressed, there is need to redirect the focus of phonological inquiry to connected speech processes. This is because it is at the level of connected speech that the typical difference between native and non-native English accents is most pronounced and intelligibility is highly impaired. (Laver, 1968; Gimson, 1980; Katalin and Szilárd, 2006).

-Meanwhile, few existing studies (e.g. Laver, 1968; Jibril, 1982; Joshua, 2009) in this domain have been confined to mere identification of the processes that characterise Nigerian English both within words and across word boundary; studies that give priority to Nigerian English speakers' proximity to Standard British English (SBE) connected speech are scarce. In view of this, it becomes pertinent to pay more attention to the sub-segmental domain of the Nigerian English phonology, particularly in relation to speakers' proximity to Standard British English.

Besides, little attempt has been made by scholars to examine the social differentiation of Nigerian English speakers in terms of connected speech processes as being proposed by this study. The only study we are aware of is Jibril (1982) whose preoccupation, however, was on regional variation only. This study, therefore, investigates the incidence of assimilation, elision and liaison processes of SBE connected speech (across word and morpheme boundary) in NE, in relation to the region, gender and age of speakers. This is with a view to determining the level of NE speakers' approximation to or deviation from SBE connected speech and unravel their social variation. The variationist perspective to this study is necessitated by Kerswill's (1985, 1987) observation that connected speech processes may be socially differentiated in a speech community depending on regional affiliation, age, sex and socio-economic class of speakers, and may be adopted or avoided by members of a particular sociolinguistic group. This is an aspect of phonological inquiry which, according to Huber and Brato (2008), is under-researched in the L2 varieties of English; but, in our view, may turn out to be an essential component in the description and codification of Nigerian English.

1.7   Aim and objectives

There is, no doubt, a marked difference between Standard British English and Nigerian English, not only in isolated sound segments, but also at the level of connected speech (where contiguous sounds slur into one another and are thereby modified or simplified). The aim of this study, therefore, is to investigate the incidence of certain Standard British English processes (assimilation, elision and liaison) in the connected speech of Nigerian English speakers, differentiated by region, gender and age. The study shall achieve the following objectives:

(i)   ascertain the incidence of assimilation, elision and liaison processes of SBE connected speech in Nigerian English

(ii)   determine the extent to which NE speakers approximate to or deviate from the Standard British English connected speech

(iii)   discover, if any, connected speech processes typical of Nigerian English

(iv)   examine the social variation of assimilation, elision and liaison in Nigerian English in terms of the region, gender and age of speakers.

(v)   identify possible factors that motivate participants' performance.

1.8   Research questions

The resolution of the stated objectives shall be guided by the following research questions:

(i)   are there incidences of assimilation, elision and liaison processes of SBE connected speech in Nigerian English?

(ii)   to what extent do Nigerian English speakers approximate to or deviate from the Standard British English connected speech processes?

(iii)   are there typical Nigerian English CSPs?

(iv)   are assimilation, elision and liaison socially differentiated in Nigerian English in terms of the region, gender and age of speakers?

(v)   what are the possible motivations for participants' performance?

1.9   Research methodology

Insights from Phonetics/Phonology and Sociolinguistics as well as various statistical tools were employed to address the issues raised in this study. The analyses covered both auditory and acoustic phenomena.

1.9.1   The participants

The participants in the study were 180 males and 180 females between ages 18-65, born and educated in Nigeria with a minimum of 2-3 years post-secondary education. They were drawn, through stratified and purposive techniques, from four regions in Nigeria: North (120), West (80), East (80) and South-South (80) (see appendix A). For the purpose of data gathering and variational analyses, participants from each region were sub-divided into four social categories (according to age and gender): Young Male, Adult Male, Young Female and Adult Female. Altogether, each

category comprised 90 participants (30 from the North, 20 from the West, 20 from the East and 20 from the South-South region), making three hundred and sixty (360) participants altogether (appendix A). Two educated native speakers served as control.

1.9.2 Research instruments

The research instruments used for investigating these phenomena were speech elicitation procedure and a structured questionnaire. For speech elicitation, Semi-Spontaneous Speech (SSS) Style was used. The data which was adapted from Gimson (1980) and Dziubalska (1990) comprised thirty-one utterances (Appendix B, Test 1) and a short passage (Appendix B, Test 2), containing various CSPs sites. The questionnaires were used to elicit information on personal, educational, regional, linguistic and socio-economic backgrounds of the participants, which were required for the sociophonetic analysis of the data (Appendices C and D).

1.9.3 Data gathering procedure

The participants and the control were guided to produce Test 1, which comprised thirty-one utterances, into digital recording devices. In order to ensure approximation to natural speech, corresponding questions were constructed to guide the production of each item. Based on these, the researcher engaged each person in a question-and- answer session in a manner that resembled casual conversation. The participants were also instructed to read Test 2, which was a short passage on car sale, as naturally as possible, as though they were making negotiations. Their initial attempts were recorded and then played back to verify whether the conversations sounded casual and natural enough. The final recordings were then made after the researcher had felt satisfied with their performances.

1.9.4 Data analysis

Two major levels of analyses were adopted in the work. First, the recordings were played back and instances of assimilatory, elision and liaison features identified at different boundaries in the data were transcribed perceptually and analysed statistically, using percentages, Multivariate Analysis of Variance (MANOVA) and Bonferroni's Post-hoc test.

An appropriate (SBE) variant in each context was allotted one (1) mark, while zero mark was recorded for each inappropriate variant (non-SBE variant). The total scores for all participants in each variant were converted to percentages, the higher

percentage taken as the norm. The percentage scores were then represented graphically and the findings subjected to Standard English phonological rules, as provided in generative phonology, to ascertain Nigerian English speakers' application of or deviation from the rules. In order to test for the level of significance between the social categories of speakers in their application of Standard British English CSPs, participants' scores were subjected to Multivariate Analysis of Variance (MANOVA) and Bonferroni's Post-hoc test.

Second, portions of the semi-spontaneous speech data produced by eight (8) Nigerian participants (representing the four regions and the social categories) were analysed acoustically with a view to corroborating the findings obtained through statistical analysis. The same two levels of analysis were also used to analyse the control's production of the data.

1.10   Scope of the study

This study is a hybrid of two distinct linguistic fields- Sociolinguistics and Phonetics. Therefore, insights, methodologies and analytical tools from both fields were employed. As it is well known that variability in speech is a function of different factors such as aerodynamic operations, language-specific variation or social factors, this study, though emphasised socially conditioned features of SBE connected speech in Nigerian English, sought explanation for Nigerian English connected speech behaviour from other sources (e.g. phonological naturalness, mother tongue influence) This is because CSPs, according to Nolan & Kerswill (1990), are actually a function of different phenomena.

Furthermore, connected speech processes are of many types, e.g. assimilation, reduction, elision, lenition, liaison, epenthesis, /l/ vocalization, glottalisation, /l/ darkening, juncture, etc. It is not our intention in this study to examine all the possible connected speech processes of SBE in Nigerian English in view of time and space. The study was rather restricted to variants of assimilation, elision and r-liaison processes commonly employed in SBE. The decision to limit the study to these features was informed by two factors. First, concentrating on few features afforded us the opportunity of conducting an in-depth investigation into each process. Second, the CSPs under consideration form the major and commonest subsegmental features of connected speech in SBE (Cruttenden, 2001).

In choosing the participants, the pluralistic nature of the indigenous languages in Nigeria was taken into consideration. The selection was representative of four regions in Nigeria, so delimited for the purpose of this study- North (comprising Hausa, Fula, Kanuri and a few other minority languages spoken in the region), East (Igbo), West (Yoruba) and South-South (comprising Edo, Esan, Izon, Annang, Urhobo, Ibiobio, etc). This, it was believed, would make it possible to capture Nigerian speakers of English of different linguistic backgrounds, knowing full well that it would be an arduous task to select participants from all the available language groups in Nigeria, as there are over five hundred languages spoken in Nigeria (Ethnologue, 2013).

Furthermore, following the sociophonetic approach employed in this study, the social variation analysis was restricted to region, gender and age. The analysis would rather have been too cumbersome should we have decided to examine ethnicity or language groups, rather than region, as we would have had very many language groups to contend with. The same reason goes for the exclusion of the variable of socio-economic class.

1.11   Significance of the study

The primary preoccupation of scholars of Nigerian English today is the characterisation and eventual codification of this variety of English. So far, concerted efforts have been made by various scholars in this direction at all linguistic levels-lexis, syntax, phonology, pragmatics, etc. At the phonological level, researchers have explored extensively, though not exhaustively, the segmental and suprasegmental features of Nigerian English. The sub-segmental domain, which deals with the effects of adjacent sounds on each other in a stream of connected speech, has, however, not been given elaborate attention.

Therefore, the study will, without doubt, contribute immensely to the description and possible codification of Nigerian English, as it aims to identify the connected speech features observed in Nigerian English, pointing out areas of convergence and divergence between SBE and NE and providing useful explanations for their occurrence or otherwise. Furthermore, the sociophonetic approach employed in the study will reveal the social distribution and differentiation of the CSPs of Nigerian speakers of English, on the basis of which valid judgment can be made with regard to who uses what CSPs in Nigerian English.

More importantly, it will provide the basis for comparing Nigerian English with the Standard British accent and thereby portray Nigerian English as a distinct variety of World Englishes. Pedagogically, the study will be of immense value to language planners and teachers, as well as Nigerian learners of English since it seeks to provide phonological explanations for the marked difference between Nigerian English and native English speakers, and unravel possible intelligibility problems.

1.12   Limitations and constraints

In view of time and space and, and more importantly, the need to keep the analysis manageable, the study is limited to just three features of connected speech: assimilation, elison and liaison. Due to the same reason, only semi-spontaneous speech data was collected, natural speech data was excluded.

Also, considering the large population of respondents involved in this study, it was not possible, in all cases, to conduct the recording sessions in a quiet venue, since the participants had to be consulted in their offices, institutions and open places. This, in a way, affected some of the recordings, as background noise was created. However, we were able to get a good number of clear recordings used for the analyses.

Finally, the researcher was constrained by a number of factors during data gathering period. At a point, it became very difficult to reach some of the target population for a number of reasons. First was the insurgency by the 'Boko Haram' sect in the northern part of the country which restricted the researcher's access to that area for some time. Second was the variational nature of the research which required data to be collected from different categories of people. Certain sets of participants were difficult to reach; for example, it took time and energy to gain access to Northern women for religious reasons.

CHAPTER 2

REVIEW OF LITERATURE

2.0   Introduction

This chapter discusses the major concepts of this study; that is, connected speech processes and sociophonetics. It also reviews various scholarly contributions to these concepts, as well as the notion of 'Nigerian English', within which purview this research is being carried out.

2.1   Connected speech processes

During speech, words are not usually spoken in isolation but in a flowing and continuous stream. Thus, distinctness of sounds implied by phonemic transcription is obviously non-existent, even in carefully spoken citation forms. As Pike (1948) opines, sounds tend to slur into one another. This implies that segments are capable of being influenced and modified in varying degrees by other adjacent sounds in connected speech, especially at morpheme or word boundaries (Nolan and Kerswill, 1990; Roach and Widowson, 2001). Nolan and Kerswill (1990:295), in this regard, assert:

> The physical activity of speech is continuous rather than discrete. Successive phonetic events blend into each other so that the segment boundaries implied by the transcription are often not evident, and the realizations of a given phonetic category may range along a continuum of fine allophonic variation according to phonetic environment.

The modifications that occur to sound segments in connected speech involve phonemic alterations or simple allophonic realisations in which the less important consonants, vowels, or syllables in words are altered or removed; contiguous sounds resemble each other or a sound is inserted. Sometimes, the change may be so complex that it does not even reflect the sounds properties. To buttress this claim, Nolan and Kerswill (1990) provide the example of an utterance: *I don't suppose you could make it for five,* transcribed phonemically as /ai dəunt səpəuz juː kʊd meik it fɔː faiv/; but

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which becomes: [nspeuʒχebme:xiffaiv] when rendered in fluent and fast speech through the processes of reduction, lenition, assimilation and deletion.

This range of phenomena by which the "explicit, dictionary-type forms of sounds are converted to the phonetic properties of fluent speech by a variety of reduction and simplification processes" (Nolan and Kerswill, 1990:296) is what is technically referred to as connected speech processes (CSPs). Among these cross-word processes are assimilation, reduction, elision (deletion), lenition, liaison (linking), epenthesis (insertion), /l/ vocalization, glottalisation, /l/ darkening, juncture, etc.

The occurrence of CSPs has largely been traced to a number of sources. One is articulatory economy whereby speakers attempt to apply less articulatory effort in the pronunciation of contiguous sounds in connected speech, with a view to reducing the number, or the extent, of the movements and adjustments of the speech organs (Abercrombie, 1967; Foulkes, 2006). Scholars of this theoretical persuasion who studied the effect of speaking rate on articulation (e.g. Gay, 1968; Crystal and House, 1988a,b; Perkell, Zandipour, Matthies and Lane, 2002) have proved that faster rate of speaking usually leads to articulation of shorter duration, increased overlap, and greater articulatory undershoot (Foulkes, 2006).

However, Ohala (1983) reasons otherwise. He is of the view that there is no way changes in speaking rate could affect all sounds equally since the degrees of inertia and speed movement of the articulators are not the same. As far as he is concerned, CSPs are a result of limitation of speech mechanism and/or operations of aerodynamic principles in the vocal tract. That is, they are products of variation in the structures of the vocal tract. He cites the example of stops which usually change to affricate in the environment of close vowels or /j/ (e.g. the pronunciation of *tune* as [ʧʉn] in some varieties of British English). According to him, the change is not occasioned by articulatory change but is due to the aerodynamic of the vocal tract setting. Foulkes (2006:3), in this regard, also opines:

> Speech is largely dependent on the physical properties of the vocal-auditory channel, and, of course, no two human beings share exactly the same physical characteristics. Differences in spoken forms may therefore emanate from physical differences in each link in the chain. Furthermore, these physical differences are not only to be found across speakers: individuals are also subject to long- or short-term physical changes in the vocal tract and auditory system, which in turn

may yield long- or short term effects on their speech or hearing.

Again, this view of mechanical determination of CSPs has been proved inadequate. CSPs, as has been discovered, differ from one language, dialect or individual to another (Lindblom, 1963; Byrd, 1994; Laver 1994), whereas the innate constraints of the vocal tracts are universal (Foulkes, 2006). Laver (1994), for instance, reveals that regressive voicing assimilation is not observed in RP pronunciation, whereas it is found in some Scottish accents (e.g. the medial consonant cluster in *birthday* may be pronounced [-ðd-]). It appears then that CSPs are determined by language-specific rules which seem to dictate what particular processes are to be allowed in a particular language or dialect (Kerswill, 1987; Nolan & Kerswill, 1990; Lindbon, 1963; Byrd, 1994; Lavar, 1994). These processes, thus, form part of the phonological knowledge internalised by the speakers of a language.

Against this backdrop, Nolan & Kerswill (1990) conclude that CSPs are actually a function of different phenomena.

2.2   Connected speech processes in Standard British English

Speech is not just sounds in isolation, but a flow of sounds based on a system through which phonemes are connected, grouped and modified in certain manner. Native speakers of English, in particular, do not pronounce words with gaps but join them together in a stream of sounds; as a result of which they are able to speak quickly and fluently. In the course of speaking therefore, single words, which ordinarily are pronounced clearly in isolation, undergo a number of context-induced phonetic modifications especially at word boundary.

According to Gimson (1980), the word, just like the phoneme, is an abstracted linguistic unit when considered from the perspective of its actual phonetic realisations under the influence of adjacent sounds or stress or rhythmic pattern. This is because the pronunciation of a word in connected speech is subject to the influence of other adjacent sounds or of the stress or rhythmic group of which it forms part. The modification, according to him, may affect the whole word (e.g. weak forms or word stress patterns), or the segment appearing at the word boundary (e.g. junctural assimilation, elision, and liaison forms). It follows from the foregoing, therefore, that there are two subgroups of connected speech processes in SBE. The first comprises suprasegmental features of stress, rhythm and intonation, as well as vowel reduction,

which characterise larger strings like syllables or utterances; while the second subgroup belongs to the domain of subsegmental which deals with the effects of adjacent sounds (vowels and consonants) on each other in a stream of speech (Foulkes and Docherty, 2006; Katalin and Szilárd, 2006).

This section reviews connected speech processes of SBE from both perspectives, but pays more attention to the subsegmental subgroup which is the concern of this study.

2.2.1 Reduction

Reduction, according to Bald (1990:317), is "a process in which a form or set of forms undergoes changes with respect to certain phonetic features". An instance of this feature in English is vowel reduction, the process by which full vowels are replaced by weak or reduced vowels– /ə/, /ɪ/ and /ʊ/ in unstressed syllables. It is a principal means by which syllables can be squeezed. Gimson (1980) opines that a common phenomenon in the various stages of evolution of English is for unstressed syllables to undergo a process of gradation which may be a complete disappearance of phonemes or obscuration of vowels. In content words, unstressed vowels normally weaken to / ə, ɪ /, and less often, /ʊ/ or are sometimes deleted completely. The following are instances of weakening in English:

/ɒ/ ⟶ [ə]   pilot   /ˈpailət/
/ɜ/ ⟶ [ə]   survive /səˈvaiv/
/ʌ/ ⟶ [ə]   surplus /ˈsɜːpləs/
/eɪ/ ⟶ [ɪ]   village /ˈvɪlɪdʒ/
/e/ ⟶ [ɪ]   challenge /ˈtʃælɪndʒ/

In the same vein, unstressed function or grammatical words usually show reduction of the length of sounds, obscuration of vowels towards / ə, ɪ, ʊ /, and the elision of vowels and consonants in connected speech in SBE, except when used for special emphasis. Most function words, therefore, commonly have varied pronunciations depending on whether they are strong or weak. Katalin and Szilárd (2006), in this regard, opine that as many as 95% of the occurrences of function words in native English speech are weak. A situation whereby only strong forms are used in speech is usually considered typical of foreigners; such pronunciations normally sound unnatural and foreign to native speakers of English. The same source provides a list of

such function words- determiners, pronouns, prepositions, conjunctions and auxiliaries- with their strong and varied weak forms as follows:

Table 2.1 Strong and weak forms

	Word	Strong Form	Examples	Weak form(s)	Examples
1	*the*	ðiː	*It's not "a" cat, it's "the" cat!*	/ðə/, /ðɪ/	*the* /ðə/ *dog, the* /ðɪ/ *end*
2	*a, an*	eɪ, æn		ə, (ən)	*a dog, an end*
3	some	sʌm	*I'll get you some.*	s(ə)m	*I'll get you some apples.*
4	his	hɪz	*It's his car, not mine.*	(h)ɪz	*what's-his-name*
5	*your= you're*	jɔː(r), jʊə(r)	*Is this YOUR CV?*	jə(r)	*Mind your head!*
6	*(s)he, we, you*	hiː, ʃiː wiː juː	*All I want is YOU.*	(h)ɪ, ʃɪ, wɪ jʊ	*I'll get you some apples.*
7	*him*	hɪm	*Whom do you love: him or her?*	(h)ɪm	*I love him.*
8	her	hɜː(r)		(h)ə(r), ɜː(r)	*I love her.*
9	*their them*	ðeə(r) ðem	*It wasn't US, it was THEM.*	ð(e)ə(r) ð(e)m	*Do you hate them?*
10	*us*	ʌs		əs	*one of us is crying*
11	*there*	ðeə(r)	*There you are!*	ðə(r)	*There's a book on the table*
12	*at*	æt	*What's he getting at?*	ət	Look at me
13	*for*	fɔː(r)	*It's just what I long for.*	f(ə), fr, f	*Stay for a week* /ˈsteɪ frə ˈwiːk/
14	*from*	frɒm	*Where are you from?*	frəm	*He's from Barcelona.*
15	*of*	ɒv	*It's love I've a lot of.*	əv	*one of us*
16	*to*	tuː	*Who did you give it to?*	tə, tʊ	*to* /tə/ *me, to* /tʊ/ *Ann*
17	than	ðæn	*"Than" is spelt with an "a" not an "e".*	ðən	*even better than the real thing*

18	*and*	ænd	*"And" is a conjunction.*	(ə)n(d)	*Twist and shout!*
19	*but*	bʌt	*Don't say "but"!*	bət	*sad but true*
20	*that*	ðæt	*What's that?*	ðət	*the book that we bought*
21	*or*	ɔː(r)	*To be or not to be?*	ə(r)	*sooner or later*
22	*as*	æz	*as and when*	əz	*as good as it gets*
23	*have has had*	hæv hæz hæd	*Have you seen her? Had I known him earlier...!*	(h)əv, v (h)əz, z, s həd, d	*You've got to know. She's got it. It's been a year. You'd better stop!*
24	*can could*	kæn kʊd	*Can you dance? Yes, you could.*	k(ə)n kəd	*I can see. You could be mine.*
25	*will would*	wɪl wʊd	*Will Susan be there? Would you like it?*	(w)(ə)l (w)(ə)d	*Susan will be at home. I'd rather sail away.*
26	*shall should*	ʃæl ʃʊd	*Shall I open the window?*	ʃəl ʃəd	*I think you should work harder*
27	must	mʌst	*You MUST hold on!*	məs(t)	*I must go now.*
28	*do does*	duː dʌs	*How do you do? Yes, she does!*	dʊ, d(ə) d(ə)s	*How do you do? What does he do?*
29	*am, are was, were*	æm, aː(r) wɒz, wɜː(r)	*I AM hungry! He said he wasn't sleepy but he was!*	(ə)m, ə(r) wəz, wə(r)	*I'm hungry. They were all drinking in the pub.*
30	*been*	biːn	*Where have you been?*	bɪn	*I've been busy all day.*

(Source: Katalin and Szilárd, 2006:103-107)

The weak forms of the function words, according to the above source, normally occur within the sentence, e.g.

> *It's time to* /tə/ *go on*

and at the beginning of the sentence (with the exception of auxiliaries) e.g.

> *To* /tʊ/ *err is human.*

The strong forms, on the other hand, are used at the end of the sentence e.g.

> *I can do it if you want me to* /tuː/

or within the sentence for purposes of emphasis or contrast, i.e.

when the word is contrasted or co-ordinated with another one, e.g.

Both of them <u>can</u> /ˈkæn/*, but only Jack <u>will</u>* /ˈwɪl/*, answer this question,* or

It's <u>at</u> /ˈæt/ *the corner, not <u>on</u>* /ˈɒn/ *the corner*

(i) when it is cited or quoted, e.g.

Don't say '<u>but</u>'! /ˈbʌt/

(ii) or when the word is emphasised, e.g.

You <u>must</u> /ˈmʌst/ *hold on!* or

He <u>does</u> /ˈdʌs/ *do the homework regularly!*

The strong form is also used when a preposition is followed by a pronoun at the end of a sentence, e.g.

I'm looking <u>at</u> you / ˈæt ju:/).

However, there are certain exceptions to these rules. The strong forms of object pronouns are not normally used even at the end of the sentence, e.g.

Have you seen t<u>hem</u>? /ðm/).

Again, the negative form of auxiliary verbs is never weakened e.g.

I <u>can't</u> /ˈkænt/ (or <u>*cannot*</u> / ˈkænɒt /) *dance*

and, usually, though not always, auxiliaries occur strong at the beginning of the sentence, e.g. *Can* /ˈkæn/ *you dance?*

Finally, some function words have strong forms only, e.g., auxiliaries (*did, may, might, need*), prepositions (*in, off, on, up*), conjunctions (*though, when*), pronouns (*that, these, those, who*), and the negative particle *not;* they cannot be weakened.

2.2.2   Variation of the word's accentual pattern (stress)

According to Gimson (1980:285), words accentual (stress) patterns behave differently in connected speech. Generally, the accentual (rhythmic) pattern of a word remains constant, notwithstanding the environment. In connected speech, although a word may lose the nuclear pitch change which it has in isolation, the position of primary and secondary accents is not changed, e.g.

be `hind;ˌ

get be `hind me;

beˈhind the `bookˌcase.

`windˌscreen;

`windˌscreen ˌwiper;

the ˈwind ˌscreen was `smashed;

he ˌbought a ˈnew `wind ˌscreen.

`yesterday;

I ˌsaw him `yesterday;

ˈyesterday `morning.

`post ˌoffice;

ˈpost ˌoffice ˌclerk;

ˈnear the `post ˌoffice.

However, when a simple or compound word pattern consists in isolation of a primary accent (stress) preceded by a secondary accent, the primary accent may be thrown back to the syllable carrying secondary stress in isolation, if, in connected speech, a strong accent follows closely to avoid stress clash, e.g.:

ˈthir `teen, but ˈthir ˌteen `shillings

ˈWest `Minister, but ˈWest ˌMinster `Abbey

ˈfull `grown, but a ˈfull ˌgrown `man

ˈafter `noon, but ˈafter ˌnoon `tea

Also, when a strongly stressed syllable closely precedes, the potential pitch-prominent secondary accent may be reduced to one of quality, quantity or rhythm, without pitch- prominence, e.g.

ˈeight ˌthir `teen; ˈnear ˌWest `minster; ˈnot ˌfull `grown; ˈFriday ˌafter `noon

Moreover, when the primary accent is shifted back, in the case of a strong accent following, the secondary accent which falls on the syllable having primary accent in isolation frequently has no pitch-prominence, and may, if the quality of the syllable permits, receive no accentual prominence of any kind, e.g. ˈWest ˌminster `Abbey or ˈWestminster `Abbey.

2.2.3   Assimilation

Assimilation, a process whereby two adjacent sounds become phonetically similar, has been extensively described by various scholars. Ladefoged (1993) refers to it as a process whereby a sound changes into another under the influence of a contiguous sound. To Roach (2000), it is the realisation of a sound in a different way as a result of being adjacent to some other phoneme belonging to a neighbouring word.

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Katamba (1989), in like manner, opines that assimilation involves modifying a sound with a view to making it more similar to some other sound in the environment. In Crystal's (1991:28) view, assimilation is "the influenced exercised by one sound segment upon the ARTICULATION of another, so that the sounds become more alike, or identical". Against this backdrop, assimilation can generally be described as a process by which a phoneme (sound segment) is modified to resemble a contiguous one within a word or at word boundary in a string of sounds. For example, the word 'this' has the sound /s/ at the end if it is pronounced in isolation, but when followed by a word beginning with /ʃ/ as in 'shop' it often changes in rapid speech to /ʃ/, giving the pronunciation /ðɪʃʃɒp/.

Gimson (1980), in this regard, argues that the actual phonetic output of a phoneme, and by extension, a word depends on the context, and so, attention must be paid to the mutual influence of contiguous sounds on each other when describing speech. In other words, phonetic continuity and merging of qualities as well as tendency toward assimilation of phonemes must be considered principal factors in connected speech.

Assimilation types have been described by scholars, using various parameters. Skandera and Burleigh (2005:90), in particular, identified four categorisations based on:

- the distance between the two sounds involved: *contiguous/contact and non-contiguous/distant assimilation*
- the direction of the influence exerted: *regressive, progressive and coalescent assimilation*
- the particular distinctive feature affected: *assimilation of voice, place and manner*
- the degree to which one sound assimilates to another: *partial and total assimilation*

Simo-Bobda and Mbangwana (1993), Roach (2000) and Abercrombie (1967) also listed classifications akin to those identified above. Besides, Abercrombie (1967) and Simo-Bobda and Mbangwana (1993) further added historical, contextual (juxtapositional), ordinary and similitude assimilation. These assimilation types are, however, not straight-jacketed; they overlap. For instance, assimilation of voice can be regressive or progressive.

2.2.3.1 Contiguous/Contact and distant assimilation

Contiguous (also contact, contextual or juxtapositional) assimilation is a process whereby the pronunciation of a segment is altered under the influence of an adjacent sound especially at word boundary. Abercrombie (1967:133) describes it as "changes in pronunciation which take place under certain circumstances at the ends and the beginnings of words (changes at word 'boundaries', that is to say) when these words occur in connected speech, or in compounds". A relevant example cited by this source is the phrase *is she*. In isolation, each of the word is normally pronounced /ɪz/ and /ʃiː/ respectively; but in connected speech, the phrase becomes /ɪʒ ʃiː/. The two words are juxtaposed and *is* now has a pronunciation different from the one it has when said in isolation. In terms of directionality, contiguous assimilation may be regressive (anticipatory), progressive (perseveratory) or coalescent

Non-contiguous or distant assimilation, on the other hand, relates to modification involving two sounds which are further apart. An example cited by Skandera and Burleigh (2005:90) is the idiom *turn up trumps* [tɜːm əp trʌmps] where the /n/ in *turn* sometimes changes to /m/, under the influence of bilabial sounds /p/ of *up* and /m/ of *trumps*. This assimilation type however barely occurs in English and is considered more or less a slip of the tongue.

2.2.3.2 Regressive, progressive and coalescent assimilation

This category of assimilation relates to the direction of the influence the sounds exert on each other. Regressive (Anticipatory) assimilation is the type of assimilation in which a sound is modified to become more like the phoneme following it or, put in another way, whereby a sound influences the preceding one. This is the most common type of assimilation in SBE, which applies to place or manner of articulation and state of the glottis. For example, in *ten bikes* [tem baɪks], alveolar /n/ becomes bilabial /m/ under the influence of the following bilabial /b/. Similar examples cited by Weisser (2005) are:

[wʌm mæn] (one man)   for [wʌn mæn] alveolar nasal → bilabial nasal

[hæʃ ʃiː] (has she)   for [hæz ʃiː] alveolar fricative → palato-alveolar

                                                    fricative

[haːb bæk] (hard back)   for [haːd bæk] alveolar plosive →bilabial plosive

[gʊb baɪ] (good bye)   for [gʊd baɪ] alveolar plosive   → bilabial plosive

[gʊb pɔɪnt] (good point)   for [gʊd pɔɪnt] alveolar plosive → bilabial

<div style="text-align:right">plosive</div>

[gʊn naɪt] (good night)   for [gʊd naɪt] alveolar plosive → alveolar nasal

[tem pɔɪnts] (ten points)   for [ten pɔɪnts] alveolar nasal → bilabial nasal

[θɪŋ kəʊt] (thin coat)   for [θɪnkəʊt]   alveolar nasal → velar nasal

Progressive (perseveratory) assimilation is one in which the preceding phoneme influences the subsequent one within a word or at word boundary. For example, in *lunch score* /lʌnʧ ʃkɔ:/, alveolar /s/ becomes palato-alveolar /ʃ/ under the influence of the preceding palato-alveolar /ʧ/). Weisser (2005) further cites the following cases where progressive assimilation occurs with high frequency function words, generally determiners that start with a weak fricative /ð/, e.g.

[ɪnnə]   (in the)   for [ɪnðə]   dental fricative → alveolar nasal

[ɪnnækkeɪs]   (in that case)   for [ɪnðætkeɪs] dental fricative → alveolar nasal

[ɪnnɪsweɪ]   (in this way)   for [ɪnðɪsweɪ] dental fricative → alveolar nasal

[ɒnnætdeɪ]   (on that day)   for [ɒnðætdeɪ] dental fricative → alveolar nasal

[dammem]   (damn them)   for [dæmðəm] dental fricative → bilabial nasal

[hu:zzæt]   (who's that?)   for [hu:zðat]   dentalfricative→ alveolar fricative

[spɒttəm]   (spot them)   for [spɒtðəm] dental fricative → alveolar plosive

He is, however, of the opinion that this type of assimilation is less common than regressive assimilation in SBE.

In coalescent assimilation, a sequence of two sounds merges or coalesces to produce an entirely new one. For example, /d/ and /j/ of *would you?* /wʊd ju:/ commonly coalesce into /ʤ/ (/wʊʤʊ/) in SBE. This assimilation process has been given different names and described in various ways. Gimson (1980) and Cruttenden (2001) simply call it *coalescence*, and apply it to instances of /sj/, /zj/, /tj/ and dj/ becoming /ʃ/, /ʒ/, /ʧ/ and /ʤ/ respectively within word or at word boundary, e.g.

/sj/ -   *in ca<u>se you</u> need it* [in keiʃʊ ni:d ɪt]; *mi<u>ss you</u>* [miʃu:]

/zj/ -   *ha<u>s your</u> letter come?* [hæʒɔ: letə kʌm]; *see<u>s you</u>* [si:ʒu:]

/tj/ -   *wha<u>t you</u> want* [wɒtʃʊ wɒnt]; *no<u>t yet</u>* [nɒʧet]

/dj/ -   *woul<u>d you?</u>* [wʊʤʊ]; *min<u>d you</u>* [maɪnʤʊ]

Roach (2000) and Shockey (2003) refer to it as *palatalisation.* A recent coinage adopted for it by Wells (1982, 1994, 2000) is *yod coalescence*. He, however, limits the

phenomenon to the environments where /t/ + /j/ and /d/ + /j/ coalesce to become /tʃ/ and /dʒ/ respectively.

The term *yod* refers to the tenth letter of the Hebrew alphabet, represented as palatal approximant /j/ in the phonetic alphabet of English and several other Indo-European languages. In English, it behaves in different ways in a Cj (consonant + /j/) sequence. First, it may be sounded (this is called *yod-presence*) as in *few* /fju:/, *new* /nju:/, *beauty* /bju:ti/, *accuse* /əkju:z/, *pew* /pju:/; second, it may be deleted (*yod dropping*) as in *chew* /tʃu:/, *rude* /ru:d/, *choose* /tʃu:z/, lunatic /lu:nətɪk/, lucid /lu:sɪd/; and lastly, it may coalesce with alveolar sounds /s, z, t, d/ to evolve an entirely new sound (*yod coalescence*).

Yod coalescence or coalescent assimilation, according to Hannisdal (2006), is therefore, a subcategory of place assimilation whereby the palatal approximant /j/ (yod) fuses or coalesces with a preceding alveolar consonant /t, d, s, z/, either within a word or across word boundary, to become palato-alveolar /ʃ, ʒ, tʃ, dʒ/ respectively, as in *issue /*ɪsju:/ becoming /ɪʃu:/, *measure* becoming /meʒə/, *educate /*edjʊkeɪt/ becoming /edʒʊkeɪt/, *soldier* becoming /səʊldʒə/, and *miss you /*mɪs ju:/ becoming /mɪʃu:/. It has been described as a process of simplification, a device by which consonant clusters are simplified in order to achieve, or at least approach, the preferred CV structure (Hannisdal, 2006; Lutz, 1991).

Diachronically, yod coalescence dates back to the seventeen and eighteen century when unstressed sequences of /tj/, /dj/, /sj/ and /zj/ coalesced following borrowings from French (Gimson, 1980); thereby yielding, for instance, the following:

/sj/ - /ʃ/   o<u>ce</u>an, spe<u>ci</u>al, i<u>ssue</u>.

/zj/ - /ʒ/   occa<u>si</u>on, mea<u>sure</u>, trea<u>sure</u>.

/tj/ - /tʃ/   na<u>tu</u>re, vir<u>tue</u>, pic<u>tu</u>re.

/dj/ - /dʒ/   gran<u>deur</u>, gra<u>du</u>al, e<u>du</u>cate

Hannisdal (2006) lists three possible positions where yod coalescence can occur in RP:

(i)   across word-boundaries, e.g. *did you?* /dɪdʒu /, *won't you?* /wəʊntʃu /;

(ii) in unstressed syllables within a word, as in *education* /ˌedʒu:ˈkeɪʃn/, *statue* /ˈstætʃu:/; and less frequently,

(iii) word-internally before a stressed vowel (/u:/ and /uə/), e.g. *Tuesday* /ˈtʃu:zdeɪ/, *reduce* /rɪˈdʒu:s/.

According to Cruttenden (2001), yod coalescence is common in fluent colloquial speech and well within the boundaries of RP across word-boundaries and in

unstressed syllables within a word. It is, however, not yet fully acceptable within RP in stressed syllables within a word, although there is evidence of change in this direction (Wells, 1994; Taylor, 1998; Altendorf, 2003).

2.2.3.3 Assimilation of voice, place and manner

Assimilation of voice is a process whereby contiguous consonants tend to be either all voiced or all voiceless depending on the state of the glottis. Unlike French which favours regressive voicing assimilation, what is permitted in SBE is devoicing. This is a process whereby a voiceless consonant affects a voiced one, irrespective of the relative order of the two (Katalin and Szilárd, 2006). Thus, devoicing can either be regressive or progressive.

In regressive (anticipatory) devoicing, a voiced sound is modified to become more like the voiceless one following it; for example, *I have to go* is pronounced as [aɪ hæftə gəʊ], not as [aɪ hævtə gəʊ]. According to Katalin and Szilárd (2006), this type of assimilation is common with fricatives and affricates and is thus referred to as 'fricative devoicing' by some writers. Gimson (1980), in this regard, points out some instances of voicing assimilation at word boundary, in which final voiced fricatives followed by a word-initial voiceless consonant may be realised as the corresponding voiceless fricative if the two words are closely linked, e.g.

/ð/ → /θ/ in *wi__th thanks, brea__the slowly, wi__th some.*

/z/ → /s/ in *the__se socks, he wa__s sent, we cho__se six, He'__s seen it.*

/v/ → /f/ in *o__f course, we'__ve found it, they'__ve come.*

/ʤ/ → /tʃ/ in *Goo__dge street, bri__dge score.*

Progressive devoicing follows the same pattern; rather than a voiceless sound become voiced, a voiced consonant is devoiced to reflect the voicing status of a voiceless sound that precedes it at word or morpheme boundary. For example, *cat__ch Bill* and *black dog* will be pronounced [kʰæʧ b̥ɪl], [blæk d̥ɒg] rather than [kʰæʤ bɪl], [blæg dɒg] (Gimson, 1980; Katalin and Szilárd, 2006).

However, progressive voicing assimilation is also possible in SBE, especially in the following instances:

- the plural morpheme {s}, as in *dogs* [dɒgz] (where voiceless /s/ changes to voiced /z/ under the influence of voiced /g/),
- the reduced form of the third person singular form of *be*, e.g. *he's* [hɪz],

- the possessive marker, e.g. *John's* [dʒɒnz]; and
- the past tense {ed}-form, e.g. carved [kɑ:vd].

Assimilation of place is concerned with changes in the place of articulation of a segment (usually a consonant) which in SBE are usually regressive or coalescent (Roach, 2000; Gimson 1980). For instance, if a word-final alveolar consonant such as /t, d, n/ is followed by a word-initial consonant with a different place of articulation, the word-final alveolar consonant is likely to take on the place of articulation feature of the following consonant. Thus, if the word 'meat' /mi:t/ is followed by 'pie' /paɪ/ it may become /mi:p/; that is, [mi:p paɪ]: /t/ changes to /p/ before /p/. The following cases are cited by Roach (2000):

(i)   before a bilabial consonant, /t/ will become /p/, as in

    that person   /ðæp pɜ:sn̩/

    light blue   /laɪp blu:/

(ii)   before a dental consonant, /t/ will change to a dental plosive /t̪/, as in

    that thing   /ðæt̪ θɪnŋ/

    get those   /get̪ ðəʊz/

    cut through   /kʌt̪ θru:/

(iii) before a velar consonant, /t/ will become /k/, as in

    that case   /ðæk keɪs/

    bright colour   /braɪk kʌlə

    quite good   /kwaɪk gʊd/

(iv) /s/ becomes /ʃ/ and /z/ becomes /ʒ/ when followed by /ʃ/ or /j/, as in

    this shoe   /ðɪʃ ʃu:/

    those years   /ðəʊʒ jɪəz/

Gimson (1980) is of the opinion that alveolars are readily prone to such assimilation because of their relatively high word-final occurrence. He further provides instances of such modifications at word boundaries involving the place of articulation where word final /t, d, n, s, z/ usually assimilate to the place of the following word-initial consonants as follow:

/t/ → /p/ before /p, b, m/, e.g. *that pen, that boy, that man* /ðæp pen/, etc.

/t/ → /k/ before /k, g/, e.g. *that cup, that girl* /ðæk kʌp/, etc.

/d/ → /b/ before /p, b, m/, e.g. *good pen, good boy, good man* /gʊb pen/, etc.

/d/ → /g/ before /k, g/, e.g. *good concert, good girl*, /ˈgʊg ˈkɒnsət/, etc.

/n/ → /m/ before /p, b, m/, e.g. *ten players, ten boys, ten men* /tem pleɪəz/, etc.

/n/ → /ŋ/ before k, g/, e.g. ten cups, ten girls /teŋ kʌps/, etc.

/s/ → /ʃ/ before /ʃ, j/, e.g. *this shop, this year* /ðɪʃ ʃɒp, ðiʃ jɜ:/.

/z/ → /ʒ/ before /ʃ , j/ or → /ʃ/ (changes to fortis) before /ʃ/, e.g.

   those young men /ðəuʒ jʌŋ men/, *has she?* /hæʒɪ/ or /hæʃ ʃɪ/,

/ð/ → /z/ or /s/ before /s, z/, e.g. *I loathe singing* /ai ləuz sɪŋɪŋ/

Assimilation of manner refers to changes in the manner of articulation of a particular sound to become similar in manner to a contiguous sound. Roach (2000) is of the view that clear instances of this assimilation type are rare in English and are only typical of the most rapid and casual speech. An example cited is a rapid pronunciation of 'that side' /ðæt saɪd/ and 'good night' /gʊd naɪt/ as [ðæs said] and [gʊn nait] respectively. As in place assimilation, this is also usually regressive except in a case of a word initial /ð/ following a plosive or nasal at the end of a preceding word, e.g. "in the"/in ðə/→ /ɪŋŋə/; "get them" /get ðəm/→/geṯṯəm, akin to instances cited under progressive assimilation above.

2.2.3.4   Partial and total assimilation

In partial assimilation, the contiguous sounds involved differ from each other in at least one of the distinctive features. For example, the assimilated /b/ of *good pen* [gʊb pen] has similar place and manner of articulation with the following /p/ of *pen* but differs in terms of voicing. On the other hand, the two sounds involved in total assimilation are completely alike. For instance, the /t/ and /d/ of *that cup* [ðæk kʌp] and *good girl* [gʊg gɜ:l] respectively take the same features of /k/ and /g/ they precede.

2.2.3.5   Historical assimilation

Historical assimilation relates to assimilation that has developed in the process of evolution of a language, in which case a word known to be pronounced in a particular way took on a new pronunciation which finally became the accepted norm in that language (Simo-Bobda and Mbangwana, 1993). For instance, Abercrombie (1967:138-139) cites the example of the English word 'orchard', which was claimed to be a compound word: *ort + yard*. Over the years, it underwent coalescent assimilation which changed the middle sounds /tj/ to [tʃ] as it is today. The same goes for the word

nature which is now prununced [neitʃə], and *immediate* which used to be pronounced with [dʒ] in the middle; it is now commonly pronounced [dj].

2.2.4 Elision

Elision is the omission of one or more sounds (a vowel, a consonant, or a whole syllable) in a word or at word boundaries in rapid connected speech, in order to maximise articulatory flow. Jackson (1982:32) refers to it as a process "involving the complete disappearance of a phoneme from a phonetic environment". Usually, when there is a cluster of two or more consonants word-internally, some of the consonants usually get elided, e.g. *han(d)kerchief*, *Chris(t)mas* and *gran(d)mother*. The same process (also referred to as cluster simplification) occurs across word boundaries, e.g.

Sain(t) Paul	*firs(t) knight*	*nex(t) day*
I don'(t) know	*sen(d) Jim*	*rock an(d) roll*
Guns an(d) Roses	*fin(d) me*	*pos(t)man*

This is because, most often, sounds that ordinarily are enunciated in isolated words or slow, careful speech get elided in rapid, casual speech. For example, the English sentence: *She looked particularly interesting* in slow, careful speech or citation form, will normally be pronounced as: /ʃi lʊkt pətɪkjələli ɪntərəstɪn/ (with 27 phonemes). In rapid conversational speech, however, it might be reduced to: /ʃi lʊk pətɪkli ɪntrstɪn/ (with 20 phonemes) leaving out seven sounds.

Simo Bobda and Mbangwana (1993) identify two types of elision: *historical* and *contextual* elision. According to them, historical elision, relates to a given sound or sequence of sounds that has disappeared in the course of the evolution of a language, so that it is no longer pronounced in the contemporary form of the language. Such cases of elision are already established in the language, though the old spelling may still be retained. For example, in:

cupboard	/kʌbəd/
talk	/tɔ:k/
evening	/i:vnɪŋ/
history	/hɪstrɪ/

phonemes /p/, /l/, /ɪ/, and /ə/ respectively are no longer pronounced in Modern English. They also added that silent letters in contemporary English sounds are clear cases of historical elision.

Contextual (juxtapositional) elision, on the other hand, is concerned with cases of sounds that exist in a word said in isolation but are omitted in the environment of another word in a rapid colloquial speech. For example:

[əgʊdil] *a good deal*   for [əgʊd dil]

[gɪvɪm] *give him*   for [gɪv him]

[lɑ:staɪm] *last time*   for [lɑ:st taɪm]

[teɪkeə] *take care*   for [teɪk keə]

[blaɪnmæn] *blind man*   for [blaɪnd mæn]

[leðəm] *let them*   for [let ðəm]

[fɜ:sθɪŋ] *first thing*   for [fɜ:st θɪŋ]

[əkɔ:s] *of course*   for [əv kɔ:s]

[kɔ:tɪm] *caught him*   for [kɔ:t hɪm]

Gimson (1980) further highlights some other instances of contextual elision which affect vowels and consonants. According to him, vowels are usually elided in the following cases:

(i)   Initial schwa /ə/ usually gets elided when followed by a continuant and preceded by a word final consonant, e.g.

not alone /nɒtl̩ leun/   *get another* /getn̩ nʌðə /,

run along /runl̩ lɒŋ /   *he was annoyed* /hi wezn̩ nɔid/.

(ii)   Word initial /ə/ may coalesce with the appropriate preceding vowel, e.g.

go away /gɜ: wei/   *try again* /tra: gən/

(iii)   /ə/ may be elided when final /ə/ occurs with following linking /r/ and word initial vowel, e.g.

after a while /a:ftrə wail/   *as a matter of fact* /əz ə mætrəv fækt/

father and son /fa:ðrən sʌn/   *over and above* / ˈəuvrən ə ˌbʌv/.

Also, consonants elision can take place in the following situations:

(i)   if the combination of continuant consonants /t/ or /d/ (e.g. /–st, -ft, -ʃt, -nd, -ld, -zd, -d, -d/) is followed by a word with an initial consonant e.g.

nex(t) day   *race(d) back*   *las(t) chance*

lef(t) turn   *sof(t) centres*   *lef(t) wheel*

mash(ed) potatoes   *finish(ed) now*   *push(ed) them*

ben(d) back	*tinne(d) meat*	*sen(d) round*
hol(d) tight	*ol(d) man*	*col(d) lunch*
gaze(d) past	*cause(d) losses*	*raise(d) gently*
loathe(d) beer	*move(d) back*	*love(d) flowers,*

(ii) when the word following the combination of word final clusters of plosive or affricate /t/ or /d/ (e.g. /-pt, -kt, - tʃt, -bd, -gd, -ʤd/) has an initial consonant. This may result in loss of the final alveolar stop in the cluster, e.g.

help(ed) me	*stopp(ed) speaking*	*jump(ed) well*
thank(ed) me	*look(ed) fine*	*pick(ed) one*
fetch(ed) me	*reach(ed) Rome*	*patch(ed) throat*
robb(ed) both	*rub(ed) gently*	*grabb(ed) them*
lagg(ed) behind	*dragg(ed) down*	*begg(ed) one*
chang(ed) colour	*urge(d) them*	*arrang(ed) roses*

(iii) final /t, d/ followed by a word beginning with /j/ usually coalesce with /j/, i.e. /tʃ/ or /dʒ/, e.g.

help(ed) you	*like(d) you*	*los(t) you*
lef(t) you	*grabb(ed) you*	*tol(d) you*

(iv) the /t/ of the negative /-nt/ is often elided, particularly in disyllables, before a following consonant, e.g.

you musn't lose it /jʊ mʌsn luːz ɪt/   *doesn't she know?* /dʌsn ʃɪ nəu/

or before a vowel, e.g.

wouldn't he come? /wudn ɪ kʌm/   *you mustn't over-eat* /ju mʌsn əuvər iːt/

(v) clusters of word final /t/ and word initial /t/ or /d/ are sometimes simplified, e.g.

I've got to go /aɪv gɒtə gəu/   *what do you want?* /wɒdə ju wɒnt/

and less commonly /d/ before /t/ or /d/, e.g.

we could try /wɪ kə traɪ/   *they should do it* /ðəɪ ʃə duː ɪt/.

(vi) one of a boundary cluster of two consonants sometimes undergoes elision, though this is usually considered vulgar, e.g.

he went away /hɪ wen əweɪ/   *I want to come* /aɪ wɒnə kʌm/

give me a cake /gɪ mɪ ə keɪk/   *let me come in* /lemɪ kʌm ɪn/

get me some paper /gemɪ sm peɪpə/,   *I'm going to* /aɪm gənə, aɪŋənə, aɪŋnə/

2.2.5   Liaison

Liaison, a French word meaning 'connection' or 'link', is defined by Crystal (2003: 269) as "transition between sounds, where a sound is introduced at the end of a word if the following syllable has no onset". Another name Roach (2000) gives to it is *linking*, which he describes as a process by which words following each other in connected speech are linked together in special ways. According to Kenworthy (1987:136), liaison refers to "smooth link between a final consonant in one word and an initial vowel in the next word". Words can be linked in Standard English through the following means (Katalin and Szilárd, 2006; Simo Bobda and Mbangwana, 1993; Roach, 2000):

1. r-liaison (linking and intrusive /r/), e.g. *far off*, [fɑːrɒf], *idea of* [aɪdɪərəv]
2. j-liaison (after /iː/ or /ɪ/), e.g. *me and you* [miːʲənjʊ], *my own* [maɪʲəʊn]
3. w-liaison (/uː/ or /ʊ/), e.g. *you and me* [juːʷənmi], *allow us* [əlaʊʷəs]
4. consonant-vowel liaison (carry over of a word-final consonant to a word beginning with a vowel in a stressed syllable), e.g. *first of all* [fɜːstəvɔːl], *not at all* [nɒtətɔːl]

The most prominent of these linking processes is r-liaison (otherwise called r- shandi by Wells (1982)) which comprises linking and intrusive /r/. Both concepts involve the insertion of /r/ in between two adjacent vowels at word boundary to maximise articulatory ease.

Linking /r/, according to Skandera and Burleigh (2005:58), refers to 'a link between words through the articulation of a normally unarticulated word-final /r/, which is articulated only when preceded by a vowel in the same word, and followed by an initial vowel in the next word.' In r-less or non-rhotic accents (e.g. SBE), /r/ is dropped when it is followed by a consonant or a pause but pronounced when followed by a vowel. This phenomenon, known as /r/- *dropping,* dates back to the 18th century or thereabout when /r/ was dropped before a consonant and in absolute final word position (Simo Bobda, 1994). However, in connected speech, when an orthographic word-final *r* or *re* is followed by another word beginning with a vowel, /r/ may be retained; that is, pronounced for euphony purpose, e.g. *far off* [fɑːr ɒf], *wear out* [wɪər aʊt], *car owner* [kaː əʊnə], *more and more* [mɔːr ən mɔː], *fire extinguisher* [faɪər ɪkstɪŋgwɪʃə], *my father and mother* [maɪ faːðər ən mʌðər], *the weather ought* [ðə weðər ɔːt], *here and there* [hɪər ən ðeə], *the door opened* [ðə dɔːr əʊpənd] (Gimson, 1980; Simo Bobda and Mbangwana, 1993; Simo-Bobda, 1994; Hannisdal, 2006).

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Sometimes, however, /r/ may also be used to link two contiguous vowels at word boundary, even when a final *r* is absent from the orthography of the first word. A phonetic /r/ that occurs in such an unhistorical environment is referred to as *intrusive /r/* (Hannisdal, 2006; Roach, 2000; Simo Bobda and Mbangwana, 1993; Gimson, 1980). Intrusive /r/, therefore, is a process whereby an unetymological /r/ is inserted to remove a hiatus between two consecutive vowels belonging to different words (Skandera and Burleigh, 2005), e.g. *media event* [miːdɪər ivent], *Anna and I* [ænər ənd aɪ], *Africa or Asia* [æfrɪkər ɔr eiʃɪə], *drama and music* [drɑːmər ən mjuːzɪk], *law and order* [lɔːr ənd ɔːdə], *awe-inspiring* [ɔːr ɪnspaɪərɪŋ].

Wells (1994) claims that intrusive /r/ is an attempt to extend the linking /r/ principle to cases which are phonetically identical but differ historically and orthographically. To him, "intrusive /r/ arises essentially from the natural tendency to give identical treatment to words with identical endings" (Wells, 1982:223). He further opines that both liaison features are very common with native RP speakers, and are regarded important characteristic features of connected speech found in RP. However, linking /r/ is generally thought to be more frequent, correct and desirable in mainstream RP, while intrusive /r/ is less common and stigmatised on the grounds that there is nothing in the spelling to justify its use (Crystal, 1992). Gimson (1980), in this regard, claims that some native speakers consider intrusive /r/ as incorrect or substandard, and as such avoids its use. Instead, they employ a vowel glide or glottal stop /ʔ/ to fill vowel hiatus in connected speech, e.g. *the door opened* /ðə dɔː əʊpənd/ or /ðə dɔː ʔəʊpənd/. However, resistance to and disapproval of intrusive /r/ by language purists notwithstanding, it "is undoubtedly widespread" (Roach 2000:144) and "very prevalent in RP" (Wells 1994: 202)

Apart from the two linking devices described above, semi-vowels /j/ or */w/* are other possible linking devices that may be used between two vowels at word boundary for hiatus-filling (Simo Bobda and Mbangwana, 1993; Katalin and Szilárd, 2006). If the first vowel is high and front, e.g. /iː/ or /ɪ/, the yod /j/ may be used e.g.

me and you	/miːʲənjʊ /
the answer	/ðiʲænsə/
to be or not to be	/təbiʲɔnɒtəbi/
petty Agnes	/pɪtrʲægnɪs/
my own	/maɪʲəʊn/

On the other hand, /w/ may be inserted if the first word ends in /u:/ or /ʊ/, e.g.

you and me /juːˠʷənmi/

you all /juːˠʷɔːl/

to answer /tʊˠʷænsə/

allow us /əlaʊˠʷəs

All these linking devices serve the same purpose of filling a hiatus (break in pronunciation between two vowels that are next to each other in consecutive syllables without an intervening consonant), so as to facilitate the smooth transition between the two contiguous vowels (Katalin and Szilárd, 2006; Hannisdal, 2006; Skandera and Burleigh, 2005).

2.3   Review of related literature on connected speech processes.

A good number of studies have been conducted on connected speech processes in English. This section reviews some of them.

Wright & Kerswill (1989), in their paper, "Electropalatography in the analysis of connected speech processes", primarily examine the perceptual correlates of the articulatory gradualness of a connected speech process: the assimilation of a final alveolar to a following velar or bilabial, and report that the assimilatory process is gradual in articulatory terms, and not discrete, as assumed in most phonological theories. In the experiment set up, phonetically trained listeners were asked to:

(a)   identify a word followed in a carrier phrase by a velar or a bilabial as having an (underlying) final alveolar or a final velar or bilabial, and

(b)   characterize the degree to which words identified as having an alveolar are assimilated to the following velar or bilabial.

The findings reveal that:

(1)   there is no discrete perceptual boundary between the various types of articulation (including the underlying velars/bilabials) presented on the tape;

(2)   there is some evidence that assimilations may never be 'complete', but may show a residual tongue body configuration characteristic of an alveolar, even when there is no discernible (either articulatorily or auditorily) alveolar gesture.

Kerswill (1991) investigates the social and linguistic factors influencing connected speech in Cambridge English from acoustic and articulatory perspectives, using twenty-six (26) local Cambridge speakers. The CSPs examined were /l/ vocalization, glottalisation and yod-calescence. The study sets out to investigate:

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(i)   the structural linguistic factors influencing CSPs

(ii)   the nature of interactions between CSPs

(iii)   how CSPs diffuse through the linguistic system, and

(iv)   the perceived status of CSPs on socially sensitive features.

The results of the analysis of a range of conversational and constructed recordings of the participants show that:

(i)   CSPs are variably influenced by structural linguistic factors as they are principally determined by segmental phonetic context and are sensitive to word boundaries and speech rate;

(ii)   socially-sensitive CSPs interact variably with phonetically-conditioned CSPs;

(iii)   increase of CSPs is partially influenced by stylistic factors; and lastly,

(iv)   CSPs are perceptually significant in the social judgment of speakers and their speech.

Nguyen and Ingram (2004) report the findings of a corpus-based descriptive analysis of the most prevalent transfer effects and connected speech processes as produced by Vietnamese speakers of English, compared with native speakers of English. A discriminant analysis is also reported, using the most typical phonetic and prosodic processes, in order to examine how well the two speaker groups can be discriminated and whether an Australian Vietnamese female speaker who has a native-like accent is classified into the native or Vietnamese speaker group.

The results of the analysis show that Vietnamese speakers' English is distinct from native speakers' in many phonetic and prosodic processes. In spite of an advanced level of English proficiency with a high proficient global accent and with phonetic and articulatory knowledge of English sounds, many Vietnamese speakers of English could not articulate the connected speech and assimilation processes which characterize native speakers' spontaneous natural speech. However, Vietnamese female speaker who had grown up in Australia is classified into native speaker group by the discriminant function and her speech was free of many phonetic and prosodic transfer effects. The fact that the other Vietnamese speakers of English were still influenced by transfer effect from their mother tongue underscores the importance of the exposure to the second language environment to the improvement of foreign accent.

All the studies above are concerned with English as spoken by native speakers or second language users elsewhere. The rest of the review, therefore, concentrates on related studies carried out in this domain in Nigerian English.

Laver's (1968) article, "Assimilation in Educated Nigerian English" was about the pioneering study on connected speech processes in Nigeria, though restricted to assimilation. Using educated Nigerian speakers of English from diverse mother tongues including Yoruba, Efik, Etsako, Emai, Bini and Otwo as participants, he discovers:

- a tendency for regressive assimilation
- absence of progressive assimilation of voice
- extensive cases of assimilation of place
- that assimilation does not involve manner of articulation alone
- that Nigerian English allows regressive voicing assimilation while RP does not.

However, his claim that Nigerian "mother-tongues had no apparent effect on the type of assimilations used in English, nor any major effect on the occurrence of assimilations in particular phrases" (158) is weak. This is because there is no review of any of the indigenous languages used in the work to justify his claim. Besides, this position was contested by Jibril (1982) who observes that *make them* [meg dem] and *black bird* [blagbe:d], which form two of Laver's three instances of regressive voicing assimilation, are apparently Efik influenced. According to him, /k/ and other plosives undergo voicing between two voiced segments in Efik. Furthermore, Laver's study is restricted to assimilation and the population is limited to just six language groups in Southern Nigeria. This justifies the need for the present research which studies assimilation, elision and liaison features of connected speech across diverse language groups and social categories in Nigeria. Besides, attempt is made not only to identify the incidence of SBE connected speech processes in Nigerian English, but also to determine speakers' proximity to SBE.

Jibril (1982), in his study of "Phonological variation in Nigerian English," examines, in passing, consonant assimilation as well as vowel and consonant deletion. He discovers from the corpus that:

- only nasals undergo assimilation of place in Nigerian English, e.g. *government council* [gʌvmɘŋ kausl], *man power* [mampa:wa:].

- cases of assimilation of manner that affect alveolars are regressive and involve the change of /d/ and /n/ to liquids, e.g. *would like* [wul laik], *don't like* [dol laik].

- regressive assimilation of voice affects final plosives only, which become devoiced or voiced before a word beginning with voiceless or voiced consonant as the case may be, e.g. *with the* [wid di], *twelve thousand* [twep θauzn].

- using vowel epenthesis to resolve consonant clusters does not occur in the speech of most Nigerian speakers of English except in just few cases involving Hausa and Igbo speakers;

- consonant deletion is common in Nigerian English in fast speech or in a bid to reduce consonant cluster.

Without doubt, Jibril's study is ground-breaking. It provides a sociophonological insight into spoken Nigerian English and identifies a number of phonological processes of Nigerian English. It, indeed, provides great impetus to this work. However, it is not without its limitations. First, the study is not a comprehensive research on connected speech processes in Nigerian English which is the major preoccupation of this work. Two, the population sample used was too small to have been able to arrive at a valid judgment on Nigerian English. Moreover, participants were restricted to the three major languages in Nigeria, without consideration for many other small language groups. It is yet to be seen, then, how his study can truly be representative of Nigerian speakers of English. Besides, his division of Nigerian English into Northern and Southern acents is unrealistic in view of the various languages withing each region. Lastly, one wonders how varied Jibril's phonological variation is, considering the fact that participants were mainly elite.

In the light of these, the present study becomes germane. It examines various assimilatory, elision and liaison processes of SBE connected speech in NE, using a larger population sample from various large and small language groups in four regions of Nigeria and different sociolinguistic groups delineated by gender and age. Finally, it seeks to reveal the proximity of Nigerian speakers of English to SBE in terms of assimilation, elision and liaison, which Jibril's study did not take into cognizance.

Josiah (2009) focuses on assimilatory processes. His dissertation titled: "A synchronic analysis of assimilatory processes in educated Nigerian spoken English" is an attempt to identify various assimilatory processes that characterise educated spoken Nigerian English (ESNE); find out whether the processes inhibit or facilitate

intelligibilty; discover the predictability of the processes in ESNE and find out any similarities or differences between SBE and NE. Using a sample of one hundred final year university students from nineteen linguistic groups in Nigeria, he examined various aspects of assimilatory processes from perceptual and acoustic dimensions. He discovers, among other things, that some of the assimilatory processes that characterise ESNE, e.g. nazalisation, devoicing of final segments and regressive assimilation are predictable; assimilatory processes induced by articulatory factors hardly inhibit national, and sometimes, international intelligibility; ESNE speech exhibits more assimilatory features than SBE and a number of assimilatory processes observed in ESNE are markedly different from those of SBE. The study concludes that ESNE phonology is markedly different from that of SBE, and therefore, requires an endonormative rather than exonormative model as long as it facilitates effective national and international interaction.

The study, without doubt, provides an illuminatory and indepth investigation of assimilatory processes in Nigeria, showing the peculiarity of ESNE and its distinctiveness from SBE. It, however, differs from this study in that its preoccupation was restricted to assimilatory processes. Besdes, its target was not assimilatory processes in connected speech (across word boundary) but within words; and there was no attempt to measure the proximity of ESNE to SBE, though it was claimed that a great deal of assimilatory processes observed in ESNE were markedly different from those of SBE. These limitations form the bases for this study, which is concerned with a quantitative investigation of a number of processes that define SBE connected speech in the speech of NE speakers and attempts to determine the extent to which NE approximates to or deviates from SBE in these processes.

2.4   Sociophonetics

The term, 'Sociophonetics', a blend of Sociolinguistics and Phonetics, was first used by Deshaies-Lafontaine (1974). It is a research field that is concerned with studies that employ both Sociolinguistic and Phonetic methods; that is, work at the intersection of sociolinguistics and phonetics. It attempts to demystify Generative Phonology's pre-occupation with the analysis of the linguistic knowledge of the "ideal speaker-listener, in a completely homogenous community" (Chomsky, 1965:3) with no consideration for variation that exists between speakers of a language.

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While sociolinguistics deals with all aspects of language variation, sociophonetics studies only socially-conditioned phonetic variation in speech that correlates with social factors like speaker's gender, age or social class (Honey, 1997; Foulkes and Docherty, 2006). As an eclectic field, it is widely used among the phoneticians to refer to descriptive accounts of variation in speech in different dialects, speech styles or speaker groups (Foulkes, 2006; Esling, 1991; Henton and Blandon, 1988); and is employed among sociolinguists to refer to phonetically inclined variationist studies, pioneered by Labov, which emphasise interrelationship between speech form and social factors such as speaking style and the background or characteristics of the speaker and explain how linguistic change originates and is transmitted (Labov, 1994, 2001).

Sociophonetic research is predicated upon the fact that language varies, and that the variation is the most pronounced at the level of phonetics. For instance, it is a proven fact that individuals pronounce sounds differently from one another, and that it is pretty difficult to find two identical voices or even two similar utterances of the same speaker. Thus, it has been established by scholars that speech production can vary according to speakers' social background; that is, their gender, age, socio-economic status and ethnicity (Labov, 1966; Trudgil, 1974; Guy 1981; Hovath, 1985), as well as their groups and social networks leaning (e.g. Milroy, 1987; Eckert, 2000). Sociophonetic variation, then, represents a pattern of behaviour learned by speakers through the experience of using language in social interaction.

This methodological inclination has given rise to insightful discoveries; one of which is apparent time hypothesis which predicts stability of individuals' phonological systems and accents throughout their adulthood; in which case any observed differences between younger and older speakers recorded at the same time are generally regarded as changes in progress (Hay and Drager, 2007). This theory has, in turn, contributed immensely to the study of language change.

Another determining factor of variation, which has also become the focus of sociophonetic research, is communicative context which encompasses linguistic style or register of speech, social context, the topic of discussion, the addressee and the intention of the speaker. It is believed that speech may be varied or adjusted by speakers at any point in time according to any of these factors. According to Foulkes (2006:19):

Phonetic forms may be controlled in line with the style or register of speech; they may be tailored according to the relationship between the speaker and listener; they may be designed to provide coherence to a discourse; they may be linked to changes in the ambient physical conditions of the context; and they may be affected by temporary external influences such as alcohol or consciously adopted disguise.

A number of studies have, therefore, been conducted along this line of thought to examine variation in speakers' style of speaking that correlates with changes in the speech setting and in the composition of audience (e.g. Labov, 1972; Bells, 1984, 2001; Hay et al. 1999). For instance, it has been reported that more standard forms are often used by speakers (particularly women) in more formal styles of speech, e.g. the production, in formal styles, of post-vocalic [ɹ] in New York (Labov, 1966), and [h] in British English (Trudgill, 1974).

Bell's audience design theory also lends credence to this. It states that 'style derives its meaning from the association of linguistic features with particular social groups' (Bells 2001:142). This implies that speakers' style is determined by and adjusted towards the speech style of their audience. Bells (1984) further observes that interlocutors often express solidarity with or distance from each others' linguistic patterns in a communicative context. For instance, in the field research conducted by Trudgill (1986) in Norwich, England, he discovered that the way he used glottal stops for /t/ correlated with that of his interviewees. Hay, et al. (1999) also reports how the ethnicity of the referee influenced phonetic variants in the speech of the television presenter, Oprah. Variation, as such, is seen as a function of the relationship between the interlocutors.

Along this line, Lindblom (1990) also opines that speakers tailor their speech towards a 'hyper-hypo' continuum in line with the perceived interactional needs of the interlocutor. In a context that requires listener-oriented speech, like giving clear instructions or speaking in noisy environments, speaker is likely to employ more elaborated (hyper) articulations; whereas, a greater degree of under-articulation (hypo-speech) may be used in interactions such as narrative which is more speaker-oriented.

Further studies in this direction have also found that the speech of adults tends to be modified during conversation with children. Foulkes, Docherty and Watt (2005), in this regard, are of the opinion that sociolinguistic variables may reflect different patterns relative to those in inter-adult speech, and may be influenced by the age and

gender of the child. Research on bilinguals also supports this line of thought; in that patterns of interference between languages depend upon the language mode being used (Grosjean, 1998). When speaking to a monolingual, a bilingual is likely to use just one language, and as such interference between the speaker's two languages will be reduced. However, code-switching cannot be avoided when such a bilingual converses with other bilinguals. Features from one language are bound to be found in the other.

Finally, in addition to audience induced variation, phonological choices are also made by speakers for pragmatic and discourse functions. For instance, turn taking may be signalled by using fully-released non-glottalised voiceless stops in Tyneside English (Local, Kelly and Wells, 1986; Docherty, Foulkes, Milroy, Milroy and Walshaw, 1997), and by intonational patterns in other dialects, e.g. as a cue to turn-endings in London Jamaican English (Local, Wells and Sebba, 1985) and (the use of high rising tone) as a turn-holding mechanism in Australia (Guy, Horvath, Vonwiller, Disley and Rogers, 1986) and New Zealand (Britain, 1992; Warren and Britain, 2000). Similarly, aspiration of voiceless stops in English (/p/, /t/, /k/) has been shown to be a discourse marker, indicating turn-finality (Local, 2003).

2.4.1   Levels of sociophonetic variation

Socially-conditioned variation in speech has been examined at different levels of phonetics and phonology: segmental, suprasegmental and subsegmental. Few of the studies conducted along these lines are hereby reviewed below.

2.4.1.1   Segmental variation

Much of the research in sociophonetic variation overwhelmingly favours segmental categories. Foulkes and Docherty (2006) discuss four main types of segmental variation proposed by Wells (1982) which he used to describe variation in accents of English. The first type is systemic variation, which relates to differences in the composition of phoneme inventory between dialects of British English. For example, phonemes /x/ and /ʍ/ are found in Scottish dialects but are absent in most other British accents. Socially, the sounds also mark age differentiation in the dialect of Glasgow where they are widespread among older speakers than younger speakers. Besides, /x/ is seen to be used more by middle class children than working class children (Lawson and Stuart-Smith, 1999).

Phonotactic distribution of phonemes is Well's second category. This is illustrated by the contextual distribution of /r/ into rhotic–non-rhotic accents dichotomy. While in rhotic accents, /r/ occurs in all contexts, non-rhotic accents (comprising most accents of England and Received Pronunciation) only permit /r/ in prevocalic positions. This distinction does not apply to regional variation only; it also indicates social categories such as social class. For instance, Labov (1966) reports how the production of [ɹ] in New York City correlates with social-economic level whereby higher social class use [ɹ] more than lower social class. However, the opposite is the case in England: high rate of [ɹ] production reflects low social status (Wells. 1982).

The third category, lexical distribution of phonemes, describes regional, social and stylistic variation in accents arising from the use of phonemes in a particular word. For example, in the following words, *path, class and Iraq*, the short vowel /æ/ is used in the north of England while the southern accents favour the long vowel /a:/. The last category is called allophonic realization. Foulkes & Docherty (2006) exemplify this with their research on the English of Newcastle upon Tyne, where they found that speakers from the area used a particularly distinctive realization of stops /p, t, k/ in word-medial inter-sonorant contexts, such as *happy, water, baker, bottle, button and metro.*

2.4.1.2 Suprasegmental variation

Some studies have also been conducted to capture regional and social speech variation at the suprasegmental level of intonation (e.g. Cruttenden, 1997; Knowles, 1978; Local, Kelly & Wells, 1986; Warren & Britain, 2000), pitch accent realization (Grabe, Post, Nolan & Farrar, 2000), tonal alignment (Nolan & Farrar, 1999), voice quality and vocal setting (Henton & Blandon, 1988; Stuart-Smith, 1999), rhythm (Deterding, 2001; Low, Grabe & Nolan, 2000) and stress placement (Wells, 1995). The works cited above on rhythm, for instance, reveal that Singaporean English is more syllable-timed than British English. Rhythm is also shown to differ across dialects of English (Grabe and Low, 2002) and serves as a marker of ethnicity, e.g. Latino identity in the US (Carter, 2005) and Maori ethnicity in New Zealand (Szakay, 2006).

Attention has also been paid to the phonetic properties of intonation tunes across speakers. It has been proved that intonation contours mark regional and social differences (Warren, 2005). For instance, in most accents of English, declarative statements take falling tunes. However, accents of Newcastle, Liverpool and a large

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part of Ireland, favour rising or high level contours in the same position (Cruttenden, 1997; Douglas-Cowie, Cowie and Rahilly, 1995). Socially, it is equally observed that the use of rising tunes in declarative statements is generally becoming characteristics of many English dialects and is particularly associated with young speakers. In the USA, Australia and New Zealand, it is peculiar with lower class and/or female speech (Arvaniti & Garding, 2005; Guy, Horvath, Vonwiller, Disley & Rogers, 1986; Cruttenden, 1995), whereas it marks the speech of the upwardly mobile in England. It has also been proved that rising tunes are commonly used in some speech styles where they play diverse discourse roles, such as acting as a turn-holding mechanism in narratives.

2.4.1.3 Subsegmental variation

The accessibility of instrumental techniques has made it possible to extend sociophonetic research to subsegmental categories (Foulkes and Docherty, 2006). Studies in this direction examine the effects of adjacent sounds on each other in a stream of connected speech, in terms of the relative duration, strength or temporal coordination of articulatory gestures. Some of the studies conducted along this line include Fourakis & Port (1986), Kerswill (1987), Kerswill & Wright (1990), Di Paolo & Faber (1990), Thomas (2000) and Scobbie (2005). In the study on 'the description of connected speech processes in Cambridge English' conducted by Nolan & Kerswill (1990), for example, a continuum in the degree of assimilation was shown by Electropalatographic data. Some tokens revealed complete assimilation (e.g. [griːm pɑːk] for green park), some showed none at all, while others had partial assimilation involving an incomplete alveolar gesture. It was also discovered that assimilated forms produced by children from the lower status school were more than those produced by children from the higher status schools. Docherty & Foulkes (1999, 2005), from their work on stops in Newcastle English, also discovered variation in intervocalic and prepausal /t/ in Newcastle and Derby, depending on a speaker's social group.

2.5   Review of related literature on sociophonetic variation

According to Barnes (2005), there has been an upsurge in the drive to integrate sociolinguistics and phonetics into a single discipline in recent times. Consequently, sociophonetics has become an eclectic field covering variations in speech perception (Clopper & Pisoni, 2005; Thomas, 2002; Barnes, 2005), linguistic and sociolinguistic theories (Nagy and Reynolds, 1997), first and second language acquisition (Khattab,

2002; Lively, Logan & Pisoni, 1993) and forensic and speaker identification (Hoequist & Nolan, 1991; Nolan, 1997). Attempt is made to review few of such illuminating sociophonetic studies in the above listed fields. However, a majority of them relate to the native speaker's setting. Only a few studies on spoken Nigerian English have been able to explore this research dimension; emphasis has almost always been on level of education and ethnicity of speakers. This, perhaps, is because of the assumption that sociolinguitic variables of gender, age and social class scarcely affect speakers' pronunciation of English in an L2 setting (Ngefac, 2003; Bobda, 1994).

Clopper and Pisoni (2004), using acoustic and perceptual analyses techniques, conducted a sociophonetic research on speech perception, focusing on identification of the dialect of speakers by listeners. Their participants were sixty-six young, white male talkers between the ages of 20 and 29 from six regions of the United States- New England, North, North Midland, South Midland, South, and West (11 from each region). They read ten sentences. The acoustic analysis identified several phonetic features that can be used to distinguish different dialects while the perceptual analysis investigated how well listeners could distinguish speakers from different parts of the United States and what features they relied on. The recordings of the sentences produced by the sixty-six talkers were played back to twenty-three Indiana University undergraduates who served as listeners for the study. They were asked to categorise talkers into one of six geographical dialect regions.

Results showed that listeners were able to reliably categorize talkers using three broad dialect clusters (New England, South, North/West), but that they had more difficulty categorizing them into six smaller regions. Multiple regression analyses on the acoustic measures, the actual dialect affiliation of the talkers, and the categorization responses revealed that the listeners in this study made use of several reliable acoustic–phonetic properties of the dialects in categorizing the talkers. Altogether, the results of these two experiments confirmed that listeners had knowledge of phonological differences between dialects and can use this knowledge to categorize talkers by dialect.

"Listener expectations and the perception of Scottish English /ʉ/: a sociophonetic investigation" is the title of Barnes' (2005) sociophonetic speech perception experiment conducted, using Edinburgh listeners. Two male speakers: a middle class Glaswegian and a working class Edinburgh native, whose parents were also natives of their respective cities of origin, were asked to complete a questionnaire

that assessed their socio-economic backgrounds and read six sentences containing a word with the short /ʉ/ vowel. 17 listeners, 8 females and 9 males, participated in the experiment. They were all native Scottish English speakers between the ages of 19 and 33. They were asked to listen to recorded sentences and decide whether or not the synthesized vowel following each sentence matched the vowel (in a target word) produced by the speaker. The listeners were divided into two groups: Group 1 was told that the speaker was from Edinburgh, Group 2 was told he was from Glasgow. Both groups actually heard the same speaker, who was native to Edinburgh. The response patterns of the two groups were analyzed to see if there were any significant differences in vowel choices based on the social information given about the speaker. The results, however, were inconclusive.

Khattab (1999) investigates the speech production of two English-Arabic bilingual Lebanese boys, born and raised in Leeds, aged six and nine respectively. Using auditory and acoustic techniques, he examined the participants' glottal stop production in English and Arabic taking into consideration corresponding phonemic or sociophonetic roles of the glottal stop in each language. This was with a view to establishing a relationship between the children's production of English and social variables existing in their environment. He specifically sought to examine whether the participants had incorporated the glottal stop in English as a sociolinguistic variant of /t/ and the frequency and environments of its use compared to a supralaryngeal stop. He also confirmed whether they used this variant in their production of Arabic /t/s in environments comparable to glottalling environments in English. Besides, an auditory analysis of the English vowel system developed by the participants with emphasis on 'accent-revealing' vowels specific to the Leeds accent was also carried out.

The investigation of the participants' glottal stop production in each language suggests that they were aware of the different roles the glottal stop [ʔ] plays in each language and of the appropriate phonological contexts for its occurrence. However, analysis of the frequency of glottal stop [ʔ] realisations in English, along with analysis of other variables known to have marked local variants in the participants' community, revealed that the bilinguals' sociolinguistic performance does not follow the patterns expected of children of their age- the amount of glottalling expected in Leeds English does not seem to have influenced their production. This seems to suggest that their Arabic background has hindered their early acquisition of local variants specific to the community. Finally, an auditory analysis of the participants' production of six English

vowels shows that only a few of the participants' realisations of six English vowels correspond to those found in the Leeds accent. It was concluded that the phenomenon is partly related to the bilinguals' sociolinguistic background, and partly to sociolinguistic changes affecting the whole community.

Marsden (2006) conducted "a sociophonetic study of labiodental /r/ in leeds". Exploring the social network model, the author attempted to track the increasing spread of [ʋ], which had previously been considered a flawed or affected speech, in the city of Leeds. The data for the study was collected from 18 speakers across a large geographical area of Leeds. They were divided into six cells, three speakers per cell with equal numbers of males and females across three age groups: 15 – 30, 31 – 50 and 51+. The study data comprised sociolinguistic interview covering the informants' everyday work and social life, and wordlist readings of 54 words. Thirty nine of these words contained /r/ with 13 tokens of /r/ in each of three word positions: word initial (e.g. *rope*, *run*), intervocalic (e.g. *porridge*, *surround*) and in word initial consonant clusters (e.g. *fruit*, *broke*). To make up the remainder of the 54 words, 15 distracter items with no /r/ were mixed within the 39 /r/-words.

The auditory analysis of the data reveals the distribution of labiodental [ʋ] variants along an age-related pattern. Some younger speakers used the innovative variant while older speakers maintained the standard variant in the majority of cases. The social networks of speakers revealed that speakers who used [ʋ] appeared to have relatively diverse social network contacts rather than strong ties within a particular close-knit local network. Speakers with relatively tight local network ties tended to maintain [ɹ]. These findings, the author claims, somewhat confirm the northward advancement of a labiodental variant of /r/ since its identification as a dialect feature in the southeast of England (Wells, 1982).

Moreover, the age-related use of [ʋ] suggested a gradual shift from the traditional alveolar approximant in the city of Leeds similar to that identified in other areas. Finally, the social network findings suggested that linguistic variants were diffused by speakers with weak ties to diverse networks which afford them contact across a wide socio-geographical range. Conversely, speakers with strong, close-knit networks were unlikely to adopt linguistic innovations due to norm-enforcing linguistic loyalties that facilitate social group integration. Strong social networks therefore do not provide a suitable environment for linguistic innovation and change.

Przedlacka's (1999) dissertation is titled, "Estuary English: a sociophonetic study". It was a sociophonetic study of the phonetic nature of a presumed variety of Southern British English known as 'Estuary English'. The fieldwork was carried out within Labovian framework. The data were collected in four Counties-Buckinghamshire, Kent, Essex and Surrey- using a word elicitation task from sixteen teenage speakers. Fourteen sociophonetic variables were investigated in the study, focusing on differences between the counties, male and female speakers and two social classes.

It was revealed that, given the extent of geographical variation, the accents spoken in the area were not homogeneous. Some observed features include: the fronting of vowel of the lexical set of GOOSE and STRUT, and syllable non-initial t-glottaling, which were more rampant amongst female speakers. Against all odds, the teenage speech of the Home Counties reveals the use of th-fronting variant, especially amongst male speakers. Generally, social class turned out not to be a good indicator of change as little difference was found between the classes.

Docherty, Hay and Walker's (2006) article, "Sociophonetic patterning of phrase-final /t/ in New Zealand English", analyses the realization of phrase-final /t/ in a corpus of young New Zealand English speakers. The data for the study was drawn from the Canterbury Corpus, part of the ONZE archive in the linguistics department at the University of Canterbury, which contains over 400 interviews, conducted by students enrolled in a 3rd year 'New Zealand English' course. The corpus comprised informal sociolinguistic interviews and a standard New Zealand English word list broadly stratified by social class into 'Professional' and 'Non-professional' speakers based on both educational and occupational criteria. The speakers in the Corpus were born between 1926 and 1985. The 'younger' group was selected from the corpus for analysis.

The analysis consists of a total of 1,057 tokens from 60 speakers – 15 young professional females (FP), 15 young non-professional females (FN), 15 young professional males (MP) and 15 non-professional males and (MN). The focus of the research was on phrase-final /t/ - defining phrase-finality to be the end of an intonation phrase. Using a combination of auditory and acoustic methods, the analyses reveal four primary variants of /t/- canonical, spirantised, affricated and unreleased stop. The results, thus, show that unreleased glottalised variants are much more prevalent than it was earlier reported. It was also discovered that young female speakers produce

significantly fewer unreleased tokens than their male counterparts, at least in phrase-final position.

Rajend (2010) examines the degree of sociolinguistic change in the English of young middle-class South Africans of different ethnic backgrounds in relation to new post-apartheid opportunities and friendships. Using forty-eight speakers analysed within Labovian tradition in relation to the goose vowel (long /u/or /u:/), the paper examines the present disposition of young people of the major ethnic groups, Black, Coloured and Indian, to the prestige White middle-class norms, whether they are adopting or adapting them or resisting change.

The results of over 4,000 tokens analysed acoustically using PRAAT and compared via vowel normalisation procedures showed that middle-class speakers of the three ethnicities were fronting the vowel, but in different ways. This was the most prominent amongst Black speakers while Coloureds and Indians females show greater resistance. Overall, the Black females approximated most closely to the norms of the White reference group of their gender.

Among the few sociophonological studies in Nigeria English is Ojareche's (2009) work titled: 'A sociophonological analysis of Nigerian male and female television newscasters' speech'. The study attempts to investigate variation in spoken English performance of Nigerian newscasters in stress and intonation on the basis of gender and ethnicity. The data was sourced from the newscasts of Nigerian Television Authority Network newscasters of Hausa, Igbo and Yoruba origin and few other minority groups. Sentences extracted from each subject's newscasts were analysed statistically and through acoustic means. The study came to the conclusion that there was gender balance in television newscast, as there was no significant difference between the pronunciation of male and female newscasters. On the other hand, mother tongue influence was evident in the newscast of each subject of study.

Sogunro (2012) is 'A socio-phonological analysis of Hausa English (HE), Igbo English (IE) and Yoruba English (YE) varieties in Nigeria'. The work is an attempt to emperically describe variations in Nigerian English accents, on the basis of ethnicity and gender and assess Jibril's (1982) claim of convergence to Yoruba English. The respondents were 30 male and 30 female undergraduates of Nigerian universities, representing the three major ethnic groups: Hausa, Igbo and Yoruba. A recording of 11 preselected sounds /v, z, θ, ð, ʧ, ʃ, ɜ:, e, ə, ʌ/ read by the repondents, and their casual

conversations were made. Each of them also filled in a questionnaire. The data was analysed using percentages, t-test and ANOVA.

It was revealed, among others, that ethnicity had a significant effect on 8 out of 11 sounds; a closer relationship was shown between HE and YE than IE and YE; [u] or [o] were used by HE and IE respondents, while YE respondents favoured [ɔ]; high tone endings were found in HE and YE, while IE repondents used low tone endings; no significant difference was found between the sexes in the three ethnolects. The study concludes that since ethnicity is the major factor of variation in HE, IE, and YE accents, Nigerian English accents are best categorised on the basis of ethnicity rather than region as Jibril postulated.

Neither of the home-based studies addressed the subsegmental features (domain of CSPs). They were limited to aspects of Nigerian phonology which have been overflogged by scholars (segmental and suprasegmental). Besides, participants were restricted to the three major Nigerian languages (Hausa, Igbo and Yoruba). All these limitations are remedied in the present study.

2.6   Nigerian English: an overview of the literature

Having long resolved the controversies over the reality or otherwise of Nigerian English, scholars have, over the years, been in search of identification, characterization, classification and norm of Standard Nigerian English. This, according to Kujore (1985), is imperative in order to have "a common point of reference to which learners and users may turn for normative guidance". While some studies have concentrated on variety differentiation, others were devoted to identifying the character and functions of Nigerian English at lexico-semantic, syntactic, phonological, idiomatic and pragmatic levels. The next section reviews some of the studies on varieties of Nigerian English.

2.6.1 Nigerian English: variety differentiation

In view of the obvious fact that Nigerian English is heterogeneous, a number of studies have, particularly, been conducted to examine the varieties of Nigerian English with a view to establishing what should be accepted as Standard Nigerian English.

Brosnahan (1958) was the first to categorise the varieties of English in Nigeria, using formal education attainment as a criterion. He classified spoken Nigerian English into four levels according to quality of education. The first variety, pidgin, is spoken by people without formal education; variety two is spoken by primary school

certificate holders and is used by most Nigerian speakers; variety three, which according to him, is marked by greater fluency and elaborate vocabulary, is peculiar to secondary school leavers while the fourth variety, adjudged to be close to Standard British English, is associated with speakers who have acquired university or higher education.

Despite the pioneering attempt of Brosnahan, he has been stoutly criticised by scholars on many grounds. While Salami (2001) invalidates his typology on account of the absence of empirical data to back it up, Banjo (1971) considers it too simplistic. Also, it has been argued that Brosnahan's typology lacks currency and has lost touch with the sociolinguistic realities of the English spoken in Nigeria today. His claims that Variety II (spoken by primary school certificate holders) is used by most Nigerian speakers, and Variety III (spoken by secondary school leavers) is marked by greater fluency and elaborate vocabulary have lost touch with the present reality. A casual observer of the trend of spoken English in Nigeria today knows that these are no longer tenable. It is not a hidden fact that an average primary and secondary school leaver in Nigeria today can hardly communicate in good English.

Udofot (2004) particularly kicked against Brosnahan's claim that Variety I of his classification is Pidgin English and is a language of the uneducated. According to her, scholars never considered Nigerian Pidgin as a variety of Nigerian English but a contact language which evolved as a result of trading activities on the coast between Nigerian and European traders in the 19th century and later grew with urbanisation and became important in some towns. She further states that Pidgin is used nowadays, though in informal contexts, by educated Nigerians- secondary and university students, as well as the elitist class. Therefore, the idea of classifying it as a variety of Nigerian English is not tenable.

Besides, Brosnahan's (1958) description was rigidly tied to the levels of educational attainment. It has however been proved that level of formal education alone does not necessarily determine competence in spoken English. Jowitt (1991), in this regard, argues that there are other factors like exposure to English at home, innate ability and intelligence, amongst others, which could influence one's degree of proficiency in English. For instance, a speaker who is still in primary school may be more proficient in English than a school certificate holder because he grew up in an environment where English was used as a medium of communication. It is unrealistic, then, to equate proficiency in English with level of formal education alone. It is against

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this backdrop the present study takes into consideration other social factors (age, gender and region of speaker) that are likely to influence performance in spoken English.

Notwithstanding the series of criticisms that trailed Brosnahan's classification, it remains the pioneering study on variety differentiation of Nigerian English, thereby providing a platform for further studies. Besides, it has shown that level of education is a fundamental (though not sole) parameter for classifying Nigerian English varieties. This is the trend other varieties differentiation in Nigerian English followed: educated speakers have been the subjects of categorisation. This, also, is the position taken in this study. Our participants are educated speakers of English with a minimum of 2-3 years post-secondary education.

Banjo (1971, 1993) proposes a typology of Nigerian English based on linguistic features as well as the extent of mother tongue transfers and of approximation to a world standard, with level of education being a factor but not the sole determinant. He identifies four varieties of spoken Nigerian English plotted on points on a cline. Variety I demonstrates excessive mother tongue transfers especially at the phonological and syntactic levels. This variety, which is more or less described as 'broken English', is said to be spoken by ~~semi-illiterate Nigerians~~, who only 'picked up the language as a result of the exigencies of their occupations' (Banjo, 1996:75). It is considered socially unacceptable and internationally unintelligible.

Variety II is associated with speakers who are exposed to formal learning of English either at the primary or secondary level. Most Nigerian bi-lingual speakers fall into this category. Though features of variety I speakers are somewhat exhibited in their speech, they demonstrate more extensive vocabulary with fewer syntactic deviations and are able to make more phonemic distinctions than variety I speakers. This variety is considered intelligible and acceptable locally but lacks international intelligibility.

Variety III, according to Banjo (1996:78), 'represents the acrolectal use of English in Nigeria'. Within this category are speakers who attained a level of mastery by exposure to a standard variety of the language through education and other factors like family background and quality of instruction. It is characterised by minimal syntactic errors, and the phonology has RP deep structure but Nigerian phonetic features capable of revealing the speaker's origin. It is considered both locally and internationally intelligible. Banjo further argues that it is inappropriate to equate it with

years or levels of education because speakers attain this level at different periods-some in secondary school, others after university education.

Variety IV is close to the Standard British accent and is considered the spoken form of those that have been exposed to native speaker's English. Although this variety is internationally intelligible, it is socially unacceptable in Nigeria for sounding foreign and affected. Thus, Varieties I and IV were rejected by Banjo because they lack international intelligibility and social acceptability respectively. Variety II was equally discarded on the basis of being internationally unintelligible. Variety III was eventually accepted as the endonormative model (home grown) for being locally and internationally intelligible.

Banjo's classification has been applauded by many scholars. Udofot (2004:94) considers it as 'a more realistic classification which is close to the present-day realities'. Eka (1985:16) opines that 'the realistic nature of Banjo's article is the basis for its popularity and prestige'. It has, thus, been described as the platform on which further research efforts are placed. The present study borrows a leaf from Banjo's because it is a variationist study which seeks to determine the extent of Nigerian English speakers' approximation to or deviation from Standard British English model which was also Banjo's target.

However, Banjo's effort has not been without criticisms. The inclusion of Variety IV in his analysis has been criticised by Bamgbose (1982). He proposes exclusion of Banjo's variety IV on the basis that it represents a category of speakers who did not get exposed to English under the same circumstances as Varieties I-III speakers. They learnt the language in the native speaker's setting and were once monolingual speakers. Therefore, they cannot be regarded as Nigerian English speakers in the real sense of it. Udofot (2004) also discards Banjo's Variety III and recommends her Variety II as the model, being the educated variety taught in schools. She describes Banjo's Variety III as "an ideal which most educated Nigerians hardly ever attain except those who have had specialised training in the phonology of English" (2004:11). In her opinion, therefore, it will be difficult to get experts who speak it.

Jibril (1982), in a bid to describe the standard variety of Nigerian spoken English, approached his study from the geo-tribal perspective, using the recorded speech of forty-five Nigerian speakers of English of Hausa, Igbo and Yoruba origins on Nigerian Television Authority (NTA). This approach was informed by his view that

"Nigerian English is not a single variety of English but a conglomeration of many varieties which relate to one another in sufficient respects to qualify for a common cover term" (Jibril, 1982:5). In view of this, he examined Nigerian English on different levels of variation- geographical, ethnic, social and linguistic.

He identifies two broad diatopic subvarieties: Hausa English and Southern English, and subsequently divides Southern English to Igbo and Yoruba English. Using proximity to or distance from RP as a criterion, he further identifies Basic Hausa English, Sophisticated Hausa English, Basic Southern English and Sophisticated Southern English. In view of perceived similarity between Basic Hausa and Basic Southern English, he again proposes Southern-influenced Hausa variety. He, thus, claims that standard Nigerian spoken English will be marked by Northern and Southern accents, in which case it has to be a combination of Sophisticated Hausa and Sophisticated Southern Varieties.

Jibril's study did introduce a new dimension (geo-tribal perspective) to the study of Nigerian English. As rightly noted, this approach cannot be ignored in a multi-lingual setting like Nigeria where spoken English is bound to be influenced by local languages. However, Jibril has been criticised on the grounds that he lumped Igbo and Yoruba English sub-varieties together as Southern English, when it is obvious that both varieties differ in many respects. Also, Jibril's study was limited to few elite participants (45) drawn from the three major ethnic groups in Nigeria. Besides, he only investigated, in passing, cases of consonant assimilation and other syllable structure processes. The present study, however, uses a larger population sample involving diverse sociolinguistic groups from both large and small language groups in four regions in Nigeria to assess speakers' proximity to SBE in connected speech processes.

Jowitt (1991), in his book, *Nigerian English Usage: an Introduction*, proposes the concept of 'Popular Nigerian English' (PNE) in lieu of 'Nigerian English'. He claims that "the usage of every Nigerian is a mixture of Standard forms and Popular Nigerian English forms, which are in turn composed of errors and variants (1991:47). Based on levels of educational attainment, he establishes a scale of three levels: VI, V2, V3, akin to Banjo's (1971) varieties, which are subsumed under the broad concept: 'PNE'. These levels represent Primary VI certificate holders, WASC holders and university graduates respectively and range from very heavily mother tongue influenced transfers forms to near Standard English forms. Towards the extreme end of

the cline is 'Near-Standard Nigerian English,' which he considers as the emerging Standard Nigerian English. This, however, has been considered a serious deficiency in Jowitt's work, in that, he equates Popular Nigerian English with the Standard and sees Standard Nigerian English as the ideal Nigerian speakers have to strive to attain.

Nevertheless, Jowitt's contribution to varieties differentiation and characterisation of Nigerian English has been so illuminating. It provides a comprehensive description of both segmental and suprasegmental features of Nigerian English from geo-tribal perspective using Hausa, Igbo and Yoruba sub-varieties of Nigerian English; and compares them with RP features. His concept of Popular Nigerian English is particularly instructive in the sense that it introduces a new perspective to the view of Nigerian English.

Udofot (2004), in her work, "Varieties of Spoken Nigerian English", reviews previous attempts at varieties differentiation in Nigerian spoken English by scholars like Brosnahan (1958) and Banjo (1971), with a view to describing the features of spoken English in contemporary Nigeria and re-classifying the varieties of Nigerian English. Her participants were sixty Nigerians of diverse educational, linguistic and socio-economic backgrounds who have learnt English in Nigeria and were taught by Nigerian teachers; and a British native speaker of English whom she used as control. She attempts to identify segmental and non-segmental characteristic features of Nigerian English pronunciation across diatopic varieties, and thereby establish the Standard variety of Nigerian English.

She grouped her participants, aged between seventeen and sixty years, with educational qualifications ranging from the Junior School Certificate to the Doctor of Philosophy, into three groups of twenty as follows:

Group One:　participants who have studied English for 9-12 years from primary to secondary school.

Group Two:　participants who have studied English for twelve to fourteen years; they have completed or about to complete tertiary education.

Group Three: participants who have learnt English for over fifteen years and have undergone further training in English pronunciation.

They all spoke on the same topic: "The high cost of living in Nigeria" for three minutes and were also asked to read a common passage. The recorded data was analysed perceptually and statistically with the aid of the Wilcoxon Matched Pairs Signed Rank Test and the Analysis of Variance (ANOVA).

She thereby reclassifies the varieties of spoken Nigerian English into three. Variety One, which is also referred to as Non-Standard Variety, has as its exponents primary and some secondary school certificate holders, some second year university undergraduates, holders of NCE certificates and primary school teachers. Variety Two, also called Standard Variety, is composed of third and final year undergraduates, university graduates, university and college lecturers, other professionals, secondary school teachers of English and HND holders. The third variety which is the Sophisticated Variety comprises university lecturers in English and Linguistics, graduates of English and the Humanities and those who have lived abroad. She recommends her variety II as the Standard variety which, according to her, is the variety taught in schools and spoken by most educated Nigerians at the moment, This is different from Jowitt's (1991) PNE and Banjo's (1971) Variety III which she described as an improbable ideal for most educated Nigerian speakers.

An important contribution of this work is that it reveals the gross inadequacy of educational attainment as the sole measure of proficiency in spoken English in Nigeria. It was discovered from her data that some Master's degree holders in English were exponents of her Variety one. Moreover, her choice of participants which took cognizance of their age, tribe and educational background is, particularly, relevant to the present study. However, Udofot's study excluded subsegmental features in her analysis, which makes this work relevant and necessary.

The present study, therefore, is a scholarly attempt aimed at contributing to the body of research on Nigerian English. It seeks to examine the incidence of SBE connected speech processes in Nigerian English and thereby determine the level of NE speakers' approximation to or deviation from the SBE norms. This will afford us the opportunity to adequately characterise Nigerian English, sifting errors from variation, and improve pedagogy.

2.7   Received Pronunciation/Standard British English

Received Pronunciation (RP), otherwise referred to as The Queen's English, Public School Accent, Oxford English, BBC English, Standard English, etc. is the British English accent which is customarily regarded as a prestige variety and as a pronunciation model in the teaching of English as a foreign language. It is the accent of the Court, the upper classes and the educated; the accent used by presenters and

newsreaders in the BBC and an accent that conceals the regional background of the speaker (not confined to any locality, geographical area or region).

RP evolved in the British society as a result of the rise of accent as a social signifier (accent became synonymous with prestige) as well as the need to standardise the spoken language (Hannisdal, 2006). By and large, the educated speech of London (the capital and the surrounding areas) and pronunciation of the upper social class emerged as the high-status variant. RP accent was further given a boost with the advent of sound broadcasting in 1922 and television in the 1930s. Only RP speakers were used as announcers and newsreaders by the BBC; a fact which further associated RP with social presitige, high status and intellectual competence.

Hannisdal (2006) is, however, of the view that RP no longer enjoys its previous towering status due to increasing democratisation of the British society whereby non-RP accents are now permitted in many contexts where RP previously held sway. She further observes that RP is somewhat detested in many contexts, because it connotes social exclusiveness and pretension. Hughes and Trudgill (1996:9) put it this way:

> It is sometimes said that nowadays there is not the same pressure as there once was to modify one's speech in the direction of RP. Reference is made to the fact that announcers with non-RP accents are now to be heard on the BBC, that important posts in industry and the civil service are held by non-RP speakers, and that some younger RP speakers have adopted, more or less deliberately, features of regional pronunciation.

The implication of this is that because of its exclusiveness, RP does not represent the accent of the majority of British English speakers. Besides, RP is no longer a homogenous dialect, as it consists of at least three subtypes: conservative RP, common among older generation and some professions or social groups; general RP, which is the pronunciation adopted by the BBC; and advanced RP, typical of young people (Gimson, 1980).

Therefore, in order to avoid the controversy of which subtype to choose as a model and the difficulty of searching for its speakers as control, this study rather adopts the term Standard British English (which is more encompassing and represents the speech of a majority of British native speakers) as a model. Speech samples were collected from two educated native Britons who had lived in Britain for more than 50

years. They were used as control to comfirm the features of connected speech processes of SBE attested in the literature.

2.8 Acoustic Phonetics

Acoustic phonetics deals with the physical properties (properties of the soundwaves) of speech sounds; that is, how sounds are physically transmitted and acoustically measured. It is the structure of soundwaves (waves of fluctuating air pressure) that distinguishes one sound from another. These waves can be acoustically measured in terms of frequency (corresponding to the pitch of a sound), intensity (corresponding to loudness) and quality (vowel, consonant, voicing, marner, etc.). For example, the higher the frequency (measured in Hertz), the higher the sound is in pitch; the more extreme the fluctuations in pressure, the greater the amplitude/intensity of the wave (measured in decibels), and the louder the sound (Kirchner, n.d.).

This study employs spectographic instrument (a device that translates a sound into a visual representation of its component frequencies) to examine such connected speech features as voicing assimilation, boundary consonant elision and linking /r/ in the speech of select Nigerian speakers of English, with a view to corroborating findings obtained through perceptual means.

CHAPTER 3

THEORETICAL FRAMEWORK

3.0   Introduction

This is a study at the borderline of two distinct fields– Sociolinguistics and Phonetics. It is expedient, therefore, to approach it using relevant theoretical insights from these fields of study. As a study principally concerned with speech, particularly phonological processes, it is premised on Noam Chomsky's Generative Phonology. Specifically, aspects of the theory which are relevant to this work are discussed. And, as a study in language variation, various theoretical developments in Labov's variability concept are examined.

3.1   Generative Phonology

Generative Phonology (GP), an offshoot of a wider theory of language– Transformational Generative Theory, began to unfold with Chomsky's publication of *The Logical Structure of Linguistic Theory* in 1955 and Halle's publication of *Phonology in Generative Grammar* in 1962, and was later elaborated in Chomsky & Halle's (1968) *The Sound Pattern of English* (SPE). It developed as a result of apparent discontent with certain tenets of classical (taxonomic) phonology which was prevalent in North America in the 1940s and 1950s, and rose to serve as an alternative to it.

Classical Phonology was concerned with inventories of elements and a classificatory or taxonomic approach to linguistic analysis (Clark and Yallop, 1995). Utterances were basically segmented into their constituent phonemes with a view to discovering the phonemes which occur in different languages (Schane, 1973). The theory distinguished between phonemes (level of contrast or opposition or the phonemic) and allophones (level of pronunciation or the phonetic). For example, in English, the aspirated [pʰ] of *pin* and the unaspirated [p] of *spin* are allophones of the same phoneme /p/ and are in complementary distribution. However, according to Kenstowicz (1994), the derivation of allophones from the phoneme is not determined by phonological processes; allophones are rather in a correspondence relation; the distribution of the elements composing each level (phonemic and phonetic) is stated by

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phonotactics, e.g. [pʰ] occurs at the onset of a stressed syllable while [p] occurs elsewhere.

Consequently, the concepts of phoneme and allophones were fraught with certain phonological inadequacies. First is the observation that [pʰ] and [t] as well as [h] and [ŋ] also stand in complementary distribution but are not derived from a phoneme (Kenstowicz, 1994). Second is the case of phonemic representations of the stem final consonant of electric /elektrik/ and electricity /elektrisiti/ which contain /k/ and /s/ respectively, cited by Schane (1973). She notes that in phonemic theory, it is possible to say that [pʰ] and [p] are variants or allophones of a phoneme /p/. In this instance, however, /k/ and /s/ cannot be considered as such. This is because both are regarded independent phonemes of English. Therefore, while the phonemicists were able to provide explanation for [pʰ] and [p], little or no relationship was established between /k/ and /s/.

These puzzles, amongst others, motivated the generativists to re-orientate the focus of phonological descriptions. Apparently convinced that such a case like *electric* vs *electricity* above cannot be explained phonemically (is neither phonemic nor phonetic), they jettisoned the phonemic level of representation and postulated an underlying representation (also known as systematic phonemic, abstract or deep forms) converted by phonological rules into systematic phonetic or surface forms (Clark and Yallop, 1995; Simo Bobda, 1994). The Underlying level of Representation (UR) is the phonemic level which is the dictionary representation of words, while the phonetic level is the actual level at which real sounds are produced. At the UR level, the word *pin* will be transcribed /pɪn/ between slashes and converted to its phonetic representation [pʰɪn] at the phonetic level by the phonological (aspiration) rule. This is illustrated as follows:

(Input) Phonemic (underlying) Level of Representation- /pɪn/

↓

P-Rules- (Aspiration Rule)

↓

(Output) Phonetic (surface) Level of Representation – [pʰɪn]
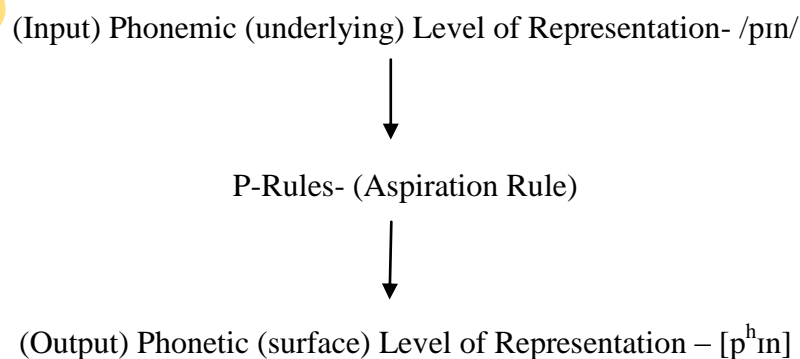
Fig. 3.1 Levels of Representation

This allows phonological rules and principles to be more transparently and economically stated with a view to eliminating redundancy from phonological analyses. Harrington (2004) opines, in this regard:

> In *the Sound Pattern of English,* one of the main aims is to factor out many more redundancies from the words' phonological representations and to fill in these redundancies by rule. This in turn results in a representation which is a good deal more abstract than the phonemic forms... Furthermore, these highly abstract representations are presumed to form part of the talker's knowledge of the language.

To generativists, then, the /k/ of *electric* and the /s/ of *electricity* are, at the underlying representation, manifestation of a unique segment K, thereby yielding /elektriK/ and /elektriK + iti/. After rules (e.g. velar softening) are applied /elektrik + iti/ then becomes [elektrisiti].

3.1.1 Phonological rules

Generative Phonology canvasses a phonological description deprived of analytical procedure of segmentation and classification but rather based on the formulation of a set of rules which constitute the phonological component of a grammar (Chomsky, 1964; Clark and Yallop, 1995). The focus of transformational-generative theory from which it evolves is a linguistic description capable of constructing a grammar that would generate linguistic forms. In order to yield phonological component of such a grammar, therefore, the theory proposes that underlying forms of the language must be converted into surface representation by the application of a set of phonological rules (Clark and Yallop, 95). In this regard, Clark and Yallop (1995:139) explain further:

> The very term 'generative' draws on a mathematical concept of definition by the application of rules or operations. Thus, in generative linguistics, a set of rules may be said to 'define' a language by generating all and only the correct possibilities... The rule is therefore powerful, in the sense that it generates an infinite number of possibilities, but also restrictive, in the sense that it generates only sequences of the language and not impermissible sequences like [aa], [m] or [aaammm].

SPE which elaborates the import of the theory considers a grammar as systems of rules that relate sound and meaning, and comprising several components including a

semantic component and a phonological component by which grammatical structures are converted to their phonetic representations by the application of rules.

```
┌─────────────────┐   Deep structures    ┌─────────────────┐
│      Base       │─────────────────────→│    Semantic     │
│ Syntactic rules │                      │   component     │
└─────────────────┘                      └─────────────────┘
         │                       │                 │
         │ Deep structures       │                 │
         ↓                       │                 ↓
┌─────────────────┐              │        Semantic Representation
│ Transformational│              │
│ Syntactic rules │              │
└─────────────────┘              │
         │                       │
         │ Surface structures    │
         ↓                       │
┌─────────────────┐
│  Phonological   │
│     rules       │
└─────────────────┘
         │
         ↓
 Phonetic representation
```
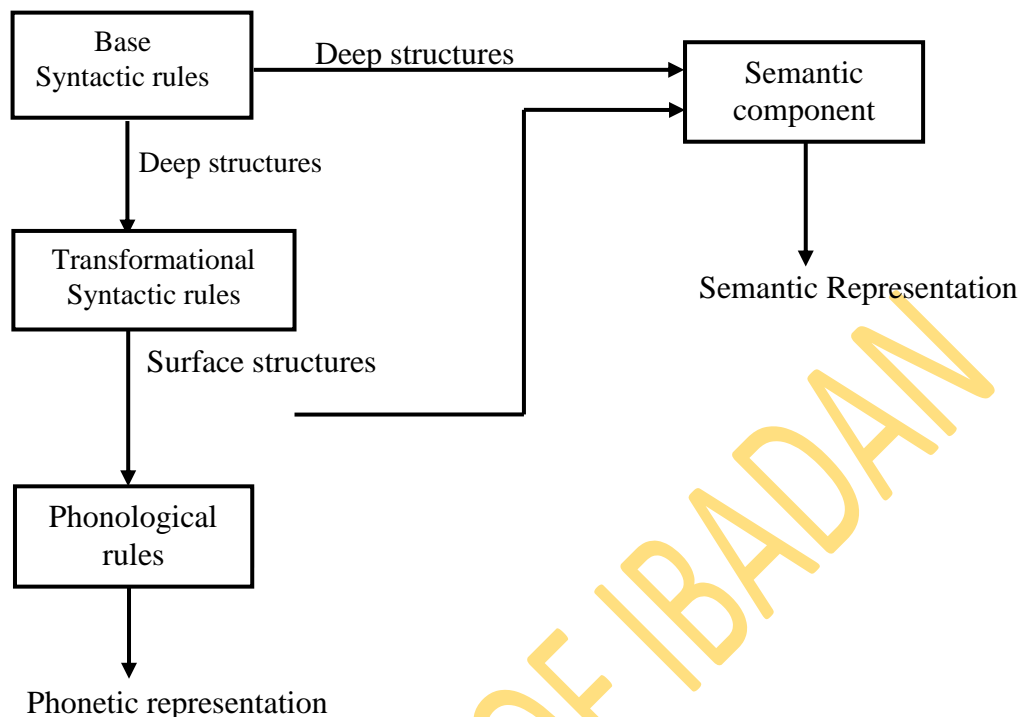
Fig. 3.2 A generative model of grammar
(Source: Clark and Yallop, 1995:402)

As rightly pointed out, the notion of phonological rules is an important concept employed in GP to map underlying representations onto phonological representations. For Fromkin and Rodman (1993:241) 'phonological rules relate the minimally specified phonemic representation to the phonetic representation and are part of a speaker's knowledge of the language'. In other words, GP attempts to assign, as correctly as possible, phonetic representation to utterances by means of 'generated' rules in such a way as to reflect the ideal speaker's internalised (intuitive) grammar. It's basic premises are that phonological structure reflects the linguistic competence of the individual native speaker to compute a phonetic representation for the potentially infinite number of sentences generated by the syntactic component of the grammar and that this competence can be investigated in a serious scientific fashion (Kenstowicz, 1994). Harrington (2004) puts it this way:

> There are phonological rules that link these often highly
> abstract underlying forms to the phonetic forms ... because
> otherwise we cannot explain how underlying forms are related

to pronunciation (this is exactly parallel to our earlier phonemic/phonetic distinction: once we represent words phonemically, we have to have rules that fill in the redundant or predictable aspects of pronunciation like aspiration; the difference in the Generative Phonology model is that the underlying forms that are being proposed are more abstract than phonemic forms- resulting in many more rules to explain the predictable and redundant aspects of pronunciation- and they lay much greater emphasis on the claim that these underlying forms are in some sense 'psychologically real' i.e. part of the talker's linguistic competence).

These rules, according to Simo Bobda (1994), capture morphophonemic alternations in a way that many irregularities or seemingly inexplicable grammatical puzzles can be unravelled by establishing the right ordering of rules and the different rule interactions. He cites the example of *decade* which, ordinarily, violates the rule converting /k/ to [s] before non-low front vowels; this is appropriate if ordered before the rule changing certain monophthongs to diphtongs. Another instance is the divergent phonological behaviour of the underlined parts of (a) gymn<u>asi</u>um [eiz] and (b) pot<u>assi</u>um [æs] which, he says, can be traced to rule ordering. In (b) [æ] remains lax because two consonants follow it (laxing rule) unlike one in (a); /s/ stands as voiceless because s-Voicing applies before Cluster Simplification.

SPE proposes over forty of such rules operating on underlying representations (URs) to yield the surface forms of both segmental and suprasegmental features (Simo-Bobda, 1994; Clark and Yallop, 1995). The following are some of these rules in SBE which are particular related to this study:

(a)   Assimilation of voice rules

(i)   Regressive Devoicing:
[- sonorant] ⟶ [- voice] / --------- ## $\begin{bmatrix} \text{sonorant} \\ - \text{voice} \end{bmatrix}$

(*The first obstruent takes on the voiceless feature as is found in the second obstruent*)

(Source: Adapted from Schane, 1973:68)

e.g. *I ha<u>ve to</u> go* is pronounced [aɪ 'hæftə 'gəʊ]: /v/ of *have* becomes /f/, losing its voicing under the influence of the following voiceless /t/ of *to*.

(ii)   Progressiving Voicing:

$$\begin{bmatrix} +ant \\ +cor \\ +str \end{bmatrix} \longrightarrow [\alpha \text{ voice}] \,/\, [\alpha \text{ voice}] \;----$$

(*s* alternates between /s/ and /z/ according to whether the preceding non-sibilant segment is voiceless or voiced, e.g. stops – [stɒps]; sobs – [sɒbz]).

(Source: Simo Bobda, 1994:56)

(iii)   Progressive Devoicing:

$$[- \text{son}] \longrightarrow [- \text{voice}] \,/\, [- \text{voice}] \;\#\# \;----$$

(A word-intial obstruent becomes voiceless after a word-final voiceless consonant, e.g. ni<u>ce b</u>oy - [naɪs b̥ɔɪ]

(b)   Place assimilation rules

(i) $\begin{bmatrix} \text{Alveolar} \\ \text{stop} \\ \text{-voice} \end{bmatrix} \longrightarrow [\alpha \text{ place}] \,/--- \#\# \begin{bmatrix} \alpha \text{ place} \\ \\ \text{stop} \end{bmatrix}$

(The voiceless alveolar stop /t/ assimilates in place of articulation to the following bilabial or velar stop /p, k/, e.g. *met Peter* and *that case*).

(ii) $\begin{bmatrix} \text{Alveolar} \\ \text{stop} \\ \text{+voice} \end{bmatrix} \longrightarrow [\alpha \text{ place}] \,/--- \#\# \begin{bmatrix} \alpha \text{ place} \\ \\ \text{stop} \end{bmatrix}$

(The voiced alveolar stop /d/ assimilates in place of articulation to the following velar or bilabial stop /g, b/, e.g. *good girl* and *good bye*).

(iii) $\begin{bmatrix} \text{Alveolar} \\ \\ \text{nasal} \end{bmatrix} \longrightarrow [\alpha \text{ place}] \,/--- \#\# \begin{bmatrix} \alpha \text{ place} \\ \\ \text{stop} \end{bmatrix}$

(The alveolar nasal /n/ assimilates in place of articulation to the following bilabial stops /b, p/ e.g. *ten boys* and *ten pounds*).

(Adapted from: Wells, 1982:61)

(c)   Palatalisation/Yod coalescence rule

$$
\begin{bmatrix} -son \\ +cor \\ +ant \end{bmatrix} \rightarrow \begin{bmatrix} -\,ant \\ \\ +\,strd \end{bmatrix} \Big/ \text{-------} \ \#\# \begin{bmatrix} -con \\ -syl \\ -back \end{bmatrix} \begin{bmatrix} -con \\ -stress \end{bmatrix}
$$
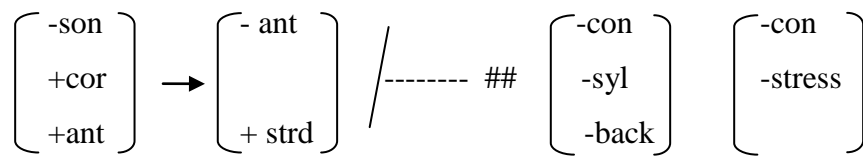
(/t, d, s, z/ are converted into [ʧ, ʤ, ʃ, ʒ] respectively, before the palatal glide /j/ at the word boundary followed by an unstressed vowel, e.g. *did you?* [diʤʊ], *won't you?* [wʊnʧʊ]).

(Adapted from: Simo Bobda, 1994:65)

(d)   R-insertion/Linking-r rule

$$\emptyset \longrightarrow r \Big/ V \text{-------}\#\#_\circ V$$
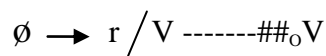
(/r/ is inserted between a vowel and a following vowel, with or without an intervening word boundary, e.g. *here and there* /hɪər ən ðeə/)

(Source: Wells 1982 cited in Simo Bobda 1994:67).

As observed from above, phonological rules delete, insert, change segments or change the features of segments and are expressed through the process of rule formalization. It is clear from the foregoing, therefore, that the goal of GP is not just to offer observational adequacy (ability of a grammar to correctly state that certain forms are observed while others forms are not) which was common to other models of phonology, but to achieve descriptive adequacy (ability to, in addition to transcribing the data, account for the knowledge- linguistic competence- of the native speaker) (Hyman, 1975).

3.1.2 Formalisation of rules

In order to express clearly and explicitly the native speaker's internalised knowledge of his language, therefore, phonological rules must state the class of sounds affected by the rule, the context or phonemic environment of the relevant sounds and the resultant phonetic change (Fromkin and Rodman, 1993). Vowel nasalisation rule, for instance, will be stated as follows:

Nasalise (phonetic change) vowels and diphthongs (affected class of sounds)
before nasals (context or phonemic environment)

The above stated rule, however, can be formulated and formalised in an economical, maximally simple, clear and unambiguous manner, using distinctive features matrices

and mathematical/scientific notations as done in the previous section. These feature notations 'provide a way to express the generalisations of the language that may be obsecured otherwise' (Fromkin and Rodman, 1993:243). In this regard, the vowel nasalisation rule above may be expressed as:

[-consonant] → [+nasal] / − [+nasal]

Some of such notations used in phonological analysis to formalise phonological rules as employed in this study are stated below with their interpretations.

/ /	phonemic/phonological representation
[ ]	phonetic representation
+	has the feature of
-	lack the feature of
→	becomes
/	in the environment of
−−	position of the affected sound
A→B/C−	A becomes B after C
A→B/−C	A becomes B before C
A→B/C−D	A becomes B inbetween C and D

3.1.3 The Distinctive Feature theory

As noted in the foregoing section, also involved in phonological rules formalisation is binary distinctive features, used to unambiguously distinguish the affected class of sounds. The origin of Distinctive Feature theory can be traced to the Prague School's idea of phonological oppositions as championed by Trubetzkoy (1939). Distinctive features (DFs) were, however, first formalised by Roman Jakobson in 1941 and further elaborated by Chomsky and Halle in the *Sound Pattern of English* (1968). Jakobson and associates (Jakobson, Fant and Halle, 1952; Jakobson and Halle, 1956) devised sets of distinctive features which provide a background for Chomsky and Halle's set. According to Mannell (2008), Jakobson's original formulation of distinctive feature theory was based on the following ideas:

1. All features are privative (i.e. binary). This means that a phoneme either has the feature, e.g. [+VOICE] or it doesn't have the feature, e.g. [-VOICE]

2. There is a difference between PHONETIC and PHONOLOGICAL FEATURES
   - Distinctive Features are Phonological Features.

- Phonetics Features are surface realisations of underlying Phonological Features.
- A phonological feature may be realised by more than one phonetic feature, e.g. [flat] is realised by labialisation, velarisation and pharyngealisation

3. A small set of features is able to differentiate between the phonemes of any single language
4. Distinctive features may be defined in terms of articulatory or acoustic features, but Jakobson's features are primarily based on acoustic descriptions.

According to Atoye (2005b), the idea of Distinctive Features (DFs) actually began as protest against the taxonomic phonology's notion of a phoneme being the smallest contrastive linguistic unit that cannot be subdivided. Generative phonology, for instance, avoids the term 'phoneme' and, instead, refers to it as sound segment. As far as this school of thought is concerned, a sound segment (phoneme) is divisible; that is, it is not the smallest unit of utterance but is actually made up of smaller linguistic units called features. Thus, a sound segment has a bundle of features capable of differentiating it from another. The features are distinctive, contrastive or significant for meaning. Botha (1973:215) explains this as follows:

> A phonetic segment is not an un-analysable whole, but has an internal structure. Its internal make-up is specified in terms of distinctive features. The distinctive features occurring in phonetic representations have a phonetic function and are called phonetic features. Examples of such phonetic features are 'consonantal', 'anterior', 'coronal', 'voiced ', 'nasal', all of which have a positive value in the phonetic segment traditionally indicated by the symbol /n/.

Thus, DFs establish the phonetic characteristics and natural classes of sounds using binary notation [+, -] where [+] indicates presence of specified features and [-] indicates their absence. For example, the sound segments /b/ and /p/ in *bee* and *pea* can be distinguished as follows:

/b/	/p/
+cons	+cons
+stop	+stop
+labial	+labial
+voice	-voice

Unlike in phonemic phonology where the difference between the set of minimal pair *bee* /bi:/ and *pea* /pi:/ is as a result of the substitution of /p/ for /b/, in GP the difference is accounted for only in terms of the distinctive feature [+voice] or [-voice].

In Kenstowicz's (1994) view, when phonological segments are represented as feature matrices this way, sound change can be formalized as the modification of a feature coefficient. Thus, features provide a measure of phonetic distance and allow a formal study of natural classes in which the plausibility of a rule is reflected in the relative simplicity of its statement.

In view of this, DF theory is generally regarded a useful tool in explaining sound patterns; it particularly offers explanations, in the form of phonological rules, for sound changes observed in natural speech, and more readily permits generalised statements within and between languages than do phonemes and allophones based description, e.g. the alternation between the negative prefix [ɪn-], [ɪm-], and [ɪŋ] in *intolerant, impossible* and *incorrect* respectively, in which the alveolar nasal /n/ assimilates in place of articulation to the following stop (Atoye, 2005b; Simo Bobda, 1994; Crystal, 1987). Following Chomsky and Halle's (1968) distinctive features, this rule of Homorganic Assimilation can be captured as:

$$
\begin{bmatrix} +nas \\ +ant \\ +cor \end{bmatrix} \longrightarrow \begin{bmatrix} \alpha ant \\ ɓcor \end{bmatrix} / \underline{\quad\quad} \begin{bmatrix} -cont \\ \alpha ant \\ ɓcor \end{bmatrix}
$$

As seen above, DFs make it possible to formulate a nasal assimilation rule that captures different alternations of the alveolar nasal /n/; the use of phonetic symbols would require the formulation of three different nasal assimilation rules. This therefore establishes the argument that distinctive features allow the possibility of formulating phonological rules using a considerably smaller number of units than the phonemes of a language, allow natural classes of phonemes to be established with a minimal number of features, are economical, maximally simple, clear and unambiguous.

However, a major problem facing DF theory, as observed by Atoye (2005b), is disagreement amongst scholars on acceptable set of Distinctive Features. Consequent upon this, the number and types of DFs vary from one scholar to another, from one book to another and even from the same scholar from time to time. For instance, while Jacobson, Fant and Halle (1952) proposes twelve sets of features, Jacobson and Halle (1956) proposes fifteen. Chomsky and Halle (1968) came up with twenty-four, and

Ladefoged (1971) twenty-six. The following are the sets of DFs postulated by Chomsky and Halle (1968) as highlighted by Schane (1973:26-33):

1. The major class features- syllabic, sonorant and consonantal.
2. Manner features- continuant, delayed release, strident, nasal and lateral.
3. Place of articulation features- anterior, coronal.
4. Body of tongue features- high, low, back, and lip shape feature: round.
5. Subsidiary Features- tense, voiced, aspirated and glottalised.
6. Prosodic features- stress and long.

3.1.4 Phonological boundary

Germane to the application of phonological processes and rules is boundary delineation. In stating and applying many phonological rules, grammatical boundaries are particularly taken into consideration. The literature, thus, contains various grammatical boundaries used differently from one author to another. Some of these, according to Simo Bobda (1994), are:

$	syllable boundary
=	prefix-stem boundary e.g. pre = side
+	general morpheme boundary e.g *electric + ity*
#	word internal boundary (boundary between a base and a neutral suffix e.g. *advertise#d, dog#s*
##	full word boundary
//	phrase boundary

Of these, Hyman (1975:196) considers ## (full word boundary), # (word internal boundary) and + (morpheme boundary) as the major phonological boundaries.

According to him, these boundaries are of different strengths arranged in a linear order on the scale of 0-3; that is, from the weakest to the strongest as follows:

Ø   +   #   ##

$\longrightarrow$

0   1   2   3
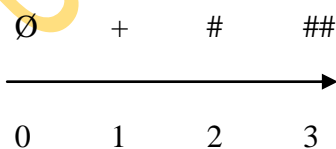
This implies that + is the weakest and ## the strongest. Depending on strength, they can either inhibit or condition the application of a phonological process. A boundary is said to be strong if it is harder to penetrate. That means ##, being the strongest, has the greatest propensity for blocking the application of a rule. Simo Bobda (1994:85), in

this regard, cites the following instances where the full word boundary blocks nasal assimilation:

A		B
Impair [impɛə]	vs	ten pence [tɛn pɛns]
Rancour [ræŋkə]	vs	rain coat [reɪn kəut]
Anger [æŋgə]	vs	Dan Garvey [dæn gɑvɪ]

Nasal assimilation takes place In **A**, but is blocked in **B** (across word boundary). He notes, however, that assimilation is possible at this boundary in a fast or lazy speech.

In the same way, certain phonological processes only take place at a particular boundary but not at another. Consider, for instance, the following rule deleting the /g/ of /ng/ sequences which is triggered by boundary:

g   →   Ø / ŋ ____ #   which yields the forms:

/bring ## her   →   [briŋər]   (full word boundary)

/sing # er/   →   [siŋər]   (internal word boundary)

/lɔng + er/   →   [lɔŋgər/   (morpheme boundary)

/finger/   →   [fiŋgər]   (no boundary)

(Source: Hyman 1975:197).

In the derivations above, ## and # condition the deletion of the /g/ of *bring her* and *singer* respectively, whereas at the + and Ø boundaries the /g/ of *longer* and *finger* remains.

It is obvious from the above explanation that application of phonological processes depends on particular types of boundaries. It is, however, still possible to make a phonological rule apply in a boundary other than its. To achieve this, Lars (1984) suggests what is called *boundary-demotion*, a process by which a boundary acquires a lower status in order to allow a process. He cites the example of the application of nasal assimilation [ŋk] in *one can* (across word boundary). To permit this, he argues that #one#can has been changed to #one+can#; that is, # is *demoted* to + in order that the rule may apply as in # in + come #.

As rightly expressed in chapter two, words are spoken in a fluent and continuous stream in connected speech so that the segment boundaries implied by phonetic transcriptions are often not evident. This makes it possible for segments to be influenced and modified in varying degrees by other adjacent sounds at designated

morpheme and word boundaries. The implication of this is that phonological rules are applicable in any of the boundaries since there is the possibility of boundary erasure or neutralisation in a fast speech.

3.1.5 Critique of Generative Phonology

There is no doubting the fact that generative phonology brought with it a novel and ground breaking perspective to phonological inquiry; however, it has also been plagued by severe and critical oppositions and numerous unresolved problems and research questions. As Goldsmith and Laks (2000:5) put it "the development of Generative phonology (and generative grammar more generally) was born of a disciplinary rupture, and brought with it rifts in the field'. Foley (1977), in particular, is of the view that GP is not a theory of phonology but is merely transformational phonetics. Sampson (1980), on his part, queries the reality of many underlying representations posited in SPE and accuses Chomsky and Halle of "overestimating the ordinary man's knowledge of his language" (203).

Specifically, GP has been seriously criticised on the grounds of its excessive abstractness. Kiparsky (1968), in this regard, doubts the possibility of a learner being able to formulate varied phonological rules and representations to explain phonological processes in the absence of knowledge of their historical antecedents. He suggested that abstract representations are motivated by alternations and that grammars change to states in which the underlying representations can be induced by rules that state generalizations over the surface phonetic representation.

Kisseberth (1970) expresses the view that the emphasis of SPE model on formal connections among rules makes it difficult to express the functional unity among diverse processes. Citing various rules in the phonology of Yawelmani which bar the occurrence of successive consonants at the surface level, he posits that it is problematic to formalize the notion of rules applying or blocking a particular process to satisfy a constraint.

Stampe (1972) emphasized the importance of substantive rather than formal considerations in shaping phonological structure. He draws a sharp distinction between natural processes and more phonetically arbitrary rules like SPE's Vowel Shift and Velar Softening that state generalizations over limited sets of lexically related words. In his view, phonological processes are what the child brings to the language while phonological rules are what the language's vocabulary brings to the child. His theory,

Natural Phonology, prefers a natural or phonetic explanation of phonological phenomena to the GP's excessive formalism.

Finally, with its emphasis on rules of sound change, it has been argued that the SPE model has little to say about phonotactics-static constraints on word shape that are unsuited to rules of sound change and seem best treated as conditions on representation that outputs must respect. Kenstowicz & Kisseberth (1976) call attention to the problem that constraints on lexical shape are often duplicated by rules of sound change that can be thought of as bringing the representation in line with the constraint.

This series of criticism brought about several phonological thoughts such as Natural Generative Phonology (Hooper, 1973; Vennemann, 1974), Natural Phonology (Stampe, 1972; Donegan, 1978; Donegan and Stampe, 1979), Lexical phonology (Kiparsky, 1982; Mohanan, 1982; Pulleyblank, 1986; Strauss, 1982), Metrical phonology (Liberman, 1975; Liberman and Prince, 1977; Hayes, 1980), Autosegmental phonology (Goldsmith, 1974; 1976) and Optimality theory (Prince and Smolensky, 1991; 1993). They all claimed to offer alternatives to GP. However, as Goldsmith and Laks (2000) opine, a majority of these theories were conducted and published within the framework of generative phonology, and their criticisms of it were expressed in terms of *SPE*. Besides, none of them is without its weaknesses, though each portrays an attempt to rectify certain inadequecies observed in Generative Phonology.

Generative phonology, therefore, in many respects remains illuminating and relevant to phonological enquiry in both first and second language situations. Through phonological rules, GP provides adequate explanations for phonological alternations of the ideal native speaker as well as regular and predictable deviations of the second language speaker; hence, the choice of the theory as the basis for analysis of data on features of Standard British English connected speech in Nigerian English. However, in view of the fact that we are dealing with a variable data of a second language situation which a single theory may not adequately account for, explanations shall be sought from other relevant theories to fill the gap.

3.2   Variability concept

Variation in language was never considered important or consequential by major linguistic schools like Saussurean theory, American and Prague School

Structuralism and Chomskyan theory, in particular. As a matter of fact, these theories treated language as a strictly invariant entity and dismissed any perceived variability as unstructured and never worth studying. The emphasis of Chomskyan Transformational Generative linguistic model, for instance, is on the ideal speaker-hearer of a language. Both individual and social variation in language was considered part of performance which was outside the purview of the linguist.

However, with the advent of the variability concept, championed by Labov (1963, 1966) and expounded by Dillard (1968) and Baratz (1969) amongst others, emphasis then shifted to structured variability in language. This empirical research method is premised against Bloomfields (1927) Structuralists' view that it is impossible to distinguish between 'good' and 'bad' speech. He proved that although 'literate' and 'illiterate English were considered in public opinion as 'good' and 'bad' respectively, empirically, neither of them is disadvantaged with respect to the other.

According to Dittmar (1976:104), therefore, variability concept seeks to:

> Explain how and in what function language systems are divided (regional, social, functional language varieties), how speech realisations are evaluated (privileged, stigmatised status of speech forms) and how they change on the basis of evaluations (**revaluation vs devaluation** of standards, dialects, speech behaviour of minority groups). The descriptions also have to explain to what extent language systems interfere with one another on the phonological, syntactic and semantic levels, how they are acquired, conserved and modified on these levels and, finally on the basis of what relationships they co-exist or come into social conflict. The aim of research into speech variation is thus to describe and explain the entire social network of speech practice and the complex competence that speakers have at their disposal for communication, in correlation with social norms and parameters.

Variability concept is built on the notion that language is inherently variable at different structural levels of Phonology, Mophology and Syntax and that it is a generally recognised fact that no two utterances of the same word by the same speaker are ever exactly alike. The same language varies from speaker to speaker or from community to community (Milroy and Milroy, 1997).

In order to demonstrate the perceived co-variation between linguistics and social categories, variationists usually employ quantification as an essential methodological tool. In this regard, a linguistic variable, e.g. a sound segment such as

/a:/ whose pronunciation is observed to vary in a particular speech community is selected and occurrences of its variants in the speech of different speaker groups are quantified. This methodological tool makes it possible to make objective and accurate judgments about fine grained differences between individuals and groups of speakers in a speech community. Speaker variables commonly used for this purpose are socio-economic class, age of speaker, sex (gender) of speaker, ethnic group of speaker and social network.

Labov's work provides the framework for studies in this direction. Many of the methods he advanced are still employed in sociolinguistics till date. He introduced the sociolinguistic interview, designed to elicit different speech styles within a single interview and a stratification of phonological variables according to sex/gender, age, socioeconomic status and situational context (Wodak and Benke, 1997). Labov's contribution to linguistic variation emphasises the twine principles that language is essentially variable and that the variation is principled and should be the subject of attention of linguistic theory.

In his 1966 doctoral thesis, "The social stratification of English in New York city", he was particularly interested in the correlation between linguistic and sociological variables of social class membership in New York City. Amongst other things, he investigated the /r/ variable. Using stratified random sampling method, Labov stratified his participants into ethnic groups (New Yorkers, Italians, Jews, Blacks) and social class (Upper Middle, Lower Middle, Upper and Lower Working Class) with the indicators of income, occupation and level of education. He interviewed his participants and recorded formal and informal speech, reading aloud from a text, and reading a series of minimal word-pairs, covering the range from least to most relaxed speech. In the long run, he quantified the mean scores for each social group in each style and discovered a correlation between the phonological and sociological variables.

Labov's theoretical and methodological ideas have been replicated by many researchers worldwide (e.g.Trudgill 1974; Chesire, 1982; Modaressi, 1978; Romaine, 1978), while others have approached his pioneering effort from different social dimensions. Milroy's (1987, 2002) studies, for example, focused on the correlation of linguistic and social networks (the dimension of solidarity at the level of individual and his or her everyday contact) rather than Labov's socio-economic class. According to the proponent of this approach, "an individual's social network is straightforwardly

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the aggregate of relationships contracted with others, and social network analysis examines the differing structures and properties of these relationships." (Milroy 2002:549). This approach queries Labov's (1966) view of a city as a single speech community; its principal consideration is the internal variation within a particular group (the working class) and not the language community as a whole. In this direction, their variable is based on the informal social relationship contracted by individual speakers with others, and not on comparisons between groups of speakers (Milroy and Milroy, 1997). This affords the sociolinguist the opportunity to painstakingly investigate and discover the impact of communal social cohesion on the speech patterns of individual members. This research drive, thus, serves as a tool for investigating the relationship existing between patterns of language maintenance and patterns of language change. It seeks to explain, for instance, why stigmatized, non-standard and low-status speech forms are retained even in the face of intimidation and strong pressure from the standard form.

The Milroys' research efforts have shown that language correlates with social network. Findings of the observed linguistic variables revealed a connection between specific language behaviour and certain peculiarities of the network. It was also established that within the network (the working class), considerable variation exists between individuals, between different speech-styles, between men and women, and between older and younger speakers (Milroy, 1981). Social network analysis approach has been applied in both urban and rural monolingual settings (e.g. Bortoni-Ricardo, 1985; Schmidt, 1985; Lippi-Green, 1989; Edwards, 1986) and in bilingualism, language contact and language shift situations (e.g. Gal, 1979; Li, Milroy and Pong, 1992; Li, 1994).

However, other variationists like Giles and Smith (1979), Le Page and Tabouret-Keller (1985) and Bells (1984, 2001) are more interested in socio-situational variation. This line of research is premised against the fact that variation in speech may be a function of linguistic style or register of speech. Speech, therefore, may be varied according to the setting (formal or informal) and the composition of audience (age, sex, socio-economic status, and regional background of speaker and addressee, and the degree of intimacy between the participants in the speech event). Giles and Smith (1979), in this regard, propounded accommodation theory with a view to exploring how speakers modify their accent in response to the speech of their interlocutors based on situational factors. Also, Le Page and Tabouret-Keller's (1985) acts of identity

shows how speakers' linguistic behaviour is motivated by the wish to resemble as closely as possible that of the group with which they wish to identify. It reveals how speakers adjust their behaviour as well as accent to suit the perceived norms of a community with a view to identifying with the community. Bell's (1984) audience design theory is another important contribution to this research drive. It holds that 'style derives its meaning from the association of linguistic features with particular social groups' (Bells, 2001:142). In that wise, speakers design their style primarily for their audience.

Having reviewed various frameworks of variationist studies that have emerged from the Labov's pioneering effort; this study is premised against the Labovian model. However, many scholars have expressed skepticism on the applicability of the Labovian model in a multilingual environment like Nigeria. This is because Labov's studies were restricted to the native speakers' settings where most speakers are monolinguals and differing levels of proficiency in the language are not an issue. Besides, the kind of elaborate social class system upon which his studies were based is non-existent in Nigeria. Nevertheless, aspects of the model and its methods are very relevant to the Nigerian linguistic setting.

First, his ethnic/regional approach to variation is appropriate in Nigeria which is made up of different linguistic/ethnic groups and genetic make-ups. This is because speech production can vary according to ethnicity/region of speakers (Labov, 1966; Trudgil, 1974; Guy 1981; Hovath, 1985). Second, Labov (1963, 1966, 1990, 1991) has proved that speakers' gender and age, besides socio-economic status, are also key factors of speech variation. This study, therefore, attempts to correlate phonetic/phonological variables of assimilation, elision and liaison with speakers' variables of age, gender and region, with a view to establishing any perceived co-variation.

3.2.1 Social variables

3.2.1.1 Age

Age as a sociolinguistic variable focuses on socially-oriented linguistic change (variation) in age stratification as well as the nature and social status of age and aging, rather than its biological status which, in any case, also influences phonological variation particularly between adults' and children's speech as a result of anatomy and physiological differences. Eckert (1997), in this regard, discusses how three key life

stages- childhood, adolescence and adulthood- affect linguistic patterns in various manners.

First, it has been proved that in childhood, children tend to adhere to the speech patterns characteristics of women's speech; which suggests the linguistic influence of mothers or caregivers on children (Labov, 1990; Foulkes, et al., 1999). This implies, therefore, that children are able to acquire speech habits undergoing sound changes in their community as propagated by their mothers or caregivers.

In adolescence, peer-group influence, to a large extent, further shapes language use. In a bid to conform to peer-group norms, adolescents take up new phonological patterns apparently different from the variety acquired through their parents or caregivers. In this regard, Kerswill (1996) reveals how at the pre-adolescent stage (ages 6-12), there is the onset of a shift from parent-oriented to peer-oriented language use: children's speech becomes more and more like that of their peers. Kerswill and Williams (2000) demonstrate this with the situation in Milton Keynes (an English new town). Children in Milton Keynes grow up amidst various dialects brought into the new town by different immigrants. However, by age 12, these varieties have fizzled out for a more homogenous local accent as a result of social pressure on adolescents to accommodate to their peers. Some studies (e.g. Wolfram, 1969; Macaulay, 1977; Eckert, 1988) particularly show low correlation between adolescents and the socio-economic status of their parents in favour of high conformity to adolescents' age group.

Eckert (1997) further describes the adolescence as a period of identity construction and argues that the activities that occur at this stage involve linguistic innovation. It is a period when social use of vernacular is encouraged and linguistic change is advanced. According to Kerswill (1996:198), "adolescents are clearly significant bearers of change; their networks allow them to have wider contacts than younger children, and their desire for a distinct social identity means that they are willing to modify their speech".

Adulthood is usually assumed to be a period of stable and fixed phonological language system. Studies (e.g. Labov, 1966; Trudgill, 1974; Horvarth, 1985) have shown that adults are generally more conservative in their use of variables than younger age groups; a fact attributed to demand for use of standard language in the work place and social networks (Sankoff and Laberge, 1978; Nichols, 1983). Nichols

(1983), for example, studied African-American women and found linguistic imperatives of the workplace as an important determinant of patterns of variation.

However, some studies in real time have recently begun to examine the possibility of language change ongoing in adulthood. Coupland (1980) and Mees and Collins (1999) reveal how certain factors as the social ambition of an individual may actuate possible changes in their choice of sociolinguistic variants. In a real time study of four Cardiff women, Mees and Collins (1999) investigated the use of glottal variants of /t/ which are uncharacteristic of Cardiff local variety of English. They showed that the use of glottal variants was more evident in the speech of speakers who desired to move out of Cardiff, while those who preferred to stay used the variants less. In the same vein, Harrington, et al. (2000) studied changes in Queen Elizabeth II's production of vowel and found that there is a shift in her pronunciation from a stereotyped upper class RP towards a more mainstream variety of RP.

3.2.1.2   Gender

Gender is related to the biological sex of speakers either as male or female. As a sociolinguistic variable, however, gender is considered the social interpretation of sex in terms of roles, norms and expectations that apply to men and women (Eckert 1989; Cheshire, 2002; Hannisdal, 2006). Considerable evidence exists on the differences between the language of males and females. On the average, men and women tend to use slightly different language styles.

Over the years, research into gender-specific variation studies has undergone various phases and yielded quite a lot of different claims. Some earlier studies actually viewed the speech behaviour of women in terms of deficiency model. In this sense, the language of men was considered stronger, more prestigious, and more desirable than that of women which was regarded as surbodinate and deficient (Lakoff, 1975; Wodak and Benke, 1997).

In another perspective, gender-related studies divided women and men's styles of speech into good-bad dichotomy (Trömel-Plötz, 1984), thereby over generalising the strengths of women styles. For instance, the female style was considered cooperative and that of male competitive. However, these studies did not take into consideration intra-gender differences; they associated the sexes with the respective gender, and relied on a unitary model of gender. Another phase of linguistic gender studies that was to follow concentrated on studying fine-grained differences in the

speech behaviour of men and women, thereby leading to a situational ranking of both sexes. Studies in this phase paid adequate attention to gender category and reflected the power structures of society in gender description, discarding the deficit theory for dominance theory of gender (O'Barr & Atkins, 1980). Deuchar (1990), in this regard, claims that female use the standard language as a means of improving their inferior position in a male-dominated world; the weaker a woman's position, the more she is forced to be polite.

Gender socialization was the focus of the next phase of gender research. Studies in this approach, otherwise called difference theory, emphasized differences in subcultures and socialization processes, rather than context-specific power relations. The direction of gender studies in this tradition focused on unraveling questions such as whether men interrupt women more often than women do, whether men dominate topics of conversation, whether women are hypercorrect, and whether more women use more standard language than men. Tanen (1991), in this regard, argued that men have a report style, aiming to communicate factual information, whereas women have a rapport style, more concerned with building and maintaining relationships.

Labov's early work in the 1960s signalled the beginning of gender-specific variation studies. His (1963, 1966) studies emphasized the relevance of sex/gender as a sociolinguistic variable. He expressed the notion that women of all classes and ages employ more standard linguistic variants than men. This is what Hudson (1996) refers to as the Sex/Prestige Pattern. Labov (1990) believes that women are more sensitive to the incoming prestige forms than men in language change from above, and that men, most often, lead in language change from below. In this regard, women have been found to prefer fully articulated forms to forms that show the effects of casual speech processes, in view of their adherence to correctness; phonetically explicit forms are considered more correct than reduced forms (Zue and Laferriere, 1979; Hannisdal, 2006). Labov (1991), however, explains that women's sensitivity to prestige forms is a function of their influence and position in a given society. In societies where women are given little or no freedom of speech (e.g. Iran and parts of India), women use more non-standard forms than men.

Trudgill (1972, 1983) also patterned his gender-specific variation study on Labov (1966) work. He, however, went a step further to provide sociological causes of the perceived gender-specific differences in language variation. Trudgill (1972) relates this cause to insecurity of the position of women in the society and the need for them

to use language to secure and signal their social status. He also links this to the fact that men's worth is appraised by their work, while women's assessment is based on their appearance, which includes language.

Milroy and Milroy's (1980, 1981, 1987) network approach concentrates on the internal variation within a group (the working class [WC]) rather than the language community as a whole. This has gone to establish significant variation between men and women speech within a particular social network. It also provides opportunity for associating particular linguistic patterns with specific peculiarities of the network structures. Like the previous scholars, the Milroys establish the general tendency for women to use more standard forms than men and vice versa and further provide explanations for this. According to Milroy (1981), the use of non-standard forms or vernacular speech by men is as a result of more rigid group pressure to which they are subjected, while women's speech is determined by the linguistic freedom tolerated by their local peer group.

However, some other studies have considered the idea of treating gender as an independent variable in measuring language use and behavior as inadequate. For instance, Eckert (1989) found that the relation between gender and linguistic variation has been inadequately established because men and women within the same society come to experience life, culture, and society differently. Gal (1995:173) observes that variationists have overlooked ''the cultural constructions of language, gender and power,'' which influence men and women's language behaviour. Cheshire (2002:428) also points out that the ''empirical basis'' for the sociolinguistic variation of gender, which puts women ahead of men in the use of standard language, has come to be questioned in recent years. Eckert and McConnel-Ginet (2003) have shown a shift in the perception of gender in recent gender studies. Instead of being simply viewed as an inactive form of identity that people possess, gender is now treated as an active and salient social category that can influence speakers' language use and behaviour in a variety of ways.

3.2.1.3   Ethnicity

Ethnicity is a concept that describes regional or geographical identification or groupings of people on the basis of common geneology and ancestry. Ethnic groups primarily share cultural and linguistic traits as well as a group history. To a great extent, then, language is an important marker of ethnicity. If one considers Milroy and

Milroy's (1997) assertion that the same language varies from speaker to speaker or from community to community, it will not be difficult to agree that regional or ethnic leaning of speakers contribute largely to variation in speech. This view is succinctly expressed by Bailey and Robinson (1973) that:

> Because the forces of standardization have not yet completely levelled the individuality resulting from genetic make-up and rearing, removed the human impulse to gather in manageably small groups, or erased the cultural differences that distinguish group from group or nation from nation, language must be as various as the groups who use it and the activities they engage in.

Studies (e.g. Spencer, 1971; Tiffen, 1974; Platt et al., 1984; Akere, 1978) have particularly shown mother tongue influence as one of the major features of non-native Englishes. This is understandable considering the fact that English coexists with various indigenous languages and different ethnic groups who use them in the non-native setting. Therefore, the English language as used in these different ethnic communities is bound to exhibit influences or interference features from the ethnic languages of its users. As a matter of fact, it has often been said that there are as many geographical varieties of English in Nigeria as there are local languages spoken (Banjo, 1979; Adegbija, 1988; Bamgbose, 2004). Strevens (1965:113), for example, opines that "One would expect a description of the pronunciations of English which may be heard in West Africa to bear a close relationship to description of the phonetic characteristics of the language spoken as a mother tongue by various groups of people". In the light of this, speakers from the same ethnic group have been shown to demonstrate homogenous features in their pronunciation of English words. Thus, the spoken English of Yoruba, Igbo, Hausa/Fulani, Edo, Tiv, Ibiobio speakers in Nigeria tend to mirror the phonetic features of each of these indigenous languages. For example, while Hausa speakers insert vowels to split a consonant clusters as in [rezigineʃən] for [rezɪgneɪʃən], Yoruba speakers nasalise English vowels preceded by nasals, e.g. [mɔ̃niŋ] for [mɔ:nɪŋ] (Bamgbose,1971; Simo Bobda, 1994).

Beyond ethnicity, however, language has been proved to vary according to region, nation and wider geographical areas. In this regard, Jibril (1979:43) asserts that "Members of several ethnic groups residing in adjacent parts of the country share many characteristics in their spoken English with one another". As far as Mbassi-Manga (1973) is concerned, there exist many varieties of English as there are countries which use it as a second language. There abound in the literature features of non-

native English which cut across national boundaries. Simo Bobda (1995) specifically shows such common traits between Cameroon English and Nigerian English. It is against this background we can talk of Yoruba, Igbo, Hausa/Fulani varieties of English, Southern or Nothern Nigerian English (as described by Jibil (1982)), Nigerian English, Ghanaian English, West African English, East African English, African English, South Asian English, etc.

In view of this, this study examines variation in connected speech processes of Nigerian speakers of English in terms of their regional groupings and contiguity-North (comprising Hausa and a few other Nrothern language groups), West (comprising Yoruba ethnic group), East (comprising Igbo ethnic group) and South-South (comprising Edo, Ibiobio, Urhobo and few other language groups in the South-South region).

CHAPTER 4

PILOT STUDY

4.0   Introduction

This chapter reports the findings of a pilot study conducted to investigate Standard British English connected speech processes (CSPs) in Nigerian English, using speakers of Educated Yoruba English (EYE) (one of the sub-varieties of Nigerian English selected for the larger study). The Yoruba ethnic group is a major ethnic nationalities found in the west of the country. The pilot study was necessitated by the need to validate the research instruments to be used for the main study and ascertain whether the phenomenon is researchable or not.

One hundred and twenty EYE speakers born, raised and educated in Yorubaland, with a minimum of two to three years post-secondary education served as participants. They comprised 60 males and 60 females between ages 18-65. For the purpose of data gathering and analyses, participants were further grouped into four social categories, namely Young Male, Young Female, Adult Male and Adult Female. Each category represents 30 participants. The data for the study comprised 22 utterance items and a short dialogue (containing assimilation, elision and liaison sites) which the participants were guided to produce into digital recording devices. The perceptually transcribed data were analysed statistically, using percentages and student t-test statistical tools.

4.1   Statistical analysis

Voicing assimilation and yod coalescence were examined in assimilation, /t/ deletion, at both morpheme and word boundaries, was investigated in elision, while r-liaison was tested in liaison. All processes found in the data were subjected to statistical analysis. In each boundary context, there were different variants of pronunciation; an appropriate (SBE) variant for was allotted one (1) mark, while zero mark was recorded for each inappropriate variant (non-SBE variant). The total marks

for all participants in each variant were converted to percentages, the higher (or highest) percentage taken as the norm.

In order to test for significance level between each social category in their application of Standard British English CSPs, their scores were subjected to student's *t*-test, an inferential statistical test used to uncover the effect of a categorical independent variable (e.g. age) on a quantitative dependent variable (e.g. elision). It determines whether there is a statistically significant difference between the means in two unrelated groups based on certain hypotheses formulated. The null hypothesis is that the population means from the two unrelated groups are equal ($H_0: u_1 = u_2$), while the alternate hypothesis is that the population means are not equal ($H_A: u_1 \neq u_2$). A level of <0.05 indicates significantly different group means, while > 0.05 indicates that the mean is not significant.

4.1.1 Voicing assimilation

Voicing assimilation is a process whereby contiguous consonants tend to be either all voiced or all voiceless depending on the state of the glottis. This section examined the types of voicing assimilation observed in the speech of EYE speakers in three different contexts and compared their performance with what obtains in SBE. Altogether, nine items were extracted from the data (five in context 1, one in context 2 and three in context 3) as follow:

1. A word-final voiced obstruent followed by a word-initial voiceless obstruent at word boundary, e.g. *cho_se six, ha_ve to, li_ve show, o_f course* and *we'_ve planned.*

2. The reduced form of the third person singular form of *be*, e.g. *dog'_s mine.*

3. A word-initial voiced obstruent preceded by a word-final voiceless obstruent at word boundary, e.g. *bla_ck dress, ni_ce boy, i_ce blue.*

Table 4.1 reveals the frequency and percentage scores for voicing assimilation processes in the three boundary contexts identified above. 600 realisations were expected in the first context, 120 in context 2 and 360 in context 3.

Table 4.1   Frequency and percentage scores for voicing assimilation

Processes	Regressive Devoicing			Progressive Voicing			Progressive Devoicing		
Contexts	1. e.g. [hæɤ̊ tə]			2. e.g. [dɒgz]			3. e.g. [naɪs ḅoy]		
Variants	RD	N/RD	5 x 120	PV	N/PV	1 x 120	PD	N/PD	3 x 120
Tokens of Occurrence	600	0	600	34	86	120	255	105	360
% Score	100	0	100	28.3	71.7	100	70.8	29.2	100

Key: RD- Regressive Devoicing; PV- Progressive Voicing; PD- Progressive Devoicing; N/RD- Non-Regressive Devoicing; N/PV- Non-Progressive Voicing; N/PD- Non-Progressive Devoicing

Table 4.1 above shows that in Context 1 (where a voiced segment precedes a voiceless one at word boundary, e.g. *I have to go*), regressive devoicing (RD) was observed in all 600 instances, e.g. [haɤ̊ t u]. This suggests that EYE speakers conformed to what obtains in SBE where regressive devoicing is usually observed in such a context (Roach, 2000; Katalin and Szilárd, 2006). In Context 2 (which relates to the reduced form of the third person singular of verb *be*), e.g. *the dog's mine*, only 34 (28.3%) cases of progressive voicing (PV) assimilation [dɔgz] were recorded compared to 86 (71.7%) of devoicing [dɔgz̥]. This points to the fact that most EYE speakers failed to employ progressive voicing assimilation, a trend which shows marked deviation from Standard British English. In the third Context (where a voiced segment is preceded by a voiceless one at word boundary, e.g. *ice blue*), EYE speakers approximated to SBE with 255 (70.8%) cases of progressive devoicing, as in [ais ḅlu:]. Only 70 (29.2%) tokens showed absence of progressive devoicing.

4.1.2 Yod coalescence

Yod coalescence is a sub-category of place assimilation whereby alveolar sounds /s, z, t, d/ coalesce or fuse with a following palatal /j/ either within a word or across word boundary to become palato-alveolar /ʃ, ʒ, ʧ, ʤ/ respectively, as in *issue* /ɪsju:/ becoming /ɪʃu:/ and *miss you* /mɪs ju:/ becoming /mɪʃu:/. The present study examines yod coalescence across word boundary; that is, in connected speech. Twelve

items from the data, three for each context, were used to verify the disposition of EYE speakers to this SBE cross-word process, e.g.

1. /s+j/: /s/ is followed by the palatal glide /j/ at word boundary, e.g. *mi<u>ss you</u>r, in ca<u>se you</u>*, and *God ble<u>ss you</u>*.

2. /z+j/: /z/ is followed by the palatal glide /j/ at word boundary, e.g. *ha<u>s your</u>, tho<u>se young</u>*, and *ama<u>ze you</u>.*

3. /t+j/: /t/ is followed by the palatal glide /j/ at word boundary, e.g. *cos<u>t you</u>, wha<u>t you</u>,* and *tha<u>t you</u>.*

4. /d+j/: /d/ is followed by the palatal glide /j/ at word boundary, e.g. *woul<u>d you</u>?, d<u>o you</u> think?* and *coul<u>d you</u>?*

Table 4.2 shows the frequencies and percentages for yod coalescence in the four cross-word boundary contexts above: /s+j/, /z+j/, /t+j/ and /d+j/. Each of the contexts has two different realisations, representing uncoalesced (/sj/, /zj/, /tj/ and /dj/) and coalesced (/ʃ/, /ʒ/, /ʧ/, and /ʤ/) forms respectively. In each context, 360 realisations were expected, making 1,440 tokens altogether.

Table 4.2 Frequency and percentage scores for yod coalescence.

Processes	YOD COALESCENCE												Grand Total		
Contexts	1. /sj/→/ʃ/ [mɪʃɔː]			2. /zj/→/ʒ/ [əmeɪʒʊ]			3. /tj/→/ʧ/ [wɒʧʊ]			4. /dj/→/ʤ/[kʊdʒʊ]					
Variants	YC	YR	3 x 120	YC	YR	3 x 120	YC	YR	3 x 120	YC	YR	3 x 120	YC	YR	12 x 120
Tokens	15	345	360	15	345	360	11	349	360	30	330	360	71	1369	1440
% Score	**4.2**	95.8	100	**4.2**	95.8	100	**3.1**	96.9	100	**8.3**	91.7	100	**4.9**	95.1	100

Keys: *YC- Yod coalescence; YR- Yod retention*

In /s+j/ context, only 15 instances (4.2%) of the coalesced variant /ʃ/ were recorded, e.g. [miʃɔ]; whereas, there were 345 (95.8%) realizations of yod retention [mis jɔ]. In /z+j/ context, EYE speakers, again, articulated just 15 (4.2%) cases of coalesced /ʒ/, e.g. [ameʒu] while yod was retained in 345 (95.8%) instances [amez ju]. The third context: /t+j/ shows 11 (3.1%) incidences of yod coalescence /ʧ/, as in [wɔʧu] and 349 (96.9%) cases of yod retention [wɔt ju]. The realisations of yod in /d+j/ environment reveal 30 (8.3%) cases of coalesced /ʤ/ [diʤu] and 330 (91.7%) instances of uncoalesced variant [did ju]. Overall, only 71 tokens, representing 4.9%,

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of yod coalescence were articulated by EYE speakers, while yod was retained in 1,369 cases, constituting 95.1%. This suggests that EYE speakers deviated significantly from SBE as far as yod coalescence is concerned.

4.1.2.1 The contextual/boundary distribution of yod coalesence

As earlier noted, there are four boundary contexts with potential yod coalescence, namely: /s+j/, /z+j/, /t+j/ and /d+j/. This section, therefore, compares the scores for all coalesced variants, i.e. / ʃ, ʒ, ʧ, ʤ/ with a view to finding out the boundary environment where yod coalescence is the most pronounced in the speech of EYE speakers. Table 4.3 shows the overall percentage scores for all participants in each variant.

Table 4.3 Percentage scores for coalesced /ʃ, ʒ, ʧ, ʤ/ variants.

Variants	%
/ʃ/	4.2
/ʒ/	4.2
/ʧ/	3.1
/ʤ/	8.3

Table 4.3 suggests that variant /ʤ/ has the highest percentage score (8.3) and is significantly different from others. This implies that the participants' use of yod calescence is the most evident in the environment of d + j, e.g. *could you?* [kʊʤu], *would you?* [wʊʤu], *do you think?* [ʤʊ] (This is also reflected in Figure 4.1).
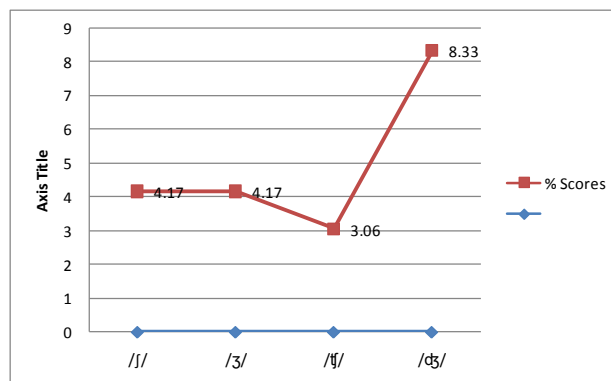
Fig. 4.1 Percentage chart for coalesced /ʃ, ʒ, ʧ, ʤ/ variants.

4.1.3 Elision

In rapid casual speech, sounds that ordinarily are enunciated in isolated words or slow, careful speech get elided for euphonic effect. Specifically, when there is a cluster of two or more consonants word-internally or across word boundaries, some of the consonants usually get elided, e.g. *han(d)kerchief*, *Chris(t)mas*, *nex(t) day* and *fin(d) me*. This has also been described as a process of cluster simplification. We examine here, using ten utterance items extracted from the data (seven in context 1 and three in context 2), the extent to which Educated Yoruba English speakers approximate to SBE in consonant elision at word boundary, e.g.

1. Word-final /t/ before another consonant at word boundary**,** e.g. *doesn't she, won't do it*, *kept quiet, exact colour, test drive, don't buy it, you musn't do it.*

2. Morpheme-final /t/ before another consonant at word boundary**,** e.g. *jumped well, equipped with, fixed price.*

Table 4.4 reveals the frequency and percentage scores for elision in these two contexts. Each is composed of two variants: Ø and /-t/ which represent elision and non-elision respectively. 840 responses were expected from context 1 and 360 from context 2. In all, there are 1200 realisations.

Table 4.4 Frequency and percentage scores for elision.

Processes Contexts	t-deletion (W/F) 1. exact colour			t-deletion (M/F) 2. a fixed price			**Grand Total**		
Variants	Ø	/-t/	7 x 120	Ø	/-t/	3 x 120	Ø	/-t/	10 x 120
Tokens	398	442	840	143	217	360	541	659	1200
% Score	**47.4**	52.6	100	**39.7**	60.3	100	**45.1**	54.9	100

Key: W/F: Word Final; M/F: Morpheme Final

Table 4.4 above illustrates the patterns of cluster simplification by consonant elision in two different contexts in the connected speech of Educated Yoruba English speakers. Three hundred and ninety eight (398) cases of elision, representing 47.4%,

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were observed in context 1 (where word final /t/ is followed by a word initial consonant), e.g. [egzɑˈkɔlɔ], against 442 (52.6%) occurrences of the non-elision variant. This shows that more than half of the speakers did not elide /t/ in this position, while a little below average did.

In the second context (where morpheme final /t/ is followed by a word initial consonant), there were 143 instances of elision, e.g. [fiˈsˈprais], translating to 39.7%. On the other hand, 217 (60.3%) realisations of non-elision were observed. This suggests that there were clearly fewer cases of elision in this context too. Overall, many educated Yoruba speakers failed to elide /t/ in both contexts, which implies that EYE speakers deviated from what obtains in SBE. This is clearly at variance with Simo Bobda's (2007:417) discovery that "simplification of word final consonant clusters... is a principal feature of African English accents", and Jibril's (1982) view that consonant deletion is common in Nigerian English in fast speech or in a bid to reduce consonant cluster. However, the performance may be justified on the grounds that the data for this study was elicited from the participants in a way that only resembled casual speech.

But comparing both elision contexts, we cannot but agree with Simo Bobda (2007:418) that "a final alveolar stop preceded by a morpheme boundary is more resistant to deletion than one which is not". This is because we found there were less cases of deletion in context 2 than context in 1 (39.7% against 47.4%)

4.1.4 Liaison

Liaison, according to Crystal (2003:269), is a "transition between sounds, where a sound is introduced at the end of a word if the following syllable has no onset". Typical of this process are linking and intrusive (r). This study examines linking /r/.

Table 4.5 shows the frequency and percentage scores for linking /r/ across-word boundary in the following utterance items extracted from the data: *Peter at, more of him, after a while, their action, inquire about, colour of , for all, there are*, *over eat*, *power-assisted steering*. There are two variants: /r/ and Ø, representing linking /r/ and /r/ suppression respectively. Altogether, 1200 realisations were expected.

Table 4.5 Frequency and percentage scores for linking /r/.

Process	Linking /r/		
Contexts	e.g. *more of* [mɔːr əv]		
Variants	r-liaison	r-suppression	10 x 120
Tokens	89	1111	1200
% Score	7.4	92.6	100

Table 4.5 above reveals incidence of linking /r/ in the connected speech of EYE speakers. Of the 1200 anticipated cases of linking /r/, only 89 instances, representing 7.4%, were recorded. On the other hand, there were 1111, that is, 92.6% instances of /r/ suppression. It is obvious from the results that most EYE speakers did not make use of linking /r/, which implies that this process is not a regular connected speech feature of the variety. One factor that probably accounted for the suppression of /r/ is the low level of awareness for this feature in Nigeria; it is not a sound feature heard every so often except, sometimes, during newscast. Besides, many EYE speakers who are possibly aware of it tend to avoid using it during speech because it sounds foreign and affected.

4.1.4.1 Linguistic correlates of linking /r/

The linguistic factors that constrained the use of linking /r/ were investigated. It was discovered that linking /r/ occurred more frequently between short grammatical words, e.g. *there are*, *more of*, *after a while*, etc. and rarely between lexical words like *over eat, power assisted*; or a combination of lexical and grammatical words, e.g. *Peter at, inquire about, their action and colour of* (see Table 4.6).

Table 4.6   Linking /r/ according to the grammatical category of the surrounding words

	Lexical words	Grammatical words	Total
Process	Linking /r/	Linking /r/	
Tokens of occurrence	4	85	89
% Score	4.5	95.5	100

As shown in Table 4.6 above, only 4 instances, representing 4.5% of the realised linking /r/ variant occurred when both or one of the adjacent words are lexical words; while 85 or 95.5% cases were recorded when /r/ appeared between two grammatical categories. Specifically, over 95% cases of the realised /r/ variant occurred in-between function words. This implies that the few instances of linking /r/ found in EYE occurred predominantly between grammatical items.

4.1.5   Summary of performance

This section presents the overall performance of EYE speakers in all the processes examined, with a view to determining their proximity to SBE. Thus, Table 4.7 is a summary of the EYE speakers' performance in all the processes investigated. In view of the fact that each of the processes contained different number of items, the total score for each was converted to a percentage. All the calculated percentages were then summed up and used to arrive at the overall percentage.

Table 4.7 Summary of CSPs of SBE in EYE data

Process	Assimilation				Elision		Liaison	Grand Total			
Variant	Regressive Devoicing	Progressive Voicing	Progressive Deoicing	Yod Coalescence	/t/- deletion (word boundary)	/t/- deletion (morpheme boundary)	Linking /r/	Grand Total (% tokens of occurrence)	Grand Total (% tokens expected)	Overall % (Approximation)	Overall % (Deviation)
EYE (%)	100	28.3	70.8	4.9	47.4	39.7	7.4	298.5	700	**42.6**	57.4
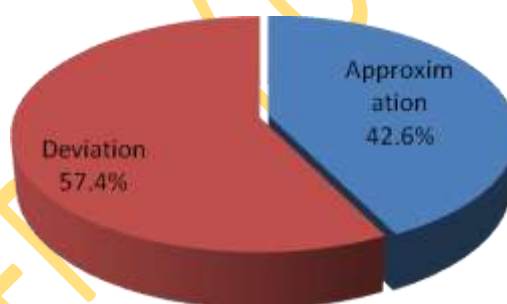
Fig. 4.2 Pie chart showing percentage summary of CSPs of SBE in EYE data.

Table 4.7 (coroborated by Fig 5.6) above shows that with an overall score of 42.6% approximation to and 57.4% deviation from SBE connected speech processes, EYE Speakers deviated considerably from SBE connected speech processes. This finding establishes the marked difference between SBE and NE.

4.1.6 Sociophonetic variation of connected speech processes

This section examines the social differentiation of these processes in EYE under the broad categories of assimilation, elision and liaison (voicing assimilation and yod coalescence were collapsed under assimilation). This was done in relation to the

variables of gender (male and female) and age (young and adult), using inferential statistics (Student's *t*-test). The following research questions were addressed:

(a)   Is there a significant difference between male and female speakers' articulation of assimilation, elision and liaison processes of SBE connected speech?

(b)   Is there a significant difference between young and adult speakers' articulation of assimilation, elision and liaison processes of SBE connected speech?

The differences between the mean scores were determined at the significant level of 0.05.

4.1.6.1 T-test analysis for gender

In response to research question (a), effects of gender on assimilation, elision and liaison processes were examined. Table 4.8 below shows the mean scores for each speaker group in each process, while Table 4.9 reveals their significant levels.

Table 4.8 Gender mean scores for assimilation, elision and liaison.

Group Statistics

	GENDER	N	Mean	Std. Deviation	Std. Error Mean
Assimilation	MALE	60	8.0000	1.04151	.13446
	FEMALE	60	8.0000	1.36543	.17628
Elision	MALE	60	5.0167	.99986	.12908
	FEMALE	60	4.0000	.80254	.10361
Liaison	MALE	60	.7333	.84104	.10858
	FEMALE	60	.7500	.75071	.09692

The performance of male and female speakers in assimilation and liaison portrayed little or no difference between the two speaker groups. They both had the same mean score (8.0) in assimilation, while females scored slightly higher (0.75) than males (0.73) in liaison. In elision, male speakers recorded a higher mean score (5.01) than female speaker (4.0). Not surprisingly, *t*-test results (Table 4.9) established no significant difference between the genders in assimilation ($t_{(118)} = 0.000$; $p = 1.000$) and liaison ($t_{(118)} = -.115$; $p = 0.909$), but showed that males' mean score in elision was significantly better than females' ($t_{(112.723)} = 6.142$; $p = 0.028$).

Table 4.9 Results of T-test analysis for gender

Independent Samples Test

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | 95% Confidence Interval of the Difference | |
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Assimilation	Equal variances assumed	3.008	.085	.000	118	1.000	.00000	.22170	-.43903	.43903
	Equal variances not assumed			.000	110.292	1.000	.00000	.22170	-.43935	.43935
Elision	Equal variances assumed	4.949	.028	6.142	118	.000	1.01667	.16552	.68889	1.34444
	Equal variances not assumed			6.142	112.723	.000	1.01667	.16552	.68874	1.34460
Liaison	Equal variances assumed	.630	.429	-.115	118	.909	-.01667	.14554	-.30487	.27154
	Equal variances not assumed			-.115	116.509	.909	-.01667	.14554	-.30491	.27158

The above finding suggests gender variation in elision in the connected speech of EYE speakers; male participants elided significantly more than females. This variation may be ascribed to speech casualness and sloppiness of the male folk compared to the females' thorough, careful and formal speech as established in the literature.

4.1.6.2 T-test analysis for age

Effects of age on assimilation, elision and liaison processes were examined with a view to answering research question (b). The mean scores for each speaker are displayed in Table 4.10 below.

Table 4.10 Age mean scores for asimilation, eision and liaison

Group Statistics

	AGE	N	Mean	Std. Deviation	Std. Error Mean
Assimilation	YOUNG	60	8.5000	1.20028	.15496
	ADULT	60	7.5000	1.00000	.12910
Elision	YOUNG	60	4.2667	.82064	.10594
	ADULT	60	4.7500	1.17351	.15150
Liaison	YOUNG	60	.5500	.59447	.07675
	ADULT	60	.9333	.91812	.11853

Table 4.10 shows that young speakers (with a mean score of 8.50) assimilated more than adult speakers (7.50), but had less mean scores in elision (4.27) and liaison (0.55) compared to the adults' mean scores of (4.75) and (0.93) in elision and liaison respectively. The *t*-test results (Table 4.11) established significant differences between these sets of mean scores. Young speakers performed significantly better than adult speakers in assimilation ($t_{(114.275)}$ = 4.958; p = 0.000), while   adult speakers' mean

scores were significantly higher than young speakers' in elision ($t_{(105.568)}$ = -2.614; p = 0.010) and liaison ($t_{(101.075)}$ = -2.715; p < 0.008). The results are summarized in Table 4.11.

Table 4.11 Results of T-test analysis for age

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Assimilation	Equal variances assumed	4.593	.034	4.958	118	.000	1.00000	.20169	.60060	1.39940
	Equal variances not assumed			4.958	114.275	.000	1.00000	.20169	.60047	1.39953
Elision	Equal variances assumed	9.029	.003	-2.614	118	.010	-.48333	.18487	-.84942	-.11724
	Equal variances not assumed			-2.614	105.568	.010	-.48333	.18487	-.84987	-.11680
Liaison	Equal variances assumed	11.382	.001	-2.715	118	.008	-.38333	.14120	-.66296	-.10371
	Equal variances not assumed			-2.715	101.075	.008	-.38333	.14120	-.66344	-.10322

These results, again, establish variation in the connected speech of young and adult EYE speakers. Assimilation seems to be more prevalent among the young speakers, while the adults, surprisingly, elided more than the young. The significant score difference between the age groups in liaison seems to suggest a diachronic shift in the awareness and use of r-liaison in EYE, which may mean that linking /r/ is being erased from the accent of the young due to absence of awareness.

4.2   Summary, conclusion and further studies

This pilot study set to investigate certain features of Standard British English connected speech (voicing assimilation, yod coalescence, elision and liaison) in Educated Yoruba English from a sociophonetic perspective, as a prelude to a larger study on Nigerian English. The findings revealed the extent of approximation of EYE speakers to the Standard British English connected speech processes, as well as the social differentiation of these features according to gender and age.

Overall, the occurrence of the CSPs of Standard British English in EYE speech revealed 42.6% approximation and 57.4% deviation. First, it was observed that EYE speakers approximated to SBE in only a few connected speech processes, while they deviated in varying degrees in others. For instance, they approximated to the SBE norms in regressive devoicing which occurred (100%) in an environment of a voiced segment preceding a voiceless one at word boundary (e.g. *I ha<u>ve to</u> go* [hḁ tu]) and in progressive devoicing found at the boundary environment where a voiceless segment precedes a voiced one. (e.g. ni*<u>ce boy</u>* [nais b̥ɔi]). EYE participants overwhelmingly scored 70.8%.

On the other hand, they deviated from Standard British English CSPs in progressive voicing, yod coalescence, elision and liaison. Progressive voicing, found in the reduced form of the third person singular form of verb *be* (e.g. *The dog's mine* [dɔgz main]), had a very low occurrence (23.3%); most participants realized [z] as [s or ẓ] in this position. Incidence of yod coalescence was abysmally low in all cross-word boundary environments where yod should have coalesced with /s, z, t, d/ (e.g. *miss your* [mɪʃɔ]); EYE speakers employed this feature in just 4.9% cases. In the same vein, at both boundary contexts where elision was tested, many EYE participants did not elide /t/ significantly, scoring 47.4% in the environment where word-final /t/ is followed by a word initial consonant and 39.7% where morpheme final /t/ is followed by a word initial consonant. With an overall score of 45.1%, EYE speakers deviated from what obtains in SBE. Lastly, linking /r/ was barely attested: EYE speakers only managed to record 7.4% tokens. The only few cases observed occurred between grammatical items like *there are*, *more of you* and *after a while,* etc. It is obvious from the results that that this process is not a regular connected speech feature of EYE.

In terms of social variation, gender variation was attested in elision, with male participants eliding significantly more than females. This, possibly, is a corrolary of male folks' casualness and sloppiness in speech compared to the females' thorough, careful and formal speech as advanced in sociolinguistic research by scholars (e.g. Labov, 1963, 1966; Hudson; 1996). Significant differences were also found between young and adult EYE speakers. Assimilation seems to be more prevalent among the young speakers, while the adults, surprisingly, elided more than the young. Use of linking /r/ was common with adult speakers than young speakers, which seems to suggest a diachronic shift in the awareness of r-liaison in EYE; lexicalised linking /r/ is probably being erased from the accent of the young due to lack of awareness.

In conclusion, this pilot study has served its purpose; in that, it has been able to reveal EYE speakers' proximity to Standard British English connected speech and the social variation of the processes. The findings, without doubt, demonstrated speakers' low level of competence in the use of SBE connected speech processes and their respective variation. Besides, the pilot study has been used to validate the research instruments and, thereby, confirm the possibility of expanding the scope of the research. In view of this, we shall investigate more processes of Standard British English connected speech amongst speakers of English from four regions of Nigeria (East, North, South-South and West), in order to ascertain their occurrence in Nigerian

English and determine the proximity of NE to SBE connected speech. Apart from using statistical tools, we shall conduct acoustic analysis on portions of the data to be collected in order to corroborate findings.

CHAPTER 5

DATA ANALYSIS, FINDINGS AND DISCUSSION

5.0   Introduction

The data used for this study were semi-spontaneous speeches, comprising thirty-one utterance items and a short passage which contained various CSPs sites (see Appendix B). The data were produced into digital recording devices by 360 Nigerian speakers of English. The participants, who ranged between ages 18-65, were 180 males and 180 females with a minimum of 2-3 years post-secondary education. They were drawn, through stratified and purposive techniques, from four regions in Nigeria: North (120 participants), West (80 participants), East (80 participants) and South-South (80 participants) (see appendix A). For the purpose of data gathering and variational analyses, participants were sub-divided into four social categories: Young Male, Adult Male, Young Female and Adult Female. Each category comprised 90 participants (30 from the North, 20 from the West, 20 from the East and 20 from the South-South region), making three hundred and sixty (360) participants altogether. Two educated native speakers, who served as control, also produced the same utterances.

Two major levels of analyses were adopted in the work. First, the recordings were played back and instances of assimilation, elision and liaison features identified at different boundary contexts in the data were transcribed perceptually and analysed statistically, using Percentages, Multivariate Analysis of Variance (MANOVA) and Bonferroni's Post-hoc Test. The findings were subjected to Standard English phonological rules, as provided in Generative Phonology, to ascertain Nigerian English speakers' application of or deviation from the rules. Second, portions of the semi-spontaneous speech data produced by eight Nigerian participants (representing the four regions and the social categories) were analysed acoustically with a view to corroborating the findings obtained through statistical analysis. The same two levels were also used to analyse the control's production of the data.

5.1 Statistical analysis

Specifically, assimilation, elision and liaison processes which, according to Cruttenden (2001), are the most common features of Standard British English (SBE) connected speech were investigated in the data at different boundary contexts. Under assimilation, variants of assimilation of voice and assimilation of place were investigated; boundary consonant elision strategies were considered under elision; while linking-r and intrusive-r were the subject of inquiry in liaison.

In each boundary context, there were different variants of pronunciation; an appropriate (SBE) variant for each context was allotted one (1) mark, while zero mark was recorded for each non-SBE variant. The total scores for all participants in each variant were converted to percentages, the higher percentage taken as the norm. In order to test for significance levels between the social categories in their production of Standard British English CSPs, their scores were subjected to Multivariate Analysis of Variance (MANOVA) and Bonferroni's Post-hoc Test, using the IBM SPSS statistics 20 package.

5.1.1 Assimilation in NE

The subject of assimilation was investigated from the perspective of voice and place assimilation. This is because, unlike assimilation of manner, they are more prevalent amongst native speakers. Besides, it is easier to capture other categories of assimilation (e.g. regressive, progressive or coalescent) under this classification.

5.1.1.1 Assimilation of voice

Assimilation of voice is a process whereby, in SBE, contiguous consonants tend to be either all voiced or all voiceless depending on the state of the glottis. This section examined the occurrence of this assimilation process in the NE data at three different boundary contexts and compared the performance with what obtains in Standard British English (as represented by the control). Altogether, thirteen (13) items were extracted from the data (six items in context 1, three in context 2 and four in context 3) as follows:

1. A word-final voiced obstruent followed by a word-initial voiceless obstruent at word boundary, e.g. *chose six, have to, live show, of course, we've planned* and *five pounds.*

2. the reduced form of the third person singular of verb *be* preceded by a voiced segment, e.g. *sh<u>e's</u>, h<u>e's</u>, do<u>g's</u> mine.*

3. A word-initial voiced obstruent preceded by a word-final voiceless obstruent at word boundary, e.g. *bla<u>ck d</u>ress, hal<u>f-d</u>one, ni<u>ce b</u>oy, i<u>ce b</u>lue.*

In each context, it was to be determined if assimilation took place, what type was observed and the extent to which speakers approximated to SBE. Table 5.1 shows the frequency and percentage scores of the participants' and the contol's productions at these three boundary contexts. There were 2,160 total tokens in context 1; 1,080 in context 2 and 1,440 in context 3. Altogether, 4,680 tokens were produced by the 360 participants.

Table 5.1 Frequency and percentage scores for assimilation of voice variants

Contexts	1. e.g. have to [hæɣ tə]			2. e.g. dog's [dɒgz]			3. e.g. nice boy [naɪs b̥oy]		
Processes	Regressive Devoicing			Progressive Voicing			Progressive Devoicing		
Varieties	SBE	NE Variants	6 x 360	SBE	NE Variants	3 x 360	SBE	NE Variants	4 x 360
Variants		RD N/RD			PV N/PV			PD N/PD	
Tokens of Occurrence	12/12	2143 17	2160	6/6	229 851	1080	8/8	937 503	1440
% Score	100	99.2 0.8	100	100	21.2 78.8	100	100	65.1 34.9	100

Key: RD- Regressive Devoicing; PV- Progressive Voicing; PD- Progressive Devoicing

N/RD- Non Regressive Devoicing; N/PV- Non Progressive Voicing; N/PD- Non Progressive Devoicing

Table 5.1, corroborated by Fig. 5.1 below, shows that in context 1 (in which a word-final voiced obstruent is followed by a word-initial voiceless obstruent at word boundary), regressive devoicing, e.g. [ʧəʊz̥ sɪks, hæɣ tə], which is the common and acceptable feature in SBE connected speech, was overwhelmingly produced by the control and the NE speakers (12 tokens, representing 100% for the control and 2,143 tokens, representing 99.2% for NE speakers). This suggests that participants comformed significantly to the SBE regressive devoicing rule schematised as:

$$[\text{- sonorant}] \longrightarrow [\text{- voice}] / \text{---------} \#\# \begin{bmatrix} \text{- sonorant} \\ \text{- voice} \end{bmatrix}$$

(*the first obstruent takes on the voiceless feature as is found in the second obstruent*) which is succinctly expressed in the sample derivation of *have to* shown below:

	SBE	NE
Input	hæv ## tə	hav ## tu
Regressive Devoicing	hæɣ to	haɣ tu
Output	[hæɣtə]	[haɣtu]

However, participants' performance appeared to have been motivated by phonological naturalness and mother tongue influence. In the first instance, this assimilatory process fits into natural rule of assimilation which Hyman (1975:171) says "can be attributed to either articulatory or acoustic assimilations or simplifications" or what Abercrombie (1967:135) refers to as "economy of effort in the utterance of a sequence of words" (ease of articulation). Such natural features are phonetically motivated, common and usually attested in different languages. This is because speakers will, generally, opt for easier and more natural sounds (e.g. devoicing) in the course of speaking (Schane, 1973). This explains why it was possible for most participants to devoice the preceding voiced segment in anticipation of the following more natural voiceless sound in each instance examined.

Considered from the mother tongue perspective, the process was easier for most NE speakers, perhaps, because the voiced fricative sounds /v/ and /z/ involved in this assimilatory process at word boundary are not available in the phonemic inventories of a number of Nigerian languages. For instance, while languages like Yoruba, Efik and Itsekiri lack /v/ and /z/, Hausa and Tiv do not have /z/ (Dunstan, 1969). The possible implication of this, therefore, is that some speakers of these languages would have to substitute the sounds in question with their voiceless

counterparts which are available in their languages. This is what James (1980) refers to as positive transfer.

In context 2 (where the reduced form of the third person singular of verb *be* 'is' is preceded by a voiced segment), the analysis of the NE data revealed a marked deviation from SBE. While the control overwhelmingly articulated progressive voicing (word final /s/ becoming voiced [z] after a voiced segment) 100% e.g. [hɪz, dɒgz] as in *he's a nice boy* and *the dog's mine*, the tokens of progressive voicing used by NE speakers were rather insignificant (229 instances out of 1,080 sites, constituting 21.2%). The low occurrence of progressive voicing in context 2 implies that Nigerian English speakers deviated considerably from the Standard British English progressive voicing assimilation rule. This may not be divorced from phonological naturalness and mother tongue transfer (in view of the challenge phoneme /z/ poses to speakers of certain language groups in Nigeria) as earlier noted.

In context 3, where a word-initial voiced obstruent is preceded by a word-final voiceless obstruent at word boundary, progressive devoicing e.g. [haf d̥ɔn, naɪs b̥ɔi] *half done* and *nice boy* was substantial in the speech of NE speakers with 937 occurrences, translating to 65.1%. The same trend, though with a higher figure (100%) was observed in the control's production. This suggests that NE speakers closely approximated to SBE progressive devoicing rule formulated as:

$$[\text{- son}] \longrightarrow [\text{- voice}] \bigg/ \begin{bmatrix} \text{- son} \\ \text{- voice} \end{bmatrix} \text{\#\# ---}$$

(a voiced obstruent is devoiced after a voiceless obstruent at word boundary) and expressed in the sample derivation of *nice boy* as follows:

	SBE	NE
Input	naɪs ## bɔi	naɪs ## bɔi
Progressive Devoicing	naɪs ## b̥ɔi	naɪs ## b̥ɔi
Output	[naɪsb̥ɔi]	[naɪsb̥ɔi]
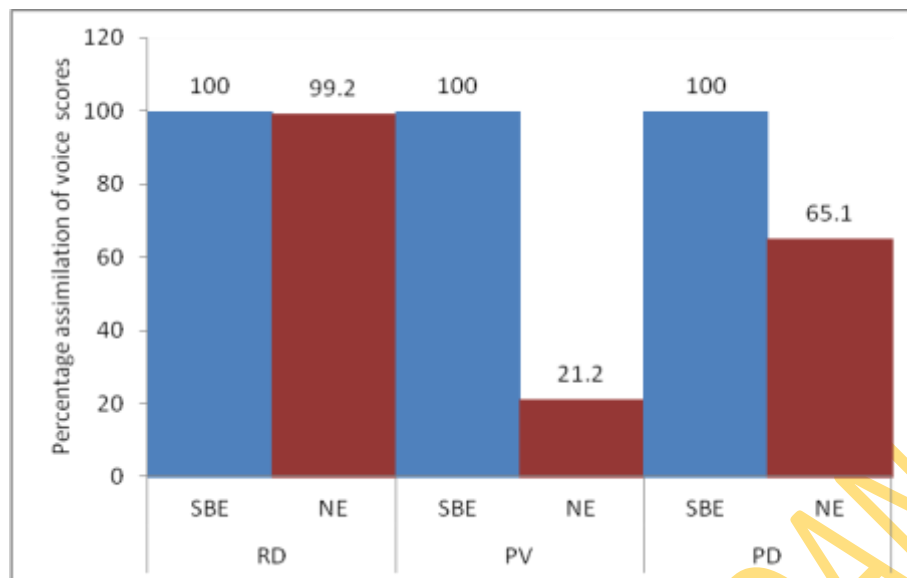
RD: Regressive Devoicing;   PV: Progressive Voicing; PD: Progressive Devoicing;
SBE: Standard British English; NE: Nigerian English

Fig. 5.1 Percentage voicing assimilation score differences for SBE and NE speakers.

Besides the connected speech processes of SBE identified under the category above, NE speakers also employed peculiar CSPs which are not attested in SBE, especially where they could not articulate the SBE forms substantially. Table 5.2 below details some of these processes.

Table 5.2 Frequency and percentage scores for typical assimilatory processes in NE

Processes	Final Devoicing	Regressive Voicing	Consonant substitution
Tokens of occurrence	851/1080	439/1440	18/1800
% Score	78.8	30.5	1

According to Table 5.2, NE speakers predominantly produced final devoicing in lieu of progressive voicing, scoring 851 tokens (78.8%) out of 1,080. The /z/ of *He's* was devoiced to   [s or ẓ], e.g. [his]; while *dog's* became [dɔgẓ or dɔks in certain instances]. Final devoicing, a process whereby final obstruents are devoiced in absolute and non-absolute word final position (Simo Bobda, 1994), has been reported to be a typical feature of Nigerian and neighbouring West African Englishes (Tiffen,

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1974; Bamgbose, 1982; Adetugbo, 1977; Jibril, 1982; Awonusi, 1987, 2004b; Simo Bobda, 1994). Josiah's (2009) opines, with regard to this process, that many educated Nigerians realize word final /z/ as devoiced [z̥] or [s] except in context where /z/ is found intervocalically. Laver (1968), categorically, claims that there is absence of progressive voicing assimilation in educated Nigerian English. Simo Bobda (2007) also asserts, in this regard, that unlike the RP which has archiphoneme /Z/ for morpheme {s} and may undergo devoicing by voicing assimilation rule, NE has archiphoneme /S/ which, on most occasions, remains unchanged at the surface level.

Final devoicing in NE, then, may be a product of what Aitchison (1981:32) referred to as "the general and inevitable weakness of articulation of sounds at the end of words", which is a function of naturalness in phonology by which speakers tend to employ features that require less articulatory effort and are attested in many languages (Hyman, 1975; Simo Bobda, 1994). Schane (1973:116) states, in this regard, that "a rule that makes obstruents voiceless in word final position is more normal than one voicing them in that environment." This assimilation process (final devoicing rule) is captured as:

[- son] ⟶ [- voice] / [+ voice] # ----

(obstruents are devoiced in final position) and expressed in the sample derivation of *dog's* as follows:

	SBE	NE
Input	dɒg#Z	dɔg#Z
Progressive Voicing	dɒg#z	------------
Final Devoicing	----------	dɔgz̥ / dɔks
Output	[dɒgz]	[dɔgz̥] / [dɔks]

Another CSP somewhat attested in the NE data, which was not articulated by the control, is regressive voicing assimilation whereby *ice blue* and *black dress* were articulated as [aiz blu] and [blag drɛs] respectively. 439 instances of this process, representing 30.5%, were articulated in context 2 in lieu of progressive devoicing of SBE. Although Laver (1968) had claimed categorically that NE allows regressive voicing assimilation, this finding does not support the prevalence of this feature in Nigerian English, as only a minority of speakers produced it.

Apart from the two processes discussed above, there were 18 (1%) cases of consonant substitution, e.g. [hap dɔn, hap tu, ɔp kɔs, wip pland, faif fauns] for *half*

done, have to, of course, we've planned and *five pounds* produced by 12 participants from the North (7 Hausa, 2 Fulani, 2 Jenjo and 1 Eggon speakers). This is a clear case of mother tongue influence peculiar to participants from the northern part of the country, where /p/ is substituted for /f/ and vice versa, obviously, due to the influence of Hausa which is more or less a lingua franca in that region. It is on record that the articulation of /p/ and /f/ poses difficulty to Hausa speakers who, according to Jowitt (1991), frequently realize /p/ as [f] and /f/ as [p] since [p], [f] and [Φ] are allophones of /p/ or /f/ in Hausa.

5.1.1.2 Assimilation of place

Assimilation of place is concerned with changes in the place of articulation of a segment (usually a consonant) at word boundary. In SBE, these changes are usually regressive (e.g. meat pie [mi:p pai]) or coalescent (e.g. *what you* [wɒʧʊ]). The concern of this section, therefore, is to verify the occurrence and direction of these two types of place assimilation in the connected speech of Nigerian English speakers, with a view to establishing the extent of their approximation to or deviation from SBE.

The junctural sites where these assimilation types were found in the data comprised word-final alveolar /t, d, n/ preceding word-initial bilabial or velar stop consonants /b, p, k, g/; and word-final /s, z, t, d/ following word-initial palatal glide /j/. 11 of such items extracted from the data were grouped into 4 contexts as follow:

1. The voiceless alveolar stop /t/ followed by a voiceless bilabial or velar stop /p, k/ at word boundary, e.g. *met Peter* and *that case*.
2. The voiced alveolar stop /d/ followed by a voiced bilabial or velar stop /b, g/ at word boundary, e.g. *good bye* and *good girl*.
3. The alveolar nasal /n/ followed by bilabial stops /b, p/ or velar stop /k/ at word boundary e.g. *ten boys, ten pounds* and *in case*).
4. /t, d, s and, z/ followed by the palatal glide /j/ at word boundary, e.g. *miss your, those young men*, *what you want, could you*.

The frequency and percentage scores for variants produced by the participants and the control group in these boundary contexts are presented in Table 5.3 below. Altogether, there were 3,960 tokens of occurrence: contexts 1 and 2 have 720 tokens each; context 3: 1080; context 4: 1440.

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Table 5.3 Frequency and percentage scores for variants of place assimilation

Context	1. e.g. met Peter [mep pɪtə]			2. e.g. good girl [gʊg gɜ:l]			3. e.g. ten boys [tem bɔɪz]			4. e.g. could you [kʊʤʊ]		
Processes	Voiceless Alveolar Stop Assm.			Voiced Alveolar Stop Assm.			Nasal Assimilation			Yod Coalescence		
Varieties	SBE	NE Variants	2 x 360	SBE	NE Variants	2 x 360	SBE	NE Variants	3 x 360	SBE	NE Variants	4 x 360
Variants		VLASA N/VLASA			VASA N/VASA			NA N/NA			YC YR	
Tokens of occurrence	4/4	343 377	720	4/4	23 697	720	4/4	686 394	1080	7/8	89 1351	1440
% Score	100	**47.6** 52.4	100	100	**3.2** 96.8	100	100	**63.5** 36.5	100	87.50	**6.2** 93.8	100

Keys: VLASA- Voiceless Alveolar Stop Assimilation; VASA- Voiced Alveolar Stop Assimilation; NA- Nasal Assimilation; YC- Yod Calescence

N/VLASA- Non Voiceless Alveolar Stop Assimilation; N/VASA- Non Voiced Alveolar Stop Assimilation; N/NA- Non Nasal Assimilation; YR- Yod Retention.

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In Context 1, where voiceless alveolar stop /t/ is followed by voiceless bilabial and velar stops /p, k/ at word boundary, e.g. *met Peter* and *that case,* NE speakers produced less instances of voiceless alveolar stop assimilation, e.g. [mɛp pita] and [dak kes] compared to the control group. While the control produced 100% cases of such assimilation, NE participants scored 343 tokens out of 720 expected, translating to 47.6%. On the other hand, they produced 376 tokens (52.2%) of unassimilated variant. This suggests a relative departure from the SBE voiceless alveolar stop assimilation rule schematised as:

$$\begin{bmatrix} \text{alveolar} \\ \text{stop} \\ \text{-voice} \end{bmatrix} \longrightarrow [\alpha \text{ place}] \ / \text{---} \ \#\# \begin{bmatrix} \alpha \ \text{place} \\ \\ \text{stop} \end{bmatrix}$$

(The voiceless alveolar stop /t/ assimilates in place of articulation to the following bilabial or velar stop /p, k/.

Sample Derivation: *met Peter* [mep pɪtə]

	SBE	NE
Input	met ## pɪtə	mɛt ## pita
Vl. Alveolar Stop Assm.	mep pɪtə	---------------
Cluster Simplification	mepɪtə	---------------
Output	[mepɪtə]	[mɛt pita]

In the second context, involving assimilation of voiced alveolar stop /d/ to bilabial or velar stop /b, g/, e.g. *good bye, good girl*, the percentage scores reveal extremely low incidence of voiced stop assimilation [gʊg gɜːl] in the NE data compared to the control group. Only 23 tokens, amounting to 3.2%, were produced by NE speakers, while the control group got 100%. On the other hand, unassimilated variant occurred in 697 cases, representing 96.8%. This, again, reveals a complete deviation from the SBE voiced alveolar stop assimilation rule stated as:
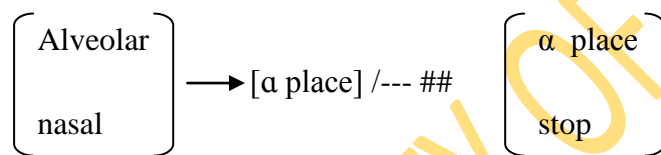
$$\begin{bmatrix} \text{alveolar} \\ \text{stop} \\ \text{+voice} \end{bmatrix} \longrightarrow [\alpha \text{ place}] \ / \text{---} \ \#\# \begin{bmatrix} \alpha \ \text{place} \\ \\ \text{stop} \end{bmatrix}$$

(The voiced alveolar stop /d/ assimilates in place of articulation to the following bilabial or velar stop /g, b/.

Sample Derivation: *good girl* [gʊg gɜ:l]

	SBE	NE
Input	gʊd ## gɜ:l	gud ## gɛl
Vd. Alveolar Stop Assm.	gʊg gɜ:l	---------------
Cluster Simplification	gʊgɜ:l	---------------
Output	[gʊgɜ:l]	[gud gɛl]

In context 3, where the alveolar nasal /n/ is followed by bilabial stops /b, p/ or velar stop /k/ at word boundary, e.g. *ten boys, ten pounds*, *in case*, NE speakers produced a significant incidence of nasal assimilation [tɛm bɔis, tɛm paunds] relatively close to the control's. They scored 63.5% (686 tokens), while the control got 100%. Absence of nasal assimilation was observed in 391 cases, representing 36.5%. This implies that participants substantially comformed to the SBE nasal assimilation rule expressed as:

$$\begin{bmatrix} \text{Alveolar} \\ \text{nasal} \end{bmatrix} \longrightarrow [\alpha \text{ place}] / \text{--- } \#\# \begin{bmatrix} \alpha \text{ place} \\ \text{stop} \end{bmatrix}$$

(The alveolar nasal /n/ assimilates to the place of articulation of a following bilabial or velar stop)

Sample Derivation: *ten boys* [tem bɔɪz]

	SBE	NE
Input	ten ## bɔɪZ	tɛn ## bɔi # Z
Final Devoicing	--------------	tɛn ## bɔis
Nasal Assimilation	tem bɔɪz	tɛm bɔis
Output	[tembɔɪz]	[tɛmbɔis]

Context four is a case of yod coalescence. In SBE, /s, z, t and d/ tend to coalesce with yod /j/ as in *miss your, those young men, what you want* and *could you* to become [mɪʃə, ðəʊʒʌŋ men, wɒʧʊ, kʊdʒʊ] respectively in a rapid speech. However, as can be seen in Table 5.3 (corroborated by Fig. 5.2 below), the occurrence of yod coalescence amongst NE speakers was abysmally low. Only 6.2% (89) incidences of appropriate yod coalescence were produced, compared to 87.5% tokens for the control. On the other hand, 1,204 (93.8%) tokens of the uncoalesced variant (yod retention) were

articulated. This suggests a significant deviation from the SBE yod coalescence rule formalised as:

$$
\begin{bmatrix} \text{-son} \\ \text{+cor} \\ \text{+ant} \end{bmatrix} \rightarrow \begin{bmatrix} \text{- ant} \\ \\ \text{+ strd} \end{bmatrix} \bigg/ \text{-------- \#\#} \begin{bmatrix} \text{-con} \\ \text{-syl} \\ \text{-back} \end{bmatrix} \begin{bmatrix} \text{-con} \\ \text{-stress} \end{bmatrix}
$$

(/t, d, s, z/ are converted into [ʧ, ʤ, ʃ, ʒ] respectively, before the palatal glide /j/ at word boundary.

Sample Derivation: *mi<u>ss y</u>our*

	SBE	NE
Input	mɪs ## jə	mis ## jɔ
Palatalisation	mɪʃ jə	---------------
Yod/Glide Deletion	mɪʃə	---------------
Output	[mɪʃə]	[mis jɔ]

Certain explanations germane to place assimilation in Nigerian English can be deduced from the above analyses. In the first instance, the findings suggest that only nasal assimilation approximated to SBE connected speech processes which, to a large extent, supports Jibril's (1982) claim that assimilation of place in NE is confined to nasals only. This may be explained by the fact that homorganic nasal assimilation is a common phonological process in most Nigerian indigenous languages (Yusuf, 2010). As a matter of fact, it is the principal consonant-consonant assimilation process: most other cases of assimilation affect contiguous vowels or consonants and vowels (cf. section 1.5.1.2).

Conversely, participants showed various degrees of resistance to assimilation in other place assimilation processes- voiced alveolar stop assimilation and yod coalescence were least articulated compared to voiceless alveolar stop assimilation. This is not surprising, considering the fact that assimilation is often triggered when speech is spoken fast and sounds are linked with each other without junctures between them. Nigerian English speakers, however, are known to usually pick and choose their words and, in the process, keep words separate. The corollary of this, therefore, is their inability to produce the assimilatory processes commonly found in SBE connected speech.
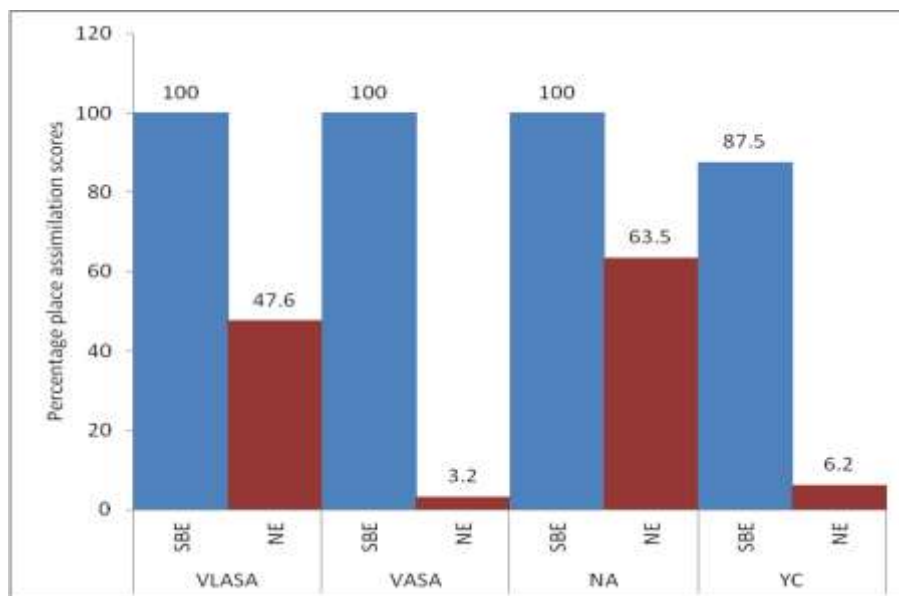
VLASA: Voiceless Alveolar Stop Assimilation; **VASA:** Voiced Alveolar Stop Assimilation;
NA: Nasal Assimilation; **YC:** Yod Coalescence SBE: Standard British English; **NE**: Nigerian English

Fig. 5.2 Percentage (%) place assimilation score differences for SBE and NE speakers.

The performance of NE speakers in yod coalescence, in particular, proved that this phenomenon, which is becoming widespread in SBE (Cruttenden, 2001), is still alien to Nigerian English users. Participants' performance was a far cry from what obtains in SBE as demonstrated by the control's score (87.5%). As shown in Table 5.4 below, speakers had to employ various yod cluster reduction strategies to simplify the yod phenomenon in the data. The first strategy used was deletion in which the final /t/ and /d/ of the first of the adjoining words were deleted in order to avoid their fusion with /j/, e.g. [wɔ ju] *what you* and [ku ju] *could you*. There were 71 (9.9%) cases of such deletion. This deletion rule can be captured as:

t/d → Θ / -------- ## /j/

Sample Derivations: *coul̲d you*

	NE
Input	kud ## ju
Cluster Simplification	ku ju
Output	[kuju]

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Another yod simplification strategy observed is /t/-voicing (what Awonusi (1985) referred to as the Nigeria /t/-tapping), which is "the realisation of intervocalic /t/ as a voiced tap rather than a fortis plosive" (Hannisdal, 2006:4). This was produced (5.8%) in lieu of yod coalescence in *what you* [wɔʈu] by 1 Yoruba speaker, 4 participants from the South-South region (Ogoja, Ogoni, Ibiobio and Ijaw), one Igbo and 14 speakers from the North (Buram, Ngas, Tambul, Tarok, Fulani, Phyem, Jenjo, Igala, Kikaku, Tiv, Challa and Hausa speakers). This realisation can be explained in two ways. First, it may signify the infiltration of GA (General American) into Nigerian English as reported by Awonusi (2004b), especially if found to be predominant amongst young speakers who are known to be linguistic innovators and agents of language change. In other way round it might have been be motivated by inherent articulatory constraints, whereby in keeping with the "principle of least effort" (Wells 1982: 94), speakers produce utterances with a minimum articulatory effort. In this regard, sounding voiceless [t] between vowel [ɔ] and [jʊ], which are all voiced sounds, required the vocal cords to be turned off and on again; whereas, it is a lot easier to allow the voicing throughout the articulation process. The latter explanation seems to be the possible reason for the articulation of /t/-voicing in the data, as the feature was not found to be peculiar to young speakers in the data.

It is, therefore, plausible to state that apart from the tendency to retain yod at word boundary, Nigerian English speakers also employed several yod cluster reductions strategies, explicated above, to resolve the yod cluster phenomenon.

Table 5.4 Frequency and percentage scores for yod reduction strategies

Processes	t/d deletion	t-voicing
Tokens of occurrence	71/720	21/360
% Score	9.9	5.8

5.1.2 Elision in Nigerian English

In rapid casual speech, sounds which ordinarily are enunciated in isolated words or slow, careful speech get elided for euphonic effect; that is, in order to maximize smooth pronunciation. Specifically, when there is a cluster of two or more

consonants word-internally or across morpheme or word boundaries, some of the consonants usually get elided, e.g. *han(d)kerchief*, *Chris(t)mas*, *nex(t) day* and *fin(d) me*. This occurs either because of fast speech or for consonant cluster simplification purposes.

In this section, we examined the application of this SBE feature of connected speech in junctural environments in NE, using fifteen (15) items extracted from the semi-spontaneous speech data. The purpose was to establish the extent to, and the pattern by, which NE speakers elide consonants at morpheme and word boundaries in connected speech, compared to what obtains in SBE. The junctural items extracted were grouped into five (5) contexts as follow:

1. Word-final /t/ before another consonant at word boundary, e.g. *doesn't she, won't do it*, *kept quiet, exact colour, test drive, don't buy it.*

2. Morpheme-final /t/ before another consonant at word boundary, e.g. *jumped well, equipped with, fixed price.*

3. Word-final /d/ before another consonant at word boundary, e.g. *found, five, old man, cold launch.*

4. Morpheme-final /d/ before another consonant at word boundary, e.g. *seemed glad, robbed both, advertised car.*

The frequency and percentage scores for elision produced by the participants and the control in each of these junctural contexts are presented in Table 5.5 below. In all, there were 5,400 tokens of occurrence: 2,160 in contexts 1 and 1,080 tokens in each of contexts 2, 3 and 4.

Table 5.5   Frequency and percentage scores for elision variants

Context	t-deletion (WF) exact colour [ɪgzæˈkɒlə]				t-deletion (MF) jumped well [dʒʌmpˋ wel]				d-deletion (WF) found five [faʊnˋ faɪv]				d-deletion (MF) robbed both [rɒbˋ bəʊθ]				Grand Total			
Varieties	SBE	NE Variants		6 x 360	SBE	NE Variants		3 x 360	SBE	NE Variants		3 x 360	SBE	NE Variants		3 x 360	SBE	NE	SBE	NE
Variants		Elision	N/E			Elision	N/E			Elision	N/E			Elision	N/E		Elision		N/Elision	
Tokens	12/12	1359	801	2160	5/6	614	466	1080	5/6	688	392	1080	6/6	661	419	1080	28	3322	2	2078
% Score	100	62.9	37.1	100	83.3	56.9	43.1	100	83.3	63.7	36.3	100	100	61.2	38.8	100	93.3	**61.5**	0.7	38.5

Keys: WF: *Word Final*; MF: *Morpheme Final;* N/E: *Non-Elision*

The analysis in Table 5.5 above (corroborated by Fig. 5.3 below) shows that in context 1 (word-final /t/ before another consonant at word boundary), NE speakers realised 1,359 (62.9%) significant tokens of /t/ elision e.g. [egzakˀ kɔlɔ, donˀ bai], while they failed to elide /t/ in 801 cases (37.08%), e.g. [tɛst draiv, kɛpt kwaiet]. This suggests that they closely approximated to the SBE form (represented by the control's score of 100%). In Context 2 (morpheme-final /t/ before another consonant at word boundary), the incidence of elision produced by NE speakers was less than what obtained in the first context. It was 614 (56.9%) tokens of elision, e.g. [ʤɔmpˀ wel, fisˀ prais] and 466 (43.2%) instances of non-elision, e.g. [ʤɔmpd wel, fiksd prais]. This performance, however, compared substantially to the control's percentage of 83.33%.

In the third context (word-final /d/ before another consonant at word boundary), NE participants' performance, again, approximated to the control's of 83.3%. They produced 688 (63.7%) tokens of elision, e.g. [faunˀ faiv, olˀ man], while they failed to elide /d/ in just 392 (36.3%) instances. Context 4 (morpheme-final /d/ before another consonant at word boundary) also revealed significant preference for /d/ elision in NE. Participants recorded 661 (61.2%) incidences of /d/ elision, e.g. [rɔbˀ boθ, ɑdvɑtaisˀ car], compared to the 100% performance of the control. They failed to elide /d/ in the same position in 419 cases, representing 38.8%.
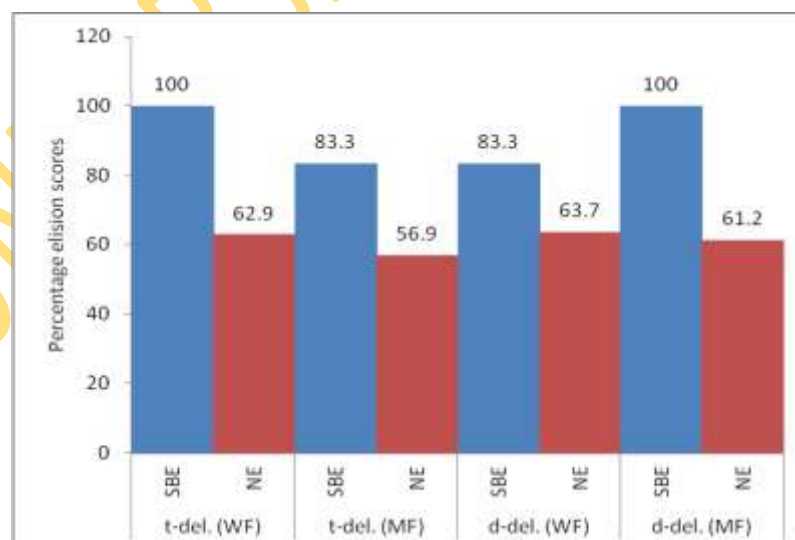

Fig. 5.3 Percentage (%) elision score differences for SBE and NE speakers.

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The overall percentage scores for elision and non-elision variants in all contexts (as reflected in Table 5.5 and represented in Fig. 5.4) show that out of total 5,400 realizations, there were 3,322 (61.5%) incidences of elision, while 2,078 (38.5%) tokens were recorded for non-elision. This performance suggests that consonant elision is prevalent in Nigerian English in a manner that closely approximates to the SBE rule, schematised as:

$$\begin{bmatrix} t/d \end{bmatrix} \rightarrow \varnothing \ / \ \text{-------} \begin{Bmatrix} \#\# \\ \\ \# \end{Bmatrix} C$$

/t, d/ is deleted before a consonant at word or morpheme boundary.

Sample Derivation: *test drive*

	SBE	NE
Input	test ## draɪv	tɛst ## draɪv
Cluster Simplification	tes draɪv	tɛs draiv
Output	[tesdraɪv]	[tɛsdraiv]
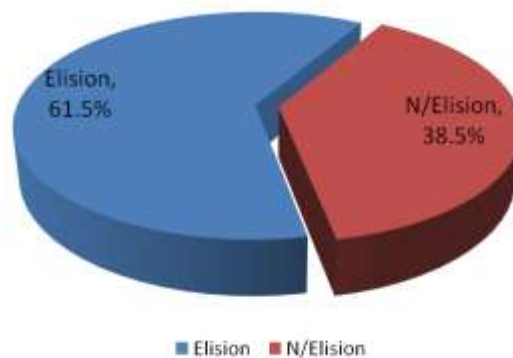
Fig. 5.4 Percentage (%) elision and non-elision scores for NE speakers.

These findings have demonstrated that NE, like many other varieties of English (including SBE), shows a tendency to elide consonants at word boundary. We, therefore, agree with Bailey's (1973:181) assertion that "all speakers of English delete /t/ or /d/ in the heaviest environment".

However, unlike in SBE where as large as a whole syllable may be deleted, especially at a weak position in connected speech (Kerswill, 1985; Nolan and Kerswill,

1990; Wells, 2000), elision predominantly affects consonant(s) at the coda position of the first of two adjoining words in NE. The frequency of consonant elision in this phonological context is, probably, made possible by the fact that the coda is said to be weaker than the onset position (Hooper, 1976 cited in Jibril, 1982).

Beyond this, however, the preponderance of boundary elision in Nigerian English is best explained as a consonant cluster simplification strategy, rather than an output of fast speech. This is because most participants elided the sounds in question even when they did not speak fast. Talking about consonant simplification therefore, most Nigerian languages have more natural syllable structure: CV or VCV (Hyman, 1975); the complex consonant clusters of SBE are rare and therefore pose problems for many NE speakers, especially in connected speech. In order to resolve this linguistic dilemma, consonants clusters are often simplified by vowel epenthesis or by consonant deletion(Simo-Bobda, 2004; 2007). Simo-Bobda (2007) refers to this simplification strategy (consonant deletion in particular) as a major feature of African English accents. This is, therefore, another instance of naturalness in phonology as explained earlier; since, according to Hyman (1975:162), "Consonant deletion processes are widespread in languages".

5.1.3.   Liaison in Nigerian English

There are several ways by which contiguous vowels at word or morpheme boundary are linked together in SBE. This could be through r-liaison, a semi-vowel, etc. The commonest of these categories is r-liaison, comprising linking /r/, e.g. *car owner* /ka:r əʊnə/ and intrusive /r/, e.g. *media event* /mi:dɪər ɪvent/. This section, therefore, examined the occurrence of r-liaison (linking and intrusive /r/) in the speech of Nigerian English speakers and discussed the findings in the light of what obtains in SBE. 14 boundary items with potential r-liaison were extracted from the data. 11 items were used to test linking /r/ and 3 for intrusive /r/.

Context   items

Linking /r/:   *Peter at, more of him, after a while, their action, wore a black dress, inquire about, colour of, for all,* there are, over eat, *power-assisted steering.*

Intrusive /r/:   *law and order, idea of it, media event.*

Table 5.6 shows the frequency and percentage scores for variants produced by Nigerian participants and the control group in each of these boundary contexts. Altogether, 5,040 tokens were expected: 3,960 in contexts 1 and 1,080 in contexts 2.

Table 5.6 Frequency and percentage scores for r-liaison.

Processes	Linking /r/ e.g. [æftrə waɪl]				Intrusive /r/ e.g. [miːdɪər ɪvent]				Grand Total			
Varieties	SBE	NE Variants		11 x 360	SBE	NE Variants		3 x 360	SBE	NE	SBE	NE
Variants		r-liaison	r-suppression			r-liaison	r-suppression		r- liaison		r- suppression	
Tokens of Occurrence	22/22	319	3641	3960	6/6	31	1049	1080	28	350	0	4690
% Score	100	8.1	91.9	100	100	2.9	97.1	100	100	**6.9**	0	92.3

Table 5.6 above reveals a very low occurrence of r-liaison in the NE data. Of the total 3,960 anticipated tokens of linking /r/ in context 1, only 319 incidences, representing a negligible 8.1%, were recorded, e.g. [mɔr ɔf, aftar e wail]; whereas, there were 3,601 tokens of r-suppression, constituting 91.9%, e.g. [pitɑ ɑt, deə ɑkʃɔn]. On the other hand, a percentage score of 100% by the control group represents an overwhelming tendency for linking /r/ in SBE. In context 2, the rate of intrusive /r/, e.g. [aidiar ɔf] is much lower for NE speakers; there were just 31 instances (2.9%) and 1,049 cases (97.1%) of r-suppression [midia ivent]. This is a far cry from what obtains in SBE as depicted by the control's 100% intrusive /r/ usage. It is obvious from the results (as portrayed in Fig. 5.5) that the incidence of r-liaison is abysmally low in NE, unlike in SBE where it is much more prevalent. Nigerain English speakers failed to use linking and intrusive /r/ significantly, having only 350 incidences (6.9%) in both contexts out of a total realisation of 5,040 tokens. This suggests that Nigerian English speakers deviated significantly from /r/ insertion (linking /r/) rule which is a regular feature of SBE connected speech, captured as:

$$\emptyset \rightarrow r \ / V \text{ ------- } \#\#V$$

(/r/ is inserted between a vowel and a following vowel at word boundary).

NE rule is rather formulated as:

$$r \rightarrow \emptyset / V \text{ ------- } \#\#V$$

(Orthographic *r* is deleted between a vowel and a following vowel at word boundary)

Sample Derivation: *more of*

	SBE	NE
Input	more of	more of
	mɔ: ## əv	mɔ ## ɔf
R-Insertion	mɔ:r əv	----------
Output	[mɔ:rəv]	[mɔ ɔf]

A number of factors account for the low usage of /r/ liaison in the data. First, using linking /r/ across word boundary requires the two adjacent words; e.g. *Peter* and *at,* to be linked with each other. This, however, is an arduous task for most Nigerian speakers of English who, like many L2 speakers, normally keep orthographic words separate in connected speech and thereby pronounce every sound as distinct as possible (Simo Bobda, 1994; Bamgbose, 2004). Second, the feature was not

encouraged by the syllable-timed rhythm of NE, whereby each syllable tends to occur at regular time intervals. It was, however, possible for the control to produce it because their isochronous rhythm requires all the unstressed syllables (e.g. *-ter at the* [tə ət ðə]) after the stressed syllable (*Pe-* [pɪ]) to be pronounced swiftly, taking the same amount of time as the single stressed syllable.

Finally, the level of awareness for this feature is abysmally low in Nigeria. It is not a sound feature heard every so often except, sometimes, in the media from newscasters, presenters and announcers who try as much as possible to approximate to the native English speech in order to appeal to their international audience. Besides, many NE speakers who are possibly aware of it tend to avoid it in casual speech, because such a speech feature makes them sound foreign and affected and often elicits a negative attitude from people.
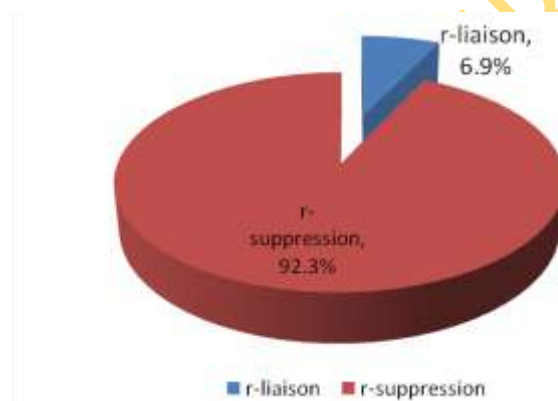

Fig. 5.5   Percentage (%) r-liaison and r-suppresion scores for NE speakers

However, it was observed that linking /r/ was more prevalent than intrusive /r/ in the data. A score of 8.06% was recorded for linking /r/ against 2.87% of intrusive /r/. The abysmally low occurrence of intrusive /r/ in NE is not surprising, considering the fact that pronunciation of English words in Nigeria is, to a large extent, orthographic or spelling induced (Akinjobi, 2013); since *r* is not present in the orthography of the affected junctural words, one would be asking too much to expect /r/ to show up in those environments. This finding is consistent with Awonusi's (2004b:16) claim that "intrusive /r/ is ... practically non-existent in NEA".

Apart from suppressing /r/, few NE speakers also produced smoothing to resolve the linking /r/ phenomenon (see Table 5.7). Smoothing, otherwise known as levelling, is a subtype of compression whereby "a prevocalic diphthong loses its

second element and is reduced to a monophthong" (Hannisdal, 2006:116). For example, /aɪə/ and /aʊə/ of *fire* and *power* may become [aə] or [a:] either within a word or in connected speech (Gimson, 1980; Wells, 1982; 2000). In the data, /eə##ə/ and /eə##æ/ of *there are* and *their action* were respectively smoothed to [eə] and [a:] as in [deə] and [da:kʃɔn] in 40 instances, constituting 2.8%.

Jibril (1982) had earlier attempted to explain this phenomenon, which he referred to as diphthong monophthongisation process (akin to smoothing) in NE, in terms of mother tongue influence. According to him, there is a tendency in Igbo and Yoruba for the first of two vowels sequence in a word boundary to undergo regressive assimilation and be deleted outright, as in *uzo amaka* 'road is good' becoming [uzamaka] and *fe oko* 'get a husband ' becoming [fɔ́kọ] respectively. This trend, he opines, may sometimes influence reduction of English diphthongs to monophthongs by the speakers of these languages, perceiving them as a vowel sequence.

However, in view of the fact that this process cut across different language groups in the data (11 speakers from the East, 10 from the West, 12 from South-South and 7 from the North), there is, obviously, more to smoothing than mother tongue influence. It can also be viewed as a reduction process (a junctural simplification strategy) for minimixing articulatory effort. This feature is said to be common in rapid or casual speech in RP and in many dialects of English (Cruttenden, 2001:139; Wells, 1982:286, 2000:165; Katalin and Szilárd, 2006).

Table 5.7 Frequency and percentage scores for smoothing.

Process	Smoothing
Tokens of occurrence	40/1440
% Score	2.8

5.1.3.2   Linguistic correlates of r-liaison in NE

This section examines the linguistic environments that constrained the use of linking /r/ in the data. The analysis shows that linking /r/ occurred more frequently between short grammatical words, e.g. *there are*, *more of*, *after a while*, *for all;* but

rarely between lexical (including a combination of lexical and grammatical) words like *over eat, power assisted*, *Peter at, inquire about, their action, colour of,* and *wore a*.

Table 5.8 Linking /r/ according to linguistic contexts

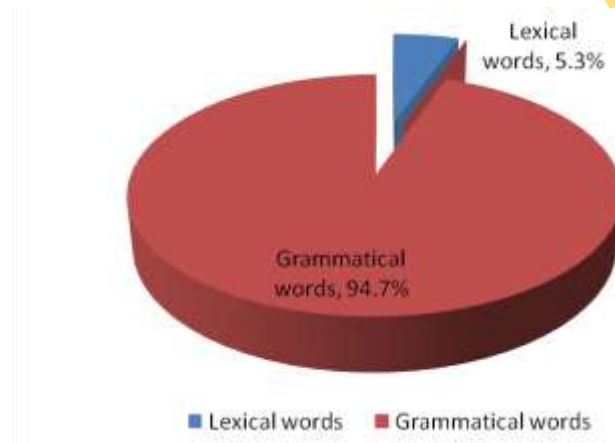|	Lexical words	Grammatical words	Total
Process	Linking /r/	Linking /r/	
Tokens of occurrence	17	302	319
% Score	5.3	94.7	100

Fig. 5.6 Percentage linking /r/ scores for lexical and function words.

As shown in Table 5.8 (corroborated by Fig. 5.6) above, in an environment where both or one of the adjacent words are lexical, only 17 instances of linking /r/, representing 5.3%, occurred out of the total 319 linking /r/ tokens. On the other hand, 302 (94.7%) cases of linking /r/ were recorded when /r/ appeared between two grammatical categories, which means that about 95% cases of linking /r/ occurred in-between function words. This, therefore, suggests that linking /r/ is used, largely, in-between grammatical items in NE. This, however, is not categorical, as it was discovered that linking /r/ was used only in such grammatical phrases as *there are*, *more of you* and *after a while,* which have somewhat been lexicalised due to the fact that participants have heard them most often. This, not surprisingly, could not be

replicated in other environments as *for all, inquire about, their action, colour of, wore a,* etc. when required.

This explains the claim made by Awonusi (2004b:216) that 'NEA operates the linking /r/ rule in a manner consistent with RP in such phrases like *for a while*, *here and there* and *after all'*. This position is also consistent with what Hannisdal (2006) found out in RP that linking /r/ occurs most frequently between short, often grammatical, words, e.g. *there are*, *here is*, *where a*, *or a*, *are also*, *your own*, etc.

5.1.4   Summary of Performance

Having examined the incidence of SBE assimilatory, elision and liaison processes in the connected speech of Nigerian English speakers, we found it germane to present the overall performance of participants vis-a-vis what obtains in Standard British English, as represented by the control. Thus, Table 5.9 shows a summary of the NE participants' performance in all variants of processes investigated compared to the control's. In view of the fact that each of the processes contained different number of realisations, the total score for each was converted to a percentage. All the calculated percentages were then summed up and used to arrive at the overall score.

Table 5.9 Summary of CSPs of SBE in the Nigerian English data

Process	Assimilation							Elision				Liaison		Grand Total			
Variant	Regressive Devoicing	Progressive Voicing	Progressive Deoicing	Voiceless Stop Assimilation	Voiced Stop Assimilation	Nasal Assimilation	Yod Coalescence	/t/- deletion (word boundary)	/t/- deletion (morpheme boundary)	/d/- deletion (word boundary)	/d/- deletion (morpheme boundary)	Linking /r/	Intrusive /r/	Grand Total (% tokens of occurrence)	Grand Total (% tokens expected)	Overall % (Approximation)	Overall % (Deviation)
SBE (%)	100	100	100	100	100	100	87.5	100	83.3	83.3	100	100	100	1254.1	1300	**96.5**	3.5
NE (%)	99.2	21.2	65.1	47.6	3.2	63.5	6.2	62.9	56.9	63.7	61.2	8.1	2.9	561.7	1300	**43.2**	56.8

Table 5.9 (represented graphically in Fig 5.7 below) shows that the control, respresenting the Standard British English accent, had an overall percentage score of 96.5%, while Nigerian English speakers scored 43.2%. Thus, NE speakers had an overall approximation of 43.2% and overall deviation of 56.8% (Fig. 5.8). This suggests that Nigerian English speakers exhibited, overall, more deviation from, than approximation to, Standard British English Connected speech processes.
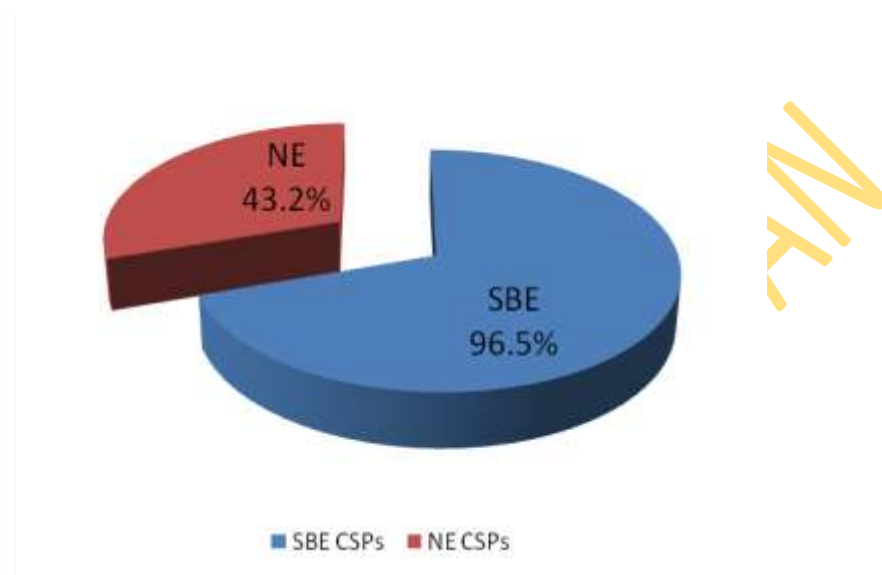

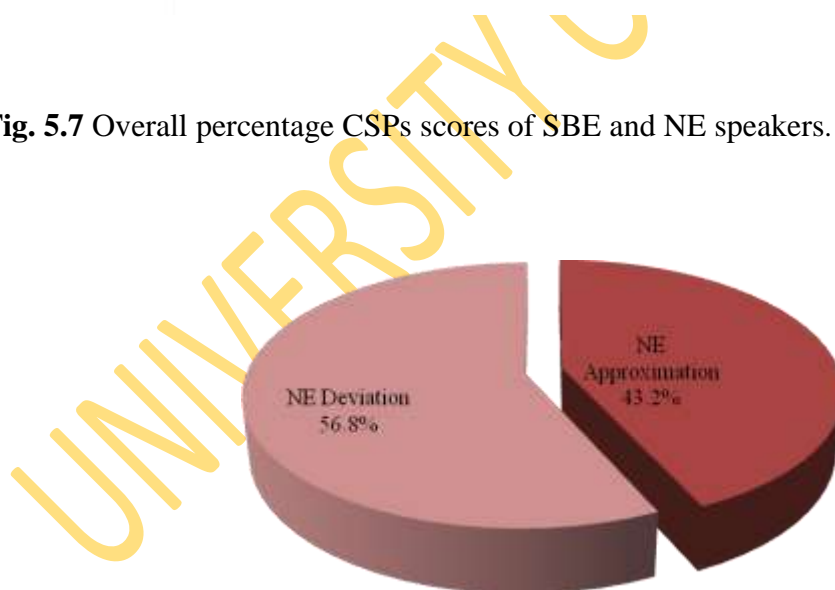**Fig. 5.7** Overall percentage CSPs scores of SBE and NE speakers.

Fig. 5.8 Overall percentage scores of NE approximation to and deviation from SBE.

5.1.5   **Sociophonetic variation of connected speech processes**

This section examines the social differentiation of the three CSPs (assimilation, elision and liaison) under consideration, in relation to the variables of region, gender and age, using inferential statistics: Factorial MANOVA (Multivariate Analysis of Variance) and the Bonferroni's Post-hoc test. In order to arrive at valid and accurate statistical outputs and to also make the analysis manageable, all variants identified under each category of CSPs were collapsed and treated together. For example, all assimilation variants made up assimilation, all elision sites were combined under elision while liaison comprised linking and intrusive–r.

5.1.5.1   **Introduction**

A 4 x 2 x 2 between-participants Multivariate Analysis of Variance (MANOVA) was performed on three dependent variables: assimilation, elision and liason. The independent variables were region (East, North, South-South and West), gender (male and female) and age (young and adult). The following research questions (culled from the major research questions guiding this study) were addressed:

(a) Are there significant mean differences in the combined DV of the CSPs (assimilation, elision and liaison) on the basis of region, gender and age?

(b) Are there significant mean differences in individual DVs (assimilation, elision and liaison) among different regions? If so, which regions differ?

(c) Are there significant mean differences in individual DVs (assimilation, elision and liaison) between male and female participants?

(d) Are there significant mean differences in individual DVs (assimilation, elision and liaison) between young and adult participants?

5.1.5.2   **Analysis**

First, the linearity of the three DVs was tested using Pearson Moment Correlation Coefficient. The result shows that the three DVs (assimilation, elision and liaison) are linearly related. Correlation coefficient is low ($r_{yy} < 0.80$) but stastistically significant (see Table 5.10). This suggests that we can make use of MANOVA.

Table 5.10 Pearson correlation coefficients

		Assimilation	Elision	Liaison
Assimilation	Pearson Correlation	1	.108*	.491*
	Sig. (1-tailed)		.020	.016
	N	360	360	360
Elision	Pearson Correlation	.108*	1	.032*
	Sig. (1-tailed)	.020		.030
	N	360	360	360
Liaison	Pearson Correlation	.491*	.032*	1
	Sig. (1-tailed)	.016	.030	
	N	360	360	360

*. Correlation is significant at the 0.05 level (1-tailed).

However, the result of Box's M test (Table 5.11) conducted to evaluate the assumption of homogeneity of variance-covariance matrices shows that the test is significant (which means that the covariance matrices are significantly different across levels of the IVs). This somewhat indicates an increased possibility of Type I error; but with a high power to detect the main effect (0.998 and 0.991- see table 5.12), the error can be catered for. Besides, Pillai's Trace multivariate test, acknowledged for its robustness to violations of assumptions, shall be reported.

Table 5.11 Box's test of equality of covariance matrices

Box's M	138.824
F	1.455
df1	90
df2	79208.252
Sig.	.003

Tests the null hypothesis that the observed covariance matrices of the dependent variables are equal across groups.

Multivariate analysis of variance was used to test research question (a) at $p < 0.05$. The result of the multivariate test is presented in table 5.12.

Table 5.12   MANOVA summary table for Multivariate tests

Multivariate Tests[d]

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Intercept	Pillai's Trace	.982	6177.415[a]	3.000	342.000	.000	.982	18532.245	1.000
	Wilks' Lambda	.018	6177.415[a]	3.000	342.000	.000	.982	18532.245	1.000
	Hotelling's Trace	54.188	6177.415[a]	3.000	342.000	.000	.982	18532.245	1.000
	Roy's Largest Root	54.188	6177.415[a]	3.000	342.000	.000	.982	18532.245	1.000
REGION	Pillai's Trace	.108	4.298	9.000	1032.000	.000	.036	38.684	.998
	Wilks' Lambda	.894	4.376	9.000	832.489	.000	.037	31.813	.990
	Hotelling's Trace	.117	4.424	9.000	1022.000	.000	.037	39.812	.998
	Roy's Largest Root	.093	10.695[c]	3.000	344.000	.000	.085	32.086	.999
GENDER	Pillai's Trace	.067	8.124[a]	3.000	342.000	.000	.067	24.372	.991
	Wilks' Lambda	.933	8.124[a]	3.000	342.000	.000	.067	24.372	.991
	Hotelling's Trace	.071	8.124[a]	3.000	342.000	.000	.067	24.372	.991
	Roy's Largest Root	.071	8.124[a]	3.000	342.000	.000	.067	24.372	.991
AGE	Pillai's Trace	.019	2.192[a]	3.000	342.000	.089	.019	6.577	.555
	Wilks' Lambda	.981	2.192[a]	3.000	342.000	.089	.019	6.577	.555
	Hotelling's Trace	.019	2.192[a]	3.000	342.000	.089	.019	6.577	.555
	Roy's Largest Root	.019	2.192[a]	3.000	342.000	.089	.019	6.577	.555
REGION * GENDER	Pillai's Trace	.029	1.108	9.000	1032.000	.354	.010	9.971	.558
	Wilks' Lambda	.971	1.107	9.000	832.489	.355	.010	8.070	.454
	Hotelling's Trace	.029	1.105	9.000	1022.000	.356	.010	9.941	.557
	Roy's Largest Root	.020	2.272[c]	3.000	344.000	.080	.019	6.817	.572
REGION * AGE	Pillai's Trace	.021	.812	9.000	1032.000	.605	.007	7.311	.411
	Wilks' Lambda	.979	.811	9.000	832.489	.606	.007	5.915	.330
	Hotelling's Trace	.021	.809	9.000	1022.000	.608	.007	7.282	.410
	Roy's Largest Root	.016	1.845[c]	3.000	344.000	.139	.016	5.536	.478
GENDER * AGE	Pillai's Trace	.009	1.032[a]	3.000	342.000	.378	.009	3.096	.280
	Wilks' Lambda	.991	1.032[a]	3.000	342.000	.378	.009	3.096	.280
	Hotelling's Trace	.009	1.032[a]	3.000	342.000	.378	.009	3.096	.280
	Roy's Largest Root	.009	1.032[a]	3.000	342.000	.378	.009	3.096	.280
REGION * GENDER * AGE	Pillai's Trace	.022	.862	9.000	1032.000	.559	.007	7.762	.437
	Wilks' Lambda	.978	.860	9.000	832.489	.561	.007	6.275	.351
	Hotelling's Trace	.023	.858	9.000	1022.000	.563	.007	7.719	.435
	Roy's Largest Root	.014	1.624[c]	3.000	344.000	.184	.014	4.871	.426

a. Exact statistic

b. Computed using alpha = .05

c. The statistic is an upper bound on F that yields a lower bound on the significance level.

d. Design: Intercept + REGION + GENDER + AGE + REGION * GENDER + REGION * AGE + GENDER * AGE + REGION * GENDER * AGE

MANOVA results as presented in Table 5.12 show that region significantly affected the combined DV of the CSPs: Pillai's Trace = 0.11, F (9, 1032) = 4.29, $p < 0.05$, $\eta^2 = 0.04$). This implies that there were significant mean differences in the combined DV of the CSPs across region. The multivariate effect size was, however, small (3.6%).

The results further indicate a significant gender effect on the combined DV of the CSPs, Pillai's Trace = 0.07, F (3, 342) = 8.12, $p < 0.05$, $\eta^2 = 0.07$. This again implies that there was a significant mean difference in the combined DV of the CSPs between male and female participants. The multivariate effect size was also small (6.7%) though.

However, age did not significantly affect the combined DV of the CSPs, Pillai's Trace = 0.02, F (3, 342) = 2.19, $p < 0.05$, $\eta^2 = 0.02$. The multivariate effect size was small (1.9%).

Since a significant multivariate main effect for each factor has been obtained, it is customary to go ahead and examine the univariate F tests of each DV with a view to identifying which of the DVs were significantly affected by the IVs. However, the experiment-wise alpha protection provided by the overall *F* test does not extend to the univariate tests. In order to neutralize the inflated error rate that could arise due to multiple ANOVA, therefore, Bonferroni-type adjustment is normally employed. This requires setting a more stringent alpha level for the test of each DV to avoid the set of DV exceeding some critical value. In doing this, the overall α-level for the analyses is divided by the number of DVs (Adegoke, 2012)

In this regard, the earlier experiment-wise alpha level of 0.05 was divided by 9 (number of tests to be performed) to get an acceptable confidence level for each of the 6 tests. The alpha level was, therefore, set to $p < 0.006$ (that is, 0.05/6). Thus, research questions (b), (c) and (d) were tested at $p < 0.006$ (approximated to 0.01) significant level.

Table 5.13   Tests of between participants effects

Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power[b]
Corrected Model	Assimilation	66.792[a]	15	4.453	1.358	.166	.056	20.364	.822
	Elision	319.103[c]	15	21.274	2.951	.000	.114	44.259	.997
	Liaison	45.960[d]	15	3.064	2.197	.006	.097	32.954	.975
Intercept	Assimilation	53376.087	1	53376.087	16274.014	.000	.979	16274.014	1.000
	Elision	29305.686	1	29305.686	4064.623	.000	.922	4064.623	1.000
	Liaison	363.487	1	363.487	260.614	.000	.431	260.614	1.000
REGION	Assimilation	20.153	3	6.718	2.048	.107	.018	6.145	.524
	Elision	53.582	3	17.861	2.477	.061	.021	7.432	.613
	Liaison	34.072	3	11.357	8.143	.000	.066	24.430	.992
GENDER	Assimilation	.088	1	.088	.027	.870	.000	.027	.053
	Elision	160.164	1	160.164	22.214	.000	.061	22.214	.997
	Liaison	2.148	1	2.148	1.540	.215	.004	1.540	.236
AGE	Assimilation	8.551	1	8.551	2.607	.107	.008	2.607	.363
	Elision	11.485	1	11.485	1.593	.208	.005	1.593	.242
	Liaison	2.488	1	2.488	1.784	.183	.005	1.784	.266
REGION * GENDER	Assimilation	12.237	3	4.079	1.244	.294	.011	3.731	.332
	Elision	47.208	3	15.736	2.183	.090	.019	6.548	.553
	Liaison	.153	3	.051	.037	.991	.000	.110	.056
REGION * AGE	Assimilation	17.003	3	5.668	1.728	.161	.015	5.184	.451
	Elision	6.214	3	2.071	.287	.835	.002	.862	.105
	Liaison	1.517	3	.506	.363	.780	.003	1.088	.121
GENDER * AGE	Assimilation	1.537	1	1.537	.469	.494	.001	.469	.105
	Elision	17.009	1	17.009	2.359	.125	.007	2.359	.334
	Liaison	.538	1	.538	.386	.535	.001	.386	.095
REGION * GENDER * AGE	Assimilation	5.156	3	1.719	.524	.666	.005	1.572	.157
	Elision	18.409	3	6.136	.851	.467	.007	2.553	.236
	Liaison	4.565	3	1.522	1.091	.353	.009	3.273	.294
Error	Assimilation	1128.263	344	3.280					
	Elision	2480.219	344	7.210					
	Liaison	479.762	344	1.395					
Total	Assimilation	56202.000	360						
	Elision	33464.000	360						
	Liaison	866.000	360						
Corrected Total	Assimilation	1195.056	359						
	Elision	2799.322	359						
	Liaison	525.722	359						

a. R Squared = .056 (Adjusted R Squared = .015)

b. Computed using alpha = .05

c. R Squared = .114 (Adjusted R Squared = .075)

d. R Squared = .097 (Adjusted R Squared = .048)

From Table 5.13, we found that it is only the mean scores in liaison that differed significantly across different regions, $F(3, 344) = 8.14$; $p < 0.01$, $\eta^2 = 0.07$. This suggests that there was a significant univariate main effect of region on liaison. The effect size is small (6.6%). On the other hand, there was no significant univariate main effect of region on assimilation, $F(3, 344) = 2.05$; $p > 0.01$, $\eta^2 = 0.02$ and elision, $F(3, 344) = 2.48$; $p > 0.01$, $\eta^2 = 0.02$.

In the same vein, Table 5.13 shows that mean scores in elision differed significantly between male and female participants, $F(1, 344) = 22.21$; $p < 0.01$, $\eta^2 = 0.06$. This suggests a significant gender effect on elision. The effect size is small (6.1%). However, there was no significant univariate main effect of gender on assimilation, $F(1, 344) = 0.03$; $p > 0.01$, $\eta^2 = 0.00$ and liaison, $F(1, 344) = 1.54$; $p > 0.01$, $\eta^2 = 0.00$.

Finally, no significant univariate main effect of age was found in assimilation, $F(1, 344) = 2.61$; $p > 0.01$, $\eta^2 = 0.01$; elision, $F(1, 344) = 1.59$; $p > 0.01$, $\eta^2 = 0.01$ and liaison, $F(1, 344) = 1.78$; $p > 0.01$, $\eta^2 = 0.01$.

Table 5.14 Table of descriptive statistics of mean scores in elision

Descriptive Statistics

	REGION	GENDER	AGE	Mean	Std. Deviation	N
Elision	NORTH	MALE	YOUNG	9.9677	2.86919	30
			ADULT	10.7333	3.47338	30
			Total	10.3443	3.17745	60
		FEMALE	YOUNG	8.7667	2.87298	30
			ADULT	9.5172	3.10093	30
			Total	9.1356	2.98535	60
		Total	YOUNG	9.3770	2.91069	60
			ADULT	10.1356	3.32419	60
			Total	9.7500	3.13090	120
	EAST	MALE	YOUNG	9.1500	1.86408	20
			ADULT	9.4000	2.83586	20
			Total	9.2750	2.40712	40
		FEMALE	YOUNG	8.7000	2.15455	20
			ADULT	8.6500	2.41214	20
			Total	8.6750	2.25761	40
		Total	YOUNG	8.9250	2.04297	40
			ADULT	9.0250	2.62617	40
			Total	8.9750	2.33832	80
	SOUTH SOUTH	MALE	YOUNG	9.7000	2.90372	20
			ADULT	11.2500	2.71208	20
			Total	10.4750	2.86220	40
		FEMALE	YOUNG	8.2632	2.82532	20
			ADULT	7.4286	2.24881	20
			Total	7.8250	2.54062	40
		Total	YOUNG	9.0000	2.91999	40
			ADULT	9.2927	3.12445	40
			Total	9.1500	3.01095	80
	WEST	MALE	YOUNG	8.9474	2.67852	20
			ADULT	9.6000	2.23371	20
			Total	9.2821	2.44894	40
		FEMALE	YOUNG	8.3810	2.26884	20
			ADULT	8.2000	2.04167	20
			Total	8.2927	2.13593	40
		Total	YOUNG	8.6500	2.45524	40
			ADULT	8.9000	2.22803	40
			Total	8.7750	2.33290	80
	Total	MALE	YOUNG	9.5111	2.64891	90
			ADULT	10.3000	2.97348	90
			Total	**9.9056**	**2.83572**	180
		FEMALE	YOUNG	8.5556	2.54890	90
			ADULT	8.5444	2.63153	90
			Total	**8.5500**	**2.58330**	180
		Total	YOUNG	9.0333	2.63602	180
			ADULT	9.4222	2.93497	180
			Total	9.2278	2.79241	360

From table 5.14, we are able to see, clearly, participants' performance levels in elision, especially the significant difference observed between male and female participants. The table shows that male participants had higher adjusted mean score (M = 9.91; SD = 2.84) in elision than females (M = 8.55; SD = 2.58).

In the same vein, Table 5.15 reveals participants' performance levels in liaison. The Eastern participants had the highest mean score (M = 1.38; SD = 1.44), followed by South-South (M =1.10; SD = 1.22), Western (M = 1.05; SD = 1.16) and Northern participants (M = 0.57; SD = 0.94).

Table 5.15 Table of descriptive statistics of mean scores in liaison

Descriptive Statistics

	REGION	GENDER	AGE	Mean	Std. Deviation	N
Liaison	NORTH	MALE	YOUNG	.4516	.88840	30
			ADULT	.5000	.68229	30
			Total	.4754	.78754	60
		FEMALE	YOUNG	.5667	.93526	30
			ADULT	.7586	1.21465	30
			Total	.6610	1.07656	30
		Total	YOUNG	.5082	.90596	60
			ADULT	.6271	.98082	60
			Total	.5667	.94142	120
	EAST	MALE	YOUNG	1.2000	1.32188	20
			ADULT	1.4000	1.60263	20
			Total	1.3000	1.45355	40
		FEMALE	YOUNG	1.1500	1.26803	20
			ADULT	1.7500	1.55174	20
			Total	1.4500	1.43133	40
		Total	YOUNG	1.1750	1.27877	40
			ADULT	1.5750	1.56709	40
			Total	1.3750	1.43531	80
	SOUTH SOUTH	MALE	YOUNG	1.2000	1.23969	20
			ADULT	.9000	1.20961	20
			Total	1.0500	1.21845	40
		FEMALE	YOUNG	.9474	.84811	20
			ADULT	1.3333	1.49443	20
			Total	1.1500	1.23101	40
		Total	YOUNG	1.0769	1.06090	40
			ADULT	1.1220	1.36373	40
			Total	1.1000	1.21801	80
	WEST	MALE	YOUNG	.7368	.99119	20
			ADULT	1.1500	1.56525	20
			Total	.9487	1.31687	40
		FEMALE	YOUNG	1.2381	1.04426	20
			ADULT	1.0500	.94451	20
			Total	1.1463	.98896	40
		Total	YOUNG	1.0000	1.03775	40
			ADULT	1.1000	1.27702	40
			Total	1.0500	1.15726	80
	Total	MALE	YOUNG	.8444	1.13089	90
			ADULT	.9333	1.28780	90
			Total	.8889	1.20932	180
		FEMALE	YOUNG	.9333	1.04720	90
			ADULT	1.1778	1.34564	90
			Total	1.0556	1.20855	180
		Total	YOUNG	.8889	1.08771	180
			ADULT	1.0556	1.31906	180
			Total	.9722	1.21013	360

However, because the IV (region) has more than two levels, it became necessary to examine the post hoc test for liaison in order to show where the regional differences lie; that is, which regions are significantly different from one another.

Table 5.16 Table of multiple comparisons: Post hoc test

Multiple Comparisons

Bonferroni

Dependent Variable	(I) REGION	(J) REGION	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	95% Confidence Interval Upper Bound
Liaison	NORTH	EAST	-.8083[*]	.17046	.000	-1.2607	-.3560
		SOUTH-SOUTH	-.5333[*]	.17046	.011	-.9857	-.0810
		WEST	-.4833[*]	.17046	.029	-.9357	-.0310
	EAST	NORTH	.8083[*]	.17046	.000	.3560	1.2607
		SOUTH-SOUTH	.2750	.18673	.850	-.2205	.7705
		WEST	.3250	.18673	.496	-.1705	.8205
	SOUTH-SOUTH	NORTH	.5333[*]	.17046	.011	.0810	.9857
		EAST	-.2750	.18673	.850	-.7705	.2205
		WEST	.0500	.18673	1.000	-.4455	.5455
	WEST	NORTH	.4833[*]	.17046	.029	.0310	.9357
		EAST	-.3250	.18673	.496	-.8205	.1705
		SOUTH-SOUTH	-.0500	.18673	1.000	-.5455	.4455

Based on observed means.

 The error term is Mean Square (Error) = 1.395.

*. The mean difference is significant at the .01 level.

Recall the alpha level of 0.05 had been adjusted to $p < 0.01$ (based on the number of tests performed earlier) to get an acceptable confidence level to protect against inflated alpha error. Looking at the pairwise tests comparing liaison by region in Table 5.16, therefore, only the East and the North are significantly different from each other in liaison. This suggests a convergence of sort among three regions- East, South-South and West.

5.1.5.3   Summary

The variational analysis of NE speakers' disposition to assimilation, elision and liaison processes of SBE connected speech, based on region, gender and age, has shown that NE connected speech, displayed only very little variation. In most instances, participants' performance cut across speaker groups studied, indicating a uniform tendency for or departure from a particular SBE process.

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5.1.5.3.1   Region

The study revealed a regional pattern of usage which does not support theoretical claims in the literature about the heterogeneity and diversity of Nigerian English. Since it is believed that Nigerian English is, theoretically, as varied as the number of indigenous languages spoken within her border (Banjo, 1979; Adegbija, 1988), one would have expected a pattern of connected speech that fully justifies this claim. Suprisingly, however, assimilation and elision were not found to be significant on the basis of region; which means that there was no regional variation in the use of these processes.

However, this does not, in any way, suggest that the NE speakers represent a homogeneous speech community; neither does it imply that they have essentially the same norms. Rather, it is a demonstration of certain shared phonetically motivated patterns of usage or speaking habit. A lack of regional variation in elision, for example, may be traced to phonological naturalness and mother tongue influence. NE Speakers, regardless of their regional or ethnic leaning, will generally employ sounds which are more natural (easier to articulate). As earlier argued in this chapter, the complex consonant clusters of SBE pose problems for many NE speakers; there is, therefore, a high tendency for simplification of consonant clusters by consonant deletion in connected speech, irrespective of the region or tribe of speakers. Simo-Bobda (2007), specifically, refers to this trend as a major feature of African English accents, not peculiar to Nigerian English. Non-regional variability in assimilation, on the other hand, is a possible reflection of the general tendency of NE speakers to keep words apart in connected speech.

The only regional contrast found was in liaison. Even this was not in anyway categorical, because the difference lies between the East (with the highest mean score) and the North (with the lowest mean score) only, and the effect size was very small: just 6.6% (see Table 5.13). Thus, there was a convergence of sort amongst speakers from Western, South-South and Eastern regions. Besides, the overall score in r-liaison was generally low. This considerably low percentage score of 6.9% (see Table 5.6) is a wide departure from the SBE norm; the paucity of r-liaison only became most obvious among nothern participants.

5.1.5.3.2   Gender

Results of gender variation somewhat followed the trend found in region. The findings did not sufficiently demonstrate variation in the speech patterns of male and female speakers as established in numerous sociolinguistic research, especially in assimilation and liaison. It is generally believed that female speakers possess higher usage levels for the more conservative or prestigious speech variants and lower levels for those at the progressive or vernacular end. Against this background, one had expected female speakers to have performed better than their male counterparts in liaison, being a prestige variant. This was however not the case, as no gender variation existed in the process. This again reveals a generally low usage of this SBE feature among Nigerian speakers, and demonstrates an equal status for liaison, irrespective of gender.

The hypothesis was, however, partly confirmed in elision where a significant difference was found between male and female speakers (the effect size is, again, very small: 6.1%; Table 5.13). The gender difference, however, can be treated more as phonological explicitness than prestige (though social prestige may not be totally ruled out). Elision is a phonetically motivated process that is characteristic of connected speech, in that it enhances the ease of articulation (Hannisdal, 2006). That males significantly elided more than females suggests that men are more receptive to natural phonological processes and tend to be articulatorily more economical than women, who are considered more careful and formal in speech (Labov, 1963, 1966; Hudson; 1996). There is, however, a certain correlation between articulatorily motivated processes and social prestige. Phonetic explicitness is often linked with correctness and high-status varieties, while phonetic reduction or simplification is associated with sloppiness, casualness or vernacular speech. Thus, the finding somewhat depicts the sex/prestige pattern to the extent that males' better performance in elision is considered a reflection of their casualness and less-prestigious speech compared to the women folk.

5.1.5.3.3   Age

In regard to age variation, the study did not find any correlation at all in the speech patterns of young and adult speakers in assimilation, elision or liaison. This, again, either demonstrates Nigerian English speakers' general low competence in connected speech processes of SBE, regardless of age group; or shows that they are

motivated by similar phonological tendencies in their articulation of Standard British English connected speech processes.

5.2 Acoustic analysis

This section examines the acoustic properties of portions of the semi-spontaneous speeches produced by 8 participants (representing the social variables of region, gender and age) and one native speaker. The purpose was to measure participants' level of approximation to or deviation from the Standard British English CSPs (as represented by the control) and to corroborate the findings obtained through statistical (perceptual) analyses. The instrumental analysis was conducted using Praat (version 5120) developed by Paul Boersma and David Weenink of Summer Institute of Linguistic, USA. The software displays such acoustic properties as speech waveforms, spectogram, fundamental frequency, formant structure, voice bar and pitch curve amongst others. Some of these acoustic tools were used to determine and identify pitch of utterance, voiced, devoiced or voiceless segments, as well as, articulated, elided or assimilated sound segments.

Four portions of the semi-spontaneous speech data extracted for instrumental analysis to test the CSPs examined earlier are: *He's a nice boy* (assimilation of voice), *Ten pounds* (place assimilation), *He won't(t) do it* (elision) and *I met Peter at the station* (liaison). Each item was segmented into interval tiers (sentence/phrase and transcription). In each category, the textgrid for the control's utterance is displayed against those of Nigerian English speakers, as shown below, so as to reveal the differences or similarities between the two groups.

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5.2.1 Acoustic analysis of *He's a nice boy.*

Control
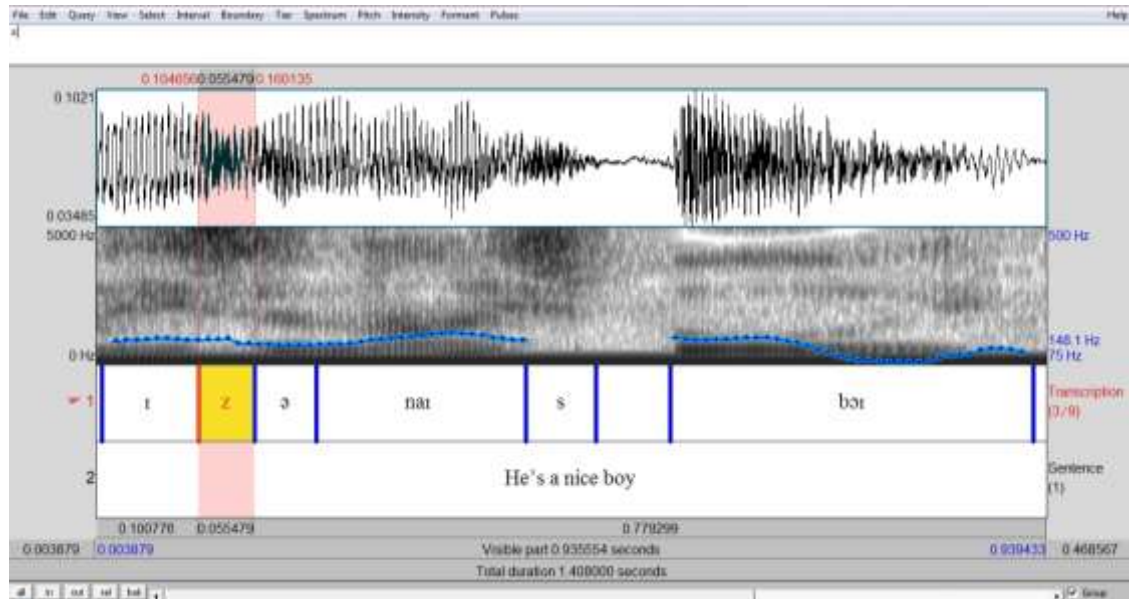
Fig. 5.9 The textgrid of *He's a nice boy* as produced by the control.

S1- West: YF
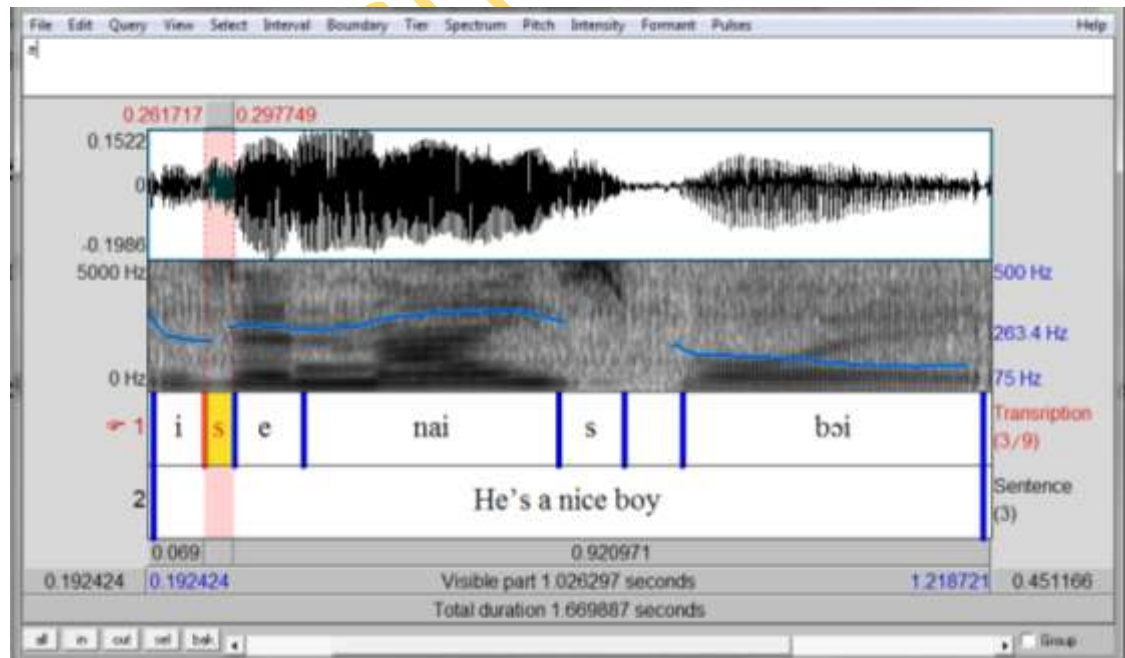
Fig. 5.10 The textgrid of *He's a nice boy* as produced by a young female speaker of English from Western Nigeria.

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S2- West: AM
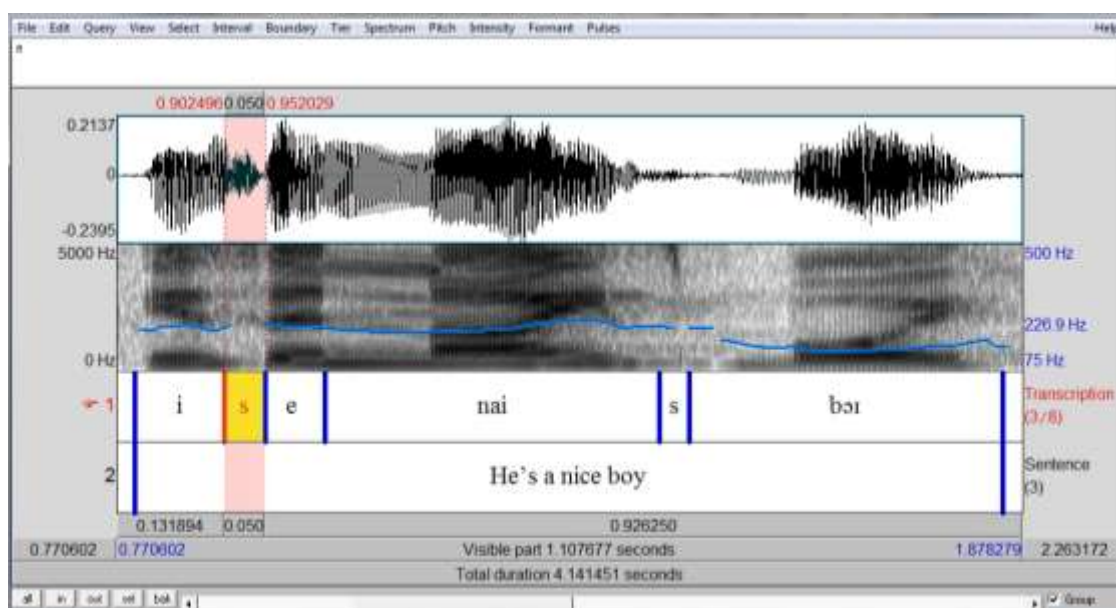
Fig. 5.11 The textgrid of *He's a nice boy* as produced by an adult male speaker of English from Western Nigeria.
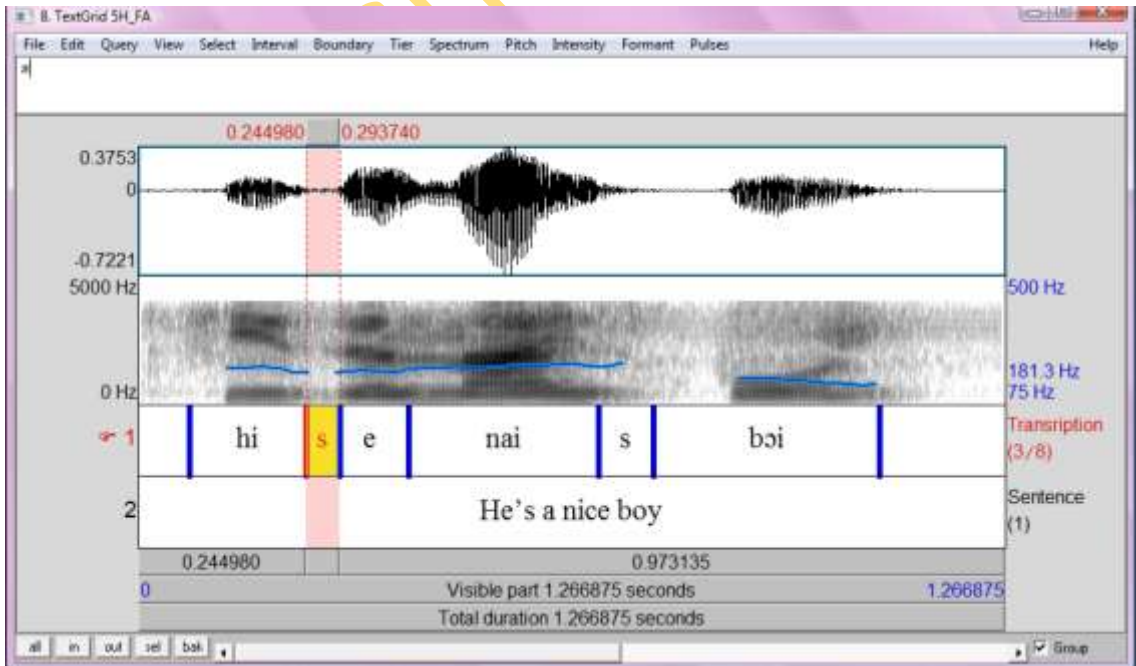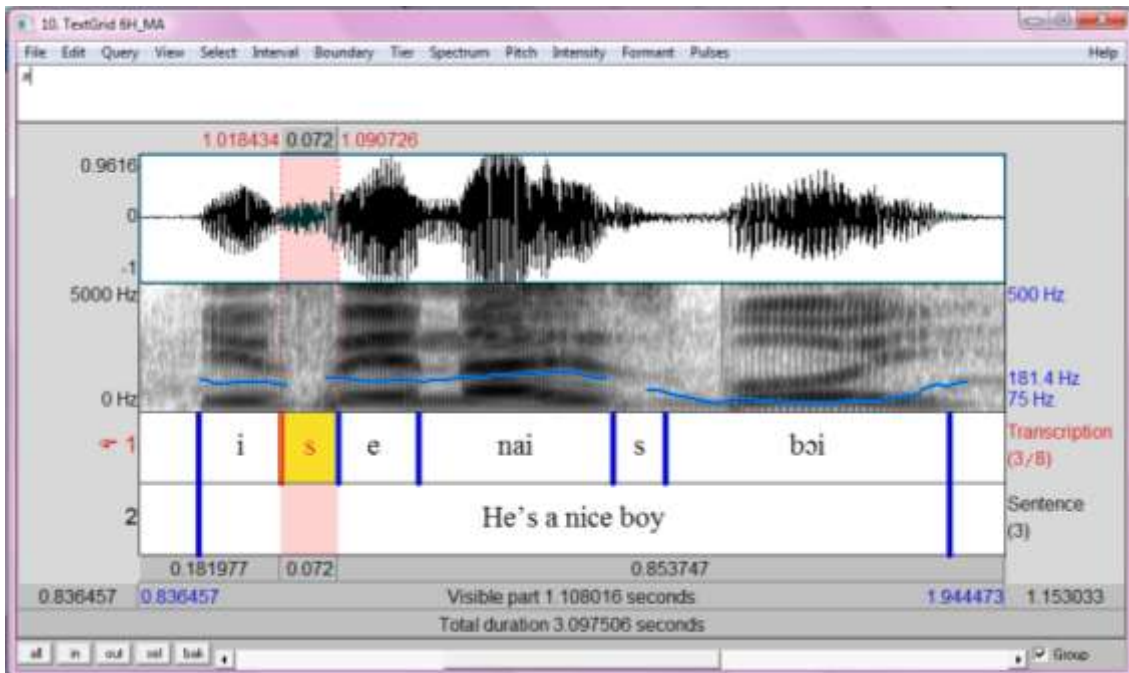
S3- East: YF
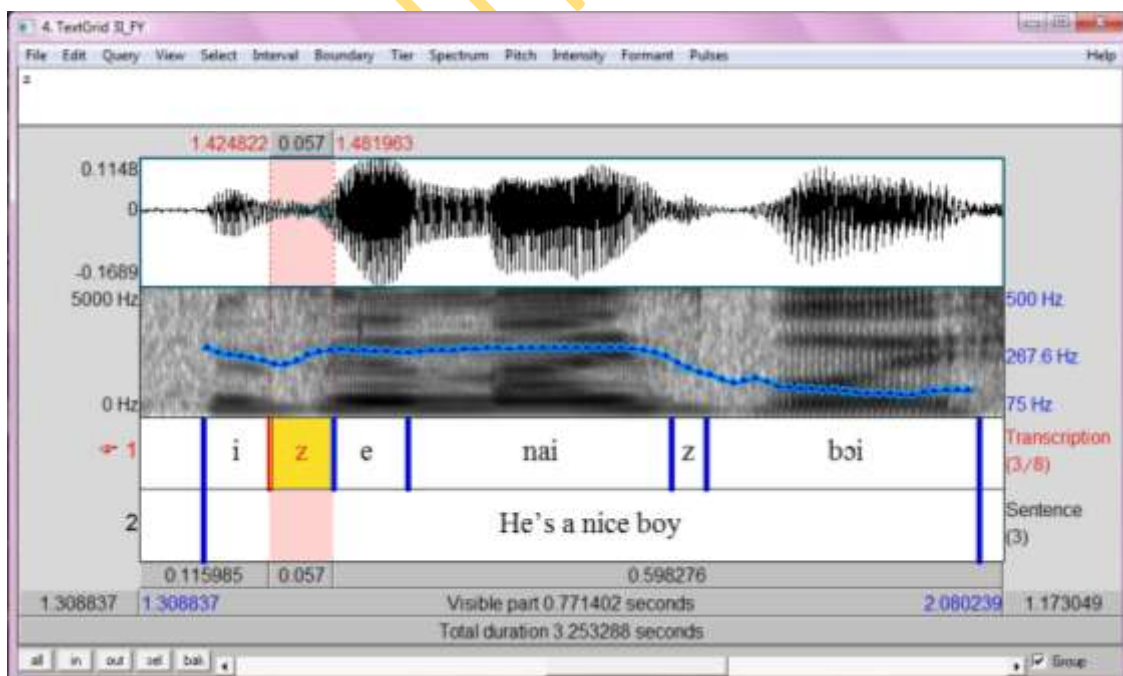
Fig. 5.12 The textgrid of *He's a nice boy* as produced by a young female speaker of English from Eastern Nigeria.

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S4- East: AM
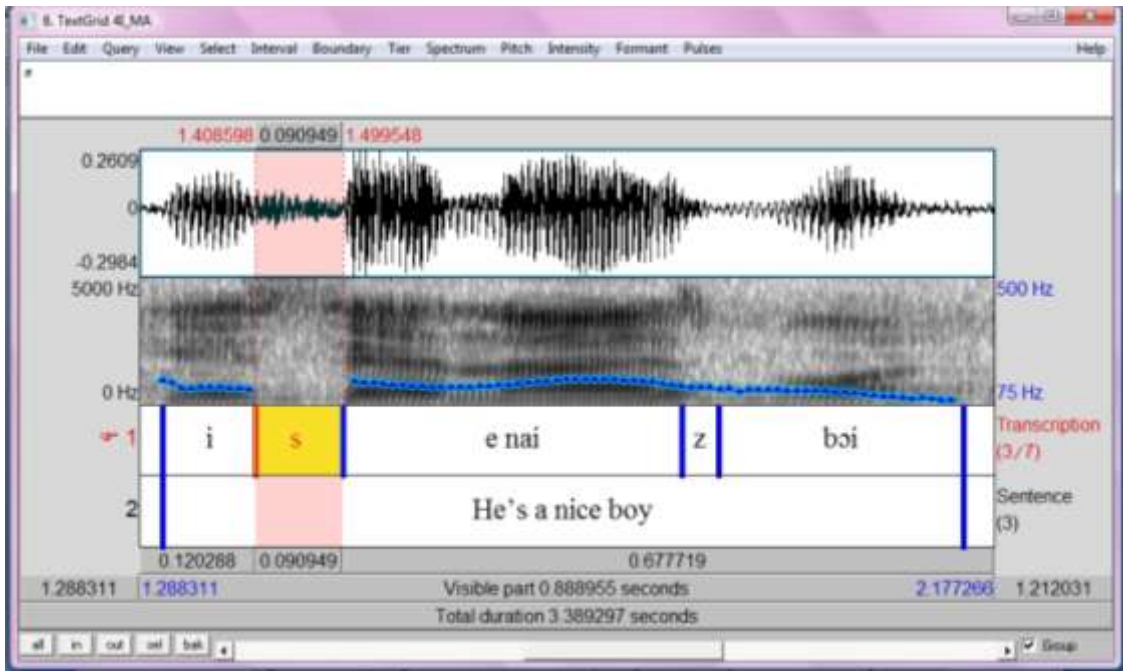
Fig. 5.13 The textgrid of *He's a nice boy* as produced by an adult male speaker of English from Eastern Nigeria.

S5- North: AF

Fig. 5.14 The textgrid of *He's a nice boy* as produced by an adult female speaker of English from Northern Nigeria.

S6- Hausa: YM

Fig. 5.15 The textgrid of *He's a nice boy* as produced by a young male speaker of English from Northern Nigeria.
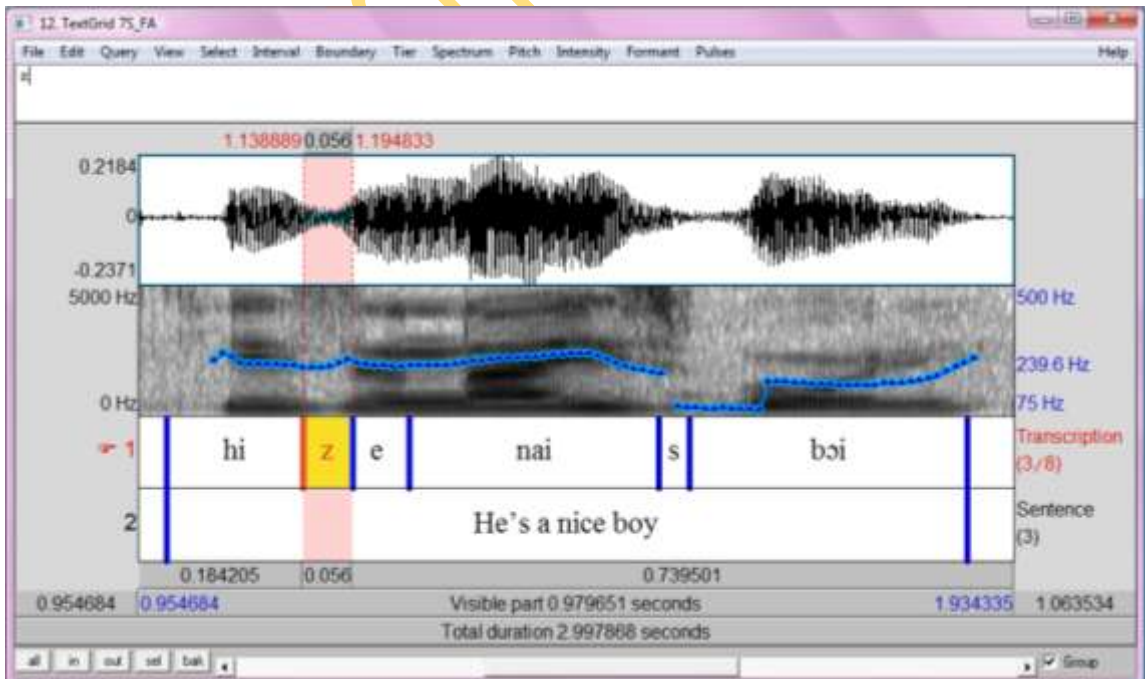
S7- South-South: AF

Fig. 5.16 The textgrid of *He's a nice boy* as produced by an adult female speaker of English from the South-South region of Nigeria
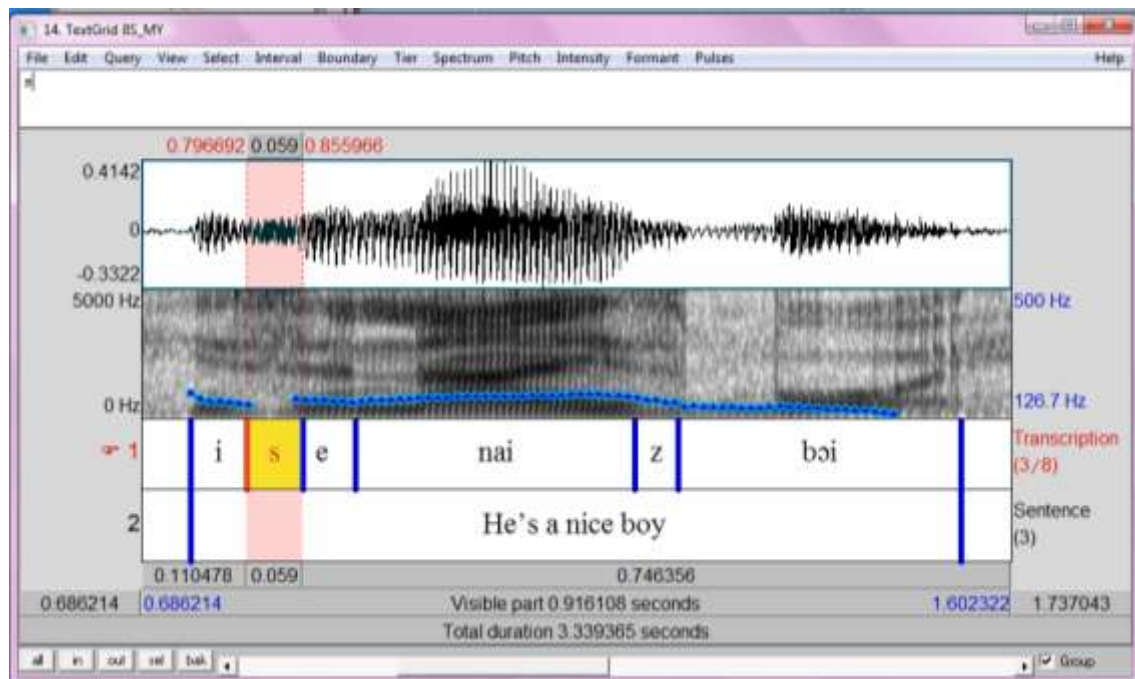
S8- South-South: YM

Fig. 5.17 The textgrid of *He's a nice boy* as produced by a young male speaker of
English from South-South region of Nigeria.

The above textgrids display the speech waveforms, spectrograms, duration and
pitch curves of the utterance: *He's a nice boy* as produced by the control and eight
Nigerian speakers of English. We were to determine the proportion of participants that
observed progressive voicing assimilation by producing *s* of *He's* as voiced [z] (and
not as [s]) as obtained in SBE and demonstrated by the control.

Acoustically, a voiced fricative is identified by a band of vertical striations (a
voice bar) at the base of the spectrogram and a comparatively regular vocal cord pulses
on the waveform; while a voiceless fricative is characterised by small irregular
flunctuations of air pressure on the waveform, absence of a voice bar and break of the
pitch curve on the spectogram (Kirchner, n.d.; Ladefoged, 1993:186-187)**.**

Through these acoustic cues, we were able to ascertain that the control
produced [z] in *He's* (progressive voicing) as indicated by the voice bar which appears
at the lower part of the spectogram (see top of the yellow spot) and the regular vocal
cord pulses on the waveform (see the pink spot) in Fig. 5.8. It follows, therefore, that
only S3 (a young female NE speaker from the East) and S7 (an adult female NE
speaker from South-South) produced [z] in *He's,* indicating progressive voicing. Six
other participants (S1, S2, S4, S5, S6, and S8) produced [s]. Their textgrids reveal

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absence of a voice bar and a break of the pitch curve at the point where [s] is produced on the spectogram.

This implies that only 25% of the NE speakers were able to articulate progressive voicing as obtained in SBE. This confirms the initial perceptual finding that Nigerian English speakers deviate significantly from Standard British English in Progressive voicing, where participants recorded 21.2%.
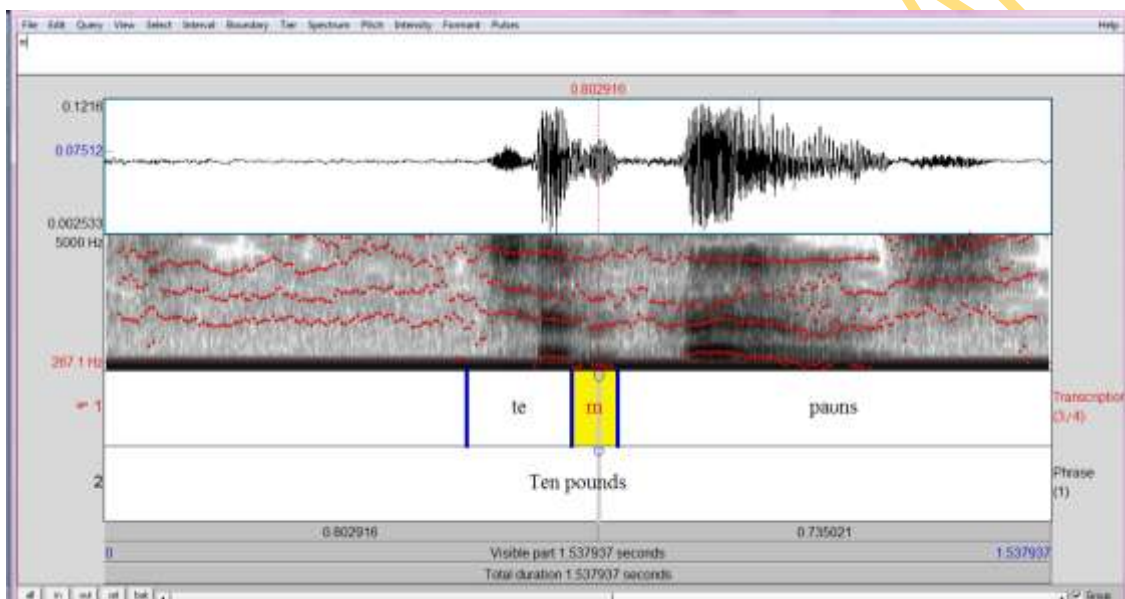
5.2.2 Acoustic analysis of *Ten pounds*

Control

Fig. 5.18 The textgrid of *Ten pounds* as produced by the control.

S1- West: YF
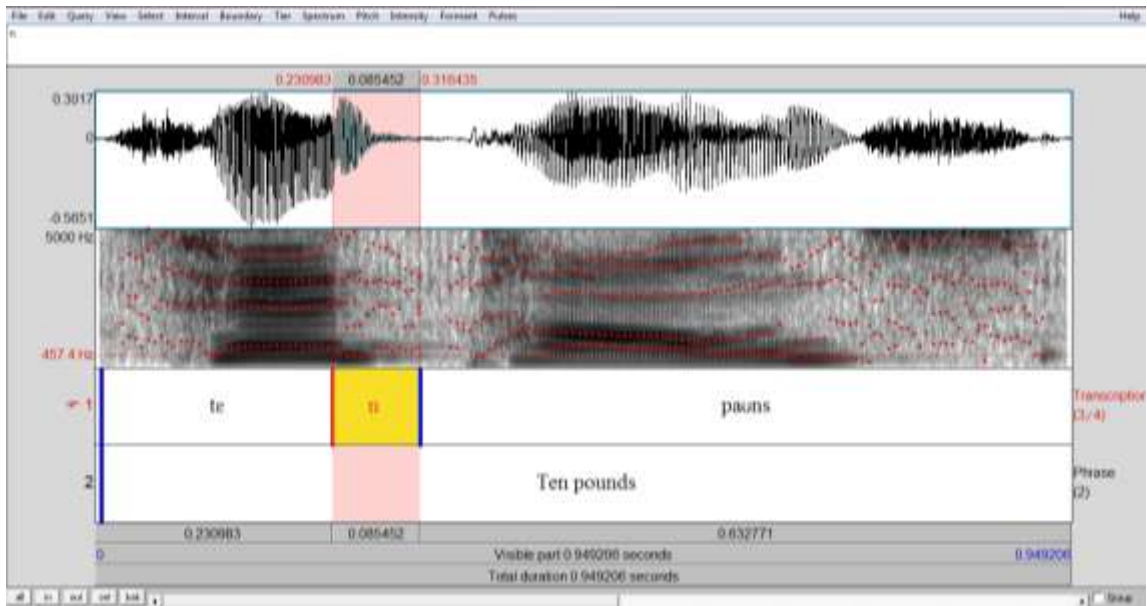
Fig. 5.19 The textgrid of *Ten pounds* as produced by a young female speaker of English from Western Nigeria.

S2- West: AM
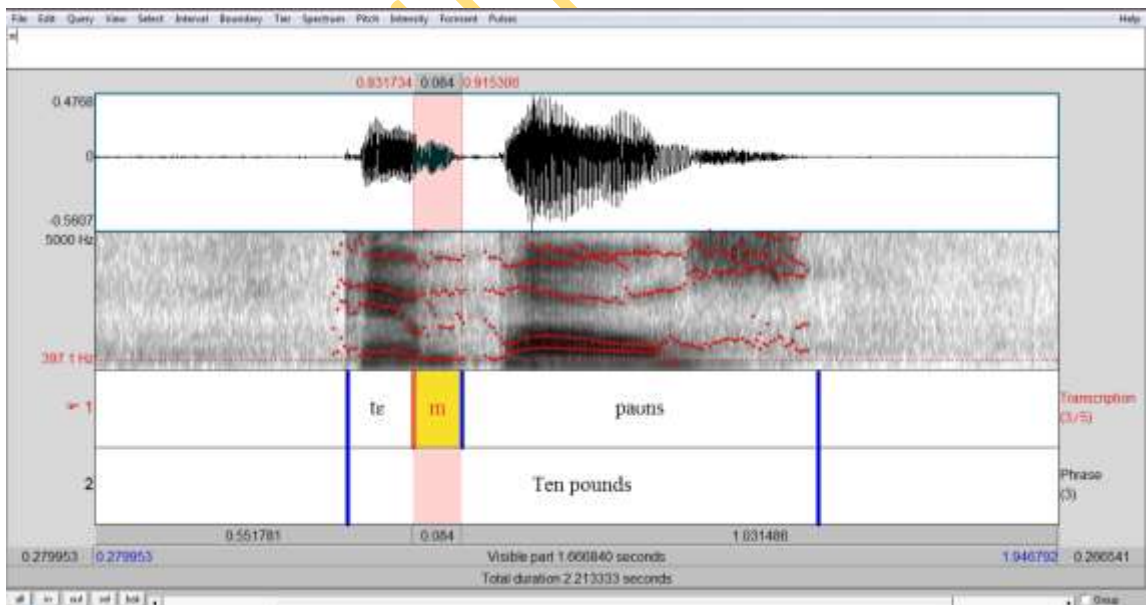
Fig. 5.20 The textgrid of *Ten pounds* as produced by an adult male speaker of English from Western Nigeria.
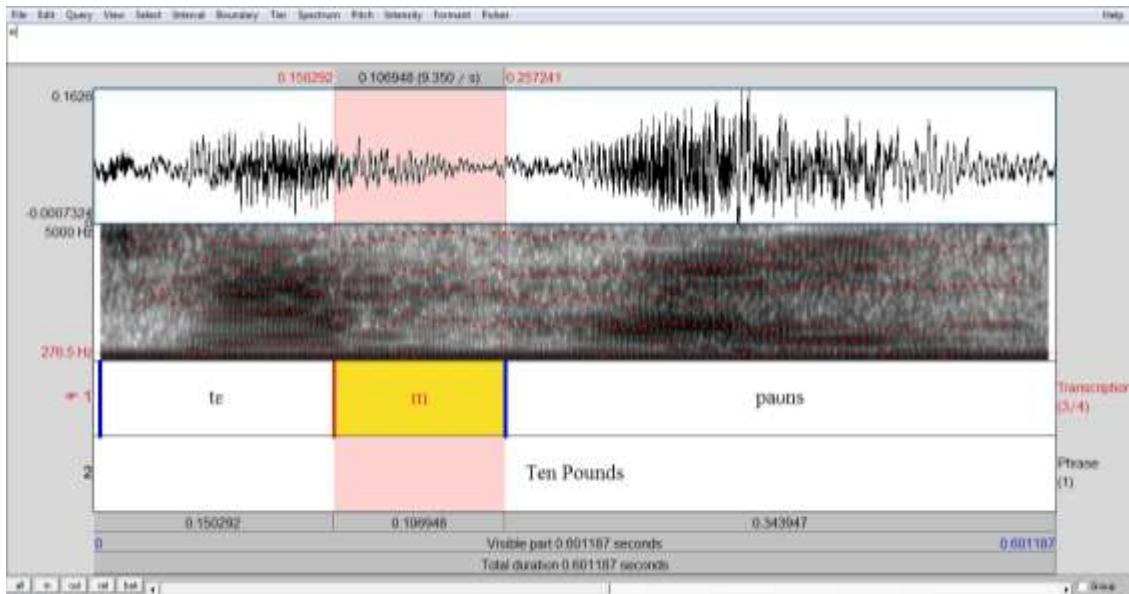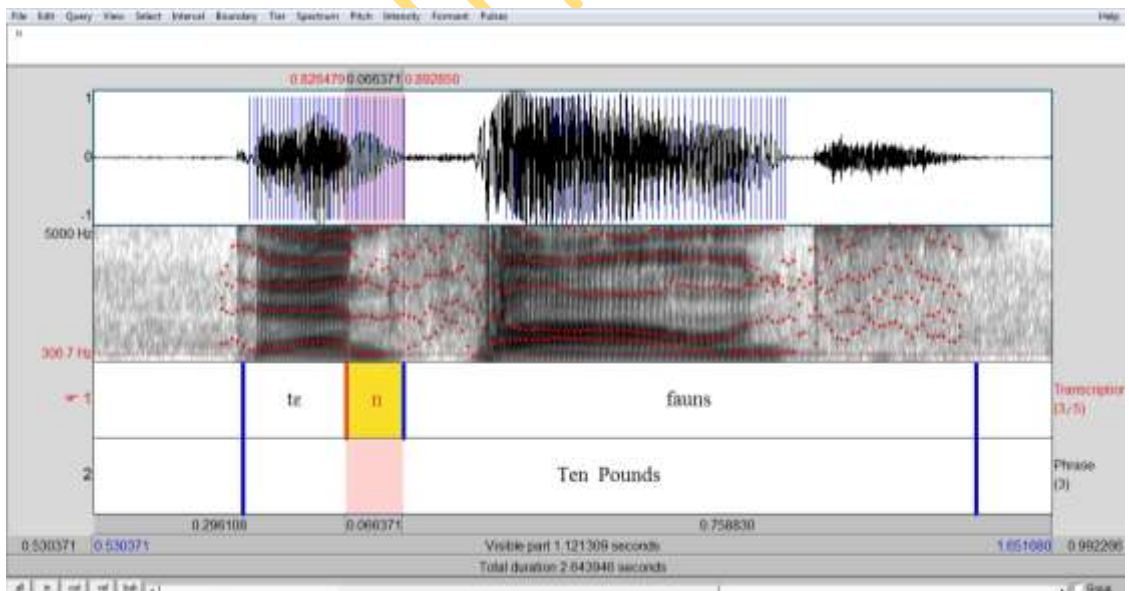
S3- East: YF
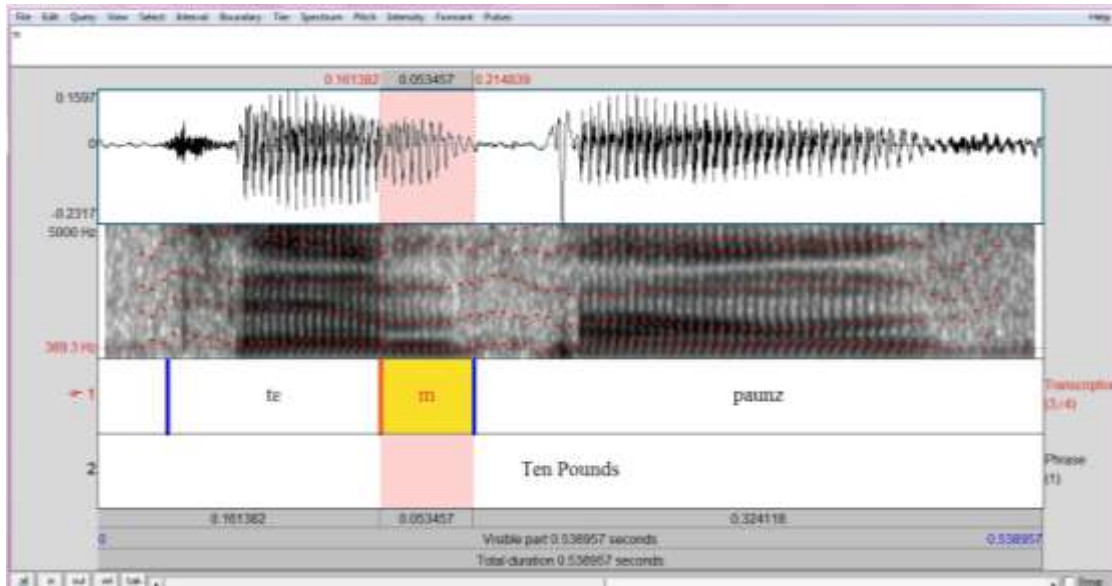
Fig. 5.21 The textgrid of *Ten pounds* as produced by a young female speaker of English from Eastern Nigeria.
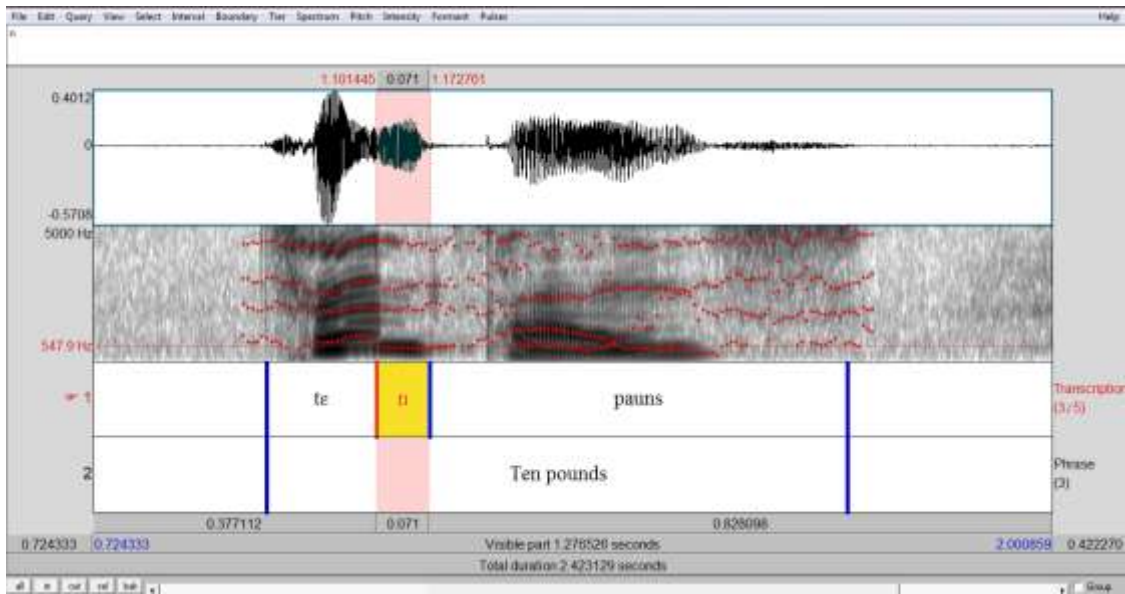
S4- East: AM
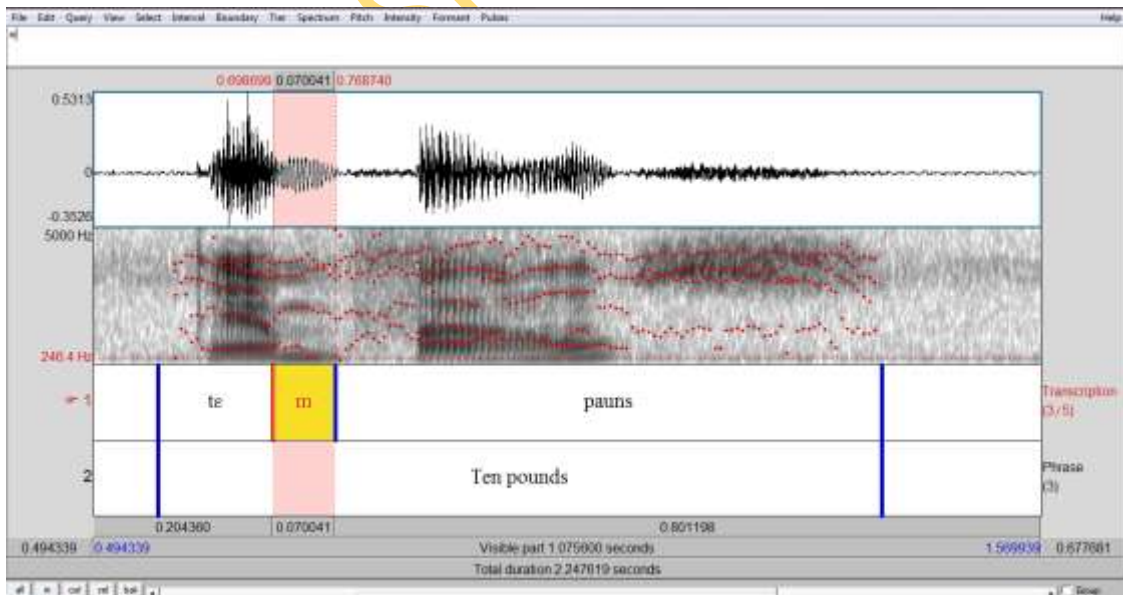
Fig. 5.22 The textgrid of *Ten pounds* as produced by an adult male speaker of English from Eastern Nigeria.

S5- North: AF

Fig. 5.23 The textgrid of *Ten pounds* as produced by an adult female speaker of English from Northern Nigeria.

S6- North: YM

Fig. 5.24 The textgrid of *Ten pounds* as produced by a young male speaker of English from Northern Nigeria.

S7- South-South: AF

Fig. 5.25   The textgrid of *Ten pounds* as produced by an adult female speaker of
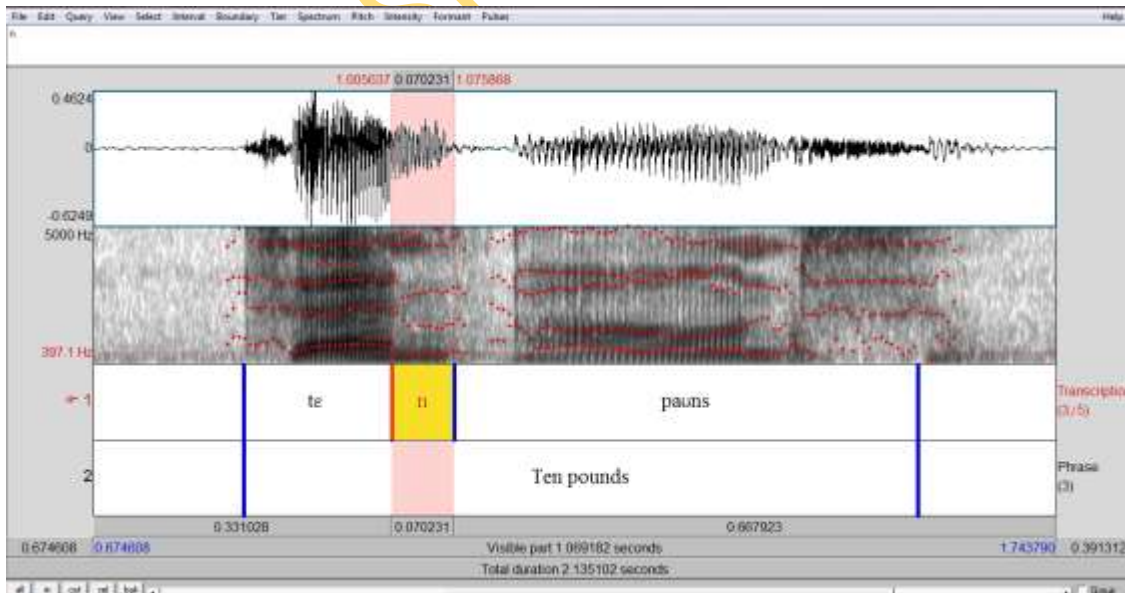English from the South-South region of Nigeria.

S8- South-South: YM

Fig. 5.26   The textgrid of *Ten pounds* as produced by a young male speaker of
English from the South-South region of Nigeria.

The above textgrids which display the speech wave form, spectrogram, duration, frequencies, formant structure and formant tracks of each slice of the utterance: *Ten pounds,* as produced by the control and eight Nigerian speakers of English, were examined to determine whether or not alveolar nasal /n/ became assimilated to bilabial nasal /m/ (nasal assimilation) in *ten pounds* as expected in SBE connected speech.

First, it is obvious from the spectogram that each respondent articulated a nasal consonant as shown by the formants (the dark horizontal bars on the pink spot where [n or m] was articulated) and formant trackers (the red horizontal lines). According to Ladefoged (1993, 2003), nasal consonants generally have formant structures similar to but often fainter than those of vowels. This is for the reason that nasals have lower amplitude than vowels. The first formant usually lies at the base line of the spectogram. In this case, therefore, each of the nasal sounds displays very low first formants. For the control, it is at about 267.1 Hz, while those of the Nigerian speakers fall between 246.4 Hz and 547.9 Hz.

However, in order to determine the nasal consonant produced, we examined the pattern of formant transitions that characterise the vowel that precede each nasal consonant. Nasals are usually distinguished from each other by the different formant transitions (movement of the formants) occurring at the end of the vowel that precedes or follows the nasal consonants (Ladefoged, 1993; Kirchner, n.d.). According to Ladefoged (1993:201), bilabial nasal /m/ is distinguished by a downward movement of the second and third formant before it, while velar nasal /ŋ/ is characterised by coming together of the second and third formants before it. Alveolar nasal /n/, on the other hand, is identified by 'comparatively small movement of the formant'.

In the control's spectogram, the second and third formants (depicted by the formant transition of vowel /e/ of *ten* as well as the formant trackers)*,* show a downward movement before the following nasal consonant, indicating that [tem paʊns] was articulated. This implies that assimilation of [n] to [m] occurred in the control's speech as earlier established in the perceptual analysis. The same trend was also observed in the spectograms of four Nigerian participants (S2, S3, S4 and S5), which implies that these participants assimilated [n] to [m]; while the remaining 4 participants (S1, S6, S7 and S8) did not. This, somewhat, corroborates the finding of perceptual analysis which showed that NE speakers closely approximate to the SBE norm in nasal assimilation.

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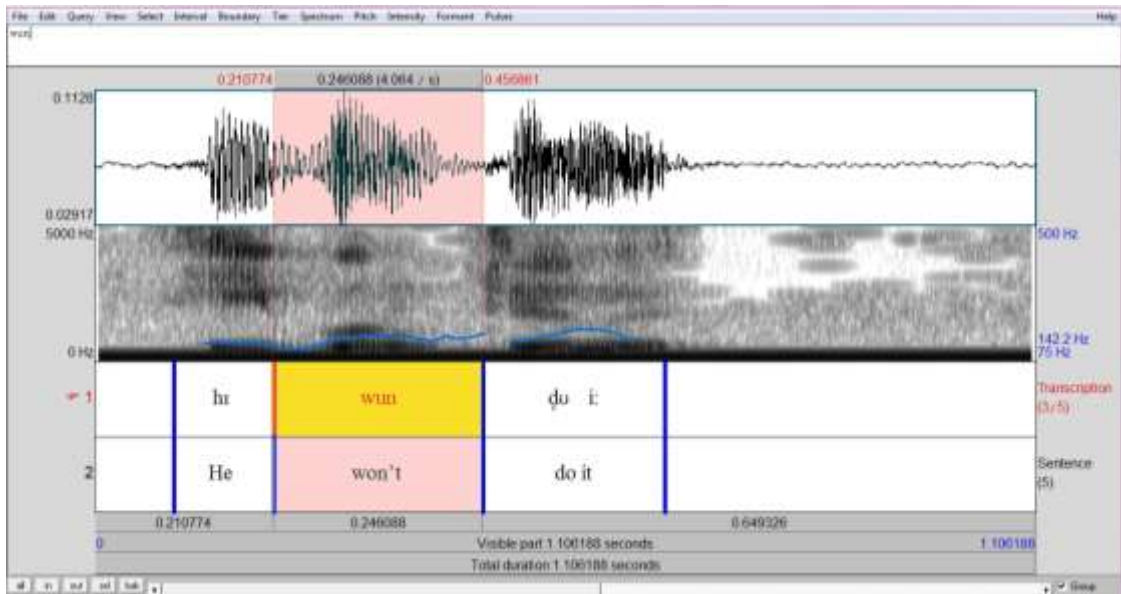### 5.2.3 Acoustic analysis of *He won't do it*

Control

Fig. 5.27 The textgrid of *He won't do it* as produced by the control.
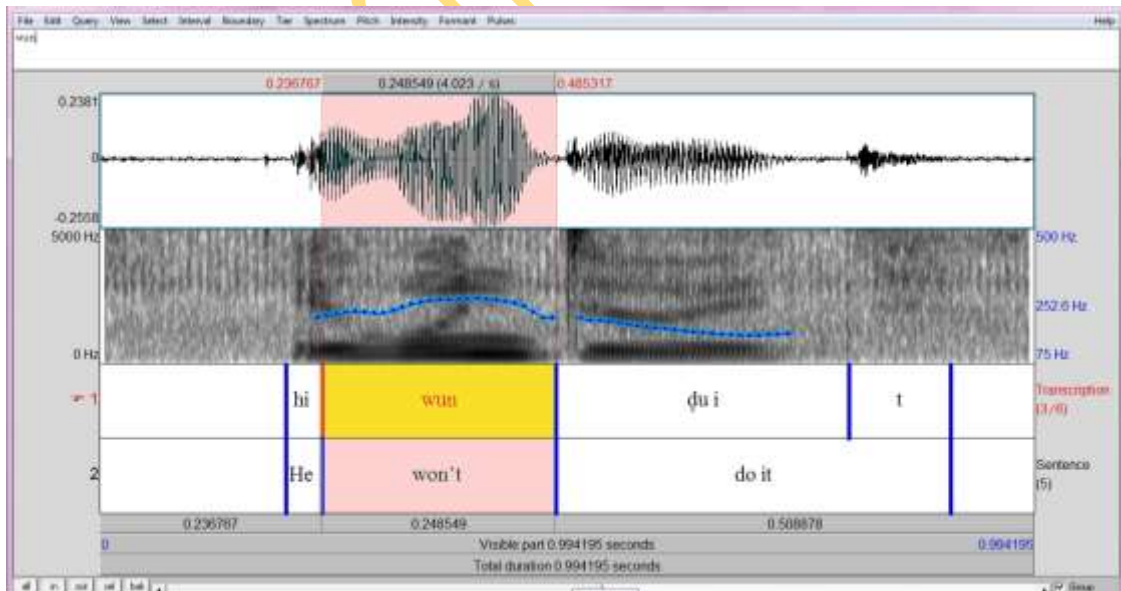
S1- West: YF

Fig. 5.28 The textgrid of *He won't do it* as produced by a young female speaker of English from Western Nigeria.
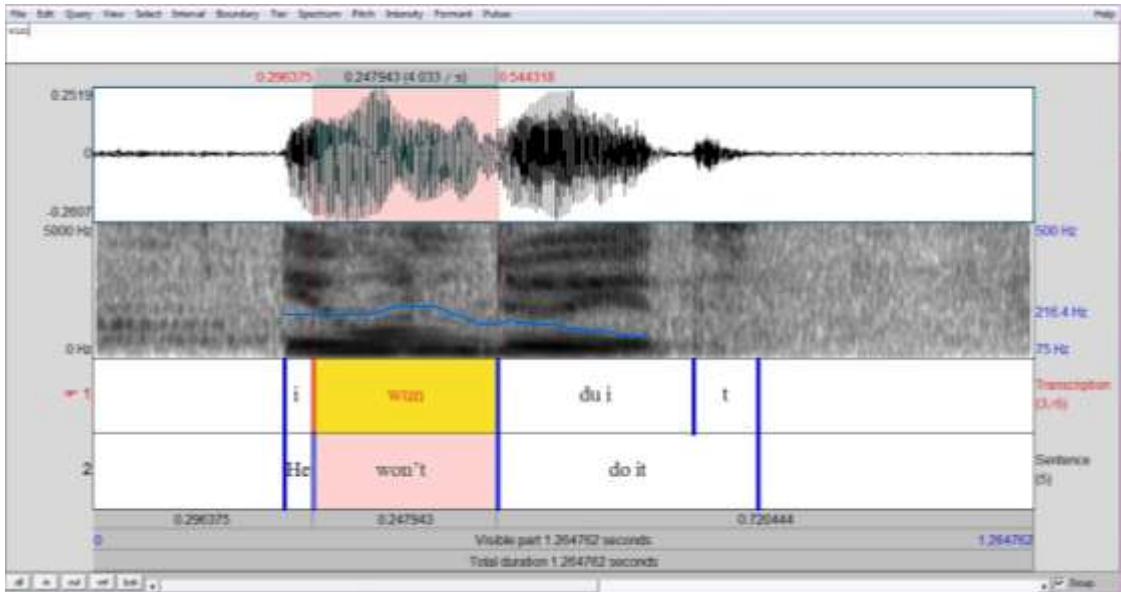
S2- West: AM

Fig. 5.29 The textgrid of *He won't do it* as produced by an adult male speaker of English from Western Nigeria.
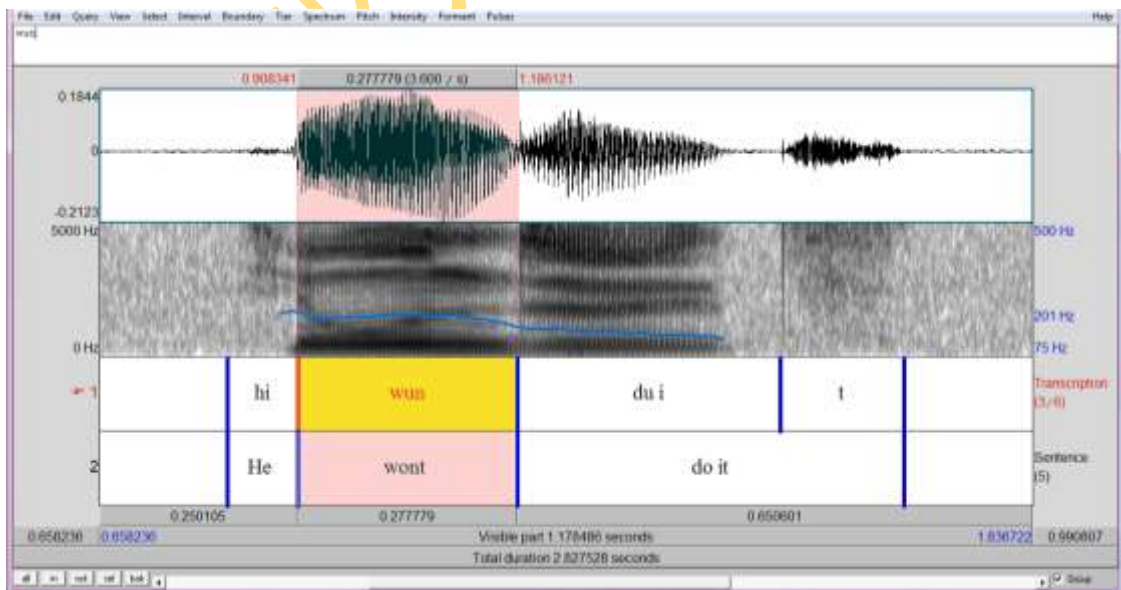
S3- East: YF

Fig. 5.30 The textgrid of *He won't do it* as produced by a young female speaker of English from Eastern Nigeria.
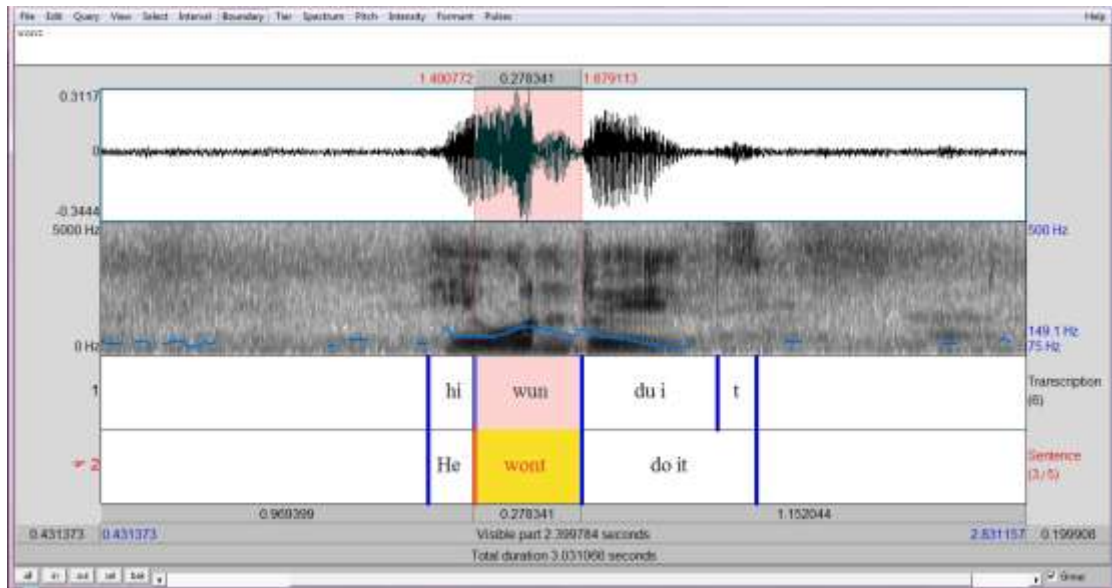
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S4- East: AM

Fig. 5.31   The textgrid of *He won't do it* as produced by an adult male speaker of English from Eastern Nigeria.

S5- North: AF

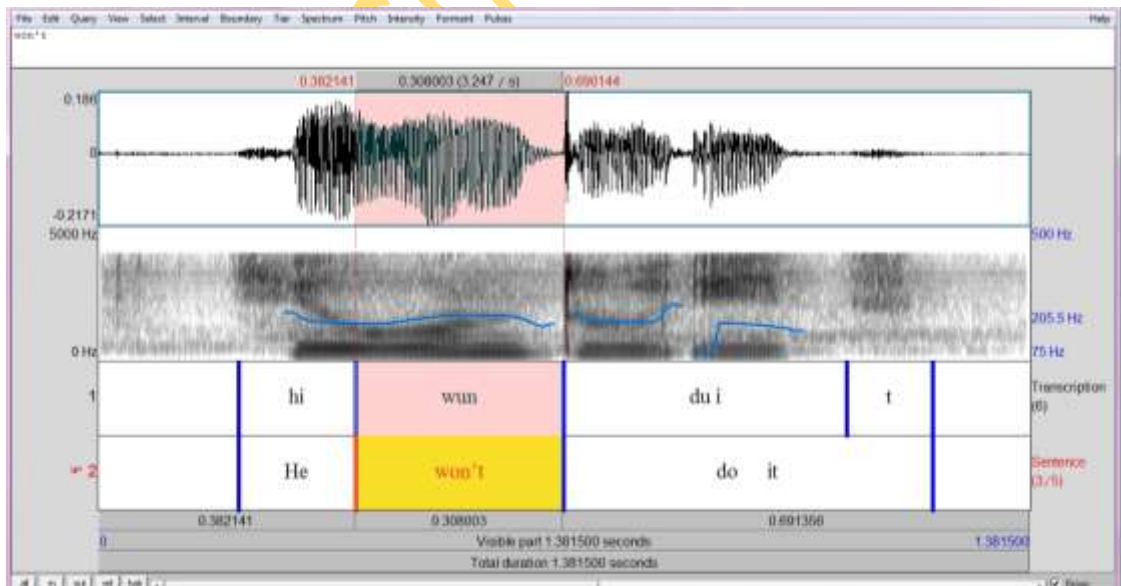**Fig. 5.32**   The textgrid of *He won't do it* as produced by an adult female speaker of English from Northern Nigeria.
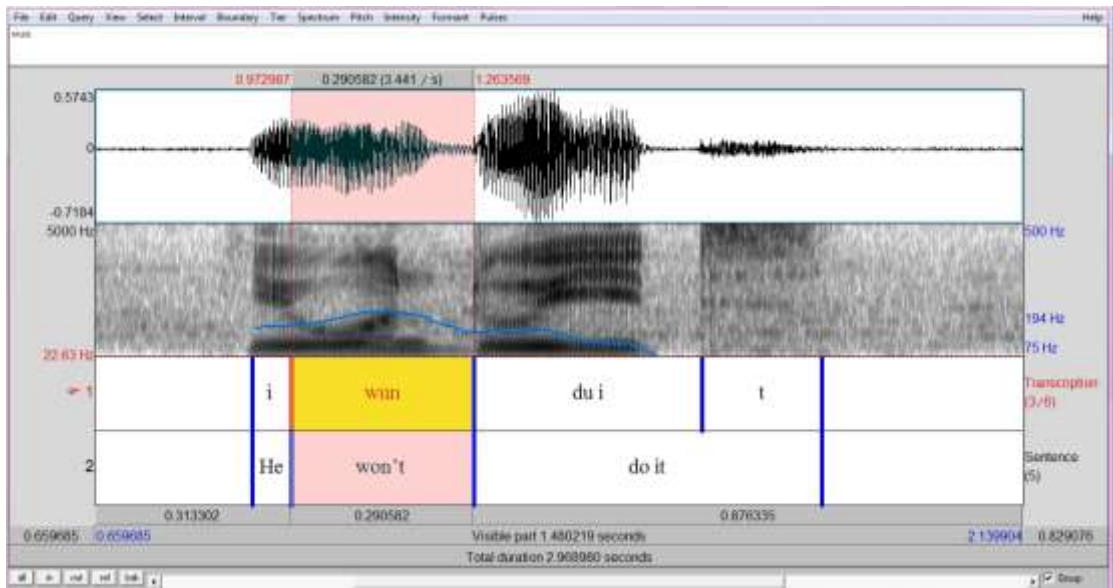
S6- North: YM

Fig. 5.33 The textgrid of *He won't do it* as produced by a young male speaker of English from Northern Nigeria.
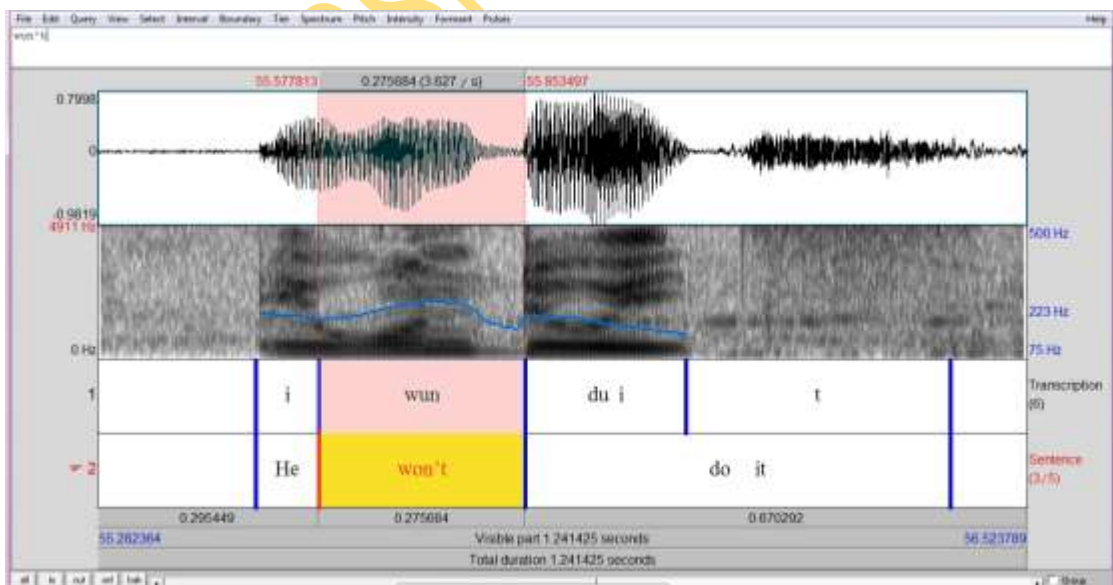
S7- South-South: AF

Fig. 5.34 The textgrid of *He won't do it* as produced by an adult female speaker of English from the South-South region of Nigeria.
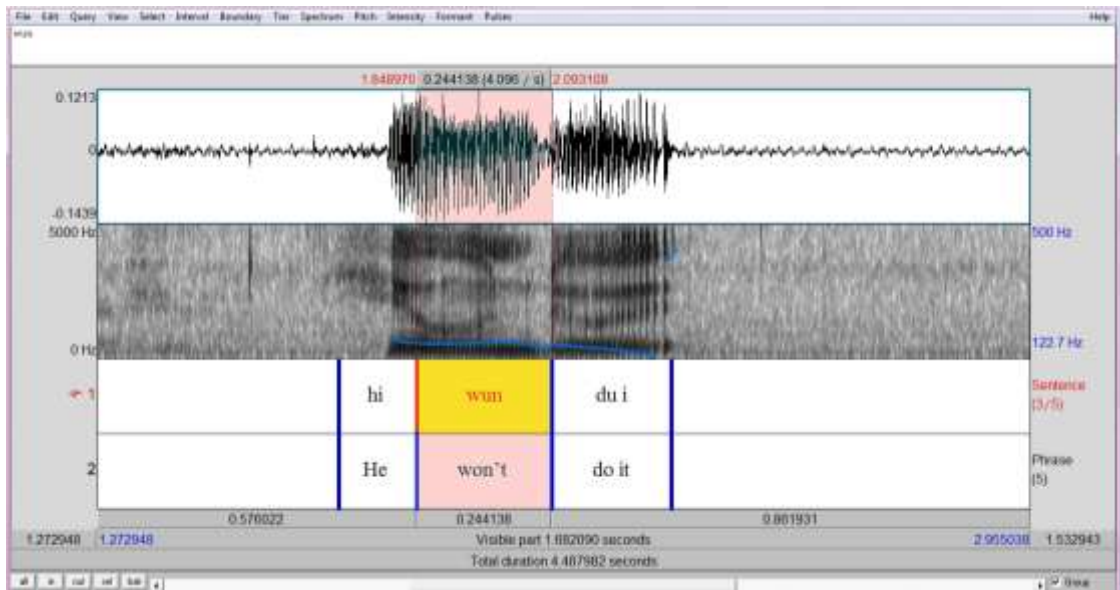
S8- South-South: YM

Fig. 5.35 The textgrid of *He won't do it* as produced by a young male speaker of English from the South-South region of Nigeria.

The above textgrids of the utterance: *He won't do it* exemplify boundary consonant elision process in SBE and NE. From the formant structure and the pitch bars on the spectrograms of the control and the participants, it is obvious that *t* was elided in all cases in *won't*. First, formants and vertical striations (representing voicing) are visible on the spot where *won't* was articulated (highlighted pink), which indicates that only approximant /w/, vowel /ʊ/ and nasal /n/ were produced (these acoustic features are uncharacteristic of /t/, which is voiceless and is usually represented with a burst of noise). Second, in most instances, the pitch curve stretches from [ɪ] of *he* to [ɪ] of *it* without a break, which implies that a voiceless segment was not produced in-between (recall that a voiceless segment breaks the pitch curve). In the three instances of the control, S1 and S5 where there is a break in the pitch bar, the break occurs on the spot where [d] was produced and not on [t]. This presupposes that it was a devoiced [d̥] rather than voiced [d] that was articulated.

This, therefore, confirms the initial finding that NE speakers approximate to the SBE connected speech processes in regard to elision and, at the same time, establishes the predominance of elision as a consonant cluster simplification stategy in Nigerian English as discovered in the previous analysis.

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5.2.4   Acoustic analysis of *I met Peter at the station*

Contol
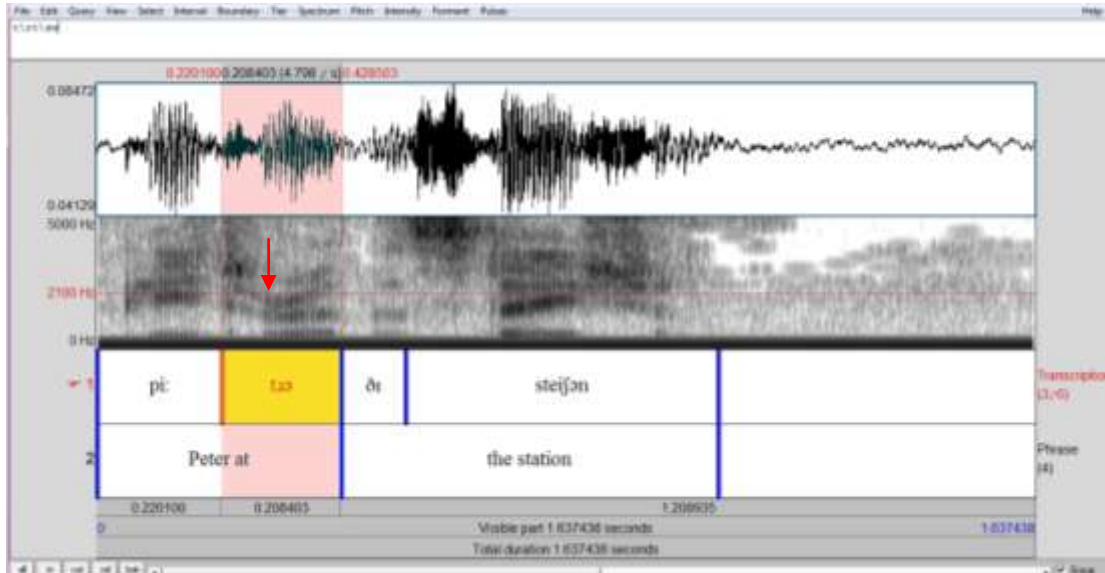
Fig. 5.36   The textgrid of *I met Peter at the station* as produced by the control.

S1- West: YF

Fig. 5.37   The textgrid of *I met Peter at the station* as produced by a young female speaker of English from Western Nigeria.

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S2- West: AM

Fig. 5.38 The textgrid of *I met Peter at the station* as produced by an adult male speaker of English from Western Nigeria

S3- East: YF

Fig. 5.39 The textgrid of *I met Peter at the station* as produced by a young female speaker of English from Eastern Nigeria.

S4- East: AM

Fig. 5.40   The textgrid of *I met Peter at the station* as produced by an adult male speaker of English from Eastern Nigeria.

S5- North: AF

Fig. 5.41   The textgrid of *I met Peter at the station* as produced by an adult female speaker of English from Nothern Nigeria.

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S6- North: YM
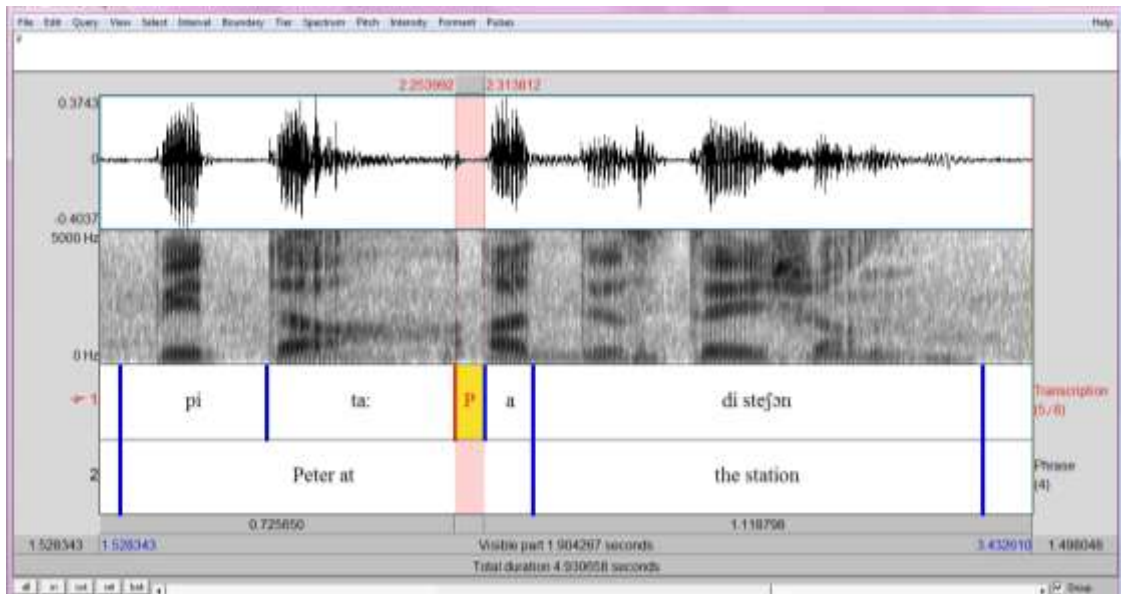
Fig. 5.42 The textgrid of *I met Peter at the station* as produced by a young male speaker of English from Nothern Nigeria.
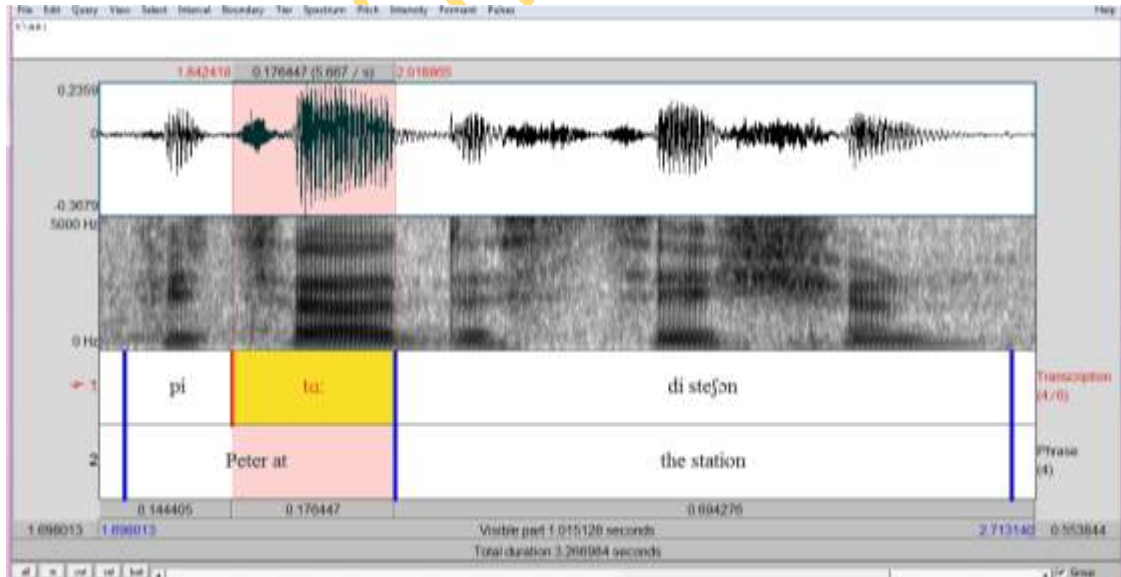
S7- South-South: AF
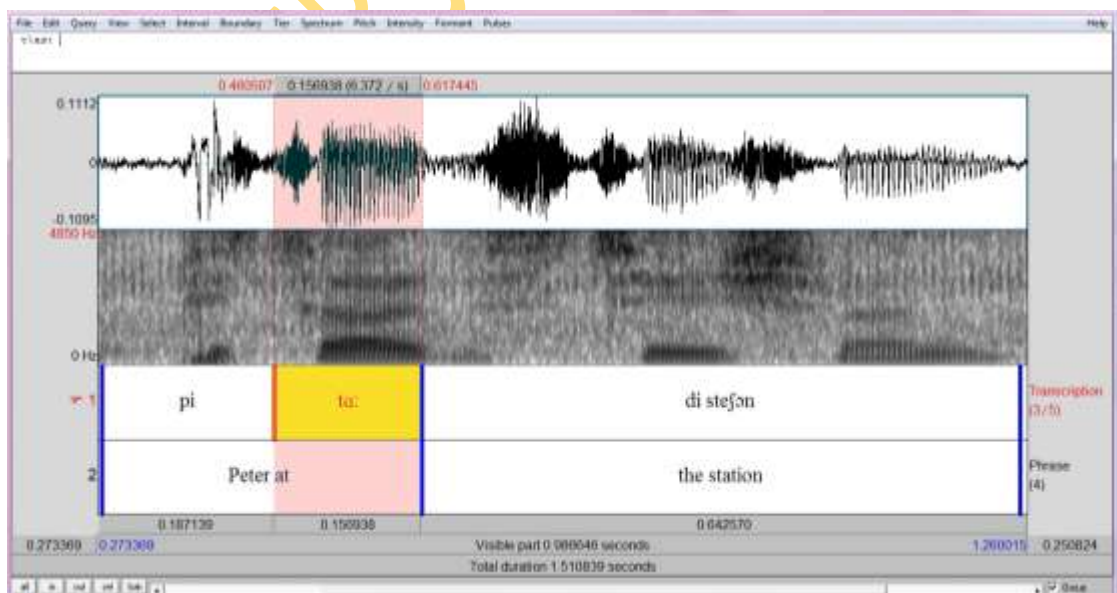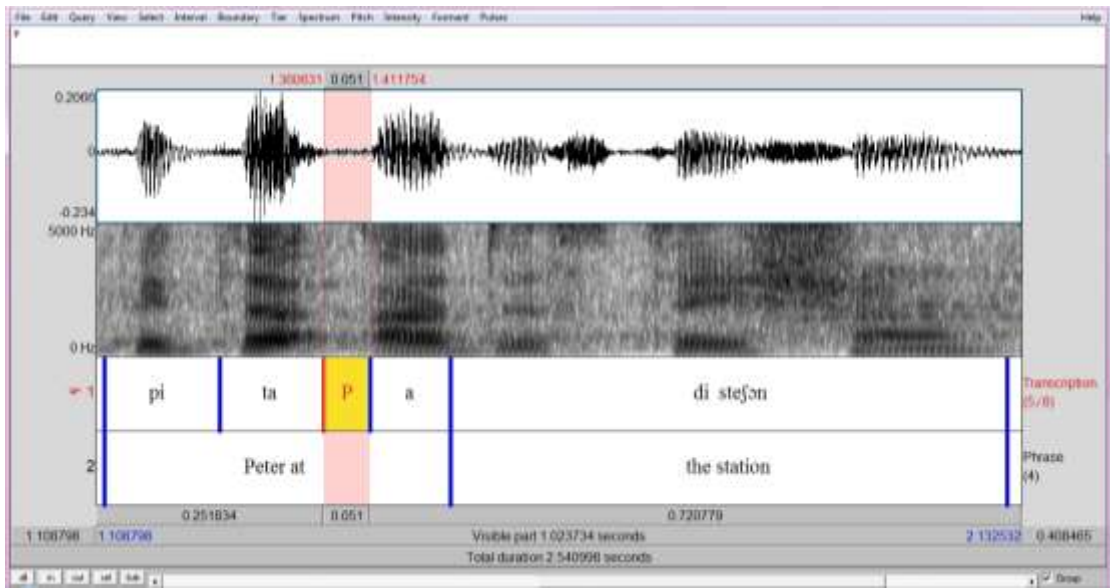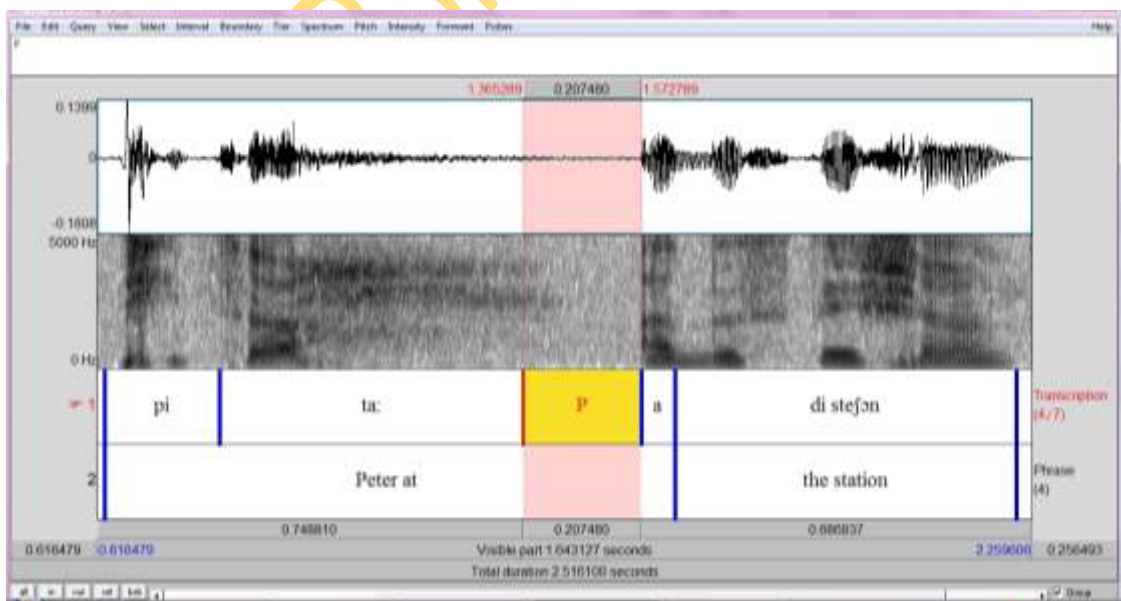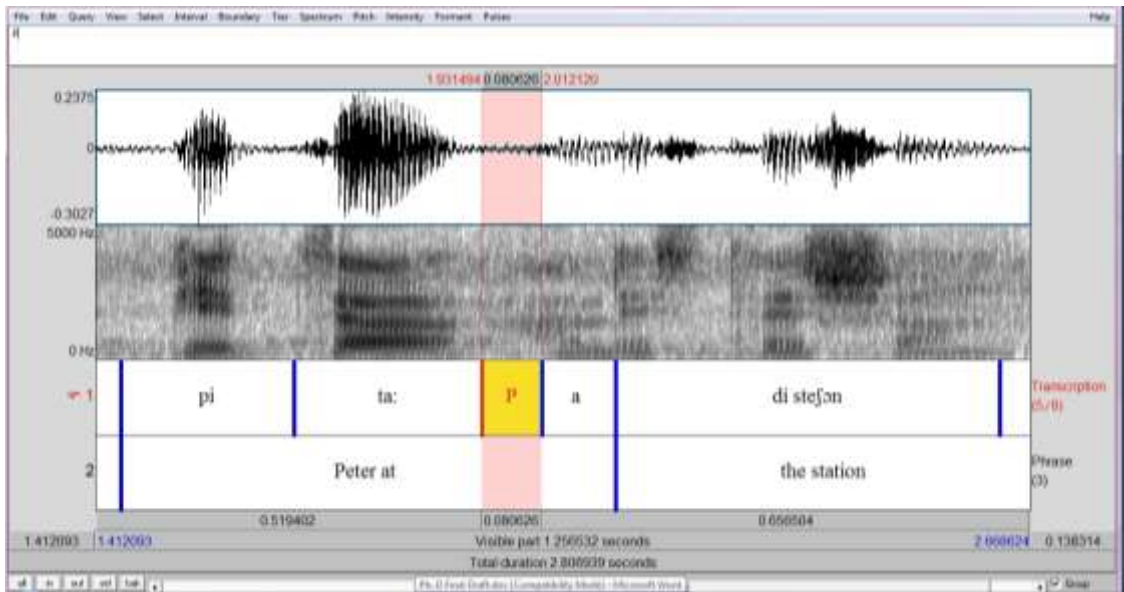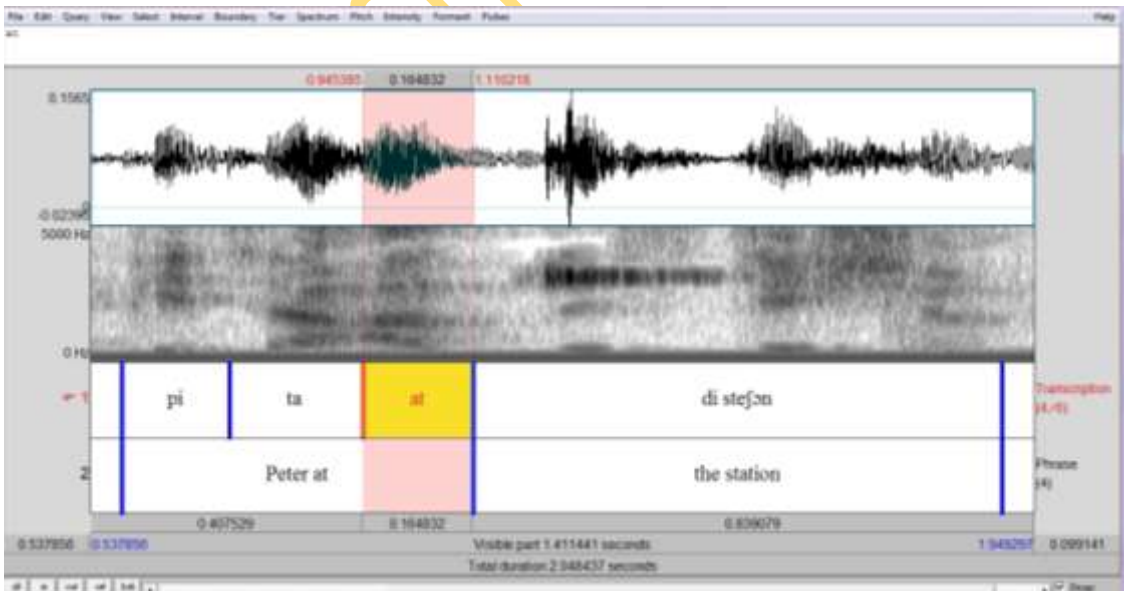

Fig. 5.43 The textgrid of *I met Peter at the station* as produced by an adult female speaker of English from the South-South region of Nigeria.
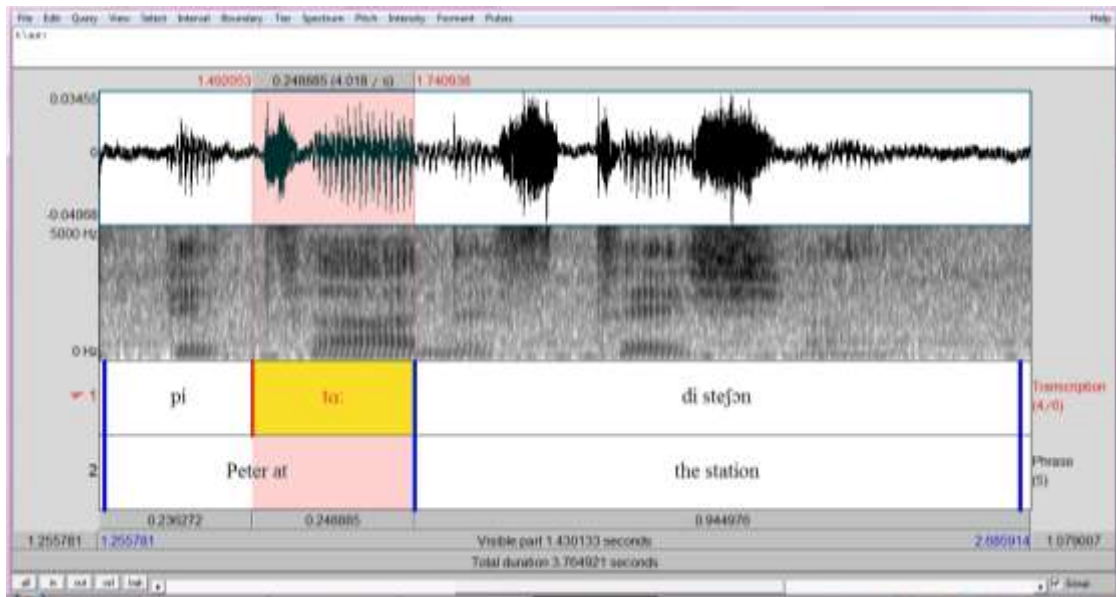
Fig. 5.44   The textgrid of *I met Peter at the station* as produced by a young male speaker of English from the South-South region of Nigeria.

The textgrids above illustrate the dispositions of SBE and NE speakers to r-liaison. We were to determine whether /r/ was used to link the vowel of the second syllable of *Peter* [ə] with the vowel of *at* [ə]. Acoustically, /r/ is distinguished mainly by a decrease in the frequency of F3; that is, the lowering of the higher formants: the third, and even, the fourth (Ladefoged 1993, 2003). Ladefoged (2003:149) specifically claims that "variations in the frequency of F3 indicate the degree of r-coloring: the lower the F3, the greater the degree of rhoticity". From the spectogram, therefore, it is obvious that the control used r-liaison as demonstrated by the lowering of the third formant at the spot where /r/ appears on the spectogram (highlighted pink). F3 descends to 2100 Hz for /r/ between the last syllable of *Peter* and *at* as indicated by the red arrow.

On the other hand, none of the Nigerian participants used r-liaison as can be seen on the spectogram. In the first instance, the higher formants for the boundary segments (highlighted pink) are not shown to be lowered; most of them are close to the upper limit of the spectogram. Besides, the linking phenomenon was resolved either by lengthening the vowel of the second syllable of *Peter* or pausing before *Peter* and *at*. For example, while S2, S3, S4 and S6 paused in-between the boundary vowels, S1, S5,

S7 and S8 lenghtened the vowel of the second syllable. This finding, again, justifies the initial submision that linking /r/ is not a typical connected speech feature of Nigerian English as speakers failed to approximate to SBE.

CHAPTER 6

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.0.   Introduction

This study set out to investigate assimilation, elision and liaison processes of Standard British English (SBE) connected speech in NE, in relation to the region, gender and age of speakers. This was with a view to establishing the extent to which NE speakers approximate to or deviate from the connected speech processes of Standard British English**.** The findings are to afford us the opportunity to appropriately describe the subsegmental domain of Nigerian English and unearth various sociophonetic influences on it.

Using the semi-spontaneous speeches of 360 participants, drawn from four regions and two social categories (gender and age) in Nigeria, we carried out both statistical and acoustic analyses in an attempt to answer the following research questions:

(i)   are there incidences of assimilation, elision and liaison processes of SBE connected speech in Nigerian English?

(ii)   to what extent do Nigerian English speakers approximate to or deviate from the Standard British English connected speech processes?

(iii)   are there typical Nigerian English CSPs?

(iv)   are assimilation, elision and liaison socially differentiated in Nigerian English in terms of the region, gender and age of speakers?

(v)   what are the possible motivations for participants' performance?

6.1   Summary of Findings

Consequently, the following discoveries were made about connected speech processes in Nigerian English.

In regard to the question of whether there are incidences of assimilation, elision and liaison processes of SBE connected speech in Nigerian English (research question

i), some of the processes that characterise the native speakers' connected speech were found in the Nigerian English data, but in varying degrees. Some of them were predominant or substantial, while others were minor. The first category comprised regressive devoicing, progressive devoicing, nasal assimilation and consonant elision. These CSPs were found to be prevalent in the data and cut across ethnic and social considerations. Included in the second category are SBE processes that were attested to a lesser degree in the data; these are progressive voicing, alveolar stop assimilation, yod coalescence, t-voicing, smoothing, linking and intrusive /r/.

Therefore, in response to the question on the extent of NE speakers' approximation to or deviation from the SBE connected speech processes (research question ii), the overall incidence of the CSPs (assimilation, elision and liaison) of Standard British English indicated 43.2% approximation to and 56.8% deviation from SBE. Considering each process, we found that NE speakers demonstrated significant approximation to SBE in three assimilation variants- regressive devoicing, progressive devoicing and nasal assimilation, while they deviated in four others- progressive voicing, voiceless alveolar stop assimilation, voiced alveolar stop assimilation and yod coalescence. Consonant elision, in all contexts, occurred significantly, while the incidence of liaison (linking and intrusive /r/) was extremely low.

The statistical analysis of the above findings showed a preponderance (99.2%) of regressive devoicing at word boundary where a voiced obstruent precedes a voiceless one, e.g. [t͡ʃo̥z siks] *we cho̱se six player*, [hḁʋ tu] I *ha̱ve to go, etc.* In each case*,* the preceding segment was devoiced in anticipation of the following voiceless sound. Progressive devoicing was significantly produced (65.1%) at word boundary where a voiceless segment precedes a voiced one, e.g. [haf d̥ɔn] *the job was half done*, [naɪs b̥ɔy] *nice boy*, etc. In each item, the initial segment of the second of the two boundary words was, in most cases, affected by the voicelessness of the last consonant of the first. Nasal assimilation was also predominant (63.5%) at word boundary where /n/ precedes bilabial stops /b, p/ or velar stop /k/, as in [tɛm bɔis] *ten boys,* [tɛm pauns] *ten pounds* and [iŋ kes] *in case.* On the other hand, progressive voicing deviated significantly (21.2%) at word-final position where the reduced form of verb *be* is preceded by a voiced segment, e.g. [hiz] *he's*, [dɔgz] *dog's*. In the same vein, voiceless alveolar stop assimilation was produced less (47.6%) in an environment where voiceless alveolar stop /t/ precedes a bilabial or velar stop /p, k/, as in [mɛp pɪta] *I met Peter*, [dak kes] *that case*. At the word boundary where voiced alveolar stop /d/

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precedes a bilabial or velar stop /g, b/, e.g. [gug‿gɛl] *good girl,* the percentage score for the NE speakers revealed extremely low incidence of voiced stop assimilation (3.2%). Also, yod coalescence was barely articulated (6.2%) at four boundary environments where /s, z, t, d/ fuse with yod /j/ to produce [ʃ, ʒ, tʃ, ʤ], e.g. [miʃɔ:] *mi_ss your train,* [ðoʒɔŋg] *tho_se young men,* [wɔʧu] *what_you want,* [kuʤu] *coul_d you*, etc.

Nigerian English speakers demonstrated a propensity for consonant elision, with 61.5% performance, at different boundary contexts (especially in boundary consonant clusters involving alveolar plosives /t, d/), e.g. [dɔsnˈ ʃi] *doesn't she,* [ezɑkˈ kɔlɔ] *exa_ct colour,* [ʤɔmpˈ wel] jumped well, [fiksˈ prais] fixe_d price, [rɔbˈ boθ] *robbe_d both banks, etc.* Conversely, liaison (linking /r/ and intrusive /r/) was less prevalent among the participants. Linking /r/ was slightly employed by participants in 8.1% instances, especially in-between short grammatical words like [mɔr ɔf] *more of*, [aftar e wail] *after a while*, [ðeər a] *there are*, etc.; while instances of intrusive /r/ were extremely low (2.9%).

The statistical findings were further corroborated by the results obtained through the acoustic analysis which revealed that participants, in most cases, considerably deviated from the SBE norms. As shown by the speech waveforms, formants structure, voice bar and pitch curves on their textgrids, only 25% of the NE speakers were able to articulate progressive voicing as obtained in SBE, 50% produced nasal assimilation, while none of the speakers used r-liaison. The spectrograms, however showed that *t* was elided by the eight participants in *He won't do it*. All these corroborated the findings of statistical analysis.

As regards the question of whether there are peculiar NE connected speech processes in the data (research question iii), few CSPs were found to be typical of the NE variety, which were not attested in the SBE data. These are final devoicing, regressive voicing and consonant substitution. At word-final position where the reduced form of verb *be* is preceded by a voiced segment, final devoicing, e.g. [ʃis] *she's a good girl*, [di dɔks main] *the dog's mine,* was significantly produced (78.8%); while regressive voicing, whereby a voiceless segment preceding a voiced one at word boundary becomes voiced e.g. [aiz blu] *ice blue*, [blag drɛs] *black dress,* showed 30.5% tokens of occurrence. Consonant substitution, which occurred in junctural contexts involving /p/ or /f/, is more or less an idiosyncratic deviation from SBE with considerably low incidence (1%). It was attested in the speech of few participants from Northern Nigeria where /p/ was sometimes substituted for /f/ or vice versa due to the

influence of Hausa (a lingua franca in the region) which regards [p], [f] and [Φ] as allophones of /p/ or /f/ (Jowitt, 1991). This process was evident in the following alternations: [hɑp tu] *ha<u>ve</u> <u>to</u>,* [faif fauns, faɪp pauns] *fi<u>ve</u> <u>p</u>ounds,* [ɔp kɔs] *o<u>f</u> <u>c</u>ourse,* [laip ʃo] *li<u>ve</u> <u>sh</u>ow*, [hɑp dɔn] *hal<u>f</u> <u>d</u>one,* etc.

On the issue of the social variation of assimilation, elision and liaison in Nigerian English in relation to region, gender and age (research question iv), it was discovered that region and gender of speakers were significant in only a few processes, while age was inconsequential. Regional contrast was found in liaison: speakers from the East performed significantly better than those from the North; at the same time, there was a convergence of sort across three regions: West, South-South and East. Gender also had a significant effect on elision: male speakers' performance was significantly better than female speakers'.

In regard to the factors responsible for participants' performance (research questions v), it was observed that participants' approximation to SBE in certain processes was principally motivated by articulatory (phonetic) factors and mother tongue transfer rather than adequate knowledge of English phonological rules. Participants were able to approximate to Standard British English CSPs in processes that are more natural (require less articulatory effort), common and attested in many languages or where the sound segments in question are easily accessible in their indigenous languages. This informed their better performance in processes that involve devoicing, homorganic nasal assimilation and deletion. Whereas they could not replicate this feat in voicing, yod coalescence and r-liaison processes which require more articulatory energy.

In terms of social factors, gender variation in elision can be associated with articulatory economy as well as sloppy, casual and less prestigious speech habit of the male folks, compared to their female counterparts' formal and more refined speech. In the literature, phonetic explicitness is often linked with correctness and high-status varieties, while phonetic reduction or simplification is associated with sloppiness, casualness or vernacular speech which men's speech is known for. On the other hand, the regional variation in liaison between Eastern and Northern speakers does not necessarily give one region a significant social advantage over the other, as speakers from all regions recorded extremely low performance in this process. Rather, it suggests that absence of r-liaison in Nigerian English is the most obvious in the North.

6.2 Conclusions

The implications of the foregoing, therefore, are as follows:

1. Nigerian English speakers' use of Standard British English connected speech processes manifested, overall, more deviation from, than approximation to, SBE. This suggests NE speakers' relatively low level of competence in Standard British English connected speech processes, and establishes the marked difference between the CSPs of the two varieties. Unlike in SBE where the occurrence of CSPs is widespread (Laver, 1968), these processes are not so prevalent in the speech of NE speakers. Where they occur at all, they are largely influenced by mother tongue transfer and articulatory exigencies- the need to employ natural features that require less articulatory effort and are attested in or common to many languages (Hyman, 1975; Simo Bobda, 1994).

    Besides, in SBE, CSPs do not affect sound segments only, but also a whole word, syllable and sometimes a phrase (Kerswill, 1985; Nolan and Kerswill, 1990; Wells, 2000); whereas, they are almost always restricted to word or morpheme boundaries in NE. These deviations stem from the fact that NE speakers, like many other L_2 speakers, do not speak English like native speakers who are fond of speaking fast, with sounds (and by implication words) slurring into each other. Rather, they have a tendency to keep words apart during speech.

    This can be explained in terms of a number of factors. One is the syllable-timed rhythm of the phonology of the indigenous Nigerian languages, in which each syllable is given equal weight (no syllable is more important than the other) and pronounced with equal emphasis. Most Nigerian speakers, therefore, negatively transfer this innate speech habit to the phonology of English. The second factor is the bookish nature of the speech habit of Nigerian English speakers. Being L2 leaners, Nigerians neither have the intuition of the native speaker nor acquire English in the native speakers' environment. English is learnt, principally, in a formal classroom setting where pronunciation teaching is based on isolated words and not on utterances (Laver, 1968; Gimson, 1980). Most Nigerian speakers, therefore, speak just the way they read, putting emphasis on each word.

2.	In a bid to resolve the difficulty posed by certain SBE connected speech rules, Nigerian English speakers have developed certain characteristic patterns of CSPs that deviate from the SBE norm. Some of them are predominant or substantial processes employed by a majority of speakers and can be regarded as Standard Nigerian English (e.g. final devoicing); while others are idiosyncratic deviations or low-level processes with regional colouration (e.g. consonant substitution). This is due to the fact that certain SBE generative rules do not apply in Nigerian English and, at the same time, there are peculiarly Nigerian English rules, which do not operate in SBE.

3.	Deviation from the SBE norm, therefore, may have implications for intelligibility. NE speakers may end up producing 'un-English' CSPs which are unintelligible to native speakers, particularly if such deviation is far removed from the SBE norm. Gimson (1980:313) advises in this regard that an L2 learner must avoid "assimilatory habits which are characteristic of his own native language but not of English". Beyond appropriate articulation of connected speech of SBE, however, NE speakers are likely to find it difficult to understand or decode the speech of a native speaker which is highly reduced, simplified or fused. This is an aspect which Gimson (1980), again, considers even more important than the acquisition of productive skills.

4.	The observation that CSPs may be socially differentiated in a community, depending on the regional affiliation, age, sex and socio-economic class of speakers (Kerswill, 1985; 1987) is not fully supported in this study. This is because only a little variation was observed in the data. Regional variation was found in liaison between Eastern and Northern participants, while males performed significantly better than females in elision process; the effect sizes of both levels of variation were, however, very small. The implication of this is that there is more convergence than divergence in these aspects of CSPs of Nigerian English speakers regardless of region, gender or age. In view of this, we cannot but agree with Laver (1968) that variation in speech in Nigerian English seems to be confined to certain sound segments and particular intonation patterns.

5.   Nigerian English is, definitely, ripe for standardisation and codification. At the subsgmental domain and in other domains earlier examined by scholars, there are features that are shared with Standard English, those which are peculiarly Nigerian and those that are alien to the NE variety. It becomes pertinent, therefore, to collate these features with a view to sieving genuine variations from errors and delimiting Standard Nigerian English pronunciation from regional varieties and non-standard forms which may impair intelligibility.

6.3   Recommendations and further studies

This study has attempted to contribute to scholarly efforts to characterise, standardise and codify Nigerian English, especially at the subsegmental level. It identified, categorised and provided nomenclatures (where none existed) for a number of connected speech processes found in Nigerian English vis-a-vis what obtains in Standard British English. Of paramount significance is the sociophonetic approach employed to unearth these processes which, by so doing, threw more light to the variability of their usage in Nigeria. In view of the above discoveries, therefore, it becomes clearer that as much as this study confirms the reality and distinctness of Nigerian English variety and the imperativeness of its codification, there is need to raise the Standard of spoken English in Nigeria, not only to be intelligible to the native speakers and speakers of other varieties, but also to ensure that Nigerian speakers are able to understand the native speakers' speech. This is because, too distant deviations from SBE may impair intelligibility at both production and perception levels.

Therefore, pedagogical efforts should be made to target for correction those features that are heavily induced by negative mother tongue transfer and spelling cued mispronunciation, which may widen the intelligibility gap between the native and non-native varieties. Besides, pronunciation teaching in Nigerian schools should no longer be based, primarily, on segmental features; emphasis should be placed on how differently these seemingly discreet sounds behave in the stream of connected speech. Learners should therefore be exposed to the communicative use of English.

This study, apart from providing a descriptive analysis for the sub-segmental features of Nigerian English, will serve as a planning platform for language planners, on the basis of which a standard that will be acceptable for teaching-learning processes can be established. It will also be of immense value to scholars, students and all who crave good spoken English.

This is, no doubt, one of the studies that have attempted to shift focus from segmental analysis to the description of sentence features. It is, however, restricted to only a few connected speech processes, in view of space. Further inquiries should, therefore, be extended to other connected speech processes, particularly, using natural speech data.

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APPENDICES

Appendix A: Distribution of participants by social variables

Region	Age	Gender	No
East	Young	Male	20
East	Adult	Male	20
East	Young	Female	20
East	Adult	Female	20
			80
North	Young	Male	30
North	Adult	Male	30
North	Young	Female	30
North	Adult	Female	30
			120
South-South	Young	Male	20
South-South	Adult	Male	20
South-South	Young	Female	20
South-South	Adult	Female	20
			80
West	Young	Male	20
West	Adult	Male	20
West	Young	Female	20
West	Adult	Female	20
			80
	Grand Total		**360**

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Appendix B.   The Semi-Spontaneous Speech Data

TEST 1

1) I've met Peter at the station

2) There are ten boys

3) She's a good girl

4) You will miss your train

5) Has your letter come?

6) Those young men

7) What you need is a good job.

8) Would you leave here?

9) Doesn't she know her teacher?

10) He won't do it

11) No, he kept quiet

12) You mustn't over-eat

13) I found five

14) No, he is an old man

15) That was cold lunch

16) No, he seemed glad

17) No, but they robbed both banks

18) You jumped well

19) I want more of Him

20) I met him after a while

21) Their action is wrong

22) They maintain law and order

23) Know what? I don't have an Idea of it.

24) I was at a media event

25) We chose six players.

26) Yea! I have to go

27) Oh! It was a live show

28) He's a nice boy

29) The dog's mine

30) She wore a black dress

31) The job was half-done

TEST 2

A. Good morning. I'd like to inquire about the advertised car

B. Yes, we have the car here. Its features will amaze you

A. Is the information about it valid?

B. Yes, of course. It is equipped with power-assisted steering, which I suppose, is the most important piece of information that you need

A. Well, obviously, but...do you think it is really ice blue with darker blue inside?

B. Oh... yes, this is the exact colour of the car.

A. All right, then. Can I arrange a test drive for tomorrow?

B. Y..es, you can have it tomorrow... It'll cost you ten pounds in case you don't buy it

A. Ten pounds!! Could you rather make it five pounds?

B. Sorry, madam, we have a fixed price for all customers.

A. Well...in that case, I'll be there tomorrow. Goodbye.

B. Goodbye and God bless you.

Appendix C. Questionnaire for adult speakers

Thank you very much for voluntarily participating in this research data gathering exercise to investigate the use of English in Nigeria. Please fill the questionnaire carefully. The information being gathered is purely for a research purpose and your responses shall be treated without reference to your name or personality.

1. **Personal information**

   Sex: M ☐   F ☐

   Age Grade: 16-30 ☐   31-49 ☐   50+ ☐

   Tribe_____

   Place of birth? _____

   Did you grow up in your region of origin (where your indigenous language is spoken)? Yes ☐   No ☐

   If no, where did you grow up? _____

   Have you spent a greater part of your life in your region of origin? Yes ☐   No ☐

   If no, where? _____

   Have you ever lived in Britain, America, Canada or any other country where English is spoken as a first language? Yes ☐   No ☐

   If yes, where?_____ For how long? _____

2. **Educational Background**

   Highest Qualification/Level of education

   SSCE ☐   NCE /OND ☐   Undergraduate ☐   HND/B.Sc/B.A ☐   MA/M.Sc/Ph.D ☐

   Course of Study_____

   What is the nature/status of the schools you attended or are attending?

   Private Primary   ☐   Public Primary   ☐   Others_____

   Private Secondary   ☐   Public Secondary   ☐   Others_____

   Private University   ☐   Public University   ☐   Others_____

   Were you taught/are you being taught by teachers who are native speakers of English?

   Yes ☐   No ☐

   Were you exposed to diction (pronunciation) at any level of your education?

   Yes ☐   No ☐

   If yes, at what level? _____

3. **Linguistic background**

   Parental linguistic Background

   Father: literate ☐   illiterate ☐

   Mother: literate ☐   illiterate ☐

   Major language spoken by father _____

   Major language spoken by mother _____

Language of parental instruction as a child

English   Yes ☐   No ☐

Any other language(s) _____

First language spoken as a child

English   Yes ☐   No ☐

Any other language(s) _____

4. **Socio-economic background (respond as applicable to you)**

What do you do for a living (Your Profession)? _____

How long have you been working? _____What is your Position at work?_____

What part of this city do you live in?_____

Rank yourself/your family **economic status** along any of the following levels:

Low ☐   Middle Class ☐   High ☐

Do you have access to DSTV or any other cable television at home? Yes ☐   No ☐

What is your favourite channel? _____

Have you ever travelled out of Nigeria to other countries before?

Yes ☐   No ☐

If yes, where_____, _____, _____, _____, _____

How many times?_____

Thank you very much.

Appendix D. Questionnaire for young speakers

Thank you very much for voluntarily participating in this research data gathering exercise to investigate the use of English in Nigeria. Please fill the questionnaire. The information being gathered is purely for a research purpose and your responses shall be treated without reference to your name or personality.

1. **Personal information**

   Sex: M ☐   F ☐

   Age Grade: 16-30 ☐   31-49 ☐   51+ ☐

   Tribe_____

   Where were you born? _____

   Did you grow up in your region of origin (where your indigenous language is spoken)? Yes ☐   No ☐

   If no, where did you grow up? _____

   Have you spent a greater part of your life in your region of origin? Yes ☐   No ☐

   If no, where? _____

   Have you ever lived in Britain, America, Canada or any other country where English is spoken as a first language? Yes   No ☐   ☐

   If yes, where?_____ For how long? _____

2. **Educational Background**

   Highest Qualification/Level of Education

   SSCE ☐   NCE /OND ☐   Undergraduate ☐   HND/B.Sc/B.A ☐   MA/M.Sc/Ph.D ☐

   Course of Study_____

   What is the nature/status of the schools you attended or are attending?

   Private Nursery/Primary ☐   Public Primary   ☐   Others_____

   Private Secondary   ☐   Public Secondary   ☐   Others_____

   Private University   ☐   Public University   ☐   Others_____

   Were you taught/are you being taught by teachers who are native speakers of English?

   Yes   ☐   No   ☐

   Were you exposed to diction (pronunciation) at any level of your education?

   Yes ☐   No ☐

   If yes, at what level? _____

3. **Linguistic background**

   Parental linguistic Background

   Father: literate ☐   illiterate ☐

   Mother: literate ☐   illiterate ☐

   Major language spoken by father _____

   Major language spoken by mother _____

Language of parental instruction as a child

English   Yes ☐   No ☐

Any other language(s) _____

First language spoken as a child

English   Yes ☐   No ☐

Any other language(s) _____

4. **Socio-economic background (respond as applicable to you)**

What are your parents' careers (Professions)?

Father_____ Mother_____

What do you do for a living? _____

How long have you been working? _____What is your Position at work?_____

What area of this city do you live in?_____

Rank yourself/your family **economic status** along any of the following levels:

Low ☐   Middle Class ☐   High ☐

Do you have access to DSTV or any other cable television at home? Yes ☐   No ☐

What is your favourite channel? _____

Have you ever travelled out of Nigeria on holidays to other countries before?

Yes ☐   No ☐

If yes, where_____, _____, _____, _____, _____

How many times?_____

Thank you very much.