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Notes to Contributors

JAPPIN is the Journal of the Association of Phoneticians and Phonologists in Nigeria. It is an outlet for reports of empirical studies and theoretical expositions within the purviews of the spoken language, phonetics and phonology, elocution and related areas.

Submissions should comply with the style adopted by the journal. Manuscripts should be original and must not have been previously submitted for publication in any other journal. Manuscript word length **must** not exceed **6000** words (including the Abstract, and References Manuscript should be typed in Times New Roman, Font 12; the transcriptions may appear in Lucida Sans Unicode and the British spelling is preferred.

There should be an abstract of not more than **200** words. The manuscript title should be written in title case and in bold fonts. The major subheadings should appear also in title case and in bold fonts while other subheadings may be in title case but not in bold fonts. The cover page should include the Paper Title, Names of Author(s) with surname(s) appearing last, address of institution and the email address. The number of pages should be below the page in the centre.

Introduction, review of literature, aim and objectives, methodology, analysis, findings and conclusion should be succinctly explained and clear.

Manuscript should be written in English. And not more than 15 pages. Double line spacing. Accurate translation into the English language of texts in other languages, is required.

Findings and Discussion Charts and Tables should be carefully labelled and discussions of findings should be clear to readers that are not Phoneticians and /or Phonologists.

The APA style sheet is preferred for the References. In-text citations should be correctly referenced and secondary citations should be avoided. The format of the Journal of International Phonetics Association is the recommended model. This may be downloaded online.

Contents

EDITORIAL

Journal of the Association of Phoneticians and Phonologists in Nigeria (JAPPIN) is a blind peer-reviewed international journal. It is the official journal of the Association of Phoneticians and Phonologists in Nigeria. This is its fifth volume. All the fifteen papers that appear in this volume were carefully selected for quality and impact. They attempt to do justice to evolving developments in the areas of phonetics and phonology from diverse perspectives.

The journal publishes well researched original articles that address any issues, topics or phenomena in areas of phonetics and phonology and related sciences. Preference is given to data-driven scholarly articles. Well-written book reviews and review papers may also be considered. Papers submitted for publication must be original and must not have been published before and must not be under active consideration for publication elsewhere. Manuscripts should be typed in Times New Roman 12 points, and all special symbols embedded in the word file. The transcriptions may appear in Lucida Sans Unicode. The British spelling convention is preferred. There should be an abstract of about 200 words, which must be accompanied with not more than 5 keywords.

Manuscripts' sections and subsections should be numbered as follows:

1 (Major heading)
1.1 (First Sub-heading)
1.2 (Second Sub-heading)
2 (Major heading)

Manuscripts files must be justified, with (sub-) headings aligned left; and paper title, author(s)'s name(s) and affiliation(s) centred. Data or examples should be numbered consecutively throughout the entire text; and any 'sub-examples' should be referred to by lower case letters, e.g., (1) a., b., etc.

Footnotes, which must be sparingly used only for substantive materials, should also be numbered consecutively. Only materials that are explicitly cited in the work should be listed in the References; and each reference item should include: (a) author(s) surname and initials; (b) the date of publication; (c) for books, place of publication and name of publisher; (d) for articles, volume number for journals and page numbers for both journal articles and papers in collections. The APA style is preferred. Publication is largely funded by the Association.

Editor

A Comparative Phonostylistics Analysis of Monologic Cultural Marketing Discourse of 'Afrokids' in Ireland, Uk and 'Afrokids' in Lagos, Nigeria

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Abstract
This research sets out to: 1)identify the English phonological and phonetic features of monologic cultural marketing discourse in a trending online video tagged "Afrokids", 2) compare the nuances of eight Afrokids in Ireland, Uk with the enunciation of eight Nigerian Afrokids in Lagos, who were required to produce the same monologic cultural marketing discourse; and 3) reveal the intelligibility level of the "Irish Afrokids" to the "Nigerian Afrokids"; although, the Irish (Nigerian) Afrokids could not be reached to test the intelligibility level of their Nigerian counterparts' discourse on them and the video which served as the data was sourced online. The findings and results reveal that the enunciations of the British-born Afrokids represent typical British accent in terms of their use of phonemes, stress, rhythm and intonation; while those of their Nigerian counterparts typify educated standard Nigerian English, exhibiting only errors in similar problematic phonemes as adult speakers, such as with the central vowels /ə/ and /ʌ/ and the back vowel /æ/, despite their being primary school pupils. Also, the Nigerian Afrokids found their British counterparts who were more exuberant, quite intelligible.

Keywords: *Afrokids, Phonostylistics, Monologic Discourse, Cultural marketing.*

1.0 Introduction

English Language is undoubtedly, one of the world's most spoken languages, as Mother tongue or first language, second language or as foreign language (Kachru, 1985; Bamgbose 1995, Daramola 2019). The English language is a global language that originated in England, spread

through Great Britain to other countries like Australia, New Zealand, America and African nations (Ademola-Adeoye, 2018). It has evolved over the years, due to language contact phenomenon, into 'New Englishes' (Bamgbose, 1995) which are different varieties of Standard English that compete with diverse indigenous languages and cultures in its multilingual or bilingual host communities or environments. As the world becomes a global village, with increasing cross-cultural marriages, ethnic boundaries in families are collapsing. Diaspora Identity Crises is growing among many Africans in the Diaspora and there is a growing need for indigenous, mother tongue and culture loyalty and preservation. Therefore, promoting the language(s) and culture(s) of ethnic backgrounds may become paramount (Atolagbe 2014, 2016; Balogun 2016).

There are various ways to solve an identity crisis among Africans with multiple citizenship or dual parental heritage in the Diaspora. A major solution in stemming this growing trend across Africa is promoting language and culture loyalty; especially in Nigeria, with the current '*Japa*' syndrome, whereby many young Nigerian professionals are seeking greener pastures in the United Kingdom, Europe, America, Canada and other parts of the western world. A trending 'Tiktok' online video, at the time of this research, attempts to adopt this approach of promoting language and culture loyalty, by using "UK – Irish born 'Afrokids' to market African culture. The video attempts to market African culture, especially Yoruba culture, through an Ikorodu born Nigerian teacher who together with his Irish-born students, aged between eight and twelve years, recite cheerfully, some brief statements to show that they pride themselves in learning the African culture, African dance and Africanness.

The online video ends with the teacher speaking, after eight of his students, and some African-Yoruba music is played with a man and a few women dressed in beautiful African-Yoruba outfits featured. The video is tagged 'Afrokids' on 'Tiktok' social media platform. It is this solution to a problem that is investigated linguistically in this paper.

This paper aims to linguistically investigate the trending 'Tiktok' video 'Afrokids', which engages some form of online monologic cultural marketing. The aim is narrowed down to a phonostylistic investigation. The specific objectives are to:

(i) identify and describe the similarities and differences in language use

at the phoneme and suprasegmental levels among these UK-Irish Afrokids and their Nigerian Afrokids colleagues;

(ii) identify and describe the similarities and differences in language use at the phoneme and suprasegmental levels among each set of Afrokids – UK born and Nigerian born; and

(iii) ascertain the intelligibility level of the UK born Afrokids – the native speaking inner circle, to their Nigerian-born, L2 outer circle counterparts.

The scope of the study covers a selected group of eight pupils, aged seven to eleven years, in a private primary school in Lagos, who performed a similar task of monologic cultural marketing after watching the trending online Afrokids video, which is contrasted with the content in the trending video. Only the UK-Irish Nigeria born teacher's enunciations are perceptually examined, as he is the initiator of the entire activity and video recording of the trending 'Tiktok' Afrokids video. Without delving into the details of how successful or otherwise the Afrokids video online has been in its monologic cultural marketing strategy, this paper seeks to focus on the peculiar nuances in the renditions of these two sets of Afrokids, in their renditions as verbal and non-verbal communication, from a phonostylistics theoretical background. It is hoped that the revelations therefrom would significantly attest to the effectiveness or otherwise of adopting such cultural marketing strategy as an approach towards the promotion of language and culture loyalty, particularly among Africans in the Diaspora. This could encourage more of such online marketing strategies, targeted at both the young and old.

2.0 Literature Review

English Phonetics, Phonology and Dialects of English

Phonetics deals with speech sounds. It is the scientific study of how speech sounds are produced – articulatory phonetics, how they are perceived – auditory phonetics, and the physical and mechanical properties of speech sounds as speech waves that can be measured instrumentally – that is acoustic phonetics (Atolagbe 2000; Roach, 2009).

Phonology, on the other hand, refers to how speech sounds that are significant for meaning in specific languages are patterned or organized for meaningful communication in that language. Phonology deals with phonemes or segments; that is segmental phonology (the speech sounds of the language) and suprasegments or prosodies; that is those features of speech that are not as discreet as the phonemes, but which are spread over the phonemes, to provide linguistic or affective meanings in utterances, that is suprasegmental or prosodic phonology. The main prosodies or suprasegments of English are pitch, stress, rhythm and intonation. Other recognizable suprasegments include tempo or speed, pause, intensity or loudness and duration; the latter two also being components of stress or accent. Accent can be used to refer to word stress (primary, secondary or weak stress) or to the totality of speech features that characterize a dialect of a speech community, group or individual(s) (Atolagbe 1999, 2000, 2014, 2016).

It has been observed that English suprasegments are usually the last to be mastered by second language users of English, especially English stress, which influences English rhythm, and English intonation (Jowitt, 2019; Udofot 2004; Akinjobi, 2006; Akindele and Akinjobi 2018). This is particularly true of Nigerians as cited in the preceding works. It has also been observed that because of languages coming in contact with one another, in multilingual settings as we find in many Anglophone Africa countries where English plays a predominant (usually official) role, interference of indigenous mother tongue features in the English speech of L2 speakers of English, is rampant (Awonusi, 1985).

Moreover, different dialects of English called 'New Englishes' have evolved across the world, especially in linguistic communities where English contends with the indigenous languages, in different domains of use. These dialects can be recognized and classified, based on different factors such as level of educational attainment, exposure to the language, specialized linguistic training, etc. (Bamgbose 1995; Awonusi and Babalola 2004). As a result, different accents of English can be identified across the world, on regional bases and educational bases, within these regions or geographical spaces. Nigeria is no exception to this classification of accents. For example, scholars have discussed in details, features of Nigerian English within such categorizations as Hausa Nigerian English, Yoruba Nigerian English, Igbo Nigerian English; Standard Nigerian English and non-Standard English; Acrolectal,

Mesolectal and Basilectal English (; Awonusi 1985, Awonusi and Babalola 2004; Jowitt, 2019; Udofot 2004; Akinjobi, 2006; Atolagbe 2010; Akindele and Akinjobi 2018; Ademola-Adeoye 2018). Specific phonemes have been found to be problematic for some ethnic groups in Nigeria while the prosodies have proved difficult for others.

Stress as an English suprasegment can be recognized as word stress or sentence stress, and it performs a number of functions such as signaling the nucleus of information in an utterance, the most prominent part of an utterance; through isochronicity, it achieves rhythm in English; and it differentiates words that have similar phonological shape but belong to different word classes, among other functions. Intonation in English performs different functions as well – accentual function, grammatical function, attitudinal function and discourse functions (Atolagbe 2000). However, while some scholars argue that there are characteristic tunes or tones attached to specific utterance types or speech types, such as falling tone used for statements, WH-Questions, mild commands (Roach 2009, Akindele and Akinjobi 2018) other scholars in the 'Discourse Intonation' school of thought posit that individuals can alter such tonal choices deliberately to indicate their own specific tonal preferences or choices (to signal new or old information, for instance) (Coulthard 1985).). Attention must therefore be paid not only to how English intonation, stress or rhythm are used in diverse accents of English, but also to how individuals use them stylistically, in achieving meaning.

2.1 Stylistics and Phonostylistics

According to Osoba (2024:16-17) stylistics is the rekindled interest in style at the beginning of the 21st century and it is difficult to separate style from stylistics. Osoba (op.cit) goes further to say that the various definitions of style (a term common in disciplines such as literature, music, architecture, art, fashion, sculpture, painting, advertising) can be classified into three: definitions based on the point of view of the writer, definitions dealing with the characteristics of the text itself and the definitions based on the impression of the reader. In summary, style may refer to: some or all the language habits of one person; occasional linguistic idiosyncracies which characterize an individual's uniqueness; the effectiveness of a mode of expression – saying the right thing in the most effective way; the language habits shared by a group over a period (Crystal and Davy 1969, cited in Osoba 2024:17). Halliday (1985)

concludes that literary and linguistic studies meet in 'style', while Traugott and Pratt (1980) assert that style concerns the characteristic choices in a given context. In essence, stylistics is 'an amalgam of style + linguistics' (Olateju 2016:8), with linguistics being the scientific study of language at all the levels of language – phonetics and phonology, morphology and lexis, syntax or grammar, semantics, discourse, etc.

Phonostylistics is the study of phonetic variations in speech, based on style; a linguistic science that studies the frequency of use of phonemes in different styles, their harmony and interdependence; analyzing sound effects, based on the content and the imagery of the text (academicjournal.i0). Features such as the use of breathy or creaky voice, giggling while speaking, spasmodic features, secondary articulations, such as lip rounding or nasalization, to produce tone of voice signaling attitude, social role or some other language specific meaning, are the concerns of phonostylistics. Therefore, phonostylistics pays attention to style forming factors that are based on a speaker's choice, and style forming factors that are perceived by a listener, in determining 'style' of speech or discourse in a given context.

2.2 Crisis of Identity, Language Loyalty and Culture Marketing

As the world gradually becomes a global village, with many individuals migrating to other countries or communities and acquiring or learning different languages, L1, L2, Lf statuses for individuals are changing. Many more people claim to possess mother tongues that are not native languages of their indigenous cultures. There are African-born kids with English as mother tongue, rather than their indigenous African language. This situation creates a problem of 'crisis of identity' for some of such persons. (Balogun 2016; Atolagbe 2018). It sometimes requires a strong language loyalty for a British-born Nigerian for example, to retain his native Nigerian language as L2, while growing up in Britain; it is presumed that English is the mother tongue or L1 of that individual. It is the sociolinguistic background that exists in such contexts that influences the 'cultural marketing of African culture' that plays out in the online videos which serve as data for this study.

3.0 Theoretical Base

This paper adopts phonostylistics as the theoretical basis for its analysis and discussions. The aim of phonostylistics is to analyze all

kinds of spoken utterances, with the main purpose of identifying the phonetic features, both segmental and suprasegmental, which are restricted to certain kinds of contexts; to explain why such features have been used and to classify them into categories, based on stylistic preferences. Phonology pays attention to the segmentals: speech sounds or phonemes, as well as the suprasegmentals: pitch, stress, rhythm and intonation. How are phonemes combined into words, phrases and sentences to produce meaning for effective communication in a particular language? Much more, how do the suprasegments which are spread over utterances, convey added linguistic, grammatical, attitudinal meanings or function as speech acts for example? These are the concerns of Phonology in particular (Jowitt 2019; Atolagbe 2000; Awonusi and Babalola 2004; Roach 2009; Akindele and Akinjobi 2018)

Stylistics on the other hand characterizes language use as 'style'. How does a particular individual or group of persons utilize language, diverse linguistic structures, to achieve his/their communicative purposes? How do we recognize language use as characterizing a person or group, whether in the spoken or the written form? These are the concerns of stylistics (Crystal and Davy 1969; Crystal 2003; Olateju 2016; Osoba 2024). Therefore, when stylistic analysis focuses primarily on the phonological aspects of language use, it is within the realm of phonostylistics.

Some auditory and acoustic analyses of the enunciations of the UK-Irish Afrokids and their Nigerian-born Afrokids are engaged in, presented and discussed.

4.0 **Methodology**

This is an empirical, qualitative study. Its population is every online video on Tiktok that engages in culture marketing. It employs purposive sampling technique, focusing on a specific online video that is trending on 'Tiktok' platform at the time of the research, which is tagged 'Afrokids'. In line with Atolagbe, Bello and Adekoya-Oduntan (2019), it tries to examine the roles of speech, voice, plus other nuances of verbal communication in a quasi-theatrical performance, through the lens of phonostylistics. The instruments used include a smartphone to record and download the Online Afrokids' video; interactive participant observation and group discussion among the purposively selected eight Nigerian-born Afrokids and their teachers, who viewed the online

Afrokids video a few times before performing a similar task. The researchers then engaged in an auditory analysis of the two sets of Afrokids' video recordings, playing back the videos over and over again. An acoustic analysis, using Pratt software, to throw further light on notable observations at the auditory level was then undertaken, and the analysis as well as interpretations provided. The spectrograms specifically focus on vowel and (consonant) qualities of the Nigerian born Afrokids renditions in comparison with the British born Afrokids. Both auditory and acoustic results are presented and discussed.

Note: Kindly bring your scope of study here and blend appropriately. Mention the type of acoustic instrument you employ in your methodology.

5.0 Data Analysis

Below is the data from the UK-Irish born Afrokids, which would be discussed first, followed by that from the Nigerian born Afrokids.

UK-Irish Born (Online) Afrokids

Student No 1:

/I'm an ′Afrokid↘/of ″course I wanna, learn the African 'Dance 'culture //my 'Dad's 'Yoruba; he's from Ni′geria↘/ /and my 'mum's 'Russian↘/ /and I was born in 'Ireland/ /which makes me ′Afro-'Irish↘/

Comment: Half-caste; fast tempo; smiling; cheerful; gesticulating
Dad- Yoruba; Mum – Russian; born in Ireland.

Student No. 2:

/I'm an 'Afrokid↘// of 'Course I have to learn↘ about the 'African 'culture/ /My 'Dad's 'teacher's Ni′gerian/ / He's 'Yoruba↘ and I'm 'Russian↘/ /And I 'love 'African 'culture/

Comment: Not half-caste; moderate tempo; smiling; cheerful; touches her chest on the last three words/final tone group.

Student No 3:

/I'm an 'Afrokid…. /of course I 'love to learn the 'culture// My 'Dad is from 'Dublin and 'Ireland and my 'mum is from 'Oyo 'State I′badan 'Nigeria/ /but I am from 'Ireland / /and I'm 'African - 'Irish↘/.

Comment: Half caste; moderate tempo.

Student No. 4

/I'm an 'Afrokid↘/ /of 'course I'm learning the 'African 'culture cos my 'Dads 'teacher is from Ni′geria/ /but though both of my 'parents and 'I am

from 'Ireland / but that doesn't 'stop me from 'learning the 'African ↴ culture/

Comment: Not African at all; fully white Irish; moderate tempo; normal pitch; touches her chest on 'and I', shrugged and walked away as she finished.

Student No 5:

/I'm an 'Afrokid ↘ / ⁀ /of course I love learning the 'African 'culture/ / I'm from 'Africa and my ′mum is from 'Russia ↴ /

Comment: Half-caste; shy, cheerful, very brief and hurriedly said; rushed over, especially tone group 2.

Student No 6:

/I'm an 'Afrokid/ /of 'course I'm learning about the 'African 'dance 'culture// my 'Dad's 'teacher is from Ni'geria ↗, and I'm from 'Venezuela ↘ / but I 'love the 'African 'culture ↘ /

Comment: Not half-caste, white; softer voice, not as loud as others; cheerful; normal tempo; gesticulates; smiles as she ends the monologue/speech.

Student No 7:

/I'm 'Afrokid 'dancer ↴ / /course I'm 'learning with the 'African ′dance culture ↴ / /my 'Dad is from Nigeria - 'Yoruba ↴ / /my 'mum's from 'Belfast ↴ / / so that makes me 'African - 'Irish ↘ /

Comment: walking and speaking rhythmically in about regular tone groups with rise-fall tones and a final fall; lower pitch than others; smiling but not gesticulating; slower tempo; paced-speech.

Student No 8:

/I'm an 'Afrokid ↘ / /I'm from 'Ireland but my mum is from the 'Yoruba part of Ni′geria //and I'm 'proud to 'be O′mo 'Yoruba 'ni 'mi //'swagger ↴ //And I 'love 'Afrokids ↘ /

Comment: Half-caste; normal tempo; normal pitch; probably the youngest of them all; she swirls round with a smile as she ends.

Their Teacher/Initiator of the Video:

/I'm the 'Afrokid 'dance 'teacher ↘ / /of ''course I have to 'share my own 'culture with everybody ↴ / /with 'all 'different 'races ↘ 'all 'different ethnicity 'backgrounds ↘ and I 'love all my 'Afrokid 'cultures ↘ / /I'm 'sharing my 'culture with 'everybody/ because I was 'born in Nigeria ↘ / 'Omo I'korodu 'ni 'mi ↘ / /my'name is O'lu'wa'gbemiga ↴ //we're from 'Ireland (by the way) ↘ /

Comment: Uses a lot of emphatic stress, many words are stressed;

falling tone used very often; smiles and gesticulates. Ends the video with some Yoruba music (like 10 seconds) and a man and some women in lovely Yoruba outfits featured.

Nigerian-born Afrokids

After watching the UK-Irish Afrokids video played back a few times, with their teachers, the teachers selected eight pupils (ages 7-11) to perform the same task. They said almost the same memorized words (very brief) except for the differences in where their parents hailed from, their ethnicity. Those with some Yoruba parentage were preferred in the selection.

Student No 1: /I am from Africa ↘/ /my mum is from Ondo ↘, my Dad is from Benue ↴//I 'love 'African 'culture ↘/ /'swagger ↴/

Comment: female, normal tempo, normal pitch; cheerful; swirled and cheerfully said 'swagger' at the end (like UK-Irish Afrokid No 8); she was probably the youngest.

Student No 2:

/ I am an ′Africa ↘/ / I'm ′proud ′Yoruba girl ↘/ / My ′dad is from o′gun ′state ↘, my ′mum is from ′ondo ′state ↘/ / ′both of ′them are part of Ni′ge′ria ↘/ / and I ′love ′African ′culture ↘/

Comment: female, normal tempo, normal pitch; gesticulates as she speaks.

Student No. 3:

/ I am an ′African ↘/ / I'm a bona′fide ′Yoruba ′girl ↘/ / My ′dad is from O′sun Uni′versity ↘/ / I ′love ′Yoruba ′culture ↘/ / ′Thank you ↘/

Comment: female; normal tempo, normal pitch; gesticulates, and 2-finger peace greeting to end.

Student No 4:

/ I am from ′Africa ↘/ / My ′dad is from ′Edo ↘, my ′mum is from ′osun in ′ode-′omu ↘/ / I am a ′Yoru′ba ′girl ↘/ /I ′love ′Yoruba ′culture ↘/ / ′Thank you ↘/

Comment: female, normal tempo, normal pitch; smiles briefly, genuflects to end.

Student No 5:

/ I am an ′Africa(n) ↘/ / ′Both of my parents are from ′Osun state ↘/ / My ′daddy is from ′Ife ↘, my ′mummy is from ′Ije′sa ↘/ / so I ′love ′Africa(n) ′culture ↘/

Comment: male, normal tempo, normal pitch; throws legs sideways like

pacing on a spot.

Student No 6:

/I am an ′African ↘ / / My ′mum is from ′Osun ˌstate ↘ / / my ′dad is from ′ogun ˌstate ↘ / / I ′love ′African ′culture ↘ /

Comment: male, normal tempo, normal pitch; throws legs backwards like pacing on a spot.

Student No 7:

/I am ′Africa ↘ / /My ′dad is ′ogun ↘ , my ′mum is from ′osun- ′saki ↘ / / I ′love ′Africa ↘ / / ′swagger ↘ /

Comment: she said Osun instead of Oyo state; normal tempo, normal pitch; attempted to blow a kiss and smiled as she ended.

Student No 8:

/I am ′Africa(n)/ /My ′mum is from A′bekuta, my ′dad is from A′bekuta/ / from ′Ogun state/ / ′O′mo ′Yoru′ba ′ni ′mi, ‿ ′Swagger/

Comment: male, normal tempo, normal pith, low voice; attempted a pose to end.

6.0 Findings and Discussion

The Auditory Perception

The UK-Irish Afrokids pronounced English phonemes characteristically like British speakers. Student number four, who was totally Irish (not mixed race), was typically British, especially in her use of English stress and intonation, making use of both the rise-fall or peaking tune and the falling tones appropriately where necessary - /but though both of my parents are from Ireland/ but that doesn't stop me from learning the African culture/. Almost all the UK-Irish Afrokids stressed 'of 'course', ''Afrokid', ''African 'culture', My 'Dad, my 'Mum, Ni'geria. They pronounced /ʌ/ in love correctly, as well as /ɔ:/ in of course. They all spoke with enthusiasm and more passion than their Nigerian-born 'Afrokids'. UK-Irish Afrokid number 7 had a deeper voice and rhythmic structure that sounded a little African-Nigerian and Yoruba in particular, with about the same length of tone groups and more of prominence on syllables than stress. This may be due to the influence of the speech pattern of her Yoruba father on her pronunciation. Interestingly, while the Nigerian-born 'Afrokids' found most of the UK-Irish born 'Afrokids' easy to understand, including the purely Irish child (student number 4), student number one was the most difficult (for three out of eight of them) to understand. This is probably because she spoke rather faster than others. Speakers 2, 3, 4, 7 in that order also proved a little bit difficult to

understand for the Nigerian-born Afrokids, even though speakers 3 and 7 were half-castes with partly Yoruba parentage, while speakers 2 and 4 were not Nigerian at all.

With regard to the Nigerian-born Afrokids, the students did not mispronounce some phonemes which are often presumed problematic for Yoruba speakers, especially /ʧ/ in culture and /ð/ or /q/. Neither did they exhibit the /h/ factor (glottal fricative intrusion before vowels); however, for almost all of them, vowels /ʌ/ in love and /æ/ in Africa were wrongly pronounced, often replaced with /ɔ/ and /ɑ/ respectively, which is a common feature of Nigerian English, especially Yoruba Nigerian English (YNE). Also, for many of the Nigerian-born Afrokids, the final /n/ in African was either elided or silent while stress was not easily noticeable on words with primary stress since most of their syllables received about the same degree of prominence. They all used the falling tone correctly, especially at the end of most of the tone groups, but other tone patterns or tunes were relatively absent from their recitations.

Notably, the Nigerian-born Afrokids did not deliver their recitations or speeches/ monologues with much passion or enthusiasm; they probably do not love their African culture as we may be witnessing today among many Nigerian youth who appear to love western culture more than their own Nigerian or African culture. (Atolagbe 2016). In fact, many prefer to speak in English than in their mother tongues, referring to their native languages as 'vernacular'. The UK-Irish Afrokids appear to have marketed" the Afrokids culture better than their Nigerian-born Afrokids counterparts who had fewer gesticulations and did not appear as cheerful as the former. It was also observed that among the Nigerian-born Afrokids, students with a non-Yoruba parent or both parents not from the same state, had better pronunciation performance in both the English segments and the suprasegments.

Some Acoustic Analyses and Discussions

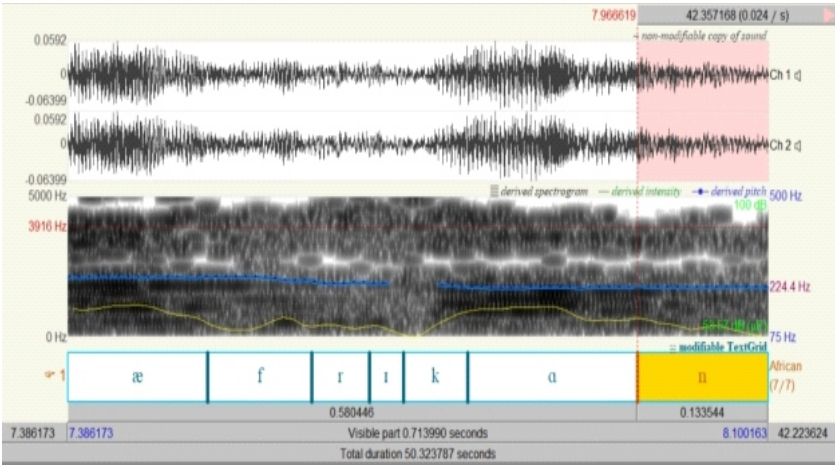
Acoustic Analysis

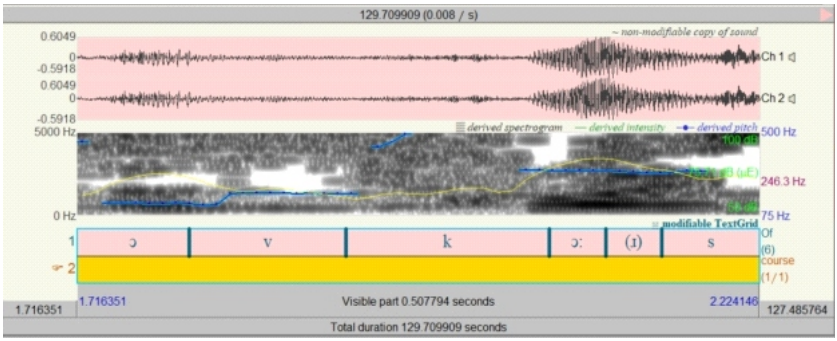
To confirm the perceptual analysis, below are selected acoustic representations of the articulations of the selected English phonemes of Nigerian Afrokids and Irish Afrokids. This section displays the articulation of English central vowels /ə/ and /ʌ/ and palate-alveolar affricate /ʧ/. These three phonemes were dominant in the utterances of the Afrokids, which makes it the point of analysis.

English central vowels

Nigerian Afrokids **Irish Afrokids**

Subject 1: "African" **Subject 2: "Of course"**

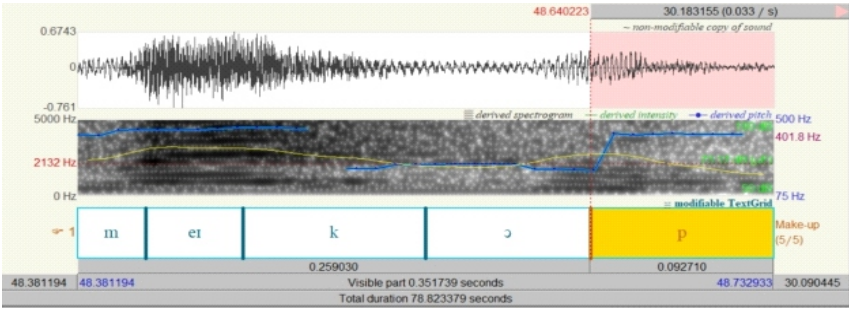


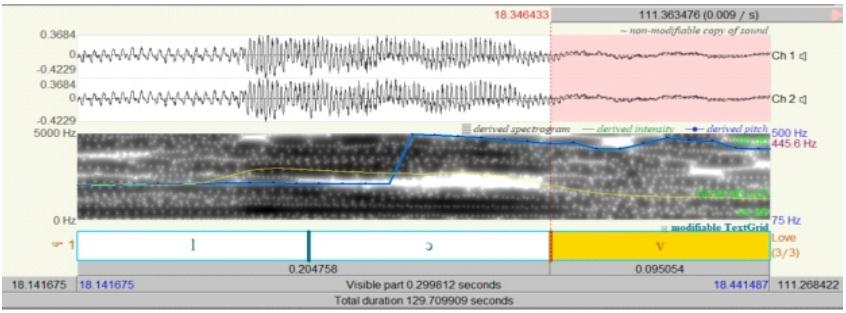


In the graphical representation above, it has been observed that Nigerian Afrokids substituted the sound /ə/ with /ɑ/. In their utterance, they ended up producing /æfrikɑn/ in place of /æfrikən/. It was also observed that Irish Afrokids substituted the sound /ə/ with /ɔ/.

Nigerian Afrokids **Irish Afrokids**

Subject 3: "Make-up" **Subject 4: "Love"**

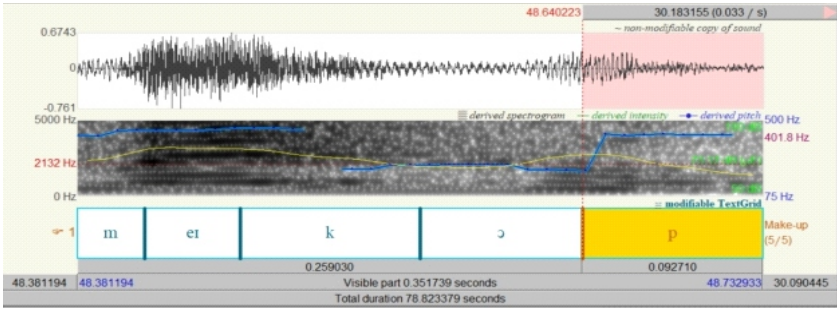


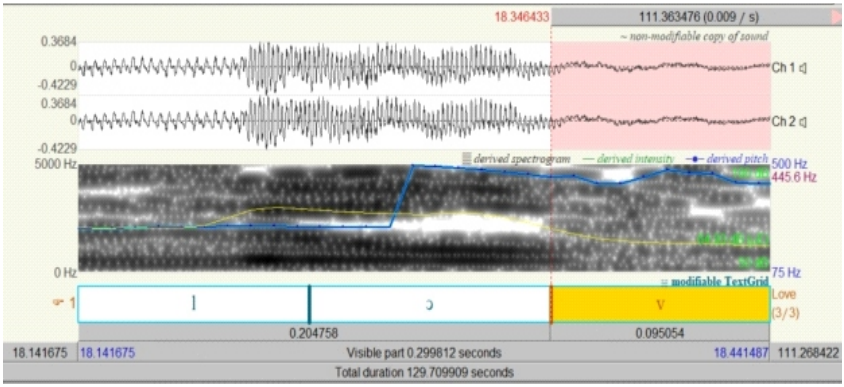


In the graphical representation above, it has been observed that Nigerian Afrokids substituted the sound /ə/ with /ɑ/. In their utterance, they ended up producing /æfrikɑn/ in place of /æfrikən/. It was also observed that Irish Afrokids substituted the sound /ə/ with /ɔ/.

Nigerian Afrokids
Subject 3: "Make-up"

Irish Afrokids
Subject 4: "Love"





All sampled kids approximated correctly the sound /ʧ/ in words like **'which', 'culture','teacher'** and so on. Also in the experimented words, consonant substitution was recorded as indicated in the spectrogram analysis.

Phonemic realisation
Table 1:

/ə/	/ʌ/
+syllabic	+syllabic
+sonorant	+sonorant
-obstruent	-obstruent
+mid	+mid
+central	+central
-round	-round

The table above shows the central vowels and their distinctive features, using the binary system to show the attributes of the particular sound in its original form. For instance, in the approximation of the sound /ʌ/, Nigerian Afrokids substituted the sound with /ɔ/ which has its features as (+syllabic, +sonorant, -obstruent, +round, -tense, +back). This slight difference has changed the pronunciation of the word to another.

Table 2:

/ʧ/
-sonorant
-voiced
+obstruent
+continuant
+coronal
+strident

The English affricate /ʧ/ has the same phonemic properties with both stops and fricatives. However, unlike stops, the occlusion is not instantly released but released with friction. The word **'culture'** was used to examine the features (-sonorant, -voiced, +obstruent, +continuant, +coronal, +strident). However, both Nigerian and Irish Afrokids were able to properly approximate the palate-alveolar affricate /ʧ/. Although some sounds were substituted with some others in their words, but sound /ʧ/ was correctly pronounced.

7.0 Conclusion

The monologic discourse of eight UK, Irish-born 'Afrokids' as a trending video on a social media platform- 'Tiktok', intended to market African culture and 'Africanness', especially the Yoruba culture, has been linguistically examined through the lens of phonostylistics. This was contrasted with a similar video production by eight Nigerian-born Afrokids who were prompted to engage in a similar task. The use of English phonemes and suprasegments by these two sets of children, aged between seven to twelve years approximately, were investigated auditorily and acoustically. The nuances in their speech behavior as verbal and non-verbal communication were also observed and reported. The findings revealed that the enunciations of the UK Irish-born Afrokids largely represented typical British English Accent in terms of choices of phonemes, stress placement and intonation patterns; while those of the Nigerian-born 'Afrokids' largely represented Educated Standard Nigerian English, probably because they attend a private primary school, and those with relatively good spoken English skills were purposively selected.

However, it was observed that expected errors due to MT interference features were not as prominent in the production of these Nigerian-born Afrokids, except that they produced what educated adult Nigerian L2 speakers would also have produced. For example, they substituted /a/ for /ae / and /ə/ in 'African', /ɔ / for /ʌ/ in love; rendered a deleted or silent /n/ in word final position of 'African', but produced /ʧ/ correctly. Also, those with parents from the same Yoruba ethnic background or same state, had more Yoruba interference influences in their enunciations. The Nigerian Afrokids were able to understand their Irish-born counterparts relatively well, except for those who spoke relatively fast. Unfortunately, the 'online' Irish kids could not be reached to assess how well they could understand their Nigerian-born colleagues. The initiator of the online video, their Ikorodu, Lagos-born Dance teacher, Oluwagbemiga, stressed many more words than his Irish born students, and had the semblance of educated Nigerian English with some underlying British-infused English accent. All the kids used the falling tone to end statements appropriately, with Nigerian kids using prominence more than stress or accent except on a few emphatically stressed words; and some Irish kids using fall-rise, peaking tune where necessary. The Irish kids were more cheerful and enthusiastic than their Nigerian kids, adding more life and conviction to their 'marketing discourse', probably because the Irish kids actually need to be more conscious of their 'Africanness' than their Nigerian counterparts who take their culture for granted, or simply do not take pride in their African culture, as discussed in Atolagbe (2016).

It can therefore be concluded that i) this online video is a good marketing strategy to address identity crises for Africans in Diaspora, by promoting language and culture loyalty; ii) Standard Nigerian English is gradually evolving, with proper teaching of English in Nigerian primary schools; iii) intelligibility level of British English to more Nigerians, even at Primary school level, is getting better; and iv) children with dual ethnic parentage appear to exhibit less interference features in their spoken English.

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Different Pitches for Different Purposes: A Laboratory Analysis of Advert in Hit Fm and Cross River Broadcasting Corporation

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Abstract
Language use is versatile, one of which is communication through the words of the mouth, mostly in the electronic media. Communication sales promotion is designed to seamlessly generate immediate action for specific reason in form of advertisements. Messages delivered through the words of the mouth, are assumed to reveal the pitch patterns of the producer and the attached sentiment. The objectives of the study are to trace the pitch patterns of orally delivered sad mood advertisements and track the pitch of happy mood product advertisements by Hit FM Radio, and Cross River Broadcasting Corporation. Pitch theory is adopted as the framework. 12 clips of orally delivered advertisements were purposively selected, 6 from each station comprising 3 obituaries and 3 of other products. Findings revealed that the oscillations of sad mood advertisements are slower during production resulting in low pitches, while oscillations of happy mood products are faster producing high pitches.

Key words: communication, advertisement, pitch, oscillation, sentiment mood

1.0 Introduction

Language use is versatile and it is functional in many facets of human lives, one of which is communication through the words of the mouth, mostly in the electronic media. Communication sales promotion is designed to generate immediate action for specific reason seamlessly in form of advertisements. According to Okon (2023, p. 7), "language serves different domains…the most significant function of language is the expressive function…because it enables us to communicate our emotions such as joy, fear, sadness amongst others". She adds that language does not perform its role in a vacuum, but when properly embedded in a sociocultural context.

Socio-culturally, language is used to suit a specific purpose

within a particular domain of usage. The media practitioners, mostly those in the marketing communications, use it in their marketing mix in sharing information, ideas, feelings and thought seamlessly, for social, business, economic and political marketing. For example, as a marketing tool, Radio broadcasters, adapt their voices to suit the desired or targeted sociocultural or economic market. Okon (2023, p.41) affirms that, "vocalics/voice is paralanguage in that; it contains elements such as tone of the voice, pitch and intonation. She adds that the key effect in vocalics is the voice quality, tone, speech rate and how these are operated during the period of communication.

The advertisers as marketers engage in representative communication to suit their clients' intent. For this reason, they have to adjust the paralinguistic features in their speech form to depict the exact mood of their clients and transmit the same to the targeted audience. The objectives of the study are to trace the pitch patterns of orally delivered sad mood advertisements and track the pitch of happy mood product advertisements taken from the Hit FM Radio, and Cross River Broadcasting Corporation (CRBC), both are located in Calabar, the capital of Cross River State. Hit FM Radio is a privately owned station while CRBC is owned by the Cross River State Government.

The researchers assume that the pitch variation of each advert is determined by the sociocultural and economic targets of the advertisers and the clientele. This assumption is a guiding hypothesis which the study hopes to validate, in laboratory tests, among others, in this empirical study. To the best knowledge of the researchers, no studies have been carried out in the subject matter in the selected Radio Stations.

2.0 **Review of Related Literature**

This section reviews the literature conceptually and empirically taking a look at key concepts such as advertisement, frequency, fundamental frequency, stress, tone, pitch and other related work.

Advertising in marketing communication involves informing others about goods, services and intentions. People exhibit their goods and intentions through different means of communications such as written, spoken and semiotic signals. According to Nwosu & Nkamnebe (2006, p.16), advertising is basically a communication process and there can be no business market practice without communication. So, the entire marketing mix in advertising hovers round communication system.

Communication deals with sharing of information, ideas, feelings, emotions and thought for social, business, economic and political gains. According to Ebitu (2012, p.99),

> In Greece during the Golden Age …and in some parts of Africa, Europe and Latin America, advertisements were done either by the town criers or through the display of certain colours and signs or certain types of leaves. The display of leaves is still done in some parts of Nigeria till date.

Contemporarily, advertisements have witnessed industrial revolution which according to Nwosu & Nkamnebe (2006, p.27), "have drastically changed the relationship between the producer and the consumer". This has invariably expanded the domestic markets. It is this expansion of the domestic market that brings in the electronic media such as the radio and the television. The focus of this research is on radio as a medium for dissemination of messages to advertisement of products in a mixed market community. Today, ICT has catched into the advertisement of products. This new entrant makes the advertisement of products more accessible to many people to receive goods, services at affordable costs and at their own pace.

Radio broadcasting started in Nigeria in 1952 with the establishment of the Nigerian Broadcasting Services (NBS), which later became the Federal Radio Corporation of Nigeria (FRCN), (Ebitu (2012, p.101). Modern advertisement came into Nigeria through the expansion of the business. According to Osuala (1999), the products flooded the markets needed numerous outlets. The creation of Indigenisation Decree in 1992 brought in the establishment of many indigenous advertising outfits with professionalization in advertising and significant improvement in message designs, campaigns and production quality standard, (Nwosu & Nkamnebe, 2006, p.31).

Radio broadcasting as our focus of investigation has greater reach and accessibility than any other media of information. Radio broadcasting is known for speed of message delivery without bounds. It has fidelity in the sense that it is "exactly" reproduced and transmitted with the message input in the form it was fed, without much distortion. According to Nwosu & Nkamnebe (2006, p.69), radio has the highest level of universality than any other medium, even television, because more people can easily access its messages, even in the remote nomadic

cattle settlements. The frequency modulation (FM) type of radio broadcasting gives radio even far greater reach and coverage than the other advertorial medium. According to Nwosu and Nkamnebe (2006, p. 70), radio air times are sold in seconds (time belts), some are billed on the basis of the number of words the advertisement contains, mostly on obituary announcements.

Radio advertisements involve presentation with the words of the mouth. Words of the mouth are made of segments and the suprasegments. The segments comprise consonants and the vowels, while the suprasegment consist of elements of tones, stress, duration, intensity, intonation, rhyme and rhythm. Atolagbe (2000, p.29) affirms suprasegments as stress, rhythm, pitch, intonation, pause, duration, length, intensity, melody etc. She adds that these features are used to show the attitude of the speaker.

Stress has been extremely tasking to define. For this reason, Jolayemi (2006, p.97), affirms that "in spite of the seeming disparity, certain features form a consensus on stress namely: prominence, duration, pitch, loudness (intensity), sonority, exertion/energy/force, syllable, the larynx and vocal folds". Jolayemi, therefore, proposed a working definition of stress as, 'the exertion or force occasioned by larynx, the vocal folds and other speech organ culminating into prominence on a syllable among other contiguous ones (if more than one) (2006, p.98).

On the above basis, the application of individual pitch on a word or syllable structure constitutes a stress. Thus, stress is the degree of force with which a unit of utterance (syllable) is produced, or used in the in the production of successive syllables in words or syllables. Since this research dwells on articulatorily based advert, stress in this instance is the amount or degree of articulatory energy exerted on a particular syllable or the degree of force with which a syllable is produced. Stress, whether on tonal language (Nigerian languages) or isochronic languages (English) has to do with the variation in pitch pattern within a unit of pronunciation or syllable. When this variation in pitch is applied on a stretch of utterance which is more than a word or syllable it becomes intonation. Intonation performs different functions in a language such as accentual, non-accentual, grammatical, discourse and attitudinal functions. Attitudinal function of intonation focuses on articulatorily based advertisements as it has to do with human attitude in expressing emotions

and attitude of the speaker. Attitudinally, utterances can be used to express anger, happiness or gratefulness.

The stretch of utterance could be a phrase, a clause or a sentence. This is what Osisanwo (2012, p. 125) calls, "connected speech or sentence stress". It is linguistic a universal that pronunciation of words differs when the words occur in isolation and when they occur in chain with other words. It is in this process that some words are articulated as weak (unstressed) and another as strong (stressed), which in this instance is referred to as stress. Stress is the alternation of the weak and strong syllables within a stretch of utterance is what results in tone group which invariably turns to rhythmic pattern of an utterance. Stress is a product of pitch as it relates to the frequency of a sound. According to Ladefoged and Johnson (2011, p.24), frequency is the number of occurrences of a repeating event per unit time that involves the single to-and-fro movement of the air particles in cycles. In this case, it is the number of times that air pulses from the larynx (resulting from the opening and closing of the vocal folds) per second. It is a very important measure unit in acoustic phonetics. Frequencies are measured in 'cycles' per second (cps) or hertz (after the German Physicist, Heinrich Rudolf Hertz, who first broadcast and received audio waves). It is abbreviated as Hz. The frequency of a pure tone correlates with the sensation of pitch, which could either be low or high. This is what pitch and tone is all about.

The higher the frequency of a sound, the higher we perceive its pitch. Pitch is also affected by the duration and intensity of the sound stimulus. Frequency and pitch are not the same. While frequency is an objective, physical act, pitch is a subjective, psychological sensation. Roach (2009, p.98), says that 'pitch is a psychological impression of fundamental frequency'. It refers to the way in which frequency is heard. That is the way in which a listener is able to place the sound as either higher or lower in terms of loudness. High frequency vibrations sound like high notes, and low-frequency vibrations sound like low notes. This is a perceptual property that allows the ordering of sounds on a frequency -related scale Pitches are compared as "higher" and "lower" in the sense associated with musical melodies which require sound whose frequency is clear and stable enough to distinguish from noise. According to Roach (2009, p.4), the pitch of a sound depends on the rate of vibration of the vocal cord. As such, a sound with high pitch must have high frequency and those with low pitch would have low frequency. The pitch of a sound

is the auditory property that enables a listener to place a sound on a scale going from low to high without considering its acoustic properties. Pitch is usually shown as blue lines in the spectrogram. It is pertinent to know that the wave length determines the frequency and the pitch of a sound. By thump rule, longer wavelength results in lower frequency and lower pitch while shorter wavelength gives higher frequency and higher pitch. These are the frequencies or group of frequencies which characterize the quality of a sound and distinguish it from other sounds of different quality. These frequencies are symbolized by high peaks of the spectrum and are referred to as formant frequencies. Formants frequencies are the reinforced frequencies which must be the harmonics of the fundamental tone, Ladefoged and Johnson (2011, p.112). Formant frequencies are important acoustic landmarks for vowels and consonants. F_1 is the lowest in frequency, F_2 is the middle, and F_3 is the highest. Phoneticians identify these peaks in speech analysis programs, especially in representations called the sound spectrogram (one of the most important visual representations of speech sound). The F_1, F_2 and F_3 are mostly for vowel sound identification. Although usually up to about four to five formants can be seen within the range of most speech analyses, the first three formants are the most important for speech. Formants provide important information for both vowels and consonants. For vowels, listeners tune in to the relative positions of the first three formant frequencies as cues to typical vowel qualities. It is the alternation of pitch and frequency that results in stress. Then the application of different stress/pitch on a stretch of utterance such as phrases, clauses and sentences that result in rhythmic patterns.

Ladefoged and Johnson (2011, p.116) referred to this as 'sentence rhythm'. Sentence stress occurs when some words are modified when the words are parts of sentences. These different alternations or the degrees of force in articulation create different intonational patterns such as 'Tune 1" (falling tune) which has to do with a fall in pitch on the stressed syllable of the nuclear word (the last stressed word in the tone group). This tune is identifiable with simple sentences, commands, wh-questions, exclamations and alternative questions (on the second part). 'Tune 2' (rising tune) has to do with a rise in pitch on the stressed syllable of the nuclear word. This is indicated with an upward movement in the voice pitch in an utterance on the last stressed syllable in the tone group. This tune is used for polar questions,

polite requests, in listing/counting, on the last part of alternative questions, the first part of a sentence, relative clauses functioning under the subject and utterances with elements of protest. There are other types of tunes like 3 and 4 which are not necessary for our analysis, as articulatorily based advertisements are fall with tune 1 and tune 2.

In a related work, Ekpe and Nsikak (2022) worked on the intonational patterns dominant in the speech of Nigerian Television Broadcasters. They investigated the features of the intonational patterns dominant in this variety within the enclaves of Received Pronunciation (RP) for possible features of localization of the English language in Nigeria. Their goals were to examine the intonational patterns dominant in the speech of Nigerian Television Broadcasters, investigate the features of intonational patterns and compare the intonational patterns of SNEV and that of RP using acoustic cues. The findings showed that the alternate rise and fall of pitch on syllables of words reflected in high pitch hertz as different from the RP; a medium of inconsistence in the pattern of the utterance of NIP where the speakers exhibited a sharp degree of voice fall and voice rising in alternating syllable of words. The speech patterns of Nigerian Television Broadcasters showed unsteady pitch patterns between the NIP in comparison with the RPIP and this was attributed to tonal patterns of Nigerian languages.

3.0 **Theoretical Framework**

Theory of Pitch perception by (Oxenham, A.J, Micheyl, C, Keebler, M.V, Loper A, and Santurette, S. (2011) is adopted as a theoretical frame for our work. This theory focuses on how the auditory system extracts periodicity as contained in the speech of an individual or instrument to be perceived in the cochlea by the auditory system (ear). The mechanical response of the basilar membrane (BM) to sounds has both a spatial and a temporal dimension. The BM vibrates in response to tones, following the frequency of the tone. The place of maximal vibration along the BM also changes gradually with tone frequency, from the base (high frequency) to the apex (low frequency). The domain of existence of pitch is complex, as the existence of pitch depends not only on fundamental frequency (F^0), but also on resolvability of harmonics and spectral content. According to Oxenham et al (2011), high-frequency complex tones, with less than 4 kilo Hertz (>4 kHz) with F^0 = 120 Hz do

not have a clear pitch, while a pure tone with the same F^0 does, but high-frequency complex tones with $F^0 > 400$ Hz do have a clear pitch. Pitch is the highness or lowness of a sound, determined by the frequency of vibrations in the sound. It is a perceptual attribute of a sound. The pitch we perceive is related to the frequency of the sound and is a discrete tone with an individual frequency.

This is in tandem with spoken advertisement, where the advertorial broadcast would have to alter the pitch of the voice (pitch) to depict the essence of the product(s) advertised to reflect the needs of the advertiser as well as that of the recipient audience. In this instance, the advertorial broadcasts have to apply different pitches for different moods such as of sympathy, empathy, sadness or happiness.

4.0 **Research Methodology**

Survey design was used in deciding on the radio station to work on. 50 already recorded Compact Discs (CD) were collected, 25 CDS from the Hit FM and 25CDS from the Cross River State Broadcasting Corporation. The 50 CDS were played in HP 250 5G and only 12 of the CDS were considered suitable for this research. 12 clips of orally delivered advertisements were purposively selected, 6 from each station comprising 3 obituaries and 3 of other products.

The orally delivered advertisements were transferred to PRAAT software, version 6.1.42 by Boersma & Weenink (1992-2021). The recorded clips of the advertisement were taken to SoundRecorder using mono channel and stereo channel. The frequency was set at 44100Hz which is the normal hearing limit for humans without distortion and damage to the ears. The recording was carefully done so that sound recorder meter does not exceed the green patch. The recorded sound was titled and taken TextGrid and the tier name and point tier were specified. The tiers were taken to Praat Object for analysis.

The Sound title and TextGrid were highlighted together for viewing, editing and annotation. It is at this level that all the features such as spectrum, pitch, intensity, formant and pulses which are the totality of features were captured from the articulatorily based selected advertisements to ascertain the features associated with the attitudinal intonation of the adverts, with our main focus on pitch. This procedure made it possible to have access to the visible part and total duration of the

utterance. This also helped in creating tiers for pitch on the spectrograph and to locate with precision the pitch locus of each utterance. It was at this level that it was possible to extract the pitch visible contour which was taken from the Praat Object to the PRAAT Picture window for ripping and copied to clipboard and Microsoft word 2010. Mixed methods of laboratory, quantitative and qualitative analysis were adopted in analyzing the data. Statistical table was used for presenting the differences in pitch of obituary and other product advertisements.

For ethical reasons, the names of the persons in which the obituaries were made, the towns and the names of the bereaved were removed from the data presented so as not to rekindle the already healed emotions of the bereaved. These are represented and replaced as 'xxx' in the presented data.

5.0 Data Presentation and Analysis

This section of the research presents and analyzes the data as gathered from the field on obituary messages, from the Hit FM and the Cross River State Broadcasting Corporations.

Data Presentation and analysis of Selected Obituary Advertisements

i. 'Across the bridge **….,** "The family of xxx in xxx in xxx Cross River State announces the demise of their mother, sister…"

ii. God be with you, till we meet again…The Royal family of xxx of xxx announces the home going of xxx

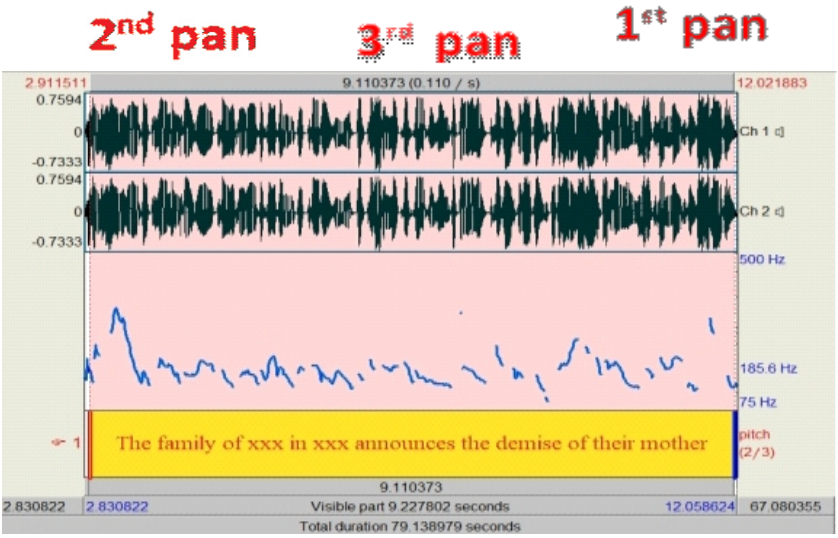
iii. With gratitude to God for a life well spent, the family of xxx, announces the glorious exit of our father, brother and husband xxx, ….

Spec Slide 1 below, represents the spectrographic presentations of obituary clip 'i' in the presented data. The recording was set at stereo because the advertisement started with symphony 'Across the bridge **….',** by Jim Reeves (1966) in South Africa, which musical type, belongs to Folk, World and Country. It was after the rendition of this emotionally triggered song which triggered empathy to the listeners, that the obituary message was delivered.

The spectrographic information is presented in 3 different pans shown in red ink. Pan '1' captures the wave form which was set on stereo.

The wave form represents air particles cut into bits by the articulatory organs to produce the resultant speech segments, suprasegments and supersegments (phonological features). Pan 2, which is the focus of our analysis represents the variation in pitch, and Pan 3 the word constituents at the syntactic level.

Spec Slide 1a: Spectrographic presentation of Obituary 1



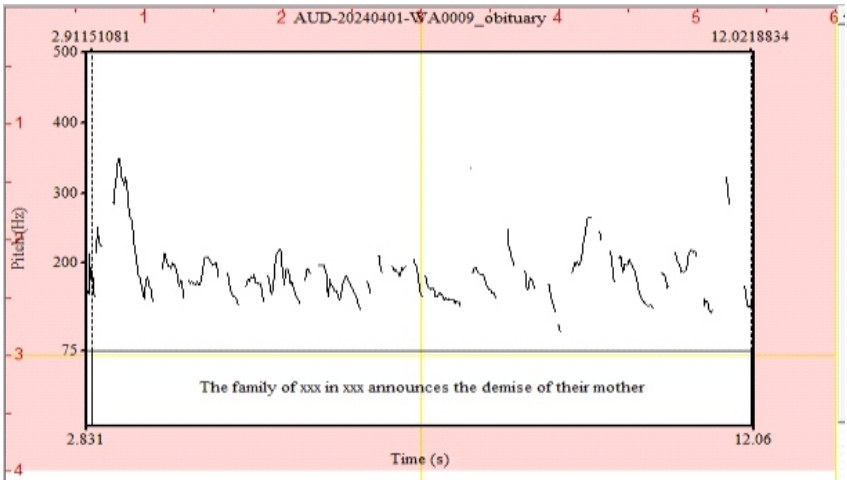
185.5Hz 195.5Hz 139.1Hz

Pan 2, which is the focus of our analysis represents the variation in pitch (rising and falling in tune) as the features in Pan 1 are displayed. After the song rendition by Jim Reeves, the message began with "The family of xxx in xxx in xxx Cross River State announces the demise of their mother, sister…"etc.

The 1st pitch is very low because the first word is a determiner and must not be stressed, by rule because it is a functional word and monosyllabic. It is for this reason that Egbokhare (2002, p. 89), stresses that, "stress in sentences can best be understood by dividing words into content and function words".

The pitch after the function word 'the' skyrocketed to 185.5 Hz, which is 186Hz by approximation, on the content word 'family', which is a noun and a polysyllabic word. The pitch went up to 195.5Hz, approximately 196Hz, thereafter it drops to 139.1Hz as shown in Pitch extract at Pitch 1a below.

Pitch 1a: Pitch extract of Obituary: "The family of xxx in xxx announces the demise of their mother" Rendition by Jim Reevs



185.5Hz 195.5Hz 139.1Hz

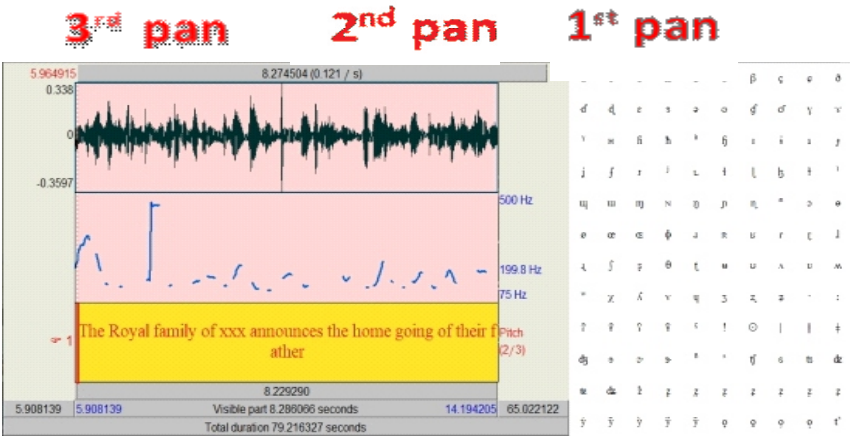
This is in line with the linguistic universal principle that, every language maintains a particular range of pitch for its linguistic purpose. The linguistic purpose of this message is to elicit sympathy, empathy and pity for the bereaved and the bereaved family.

At the end of the advertisements, the acoustic properties of the advertisement showed a very low oscillation mostly on the nuclear tune (final pitch), attesting to attitudinal function of tune. The low oscillation (pitch) is in line with the functional type the sentence exhibits, which in this instance, it is an imperative, with nuclear rising-falling tune (pitch).

Spec Slide 1b: Spectrographic presentation of Obituary 2

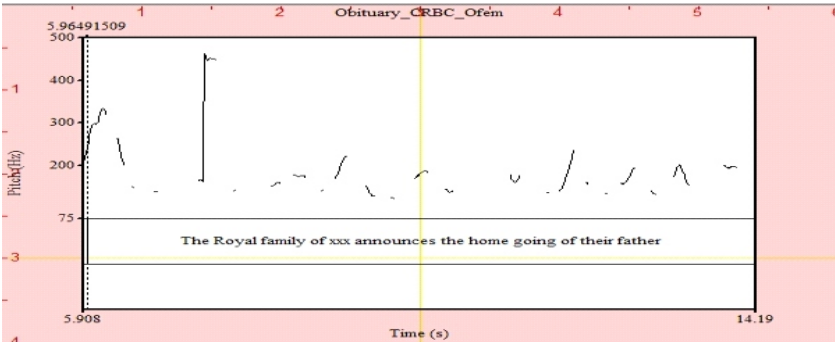
Spec Slide 2 below, represents the spectrographic presentations of obituary clip 'ii' in the presented data. The recording was set at mono to make a difference from slide 1. The song rendition was rendered at the beginning of the advert by 'Jeremiah Rankin' (1882), "God be with you, till we meet again…" a popular hymn for funeral services.

Spec Slide 1b: Spectrographic Presentation of Obituary 2



The Pan in Pitch 1b, is an extraction of pitch variation of "God be with you, till we meet again…" a popular hymn for funeral services. This extract on pitch variation between high and low shows that the pitch of the voice cannot be static it has to fluctuates to depict the essence of the intended information, which in this instance is that of sad sympathetic/empathetic mood of the advertorial.

Pitch 1b: Pitch extract of Obituary:



Data Presentation and Analysis of Selected Alcoholic Drink and Blocked Airtel Lines

This section of the research presents and analyzes the data as gathered from the field on other
products such as alcoholic drink and network providers.

Data Presentation of Adongo Bitters Alcoholic Drink and Airtel Blocked Lines

Data '2ai' and 'aii' below represent the data extracted from the articulatorily based advertisements for other products. '2ai' is for alcoholic drink and '2aii' is network provider. The data have to do with appeal calling the attention of customers to patronize their services.

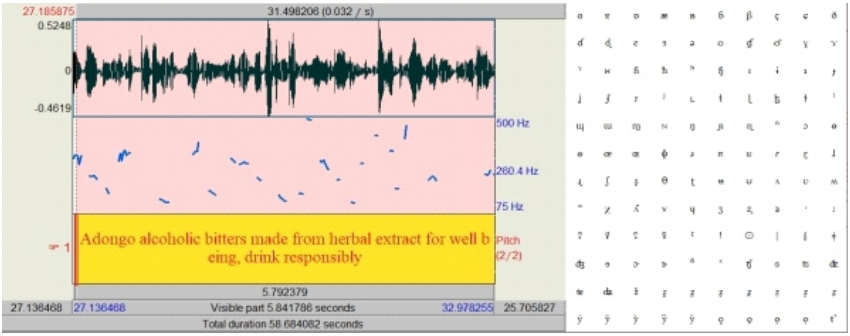
i. "Adongo alcoholic bitters made from herbal extract for well-being drink responsible…"

ii. "Attention, Airtel Customers, if your line has been blocked, this is for you… "

Data Analysis of Adongo Bitters Alcoholic Drink and Airtel Blocked Lines

The slide in 2ai. below represent the articulatorily based advertisements of the presented data in '2ai'.

Spec Slide 2ai.: Spectrographic Presentation of Adongo bitters alcoholic drink

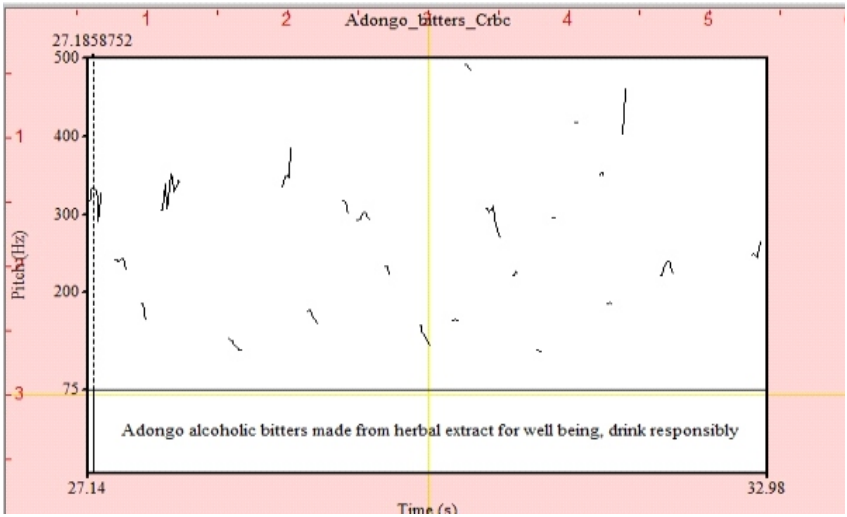


296.7Hz 136.1Hz 245.2Hz

The advertisement started with high life music and was followed by the message content for the targeted audience, 'Adongo alcoholic bitters made from herbal extract for well-being" and ended with the

warning, "…drink responsibly". The pitch of the advertisement started with a fast oscillation with a very high pitch of 296.7Hz, (approximately 297Hz). The pitch nosedived to 136.1Hz low and rose to 245.2Hz. This indicates that the advertisement is an appeal for patronage, the tune has to be high spirited to match with its linguistic purpose, but with a caveat, that its customers should not over drink to the level of stupor and toxication, though they are seeking for their patronage of their product. The pitch alteration is so scattered as the pitch of the voice of the advertiser has to be varied and alternated to spur its patroniser into action as shown in Pitch extract '2ai' below.

Pitch 2ai: Pitch extract of Pitch extract of Adongo Bitters Alcoholic drink



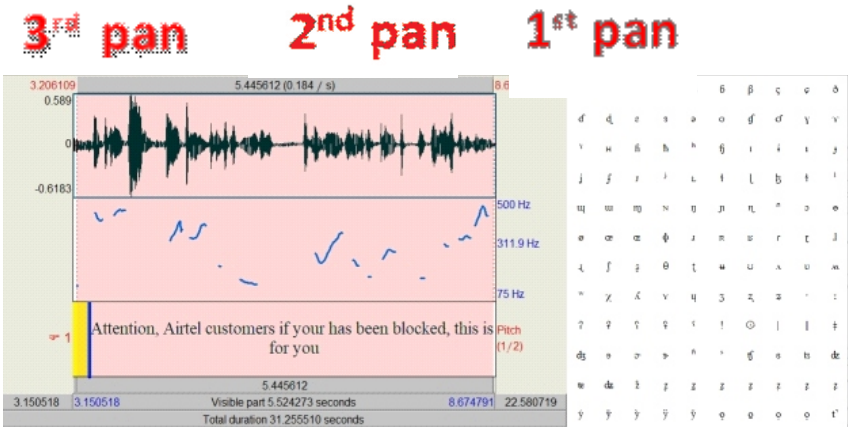
296.7Hz 136.1Hz 245.2Hz

In conformity with its linguistic purpose, tune type, attitudinal function, communicative function and word classes within a sentence structure, this utterance complies with 'Tune 11', the advertisement started with a rising tune and ended with an upward or rise in pitch with an in between low pitch. The oscillation was high initially and finally, showing a polite encouragement, request and a warning.

Spec Slide 2bi: Spectrographic presentation to Airtel Customers

i. Attention, Airtel Customers, if your line has been blocked, this is for you… Airtel, …a reason to imagine.

Spec Slide 2bi: Spectrographic Presentation Airtel blocked lines



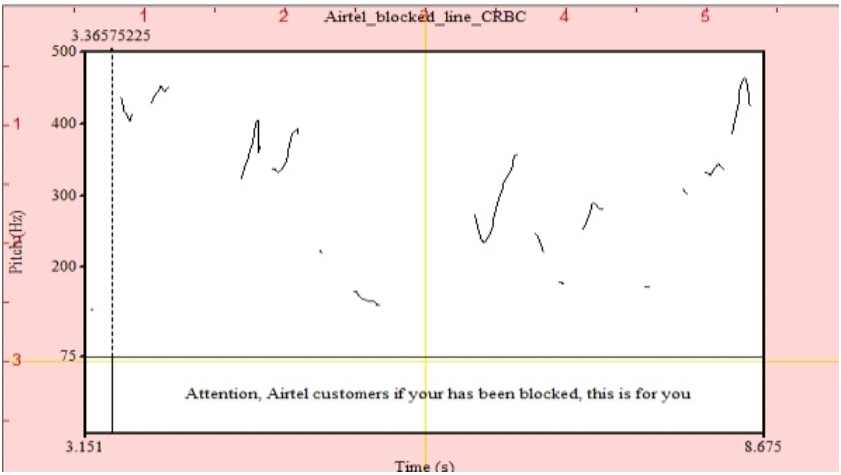
436Hz 147.3Hz 464.3Hz

The advertisement on "Attention, Airtel customers if your line has been blocked , ….this is for you…" started with a buzzing sound without any utterance. This is indicated with a non-so-pronounced wave form in the 1st Pan of the spectrograph above. Sequentially, the wave form started building up from the fundamental frequency indicated with 0Hz with patches of moments of silence shown on the wave form with thin lines. Pan 2, is a reflection of the activities of the wave form in Pan 1, representing the pulsation of the vocal and its result pitches in blue patches pitch is approximately 500Hz.

As the actual utterance of the advertisement started, the wave form became bulkier and the pitch dropped to 436Hz, 147Hz and suddenly rose to 464HZ. The 3rd Pan contains the lexical items that constitutes the entire stretch of utterance. The wave forms in 1st Pan, and the pitch variations in 2nd Pan all determined by the word classes in the 3rd Pan. These invariably determined the communicative function of the intonational pattern of the utterance as a request which falls under Tone

111 (fall-rise tune). The pitch extract of this tune is shown in Pitch extract 2bii below:

Pitch 2bii: Pitch extract to Airtel Customers



The communicative function, linguistic purpose, attitudinal function, and word constituents in the utterance of this advertisement comply with 'Tune 111', starting with rising tune, low pitches in-between and high pitch. The oscillation was high initially, low and high finally, showing a polite request for patronage.

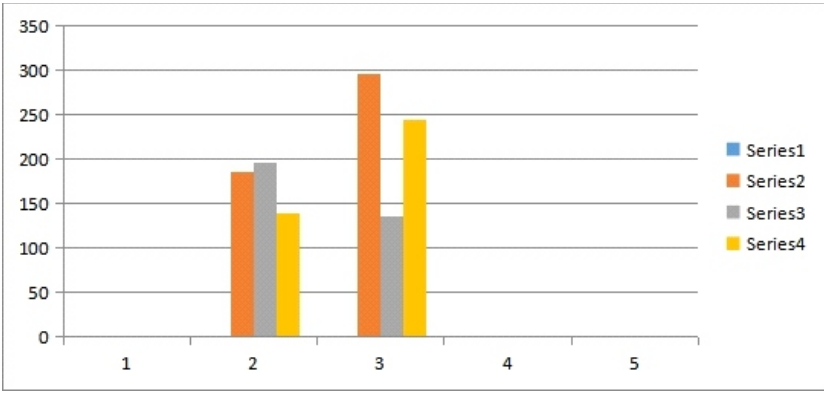
The statistic pitch mood table 1, below and the statistical mood cylindrical in chart 1 below further attest to our findings that sad mood pitches are lower and have slower oscillation than the happy mood advertisement.

Table 1: Statistical Pitch Mood Advertisement

	Pitch Range in Hertz		
Sad Mood	185.5	195.5	139.1
Happy Mood	296.7	136.1	245.2

In the bar chart below, the first bundle of chart represents the sad mood while the second represent the happy mood advertisements. The brown colour in the first bar chart representing sad mood stands at 185.5 Hz, while the pale green is at 195.5Hz and the blue is at 139.1 Hz. On the contrary, that of the happy mood by the right has all high at 296Hz, 245Hz respectively and a low 136.1 Hz.

Chart 1: Statistical chart of Mood Advertisement



Summary, Conclusion and Suggestion for Further Study

Advertising in marketing communication involves informing others about goods, services and intentions. People exhibit their goods and intentions through different means of communications such as written, spoken and semiotic signals. Adverting is basically a communication process and there can be no business market practice without communication.

In achieving the purpose of the research, several literatures were reviewed conceptually and empirically. Pitch theory was adapted to guide on the type of data collected and method of analyses that were used. 12 clips of audio advertisements were purposively selected, 6 from each station comprising 3 obituaries and 3 of other products. Mixed methods of laboratory, quantitative and qualitative analysis were adopted in analyzing the data. Statistical table 1 was used for presenting the differences in pitch and was transferred to xcel spread sheet to capture the statistical bar in chart 1. Ethical rules were taken into consideration by omitting sensitive information that might infringe on the fundamental human right of the advertisement owner, mostly that of funerals.

In line with the set objectives of the study of the orally delivered advertisements by the Hit FM Radio, and Cross River Broadcasting Corporation, were to trace the pitch patterns of orally delivered sad mood advertisements and track the pitch of happy mood product advertisements. The results agreed with our assumption that the pitch patterns of the producer are linked to the attached sentiment and linguistic purpose of the advertisement. The findings attest that orally delivered sad

mood advertisements is occasioned by low pitch or oscillation while the pitch of happy mood product advertisements exhibits high pitch or oscillation mostly on the nuclear tune. These are additionally attested by the statistical table 1 and the chart 1. It is suggested that a sociolinguistic study be carried out on funeral messages such as "painful exit' and "glorious exit"

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Optimality in Disyllabic to Tetrasyllabic English Words Production by Three-Year-Olds in Lagos Schools

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Abstract

This study examined optimality in disyllabic to tetrasyllabic English words production among three-year-old children enrolled in schools in Lagos. The objectives of the study include investigating how markedness constraints such as *ONSET, *COMPLEX, *LIQUID and AGREE-VOWEL, and faithfulness constraints like MAX, DEP, and IDENT-IO interact and influence the production of disyllabic to tetrasyllabic words by the participants. The study adopted OT as the theoretical framework, as well as aspects of Gesell's theory of maturation which incorporporate language development. The data for the study were collected through audio recording from three-year-old children in preschool settings. The data were transcribed and analysed for phonological features, using perceptual and statistical methods. The findings show that the participants simplify complex phonological structures through various processes which reflect the dominance of markedness constraints over faithfulness constraints. The study recommends that parents and educators should not panic when children in this age category exhibit such language 'deficit', as this is natural and part of their linguistic development.

Keywords: Acquisition, Constraints, Optimality, substitution, Truncation

1.0 Introduction

Language is arguably the most important natural tool possessed by man. It essentially distinguishes man from all other animals; and the evolution of man from the stone-age-man to the present advanced science-and-technology-age-man is largely due to the possession of language. However, the acquisition and use of language is never spontaneous. It is gradually developed over a relatively long period of time from childhood to adulthood. Language acquisition and development is thus a fundamental part of human development. This probably explains why most theories of child development usually incorporates language

development.

Chomsky's nativist theory of language acquisition (Chomsky, 1957) postulates that all humans are born with language ability innately wired into them through a device called language acquisition device (LAD); Skinner's behaviorist theory of language acquisition (Skinner, 1957) claims that language development is a learned behavior, the acquisition of which is similar to how we acquire any new skill through observation, imitation, repetition, errors, rewards, and even punishment (otherwise called *operant conditioning*); Vygotsky's Social Interactionist Theory, theorises that language develops in the child, from birth, as a result of his continual social interactions which enable him to develop higher cognitive functions, that is, language and thought (Vygotsky, 1978). Also, Piaget's constructivist theory posits that individuals construct language by following cognitive development, based on their individual experiences (Piaget, 1954); and Gesell's Maturation theory which focused on the influence of physiological development on children's language acquisition and development (Gesell, 1925).

However, language development in children is a complex process that begins from birth and continues through early childhood. The process begins with cooing, to babbling, then to the production of monosyllabic words, and so on (Demuth, 1995; Broselow, 2008). The earliest stage of actual child-language development appears to be the production of monosyllables, which after sometime, is followed by the production of disyllabic words, and so on. At the stage of disyllabic words production, the production of binary feet is fairly established; binary feet being minimal prosodic words. It is reported that by 12 months the average infant has already developed sensitivity to the grammar that is required to understand causative sentences, such as "who did what to whom?" e.g., the bunny pushed the frog (Lemetyinen, 2023). By the age of three, the average child exhibits significant capabilities in their language use, which encompass both receptive and expressive language skills. However, it is generally observed that children tend to acquire unmarked phonological structures before marked ones (Jakobson, 1968). For instance, CV syllable structure is first acquired, followed by CVC structure, then CCVC and CCVCC structures, and so on, depending on the phonotactics of the target language (Lleó & Prinz, 1997).

Generally speaking, it appears that enough discussions have not centered around young children's production of words comprising

binary feet (polysyllabic words), especially in Nigeria. Observations have shown that children of age three find it difficult to replicate adult production of polysyllabic words in many instances. Consequently, their production results in the manifestation of different processes such as *deletion, addition* or *substitution* of segments or syllables; and in certain instances, truncation of syllables or morphemes. The following section reviews some work already done in the aspect of child phonology.

2.0 **Review of Literature**

The focus of the Literature Review includes child language development, dominant aspects of language development at age three, and phonological processes in language acquisition.

Child Language Development

The literature reviewed here bothers around early language acquisition and segmental development in children.

Early Language Acquisition

Brown (1973) outlines the stages of language development, emphasizing how children progress from simple word combinations to more complex sentences. The work identifies **five stages of language development** in young children. The stages are based on the child's **mean length of utterance (MLU)**, a measure of linguistic complexity determined by the average number of morphemes per utterance. The stages are summarised in a tabular format as follows:

Stage I (MLU 1.0–2.0)	
Age: Around 12–26 months.	Focus: Basic semantic and syntactic development. Children primarily use two-word combinations (e.g., 'want cookie,' 'big dog'). This is characterized by telegraphic speech, omitting function words such as articles and prepositions.
Stage II (MLU 2.0-2.5)	
Age: Around 27–30 months.	Focus: Development of grammatical morphemes such as plurals, possessives, and present progressive forms (e.g., '-ing').
Stage III (MLU 2.5-3.0)	
Age: Around 31–34 months.	Focus: Use of simple sentences, subject-verb-object structures, and commencement of addition of negatives and question forms.
Stage IV (MLU 3.0–3.75)	
Age: Around 35–40 months.	Focus: Expansion of complex sentences, including embedding clauses (e.g., 'I say he is crying').
Stage V (MLU 3.75–4.5 and beyond)	
Age: Around 41+ months.	Focus: Mastery of more advanced grammatical structures, such as conjunctions, relative clauses, and irregular past tense forms.

These stages describe the natural progression of language acquisition, emphasizing the incremental development of grammar and sentence complexity as children grow. In a similar vein Kuhl (2004) explores how infants discriminate phonetic contrasts, which later develops into the ability to produce these sounds. The paper recognised a phenomenon in which infants' perception of speech sounds is encased in the prototype of a phonetic category in their native language. This phenomenon is referred to as the 'perceptual magnet effect'. It suggests that sounds that are closer to the prototype in terms of place and manner of articulation are perceived as more similar to the prototype than they actually are, thus 'pulling' neighbouring sounds towards the category center. Kuhl (2004) believes that this helps infants to organize and categorize speech sounds during early language development. This implies that the process sets the foundation for later word production. Additionally, the work explored phonetic and phonological aspects which particularly focus on how infants process and categorise speech sounds during early development. This involves three key phonetic aspects: **speech sound discrimination, perceptual magnet effect,** and **statistical learning.** The first implies that children are born with the innate ability to discriminate among a wide range of phonemes across different languages that they encounter. This ability, however, begins to diminish around age 6-12 months as infants focus on the sounds of their native language. The second suggests that the ability of babies to perceive and discriminate among phonemes is influenced by prototypes of phonetic categories in their mother tongue. And the third relates to the fact that babies exhibit the tendency to track the frequency and distribution of phonetic features in the speech that they hear and this consequently assists them to distinguish between phonemes and construct phonetic categories.

The phonological aspects involved are four: **phonemic categorisation, role of prosody, phonotactic learning,** and **phonemic development.** In phonemic categorisation, babies exhibit the tendency to categorise phonemes from the stream of continuous acoustic speech and these categories are refined by the mother tongue experience. Under the role of prosody**,** prosodic patterns such as intonation, stress, and rhythm influence phonological development and these support babies in

segmenting speech into meaningful units. For phonotactic learning, Kuhl claims that babies learn language-specific constraints on permissible sound combinations through extensive exposure to the language(s) in their environment. For phonemic development, it is suggested that infants acquire vowels first. This is subsequently and progressively followed by the acquisition of consonants as motor skills and auditory feedback develop. The foregoing emphasized the interconnectivity of the roles of biology, experience, and linguistic input in early language acquisition.

2.1.2 Segmental Development in Children

Ota (2015) worked on L1 phonological development, using Japanese speaking children. The work claimed that "At 6 to 8 months old, Japanese-learning infants can discriminate English [ɾ] and [l] at a level comparable to that of infants exposed to American English" (Ota, 2015, p. 3). It, however, juxtaposed this with Kuhl et al. (2006) which had earlier noted the existence of a '**facilitation effect' in** which babies exhibit increased sensitivity to phonetic contrasts specific to their native language between age 6 and 12 months. It further claimed that, "by 10 to 12 months, their performance becomes significantly lower than their American counterparts". Researches in other languages also corroborate this observation, as ten-month-olds have exhibited a similar loss of sensitivity to non-native phonemic contrasts, suggesting that the auditory perception of babies by that age has become more specifically aligned to acoustic differences in the phonemic contrasts of the language of the environment (Best and McRoberts 2003). Another work by the duo of Boysson-Bardies and Vihman (1991) compared babbling produced by infants of age 13 to 19 months from four different language backgrounds (English, French, Japanese and Swedish). The result showed that Japanese infants produced significantly fewer labials (25.4%) than those of English or French; more stops (69.5%) than French infants; and more nasals (16.2%) than Swedish infants. In terms of actual phonemic production across different languages, various researches show that children realise vowels earlier than consonants (Murata 1970; Ota 2015). The majority of children are reported to reach the 90% criterion for all 5 basic vowels by the age of 2. Moreover, in consonantal articulation children acquire stops and nasals first (mostly by age 4), while fricatives, especially sibilants ([s, z, ʃ]), and the flap ([ɾ]) are acquired later. In

addition, sibilants were observed to be acquired last among fricatives (Ingram 1989). This order of segmental development suggests a manifestation of markedness in feature values (Rice and Avery 1995). Ueda (1996) observed that stops are acquired before fricatives because [+continuant] is more marked than [-continuant], and non-sibilants are acquired before sibilants because [+strident] is more marked than [-strident].

2.2 Dominant Aspects of Language Development at Age Three

Language development in children is not a spontaneous occurrence but rather a slow and somewhat subconscious process that sets in during infancy through early childhood and gradually consolidates in late childhood into adolescence. Hoff (2014) notes that by age three, the average child begins to produce polysyllabic words with improved clarity while they may simplify certain complex structures. Instances include the pronunciation of *banana* /bænænæ/ as [nana], *elephant* /ɛlɪfænt/ as [ɛfant], and *spaghetti* /spægɛtɪ/ as [pæsgɛtɪ]. Hoff opines that young children adopt these simplified forms as a coping mechanism in order to manage the production of complex word structures while still developing the motor control that will enable them to have the capacity for adult-like pronunciation. This simplification phenomenon manifests in forms such as syllable reduction or substitution. Similarly, Owens (2016) describes the phonological development of three-year-olds, focusing on their growing ability to produce polysyllabic words. Just like Hoff, Owens also attests that children at this stage frequently simplify longer words, using processes like truncation and substitution. For example, a child might pronounce *computer* /kəmpjʊtə/ as [putə] or *umbrella* /ʌmbrɛlə/ as [brɛla]. These simplifications reflect their efforts to manage the complexity of multiple syllables while building motor and cognitive skills to handle more complex word structures. Hoff mentions that by the age of three, children can produce a vocabulary of approximately 1,000 words, and begin using simple, multi-word utterances. This reflects their expanding ability to form sentences of three-to-six words, marking an important stage in linguistic development. In the same vein, Owens discusses the linguistic growth of three-year-olds, noting their capacity to produce short sentences and understand vocabulary that can reach around 1,000 words.

2.3.1 Phonological Processes in Language Acquisition

Major phonological processes observed in language acquisition include deletion, substitution and truncation.

Deletion

Deletion is part of the phonological processes young children adopt to simplify language production during their early stages of development. It reflects both a universal tendency in language acquisition and language-specific patterns based on phonotactic constraints. Adam (2003) observed deletion patterns in children, where final consonants are deleted in a word. Examples include /dɒg/→[dɒ], /kæt/→[kæ]. This pattern often occurs in English-learning children due to the difficulty of producing coda consonants. Apart from consonants, vowels were also observed to be deleted by children. This usually involved the nucleus of unstressed syllables perhaps with the purpose of simplifying a complex word. For example, *family*→[famli]. Demuth (1995) noted that final consonant deletion is a universal tendency but variations occur based on the phonotactic rules of different languages. The various studies show that children have the tendency to delete unstressed syllables and final consonants across languages. Additionally, marked structures like clusters and complex codas are simplified through deletion.

2.3.2 Substitution

Another major phonological process observed in child phonology is phonemic substitution. This refers to a situation in which a sound segment is replaced with another one similar to it in the phonemic inventory of the speaker. This is a common feature of child language, as a result of their inability to realise the actual adult sound due to a number of factors. Levelt (2003) observed that there is similarity in substitution errors between Japanese' and other languages' child phonology. This includes stopping and palatalization. In stopping, sibilants are produced with complete or near-complete closure. For example, *see* /si:/→[ti] and *zoo* /zu:/→[du] (Smith 1973; Locke 1983).

2.3.3 Truncation

Truncation refers to the process of shortening a word by cutting off one or more syllables from it. This is similar to deletion but the major difference here is that truncation usually involves the deletion of syllables. This process is common in child phonology (Nespor & Vogel 2007; Plag

2003). In a typical child production, one or more syllables may be deleted from a word while retaining its core meaning. Demuth (1995) demonstrated that children across languages prefer deleting syllables to maintain rhythmic balance. These are usually unstressed or weak syllables and this reflects early speech prosodic and phonological constraints. Examples include *banana*→[nana]; *elephant*→[ɛfant]; *letata* (duck)→[tata]. This shows that children often omit the initial unstressed syllable, aligning with cross-linguistic tendencies.

The literature reviewed focused on child language development, dominant aspects of language development at age three and phonological processes. This helps to provide some needed background for understanding how three-year-olds acquire and produce polysyllabic words. The insights got therein provided valuable support for the analysis that follows.

2.4. Theoretical Framework

This study adopts OT as its theoretic foundation, focusing on the ranking architecture of phonological constraints in Nigerian English-speaking three-year-olds. Osifeso (2020, p. 35) described a constraint as "any underlying linguistic condition which prohibits the application of a certain rule so as to prevent an ill-formed structure from emerging as the surface structure". The following are valid assumptions in OT (Pater, 1998, Boersma and Levelt, 2003):

a. Constraints are all available as part of Universal Grammar.
b. A full set of phonological representations (segmental and prosodic) is 'available' as part of Universal Grammar.
c. Constraints can be violated.
d. In child phonology markedness constraints initially dominate faithfulness constraints, i.e., M>>F.
e. Constraints are continuously reranked in later productions to match up with the adult target, gradually leading to faithfulness constraints dominating markedness constraints, i.e., F>>M.

In OT, constraints are assumed to be universal and innately acquired; acquiring a grammar therefore implies acquiring the constraints ranking architecture of a specific language. Levelt 1995 noted that outputs started out governed by markedness constraints, rather than by faithfulness constraints. Consequently, it was proposed that all markedness constraints dominate all faithfulness constraints at the initial state of the grammar (i.e., M>>F). However, the constraints are subsequently

reranked as the child aims to achieve the adult target output. Thus, the M>>F in early stages sooner or later become some F>>M rankings as some high-ranked markedness constraint in the learner's grammar prohibited by the adult's grammar get demoted, while the corresponding faithfulness constraint is promoted. Consequently, the following are some of the constraints that are applicable to this study, following McCarthy & Prince, 1995; Kager, 1999 and McCarthy, 2007.

Markedness Constraints

i. *COMPLEX: No complex onsets or codas
ii. ONSET: Syllables must have onsets.
iii. *CODA: Syllables must not have codas.
iv. DEP: Avoid inserting segments.
v. NASAL SPREADING: Maintain nasal harmony across adjacent vowels.
vi. UNIFORMITY: Avoid spreading features.
vii. M-FAITH (Base-Reduplicant Correspondence): Ensure similarity between the base and reduplicant.
viii. *LIQUID: Avoid liquids.
ix. AGREE-VOWEL: Vowels in adjacent syllables should harmonize.

Faithfulness Constraints

x. MAX: No deletion of segments (e.g., all sounds in the adult target form should be present in the child's production).
xi. IDENT-IO: Input and output forms must match in terms of feature specifications (e.g., voiced consonants remain voiced).

2.5 Purpose of the study

The study investigated the optimality of disyllabic to tetrasyllabic English words production by three-year-olds attending schools in Lagos, using OT framework. The objectives are as follows: i. to investigate the dominant phonological constraints in the production of polysyllabic words by three-year-olds in Lagos state; and

ii. to determine the ranking architecture of Nigerian English-speaking three-year-olds in their production of polysyllabic words.

3.0 Methodology

The study was both descriptive and analytical in nature. It involved direct observation and recording of children's word production. The sample size was eighteen participants and the selection criteria are: **age** - 3years (3years to 3years 11months); **language background**: primary exposure to English language at home and school; and **health status**: No known speech, hearing, or cognitive impairments. The participants were purposively selected from three nursery schools across the three senatorial districts of Lagos state. Six participants comprising three boys and three girls were selected from each school. The tokens for the analysis comprised twenty-three words: ten disyllabic, eight trisyllabic and five tetrasyllabic. The words are presented in table 3.1.

Table 3.1: Word list for the Elicited Data

S/N	Disyllabic	Trisyllabic	Tetrasyllabic
1	apple	Banana	Calculator
2	Balloon	Butterfly	Caterpillar
3	carrot	Elephant	Helicopter
4	Elbow	Pineapple	Television
5	Finger	Rectangle	Watermelon
6	Flower	Telephone	
7	purple	Triangle	
8	Shoulder	Umbrella	
9	Stomach		
10	yellow		

The words are presumed appropriate for the age of the participants as they are commonly encountered in everyday conversation by children either in school, at home or on electronic media that are accessible to children. Moreover, the words represent a variety of syllable structures and phonological patterns which can be used to form the basis of generalizing the participants' phonological optimality and patterns when they articulate words ranging from two to four syllables.

A brief warm-up session was conducted with the participants to build rapport and make them comfortable with the researcher. The data were elicited from the participants, using picture cards and toys that represent the words. A high-quality audio recording device was deployed to capture the participants' word productions. The participants' classroom was the setting of the data collection, while the teacher's table serves as the data elicitation point. This was to make the participants comfortable and ensure natural behavior. Each participant was isolated in turns at the

teacher's table for the elicitation procedure. The data collection procedure followed a question-and-response format: the researcher, aided by the class teacher, presents the picture card or toy of a token in a simple question form (for example, 'what is this?') and the participant responds accordingly (for example, 'an elephant.' or simply 'elephant'). Each word was elicited three times to account for variability in production. The responses were recorded and later transcribed perceptually, using the International Phonetic Alphabet. For ethical consideration, all data were anonymized. The phonological features of the polysyllabic words production were theoretically analysed using relevant constraints based on OT tenets, while the statistical analysis was done using frequency and percentage.

Data Analysis

The data were analysed in three subsections: disyllabic, trisyllabic, and tetrasyllabic words.

Participants' Realisation of Disyllabic words

Table 4.1 shows the input and the participants' optimal output for the disyllabic words tested.

Table 4.1: Disyllabic Words, Input and Participants' Optimal Output

S/N	Words	Input	Output
1	apple	/ˈæp.əl/→[apul]	[apu]
2	Balloon	/bəˈluːn/→[balũ]	[balũ]/[bajũ]
3	carrot	/ˈkær.ət/→[karɒt]	[karɒt]
4	Elbow	/ˈɛl.bəʊ/→[ɛlbo]	[ɛbo]
5	Finger	/fɪŋ.əʳ/→[finga]	[finka]
6	Flower	/flaʊəʳ/→[flawa]	[flawa]
7	purple	/ˈpɜː.pəl/→[pɒpul]	[pɒpu]
8	Shoulder	/ʃəʊl.də/→[ʃolda]	[ʃoda]
9	Stomach	/ˈstʌm.ək/→[stomak]	[tomak]/[somak]
10	yellow	/jɛləʊ/→[jɛlo]	[jɛlo]

Note that the input column has two forms: the underlying representation (UR), left of the arrow, and the surface representation (SR), to the right. The UR refers to the abstract, mental form of the word as realised by the native speaker, while the SR represents the form realised by the adult Nigerian speaker, which actually serves as the input for the participants.

As revealed in table 4.1 above, the optimal outputs of the participants slightly vary from those of the input (adult's). Out of the ten samples two (20%) were quite similar to the input's. These are *carrot* and *yellow*. However, 50% of the participants realised *balloon* as [balữ], while the other 50% realised it as [bajữ]. The remaining seven words were realised slightly differently as follows: [apul]→[apu], [ɛlbo]→[ɛbo], [finga]→[finka], [pɒpul]→[pɒpu], [ʃolda]→[ʃoda], and [stomak]→[tomak]/[somak].

The data shows that /l/ is deleted in coda positions, whether medially or finally as seen in apple→[apu], elbow→[ɛbo], purple→[pɒpu] and shoulder→[ʃoda]. Three constraints are mainly at work here: *COMPLEX, *CODA and MAX. Let us illustrate this with the emergence of [ʃoda] as the optimal output.

Tableau 1: Emergence of [ʃoda]

Input: /ʃəʊl.də/→[ʃolda]

	*COMPLEX	*CODA	MAX
a. [ʃolda]	*!	*	
b. [ʃoda]			*

Constraint ranking: *COMPLEX>>*CODA>>MAX

From the tableau, candidate (a) violated two constraints, *COMPLEX and *CODA (both highly ranked constraints), while candidate (b) violated one constraint, the lowest ranked constraint. The violation of *COMPLEX by (a) attracted a fatal penalty as shown by the asterisk and the exclamation mark. (b), consequently, emerged as the optimal candidate. This is shown by the pointing finger. The constraints ranking here is: *COMPLEX>>*CODA>>MAX. This means that *COMPLEX dominates *CODA, which also dominates MAX in the participants' disyllabic word production.

Tableau 2: Emergence of

[finka]	Input: /fiŋ.əʳ/→[finga]	
*IDENT-IO*CODAMAX	a. [finga]*!*	b.[finka]**

In the production of *finger*, the majority of the participants realised [finka]. Here, there is a substitution of the voiced velar stop /g/ in the adult's target with its voiceless counterpart /k/. This is an instance of voicing substitution, which relates to faithfulness; hence, *IDENT-IO (a faithfulness constraint) is brought in at the peak of the tableau to replace *COMPLEX (a markedness constraint). From the tableau, candidate (a) violated *IDENT-IO and *CODA, which candidate (b) also violated. However, candidate (a) having violated the highest ranked constraint, attracted a fatal penalty. This thus makes (b) emerge as the optimal candidate. The constraints ranking here is: *IDENT-IO>>*CODA>>MAX. This means that *IDENT-IO dominates *CODA, which also dominates MAX.

Tableau 3: Emergence of [tomak]/[somak]

Input: /ˈstʌm.ək/→[stomak]

a. [stomak]	*!		
b. [tomak]		*	*
c. [somak]		*	*

In the realisation of stomach, 50% of the participants produced [tomak], while the remaining 50% also produced [somak], leading to two variants among the participants.

The tableau, therefore, shows two optimal candidates. [stomak] violated the highest ranked constraint (*COMPLEX), as the onset of the initial syllable is a cluster, thus making it to lose out of the competition. Although the two optimal candidates violated two constraints each, they emerged winners because the violated constraints are lowly ranked.

4.2 Trisyllabic Words

Table 4.2 shows the input and the participants' optimal output for the trisyllabic words tested.

Table 4.2: Trisyllabic Words, Input and Participants' Optimal Output

S/N	Words	Input	Output
1	Banana	/bəˈnæ.nə/→[banana]	[banana]
2	Butterfly	/ˈbʌtə.ˌflaɪ/→[bɒtaflai]	[bɒtafai]
3	Elephant	/ˈɛl.ɪ.fənt/→[ɛlɪfant]	[ɛjĩfant]
4	Pineapple	/ˈpaɪnæp.əl/→[paɪnapu]	[paĩapu]
5	Rectangle	/ˈrɛk.tæŋ.gəl/→[rɛktangul]	[rɛtangu]
6	Telephone	/ˈtɛl.ɪ.fəʊn/→ [tɛlɪfon]	[tɛjɪfon]
7	Triangle	/ˈtraɪæŋ.gəl/→[traɪangul]	[taɪjangu]
8	Umbrella	/ʌmˈbrɛl.ə/→[ɒmbrɛla]	[ɒmbrɛja]/[ɒmblɛla]

Table 4.2 shows that the optimal outputs of the participants vary significantly from those of the input. Only 25% of the samples were produced similar to the input's, while 75% were realised differently. These are [bɒtaflai]→[bɒtafai], [ɛlɪfant]→[ɛjĩfant], [paɪnapu]→[paĩapu], [rɛktangul]→[rɛtangu], [traɪangul]→[taɪjangu] and [ɒmbrɛla]→[ɒmbrɛja].

[bɒtaflai]→[bɒtafai]

The phonological process involved here is cluster reduction. The lateral /l/ was deleted in order to simplify the onset in the final syllable. The constraints architecture here is: *COMPLEX>>IDENT-IO>>MAX. In the participants' production, the avoidance of complex onsets [fl_] dominates correspondence between input and output forms, leading to the production of [f_]. Although the output [bɒtafai] is less faithful, it avoids a marked onset.

[ɛlɪfant]→[ɛjĩfant]

The phonological process here involves the substitution of a lateral with the glide /j/ and an anticipatory nasal assimilation of the front vowel /i/ in anticipation of the nasal sound in the following syllable. The constraints architecture here is: *LIQUID>>MAX>>IDENT-IO. *LIQUID requires the liquid to be substituted with a glide, MAX seeks to preserve input segments, while IDENT-IO ensures correspondence between input and output forms in terms of feature specifications. The first two were satisfied by the winning candidate. Here is the tableau:

Tableau 4: Emergence of [ɛjĩfant]

Input: /ˈɛl.ɪ.fənt/→[ɛlɪfant]

	*LIQUID	MAX	IDENT-IO
☞ a. [ɛjĩfant]			**
b. [ɛjĩfant]		*!	

[paɪnapu]→[paĩapu]

The process here is consonant deletion and nasal spreading. The nasal coda of the initial syllable is deleted, while its nasality spreads to the following vowel. The constraints architecture is: NASAL SPREADING>>MAX>>IDENT-IO. The deletion of /n/ simplifies the production, while nasality spreads to the vowel to satisfy harmony constraints. Not all input consonants were preserved, hence, MAX was violated due to /n/ deletion. Consequently, NASAL SPREADING dominates MAX and UNIFORMITY.

[rɛktangul]→[rɛtangu]

This is a case of consonant cluster reduction and coda deletion: the onset /kt/ of the penultimate syllable is reduced to /t/ and the coda /l/ of the ultimate syllable is deleted. Hence, the dominant constraints are *COMPLEX and *CODA. This is expressed in Tableau 5.

Tableau 5: Emergence of [rɛktangul]

Input: /ˈrɛk.tæŋ.gˌl/→[rɛktangul]

	*COMPLEX	*CODA	MAX
☞ a. [rɛtangu]			**
b. [rɛtangul]	*!	*	

Candidate (a) committed two violations of MAX, while candidate (b) committed one violation each of *COMPLEX and *CODA. Candidate (a) emerged winner because MAX is the least ranked on the tableau.

[traɪangul]→[taɪjangu]

There are three main processes involved here: cluster reduction (/tr/→/t/ initially), insertion (/j/ medially) and deletion (/l/ finally). Consequently, four constraints are relevant: *COMPLEX, ONSET, *CODA and DEP. This is illustrated as follows:

Tableau 6: Emergence of [taɪjangu]
Input: /ˈtraɪæŋ.gˀl/→[traɪangul]

	*COMPLEX	ONSET	*CODA	DEP
a .			*	**
b. [traɪangul]	*!	*	*	

Candidate (a) exhibits cluster reduction which satisfies *COMPLEX; glide insertion which satisfies ONSET; and the deletion of /l/ which satisfies *CODA; while DEP, the least ranked constraint, is violated for the insertion of /j/. The inverse is the case for candidate (b). Moreover, it is noteworthy that in both the [-kt-] and [tr-] clusters of *rectangle* and *triangle*, the /t/ is retained. This suggests that the participants have a preference for coronal consonants.

[ɒmbrɛla]→[ɒmbrɛja]
This production is quite close to the adult's as the only process undergone is substitution of a liquid /l/ with a glide /j/ at the onset of the final syllable. The constraints architecture is: ONSET>>IDENT-IO. The analyses above show that children usually simplify adult forms by reducing complexity or inserting segments, prioritizing markedness over faithfulness.

Tetrasyllabic Words
Table 4.3 shows the input and the participants' optimal output for the tetrasyllabic words tested.

Table 4.3: Tetrasyllabic Words, Input and Participants' Optimal Output

S/N	Tetrasyllabic	Input	Output
1	Calculator	/ˈkæl.kjə.leɪ.təʳ/→[kalkuletɒ	[katujetɒ]
2	Caterpillar	/ˈkætərˌpɪləʳ/→[katapɪla]	[kakapɪja]
3	Helicopter	/ˈhɛl.ɪˌkɒp.təʳ/→[hɛlɪkɒpta]	[ɛjɪkɒta]
4	Television	/tɛl.ɪˈvɪʒən/→[tɛlɪvɪʃon]	[tɛlɛbɪʃõ]
5	Watermelon	/ˈwɔ:təmɛlən/→[wɒtamɛlɒn]	[ɒtamɛnõ]

As seen in table 4.3, all the participants' optimal outputs for the tetrasyllabic tokens vary significantly from those of the input. These are: [kalkuletɒ]→[kakujetɒ], [katapɪla]→[kakapɪja], [hɛlɪkɒpta]→[ɛjɪkɒta], [tɛlɪvɪʃon]→[tɛlɛbɪʃõ] and [wɒtamɛlɒn]→[ɒtamɛjõ].

4.3.1 [kalkuletɒ]→[kakujetɒ]

Tableau 7 illustrates this process:

Tableau 7: Emergence of [kakujetɒ]

Input: /ˈkæl.kjə.leɪ.təʳ/→[kalkuletɒ]

	*CODA	IDENT-IO (MANNER)	DEP
☞ a. [kakujetɒ]		*	**
b. [kalkuletɒ]	*!		

Two main processes were undergone here: cluster reduction ([lk]→[k]) to satisfy *CODA, and substitution (of a liquid /l/ with a glide /j/ at the onset of the penultimate syllable), which violates IDENT-IO (MANNER). [kakujetɒ] satisfies the highest ranked constraint but violates the two lowly ranked ones; while [kalkuletɒ] violates the highest ranked constraint, satisfying the two lowly ranked ones.

[katapıla]→[kakapıja]

This process is illustrated in tableau 8:

Tableau 8: Emergence of [kakapıja]

Input: /ˈkætəˌpılər/→[katapıla]

	M-FAITH (Base-Reduplicant Correspondence)	*LIQUID	IDENT-IO (MANNER)
a. [kætərˌpılər]	*!	*	
☞ b. [katapıla]			**

In candidate (b) the initial syllable /ka/ is reduplicated, while the liquid /l/ in the final syllable is substituted with a glide /j/. This makes it to satisfy both high-ranked constraints M-FAITH and *LIQUID, while candidate (a) satisfies only IDENT-IO. This observation supports claims that children often use reduplication as a strategy to simplify complex words (Kager, 1999), while they also substitute liquids with glides because glides are easier to produce (de Lacy 2006).

[hɛlıkɒpta]→[ɛjıkɒta]

Here, three main processes are involved: initial consonant deletion (/h_/→/ø/), substitution of /l/ in the antepenultimate syllable with /j/ and the reduction of the cluster /pt/ in the final syllable to /t/. Consequently, four constraints are relevant: *ONSET, *LIQUID, *COMPLEX and MAX, as illustrated in tableau 9:

Tableau 9: Emergence of [ɛjɪkɒta]
Input: /ˈhɛl.ɪˌkɒp.təˈ/→[hɛlɪkɒpta]

a. [ɛjɪkɒta]				***
b. [hɛlɪkɒpta]	*!	*	*	

[ɛjɪkɒta] satisfies *ONSET (it deletes /h/ initially), *LIQUID (it substitutes /l/ with /j/ antepenultimately) and *COMPLEX (it reduces the cluster /pt/ to /t/) but it exhibits three violations of MAX in its bid to satisfy those three high-ranked constraints. Meanwhile, [hɛlɪkɒpta] violates the three high-ranked constraints, while satisfying MAX, the least-ranked constraint.

[tɛlɪvɪʃon]→[tɛlɛbɪʃõ]
Three main processes are also involved in the emergence of the optimal candidate: vowel harmony (/ɪ/ in the second syllable assimilates to /ɛ/ of the preceding syllable), substitution (/v/→/b/ in the penultimate syllable) and nasalization (final vowel becomes nasalized, while the coda nasal is deleted). The following constraints are involved in their ranking order: AGREE-VOWEL (violated by [tɛlɪvɪʃon] but satisfied by [tɛlɛbɪʃõ])>>*IDENT-IO (PLACE) (violated by [tɛlɪvɪʃon] but satisfied by [tɛlɛbɪʃõ])>>*IDENT-IO (NASAL) (violated by [tɛlɪvɪʃon] but satisfied by [tɛlɛbɪʃõ]).

[wɒtamɛlɒn]→[ɒtamɛjõ]
Tableau 10 illustrates the processes:

Tableau 10 illustrates the processes:
Tableau 10: Emergence of [ɒtamɛjõ]
Input: /ˈwɔ:təmɛlən/→[wɒtamɛlɒn]

	*ONSET	*LIQUID	IDENT-IO (ORAL)	MAX
a. [ɒtamɛjõ]			*	***
b. [wɒtamɛlɒn]	*!	*		

[ɒtamɛjõ] satisfies the two high-ranking constraints: *ONSET and *LIQUID as it deletes the onset of the initial syllable of the input and it also substitutes the /l/ in the final syllable with /j/. It, however, violates the oral feature specification of the final vowel as that is nasalized; and it also incurs three violations of MAX. However, [wɒtamɛlɒn] violates both *ONSET and *LIQUID, the two high-ranking constraints in the

architecture, while satisfying the two lowly-ranked. The foregoing justifies why [ɒtamɛjõ] emerged the winner.

Findings

Across the three syllabic categorisation of the analyses, it was observed that the participants simplify complex phonological structures through processes such as onset deletion, substitution of liquids with glides, cluster reduction, reduplication, and nasalisation. These processes reflect the preference of markedness constraints such as *ONSET, *COMPLEX, *LIQUID and AGREE-VOWEL over faithfulness constraints like MAX, DEP, and IDENT-IO; and this aligns with the findings in child phonology across languages (Demuth, 1995; Kuhl, 2004; Ota, 2015). Of particular note is the liquid /l/ which is consistently deleted or vocalised as the glide /j/. It appears that young children often violate faithfulness constraints in order to simplify complex adult forms based on their stage of phonological development. As they continue to develop, they continue to readjust the constraint architecture to more adult-like forms.

Conclusion

The study investigated optimality in disyllabic to tetrasyllabic English words production of three-year-old children in Lagos schools. The participants' production of disyllabic words majorly align with that of the adult output (with a difference of 20%). For trisyllabic words, the percentage of difference increased to over 25%. For tetrasyllabic words, however, the percentage of difference increased to 100%. This suggests that the higher the number of syllables, the more difficult it becomes for children to accurately produce the target output. In many instances, onsets and clusters pose some challenges, as well as the liquid /l/. Much of these observations reflects the maturation stage of the children. Therefore, it is recommended that parents and educators need not panic when children in this age category exhibit such language 'deficit'. It is a common phenomenon across languages.

For future research, it is suggested that children of ages 4-5 can also be studied in words with longer syllable structures and the results compared with this current outcome.

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From Pulpit to Performance: Pragmatic Functions of Prosodic Features in Nigerian Pentecostal Pastors' Sermon Delivery

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Abstract
This study explored the pragmatic functions of prosodic features employed by Nigerian Pentecostal pastors during sermon delivery. The specific objectives were to identify the pragmatic functions and prosodic features utilized by Nigerian Pentecostal pastors during sermon delivery, and analyze the roles of prosodic features in conveying meaning and fostering congregational engagement within the sermons. The study employed a qualitative research design. Three sermons were purposively selected from five Nigerian Pentecostal pastors, with subsequent analysis focusing on identifying pragmatic functions and prosodic features, as well as examining the roles of prosodic features in conveying meaning and fostering congregational engagement within the selected sermons. The study drew its theoretical insights from Brazil's Discourse Intonation and Mey's Pragmatic Acts theories. The study found that certain prosodic features such as assimilation, elision, epenthesis, prominence, and vowel lengthening were used by the pastors in the sermons, contributing to meaning-making. It also found that these prosodic features were used to achieve pragmatic functions such as clarity, precision, emotionality, assertiveness, and charge in the sermons. The study concluded that prosodic features played a crucial role in Nigerian Pentecostal sermons, significantly contributing to the conveyance of meaning, audience engagement, and the reinforcement of religious beliefs.

Keywords: Intonation, Pentecostalism, Sermon Delivery, Pragmatics, Religious Performance

1.0 Introduction

Prosodic features, variations in pitch, stress, rhythm, and timing, are vital in spoken discourse, enhancing emotional expression, marking questions, and emphasizing key points (Gussenhoven, 2016). Recent studies emphasise how prosodic elements influence message interpretation, revealing how speakers manipulate pitch, stress, and

rhythm to achieve specific pragmatic effects (Ladd, 2020). In contexts like public speaking, prosody shapes comprehension by providing cues on intent and argument structure; for example, stress and rhythm can distinguish statements from questions, guiding listeners' responses (Hirschberg & Pierrehumbert, 2021). Beyond grammatical usage, prosody fosters emotional connection, prominence and assertiveness (Gbadegesin 2018), establishing rapport in settings like religious sermons, where conveying intent, making emphasis, explaining a concept with assurance and engaging the audience are paramount.

In Nigerian Pentecostal sermons, prosodic features contrl engagement, enhancing community cohesion through participatory worship (Chinyere, 2022). Despite an increase in studies on language in religious discourse (Hirsch, 2019; Robinson, 2020; Bhandari, 2021), the prosody of Nigerian Pentecostal sermons remains underexplored, leaving a gap in understanding how pastors' prosodic choices affect message impact and congregational response (Gbadegesin & James-Idowu, 2023; Adetunji, 2018). This study, therefore, aims to analyze the pragmatic roles of prosodic features in these sermons, focusing on how intonation, stress, and rhythm enhance clarity, emotional resonance, and audience interaction, thus bridging a critical gap between linguistic theory and congregational experience. The findings could not only enrich linguistic and religious studies but also provide pastors with insights for improving engagement and spiritual connection in sermon delivery.

2.0 Literature Review

Intonation, as a vital component of spoken language, enhances communication by adding layers of meaning beyond words. Ladefoged and Johnson (2015) describe it as the use of pitch variation to convey attitude, structure, and emotion, making speech richer and more dynamic. Cruttenden (2014) emphasizes intonation's role in marking sentence boundaries and clarifying syntax, which aids in understanding complex thoughts. Similarly, Wells (2016) and Levis (2020) highlight its social functions, noting how intonation signals emphasis, shows politeness, or even conveys irony. These functions are essential in settings like religious sermons, where intonation helps speakers engage audiences and convey key messages emotionally (Hirsch, 2019). The strategic modulation of pitch in religious discourse fosters an interactive environment, reinforcing communal bonds as speakers evoke responses

from congregants, such as "Amen" or "Hallelujah" (Adebanjo, 2021). These perspectives show how intonation supports both clarity and expressiveness in communication, allowing speakers to influence understanding and build social connections effectively.

Research in religious contexts reveals intonation's unique role in deepening engagement and shaping spiritual experiences. Hirsch (2019) demonstrates that in Pentecostal sermons, intonation not only clarifies language but also enhances comprehension and evokes emotional reactions, creating a dynamic worship experience. Similarly, Adebanjo (2021) finds that Nigerian pastors use intonation to emphasize authority, urging congregational responses and reinforcing doctrinal certainty. Comparative studies, such as Singh and Prasad's (2020) examination of Hindu chanting, show how intonation differs across religions; Hindu chants, for instance, use steady pitch for a meditative state, unlike the dynamic prosody in Christian sermons. Al-Badri (2022) extends this understanding by comparing Islamic and Catholic services, illustrating how both traditions use intonation to foster reverence and reflection. These studies underscore intonation's role in religious contexts, showing it to be an essential tool for enhancing audience engagement, which transforms listeners from passive recipients to active participants and strengthens the communal spirit within worship settings. Pragmatic approaches to intonation thus enrich our understanding of its power in spoken discourse, particularly in fostering engagement and delivering impactful messages in religious and other social contexts (Sperber & Wilson, 2018; Schultz, 2021).

3.0 Theoretical Framework

3.1 Pragmatic Acts Theory

Pragmatic Acts Theory (PAT), developed by Jacob Mey (2001), focuses on how language is used in context to achieve communicative purposes, emphasizing the social and situational aspects of language use. PAT considers how context, intention, and the interactive setting influence communication. This theory posits that language cannot be entirely understood in isolation from its usage environment; it is shaped by the speakers' intentions and the cultural, social, and interpersonal factors surrounding its delivery. Within religious discourse, such as sermons delivery, this theory is particularly applicable because sermons are complex interactions that rely on both linguistic and non-linguistic

elements like intonation, gestures, and pauses, to convey powerful messages and engage congregants effectively. Applying Pragmatic Acts Theory to a study on intonation in Nigerian Pentecostal sermons allows an analysis of how pastors' tone and delivery choices serve specific pragmatic functions, such as invoking emotion, encouraging congregational responses, or emphasizing doctrinal points. Examining these features through the lens of PAT, this study reveals how intonation conveys information while also performing essential social and religious functions. The theory is thus relevant to this study as it provides a framework to understand the dynamic, interactive nature of religious communication, emphasizing how pastors adapt language to engage and influence their audience, and fulfill the spiritual, cultural, and community-building objectives of their sermons.

3.2 Discourse Intonation

Discourse Intonation, as introduced by David Brazil (1997), emphasizes the role of intonation in shaping meaning across connected speech or discourse, rather than in isolated sentences. Brazil's framework reveals how variations in pitch, stress, rhythm, and tone contribute to a speaker's intent, allowing listeners to interpret attitudes, focus, and organization of information within spoken language. Discourse Intonation signals elements like new versus given information, emphasizes key points, and manages conversational turn-taking, making it integral to how messages are communicated and received in real-time interactions. This perspective is highly relevant to analyzing sermon delivery in Nigerian Pentecostal churches, where pastors rely on prosodic features such as assimilation, elision, epenthesis, prominence, and vowel lengthening to engage audience, emphasize spiritual themes, and create an emotional impact. The framework's focus on the communicative function of intonation within extended discourse makes it ideal for examining how pastors adapt their delivery dynamically to suit the interactive and participatory nature of religious services. Discourse Intonation thus provides valuable insights into the pragmatic effects of intonation, supporting an understanding of how prosodic choices reinforce the sermon's content and strengthen engagement.

4.0 Methodology

This study adopts a qualitative research approach to examine prosodic features and their pragmatic functions in Nigerian Pentecostal sermons.

The target population includes Nigerian Pentecostal pastors. Purposive sampling technique was used to select three sermons from three pastors. These include Apostle Joshua Selman's *A Wise Masterbuilde*r, Pastor Paul Enenche's *Surviving in the Last Days* and Pastor Enoch Adeboye's *Wonders of Creation*. These sermons were selected because they exemplify distinct prosodic features and pragmatic strategies employed in Nigerian Pentecostal preaching. Each sermon also addresses critical theological and contemporary issues, making them representative of authoritative and impactful religious discourse. The messages were downloaded from YouTube and the audio were transcribed. The prosodic features of the sermons—such as assimilation, elision, epenthesis, prominence, and vowel lengthening, as presented in Brazil's Discourse Intonation framework—were analyzed using Praat. This allowed for the identification of variations in tone, emphasis, and speech patterns that contribute to meaning and engagement. For pragmatic functions, the transcriptions were examined for markers of assertiveness, emotionality, clarity, precision, and charge using Mey's Pragmatic Acts theory to determine how language was used to influence, instruct, and persuade the audience.

5.0 Results

The analysis present key findings on the prosodic features and pragmatic functions observed in Nigerian Pentecostal sermons. It explores how specific prosodic features, such as assimilation, elision, epenthesis, prominence, and vowel lengthening shape sermon delivery, enhancing meaning and fostering audience engagement. This section also explores how these prosodic features are used to achieve pragmatic functions such as clarity, precision, emotionality, assertiveness, and charge in the sermons. These insights reveal the unique ways pastors use intonation to communicate spiritual messages effectively and connect with congregations. The pragmatic functions are presented below and the roles of prosodic features in achieving the functions are discussed.

A. Pragmatic Function of Clarity

The pragmatic function of clarity ensures that a message is conveyed in a way that is easily understood, precise, and free from ambiguity. The following excerpts illustrate how clarity enhances the effectiveness of

spoken and written messages:

Excerpt 1: "Everything God creates is good. Everything that the Almighty God created and may be creating is good." — Pastor Enoch Adeboye

Excerpt 2: "As believers generally, when it has to do with kingdom advance, we are co-laborers with God." — Apostle Joshua Selman

Excerpt 3: "When truth is stretched a little, it becomes error. It is truth, just that it was a little bit stretched." — Pastor Paul Enenche

Each of these excerpts employs specific prosodic features to enhance clarity, helping pastors emphasize and communicate essential elements of their messages with precision and impact. In Pastor Enoch Adeboye's statement, "Everything God creates is good. Everything that the Almighty God created and may be creating is good," assimilation plays a crucial role in connecting phrases like "that the" and "God created," creating a seamless flow. This prosodic linking allows the message to align more cohesively and ensures listeners can easily follow the repeated emphasis on the goodness of God's creations. The repetition, alongside smooth transitions, emphasises the essential theme of divine perfection, making it unforgettable for listeners. This emphasis on clarity is fundamental for delivering such a universal truth in a memorable, understandable manner. Similarly, in Apostle Joshua Selman's message, "As believers generally, when it has to do with kingdom advance, we are co-laborers with God," prominence brings clarity by revealing terms like "believers," "kingdom advance," and "co-laborers." Each word carries significant theological meaning, and by stressing these terms, Selman effectively directs the congregation's focus to the message's core. This clarity reminds listeners that their roles are both individual and collective within the larger purpose of God's kingdom, leaving no ambiguity. Through strategic prominence, Selman's statement unites his audience under a shared mission, reinforcing the clarity of purpose with which he speaks. In Pastor Paul Enenche's reflection, "When truth is stretched a little, it becomes error. It is truth, just that it was a little bit stretched," the use of prominence and vowel lengthening further contributes to clarity. Words like "truth" and "error" are emphasized, making the contrast between these concepts evident. Lengthening vowels in "stretched" and "error" adds to the clarity by illustrating the gradual distortion that occurs

when truth is altered, helping listeners grasp the delicate nature of integrity. Enenche's use of these features communicates the fine line between truth and falsity, reinforcing the message with a sense of caution. These features guide audiences to focus on essential ideas, making complex spiritual concepts comprehensible and compelling. Carefully employing prosody, each pastor sharpens their message, offering listeners a clear and impactful understanding of divine truths and responsibilities.

B. Pragmatic Function of Precision

The pragmatic function of precision ensures that language conveys exact meaning, leaving no room for misinterpretation or vagueness. The following excerpts demonstrate how precision enhances clarity and effectiveness in communication:

Excerpt 1: "If the Almighty God says something is good, that thing must be really, really good." — Pastor Enoch Adeboye

Excerpt 2: "Inasmuch as we are co-laborers with God, it doesn't give us the liberty to build anyhow." — Apostle Joshua Selman

Excerpt 3: "It doesn't matter how annoying a person or a pastor is. If he says things that are contrary to scripture… watch that connection." — Pastor Paul Enenche

In each of these excerpts, precision is achieved through specific prosodic features—elision, assimilation, and prominence—that help deliver direct and impactful messages. In Pastor Enoch Adeboye's statement, elision in phrases like "must be" and "really good" streamlines his message, reinforcing the emphasis on God's absolute goodness. Reducing articulation centers attention on "really," creating a concise yet powerful assertion about divine standards. Apostle Joshua Selman's excerpt uses both elision and assimilation to similar effect, creating smooth transitions in phrases like "doesn't give us" and "to build anyhow." This fluidity emphasises the importance of adhering to God's standards without deviation, ensuring listeners understand the seriousness of their responsibility. The use of these prosodic features makes Selman's message precise and deliberate. Pastor Paul Enenche's passage uses assimilation and elision to create a seamless flow that aids precision. Linking phrases like "doesn't matter" and "how annoying," he removes unnecessary pauses, making his warning against connections that

contradict scripture clear and immediate. This precision keeps the audience's focus firmly on the crucial advice to be vigilant, leaving no ambiguity. In each excerpt, prosodic features are carefully chosen to deliver each message with precision, ensuring that the intended message is unmistakably understood and retained by listeners.

C. Pragmatic Function of Emotionality

The pragmatic function of emotionality ensures that language evokes feelings, engaging the audience on a deeper, more personal level. The following excerpts illustrate how emotional appeal strengthens communication:

Excerpt 1: "I will praise thee, for I am fearfully and wonderfully made." — Pastor Enoch Adeboye

Excerpt 2: "How can a man become an expression, a reflection of the fullness of God?" — Apostle Joshua Selman

Excerpt 3: "Don't love anybody enough to follow them to hell. Don't love anybody enough." — Pastor Paul Enenche

In each excerpt, emotionality is pragmatically expressed through prosodic features, particularly vowel lengthening and epenthesis, which add depth and impact to the messages. Pastor Enoch Adeboye's statement lengthens the vowels in "fearfully" and "wonderfully," imbuing his words with a tone of awe and reverence, which allows the congregation to feel the significant wonder of divine creation. This reverent tone encourages listeners to connect emotionally with the message, reflecting on their own unique, divine origin. Apostle Joshua Selman similarly employs vowel lengthening in "expression" and "reflection," emphasizing the significance of embodying "the fullness of God." The slow, reflective pace prompts the audience to ponder the spiritual weight of this rhetorical question, inspiring a sense of wonder and aspiration in their own spiritual journeys. Pastor Paul Enenche's repetition and lengthening of vowels in "love," "anybody," and "enough" enhance the emotional impact of his cautionary advice. This prosody brings an almost mournful tone, emphasizing the importance of prioritizing one's spiritual integrity over personal attachments. The epenthesis, or slight pause, around "anybody enough" serves to intensify this emotional appeal, urging the audience to reflect on the gravity of forsaking harmful influences, even those tied to strong feelings of love. Together, these prosodic choices foster a well emotional connection, reinforcing the spiritual message and stirring awe for God's transformative abilities.

Through these emotional cues, each pastor enhances the impact of their message, drawing listeners into a closer, reflective engagement with the spiritual truths being conveyed.

D. Pragmatic Function of Assertiveness

The pragmatic function of assertiveness ensures that language conveys confidence and authority, reinforcing the speaker's conviction and persuading the audience. The following excerpts demonstrate how assertiveness strengthens communication:

Excerpt 1: "And if the Almighty God says something is good, that thing must be really, really good." — Pastor Enoch Adeboye
Excerpt 2: "There is a standard." — Apostle Joshua Selman
Excerpt 3: "Remain under strong pastoral coverage. Nobody is too big to be pastored." — Pastor Paul Enenche

Each excerpt employs assertive language strategies, including prominence, vowel lengthening, and assimilation, which contribute to a confident, directive tone that leaves little room for doubt. In Pastor Enoch Adeboye's statement, the prominence on words such as "Almighty God" and "really" conveys assertiveness by affirming God's authority and judgment. This stress reinforces a sense of unwavering confidence in God's standards, inviting listeners to adopt this view with full trust. Apostle Joshua Selman uses a similar strategy in his brief but powerful phrase "There is a standard." By stressing "is" and lengthening the vowel in "standard," he signals the non-negotiable nature of God's benchmark. This assertive delivery enhances the gravity of his message, compelling listeners to take this divine standard seriously. In Pastor Paul Enenche's statement, assertiveness is amplified by stressing words like "remain," "strong," and "nobody." These words underline the necessity of staying connected to pastoral oversight, regardless of one's status. The use of assimilation in the phrase "too big to be pastored" adds a natural, seamless flow, reinforcing the pastor's assertion that no one is beyond the need for guidance. Each pastor's use of assertive prosody transforms their message into a compelling call to action, encouraging listeners to embrace these spiritual truths with confidence and conviction.

E. Pragmatic Function of Charge

The pragmatic function of charge ensures that language inspires action, motivating the audience to respond or take specific steps. The

following excerpts illustrate how a charge can be embedded in communication to prompt engagement and commitment:

Excerpt 1: "He looked at his last creation. He said, this is very good. Very good." — Pastor Enoch Adeboye

Excerpt 2: "Pay attention now, please!" — Apostle Joshua Selman

Excerpt 3: "Refuse to be swayed by the wind of falsehood and deception!" — Pastor Paul Enenche

In these excerpts, prosodic elements such as epenthesis, prominence, and vowel lengthening are employed strategically to create a sense of urgency, empowerment, and motivation, making them effective charges to the listeners. Pastor Adeboye's words, "this is very good, very good," use epenthesis and vowel lengthening to emphasize the affirmation of humanity's divine worth, encouraging listeners to internalize their value in God's eyes. The elongated "very good" not only reveals the importance of the statement but also fosters a sense of pride and worth among the congregation. Apostle Selman's "Pay attention now, please!" uses epenthesis in "please" to soften the command, creating a sense of urgency while keeping the tone polite yet firm. The prominence on "attention" and "please" elevates the call to action, ensuring that listeners are fully engaged and focused on the message that follows. Pastor Enenche's charge to "Refuse to be swayed by the wind of falsehood and deception!" uses prominence and vowel lengthening to create a powerful, resolute tone. Emphasizing "refuse" and "swayed" strengthens the call to action, motivating the audience to stand firm against external influences. The elongated "deception" adds weight to the warning, encouraging active rejection of lies and falsehoods. Together, these charges effectively combine prosody and language to create a motivating, empowering, and action-oriented atmosphere.

6.0 Discussion of Findings

The analysis of prosodic features in selected sermon excerpts highlights how elements like assimilation, elision, prominence, vowel lengthening, and epenthesis contribute to the pragmatic goals of clarity, emotional resonance, and assertiveness. These features enhance communication in religious discourse by emphasizing critical messages, engaging listeners, and evoking emotional responses. For instance, assimilation and elision in Pastor Enoch Adeboye's sermons improve speech flow, allowing the message to be delivered seamlessly and held more clearly in the audience's memory. Through these techniques, the

pastors strengthen the coherence of their speech and ensure their message is both impactful and accessible.

Prominence and vowel lengthening are especially instrumental in directing the congregation's attention to key concepts. Apostle Joshua Selman, for example, uses prominence on words like "believers" and "kingdom advance" to underscore the congregation's collective role in God's work, while Pastor Paul Enenche emphasizes "truth" and "error" to clarify the consequences of deviating from the gospel. He also uses these prosodic features to draw a clear line between divine intervention and human effort, highlighting the contrast to reinforce theological significance. Using prosodic emphasis, the speakers ensure that important theological concepts are delivered with clarity, leaving a lasting impact on the congregation.

Additionally, the prosodic choices made by pastors have a notable effect on audience engagement and emotional responses. In Apostle Joshua Selman's message, prominence and vowel lengthening create urgency, prompting immediate action from listeners. Also, vowel lengthening in phrases like "fearfully and wonderfully made" in Pastor Enoch Adeboye's message enhances the emotional connection, fostering reverence and awe. Assertiveness also plays a role in reinforcing theological truths, which assert the unique power of the church. These prosodic strategies not only convey theological truths with authority but also cultivate a sense of confidence and commitment among the congregation, solidifying the spiritual message and encouraging active listener engagement.

7.0 Conclusion

Examining the specific prosodic features in these sermons, the study shows that pastors strategically use assimilation, elision, epenthesis, prominence, and vowel lengthening to create an emotional connection with the congregation, effectively communicating spiritual messages and reinforcing doctrinal principles. The findings suggest that prosodic features serve a dual purpose: they aid in the comprehension of the sermon's message while also fostering a sense of community and collective spiritual experience. Ultimately, this research emphasises the importance of prosodic features in shaping not just the linguistic structure of sermons, but also the religious experience and identity of the congregation. This study contributes new knowledge to the understanding of the role of prosodic features in Nigerian Pentecostal

sermons, offering significant insights into how these features are used to shape meaning, facilitate audience engagement, and reinforce religious beliefs. Additionally, the study has contributed to the existing body of knowledge on the intersection of linguistics and religious discourse, offering a better understanding of how language, particularly prosody, functions as a vehicle for spiritual expression and persuasion. Through this analysis, the study calls for greater attention to the prosodic elements of religious speech, urging further research into how these features may vary across different religious settings and cultures.

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Crucial Connections Between Nigerian Inspirational Speakers' Accents and Ethnic Identities

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Abstract
Accent is an integral marker of ethnic identity within the Nigerian multilingual and multiethnic society. However, there is a dearth of studies on the subject. Therefore, this paper in line with its set goals, has established listeners' inputs in identifying inspirational speakers' ethnic identity by listening to their blinded audio speeches. It also described features of accentuation or de-accentuation in the inspirational speakers' renditions and discovered the implications of their speech patterns for communication. The data comprised three speeches (one for each) of three prominent Nigerian inspirational speakers who have either Yoruba, Igbo or Efik as first language and English as second language. Sixty university undergraduates of English filled in questionnaires on ethnic identity and accent, providing the identity cues of each of the inspirational speakers. Their answers were validated citing specific words as ethnic clues. Also, interviews were conducted with twenty interviewees on attitude, model choice and personal testimonials (*PT*) towards preferred accent. The data was subjected to manual and instrumental analyses with Praat. The findings revealed that all three inspirational speakers deaccentuated from their ethnic identity because of their education and exposure to native English-speaking environments.

Keywords: Nigeria, English, accents, ethnic-identities

1.0 Introduction

English is being spoken in different geographical locations and it has undergone domestication and has produced as many varieties of the language as the locations in which it is being spoken. The different varieties of the English language have given rise to various dialects which have in turn birthed different accents. According to Fishman (1976), language "is not merely a carrier of content, language itself is content, referent for loyalties and animosities, an indicator of social statuses and personal relationships … that typify every speech community" (p. 219).

Whatever the variety of English being spoken or the language of interpersonal communication, people give impression about themselves and make judgement about others from how the speech is done, covering speaker's manner of pronunciation, intonation and prosodic features. All of these constitute the accent. Even when we are unaware, every spoken communication appears to construct an impression about the speakers. An accent is a distinctive way of pronouncing words in any language. McArthur (1998) explains that for national varieties, there are regional accents (which are connected to geographical areas) and social accents (which are connected to the educational, economic status and ethnicity of speakers). The process of acquisition of language and the type of learner/speaker the individual is, could determine the quality of pronunciation of individuals.

Due to the fact that speakers of the English language speak different varieties of the language, pronunciation tends to differ. If an accent is a particular way of pronouncing a language and all the speakers have particular ways of pronouncing, their style of pronunciation may affect the way they are perceived and accepted. Listeners' perception and acceptance of a speaking style may also influence their choice about who to or not to listen to among several inspirational speakers. This paper has provided some empirically validated results on these assumptions paying attention to the following three research questions;

a. What were the listeners' perceptions about the inspirational speakers' ethnic accentuation?
b. What specific features mark each inspirational speaker's accent as belonging to an ethnic domain?
c. Which factors determine listeners' acceptance or rejection of inspirational speakers' accents as models?

The research questions considered both the speakers and the listeners as crucial for effective communication. Communication is the exchange of knowledge, beliefs and opinions through words or gestures using either linguistic or non-linguistic means. In the world of Public Speaking, speakers have the freedom to engage their audience on whatever theme they have been inspired to speak about. Their responsibility or commitment is to speak, but through their speech, they

could determine the attitude of their listeners. We all make assumptions and conclusions from the way people speak. These assumptions are age-long language and variety discrimination which tend to favour the native speakers of English. The idea that one dialect (or accent) is better than another may have had its roots in the seventeenth century England. This is language and variation discrimination. However, dialect pride is on the increase as public awareness of dialect discrimination goes on to save some disappearing dialects.

2.0 Literature Review

Speakers can be traced to the environment they grew up in or where they originated from. Studies have shown that – "it can take just 30 milliseconds of speech - enough to say "hello" – for listeners to identify a person's ethnic or cultural background as being different from their own and make snap judgements about the kind of person they might be, whether positive or negative *(BBC Worklife*, 2017**)**. Thus, listeners could be attracted to some speakers and not others based on the assumptions or impressions they have gleaned from their speech. Speakers' accents can be fluid. They switch between different pronunciation patterns or dialects either consciously or unconsciously depending on the situation, the audience or the speakers' intentions. When speakers unconsciously adjust their pronunciation or choice or words based on the level of their listener, this is called accommodation. Giles (1973) captured this aptly explaining that "...speakers tend to converge in their speech behaviour as a function of their desire to appear similar to (or different from) their interlocutor's (p. 67). Speakers employ fluidity to achieve a better flow of communication and rapport with their audience. Exposure to different accents, a high level of social awareness and possessing the skill to learn and change speech patterns are factors that enable speakers use fluidity to achieve better communication.

Furthermore, the term 'inspirational speakers' has been used to refer to both motivational and inspirational speakers but there are categorical differences in their content, style of delivery and overall impact on their audience. While motivational speakers focus on listing steps to a certain goal using excitement and enthusiasm through humour

and anecdotes to heighten the sense of urgency and get their audience to act immediately, inspirational speakers employ deep emotions like empathy and hope, weaving in their personal stories or historical examples to awaken in their audience the desire and passion to follow a similar path for transformation in the long run (Brown, 2012). Inspirational speakers bring about lasting change in personal values and perspectives by instilling a deep sense of purpose and meaning in their audience (Sinek, 2009). Sometimes, the line between them may be very thin, but this paper has adopted "inspirational" since the speakers employed in this study fit well into the definition of inspirational speakers.

2.1 The Connections among Accent, Ethnicity and Identity

The nexus between accent and ethnic identity has been of interest to several studies which have examined how speech patterns serve as markers of group affiliation and social belonging. Jenkins (2009) highlights the role of accent in defining in-group and out-group distinctions, where linguistic features can reinforce social identities. Similarly, Miller (2004) investigates how accent functions as a crucial aspect of ethnic identity, suggesting that individuals may either embrace or resist specific accents to align themselves with certain ethnic or cultural groups. Lippi-Green (2012) examined how accents are tied to identity and the ways in which they influence societal perceptions and prejudices. Luu (2020) adds that accents are not just purely about how we speak – they are one of the most distinctive cues for where we come from - they immediately mark out who we are and they form a core part of our identity. For a style of speaking to qualify as accent, it should have certain features. Accents can be affected by the position of lips, tongue and jaw, the choice of consonants and vowels, the place of stress in a word, the range of pitch and tone and the way syllables are joined. In identification, accent features have been acknowledged by several linguists in different ways. Trudgill (1974) identifies accent features focusing on pronunciation aspects like the vowel systems, consonant clusters, and intonation patterns. Wells (2008) focuses on the acoustical and perceptual dimensions in identifying accent features like formant frequencies, vowel duration, and spectral tilt. According to him, "accents differ in the sounds they use, the frequencies of their formants, and the durations of their segments" (p. 35).

2.2 General Accent Features

This section discusses some general accent features which include vocalic patterns in the vowel system and consonant inventories. The vowel system alongside its number and quality differs across accents in varieties of English such as, the Nigerian English (NigE). Monophthongisation occurs when a diphthong which naturally has two vowel phonemes is pronounced as a single phoneme. Diphthongization occurs when a monophthong, which naturally has one vowel phoneme is pronounced as a double vowel although, this phenomenon is rare in Nigerian accent. In Nigerian English, various scholars have studied monophthongisation and diphthongisation examining the reasons for occurrence. Among these are Essien (1990), Jowitt (1991), Udofot (2004), Adetugbo (2004), Igboanusi (2006) and Akinjobi (2009).

Akinjobi (2009) looked particularly at how monophthongisation and diphthongisation differ among Nigerian speakers based on their mother tongue influence. She found that Yoruba and Igbo speakers tend to monophthongise diphthongs such as /eɪ/ and /əʊ/, reducing them to [é] and [ó], respectively. For example, the diphthong /eɪ/ as in "face" is often realised as the monophthong [é], and /əʊ/ as in "go" is pronounced more like [ó]. This reflects the vowel systems of their native languages, which have fewer diphthongs. Jowitt (1991) observed that monophthongisation is part of the broader tendency of Nigerian English to simplify vowel phonemes. Banjo (1996) argued that monophthongisation of diphthongs is more prominent in the basilectal variety of Nigerian English where speakers with less formal education or exposure to British English are likely to simplify phonemes. Udofot (2004) mentioned monophthongisation as a major feature among the Igbo, who tend to replace diphthongs with monophthongs due to their L1 phonological structure. While Banjo (1996) noted that monophthongisation is more prominent among the lower-educated speakers, Udofot (2004) argued that it is widespread and not limited to this group. Monophthongisation is also prevalent among the Ibibio speakers of English. This process may occur in Ibibio English as it does not have a comparable range of diphthongs with English. Essien (2011) expounded the phonotactics of English and Ibibio, linking the reason for monophthongisation of Ibibio to the structural differences in the vowel systems of Ibibio and English. These features strongly impact Nigerian English accent because of the influence of the indigenous languages which are syllable-timed

(Adetugbo,1979; Jibril, 1982; Gut, 2004; Ekong, 2016).

Consonant inventories such as flapping, t-dropping and h-phenomena are all important accent features which affect other surrounding phonemes and meaning within sentences. Flapping has been identified as one of the less common but notable features of Nigerian English due to the influence of American English, especially among the younger, urban Nigerian speakers of English (Jowitt, 1991; Ndimele, 1999; Oyètádé 2001; Egbokhare, 2003; Adegbija, 2004; Eze, 2017). The Nigerian English h-phenomena have been identified by Awonusi (2004) and these include the h-weakening, h-restoration, categorical h-dropping, variable h-dropping and the h-insertion. Regarding the t-dropping phenomenon, Jowitt (1991), Bamgbose (1995), and Gut (2001) attributed it to the lack of clusters in the indigenous language phonologies and rapid speech, while Ekong (2016) focused on the sociolinguistic factors influencing t-dropping in Nigerian English and speakers' level of education. Some of these features are examined in the inspirational speeches of the participants employed in this paper.

Speech rate which is crucial to accents, ethnicity and identity is also considered in this paper. Speech rate concerns the tempo or "the speed at which someone speaks, (and, it is) usually measured in the number of syllables produced per second" (Crystal, 2011, p. 195). Speech rate is an important feature of communication, both in speaking and perception. "Slower speech rates are associated with increased credibility and persuasiveness, while faster rates can be perceived as nervousness or excitement" (Wells, 2008. p. 76). The speech rate of the speeches employed in this paper was measured using the syllable per minute measurement (SPM) because it is found to be most appropriate and reliable.

3.0. Methods

A set of questionnaires was administered to 60 undergraduate students of English Arts/English Education departments (200 level) of the Obafemi Awolowo University, Ile-Ife. The questionnaire comprised 2 sections. Section 1 had the bio data of respondents regarding their ages, the languages they speak and their sex - whether male or female. Section 2 comprised 4 questions on each of the three inspirational speakers. Respondents were required to listen to two minutes of formal renditions of each of the inspirational speakers. After a careful and repeated listening of each, respondents were required to carefully respond to these

four questions:
1. What is the ethnicity of the speaker?
2. What is your reason for your choice in (1)?
3. Mention two words that gave a clue.
4. (a) Would you like to model your speech after this Speaker? 4. (b) Why?

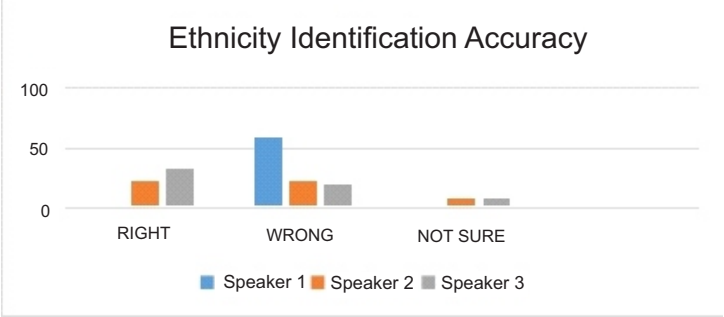
4.0 Analysis and Discussion of Findings

The findings on the three major questions and listeners' tasks are discussed in this section of the paper. These include listeners' perceptions of the inspirational speakers' ethnic accentuation, specific features marking each inspirational speaker's accent as belonging to an ethnic domain and factors determining listeners' acceptance or rejection of inspirational speakers' accents as models.

4.1. Listeners' Perception of the Inspirational Speakers' Ethnic Accentuation

None of the sixty (60) listeners, was able to correctly identify the ethnicity of Speaker 1 through the speaker's accent. Fifty (50) identified the speaker's ethnicity as Yoruba. Listeners' word cues for their answers were 'example', 'exit', 'conclusion', 'everything, 'ultimate', 'recap', and 'presentation'. The *Praat* analysis of some of these words reveals that the accent of Speaker 1 is de-accentuated from their native ethnicity which is Ibibio. For speaker 2, out of the sixty listeners, twenty-nine (29) were able to accurately identify the ethnicity as Igbo, while thirty-one (31) were unable. The thirty-one include those who were not sure (8 listeners were not sure). The listeners' word cues for Speaker 2 were 'truth', 'say', 'address' and 'lying'. For Speaker 3, out of the sixty listeners, thirty-two (32) accurately identified the speaker as Yoruba, while twenty-eight (28) were unable. Twenty (20) of them identified Speaker 3 as Igbo, six (6) identified the speaker as Hausa, while the two (2) others identified the speaker as being from the South-South region of Nigeria. The listeners' word cues are '*able*', '*must*', '*thing*', '*people*' '*audience*', '*nobody*', '*somebody*', *who*', '*conversation*', '*organisation*' and '*country*'. Below is the graphic representation of the results on listeners' perceptions:

Fig. 1: Results of Listeners ' Perception of Ethnic Accentuation



Generally, the findings revealed that all three speakers deaccentuated from their ethnic identity in varying degrees. Speaker 1 was not easily identified as Efik, Speaker 2 was not easily identified as Igbo and Speaker 3 was not easily identified as Yoruba. This may be due to the absence of the phonological idiosyncrasies of the average Nigerian from these regions from the speeches. The speaker's accents showed deaccentuation traceable to their education, native English-speaking environment and personal development efforts. However, their speeches exhibited some general markers of Nigerian English such as the final consonant deletion, monophthongisation, and dental neutralization of the 'th' which are expounded in subsequent sections of this paper.

Specific Features Marking each Inspirational Speaker's Accent as Belonging to an Ethnic Domain

The specific features marking each inspirational speaker's accent as belonging to an ethnic domain are discussed in the following sub-sections:

Monophthongisation of Diphthongs by the Inspirational Speakers

On the monophthongisation of diphthongs by the speakers, the words 'restate' /ˌriːˈsteɪt/, 'say' and 'able' are analysed. It is observed in fig. 2 that the highlighted nucleus of the second syllable of 'restate' has just one wave form representing the vowel phoneme /é/ instead of two wave forms representing the two vowel elements in the diphthong /eɪ/ as observed in fig 3 which is the actual representation of the BBC accent in the Cambridge English Pronouncing Dictionary, 18th Ed (Roach, Hartman & Setter, 2011). The horizontal blue line in fig 2 shows the pitch

of speaker, monophthongising the diphthong in the word 'restate'. The blue pitch line in fig 3 is a z-curve which shows the vowel heights of the diphthong /eɪ/ in the word 'restate'.

Fig 2: Speaker 1 – 'restate'/riːˈstét/

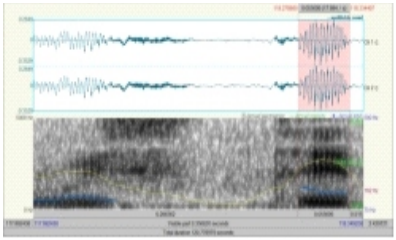
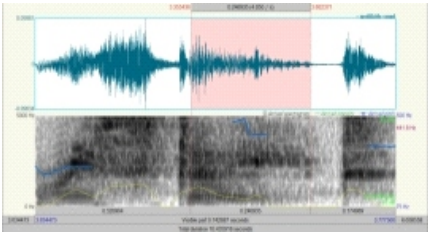


Fig 3: BBC Accent of 'restate'/ˌriːˈsteɪt/



The selected portions of fig. 4 and fig. 5 depict the nucleus of the word 'say'. In fig. 4, the wave form is single and this shows the production of a monophthong by Speaker 2, instead of a diphthong which the wave form in fig. 5 depicts. The blue pitch line in fig. 5 has a downward curve showing the articulation of the second vowel phoneme in the F2 region of the spectrogram.

Fig 4: Speaker 2 'Say' /sé/

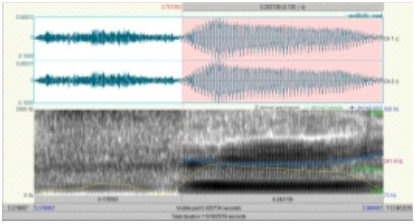
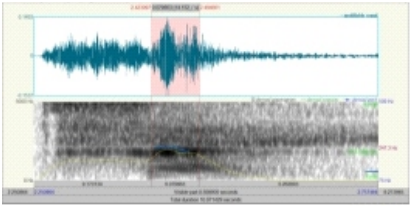


Fig 5: BBC Accent of 'say' /seɪ/



The selected portions of fig. 6 and fig. 7 show the second syllable of the word 'able'. Fig. 6 has the clearly visible dark formants at the F1 position showing the voicing of the vowel phoneme /u:/ whereas fig. 7 has not just the dark formants at F1 but F2 and F3 formants which represent the formant structure of the lateral phoneme /l/. The wave form in fig. 6 has a higher amplitude from the production of the /u:/ compared to the wave form in fig. 7 where the waveform amplitude diminishes towards the end because of the reducing intensity of the schwa /ə/ combined with the lateral /l/. The blue pitch line in fig. 6 is higher, more visible and sustained

throughout the word to show the vocalic voicing that cuts across the word. In fig. 7, the blue pitch line is lower, flatter, weak and is not sustained to the end of the word because of the presence of /l/. This implies the absence of the final consonant from fig. 6 as it was not realized by the speaker.

Fig 6: Speaker 3 Able- /ébu:/

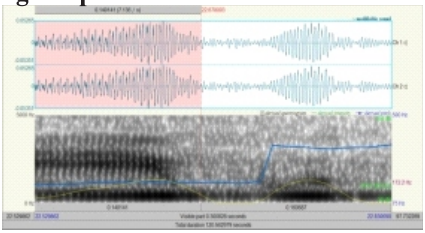
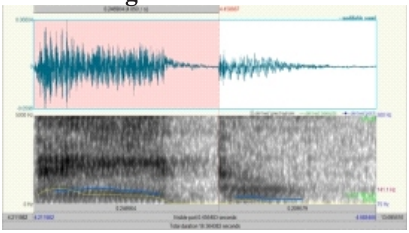


Fig 7: BBC Accent - /eɪ.bəl/



The waveform in fig. 6 is a single element showing the monophthong /**é**/ produced by Speaker 3 compared to the diphthong /eɪ/ which the double elements in the waveform of fig. 7 depicts. This indicates the presence of monophthongisation of diphthongs in Speaker 3.

The Final Consonant Deletion by the Inspirational Speakers

On final consonant deletion, Speaker 1 realized the word, 'example' /ɪgˈzɑ:m.pᵊl/ as /eg'zɑ:mpu:/, deleting the final consonant /l/ and pronouncing the optional unstressed vowel /ə/as a full vowel, /u:/. The length and intensity of the dark formants in fig. 8 and fig. 9 below, confirm the difference between the BBC accent /ɪgˈzɑ:m.pᵊl/ and the realization of /eg'zɑ:mpu:/ by Speaker 1.

Fig 8: Speaker 1 - /eg'zɑ:mpu:/

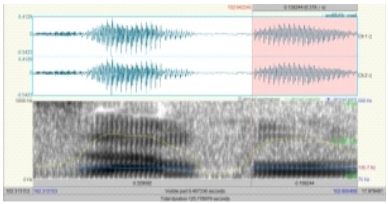
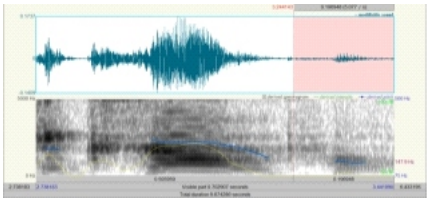


Fig 9: BBC Accent - /ɪgˈzɑ:m.pᵊl/



There was no observation of the final consonant deletion in the speech of Speaker 2. However, the final consonant deletion phenomenon was also observed in the speech of Speaker 3 in the word 'must' /mʌst/ which was realized by the speaker as /mɔs/, with the /**t**/ deleted. This is demonstrated in fig. 10, and fig. 11, below:

Fig 10: Speaker 3 –Must /mɔs/

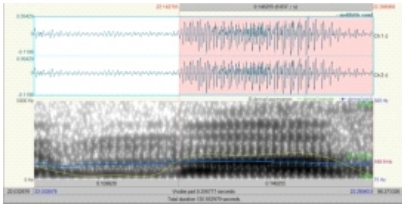
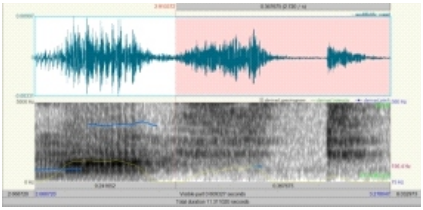


Fig 11: BBC Accent – Must /mʌst/



The selected portions of fig. 10 and fig. 11 show the acoustic details of the two final consonants of the word 'must'. In fig. 10, the waveform is a single element /s/ and there is no interruption in the energy frequencies because of the absence of the stop /t/; unlike the selected part of fig. 11 which shows a visible gap differentiating the two separate waveforms for /s/ and /t/.

4.2.3 Th-Dental Neutralisation

As regards dental neutralisation, the voiceless dental fricative sound /**θ**/ in the word, 'everything' is realized as a voiceless alveolar stop /t/ by Speaker 1. The Speaker's realization in fig. 12 is shorter than the actual production of /**θ**/ in fig. 13 due to the continuous noise of frication in when /**θ**/ is released. The transition of the waveform from the preceding vowel /i:/ shown by the thickness and the shape of the waves is distinct in fig. 13 when compared with that of /**t**/ in fig. 12. The abruptness of the plosive stop /t/ may have been responsible for this. This shows that the voiceless alveolar dental fricative /θ/ was neutralised to the alveolar stop /t/ by Speaker 1.

Fig 12: Speaker 1 - everything /ˈev.ri.tɪŋ/

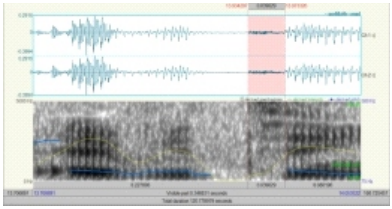
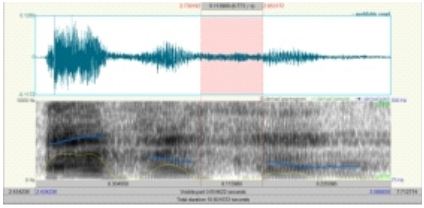


Fig 13: BBC Accent- everything /ˈev.ri.θɪŋ/



However, Speaker 2 did not exhibit this tendency of dental neutralisation as demonstrated in fig. 14 and fig. 15. Speaker 2 articulated the coda in 'truth' /truːθ/ the same way it is realized in BBC accent.

Fig 14: Speaker 2 – Truth /truː|θ/

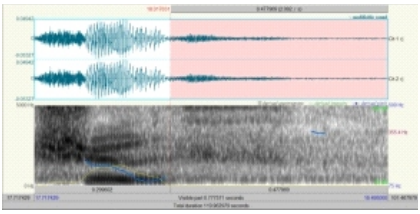
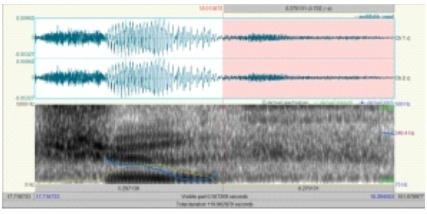


Fig 15: BBC Accent - /truː|θ/



For Speaker 3, there was dental neutralisation. The selection in fig. 16 and fig. 17 represent the 'th' in the word 'thing'. The thickness of the waves is quite evident in the waveform of fig. 16 which shows lower amplitude compared to that of fig. 17. This shows that the voiceless alveolar dental fricative /θ/ was neutralized to the alveolar stop /t/ by Speaker 3.

Fig 16: Speaker 3 – Thing /tin/

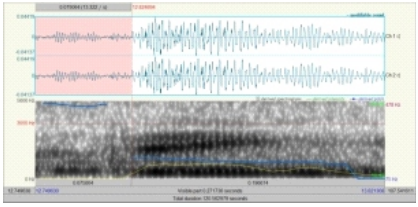
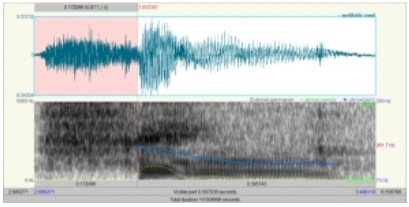


Fig 17: BBC Accent- Thing /θɪŋ/



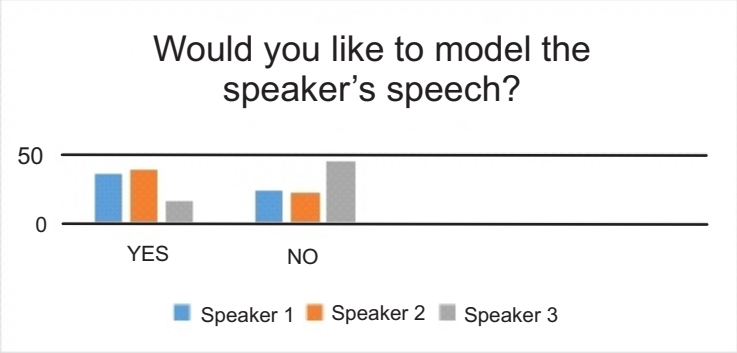
From the above, it is observed that Speaker 1 and Speaker 3 exhibited Nigerian English accent features such as the final consonant deletion, monophthongisation and neutralization of the -th. But, Speaker 2 exhibited one out of the three Nigerian English accent features which is the monophthongisation of diphthongs.

Determinants of Listeners' Choice of Inspirational Speakers' Accents as Models

On listeners' choice as regards the speaker's accent they like as models, fig. 18 graphically explains their scale of preference. It is observed that Speaker 2 had the highest acceptance of 63% which is thirty-eight (38) out of sixty (60). The respondents gave reasons such as authenticity, voice control, good articulation, good enunciation, absence of fillers and a moderate pace, for their choice. The remaining 37% which rejected Speaker 2 as model gave reasons such as too many pauses and a rather slow speaking rate. The acceptance rate for Speaker 1 was also high

with 60% which is thirty-six (36) out of sixty (60). Reasons for their preference include eloquence and good pronunciation. The respondents who rejected Speaker 1 gave reasons such as poor enunciation, the presence of too many fillers and the lack of poise. Speaker 3 had the lowest acceptance rate as only 16 out of the 60, which is 27% accepted to model their speech after the Speaker. Their reasons include the absence of fillers and a commanding tone showing confidence in the Speaker's speech. The forty-four (44) which is 73% of the respondents that rejected Speaker 3 highlighted wrong stress pattern and poor articulation as reasons.

Fig. 18: Listeners' Determinants of Inspirational Speakers' Accents as Models



55.0 Conclusion

The highest modelling acceptance of Speaker 2 is perhaps largely due to the speaker's ability to differentiate between short and long vowels (e.g. /ɪ/ and /i:/) and accurately realize particular consonant phonemes that would otherwise be problematic for the average Nigerian such as /ð/, /θ/ and /ʒ/. The avoidance of excessive use of fillers by Speaker 2 may have added credibility to the listeners' model choice and perception of the Speaker.

Generally, the listeners' preference asserts the age-long phonological features that often endorse a speaker as having a good accent. One of such is speaker's ability to deaccentuate, such that, very little influence is exerted on the speaker from their ethnic or indigenous language background. The inspirational speakers employed in this study vis-à-vis the listeners' attitude and preference demonstrates the importance of articulating final consonants and overcoming the dental

neutralisation phenomenon in the English language. Observing these accentual features may facilitate the acquisition of the native-like accent by speakers of English as a second language and on the whole, enhance intelligibility.

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Appendix

Speaker 1 (George Essien)

People may forgive your bad opening but they may not forgive your bad close. Your close matters. Last words linger longer than every other thing you may have said but they will not forget those last words. So be particular about your exit just as much as you're particular about your entry. Now technically, we call close in public speaking recency. We don't use the word 'conclusion'. You hear people say 'What's your concluding part?' or conclusion? The term 'conclusion' is a speech writing or a proposal term and not a public speaking or sales term so in public speaking, you often you hear the word recency. Recency is a technical term for your close. You must be particular about it. Just as the comedian should leave the audience laughing, the public speaker should leave the audience should be your ultimate plan as you close your presentation. So, I'm going to be sharing with you a few tips on how you can close your presentation. Recap! Summarise what you have said at the end of the presentation so that people can actually get a preview of whatever it is you have said. That's why I often will tell people to use what I call the prep formula. PREP helps you to transition ehmmm into your close. P stands for point of view. R stands for reason for point of view. E stands for example. P stands for point of view restated. So, let me just tell you how it works, a very simple strategy in speaking especially in your body and into your close. You make your first point; you give a reason for that point. You give an example and then you restate the point again. (287 word-length speech)

Speaker 2 (Chimamanda Ngozi Adichie)

If I were asked the title of my address to you today, I would say: 'Above all else, do not lie' or 'Don't lie too much' which is really to say 'Tell the truth' but lying, the word, the idea, the act, has such political potency in America today that it sometimes feels more apt. Above all else, do not lie. Aspirational! Yet another absurd thing happened politically we would say: 'This can never happen in America' but today, the political discourse in America includes questions that are screened out of the land of the absurd. Questions such as 'Should we call a lie a lie? 'When is a lie a lie?? And so, class of 2018, at no time has it felt as urgent as now that we must protect and value the truth. Before I tell you about not lying, I must first admit … Applause. So, before I tell you about not lying, I must first admit

to lying. I routinely lie about my height even at the doctor's office. There are other lies. Sadly however, I cannot tell you about them without having to kill you afterwards. But what I know is that I have almost felt my best and done my best when I gear towards truth. (212 word-length speech)

Speaker 3 (Ibukun Awosika)

The important thing is this. Every stage of your life is different. Every season comes with a different need and **you must be able** to reorganise yourself for the time and the season. There are certain things that are constant. People are a factor of your life all of the time. So, you can't wing it with people because they know you, they can see you and see through you. That's why you must understand that every human being you meet in your life is an opportunity, big or small, rich a or poor - because the guy you think is a poor man today – people are mobile, you don't know where he's going to turn up tomorrow. The man you think is a nobody today, what do you know? Even if he becomes a nobody today, his child could become somebody and that's still a network. So, it's about people, it's about you deciding to deliberately pay attention to being respectful to people and leaving a legacy with people. A legacy that will allow you to knock on the door and walk through the door when you need to. The other thing is our entire life is on a stage. You have a full audience – invited and uninvited. And every member of that audience will form an opinion Based on what you do, how you make people feel, what you say to them and if that audience you do not know holds the key to the door you need to walk through… Somebody is gonna have to open a door or shut a door against you somewhere. (275 word-length speech)

Comparative Study of Open and Close Juncture and Intonation in Ika and English Languages

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Abstract

This paper examines and compares open and close juncture and intonation in Ika and English languages. It used the theory of Contrastive Analysis since it focuses on investigating the similarities and differences in two languages and giving attention to areas that are problematic to language learners. The objective of the study focuses on the realization of intonation in Ika and English languages to ascertain the similarities and differences that exist between Ika and English open and close junctures. The study adopts a qualitative approach where words in the two languages were nestled schematically for analysis. The data were generated from recorded texts from the Church of God Mission Sunday sermons in Mbiri, Ika language Bible, Ika town hall meetings, and music centers in Agbor. The words were translated into English for analysis. The analysis was done by selecting open and close juncture expressions in the two languages with attention on the linguistic role of intonation in Ika and English languages. The results showed that the two languages have juncture and intonation at the phonological level and that while the two languages have similar expressions and renderings in many ways, Ika is devoid of articles (determinants) before nouns.

Keywords: Juncture, Intonation, Accentual, Attitudinal, Discourse, Grammar

1.0 Introduction

One of the major features of language is that it is consequent upon rules. Rules stipulate how a language is used, spoken or written. Raymond (2013) states that human language has a set of rules and conventions which if adequately observed produce correct and acceptable sentence and syllable. Tazodayi (2014) writes that language is sophisticated in nature and does not work like an indivisible machine with complex inexplicable internal organs. It is a conglomeration of several forms or levels like orthography, word formation, syntactic level, and phonological

level – juncture and intonation inclusive. How these diverse structures relate to function together in communication is the basic reason linguists carry out endless researches. Language is a social phenomenon and one of its main goals is to communicate with people and to understand them. When people speak, they intend a specific purpose and they want to convey a message through that language. A person uses his language for many different purposes, for example, to express his feelings, to ask for help and to apologize. In fact, we use language in many different ways, some of these are, the informational, the expressive, the directive, the phatic, the aesthetic. We use language and that language is a part of society. Actually, any language varies according to the nature of the society, what kind of people, and their attitudes. People use language according to their situation.

The study of a language also includes an examination of its juncture and intonation. In linguistics, and particularly phonology, juncture, is the manner of moving (transition) between two successive syllables in speech. An important type of juncture is the suprasegmental phonemic cue by means of which a listener can distinguish between two otherwise identical sequences of sounds that have different meanings. On the other hand, intonation is primarily a matter of variation in the pitch of the voice. In such languages as Ika and English, it is often accompanied by stress and rhythm to produce meaning.

2.0 Literature Review

2.1 An Overview of Ika Language

Ika language has linguistic identity with Igbo and Edo languages. This is also reflective in the names that the people bear. The whole of Ika community speaks Ika dialect while Igbodo speaks dual, Ika and Enuani dialects. The history of the name "Ika" shows that the term "Ika" has not always been particularized to the present Ika area and its people but has been generally used to loosely accommodate the entire people once referred to as "Western Ibos" by the British colonialists but now Anioma by natives. The Ika people are found in Delta and Edo states of southern Nigeria. They speak the Ika language. Ika communities mostly comprise the following: Agbor, Owa, Umunede, Owerre Olubor, Ekuoma, Emuhu, Mbiri, Abavo, Orogodo, Otolokpo, Igbodo, Ute-Okpu, Ute-Ogbeje,

Idumuesah, Akumazi, Ekpon (Edo State), Igbanke (Edo State), Inyelen Edo State), Iru (Edo State). Other Ika communities found in Edo State are Owanikeke,Ute Obagie, Owa-Riuzo Idu and Igbogili. Rao (2019), on the other hand, hints that English is the most spoken language in the world and it is the most used language in international markets, in scientific resources and in the internet. English is the most learned and spoken foreign language in the world and the number of non-native speakers grows year after year. Doing a comparative study of Ika and English languages is indispensable, considering the status of English in Nigeria. The objective is to establish the similarities and dissimilarities in Ika and English languages in the areas of open and close juncture and intonation. This paper is therefore tailored towards offering answers to the following questions:

1. How is intonation realized in Ika language compare to English language?
2. What similarities and differences exist in Ika and English open and close juncture?

The work borders on comparative study of intonation and open and close juncture in English and Ika languages and it is limited to phonological level.

2.2 The Concept of Phonology

Phonology is a branch of linguistics that studies the sound systems of a language. It is good to note that while phonetics deals with the sound systems of all languages in the world, phonology focuses on a single language. That is why we have phonology of English, Yoruba, Igbo, Hausa etc. This makes the study of phonology to be specific. Elizabeth & Chinonso (2010) define phonology as the study of the sound system of a language and the general properties displayed by such system. Alagbe (2016) maintains that phonology deals with the understanding of the theoretical basis on the nature of sounds and how they are used in language. Akmajian (2008) sees phonology as a description of the sound of a particular language and the rules governing the description of the sounds and as part of general theory of human language that is concerned with universal theory of properties of natural language. Thus, we can talk about the phonology of English, Chinese, etc. Emphasis on description

and rules shows that each of the languages on earth has some particular rules that govern it.

2.3 The Concept of Juncture and Intonation

As a supra-segmental phoneme, juncture characterizes the words from one sound to the next sound in the stream of speech. By nature, it interposes a temporary stoppage of the flow of speech by requiring the need of pausing to bring in clarity in thought in the stream of speech. Therefore, it happens to be a suprasegmental phonemic cue that makes the listeners to perceive between two otherwise identical sequences of utterances that have different. Bloch & Trager (1942) state that juncture in connected speech sounds appears in sequences, and it is not easy to be presented into constituent fractions so the phenomenon that relates sounds to one another is called juncture. This means that juncture relates to the ways in which words are joined together. However, juncture according to Demirezen (2013) is a quality of sound to sense pause or pauses, and according to Roach (1998) it is the link that connects one sound with the sounds that directly precede and follow it.

Roach (1998) affirms that juncture is "the relationship between one sound and the sounds that immediately precede and follow it. Junctures are used to demarcate words or other grammatical units. Underhill (2005) states that juncture is the label given to a number of features which may occur at the boundary between two words in connected speech such that, even though the two words may be fully linked together, the boundary between them is nevertheless unambiguous and clear. Skandera & Burleigh (2011) affirm that close juncture phoneme is called “close transition” or “normal transition” wherein there is a smooth or unbroken transition in the flow of the segmental phonemes as seen in the word “nitrate” as opposed to “night rate.” There is no sign used for close juncture phoneme in phonetic transcription.

The absence of a juncture creates a change in the meaning of the words as heard in the examples in forms of minimal pairs, which typify the existence of **close juncture phoneme** and **open juncture phoneme** as two different supra-segmental phonemes in English phonology. Skandera & Burleigh (2011) point out that in phonetic transcription, open juncture is transcribed as /+/, hence the name plus juncture. Close juncture is the movement from sound to sound which has no intervening pauses or delay; this is a normal transition from one phoneme to the next within an utterance.

For British English, Roach (2009) gives the example **"my turn"** /ˈmaɪ tɜ:n/. The relationship between /m/ phoneme and /aɪ/ diphthong, between /t/ and /ɜ:/ and between /ɜ:/ and /n/ is said to be of close juncture. The /m/ phoneme is preceded by silence and /n/ phoneme is followed by silence, and so /m/ and /n/ are said to be in a position of external open juncture. Roach (2009) maintains that the problem lies in deciding what the relationship is between /aɪ/ and /t/, since we do not usually pause between words there is no silence (or external open juncture) to indicate word division and to justify the space left in the transcription. But if English speakers hear /maɪtɜ:n / they can usually recognize this as **'my turn'** and not **'might earn.'** This is where the problem of internal open juncture becomes apparent. /t/ is aspirated at the beginning of the word **'turn'**, and /aɪ/ is shorter in the word **'might'.**

Demirezen (2013) opines that juncture as a phoneme is another measuring unit of intonation. As a supra-segmental phoneme, it characterizes the words from one sound to the next sound in the stream of speech. By nature, it interposes a temporary stoppage of the flow of speech by requiring the need of pausing to bring in clarity in thought groups in the stream of speech". Therefore, it happens to be a supra-segmental phonemic cue that makes the listeners to perceive between two otherwise identical sequences of utterances that have different meanings. Demerezen (2013) posits that junctures are used to demarcate words or other grammatical units. Juncture phonemes, one of the elements of intonation along with primary stress and pitch phonemes, are "the phonetic boundary features which may demarcate grammatical units such as morpheme, word or clause" Thus, the term juncture distinguishes word boundaries and is represented by the /+/ symbol, and three types of pauses in connected speech. The latter ones are all phonemic and indicate different types of junctures.

Martins (337) points out that "no one speaks and his voice remains steady without rising and falling intermittently" It is this rise and fall of the voice that gives rise to the pitch which in turn creates melody". The ability of the voice to rise and fall, according to Martins (337), is called intonation while the degree or extent of the rising and falling is called pitch.

Intonation refers to how the voice can change pitch to convey meaning. In essence, intonation replaces punctuation in spoken language. It can be understood as a combination of falling and rising

tunes in speaking which expresses speakers' attitudes and feelings when exchanging information. This is why intonation is considered as a subconscious level in pronunciation, which is a property of supra-segmental. Roach (1988) asserts that intonation can also be used to recognize the boundaries between phrases, clauses, sentences, as well as the difference between kinds of questions, and statements. McCarthy (91) states that "although there are some rules for intonation so as to mark its grammatical function, for example, yes/no questions have rising tones, Wh-word questions have falling tones, and these rules are not completely true in reality. In real conversation, both falling and rising tones can be applied to either type of question depending on the specific contexts". Uguru (2015) indicates that intonation is one of the major features in which Ika phonology differs from many Igbo dialects. Intonation involves the use of pitch to express various meanings, for example attitudinal and emotional, and to mark syntactic form. Of major importance is that intonation distinguishes between declaratives and interrogatives except in *wh*-questions. Thus, an utterance could have six distinct attitudinal meanings depending on the tune the speaker chooses to use. This classification indicates that intonation in Ika language has several roles to play. In most cases, the tone reflects the speakers' mood and context. Although there are various views on English intonation, most of the authors agree on four main ones, including attitudinal function, grammatical function, accentual function, and discourse functions. Roach (2009) mentions four functions which are attitudinal function, accentual function, grammatical function, and discourse function. Betti (2023) affirms that attitudinal function of intonation expresses feelings, attitudes, and emotions, for example anger, boredom, gratefulness and so on.

Betti (2023) indicates that Falling Intonation is the tone that is usually regarded as more or less neutral. If someone is asked a question and the reply is yes/no, it will be understood that the question is now answered and that there is nothing more to be said. Thus, the falling tone gives an impression of finality. Martins (2005) affirms that falling tune indicates the voice pitch has descended from a higher level to a lower level and it is used in making statements, WH questions, commands, instruction, pieces of advice and exclamations. The attitude can be that of surprise, doubt, sarcasm, interest, indifference, disbelief, uncertainty. For instance, when a speaker answers "Yes" in response to a question, different shades of meaning can be inferred. If given in a falling tone

means affirmation, meaning there is no doubt. But when it is given in a rising tone, it suggests some reservations (doubt) in the speaker's mind. Rising Intonation conveys an impression that something more is to follow. Martins (2005) affirms that rising tune shows the movement of the pitch of the voice from low to high; it is used for yes/no questions, questions asking for repetition, polite requests, farewell greetings, expressions of protest and surprise and tag questions seeking information. Intonation also helps to disambiguate utterances in certain aspects. The grammatical function, however, places emphasis on certain grammatical constituents that are more accentuated. Betti (2023) states that the grammatical function is performed by tone boundaries. It is used in those sentences which when written are ambiguous, and whose ambiguities can only be removed by using differences of intonation. According Nagendra (2018), intonation does not play a mere decorative role, but performs a linguistic function. He indicates that an expression could serve as a statement or a question depending on what the speaker wishes to achieve. Nagendra (2018) gives examples of two sentences to illustrate this. Using sentences (a) and (b) below, he maintains that different interpretations are very possible in a sentence.

(a) Vibrant is arriving late (statement)

(b) Vibrant is arriving late? (question)

From the above sentences, it is clear that the first example requires a falling tune (↘). The second sentence requires a rising tune (↗) and requires further clarification from the listener.

The function of the accentual intonation, according to Betti and Yaseen (2023) is the placement of stress on tonic syllables in lexical words (nouns, adjectives, main verbs, adverbs) and not the functional words. For contrastive purpose, however any word may become the bearer of tonic syllable. Nagendra (2018) indicates that accentual function focuses mainly on the location of the tonic syllable. The speaker can change the meaning of a sentence by shifting the focus.

While examining the discourse function of intonation, Betti (2023) indicates that attention should be given to the context which determines the pragmatic implication of what is said. Intonation can signal to the listener what is to be taken as "new" information and what is already "given". Primarily, it is related to communicative competence. It can indicate when the speaker is indicating some sort of contrast or link with material in another tone unit. In conversation it can convey to the listener

what kind of response is being expected from him. The discourse function of intonation helps the speaker to give emphasis on a particular syllable in a word which requires attention. The tonic syllable is the one which the speaker feels is more important. Conversational interaction in that intonation plays a very important role in this regard, among the other important prosodic features. The speech between doctors and patients, teachers and pupils, etc. varies a great deal and this is made clear in intonation, amongst the other devices.

Martins (337-40) states that the falling tune (↘) is used in statements, WH questions, commands, instructions, advice and exclamations while the rising tune is used in the areas of Yes/No questions, Questions asking for repetition, question tag seeking for information, and expressions of surprise.

From the above sentences, it is clear that the first example requires falling tune (↘). The second sentence requires rising tune (↗) and requires further clarification from the listener.

3.0 Theoretical Framework

The study uses Contrastive Analysis Hypothesis (CA) which focuses on finding the similarities and differences in two languages. Contrastive analysis as Crystal (2009) declares "is a general approach to the investigation of language (contrastive linguistics), particularly as carried on in certain areas of applied linguistics, such as foreign–language teaching and translation. He adds that contrastive analysis is based on structural linguistics. In a contrastive analysis of two languages, the different structures are identified. They are studied as difficulties of negative transmission or interference between the native and target languages that spoil the process of learning. Contrastive analysis has begun in Central Europe before the Second World War and developed afterwards in North America and the United States in the late 1950s.

Contrastive analysis (CA) is the systematic study of a pair languages with a view to identifying their structural differences and similarities. The principal purpose of contrastive linguistics is to compare syntax, morphological systems, phonological systems, and lexical meanings of two or more languages. The aim is also to provide thoughts into possible problems of pronunciation which may be faced by the learners. These problems are differences between the two languages. The theoretical foundations for what became known as the contrastive analysis

hypothesis were formulated in Robert Lado's Linguistics Across Cultures (1957). In the 1950s, American Linguist Robert Lado began to study errors – contrastive analysis. He has the overall objective of helping language teaching. Lado (1957) describes a system of CA which lays down how to carry out a rigorous step-by-step comparison of first language (L1) and second language (L2) in terms of their phonology, grammar, writing systems, and culture. The fundamental assumption is transfer; individuals tend to transfer the forms and meanings of their native language and culture to the foreign language and culture. Those elements that are similar to his native language will be simple for him, and those elements that are different will be difficult. Consequently, language teaching should concentrate on the points of differences, "the problems often require conscious understanding and massive practice, while the structurally analogues units between languages need not be taught. In this view, it becomes "positive" transfer when the two languages have the same properties in common. However, it becomes "negative" transfer when the elements of L1 fail to correspond to the ones in L2. The aim of CA is to examine the challenges that exist between L1 and L2. Also, it looks at the causes of those problems that exist between two languages.

Al-khresheh (2010) posits that "CA is founded on the assumption that L2 learners will tend to transfer the formal features of their L1 to their L2 utterances. Simply put, this notion of 'transfer' means carrying over the habits of the MT into the L2. It can be also defined as the influence of the learner's L1 on the acquisition of L2. Transfer can be considered as an important part in language learning at all levels. It is considered as a language learning strategy used by FL/L2 learners in order to facilitate their language learning. Learners start learning L2/FL language by transferring some sounds and meanings (semantic transfer). They also transfer several rules and structures consisting of pragmatics and word order. The CA hypothesis has been predominant in L2 learning theory with ramifications in pedagogy as well. There are two assumptions or versions of the hypothesis: strong and weak. Within the strong version of the paradigm, researchers believe that errors in L2 learning could be attributed to patterns in the NL. It was considered theoretically possible to predict what errors would be made by making a careful detailed comparison of a learner's L1 and L2. According to Mair (2018) differences would constitute potential sources of errors. The weak

version is a model with an explanatory power as opposed to a predictive power: That is, it is claimed that researchers can look at errors once they have been combined and offer an explanation based on a CA of that area of grammar as to why those errors occurred. Furthermore, the strong version of CA refers to areas of complexity in the TL, which are expected by comparing L1 and L2. The areas of contrast will then form the basis for teaching materials. In contrast, the weak version of CA attempts to account for observed errors by starting with classroom data and using the differences between the two linguistic systems to clarify the errors. According to Bell (2013), the strong version of this approach is not only a resource of exploring errors but also a method for expecting them. Al-khresheh (2010) maintains that the weak version presumes that equipped with a CA of the language concerned, the teacher will have a comprehensible depiction of the trouble area even before the learner has started to learn it. Given the above, it could be said that the strong version of CA involves the process of expecting the area of complexity in the TL by comparing the L1 and L2, and the areas of contrast, being then used as the center of teaching materials. The expected problems or predictions, however, have been found to be inadequate. The move was then towards the weak version in which a comparison between L1 and L2 systems was made to explain errors after they had occurred, rather than to predict them. The weak version of CA hypothesis therefore seems to be closer to Error Analysis theory (EA hereinafter) in that both start with students' errors. Critics of CA argue that neither of these assumptions is valid. However, proponents of CA have never claimed that CA can necessarily predict all errors in L2 production. The Contrastive Analysis is chosen for the analysis made in this study because two languages are involved - Ika and English languages. Contrastive Analysis Hypothesis (CAH) gives the procedure on how to compare two languages – L1 and L2 – in terms of their phonology, grammar, writing system and culture. For example, at phonological level, Ika and English languages have open and close juncture but sometimes where close juncture is used in English, Ika language uses open juncture. The two languages also have similarities in the area of intonation.

4.0 Methodology

The research is a comparative study of juncture and intonation in Ika and English languages. Audio-tape recording was used as an instrument for data collection. Places like Ika town halls in Agbor, music centers, and

branches of Church of God mission in Mbiri where sermons are given were visited and selected speeches were recorded. Research ethics of privacy was also maintained. Audio recording device was used to record raw Ika words spoken by native speakers, especially chiefs, pastors, kings and musicians. Attention was given to church sermons in Ika language. The data was used to ascertain the areas of similarities and differences in the two languages. Qualitative research design, which is interpretation-based, was used to analyze the data collected from the field.

5.0 Data Presentation, Analysis and Discussion of Findings

Table 1: Similarities and Differences in Open and Close Juncture in Ika and English languages

	Ika Words	English Words	Open or Close Juncture
1	ode ekukwo	secretary	Close/Open juncture
2	Eberechukwu	God's mercy	Open juncture
3	okpu uzu	blacksmith	Close juncture
4	onye nkuzi	teacher	Close juncture
5	ugbo ali	motor	Close juncture
6	eke ekpe	left hand	Open juncture
7	ulo nche	watchtower	Close juncture
8	ogu egho	money ritual	Open juncture
9	Diokpa	old man	Open juncture
10	nwa nta	small child	Open juncture
11	isi ewu	goat head	Open juncture
12	nwa nnunu	small bird	Open juncture
13	uzo ukwu	big way	Open juncture

The table above reveals the occurrence of open and close juncture in Ika and English languages. The data indicate that there are similarities and differences in the patterns of juncture in Ika and English languages. For instance, example number one 'ode ekukwo (+)' in Ika language is an example of open juncture but this is in sharp contrast from the English equivalent 'secretary, since it is a close juncture. Again, 'ode-ekukwo' is used as a compound word in Ika language (although it functions as a noun) whereas in English language it is used as a single word which functions as a noun. Attention in the latter is primarily given to

transitional flow which exists between the consonants and vowel sounds in the word secretary /ˈsek.rə.tri/.

In example seven (7) above, Ika and English languages possess the same syllabic juncture. The English word '*watchtower*' is used as a noun and this same applies to Ika equivalent '*ulo nche*'. However, when you separate the words in Ika (ulo and nche) the former functions as a noun while the latter is a verb. This is also applicable to the English equivalent where the first segment (watch) functions as a verb and the final segment (tower) occupies the role of a noun.

In example six (6) the Ika word 'eke ekpe' [e+ke+kpe] and its English counterpart 'left hand' are used as compound words and they are examples of open juncture or plus (+) juncture. One unique thing about this is that the two words 'eke ekpe' function as nouns and the English equivalent 'left hand' also falls within the same grammatical category – noun. However, that is not the case in five (5) above where Ika word '*ugbo ali*' and its English equivalent 'motor' have smooth transition. In the above examples, a pause is observed between the two macro-segments, and the linking of the segments could be 'smooth-sailing' or sturdy. While describing the production of this kind of speech segment, Hockett (1958) says, therefore, that when there is a clean finishing of one vowel or consonant before transiting to the next, the result is "sharp transition". When, however, the finishing is on the contrary, he calls the transition, "muddy transition". In other words, sharp transition occurs across a boundary between macro-segments while muddy transition obtains within a single macro-segment or a single word such as 'motor'. Therefore, juncture determines the flow of speech used in communication. Examples 12 and 13 show that open junctures (+) are present in Ika and English languages in the area of noun phrase, as in '*nwa nnunu*' and 'small bird' and '*uzo uku*' and 'big way'. Although in Ika language, the word 'uku' is used as a predicative adjective while in English, 'big' functions as an attributive adjective. In 12, the grammatical arrangement (adjective + noun) remains the same.

The data indicates that pausing in speech is a regular feature in the speech of an average native speaker of Ika language. Some people pause as they speak because they are stammerers, whereas others introduce pausing to signal meaning for special purposes.

Table 2: Juncture and Sentences

Sentences	Sentence 1	Sentence 2
Ika language	James, onye agba bọọlụ awụhụalẹ	James, onye agba bọọlụ, awụhụalẹ
English language	James, the player is dead	James, the player, is dead

At the level of sentence, juncture plays an expedient role in Ika and English languages, especially when it requires dialogue. The speaker uses momentary pause (or comma) to signal his intention and to pass a particular message to the listener. In the first sentence above, someone is informing James that a particular player has died. However, in the second sentence, James is the one who is dead. The short pauses, both single and double, make the statements clear to the hearer. This shows that most speakers in most languages have diverse ways of signaling different attitudes and meanings in their speech, and also that the conventions that govern the behaviors vary among societies and social settings.

Table 3: Similarities and Differences in Intonation Pattern in Ika and English Languages

	Ika Sentences /Expressions	English Sentences/Expressions	Function of Intonation
1	Onye nkuzi w'a lala.↙	The teacher is coming↘	Grammatical function
2	I lala?	Are you coming?↙	Discourse function
3	Yerigua ihioriri ifinai?	Have you had your lunch?	Discourse function
4	Kiku kiken?↗	What did you just say? ?	Discourse function
5.	Omenali eni ro.↙	It is our our tradition. ?	Discourse function
6	Enyiwa we oshicapa↗, ogede↗, le ose?	We have rice? , plantain↗, and pepper ↘	Grammatical function
7	Gha ebeni pu!↙	Get out of this place!↘	Attitudinal function

Table 3 above, shows a list of expressions and sentences in Ika and English languages. The intonation marker is used to indicate the rising and falling tunes as well as the information and functions which they reveal. Context is also considered since intonation falls within the premise of discourse.

Table 3 shows that intonation has different functions in discourse setting. For instance, in Ika language, number one above 'Onye nkuzi w'a lala. ↘' indicates that the tune of the speaker has fallen and therefore does not require further deliberations. Usually, this tune is used in grammatical function of intonation where attention is given to differentiate sentence types. In this case a declarative sentence is realized since the speaker had had discussion with listener. In other words, there was a prior understanding on the subject of discussion between the two. The same grammatical role is played in example six (6) below, where rising-falling tune is used. However, for grammatical effect, the tune fell when the speaker had finished talking.

Enyiwa we oshicapa↗, ogede↗, le ose↘ (Ika language)
We have rice↗, plantain↗, and pepper↘ (English language)

Examples two to five above justify the discursive role of intonation. Aworo-Okoroh (2017) maintains that in Discourse Analysis (DA) or Conversational Analysis (CA), the analyst seeks to discuss how a recipient might come to comprehend the producer's intended message on a particular occasion and how the requirement of the particular recipient is not in definable circumstances. In the light of this, examples two to four show that the speaker, who is engaged in dialogue with another, requires more information or response from the listener – hearer. However, that is not the situation with example five, as the listener has responded to a question posed by a speaker. When this type of response is given in a declarative sentence, the tune abruptly falls.

Dialogue between Jesus Christ and Satan: Matthew Chapter 4: verses 3 and 4 (New International Version) and Ekukwo-nso Onu Ika (Ika Bible Translation Committee 2018) culled from the Bible.

The dialogue between Jesus and Satan below also shows tone markers in discourse setting and reveal the feelings and attitudes of the speaker and listener.

Ekwensu: Ekwensu no si a, "Omeni I wu Nwa Osolobue↗, si omumani horin ogbe bredi." ↘

Satan: The tempter came to him and said, "If you are the Son of God ↗, turn these stones to become bread." ↘

Jesu: Jesu no si a, "E degua w'a ime Ekukwo-nso ni 'Ihia aragi ihien-oriri suo a ri ndun." ↘

Jesus: Jesus answered, "It is written: 'Man shall not live on bread alone↗,

but on every word that comes from the mouth of God." ↘
From the above conversation between Jesus and Satan, the tune markers (as indicated in the utterances) are used to show the intensity (loudness) and culmination of speakers' interest. The expression 'it is written' projects awareness, reminding the listener of what is in print. This establishes a level of understanding between the speaker and receiver.
From the findings, it is evident that junctures are important in the rendition of any good speech and meaningful communication. They project speaker's intention. Pauses are a special form of juncture which contributes to meaning in speech and intonation has many linguistic functions as reflected in the analysis. As prosodic features, intonation and juncture help listeners to interpret a given message and act accordingly. All the pauses and extra linguistic features introduced within speech convey some meaning; even throat clearing signals a message. The purpose a particular form of pausing serves at one time may not necessarily be the same at another context as illustrated in the discussion on Ika language.

6.0 Conclusion

This research has compared open and close juncture and intonation in Ika and English languages. From the data analyzed, it can be deduced that intonation and juncture play significant roles in the spoken language. Though all languages differ in their prosodic patterns, there are common features to juncture and intonation in all languages. Where similarities exist, Ika learners would find the learning of English language easier. On the other hand, the difference(s) in the sentence pattern of both languages under study leads to negative transfer in which case Ika learners of English would find it difficult to use this area of English language properly. Therefore, for higher competence in English by Ika speakers who are learners of English, the difference in structural pattern of intonation and juncture in both languages should be incorporated into textbooks and all learning activities.

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Influence of Hausa Language on the Use of English Sounds /p/ and /v/ and Students' Performance in Bauchi Metropolis

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Abstract
This study examined 'the influence of Hausa Language on the use of the English sounds /p/ and /v/ and students' performance in English in Bauchi metropolis. The study adopted a quasi-experimental research design to ascertain the effectiveness of the minimal pair approach to the teaching of English sounds to Senior Secondary School students in Bauchi metropolis. It involved SS2 classes from two public Senior Secondary Schools randomly selected from the population, one, as the experimental and the other as the control. Two objectives, two research questions and two hypotheses were formulated to guide the study. Oral Test on English Sounds (OTOES) was used to collect data, and the data were analysed using mean, standard deviation and t-test statistics. The null hypotheses were tested at 0.05 level of significance. The findings showed a significant difference in the performance of the two groups; those students who learned English sounds /p/ and /v/ through minimal pairs approach achieved higher performance mean scores than those who learned through conventional methods. The posttest mean scores of the control and experimental groups showed a significant difference between the two groups, with the experimental group achieving higher performance mean scores significantly in the two sounds.

Keywords: Hausa, influence, Sounds, English and performance

1.0 Introduction

The influence of Hausa Language on the use of English sound /p/ and /v/ and students' performance is one of the major challenges facing Hausa learners of English in Bauchi metropolis. Pronunciation plays an important role in communication since serious mispronunciation can hamper intelligibility. Keshararz and Khamis (2017) assert that one of the most controversial issues in the field of second language acquisition (SLA) is the role played by mother tongue (MT) in learning different components of the target language. The same authors further assert that

there is also a general consensus that the influence of the learners' MT is most noticeable and long lasting in the area of pronunciation as compared to grammar and vocabulary.

Hassan (2012), emphasises the importance of pronunciation skills in learning any language. That is, in order to learn any language, pronunciation skills are very important, in addition Hakim (2012) states that, "no two people speak exactly alike, we can always hear differences between them and the pronunciation of English varies a great deal in different geographical areas" pp: 245. The author further suggests that "in speaking and listening, good pronunciation is a crucial thing; (and) it is true that pronunciation has an important role in communication". Good pronunciation is the first thing that a learner of English should learn. A learner can live without advanced vocabulary. That is, he/she can use simple words to say what he/she wants to say. One can also live without advanced grammar, that is one can use simple grammar structures instead, but there is no such thing as simple pronunciation. The consequences of bad pronunciation are considered as problematic because, even if you use correct grammar, people may not understand what you are trying to say. Moreover, Fraser in Mirzaei, Abdollahian and Ranjab (2012) assert that, pronunciation is of vital importance to second or foreign language (L2) learning. Many learners of second languages face pronunciation difficulties when speaking in the target language and this difficulty serves as their main communicative problem. However, many factors can influence the pronunciation of English in communication as stated by Kavaliauskiene (2009, p.4) "cross-linguistic similarities and differences can produce positive transfer or negative transfer such as underproduction, overproduction, production errors and misinterpretation". The factors that affect the students in mastering pronunciation in English can be divided into three groups: (a) Biological factors, (b) socio-cultural factors and (c) personality factors.

From the foregoing, linguists generally believe that spoken language is superior to its written version. Usman (2015) asserts that the spoken language is more basic and important skill than other language skills". There is a great concern by the state government, English language teachers and some parents including examination bodies on the pronunciation problems by students of secondary schools in Bauchi. Hausa speakers find it difficult to pronounce some English segmental phonemes. Their first language at times interferes with the target

language which leads to error in pronunciation. However, Sani (2011) asserts that Hausa speakers of English, for example, easily pronounce paper as /feifa/ instead of as /peɪpə/. A pen can be pronounced as /fɛn/ because the /p/ sound is not existing in their mother tongue as well as the Hausa phonetics but available in English phonetics. They normally confuse /p/ and /f/ with /v/ and /b/, so, the word "past" is pronounced as /fa:st/. "vein" is pronounced as "bɛn" by most of the Hausa speakers of English language.

The idea of this topic came about as a result of the personal experience of the researcher with students in respect to existing problems of correct English pronunciation in Senior Secondary Schools in Bauchi metropolis.

English language has been for many centuries the language of instruction in the Nigerian schools, Hausa learners of English still have difficulties in the production of some of the English sounds. Hausa learners of English in secondary schools in Bauchi Metropolis tend to mispronounce those English sounds or interchange them with those present in their native language. This results in confusing listeners and renders the communication unintelligible; Usman (2015) asserts that, many researchers discovered that oral English, particularly, aspect of pronunciation is totally neglected due to lack of qualified teachers. The Chairman, State Universal Basic Education Board (SUBEB), in his opening speech at the 2020 training of teachers on Core Subjects in Bauchi State affirmed that, pronunciation problems by students are rampant and lamentable scenario among teachers and students in JSS classes in the state.

Moreover, Suleiman (2021) discovered that in a third term 2nd C/A test 2020/2021 academic session at the Government Day Technical College Bauchi, the English language teacher conducted an oral test for SSII students which were scored 10/10 but only 35 out of the 146 students were the highest scorers that scored between 05-10 representing 23.97% of the total population of the class and the remaining 111 students scored between 0-04 representing 76.03% of the total population. However, in another English oral test conducted at Dr Ibrahim Tahir Comprehensive Secondary School, Bauchi, the results were obtained when ten English words containing different English sounds were given to 79 SSI students by the English language teacher to read as an English language test of orals examination. They were graded

10/10 but only 11 students scored between 6-10 representing 13.92% of the students, where 16 students scored between 4-5 representing 20.25% while the remaining 52 students scored between 0-3 representing 65.82% of the total population in the class. The result indicated that only 27 students have passed the oral test examination, representing 34.18% of the population whereas 52 students have failed woefully in the oral test. The major reason given by most of the English language teachers in Bauchi metropolis with regard to the students' failure in oral English is the mother tongue interference of Hausa language which is affecting the learners' performance in spoken English. Consequently, the West African Examination Council (WAEC) and others, affirmed the massive examination failures in English papers across the country and oral English section suffers the most.

For instance, WAEC results in Bauchi State for 2016 showed that among the 29,514 public secondary schools' students that sat for WAEC Examination, only 11,581 of them got 5 credits and above including English language, which indicated that 32.6% of the total population scored credits in English language and four other subjects. The results for 2017 showed that among the 36,419 students that sat for WAEC Examination, only 9,649 of them got 5 credits and above including English language, which represented 23.37% of the total population scored credits in English language and four other subjects. In addition, the 2018 results showed 42,187 public secondary schools' students sat for the Examination and only 9,976 of them got 5 credits and above including English language, which showed only 20.24% of the total population scored credits in English language and four other subjects.

Moreover, "A large population of L2 learners is of the opinion that the main difficulty they experience when learning English is pronunciation" (Derwing & Rossiter in Binturki, 2008). In the light of this, this study investigates the influence of Hausa language on the use of English sounds /p/ and /v/ and how it affects the students' performance in Senior Secondary Schools in Bauchi metropolis.

The aim of this study is on influence of Hausa language on the use of English sounds /p/ and /v/ and students' performance in Bauchi metropolis. The specific objectives are to:

1. find out the pretest and posttest performance mean score of students taught English with plosive sound /p/ using minimal pairs approach and those taught without.

2. find out the pretest and posttest performance mean score of students taught English with fricative Sound / v / using minimal pairs approach and those taught without.

Research Questions

The following research questions were raised to serve as a guide for the study:

1. What is the pretest and posttest performance mean score of students taught English with plosive sound /p/ using minimal pairs approach and those taught without?
2. What is the pretest and posttest performance mean score of students taught English with fricative sound /v/ using minimal pairs approach and those taught without?

HYPOTHESES

The following hypotheses were formulated to guide the study.

1. There is no significant difference between the pre-test and post-test performance mean scores of students taught English with plosive sound /p/ using minimal pairs approach and those taught without.

2. There is no significant difference between the pre-test and post-test performance mean scores of Students taught English with fricative sound /v/ using minimal pairs approach and those taught without.

2.0 METHODOLOGY

This study makes use of the quasi-experimental design which involved non-equivalent pre-test and post-test design. It concerns the use of two intact classes, for experimental and control groups.

The population for this study comprised twenty-three (23) public senior secondary schools in Bauchi Metropolis. The total population of SS II students in the twenty-three (23) Secondary Schools is 10,543 students. The preference of public senior secondary schools for the study is because the schools share the same curriculum and have one central administration style. This uniformity among the public senior secondary schools in Bauchi Metropolis is therefore convenient for this study.

However, two Senior Secondary Schools from the 23 Senior Secondary Schools in Bauchi metropolis were sampled to serve as experimental and control groups. The schools that were chosen as sample

are; Government Day Secondary School Tirwun, referred to as School A with the total of 230 SS II students of which 158 students are Boys while the remaining 72 are Girls. SS IIA contains 62 students, B 93 and C 75. However, SS IIA is chosen as sample for the experimental group, but 9 students were excluded during the pre-test and post-test because they are not Hausa native speakers. The Second School Government Comprehensive Day Secondary School Sa'adu Zungur, referred to as School B has a total of 426 students of which 210 students are Boys and the remaining 216 are girls. SS IIA contains 40 students, B 43, C 74, D 79, E 56, F 35 and G 99. However, SS II E is chosen as a sample for the control group, but 7 students were excluded during the pre-test and post-test because they are not Hausa native speakers.

The simple random sampling technique was used to determine the two senior schools selected for the research. In this technique, all the names of the 23 senior secondary schools in Bauchi Metropolis were written on piece of papers and thoroughly mixed, and then two pieces picked from the mixture at random. Therefore, all the senior secondary schools in Bauchi Metropolis have equal chances of being sampled. The purposive sampling technique was used for selecting the sample classes, especially since the research involved two intact classes. The school authorities would not allow the disruption of lessons. The instrument for data collection was titled: Oral Test on English Sounds (OTOES). It was used to determine the influence of Hausa language on the use of English sounds and students' performance in English in Bauchi Metropolis on SS II students. The instrument Oral Test on English Sounds (OTOES) consisted of English words that contain plosive and fricative sounds in the initial, middle and final positions. Therefore, the oral test was divided into two sections; section A has to do with the respondents' Bio-data while Section B contains the words to be read by the respondents. In addition to that, the Received Pronunciation (RP) of each of the words were written together with the expected Hausa learners' pronunciation, where the researcher was ticking the respondents' pronunciation from the researcher`s check list which contains the transcription of the words in section "B".

3.0 Literature Review

For the purpose of the development of the instrument, the researcher had reviewed relevant literature. Buba and Kaigama (2015) carried out a

study titled: First Language (L1) interference in learning English plosive and fricative sounds and pronouncing English consonant clusters among Hausa learners of English language. The subjects of the study were the native speakers of Hausa language currently studying at a university in Malaysia. Fifteen (15) sentences and thirty (30) words were given to the participants to read while the researchers recorded on their cell phones. The researchers discovered that five (5) English fricatives (/θ/, /ð/, /f/, /v/, /ʒ/) pose problems to the participants while other fricative (/ʃ/, /s/, /z/, /h/) were produced without hurdles. Abubakar (2014) worked on, pronunciation problems of Hausa speakers of English: The case of Nigerian students in North Cyprus. The study was conducted with native speakers of Hausa language studying at Near East University, Eastern Mediterranean University and Cyprus International University in North Cyprus. The participants were mostly undergraduate students, Hausa native speakers who lived in Hausa speaking communities. The results of the pronunciation test showed that Hausa speakers of English have problems with some English sounds. This is mainly due to the absence of such sounds in their native language. There are four English consonants which are not present in the Hausa language namely (/p/, /v/, /θ/ and /ð/). Also, Keshararz and Khamis (2017) conducted a study titled; an investigation into pronunciation problems of Hausa speaking learners of English. The problematic English consonant investigated were /p/ mispronounced as /f/, /v/ as /b/, /θ/ as /t/ and /ð/ as /z/, it was concluded that these English sounds are problematic for Hausa speakers of English.

Usman (2015) conducted a study on an investigation on the level of phonological interference in the speech of Hausa – English bilingual. The findings discovered was Hausa speakers have problems with most of the sounds which were not available in their first language and they replaced them with the ones that were found. They were also unable to differentiate a sound from other related and counterpart sounds. These sounds /p/ and /θ/ were more substituted for /f/ and /t/. They also pronounce sounds according to how the words were written down. Most of the findings are relevant to this study, therefore, the researcher read and picked the relevant items for the present study.

Before embarking on the research, the researcher sought permission from the secondary schools earmarked for the study, using a letter of introduction from the directorate of general studies ATBU Bauchi. The researcher employed the use of two research assistants who are the teachers of English language in the sampled schools. The researcher

scheduled an appointment with experienced teachers for two days training which lasted for one hour every day. The research assistants were trained to assist the researcher administer the pretest and posttest on the control and experimental groups. Thereafter, the researcher commenced the administration of the pretest on both the experimental and control groups. The students were instructed to read the English words containing English plosive and fricative sounds within 1 hour 20 minutes on the first day and 40 minutes on the second day. Most of the students were able to read the words within 2 to 3 minutes. The two groups were tested using the same questions in order to determine their levels of performance in English plosive and fricative sounds, with the help of the research assistants. The test scores were recorded for each of the two groups. Four weeks was used for the treatment on experimental group. A week was used to teach the experimental group on the English plosive sounds in four different periods as contained in the school time table, while another week was used to teach the English fricative sounds for four periods with the assistance of the research assistants. The treatment duration was 40 minutes per lesson and a double period in a week. The treatment was withheld from the control group and they were taught by their teachers.

At the end of the treatment, the posttest was conducted on the experimental and control groups in order to ascertain the influence of Hausa language on the use of English plosive and fricative sounds among Hausa learners of English with the help of the research assistants. The posttest questions were the same with the pretest questions. The pretest and posttest were scored, thereafter; the pretest and posttest mean scores were compared to find the differences in the students' performance of the experimental and control groups. The descriptive statistics (mean scores and standard deviation) were used to answer the two research questions. The two hypotheses of the study were tested using difference scores of the students by t-test at 0.05 level of significance.

4.0 RESULTS

Research Question One -What is the pre-test and post-test performance mean score of students taught English with plosive sound /p/using the minimal pair approach and those taught without it?

Table 1: Mean and Standard Deviation of Pre-test and Post-test performance Scores of Students in Plosive Sound /p/ in

Experimental and Control Groups

Group	N	Pretest		Posttest			
		X	SD	X	SD	Mean Gain	$\bar{X}_{Diff}$
Experimental	53	27.55	9.59	55.28	11.37	27.73	22.01
Control	49	28.57	11.55	34.29	12.08	5.72	

Table 1 revealed the mean and standard deviation of pre-test and post-test mean performance

Table 1 revealed the mean and standard deviation of pre-test and post-test mean performance scores of the experimental and control groups on pronunciation of English words with plosive sound /p/. The result for experimental group yielded a mean score (= 27.55, SD = 9.59) and control group had a mean score of (= 28.57, SD = 11.55 before treatment. After treatment, the results for experimental group yielded a higher mean score (= 55.28, SD = 11.37) than the control group (= 34.29, SD = 12.08). It indicates that the mean gain score of experimental group is 27.73 and that of control group is 5.72 with a mean difference of 22.01. This means that there was improvement in the post-test after exposure of the experimental group 7to treatment of minimal pairs approach. The result further shows that those taught English plosive sound /p/ using minimal pairs approach performed better than those taught without minimal pairs approach.

Research Question Two

What is the pre-test and post-test performance mean score of students taught English with fricative sound /v/ using minimal pairs approach and those taught without?

Table 2
Mean and Standard Deviation of Pre-test and Post-test performance Scores of Students in Fricative Sound /v/ in Experimental and Control Groups

Group	N	Pretest		Posttest			
		X	SD	X	SD	Mean Gain	$\bar{X}_{Diff}$
Experimental	53	29.43	8.86	54.53	8.45	25.10	
Control	49	23.27	8.75	27.96	9.12	4.69	20.41

Table 2 revealed the mean and standard deviation of pre-test and post-test mean performance scores of the experimental and control groups on pronunciation of English words with fricative sound /v/. The result for experimental group yielded a mean score (= 29.43, SD = 8.86) and control group had a mean score of (= 23.27, SD = 8.75 before treatment. After treatment the results for experimental group yielded a higher mean score (= 54.53 SD = 8.45) than the control group (= 27.96, SD = 9.12). It indicates that the mean gain score of experimental group is 25.10 and that of control group is 4.69 with a mean difference of 20.41. This means that there was improvement in the post-test after exposure of the experimental group to treatment of minimal pairs approach. The result further shows that those taught English fricative sound /v/ using minimal pairs approach performed better than those taught without minimal pairs approach.

Hypotheses

Hypothesis One

There is no significant difference between the pre-test and post-test performance mean scores of students taught English plosive sound /p/ using minimal pairs approach and those taught without.

Table 3
Results of t-test Analysis between Pretest and Posttest performance Mean Scores of Students in the Experimental and Control Groups in Pronunciation of English Words with Plosive Sound /p/

Group	Test	N	Mean	SD	DF	T	*P*-value	Decision
Experimental	Pretest	53	27.55	9.59	52	-33.16	0.000	Reject HO
	Posttest	53	55.28	11.37				
Control	pretest	49	28.57	11.55	48	-6.53	0.00	Reject HO
	Posttest	49	34.29	12.08				

Table 3 revealed the result of t-test result of the pretest and post-test performance mean scores of students in pronunciation of English words with plosive sound /p/. From the result, statistically significant difference exists in the pretest and posttest mean scores of experimental groups. The pre-test mean score was (Mean = 27.55; SD = 9.59) lower than the posttest mean score (Mean = 55.28; SD = 18.49). The result also yielded (52) = -33.16, P < 0.05. Since the P-value of 0.000 is less than the 0.05 level of significance, the null hypothesis was rejected.

It was concluded that there is a significant difference between pre-test and posttest mean score of experimental group. It shows that students' performance mean scores increased after exposure to plosive and fricative sounds through minimal pairs approach. Also,

Table 3 reveals the result of t-test for dependent sample conducted on the pretest and post-test achievement mean scores of students taught English with plosive and fricative sounds without minimal pairs approach. From the result, a statistically significant difference exists in the pretest and posttest mean scores of control group.

The pre-test mean score was (Mean = 28.57; SD = 11.55) lower than the posttest mean score (Mean = 34.29; SD = 12.08). The result also yielded t (48) = -6.53, P< 0.05. Since the P-value of 0.000 is less than the 0.05 level of significance, the null hypothesis was rejected. It was concluded that the pretest mean scores were significantly different from the posttest mean score of the control group, although the post-test performance was still poor, it was slightly better than the pre-test mean score.

Hypothesis Two

There is no significant difference between the pre-test and post-test performance mean scores of Students taught English fricative sound /v/ using minimal pairs approach and those taught without.

Table 4
Results of t-test Analysis between Pretest and Posttest performance Mean Scores of Students in the Experimental and Control Groups in Pronunciation of English Words with Fricative sound /v/

Group	Test	N	Mean	SD	DF	T	*P*-value	Decision
Experimental	Pretest	53	29.43	8.86	52	-23.57	0.000	Reject HO
	Posttest	53	54.53	8.45				
Control	Pretest	49	23.27	8.75	48	-6.04	0.00	Reject HO
	Posttest	49	27.96	9.12				

Table 4 revealed the result of t-test result of the pretest and post-test performance mean scores of students in pronunciation of English words with fricative sound /v/. From the result, statistically significant difference exists in the pretest and posttest mean scores of the experimental group. The pre-test mean score was (Mean = 29.43; SD = 8.86) lower than the posttest mean score (Mean = 54.53; SD = 8.45. The result also yielded t (52) = -23.57, P < 0.05. Since the P-value of 0.000 is

less than the 0.05 level of significance, the null hypothesis was rejected. It was concluded that there is a significant difference between pre-test and posttest mean score of the experimental group. It shows that students' performance mean scores increased after exposure to English sounds through minimal pairs approach.

Also, Table 4 reveals the pretest and post-test performance mean scores of students taught pronunciation of words with fricative sound /v/ without minimal pairs approach. From the result, a statistically significant difference exists in the pretest and posttest mean scores of the control group. The pre-test mean score was (Mean = 23.27; SD = 8.75 lower than the posttest mean score (Mean = 27.96, SD = 9.12). The result also yielded $t(48) = -6.04$, $P < 0.05$. Since the P-value of 0.000 is less than the 0.05 level of significance, the null hypothesis was rejected. It was concluded that the pretest mean scores were significantly different from the posttest mean score of the control group, although the post-test performance was still poor, it was slightly better than the pre-test mean score in pronunciation of English words with fricative sound /v/.

5.0 Discussion of Findings

The Oral Test on English Sounds (OTOES) comprised of thirty words for each sound, ten words at the initial, middle and final positions read by the respondents. Oral test was administered on both groups in the pretest and posttest respectively. The pretest mean scores showed no significant difference between the performance mean scores of the experimental and control groups. In the posttest, remarkable differences were observed in the performance mean scores of the two groups. The results are discussed as follows:

The result of the plosive sound /p/ shows no significance difference between the experimental and control groups in the pretest and also affirmed that /p/ sound is one of the English sounds that pose problem for Hausa learners as suggested by Aliyu (2011). The posttest result showed a significance difference between the two groups, the experimental group yielded higher mean performance scores after treatment of minimal pairs approach. The pretest result of fricative sound /v/ showed no significance difference between the two groups, and also affirmed that Hausa learners of English have difficulties in pronouncing the sound as affirmed by Maiunguwa (2015) in his study. After exposing the experimental group to the treatment of minimal pairs approach, the result yielded a significance difference between the two groups, which indicated that the difficulties can be reduced by minimal pairs approach.

However, the pretest result of the fricative sound /v/ showed no significance difference between the experimental and control groups, and also affirmed that Hausa learners of English language experience some problems in the production of the sound which corresponded with Usman (2015) findings. But after exposing the experimental group to the treatment of minimal pairs approach the result changed significantly and the mean performance scores was higher than that of the control and the pretest. Moreover, the pretest result of fricative sound /v/ showed no significance difference between the two groups and also corresponded with Maiunguwa (2015) study that Hausa learners face some difficulties in pronouncing the /v/ sound. The posttest result showed a significance difference between the two groups, with experimental group achieving higher mean scores compared to the control group and the pretest result. The posttest results therefore, affirmed that the influence of Hausa language can be reduced by minimal pairs approach.

Going by the t-test results on the English sounds, as indicated in the tables, the results proved that the two null hypotheses are not retainable. The null hypotheses were rejected. It was concluded that there is significance difference between pretest and posttest mean score of the experimental group. It shows that students' performance mean scores increased after exposure to the English sounds through minimal pairs approach.

5.0 CONCLUSION

From the findings of this study, it was discovered that Hausa language has a negative influence on the students' performance in terms of the English plosive and fricative sounds. Pronunciation test was used as an instrument of data collection. Results from the study have shown that Hausa speakers experience some problems with some of the English sounds. The problems mainly occur as a result of the absence of these sounds in their native language.

In conclusion, teaching English language sounds using the minimal pair approach is one of the effective approaches of teaching English sounds. Students achieve higher mean scores in English sounds when exposed to the oral activities approach especially using words that are minimal pairs. Students who were not exposed to the oral activities using the minimal pairs showed more signs of deficiency in English plosive and fricative sounds.

In recognition of the influence of Hausa language on the use of English sounds /p/ and /v/ and students' performance in English in Bauchi metropolis, there should be provision of good learning atmosphere for the students, well trained English language teachers who would teach English sounds effectively, and attend seminars and workshops where new methods and approaches to teaching English sounds are promoted so as to advance beyond the traditional methods of instruction. Also, frequent supervision should be adopted using well trained personalities in order to supervise the English teachers in practical situations, fully equipped language laboratories should be provided in schools with relevant teaching materials that would help the pupils understand English sounds and develop interest in the profession. Besides, the minimal pair method should be adopted in teaching in order that the pupils may be able to differentiate between English sounds - /p/ and /f/, /v/ and /b/ respectively, and parents should enroll their children in schools right from the primary level, and provide relevant audio-visual cassettes that contain the English sounds for practicing at home.

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An Analysis of Orthographic Ambiguity in Hausa

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Abstract
This paper analyses and discusses the phenomenon of ambiguity in relation to Standard Hausa (SH) orthography. Ambiguity has for so long been one of the most problematic and challenging issues in Natural Language Processing (NLP), and orthographic ambiguities are those words that are written the same but pronounced differently and mostly found in tonal languages. Galen theory of ambiguity was used for the analysis. Hausa is a tonal language with three distinctive tones, which are not indicated in the standard orthography. These are high (H), low (L), and falling (F) tones but there is no rising tone. The paper attempts to clearly illustrate the ambiguousness of such Hausa words, especially those that are orthographically ambiguous as a result of their tonal variations. The findings clearly establishes that Hausa is very rich in terms of orthographic ambiguities which make the language very interesting on one hand and very difficult on the other hand, especially to those who are non-native speakers/learners of Hausa. The paper is descriptive in nature and within the purview of formal linguistics. The primary data were sourced from observation and the secondary data especially from related literature.

Keywords: Orthography, Ambiguity, Hausa and Tone

1.0Introduction

When dealing with natural languages specifically tonal languages, especially their written forms (texts), people usually face challenges especially when they come across some certain words that are seriously confusing in terms of their pronunciations as a result of their multiplicity of tones. This usually happens when the tone is not marked at all in the orthography and thus, it is what some philosophers and modern linguists refer to as orthographic ambiguity and others call it phonological ambiguity. We normally struggle as readers/researchers to solve such kinds of ambiguities by trying to detect which of the various tones of the word is referred to in this particular context. Hausa is a member of Chadic

Language Family, which itself is a constituent member of the Afroasiatic Phylum that also includes Semitic, Cushitic, Omotic, Berber and Ancient Egyptian. However, Hausa has a number of geographical dialects, marked by differences in pronunciation, grammatical formatives and vocabulary (Newman: 2000). In this paper, only the dialect of Kano will be used for sourcing the primary data since it is the dialect that is regarded by most linguists and many other scholars as the 'Standard Hausa' (SH).

That is why Newman (2000) further maintained that "the dialect of Kano state is significantly regarded as the Standard Hausa, because it is the dialect that has become recognized as the norm for the written language (as embodied in books journals and newspapers) and also for such media as radio and television". This is the dialect represented in the major dictionaries and grammars of the language prepared over the past century and in most pedagogical materials prepared for Americans and Europeans intending to learn the language. This choice of Standard Hausa is necessary because there are different dialects of Hausa with differentiations among them especially in terms of meaning i.e., semantics and pronunciation i.e. phonetics and phonology. For example:

Kano Dialect	Sokoto Dialect	Gloss
Fàaràa	Hwàaràa	Grasshopper
Xaa	Xanxaa	Son
'Yaa	Xìyaa	Daughter

Now, by considering the above three examples, we can clearly see that definitely there are dialectal variations among the various Hausa dialects and it is why we stick to the standard dialect only in order to avoid confusion.

1.1 Orthography

The term orthography is said to be derived from Greek 'orthographia', meaning 'correct writing'. Therefore, it simply refers to the art, practice or study of writing words with the proper letters according to accepted usage which is based on certain set of conventions. Bussmann (1988:343) defined orthography as the study and/or instruction of systematic and uniform transcription with letters (graphemes) and punctuation. The orthographic system of a given language is the result of different and, at times, controversial principles. These principles include: phonetic principles, phonological principle, etymological principle, historical principle, homonymy principle, pragmatic principle, principle

of economy, principle of aesthetics. But all of these principles are merely tendencies; the numerous non-systematic deviations make learning the orthography of the given language more difficult. Thus, discussions about orthographic reform are of interest not only to linguists, but also to those involved in making educational and political decisions because the practical orthography used and required by the speech community often differs from that demanded by linguists.

1.2 Ambiguity

Etymologically, the term ambiguity is said to be derived from Latin ambiguus from ambigere 'to be undecided', which was formed by combining ambi- (meaning 'both') and agree (meaning 'to drive'). Ambiguity has been defined severally because many researchers such as linguists, philosophers, psycholinguists, scientists and lawyers have been showing keen interest in the area of ambiguity. For instance, Ullmann (1977:156) expressed that ambiguity as a linguistic condition can arise in a variety of ways. He further explained that ambiguity should be seen as a notion in which there is difficulty in giving a precise meaning to a linguistic expression. It is a representative of doubtfulness, uncertainty and confusion in any human language. It may disrupt the flow of reading and eventually leads to incorrect conclusion or concealment of wrong understanding by addressee. Usman (2023) described ambiguity as a situation in which a single word, phrase, clause or sentence has more than one meaning or is open to more than one interpretation. Similarly, Shultz& Pilon (1973) opined that a number of psycholinguists have begun to study ambiguity in the hope of understanding the processing and interpretation of language. On the other hand, Bussmann (1988) maintained that "ambiguity in natural languages is a property of expressions that can be interpreted in several ways, or, rather, that can be multiplied specifically in linguistic description from lexical, semantic, syntactic and other aspects." Lobner (2002) asserts that "many words have more than one meaning and even complete sentences may allow for several readings. The technical term for this phenomenon is ambiguity: an expression or utterance is ambiguous if it can be interpreted in more than one way. The notion of ambiguity can be applied to all levels of meaning: to expression meaning, utterance meaning and communicative meaning". However, according to Denham & Lobeck (2010) "ambiguity can occur both at lexical and syntactic levels and a sentence is said to be ambiguous if it has more than one meaning.

1.3 Types of Ambiguity

Generally, there are several identifiable types of ambiguity in natural languages. They are as follows:

a.Syntactic Ambiguity e.g., the young men and women have arrived.

b.Lexical Ambiguity e.g., bank (shore of a river), bank (financial institution).

c.Morphological Ambiguity e.g., saw (past of see), saw (cutting of wood or the instrument for cutting wood).

d.Phonetics and Phonological Ambiguity e.g., write, right, rite, wright, son & sun etc.

e.Pragmatic Ambiguity.

f.Metaphorical Ambiguity etc.

2.0 Literature Review

According to Bussmann (1988:486) tone also refers to sound in acoustic phonetics, a branch of general phonetics; and it refers to the term for occurrence of sounds with simple, period waves. While in phonology, intonation is the phenomena of pitch that refers to morphologically defined segments (morphs, words) to the extent that different pitches in a language are distinctive. Such languages are known as tonal languages. In phonology, the term 'toneme' (in analogy to 'phoneme') is used to denote phonetically distinctive tones.

2.1Tonal Languages

A tonal language is a language in which tone contours have phonological relevance, that is, make a difference in meaning. In other words, tonal languages are languages in which the meaning of a word or phrase depends not only on the arrangement of consonants and vowels but also on the pitch or tone with which the word is pronounced or spoken. In tonal languages, changing or substituting the pitch or tone of a word can alter its actual meaning entirely, even if the consonants and vowels which constituted the word remain the same. That is why tone is considered by linguists as a vital linguistic element in tonal languages such as Chinese, Hausa, and Vietnamese among others.

2.2 The Hausa Language

According to Bussmann (1988) Hausa is the largest Chadic language

with approximately twenty-five million (25,000,000) speakers in northern Nigeria and Niger; it is also the most important trade language. He adds that some of its major characteristics include rich consonant system, simple syllable structure, and fairly complicated morphology, both with nouns (e.g. plural formation) as well as with verbs (voices). Hausa uses Subject Verb Object (SVO) word order. But as for Newman (2000), Hausa language is spoken by upwards of thirty-five million speakers. It is the first language of ethnic Hausas and settled Fulanis in what one might call Hausa land proper, which covers the traditional emirates of Kano, Katsina, Zaria, Daura, Sokoto etc., in what is now Nigeria, and the Hausa-speaking areas of southern Niger, which consist of Gobir, Maraxi, Damagaran, Tahoua, Dogondoutchi, etc. Hausa is also spoken as a first language by resident Hausa communities in Niamey (Niger), in Ibadan and Lagos (southern Nigeria), in Jos and Abuja (central Nigeria), in Ghana (especially, in the north, but also in the capital Accra), and in the Blue Nile area of the Sudan. Hausa has probably been expanding for the past two hundred years, but its spread during the past half century has been particularly dramatic, particularly in northern Nigeria. Thus, one finds that in urban areas like Bauchi, Gombe, Kaduna, and Potiskum, Hausa is rapidly establishing itself as a mother tongue for many inhabitants, or, if it is not replacing the indigenous language(s), it is at least being used on a day-to-day basis as a lingua franca. But with regard to the language family, Hausa is a member of the Chadic language family, which itself is a constituent member of the Afro-asiatic phylum that also includes Semitic, Cushitic, Omotic, Berber, and ancient Egyptian. Within Chadic, Hausa's closest relatives are west Chadic languages belonging to the Bole-Tangale, Angas and Ron groups (Newman, 2000 & Greenberg, 1963).

However, in the light of the above, we can clearly see that between the Bussmann's statistics on the population of Hausa speakers in his work of 1988 and that of Newman in his work of 2000, there is a gap of twelve (12) years only. But the number of population of Hausa speakers has rapidly increased up to over one third of the former population. This really shows how Hausa language is widely spreading ceaselessly. Also, Newman & Newman (2001) described that Hausa is a tone language with three distinctive tones, which are not indicated in the standard orthography. These are high (H), low (L), and falling (F). (There is no rising tone). In modern Hausa linguistic scholarship, low is marked with a grave accent, e.g., à, falling is marked with a circumflex, e.g., â, and

high tone is left unmarked, e.g., wùyaa (L-H) 'trouble', fuskàa (H-L) 'face', yâraa (F-H) 'children'.

2.3 Some of the Previous Studies on Ambiguity

Several researches have been conducted on the concept of ambiguity and its various types. For instance, Unseth & Unseth (2018) conducted a study on orthographical ambiguity in which they analyzed ambiguity in orthographies. They also discussed the various types of ambiguity and their different linguistic functions. In their findings, they have argued that it is not possible to precisely quantify the ambiguity that a native speaker will face in orthography, especially as the person becomes a fluent reader. They also found that there is no substitute for careful testing of orthography, but they hope that the concepts presented here will help orthography planners to devise more useful tests. Usman (2023) discussed constructional ambiguity in Hausa where he analyzed some Hausa constructions that are structurally ambiguous. He further explained some parts of the lexical ambiguity, phonological ambiguity as well as morphological ambiguity. His findings revealed that Hausa language is very rich in terms of constructional ambiguity which could be apparently seen at all levels, e.g., at phrasal, clausal or sentential level. He also discovered that Hausa language is rich with regards to the lexical ambiguity i.e., ambiguity at word level. Moreover, he explored that some of the Hausa constructional ambiguities could be disambiguated or resolved by using some linguistic or non-linguistic techniques. Moreover, Miangah & Vulanovic (2021) wrote on the ambiguity of the relations between graphemes and phonemes in the Persian orthographic system, where they displayed how graphemes and phonemes can be a cause of ambiguity in Persian orthography. They also attested that orthography is really a means of ambiguity in many natural languages. Seewoester (2009) conducted research on linguistic ambiguity in language-based jokes. In his research an attempt was made to uncover what mechanisms of language render English so flexible in the creation of language-based jokes and to what degree these mechanisms are utilized. He also explored patterns in joke type, word class, word class progressions, use of morphologic/syllabic mechanisms, and compound word manipulations in the "serious" and "humorous" interpretations of puns. He clearly showed and demonstrated how people deliberately play with a language through ambiguities.

Also, Irawan (2009) conducted research on ambiguity and identified the kinds of ambiguity found in the articles of The Jakarta Post. In the study, the author tried to figure out the causal factors of the ambiguity in the articles of The Jakarta Post. Furthermore, he also discussed the interpretations which may arise in the ambiguous words and the sentences found in the articles of The Jakarta Post. Besides, the analysis of his research also revealed that the ambiguous words, phrases and sentences are interpreted into two or three ways. There are 20 data of ambiguity interpreted into two interpretations and 3 data with two interpretations. But all data with three interpretations were lexical ambiguity.

3.0 Theoretical Framework

Theoretically, the popular Galen's theory of ambiguity was chosen and adopted in this paper because it is regarded by many researchers in the field of linguistics as one of the most influential theories of ambiguity that are almost all-inclusive. That is why many scholars particularly linguists opined that the main original contribution of Galen's De Captionibus to the philosophy of language in antiquity is a theoretical description of linguistic ambiguity. Galen's achievement may be described as an exhaustive classification (including definitions by genus and differentia) of every sort of ambiguity that occurs in language. Galen's theory was designed both to yield a deeper insight into linguistic ambiguity and to reveal the true nature of this phenomenon. Briefly, in his theory, Galen appealed to five principles which govern all cases of ambiguity in language: Actuality, Potentiality, Appearance, Being Lexical, and Being Syntactic. Galen proceeded by accepting as 'givens' both Aristotle's enumeration of the types of ambiguity and the following preliminary definition of sentential ambiguity: an ambiguous sentence is a sentence, the utterance or inscription of which has at least two distinct meanings. From there he classified and defined the types of ambiguity he himself countenances as follows:

Homonymy = Actual, lexical ambiguity
Amphiboly = Actual, syntactic ambiguity
Accent = Potential, lexical ambiguity
Combination and Division = Potential, syntactic ambiguity
Form of expression (L) = Apparent, lexical ambiguity
Form of expression(s) = Apparent, syntactic ambiguity

Among the assumptions of Galen is that he claimed that his method shows

that any case of ambiguity is intended to apply to ancient Greek, but may be modified to apply to other natural languages, like English.

4.0 Data Presentation and Analysis

In this segment of the paper, the primary data is going to be presented and analyzed accordingly. Hausa is very rich in terms of lexical and phonological ambiguities. For instance, consider the following Hausa words:

Sample Data 1: Fari:

The above four-letter word is orthographically ambiguous in Hausa. This is because the word takes different tones and consequently different pronunciations. So, when it is written just like the way it was written above without proper marking of the tone, the reader will definitely face some challenges on deciding which of the series of phonemic features is really the intended one?

Fárí:	Fárì:	Fàrí:	Fá:rì	Fà:rí:
White	Drought	Ogle	At the beginning	Grasshoppers

Now let us illustrate more on the ambiguity of the above word in the subsequent sentences.

Da akwai fari a garin. This sentence may mean any of the below options:

a. There are grasshoppers in the town.
b. There is drought in the town.
c. There is white in the town.
d. There is ogle in the town.

Sample Data 2: Bara

The above four-letter word is also orthographically ambiguous in Hausa. This is because the word has different tones and consequently different pronunciations in different contexts. So, when it is written just like the way it was written above without marking of the tone properly, the reader will definitely face some challenges on deciding which of the series of phonemic features is really the intended one?

Bà:rá	Bárà:	Bárà:	Bà:rá:
Last Year	Begging	Servant	One's Focus

Now let us put the above word in a sentence to clearly see the ambiguity.

Bara ya je gidan. This structure may mean any of the below options:

a.He went to the house for begging.
b.He went to the house last year.
c.The servant went to the house.

Sample Data 3: Baqi

The above four-letter word is also orthographically ambiguous in Hausa, because the word has various tones and consequently different pronunciations in different contexts. So, when it is written just like the way it was written above without marking of the tone properly, the reader will definitely face some challenges on deciding which of the series of phonemic features is really the intended one?

Báqí:	Bà:qí:	Báqí:
Black	Guests	Letter of Alphabet

Now consider the following Hausa construction:
Baqi ne kawai za su saya. This may refer to any of the following:
a.It is black only that they will purchase.
b.It is only the guests that will purchase.
c.It is only the alphabet that they will purchase.

Sample Data 4: Matata

The above six letter word is also orthographically ambiguous in Hausa, because the word has various tones and consequently different pronunciations in different contexts. So, when it is written just like the way it was written above without proper marking of its tone, the reader will definitely face some challenges on deciding which of the series of phonemic features is really the intended one?

Mátá:tá:	Mà:ta:ta:
Refinery	My Wife (a short possession in Hausa)

Now consider the following Hausa construction:
Matata za ta je gobe. This may mean either of the following,
a.She is going to refinery tomorrow.
b.My wife will go tomorrow.

Sample Data 5: Matashi

The above six letter word is also orthographically ambiguous in Hausa, because the word has various tones and consequently different pronunciations in different contexts. So, when it is written just like the way it was written above without proper marking of its tone, the reader

will definitely face some challenges on deciding which of the series of phonemic features is really the intended one?

Mátá:shí	Mátà:shí
Pillow	Adolescent

Now consider the following Hausa construction.
Wannan matashi ne. This statement may mean:
a.This is a pillow.
b.This is an adolescent.

Sample Data 6: Ma'aikata

The above eight letter word is also orthographically ambiguous in Hausa, because the word has various tones and consequently different pronunciations in different contexts. So, when it is written just like the way it was written above without proper marking of its tone, the reader will definitely face some challenges on deciding which of the series of phonemic features is really the intended one? For example:

Má'áikátá:	Má'àkàtá
Company/Factory/Industry/Ministry	
Workers/Labourers/Staff	

Now study this Hausa sentence.
Dole ne a canja komai in ban da ma'aikata. This statement is orthographically ambiguous as follows:
a.Everything must be changed except factory/industry.
b.Everything must be changed except labourers/workers.

Sample Data 7: Makaranta

The above data is orthographically ambiguous in Hausa because it takes two distinct tones that eventually it gives two different meanings as follows:

Makarantaa	Makàrànta
School	Readers/Reciters

Now consider this Hausa construction. Ni ba na jayayya da makaranta. This may mean:
a.I do not argue with school.
b.I do not argue with readers/reciters.
Sample Data 8: Jakata

The above data is orthographically ambiguous in Hausa because it takes two distinct tones that eventually it gives two different meanings as follows:

Jàkaataa	Jàakàataa
My Bag	My Jennet

The ambiguity of the above data could be exemplified as follows: Na bar jakata a gida. This can be either of the following:
a.I left my jennet at home.
b.I left my bag at home.

Sample Data 9: Mahauta

The above data is orthographically ambiguous in Hausa because it takes two distinct tones that eventually it gives two different meanings as follows:

Máháutá:	Máhàutá:
Abattoir/Slaughterhouse	Butchers/Meat Sellers

Now consider this Hausa sentence: An rufe mahauta jiya. This could mean:
a.The abattoir was closed/sealed yesterday.
b.The butchers were detained/jailed yesterday.

Sample Data 10: Makara

The above data is orthographically ambiguous in Hausa because it takes two distinct tones that eventually it gives two different meanings as follows:

Màkarà	Màkàra:
Lateness	Bier

Now consider the above word in the following sentence without marking of the tone to see its ambiguity: Ni na tsani makara kwata-kwata a rayuwata. This may mean any of the following:
a.I absolutely hate lateness in my life.
b.I absolutely hate bier in my life.

Summary of Findings

Based on the analysis of the above examples, this paper has found the following results: firstly, the paper has clearly established that being a tonal language, Hausa has so many words that are orthographically or phonologically ambiguous. Secondly, the paper has discovered that this

type of ambiguity only arises when the words are written without proper marking of the tone. Thirdly, the paper has realized that whenever the tone is marked appropriately, the ambiguity disappears immediately. Fourthly, the paper has discovered that in some conditions, the pragmatic contexts do help in disambiguating such orthographically ambiguous words especially by the help of either linguistic or non-linguistic clues. Fifthly, the paper has displayed that many readers read and re-read such words when they come across them in their reading in order to ascertain which of the two-tones is here. These challenges affect their reading speed as it necessarily makes them read slowly.

5.0 Conclusion

The foregoing discussion was an attempt to primarily to describe how tonal languages like Hausa cause orthographical/phonological ambiguities to the readers. The study has discovered that those kinds of ambiguities can be disambiguated or resolved, but the best way of resolving them is by appropriate marking of the tones. Unfortunately, it is only in some academic writings that you see marking of the tones, and even in the academics, it is only in the writings of the departments of languages and linguistics and other related departments or units that you can find it. But most of the writings by laymen in such languages do not pay attention to marking of the tones. As it has been said Hausa is a tone language with three distinctive tones, which are not indicated in the standard orthography. These are high (H), low (L), and falling (F). (There is no rising tone). In modern Hausa linguistic scholarship, low is marked with a grave accent, e.g., à, falling is marked with a circumflex, e.g., â, and high tone is left unmarked.

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Phonological Review of Nigerian English features in Selected Nigerian Autistic Utterances

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Abstract
This paper reviewed features of Nigerian English (NE) in selected utterances of autistic children which are characterised with Language Disorder (LD). This study was carried out with an objective to demarcate features of NE from LD. Availability and accessibility to data mandated the selection of 11 willing participants from Lagos, Oyo and Osun states after all ethical considerations were fulfilled. Data containing simple words that participants were conversant with were analysed using Optimality Theory to explicate constraints that favoured output. Standard British English transcriptions were used as the model for easy demarcation of features of NE and LD. The result showed overstretched vowels as a typical feature of NE. The candidates showed preference for back vowels over the central vowels which is a common occurrence among NE speakers. Monophthongs were also preferred over diphthongs and this choice suggested features of Language Disorder (LD) especially in instances where diphthongs could have been realised in NE. Markedness dominated faithfulness in the autistics' output.

Keywords: Autism, Language Disorder, Nigerian English, Optimality Theory.

1.0 Introduction

The larger community may have before now found it problematic to communicate with the autistic population and adjudged the cause to Language Disorder (LD) making it difficult for intelligibility to take place. This may be true in developed countries where English is the first language hence, many forms of unintelligibility may be adjudged to language disorder. However, in a multiethnic society like Nigeria, there may be more to unintelligibility than just language disorder. The fact that autistics in Nigeria exist in a multicultural setting may influence their language use and as a result, disorder may not be the sole reason for unintelligibility.

One of the major challenges faced by people living with Autism Spectrum Disorder (ASD) is language disorder or communication impairment which may also reflect or be particular to their socio-cultural background. Nigerian English is the variety of English spoken in Nigeria. The bid to describe a standard version of this variety at every level of language has mandated several scholarly attentions from seasoned scholars, for quite some decades now (Okoro, 2009; Omoniyi, 2012). These have helped in the viable description of what to expect in a standard variety of the Nigerian English. Taking a look at a study like this would expand the literatures of the Standard NE and also identify phonological impairments from NE features.

The need to describe language usage from the purview of people living with special needs, particularly autism in this case is pertinent to the standardization of the Nigerian English variety. This is because this set of people form a certain percentage of the Nigerian population and also make use of the Nigerian variety of English to communicate in their own way. Autistics could exhibit unique linguistic traits which may be observed so as to detect patterns that may aid better intelligibility during communication. This paper therefore attempted to separate the features of Nigerian English from language impairment in autistic utterances.

Scholarly efforts that have been added to the repertoire of NE concerning special needs language usage include those of Sunday (2008), Ojo (2012), Esan (2018) and Abe (2023) in phonology, Atanda (2019) in discourse, Akinmurele (2019) in syntax, among others. These have contributed literatures to NE, looking at various levels of language use by atypical people in Nigeria. In addition to the striding contributions of these and other notable scholars, attention is being given to the language use of autistics with the intention of extracting the features of both Nigerian English and language impairment in their utterances in this present study. Extant studies have not particularly paid attention to where language disorder ends in the phonology of the autistics, and where the features of Nigerian languages manifest. These two phenomena have been logged in these studies as language disorder without any consideration of the socio-cultural influence on language in a multicultural and multilingual context that a country like Nigeria has to offer. This paper exposed relevant information on the dichotomy between language disorder and features of Nigerian English in the phonology of the sampled autistics.

The paper will be a priced asset and aid intelligibility for speech therapists, educators, minders, parents, and concerned persons and professionals to draw the line between language disorder and features of Nigerian English in the speech of people living with autism. The aspects of phonology covered in this paper are segmental phonology and syllables.

2.0 Literature Review

Language delay is not a typical feature of only ASD. It is a common occurrence in most special needs conditions as well as the experience of some typically developing children in some cases (Tager-Flusberg, Paul and Lord 2005). What differentiates language delay in autism from other conditions is language loss; autistics experience what is called language regression from 12-months to about 18-months of age when ASD becomes diagnosable (Lord, Shulman and DiLavore, 2004; Alli, 2019). They begin to lose whatever form of language they might have acquired at infancy.

To detect language behaviour in autistic children from 18 months to 36 months, Schoen, Paul and Chawarska (2011) studied the phonology and vocal behaviour in 30 toddlers with autism aged 18 months to 36 months. They were paired with 11 age-matched and 23 language matched controls. Result showed that toddlers with ASD produced speech-like vocalizations similar to those of the language-matched peers but produced significantly more atypical non speech vocalizations when compared to both groups. ASD showed more speech-like sound productions that are linked to their language level in a manner similar to that seen in the production of the typical vocalizations. Ojo (2012) looked into the phonological disorder of 12 autistic persons. The disorder includes: consonants elision at the initial and final positions; substitutions between sounds that have the same place or manner of articulation; and inconsistencies in English stress placement rules. These issues are similar to those that can be found in most typical Nigerian English speakers (Jibril, 1982; Awonusi, 1985; Jowitt, 1991; Adetugbo, 2009; Osisanwo, 2012) but were not acknowledged by the researcher.

Autism has been broadly divided into verbal and non-verbal autistics and this definition cuts across the different types of autism identified in the directory of medical science (DMS-5). The study carried out by Nwanze (2013) investigated spoken language in Nigerian children with features of autism; measuring the claim that language skills in

African children with ASD were inferior to those in the west. She studied 145 children with ASD, ages 3-10 years with ratio 5:2 boys to girls. The study revealed that 54% of the sampled children with ASD were non-verbal. The verbal ones had a mean length utterance (MLU) of over 3 morphemes with little difference between boy and girl performance.

The assessment by Umera-Okeke and Iroegbu (2016) on children with speech sound disorder; included children with autism, down syndrome and the likes. They identified coalescence, epenthesis, final consonant deletion, weak syllable reduction, cluster reduction and gliding as the error patterns in their speeches. Also strengthening this claim, Esan (2018) further investigated the prosodic features of people with developmental and acquired language disorder which covered most special needs group, including autism. In addition to the findings of Umera-Okeke and Iroegbu (2016), she observed that simpler syllabic structures were preferred, stress was not impaired but intonation was greatly impaired in developmental language disorder. She hinted that influences of mother tongue on grammar were common in language disorders.

Abe (2023) in her study of phonotactics of autistic children in Lagos state of Nigeria stated that 'cases of interference in autistic phonotactics existed marginally since only a few spoke their first language'. The multi-ethnicity society of Nigeria is bound to have a background effect on the speech of those that live in that society. This study will therefore take a peep at those who possess their indigenous language in addition to English language and others who have their speech coloured by their societal background.

From the foregoing, it can be averred that the features of autistic speeches can be detected early in children from their vocal behaviour. ASD is broadly divided into verbal and non-verbal autistics of which the non-verbal ones have hope of improved speech performance with consistent and early intervention. Most of the scholars discussed above, have concentrated on other issues that rallied round language disorder. In all, Esan (op.cit) mentioned the influence of mother tongue on grammar being common to language disorder, while Abe (op.cit) pointed out that cases of interference in autistic phonotactics existed marginally with reference to the few that spoke their first language leaving the question: "What about those who do not possess the ability to speak their first language but have their utterances coloured by the society they live in?" This study differentiates itself from others by looking at: the extent to

which Mother Tongue (MT) and societal background of an individual influence language disorder in the utterances of autistic people in Nigeria.

An Overview of Nigerian English (NE)

Nigeria, a multilingual West African country is popular for her numerous indigenous languages. More than 500 languages have been associated with her (Adegbite, 2010). There are probably as many Nigerian varieties of English as there are primary Nigerian languages because of the features of native Nigerian language interference on English (Adetugbo, 2009:179); which according to Bamgbose (1981) are a significant part of Nigerian English (NE). Strevens (1965) identifies the two main dialects of NE: the northern and southern varieties. Adetugbo summarises that the differences between NE and the Received Pronunciation (RP) is largely due to interference as well as pedagogical model from one or two primary language(s).

The lesser number of vowels in Nigerian local languages resulted to substitution of vowels in NE. as remedy to these shortages; NE speakers employ a number of phonological processes to help bridge the gap. The case of vowel strengthening evolves from lack of the equivalent vowels in Nigerian English. For example, /sɪstə/ in Standard English (SE) is realised as /sistæ/ in most NE utterances. The substitution that occurred in the NE output is a result of the absence of the half-open central neutral vowel, /ə/ sound in majority of Nigerian languages. The open front unrounded vowel /æ/, is the closest vowel that can replace the half-open central neutral vowel in this case. Other examples include colour /kʌlə/ which becomes /kɔlɔ/ and purple /pɜ:pᵊl/ which is realised as /pɔpu/ mostly; revealing how vowel sounds are mostly substituted in NE.

For epenthesis, a redundant semi vowel glide /j/ and front vowel, /e/, could be added to oil /ɔil/ in Nigerian local languages to become /ɔjel/. Despite the fact that NE tends to be faithful to orthographic pronunciation of sounds, deletion of final sounds is common in NE. Deletion is considered as part of the phonological processes of rapid speech, and only those in Banjo's (1971) variety III of NE speakers could attain the feature and that at erroneous instances. NE is mostly identified as a tonal language because it is characterised by the features of other indigenous languages which are transferred to NE. At the supra segmental level, NE has been variously termed as a syllable-timed language as against the SBE stress-timed language. As a result, for

syllables, every syllable tends to be stressed in NE and there are less problems with clusters, they are produced with ease in standard NE while in some uneducated varieties found in south-western region of Nigeria, clusters might be ridden with epenthesis. For example: screw driver /skru:draɪvə/ may become /sukuru diraɪvæ/ and bread /bred/ may be realised as /buredi/ Osisanwo (2012).

3.0 Theoretical Framework

Constraints based on Allan Prince's and Paul Smolensky's Optimality Theory (OT) propounded in 1991 served as the framework for this study. The theory appeals to constraint rankings as a means of generating the output from the input. The relationship between the input representation and the output presentation is mediated by the GENerator and EVALuator functions (McCarthy, 2008). The GEN generates an indefinite number of possible phonetic outputs or candidates of any given input form. The output forms generated by GEN usually compete with one another. Only one output is chosen as the winning or optimal phonetic form. EVAL receives the candidate output set from GEN and evaluates them in a parallel order. EVAL applies a set of CON (constraints), a universal set of rules which are our innate knowledge of the language, to choose the output form which is the most optimal as the winning output form. EVAL determines which candidate is most harmonic with the input.

OT is evaluated through ranked constraints which restricts the structure of possible output forms (Barlow 2001:243). The higher ranked constraints are rarely violated which shows the way the language is unmarked while the lower ranked constraints are frequently violated which reveals the way in which the language is marked. A candidate who does not satisfy every constraint can be chosen as the optimal. The candidate with fewest number of violated constraints is ranked optimal by EVAL. Operations of the EVALuator of possible output forms are presented in tableaux. Constraints are shown in columns; the forms to be evaluated are shown in rows. The marker for constraint violation is an asterisk (*) while that of a winning or optimal candidate with lesser violations is a pointing finger (☞). Constraint rankings are encoded with the left to right ordering of constraints. The violation that eliminates a candidate completely is fatal and gets the asterisk and exclamation mark (*!). Shaded cells in that column indicate that all other violations are not relevant as a result of the violation of a higher ranked constraint (Fox,

2002:198).
Two types of constraints are MARKEDNESS and FAITHFULNESS. FAITHFULNESS constraints are those constraints that ensure that all segments of input are parsed in output (Barlow and Gierut, 1999:1484). MARKEDNESS constraints evaluate structure of an output candidate independently with well-formed outputs being those that have the simplest phonological structure. (Gierut and Morrisette, 2005) an output that abides by a markedness constraint is inherently a simpler form.
Some of the constraints relevant for the present analysis are:

1. *ONSET syllables must not have onsets (Prince & Smolensky, 1993)
2. NO CODA syllables must not end with consonants (Wheeler, 2007)
3. MAX/MAX-V forbids deletion of segments; it infers that input vowels must have output correspondents (Wheeler, 2007).
4. DEP-IO output segments must correspond with the input segment. It forbids insertion (Kager, 1999).
5. *SCHWA-V allows the substitution of schwa in the output vowels (Wheeler, 2007).
6. *HIATUS forbids the occurrence of two adjacent vowels. Two adjacent vowels cannot occur without a consonant in-between (Sande, Ondondo & Rew, 2019).
7. *MAX - segments in the input must not correspond with segments in the output.

4.0 Methodology

The study adopted a descriptive design and a purposive sampling technique was used for data collection. Data was collected through observation, audio-recording and manual transcription carried out in selected facilities in Lagos, Osun and Oyo States. Unstructured utterances by 11 autistics were audio-recorded from four private special need facilities across Lagos, Osun and Oyo states (selected from southwestern Nigeria), eight of them from two special schools in Lagos, two others from one special school in Oyo and one from a special school in Osun state. The data were gathered over a period of nine months. The decision on the proposed size of the data was informed by the limited population of people with ASD and consented access to them. The data were transcribed using AC Gimson's (1977) phonetic system of transcription which were thereafter analysed using Prince and Smolensky's Optimality theory.

Only willing and verbal autistics who are properly diagnosed with autism according to the DMS-5, were allowed to partake in the study

after appropriate permission and ethical considerations were received from facility heads, and coordinators who in turn sought parental consents after assuring them of their children's and wards' confidentiality. Participants' identities are concealed during the process of analysis for the sake of confidentiality and they were informed of their right to withdraw from participating if they so wish. Data were collected through personal interaction and observations and the proceedings recorded via a recording app on the researcher's device. Data collected were analysed segmentally and supra-segmentally, to extrude autistic speech sound production and syllabic production, for the purpose of separating the features of Nigerian English away from language disorder in their utterances using the constraint-based theory of OT.

Presentation of participants

In table 1 below, necessary information about the participants is presented. There were eleven subjects with an average age of 13 years; eight males and three females. Two had English as their L1 while others had it as their L2, nine of them variously have Yoruba, Igbo or Hausa as their L1; only four subjects are from Southwest, more than half of the subjects (6) are from Southeast and one from Northwest.

Table 1: Demographic profile of participants

Subjects	Sex	Age	Gpz	L1	L2
Sub1	F	6	SE	English	-
Sub 2	M	9	SE	Igbo	English
Sub 3	M	7	SE	Igbo	English
Sub 4	F	12	SW	Yoruba	English
Sub 5	F	29	SW	Yoruba	English
Sub 6	M	9	SE	Igbo	English
Sub 7	M	26	SW	Yoruba	English
Sub 8	M	11	SE	English	-
Sub 9	M	12	NW	Hausa	English
Sub 10	M	10	SE	Igbo	English
Sub 11	M	12	SW	Yoruba	English

Table 1: study population and sample

KEY
Sub: autistic subjects, sex: F=female/ M=male, GPZ: geopolitical zone, SE: southeast, SW: southwest, NW: northwest.

5.0 Data presentation and analysis

Word (RP)	NE	1st Attempt	NA	Several A	
Sister /sɪs.təʳ/	[sis.tə/sis.tæ]	[i.tæ]	[si.tæ]	[sis.tæ]	
Impediment /ɪm.pe.dɪ. mənt/	[im.pe.di.ment]	[i.pe.di.me]	[i.kpe.di.men]	[im.pe.di.ment]	
colleague /kɔli:g/	[kɔ.li:g]	[kɔ.jin]	[kɔ.lɪ]	[kɔ.lig]	
About /ə.bɑʊt/	[æ.bɑot]	[ɑ.bɑ]	[ɑ.bɑot]	[ɑ.bɑot]	
early /ɜ.lɪ/	[e.li]	[e.ji:/e.ri:]	[e.ji:]	[e.li]	
Fountain /fɑʊn.tɪn/	[fɑon.tin]	[fɑ:.tin]	[fɑn.tin]	[fɑn.tin]	
purple /pɜ:.pəl/	[pɜ.pʊl/pɔ.pʊl]	[pɔ.bʊ]	[pɔ.pʊ]	[pɔ.pʊl]	
our /ɑʊə/	[ɑ.wæ]	[hɑ:]	[hæ.wæ]	[æ.wæ]	
Sleep /sli:p/	[sli:p]	[lip]	[sip]	[slip]	
Colour /kʌ.ləʳ/	[kɔlɔ]	[ɔ.lɔ]	[kɔ.lɔ]	[kɔ.lɔ]	

To collect the data above, random words were selected from various displayed wall charts and random texts. The researcher read the words first in standard RP and repeated them in NE before asking the participants to repeat the words, targeting NE pronunciation.

Their first atttempt as captured in the table, revealed that intelligibility would be lost if relied upon for understanding. With several deliberate attempts as captured in the last two columns are testaments that clarity could be achieved over time, if focused upon.

Tableau 1 the emergence of [eji:] and [e.ri:]
Input: early /ɜ:lɪ/ → [eji:] and [e.ri:]

Early /ɜ:lɪ/	*MAX	V: #	DEP
A. [eli]		*!	
B. [eji:]			***
☞ C. [eri:]			
D. [ɜ:lɪ]	*!		

Constraint ranking: *MAX>>V:#>>DEP

Optimal Candidates: [eji:] and [eri:]

Tableau 1.1 shows the output from four candidates interacting with three constraints. In this tableau, there are two optimal candidates, candidates B and C respectively. Candidate D is eliminated from the race for incurring a fatal violation by disobeying the *MAX rule, which requests that output should not be faithful to the input. By being faithful to the input, this candidate could not emerge optimal. Candidate A also exits the race for incurring a fatal violation against V:# constraint which instructs that all outputs must end with a long vowel. This candidate violates this constraint by ending with a short vowel. Finally, Candidates B and C, having obeyed the highly ranked constraints, emerged as the winning candidates. The two candidates having incurred similar violations in the least ranked constraint, DEP, a constraint which forbids the insertion of sounds not featured in the input, were both chosen because Candidate B introduced the voiced palatal semi vowel/glide, [j] while Candidate (iii) introduced the voiced alveolar approximant, [r], into their outputs, respectively, both disobeying the DEP rule. However, because these violations were not fatal ones, both candidates are still able to emerge as winners together.

Also, while [e.li] could be considered as the Nigerian version of /ɜ:lɪ/, there is an obvious issue with [e.ji:] and [e.ri:]. While the half open front spread [e], can be accepted as the NE variety of half close central neutral /ɜ:/, the voiced palatal semi-vowel glide [j], cannot be said to be a

representation of NE voiced alveolar lateral /l/, and should be a clear indication of language disorder (LD) and not a feature of NE in this instance. Notwithstanding the fact that this feature of substituting /l/ for /j/ is an attribute of speech errors typical to children less than five years of age. However, since all the participants in this study were aged above five, this feature is clearly as a result of language disorder and not that of speech error. Also, the existence of the substitution /l/ for /r/ in [e.ri:] has been featured in some dialectal deviations of some Igbo adult usage. In this case however, it adjudged to be language disorder because the output above was not made in the context of dialectal deviations but evidenced language disorder by Nigerian autistics. The voiced alveolar approximant, [r] however, because of its shared properties (voiced alveolar) in this case, can be said to be a misrepresentation of the target sound /l/, which exists in the NE variety. The emergence of the [i] as the final sound in the output by the NE rendition was a favoured variety in place of the RP's half-close front spread, [ɪ]; while the decision to use the long version [i:] by the candidates may suggest the influence of NE on the candidates.

Tableau 2: the emergence of [ɔ.lɔ]

Input: colour /kʌl.ə^{r}/ → [ɔ.lɔ]

/kʌl.ə^{r}/ colour	*MAX	*ONSET	MAX
A. **/kʌl.ə^{r}/**	*!	*!	
B. **/kʌl.ə /**		*!	
C. ☞[?.l?]			*

Constraint Ranking: *MAX>> *ONSET>> MAX

OptimalCandidate: /kʌl.ə^{r}/

Tableau 2 explains the emergence of Candidate C [ɔ.lɔ] in an autistic realisation of *colour*. Candidates A incurs a fatal violation of the highest-ranking constraint, *MAX, which forbids faithfulness to the input. Both candidates A and B also incur a fatal violation of the next highly ranked constraint, *ONSET which prohibits output from having an onset, thus,

ruling them out of the competition and leaving Candidate C to emerge as the optimal with a minimal violation of the least ranking constraint, MAX, which requires that output must be faithful to input.

While Candidate A's rendition represents the RP and some Nigerian elitist's realisation of the word, Candidate B's rendition is the most popular NE's realisation of the word. The substitution of the open central neutral, /ʌ/, and the half-open central neutral, /ə/ for the open back rounded sound, /ɔ/, points clearly to a typical feature of NE speakers. Abe (2023) established that autistics mostly substitute central vowels for /ɔ/, /e/, or /æ/ based on the surrounding sounds and this can be traced to their cultural backgrounds as Nigerians. This finding is similar to Sunday (2021)'s study of variants of central vowels in educated Nigerian English. However, the omission of the onset, the voiceless velar sound, /k/, is a function of impairment. The candidate has clearly not mastered the ability to create the voiceless velar sound, hence, omitting it from the output.

Tableau 3: the emergence of [pɔ.pʊ]
Input: purple /pɜ:.pˀl/ → [pɔ.pʊ]

/pɜ:.pˀl/	*MAX	NOCODA	DEP
/pɜ:.pˀl/	*MAX	NOCODA	DEP
☞ A. /pɜ:.pˀl/			**
B. /pɜ:.pˀ /]		*	**
C. /pɜ:. ˀl/	*!		

Constraint ranking: *MAX>>NOCODA>>DEP

Optimal Candidate: [pɔ.pʊ]

Tableau 3 explicates the emergence of Candidate A [pɔ.pʊ] in the realisation of *purple*. Candidate C violates the highest-ranking constraint, *MAX, which forbids faithfulness to the input and so incurs a fatal violation (*!). Candidate B also incurs a violation of the next highly ranked constraint, *NOCODA which bans an output from having a coda, this violation is not a fatal one but the constraint is next in hierarchy, the candidate therefore bows out of the competition and leaving Candidate A to become the winner with a minimal violation of the least ranking

constraint, DEP, which requires that output must not entertain any insertion otherwise not found in the input. Because of the substitution of the central sounds in the output of Candidates A and B, this constraint is being violated but since it is the least ranked constraint, Candidate A is able to emerge the winner.

Again, the use of open back rounded vowel, /ɔ/, in NE is stretched to fill in the place of half-close central neutral sound, /ɜ:/, in the first syllable of *purple* and half-close back rounded sound, /ʊ/, to replace /ˀl/ in the second syllable of the word, is relative to the discussion in the analysis of *colour* above. The outputs in Tableau 3 above have clearly been influenced by Nigerian English and not Language disorder.

Tableau 4: The emergenceof [æ.wæ]

Input:our /ɑʊə/ → [æ.wæ]

Our /ɑʊə/	*HIATUS	*V:#	*ONSET	MAX-V
A. [hæ.wæ]			*	
B. [ɑʊə]	*!			
C. [hɑ:]		*	*	
☞ D. [æ.wæ]				***

Constraint ranking: *HIATUS>>*V:#>> *ONSET>>MAX-V

Optimal candidate: [æ.wæ]

Tableau 4 shows the constraints responsible for the emergence of [æ.wæ] as the optimal output. The highest ranked constraint, *HIATUS, is violated by Candidate B. This violation happens because all the phonemes of the word are faithful to the input, hence violating *HIATUS which states that no two adjacent vowels should occur without a consonant in between. Thus, Candidate B is eliminated from the competition. Candidate C is the next to bow out of the competition having violated the next highly ranked constraint, *V:#, which requires that no output ends with a long vowel. Candidate A also leaves the competition on the account that *ONSET, which demands that all output must not have an onset was unheeded. With all the other competitors eliminated, Candidate D is able

to emerge as the winner of the competition in the tableau, having satisfied the highest constraints over the lesser ranked constraints.
The optimal output, [æ.wæ], is the typical NE realisation of the word *our*. Hence, the autistics' realisation of the word is heavily influenced by the NE society where they are.
The acoustic analysis of *our* is presented below:

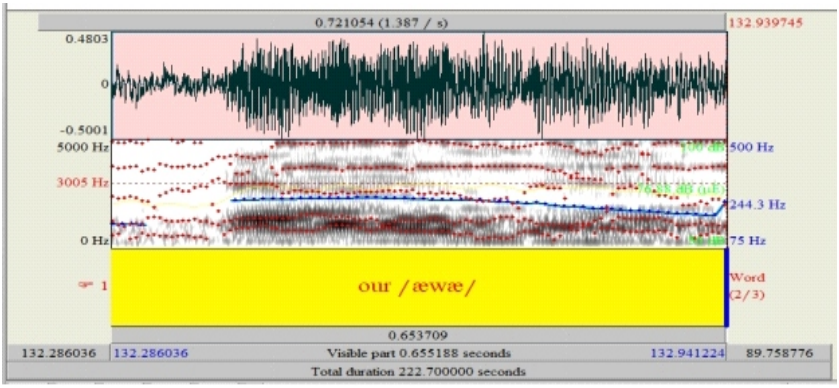

Figure 1: Acoustic representation of *our*

The image presented above is that of *our*. The formants for the vowels are at 680.1 for F1 and 1260.7 for F2. The intensity value is at 58.2 dB while the pitch is at 92.69 Hz. The first and second formants for both peaks in the two syllables are within the same range because both sounds [æ], are the same. The consistency is seen, not only in the values, but also in the horizontal line that the first and second formants present.

Tableau 5: The emergence of [ɑ.bɑ]

Input: about /ə.bɑʊt/ → [ɑ.bɑ]

	*ONSET	*SCHWA	NO CODA	MAX
A. [ə.bɑʊt]		*!	*	
B. [ɑ.bɑot]			*	
☞C. ɑ[bɑ]			*	
D. [bout]	*!		*	

Constraint ranking: *ONSET>>*SCHWA>>NOCODA>>MAX

Optimal Candidate: [ɑ.bɑ]

The fourth candidate is the first to be eliminated for violating the highest-ranking constraint, *ONSET, which insists that output must not start with an onset. Candidate D fails to abide by this constraint by starting with a consonant. Also, Candidate A violates the next highly ranked constraint, *SCHWA, which forbids the manifestation of central vowels in the output. By retaining the vowel in its first syllable, Candidate A violates this constraint and is unable to emerge as the harmonic candidate. Candidate B also exits the competition for disobeying the NOCODA constraint which forbids any output segment from ending with a consonant; this candidate, together with the previously eliminated ones, retained the coda consonant in their outputs and are assigned an asterisk each, leaving Candidate C to emerge the optimal candidate because it obeyed the highly placed constraints and disobeyed the least ranked constraint, MAX, instead. MAX disallows any form of deletion in the output. Candidate C's output [ɑ.bɑ] violates the constraints and incurs a violation but the violation is not a fatal one, therefore it emerges as the optimal candidate.

6.0 Discussion of Findings

Where language disorder ends in ASD and where NE commences

Nigerian English is a variety that is accepted and understood by the larger society and may be recognised intelligibly in some English-speaking parts of the world. The same cannot be said of Language Disorder (LD). Sister /sɪstə/ for instance, is mostly realised as [sistæ] in NE, whereas, other variant outputs such as [i:tæ], [i:stæ] and [si:tæ] are clearly as a result of language disorder. It can however be averred that the use of /æ/ in place of /ə/ in these outputs are without doubt a feature of most varieties of NE and not a result of LD.

In the case of purple /pɜ:pᵊl/ and colour /kʌlə/, which are usually realised as [pɔpu] and [kɔlɔ] in NE, the use of the back vowel, /ɔ/ to substitute the central vowels, /ɜ:/ and /ʌ/ in the first syllables of *purple* and *colour,* /ɔ/ was also featured in the last syllable of *colour,* while /ʊ/ replaced the final syllable of purple. These are typical features that can be found in NE; it can be averred that the use of /ɔ/ and /ʊ/ by the participants are influenced by NE while the cases of elision and substitution in [ɔlɔ] for *colour*, and [pɔbu] for *purple* is a function of LD and not NE. The same can be said of *sleep* /sli:p/ which becomes [li:p, si:p, bli:p] which suggests cluster reduction, simplification and stopping.

The candidates showed preference for back vowels over the central vowels and for monophthongs over diphthongs. The preference for back vowels is not unique to autistics participants alone, but is a common occurrence among NE speakers and typically developing children as well. While the choice of pure vowels over diphthongs in the output can be traced to impairment in the autistics' rendition, younger children without speech disorder can also realise similar words as such, but would outgrow it without necessarily going through intervention which is not the case with the autistic children.

7.0 Conclusion

This paper set out to outline Nigerian features in the phonology of people living with autism.

This study identified several features of NE in the phonology of autistic people, language disorders in the utterances of people living with autism and clearly demarcated features of Nigerian English from language disorder in their speeches. The result showed that the over stretching of vowels as in 'early', in NE to accommodate those in SE is also employed by participants in the realisations of test words and in the way they speak. However, elision, stopping epenthesis, and deletion were suggestive of language disorder in their utterances. Not every ASD speech is a result of language disorder, influences of their linguistic background may also feature in their utterances. Some of the highlighted issues in the study, may also be features of linguistic transfers from an indigenous language, but this claim is subjected to further investigations.

Based on the outcome of this study effort, phoneticians can use language to isolate ASD early for treatment. The study points out to speech therapists and phoneticians, the problematic aspects of an autistic utterance that will aid intelligibility and clarity if focused upon for correction. Speech coordinators and special needs educators should be encouraged to study Phonetics and phonology to aid the identification of speech issues.

Their knowledge in the course may be useful for identification of Language disorder, speech errors and other speech deviations in autistic speeches. Some of these speech experts may then be attached to Teaching hospitals for easy and early identification of language disorder that pertains to ASD and other special needs children as time goes on.

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Grapho-Phonological Analysis of Selected Readers' Sensitivity to the Broadcast of Newspaper Headlines

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Abstract
The study identified and described various phonological features signalled by the use of punctuation in some newspaper headlines and compared the oral renditions of the broadcast with the graphological representations in the newspapers in the light of English as a Second Language (ESL) in Nigeria. The primary data comprised ten selected recorded headline broadcasts from Silverbird Television (STV) and African Independent Television (AIT). The exact newspapers were used collaboratively. Punctuations and headlines were extracted and subjected to acoustic analysis. The secondary data comprised books, journal articles, and the internet. The findings revealed that the broadcasters were insensitive to grapheme-phoneme correspondence in their observance of punctuations which potentially resulted in lots of ambiguities in the readings by the listeners. The study concluded that the grapho-phonological components were significant in news readers' oral proficiency.

Keywords: Grapho-phonological, Newsreaders, Broadcast, graphemes, phonemes

1.0 Introduction

The mass media as a way of communicating news about daily topical events began in the 17th Century (Baran, 2004). It first started in printed form as a newspaper and now penetrates all social classes through social media. At first, news items on each mass medium such as print, radio and television were uniquely presented on their specified medium. According to Cox (2000, p. 4) at the turn of the 21st century, with the advent of the Internet, alongside fundamental breakthroughs in Information and Communication Technology-(ICT), reading of newspapers shifted from the physical nature of the purchase of tabloids to reading an electronic form.

The mass media perform the role of informing, educating,

entertaining, sensitising and awakening the public to topical developments, events and happenings around them, locally, nationally and internationally. Media stories published in the newspapers are often relatively and objectively sourced and reported through more robust writing styles that are aimed at captivating and stimulating readership among the public. The primary product of all mass media is news, which the newspapers, radio, television and online news channels make their mainstay. Since news presentation and production are a daily affair, there is a need to stimulate readers of newspapers and create an agenda for public discourse. The more permanent newspaper sees the broadcast television programme and presentation which is transient as that which directs and redirects the public to read details of the news headlines presented on air. The headline is the most interesting part of the newspaper, because newspaper headlines are considered to have their characteristics and status in news discourse (Bell, 1991). Fairclough (1995, p. 21) states that "headlines have distinctive syntactic properties, which make them a grammatical oddity". The headline is a unique type of text and it operates within a range of restrictions that limit the freedom of the writer (Reah, 1998).

2.0. Literature Review

Newspaper headlines are strategically couched texts which spotlight essential information to the public about topical events and issues happening in the society. Newspaper stories cover fields like politics, culture, business, crime, infrastructural development, education, entertainment, sport, and religion. They are written in typified textual fonts and sizes to signify their importance. They are sometimes placed on the front, inside and back pages of the newspapers as a way of giving prominence to the stories, thereby setting the agenda for public discourse. Headline news reading in television is the process adopted by the media as a way of keeping the viewers abreast with topical issues available on the pages of the newspapers daily. The broadcast of newspaper headlines presented on air directs and redirects the public to read details of the newspaper afterwards.

Nigerian newsreaders aside from being information carriers are seen as role models to the majority of the populace since English is a second language as well as the lingua franca of the country. The Nigerian newsreader is seen as a role model when it comes to the usage of the English language in Nigeria. This is because they are expected by the

nature of their training to use Educated Nigerian English for their professional assignment (Akinbiyi, 2020). There is also an assumption that since the newsreaders communicate orally, more attention is given to pronunciation and accentuation of the English language. Adejuwon (2011) opines that most broadcasters especially those in state-owned electronic media organisations are not intentionally intelligible in the area of pronunciation and accentuation, thus further clarifications have to be made by any native speaker listening to them. The news broadcasters in privately owned television stations have a good command of the Educated Nigerian English, although in the oral rendition of the news headlines, there is still sensitivity to the observance of various phonological features in the read aloud and this jeopardises meaning and may get the listeners more confused because not all the hearers have access to the newspapers.

Soneye (2004) analysed the phonological sensitivity of selected secondary school teachers in Ile-Ife to elision in English. The study reiterated that Nigerian users of English have not maximally internalized the principle of elision in the articulation of some English words which affects the performance of students in SSCE examinations. This present research investigates factors related to newsreaders' sensitivity to grapheme-phoneme correspondence and grapho-phonological features in the oral renditions of newspaper headlines. This is the gap the study intends to fill. This is why readers of newspaper headlines on television need to get acquainted with the texts, fonts and punctuations used by the various newspapers before the oral rendition of the headlines. Language is a powerful tool in communication that when misused can create a lot of ambiguities (punctuation ambiguity, phonological ambiguity) to the listeners. This is one of the difficulties experienced by most Nigerian speakers of the English language since they are second-language speakers. There is a need for especially broadcasters and presenters reading newspaper headlines on air to understand these rules, especially the graphological and phonological aspects of language.

2.1 Objectives of the Study

The specific objectives of the research are to:

(a) identify and describe various phonological features signalled by the use of punctuation marks in the recorded newspaper headlines;

(b) compare the oral renditions of the broadcasters with the

graphological representation in the newspapers; and

(c) analyse these phonological features with the standard graphological representations of the punctuations in the light of English as a Second Language (ESL) in Nigeria.

2.2 Theoretical Framework

The theoretical framework adopted by the study was premised on the Principle of Orthographic Complexity of Arab-Moghaddam and Senechal (2001). The authors state that reading is primarily influenced by word skills of the reader which include the identification and spelling of words. Hence, they posit that the identification of words refers to the ability of the reader or presenter to identify words based on a match between a grapheme and a phoneme. Furthermore, the identification of words and spelling depends on phonological and orthographic skills. In this regard, readers and presenters of newspaper headlines read words by considering how the phonology corresponds to the graphology.

One of the problems that Nigerian newsreaders have is the uncertainty about how to pronounce certain graphemes when reading aloud. Newsreaders and presenters who can relate graphemes to phonemes could use this ability to read newspaper headlines better on television. Through the understanding of phonological skills, readers represent the phonemes in a word with its graphemes. The newsreaders may not attain speaker proficiency, while reading aloud the news headlines but can strive to approximate the target language. It will be a ubiquitous task for news broadcasters to observe accurately the pauses and graphology since the English language is stressed time. However, news readers should read and avoid ambiguities. For instance, if a broadcaster should say 'Buhari sleeps on corruption' and the printed headline reads 'Buhari slips on corruption', ambiguity may set in for the listeners. Taking cognizance of minimal pairs, punctuation observance, pauses, and so on, is important and newsreaders especially in the ESL environment should make efforts to make distinctions in the pronunciation of grapheme-phoneme correspondence. According to Wimmer & Humer (1990), the performance of word identification as well as spelling is predicated on the measure of phonological skills such as reading pseudo-words, non-real pronounceable alphabetical characters that can be read by the reader or presenter in a grapheme-to-phoneme correspondence.

Orthographic skills also aid the newsreaders in the oral rendition of the newspaper headlines to read irregular words which depend more on their knowledge of the visual form of printed words as well as the corresponding rule of grapheme-to-phoneme to avoid incorrect pronunciation of the letters. In reading newspaper headlines that are largely made of letters and characters, the emphasis for the newsreaders lies squarely on how phonological and orthographic skills used in reading and pronunciation of words are understood.

3.0 Methodology

The data for this study were drawn from ten selected series of recorded news headline broadcasts from six newscasters; three from each of Silverbird Television (STV) and Africa Independent Television (AIT). These stations were chosen based on the Educated Nigerian English of the newsreaders in an ESL environment. Hardcopies of the newspapers (*The Daily Sun, The Guardian, The Nation, The Punch,* and *The Nigerian Tribune*) were also used for collaborative validation. These newspapers were selected because they are widely read across the country. The selected news headlines were purposively recorded between March and April 2016. This period was chosen because it was characterised by brouhaha about fuel scarcity, fuel subsidy, and other pressing issues. Punctuation features and headlines were extracted and subjected to acoustic analysis using WASP speech software.

4.0 Data Analysis and Results

Phonological Features in the Recorded Headlines

Some phonological features like observance of pauses and intonation are identified in the oral rendition of the recorded headlines. These features are analysed in Table 1, below:

Table 1. Identified Phonological Features in Recorded Headlines

S/n	Headlines	Graphological Representations	Phonological Features
1	US to trace, return stolen billions of dollars to Nigeria	Comma	pause
2	How ex PDP chair, Haliru, son got three hundred million naira	Comma	pause
3	Ese Oruru: Sureties turn down Yunusa	Colon	pause
4	Father, daughters die in fire Explosion	Comma	pause
5	Ambode: Lagos loses 42 billion naira yearly to traffic congestion	Colon	pause
6	Buhari, Dogara, Fayose, rejoice with Tinubu at 64	Comma	pause
7	Rivers: PDP wins 3 Reps seats as INEC releases more results	Colon	pause
8	Fuel scarcity my story, by Kachikwu	Comma	pause
9	Queues still visible at filling stations, price rises	Comma	pause
10	Nigeria, US to discuss naira Devaluation	comma	pause

The table above shows the various phonological features signalled by the use of punctuation in the selected newspaper headlines. As seen above, the graphological device, -the comma is indicated in speech as a pause. Therefore, anywhere a comma is indicated in the written, it should be observed as a pause, while reading.

Comparison of Oral Renditions with the Graphological Representations

The news headlines analysed earlier have been compared with the perception in the read-aloud. In Table 2 below, a comparison is made to show the nexus between the graphological representations and the oral renditions.

Table 2. The Dissimilarities between the Oral renditions and the GraphologicalRepresentations

s/n	Oral Rendition (perception)	Graphological representation (ideal)
1	Buhari and Dogara and Fayose rejoice with Tinubu at 64	Buhari, Dogara, Fayose rejoice with Tinubu at 64
2	EFCC, arrest Jonathan's cousin	EFCC arrests Jonathan's cousin
3	Rivers: PDP wins three, Reps sits as INEC releases more results	Rivers: PDP wins 3 Reps seats as INEC releases more results
4	No agreement yet as Oyo, government, workers meet	No agreement yet as Oyo government, workers meet
5	APC PDP Senators set to clash, over, Saraki's seat	APC, PDP Senators set to clash over Saraki's seat
6	Senators split over Saraki, rule out Impeachment	Senators split over Saraki rule out impeachment
7	Kachikwu: Fuel scarcity ends, April 7 apologises	Kachikwu: Fuel scarcity ends April 7, apologises
8	Old girls' PTA in war of words	Old girls, PTA in war of words
9	US to trace return stolen billions of dollars to Nigeria	US to trace, return stolen billions of dollar to Nigeria
10	How MDAs undermine enforcement of information, Act	How MDAs undermine enforcement of information Act

From the table above, one would observe the news readers' insensitivity to the observance of pauses. The news readers are either ignoring the graphological representations or making insertion of their own grapho-phological representations in speech, thereby causing misunderstanding and altering the editor's intended meaning. The news readers' insensitivity to the grapheme-phoneme correspondence has caused a lot of ambiguities in meaning and the listeners may never have the opportunity to cross-check what they have heard on television.

Table 3. The Similarities between the Oral renditions and the Graphological Representations

s/n	Headlines	Oral Renditions	Graphol ogical features	Phonolo gical features
1	The Tunji Braithwaite we'll miss, by Buhari, Atiku, govs	The Tunji Braithwaite we'll miss, by Buhari, Atiku, govs	comma	pause
2	C.J dismisses Metuh's petition, ask judge to continue trial	C.J dismisses Metuh's petition, ask judge to continue trial	comma	pause
3	How govt plans to end fuel crisis as black market booms	How govt plans to end fuel crisis as black market booms	comma	pause
4	Braithwaite kept govt on its toes	Braithwaite kept govt on its toes	comma	pause
5	How ex PDP chair, Haliru, son gets N300m-Witness	How ex PDP chair, Haliru, son gets N300m-Witness	comma	pause
6	Crises looms at OAU over appointment of VCs	Crises looms at OAU over appointment of VCs	comma	pause
7	Commuters now trek as fares rises by 200 percent	Commuters now trek as fares rises by 200 percent	comma	pause
8	Trouble looms in states over unpaid workers' salaries	Trouble looms in states over unpaid workers' salaries	comma	pause

In Table 3 above, the respondents were sensitive to the graphological representations of the news headlines in their read-aloud. The graphological representations and the oral renditions were the same. All punctuations were observed in the read-aloud. This is quite different from table where there was no correspondence between the graphological representations and the oral renditions.

5.0 Discussion of Findings

The standard graphological representations of punctuation in English especially in an ESL environment that were identified in the oral renditions are the full stop, the comma, and other phonological features

identified were stress, intonation, and pitch. The full stop was characterised by a longer pause (some seconds), the comma was indicated by a brief pause, and the stress was characterised by the emphasis placed on the words and pitch by the rise and fall of the voice.

This study investigated the phonological features and graphological features of news headlines and how significant they are in the oral rendition by news readers. These phonological features need to be duly observed by the news readers in their oral renditions in order to reduce ambiguity in the listener's perception and arouse their interest. This research analysed the phonological sensitivity of Africa Independent Television and Silverbird Television news broadcasters to the phoneme-grapheme correspondence in English. The basis for this research is to articulate efficiently the role which the English language graphological structure plays in determining the phonological proficiency level of ESL speakers, especially in Nigeria. The qualitative research has shown how newsreaders neglect the accurate observation of pauses and other graphological components in the read-aloud of the news headlines and thus miss what the editor intended as meaning of the headlines. The observance of pauses required after commas could be accentuated by a silent count (maybe seconds). This will produce an awareness of tone. Some of the readers used the rise and fall tunes for emphasis.

There was sensitivity to the graphological representations of the newspaper headlines by some of the respondents. It showed the graphology-phonology relationship. It portrayed respondents' phonological awareness of grapheme-phoneme correspondence. On the other hand, there was insensitivity to some of the news headlines by some. There were grapheme-phoneme discrepancies among the respondents. The newsreaders lacked awareness in the grapheme-phoneme relationship, thereby allowing room for possible ambiguity on the part of the listeners. Some of the newsreaders lack exposure to phonological and punctuation awareness and this could be improved upon if they independently practise the read-aloud before they come on air.

As seen in the analyses above, Nigerian newsreaders have difficulty enunciating graphological devices like punctuation features in read-aloud. A lot of inconsistencies were seen in the observance of pauses as well as the misplacement of intonation on mono-syllabic words like *looms*, *booms*, and *loot.* The newsreaders have the analytical ability to grasp the phoneme-grapheme correspondence but need to be trained on

how to observe pauses in the oral rendition of the print.

The first objective stated that this research was set out to identify and describe the various phonological features signalled by the use of punctuation marks in the oral rendition of newspaper headlines. From the analyses given in the paper, it can be said that some broadcasters do not understand the relationship between the written and spoken and so encounter difficulty in applying the graphological components in the read-aloud. According to Bada (2006), pauses, along with stress, intonation and pitch, are of great importance in speech and reading. Perfetti (1985) and Ehri (1992) reiterate the importance of phonological, lexical, orthographic, and semantic representations in the reading process, stating that skilled reading involves the processing of, and links between, these features of print. Reading requires the readers to handle information simultaneously.

The second objective stated that the research was set out to compare the oral renditions with the graphological representation in the newspapers. From the analyses, it is observed that newsreaders do not know the functions of punctuation in discourse. Although some of the newsreaders articulate their phonemes well and speak fluently, they do not adhere strictly to the observance of punctuation features in their oral rendition. Rossiter (2009) and Tavokoli (2011) found that speakers in an ESL environment pause more often and for longer periods than native speakers do.

The third objective focused on the analyses of these phonological features to the standard graphological representations of the punctuations in the light of English as a Second Language (ESL) in Nigeria using the newspapers as validation.

6.0 Conclusion

This research has shown that the graphological representations of punctuations in the English language are the same in an ESL environment and that there exists a strong nexus between graphology and phonology. The field of phonology is of importance in the observance of pauses, the fall and rise in voice pitch especially the question mark, and other punctuation marks in especially read-aloud texts. Readers must understand that the grapheme, which is the symbol, should be reflected when reading because of the connection between the written and the spoken texts.

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Phonological Features and Brand Engagement in Some Nigerian Digital Advertising Campaigns

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Abstract
This study sets out to identify the phonological features present in Nigerian digital adverts and assess if any of the identified features were likely to lead to increased brand engagement. By identifying which features drive audience engagement, the study provides valuable insights for advertisers to craft more persuasive campaigns and offers empirical data to help marketers enhance brand recall and consumer interaction through effective use of sound patterns. The study adopted a mixed-method design, with a perceptual qualitative analysis of the adverts and a quantitative analysis of 120 responses to a digital questionnaire on memorability, perception, and brand engagement. Nine adverts, voiced in English and Nigerian Pidgin (Naija), were purposively selected from three digital platforms where Nigerian digital adverts are found. The study identified 10 phonological features, including repetition of sounds, which was found to be the most used, the most easily observed and the feature most likely to lead to brand engagement. The attitudinal, accentual, grammatical and discourse functions of intonation were also present in the advert samples. The study found that digital adverts follow the steps of the AIDA model, using phonological features to attract the audience and lead them to engage.

Keywords: AIDA Model, Brand Engagement, Digital Advertising, Naija, Phonological Features

1.0 Introduction

Advertising is a 'paid, owned, and earned mediated communication, activated by an identifiable brand, and intent on persuading the consumer to make some cognitive, affective or behavioural change, now or in the future' (Kerr & Richards, 2020). This definition shows advertising as a multifaceted field that aims at disseminating a persuasive message about product, service or an idea using any media, with the intention of eliciting a reaction from the receiver. With the evolution of digital technologies,

traditional advertising methods have expanded to include digital platforms, offering cost-effective solutions and a wider audience reach, which is the overarching purpose of advertising campaigns (Richards & Curran, 2002). According to WebFX (2020), digital advertising makes it possible to interact with audiences, get immediate feedback, track results and even target specific audiences for specific advert campaigns. With the widespread adoption of digital technologies like smartphones, and increasing internet penetration, Nigeria boasts a vibrant digital advertising landscape across various platforms, including YouTube, websites of television and radio stations, and streaming services like Spotify, presenting a lucrative market for advertisers, and attracting both local and international brands to invest in digital advertising campaigns.

2.0 Literature Review

Language is essential for the conceptualisation and realisation of an idea (Sapir, 2014). Since advertising is a type of communication, it follows that it can only be achieved through the instrumentality of language, be it written, spoken or signed. With a population of over 200 million people, Nigeria has a pluralistic linguistic landscape where several languages and language varieties co-exist, including, English, over 500 indigenous languages, Nigerian Pidgin English, and several foreign languages. The language commonly called Nigerian Pidgin or Nigerian Pidgin English is a creolised English-lexified Pidgin renamed Naija at the 2009 Nigerian Pidgin Conference held at the University of Ibadan (Esizimetor, 2010). All of these over 500 languages also have various varieties, accents and dialects (Adejobi & Adejobi, 2023). English is the dominant language used in digital advertising in Nigeria, due to its widespread use in education, business, and popular culture.

Languages have phonological features which are distinctive elements and characteristics of speech sounds within a particular language system. These features play a crucial role in the organisation and interpretation of linguistic sounds, contributing to the differentiation of meaning and facilitating communication within a speech community. Languages also have nuances that influence how messages are perceived and understood. These subtle variations play a crucial role in digital advertising campaigns aimed at engaging audiences and eliciting desired responses from consumers. Understanding the phonological features embedded in digital adverts, such as repetition, alliteration, rhyme and

intonation become essential in deciphering their impact on brand engagement. This study, therefore, explores the relationship between phonological features, brand engagement, and digital advertising campaigns in Nigeria. By analysing how these elements interrelate, the research aims to uncover insights into effective communication strategies and their implications for brand success in the digital landscape.

2.1 Distinct Phonological Features of Language

Phonological features of languages are distinctive characteristics of speech sounds within a particular language system. They are operationally defined in this study as linguistic elements that modify the sound patterns of language to achieve communicative effects, and encompass any technique, device, or structure that alters the way a word or phrase is pronounced, affecting how it is perceived by the listener. By this definition, several phonological features were found in this study, including repetition, rhyme, assonance, alliteration, vowel elongation and pronunciation deviation. Repetition is a device in which a phoneme, word or phrase is repeated two or more times in a piece of text. Features of repetition include Rhymes, the repetition of the same sounds at the end of a given pair of words; Assonance, the repetition of the same vowel sound in a string of words; Alliteration, the repetition of consonant sounds, often at the beginning of adjacent or closely connected words; Anaphora, the repetition of phrases or words in a set of clauses, sentences, or poetic lines; and Epiphora, the repetition of phrases or words at the end of successive clauses, sentences, or poetic lines (Malewitz, 2020). An interjection is a word, phrase, or sound used to convey an emotion such as surprise, excitement, happiness, or anger. Some common interjections in spoken language in the Nigerian context are *hey, oo, ha, eh, hmm, yee, aw, yo, wow, brr, sh*, and *yippee*. Interjections are often accompanied by an exclamation mark (!) or an interrobang (?!). Vowel elongation refers to the lengthening of a vowel sound beyond its typical duration in spoken language, resulting in a more prolonged and sustained articulation of the phoneme. It can draw attention to specific words or phrases and can enhance the musicality or rhythm of speech. And then there is Pronunciation deviation, which involves bending pronunciation, deliberately violating the norms of standard, acceptable pronunciation for the convenience of rhythm or rhyming. This deviation is done temporarily not with the intention of

changing or adding to the vocabulary of the language. Another phonological feature, a feature of suprasegmental phonology, is Intonation. It involves the use of patterns of pitch, or melody (an auditory sensation controlled by the speaker and experienced by the hearer) to communicate meanings which are not spoken.

2.2 The Role of Adverts in Influencing Brand Perception

Adverts play a crucial role in influencing brand perception and consumer behaviour and brand engagement, making it essential for advertisers to understand how to craft effective communication strategies that resonate with the target audience. Failure to create adverts that resonate with the audience can lead to reduced brand engagement and a loss of revenue for the brand. Despite the growing significance of digital advertising and the copious studies on the nexus of language, advertising and brand engagement, limited research exists on the specific phonological features that are used in Nigerian digital advertisers and the effect these various phonological features have on brand engagement.

The study aims to bridge the gap in knowledge on how different phonological features and nuances in English and Naija digital adverts influence brand engagement among these Nigerian consumers (Proctor, 2013). Addressing this research problem and bridging the knowledge gap is significant so that advertisers can gain valuable insights into which phonological features actually increase brand engagement and which do not. The insights will also be invaluable for linguists, content creators and voice actors who create content for digital marketing. The present study, an offshoot of a broader study on the language of advertisements in Nigeria, focuses on the phonological features that are found in adverts on digital platforms and how these features shape consumer perceptions and responses to advertising messages. There are 2 sets of population for the study: Nigerian digital adverts and Nigerian Millennials, also known as Gen Y, those born between 1982 and 1996. This study aims to explore the effects of phonological features on brand engagement in Nigerian digital advertising campaigns. The specific objectives are: 1, to identify the phonological features that exist in Nigerian digital advertising campaigns, and 2, to examine how phonological features affect brand engagement in Nigerian digital advertising campaigns.

The main communicative purpose of any advertising message is to move the receiver to make a conscious decision about a product or service. Experts have long investigated the link between language and

advertising from various perspectives or disciplines. A study on the use of Language in Digital Marketing by Oza (2019) found that language can be the most effective marketing tool. It showed that creating digital advertising content in the preferred language of the target audience was crucial to brand engagement. The study posited that Millennials (Gen Y, those born between 1982 and 1996), make up about three quarters of those who shop online and are the target audience of digital adverts. They prefer to engage with brands that used the language of the people, making it imperative that language plays a key role in any global digital marketing and long-term consumer strategy. Despite showing the importance of language to advertising, the study did not look into specific phonological features of language that enhance brand engagement, which is the focus of this present study.

Another study on the basic features of advertising language by Shirinboyevna, (2020) examined the text of advertisement from a sociolinguistic point of view. The study showed changes in the lifestyles of members of society are reflected in their language, including the way language is used in advertising, reflecting the issues affecting the society and public life in general, and linguistic resources available in that society. Though the study thoroughly explored the sociolinguistic facets of the language of advertising, it did not touch on the phonological features of language and how these can affect brand engagement. The paper 'Language Deviation in English Advertising' by Ren & Yu, (2013), identified the phonology of a language, along with the graphology, its lexicon and its grammar as essential elements and norms of language knowledge. This study hypothesises that advertisers deliberately violate these norms to create memorable adverts. Another study on the tools and techniques used in the language of Indian TV advertisements noted that copywriters frame their advertising messages in a way that convinces their audiences that theirs is better than other similar products (Shariq, 2020). The study adopted a qualitative approach to investigate 75 different Indian TV advertisements. The advert data was gathered and categorised systematically according to the tools and techniques found and then inferences were made from the analysis of the data collected. This present study adopts a similar method of categorisation and analysis of the phonological devices found in Nigerian Digital Advertising Campaigns with a view to identifying which phonological devices are used by Nigerian advertisers. Gbadegesin's (2018) work on 'Discourse Intonation Patterns of Females in Selected English-Medium Nollywood Films' emphasizes that intonation enhances meaning in communication.

Intonation can be used to perform several functions in an utterance, including attitudinal, accentual, grammatical and discourse functions.

3.0 Theoretical Framework

This study is hinged on two theories. The first one is the AIDA (Attention, Interest, Desire, Action) Model. This model, designed by Edward Kellogg Strong in 1925, is a behavioural model that outlines the stages that consumers go through in engaging with the advertising message of a brand (Strong, 1925). The central idea of AIDA is that adverts increase consumer consciousness and arouse their attention, leading them to take a desired action, namely engaging with the brand and ultimately making a purchase. In the context of phonological strategies in digital adverts and jingles, this model can be applied to analyse how different phonological features can be used to guide audience to engage with a brand. The second theory on which the study is hinged is the Discourse Intonation (DI) Theory, a theory of intonation proposed by David Brazil, in the 1980s. When studying the intonation of an utterance, linguists usually consider the form (Tone, Pitch, Key etc) and the function (Attitudinal, Accentual, Grammatical and Discourse functions) of the intonation (Roach, 2009). Discourse intonation focuses on the function of the intonation, what the speaker intends to communicate in the discourse, in this case, the advert message. Gbadegesin (2018) explained that the interpretation of intonation is contextual in nature; the intonation choices and meanings are tied to the context in which they occur. The theory emphasises the communicative value of intonation in terms of the contextual implication from the language user's point of view (Odeyemi, 2017). Discourse Intonation Theory can be applied to analyse the intonational features of advertising discourse so as to shed light on how phonological features influence audience engagement.

4.0 Methodology

This study employed a mixed-method research design, with qualitative approaches used to carry out a content analysis on the selected adverts, and quantitative approaches used to provide insights into simple statistical analysis. The population for the study was all adverts on Nigerian Digital platforms. Nine adverts were purposively selected for the study, three each from three different digital platforms. One advert

entirely in Standard English, one in the South-West Nigeria variety of Naija and one in a combination of both languages was selected from each of the three platforms. The digital platforms were also purposively selected. Spotify was selected because it is the most popular streaming platform in the world, with 350 million users and 150 million subscribers (CNN Underscored, n.d.). YouTube was selected because it is the largest video-sharing website in the world with over 2.6 million active subscribers (LinkedIn Pulse, 2014). And Facebook, because it is the most popular social network with over 3 billion active users (Shopify, n.d.). The Facebook live streaming page of Splash FM105.5 was selected as it has been repeatedly ranked as the most listened-to radio station in Oyo State (MPS Nigeria, n.d.; Dixon, 2024).

Also, a digital questionnaire was designed with Google Forms; the first section of the form was designed to identify the phonological devices found in the adverts. Audio files of the selected adverts were embedded in this section. Only the audio of the adverts was used so that other features including the quality of the video or the celebrity of the actors would not skew the reactions of the participants. The second section was to gather information on the effect of the different phonological devices on the respondents' desire to engage with the brand. No identifying data, like name or email address, was collected, ensuring anonymity and confidentiality. However, there was a question on 'age' to ensure that the responses selected were those received from only those who fall into Generation 'Y' bracket. Those whose responses fell outside the desired age-range were thanked and their forms terminated. Once the advert samples were selected, they were transcribed using Roman letters so that they can be read. A qualitative phonological content analysis was then carried out to identify the phonological devices used in each of the adverts. The portions of the adverts containing the observed phonological features were transcribed using the International Phonetic Alphabet (IPA) so that the phonological features can be displayed. The advert data was categorised systematically according to the phonological features identified and then inferences were made from the analysis of the data collected. A quantitative analysis was also carried out on 120 valid responses received. Qualitative data analysis methods were used to appraise the data. After listening to all the selected advertisements, a thematic analysis of the adverts was done to identify various phonological devices present in the

adverts. An iterative approach was used to identify and code the responses of the respondents. Conclusions were drawn from the results.

5.0 Data Analysis

The analysis was carried out based on the research questions. The selected adverts were analysed and classified for reference purposes as shown in Table 1 below:

Table 1: Selected Adverts

Language	1.YouTube	2.Spotify	3.Facebook /SsplashFM
NSE	A. Glo Big Day	A. Chipper Cash	A. Lush Hair
NAIJ	B. My MTNApp Naija	B. Erisco Tomato Paste	B. Nigeria 'Check Am-O TB
NSE + NAIJ	C. First Bank *894#	C. Onga Seasoning Cubes	C. Indomie Noodles

Language code: **NSE**: Nigerian Standard English; **NAIJ**: Naija, formerly called Nigerian Pidgin English; **NSE + NAIJ:** A combination of Nigerian Standard English and Naija.

Research Question 1: What phonological element exist in Nigerian digital advertising campaigns? The phonological features found in the digital advertisements in Nigeria and the number of times they featured in the samples are listed in Table 2 below.

Table 2: Phonological Features and Number of incidences

Serial Number	Phonological Device	Number of Incidences	Percentage of occurrences
1	Repetition	16	21.62
2	Rhyme	15	20.27
3	Assonance	12	16.22
4	Alliteration	10	13.51
5	Interjection	8	10.81
6	Anaphora	5	6.76
7	Pronunciation deviation	4	5.41
8	Epiphora	2	2.7
9	Vowel Elongation	2	2.7
	Total	74	100

Table 2 shows 9 different phonological devices found in the advert samples studied. A total of 74 different instances were recorded. All of the advert samples demonstrated different intonations functions depending on the advert message and the way the message was communicated.

(i) Repetition

Instances of repetition found involved featuring the brand name or the main essence of the advert message multiple times throughout the advert as shown in Table 3 below.

Table 3: Instances of Repetition

Advert	Word	Number of Repeated Instances
1A	Two	3
1B	MTN,	31
	My MTN app Naija	15
1C	894	33
2A	It	7
2B	Erisco	12
2C	Onga	7
3C	I (the pronoun)	9

Table 3 shows that the word 'Two' was repeated 3 times in Advert 1A, the acronym 'MTN' 31 times in Advert 1B, the USSD code '894' 33 times in advert 1C. Other repeated words and their occurrences are also shown in the table. It was found from the advert samples that repetition was the most popularly used phonological device with a total of 16 instances captured.

(i) **Rhyme**

Rhymes were found extensively in the advert samples studied. The analysis is displayed below:

Table 4: Incidence of Rhyme

Advert	Word	IPA Transcription	Rhyming sound
1B, Line 1	Baiday	/baɪdeɪ/	/eɪ/
1B Line 2	Delay	/dɪˈleɪ/	
1B line 6	Air time	/eə/ /taɪm/	/ taɪm/
1B line 7	One time	/wʌn/ /taɪm/	
1B line 19	Cheaper	/ˈʧiːpə/	/ə/
1B line 20	Bigger	/ˈbɪgə/	

In Advert 1B, line 1, the last word of line 1, 'Baiday', rhymes with the last word of line 2, delay. While lines 6 and 7 end with / taɪm/, while lines 19 and 20 end with the /ə/.

(iii). Pronunciation Deviation

Several words were also 'made to rhyme' using stylistic licence. Advertisers deliberately violate the norms of pronunciation, and deviate from the acceptable standard pronunciation of Standard Nigerian English pronunciation, for the convenience of rhyming and to create memorable adverts. An example of this pronunciation deviation found in the table below.

Table 5: Incidence of Pronunciation deviation

Advert	Word	IPA Transcription	Pronunciation Deviation
1C lines 7, 20	Four Secure	/fɔː/ /sɪˈkjʊə/	/fɔː/ /sɪˈkjɔː/
1C lines 9,12, 22	Matter Data	/ˈmæt ə/ /ˈde ɪtə/	/mɑːtɑː/ /dɑːtɑː/

As shown in the table 5 above, in advert 1C, the word 'secure' at the end of one line is made to rhyme with 'for' at the end of the previous line; also, the words 'matter' /ˈmætə/ and 'data' /ˈdeɪtə/, were made to rhyme. The initial vowel sound in 'data', /eɪ/ deviates from the standard pronunciation and is realised as /ɑː/.

(iv). Alliteration and Assonance

Some examples of Alliteration and Assonance found in the sampled adverts include those listed in the table 6 below:

Table 6: Incidences of Alliteration and Assonance

Advert	Advert text	IPA Transcription	Phoneme	Phonological feature
3C line 1	**I find** the strength **I** need every **time** that **I** look into yo ur **eyes**	**/aɪ** faɪnd ðə strɛŋθ **aɪ** niːd ˈɛvri t**aɪ**m ðət **aɪ** lʊk ˈɪntə jər **aɪz**/	/aɪ/	Assonance
2A line 14	**wh**at the **w**orld's been **w**aiting for	/**w**ɒt ðə **w**ɜːldz biːn ˈ**w**eɪtɪŋ fɔː/	/w/	Alliteration
1C line 5	**eigh**t, w**ai**t	/**eɪt**/, /w**eɪt**/	/eɪ/	Assonance
1A line 13	**t**op **t**ech **t**alents	**t**ɒp **t**ɛk ˈ**t**ælᵊnts/	/t/	Alliteration

In table 6 above, instances of Alliteration are seen in Advert 2A where the consonant sound /w/ is repeated in line 14, **wh**at the **w**orld's been **w**aiting for while Assonance is seen in Advert 3C line 1, where the vowel sound

/aɪ/ is repeated in line 1: **I find** the strength **I** need every **time** that **I** look into your **eyes.**

(v). Anaphora and Epiphora

Instances of Anaphora and Epiphora found in the adverts are listed in table 7 below.

Table 7: Incidence of Anaphora and Epiphora

Advert	Advert text	IPA Transcription	Expression	Phonological feature
1C	894, for me, 894 for you, 894 for naija	/eɪt naɪ fɔ: *fə* mi:/ /eɪt naɪ fɔ: *fə* ju:/ /eɪt naɪ fɔ: *fə* naɪʤɑ:/	/eɪt naɪ fɔ:/	Anaphora
2A	your high key off key or no key	/jə haɪ ki:/ /ɒf ki:/ /ɔ: nəʊ ki:/	/ki:/	Epiphora

Table 7 above shows an example of anaphora from Advert 1C, where the phrasal expression /eɪt naɪ fɔ:/ is used to start 3 consecutive lines. While in Advert 2A, the same expression, /ki:/ is used to end 3 lines, showing the presence of epiphora.

(vi). Interjection

Phonological interjections found in the adverts are displayed in the table 8 below.

Table 8: Incidence of Interjection

Advert	Advert text	Interjection	IPA Transcription	Nuanced Meaning
1C, line 14	For this special season, better dey O	O	/əʊ/!	Emphasis on the availability of the offers
2B line 5	See en	en!	/ɛn/	pay attention
3B line 3	Hospital ke?!	ke?!	/kɛ/	Emphasis on the lack of desire to present at the hospital

Though not grammatical, Table 8 shows the interjections in the advert samples. Six out of nine adverts had at least one interjection, with the exception of those adverts voiced in entirely in English.

(vii) Vowel elongation

An instance of this phonological feature was observed in Advert 3A line 3, the close front unrounded vowel /i:/ sound in the phrase 'not meeee' is pronounced with the sound stretched. Another instance was found in Advert 2B line 12 where the taste of the Erisco tomato paste was described as 'sweeeet', with the close front unrounded vowel /i:/ elongated as if to emphasise the intensity of the 'sweetness' of the tomato paste. Lengthening a vowel sound in this way is a common way of showing heightened emotions in Nigerian parlance.

(viii). Intonation

Analysis of the advert samples shows that the four major functions of intonation in discourse were used to signal different illocutionary acts performed by the advert text. Examples of these functions of intonation are displayed in table 9 below.

Table 9: Incidence of Intonational Functions of Discourse

Advert	Advert Text	Context	Intonational Function
1A Line 3 Line 10	We don't quit guys, I'll be there Two minutes, two minutes, move!	Exhibits must be delivered before the start of the show Heightened Emotions due to time pressure. Relentless attitudes	Attitudinal function
2A Line 13 Line 15	That's what you're made of You've got it now bank on it	When you have the Chipper app, you have nothing to fear Focus, Stress	Accentual function
1A Line 8 Line 9	Aisha, where are you? Guess where?	Question asked to confirm nearness to the venue Question to confirm arrival at the venue	Grammatical function
2B Line 8 Line 9 Line 10 Line 11 Line 12 Line 17	You see this Erisco, dem take correct natural ingredients make am. If na made in Nigeria like Erisco Tomato paste get many benefits You dey help grow our economy And job plentiful yafun yafun. And when you put am inside mouth, e sweeeet So, start today, Buy Erisco Products	New information about the product being shared /Response required	Discourse function.

Intonation in Advert 1A performs an attitudinal function, expressing the heightened emotional pressure that the parties are under. In Advert 2B, Intonation performs a discourse function as the main character is describing the features of the product to the listener. An Accentual function is performed in Advert 2A as the value of 'it' the Chipper Bank app is stressed to assure the listener.

Research Question 2: How do phonological features affect brand engagement in Nigerian digital advertising campaigns?

Table 10: Analysis of Responses to the Digital Questionnaire

1. Eligibility Check:	Yes	No
Are you between the ages of 26 and 40?	120	0
2. Phonological Feature Observation	Yes %	No %
Did you observe [Phonological Feature] in the digital adverts you listened to?		
1. Repetition	99	1
2. Rhyme	27	73
3. Assonance	72	28
4. Alliteration	78	22
5. Interjection	97	3
6. Anaphora	81	19
7. Pronunciation deviation	25	75
8. Epiphora	82	18
9. Vowel Elongation	75	25
10. Intonation	85	15
3a. Emotional Response	Yes	No
Did the use of [Phonological Feature] capture your attention? AIDA Stage 1		
1. Repetition	98	2
2. Rhyme	40	60
3. Assonance	78	22
4. Alliteration	76	24
5. Interjection	90	10
6. Anaphora	79	21
7. Pronunciation deviation	12	88
8. Epiphora	73	27
9. Vowel Elongation	90	10
10. Intonation	78	22

3b. Emotional Response	1: Strongly Negative	2: Negative	3: Neutral	4: Positive	5: Strongly Positive
On a scale of 1 to 5, how did you feel about the way [Insert Phonological Feature] was used in the advert sample?					
1. Repetition	25	15			60
2. Rhyme				19	81
3. Assonance					85
4. Alliteration					82
5. Interjection			38		62
6. Anaphora					81
7. Pronunciation deviation			72		28
8. Epiphora					84
9. Vowel Elongation					75
10. Intonation					88

4a: Perception of Brand Message	Yes	No
Did the use of [Phonological Feature] in the advert enhance your understanding of the brand message?		
1. Repetition	83	17
2. Rhyme	31	69
3. Assonance	81	19
4. Alliteration	85	15
5. Interjection	90	10
6. Anaphora	70	30
7. Pronunciation deviation	29	71
8. Epiphora	70	30
9. Vowel Elongation	75	25
10. Intonation	62	38

4b: Perception of Brand Message	Yes	No
Did the presence of [Phonological Feature] generate interest in the advertised brand or product? AIDA Stage 2		
1. Repetition	80	20
2. Rhyme	60	40
3. Assonance	71	29
4. Alliteration	75	25
5. Interjection	88	12
6. Anaphora	70	30
7. Pronunciation deviation	69	31
8. Epiphora	70	30
9. Vowel Elongation	73	27
10. Intonation	70	30

5: Memorability	Yes	No
Did the use of [Insert Phonological Feature] in the advert make the brand more memorable to you?		
1. Repetition	85	15
2. Rhyme	71	29
3. Assonance	69	31
4. Alliteration	72	28
5. Interjection	85	15
6. Anaphora	80	20
7. Pronunciation deviation	54	46
8. Epiphora	80	20
9. Vowel Elongation	87	13
10. Intonation	65	35
6a: Likelihood of Engagement	Yes	No
Did the presence of [Insert Phonological Feature] create desire to know more about the brand? AIDA Stage 3		
1. Repetition	89	11
2. Rhyme	76	24
3. Assonance	73	27
4. Alliteration	72	28
5. Interjection	82	18
6. Anaphora	71	29
7. Pronunciation deviation	23	77
8. Epiphora	69	31
9. Vowel Elongation	75	25
10. Intonation	71	29

6b: Likelihood of Engagement	1: Very Unlikely	2: Unlikely	3: Neutral	4: Likely	5: Very Likely
Based on the way [Phonological Feature] was used in the advert, how likely are you to engage with the brand in any of the following ways: like, share, leave a comment, repost, visit the website, make a purchase? AIDA Stage 4					
1. Repetition		11			89
2. Rhyme		5	3	12	80
3. Assonance				19	81
4. Alliteration			10	11	79
5. Interjection			33		67
6. Anaphora	21				79
7. Pronunciation deviation			77	23	
8. Epiphora	23				77
9. Vowel Elongation				22	78
10. Intonation				11	89

6.0 Discussion of Findings

a) Repetition

Repetition proved to be by far the most popular phonological device used in Nigerian Digital Advertising Campaigns, and the most commonly observed by 99% of the respondents. (Table 10, Question 2). About 60% the respondents felt strongly positive about the use of repetition while 15% felt negative and 25% felt strongly negative about the use of repetition (Table 10 Question 3b). As with earlier studies, this present study confirmed that repetition has a great impact on memorability and brand engagement as about 85% answered in the affirmative and 89% said they will very likely engage with the brand as a result of the use of repetition (Table 10, Question 6b).

b) Rhymes

The responses received showed that use of rhymes really resonates with the sampled audiences. In response to the question 'How likely are you to engage with the brand as a result of the way Rhymes were used in this advert? Over 80% of them chose very likely, 12% chose likely, 3% were neutral while the remaining 5% chose unlikely (Table 10, Question 6b). Just over 81% of them responded that they felt strongly positive about the way Rhymes were used in the advert sample. (Table 10, Question 3b). This shows that rhymes are a very effective phonological device when it comes to inducing brand engagement.

c) Pronunciation Deviation:

A great majority (75%) of the respondents, answered 'No' to the question 'Did you observe the following phonological feature in the digital adverts you listened to? (Table 10, Question 2). Most of the respondents, 72% of them were indifferent to the use of pronunciation deviation in the adverts as shown in their selection of Neutral to this question (Table 10, Question 3b).

Most of the respondents, 71%, also selected 'No' when asked if this feature enhanced their understanding of the brand message (Table 10, Question 4a). The responses received to this feature suggests that 77% of the participants did not feel that the use of this feature increased their likelihood to engage with the brand (Table 10, Question 6a). There did not appear to be any novelty experienced in the use of this feature. This finding agrees with the observation in the study of the Perception and

Production Patterns of English 'H' among Yorùbá Students in Lead City University, Ibadan, that participants did not perceive erroneous pronunciations as errors, but rather could decipher correctly what was being said, despite the pronunciation deviation, and so misunderstanding, miscommunication and communication breakdown were not observed during the study (Adejobi, 2022).

d) Alliteration and Assonance

When asked how they felt about the way these features were used, 82% of respondents felt strongly positive about the use of alliteration and 85% for assonance (Table 10, Question 3b). Over 70% of them responded that the use of two features made them very likely to engage with the brand (Table 10, Question 6b).

e) Epiphora and Anaphora:

The use of Anaphora and Epiphora were observed by over 80% of the respondents (Table 10, Question 2) and almost the same proportion of them, just over 80 % reported that they liked the use of both features (Table 10, Question 3b). In response to whether the use of this feature will move them to engage with the brand, 79% and 77% of them respectively said very likely while 21% and 23% of them said Not likely (Table 10, Question 6b). Seventy percent (70%) of the respondents said Epiphora and Anaphora enhanced the message of the brand and increased their interest in the brand (Table 10, Question 4a), while 80% said the features made the adverts more memorable (Table 10, Question 5).

f) Vowel elongation

When asked about their feelings towards vowel elongation and how it affected their perception of the brand 75% of respondents felt strongly positive towards it and 80% felt that it enhanced their perception of the brand (Table 10, Question 4a). 75% and 78% respectively said the use of the vowel elongation aroused a desire in them and made them very likely to engage with the brand.

g) Intonation

An average of 78% of respondents were attracted to the brand as a result of the way discourse intonation functions were used in the adverts Almost 90% of the respondents responded that they felt strongly positive

about the intonation functions of the adverts while 89% of respondents would engage with the brand because of the communicative function of the adverts. (Table 10, Questions 3a, 3b and 6b)

7.0 Conclusion

This study investigated the influence of phonological features of Nigerian digital adverts on brand engagement among Nigerian millennials. It explored the relationship between phonological features, brand engagement, and digital advertising campaigns in Nigeria. The findings reveal that various phonological features used in the digital advertising space, including Repetition, Rhyme, Alliteration, Assonance, Anaphora and Epiphora and strategic Pronunciation Variations significantly impact brand recall, perception, and ultimately, brand engagement. Effectively deploying discuss Intonation functions was also very successful in generating brand engagement. By leveraging these features strategically, marketers can craft more effective and culturally-sensitive advertising experiences that resonate with Nigerian consumers. Repetition was found to be the most frequently observed by audiences, the one most frequently used by advertisers and the one most likely to lead to brand engagement. Advertisers should use it with caution though as excessive use of it was found to have a negative impact on the audiences. The study confirmed that effective advertising successfully takes audiences through the 4 stages of the AIDA model: attention, interest, desire, and action, thus increasing brand engagement. The presence of the four discourse functions of intonation in all the advert samples confirm that discourse intonation is used successful to communicate clear and easily understood advert messages, and as such should be used in Nigerian Digital advertising campaigns.

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Wikipedia contributors. (2019, March 13). Millennials. Wikipedia. https://en.wikipedia.org/wiki/Millennials**Perception and Production of /a/ Vowel Family by Educated Hausa Speakers of English**

Perception and Production of /a/ Vowel Family by Educated Hausa Speakers of English

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Abstract
Researchers and language enthusiasts have continued to delve into issues bedeviling learners as well as speakers of English as second language. Using Flege's Speech Learning Model (SLM), this study investigated one of the problems faced by Hausa speakers of English in perceiving and producing /a/ vowel family. The aim of the study was to examine difficulties faced by Hausa speakers of English in distinguishing /ʌ/, /ə/ /æ/ /a:/ and /ɜ:/. Forty 400 level students of English participated in this research having attained a significant level of training in phonology. Three tests were administered on the participants to measure perception, these are; identification test, discrimination test and force choice alternative test with a test on production. The study found out that the participants identified /ʌ/, /ə/ and /æ/ vowels but performed below average in the perception and production of the long vowels /a:/ and /ɜ:/. This is attributed to the absence of long vowels in their mother tongue. The result of the production test showed that participants scored higher in perceiving /ʌ/, /ə/ and /æ/ vowels but could not perceive /a:/ and /ɜ:/ vowels correctly. The study proved SLM in the former and disproves it in the later vowels.

Keywords: Perception, Production, /a/ Vowel Family, Hausa Speakers of English

1.0 Introduction

Language began as speech and all written form originated from the spoken language. Sapir (1921) notes that language is 'purely human and non-instinctive method of communicating ideas, emotions and desires by means of voluntarily produced symbols' (7-8). Every language has its

peculiar phonological system that reflects its sounds and various combinations of these sounds to form words. Perception is the process by which sounds of a language are heard, interpreted and understood. Perception of a sound can be affected by certain factors such as pitch, volume, tone and length. On the other hand, production is a complex process that involves biological and physical phenomenon which deals with generation of vibrations and transmission of these vibrations through a medium to be received and interpreted by a listener. The perception and production of non-native speakers of a given language has been an interesting area of research to many scholars. Language learning or language acquisition has posed a lot of challenges in the production and perception of second language phonemes especially those that are not found in the L1 of the target learners. It has been suggested that English vowels may be wrongly perceived and mispronounced by ESL learners due to assimilation of two English phonemes to a single phoneme category in the learner's L2 (Pereira, 2013).

It is not possible to convey our messages clearly without proper pronunciation because misuse of rhyme and intonation alone can disrupt the smooth flow in understanding of the message being communicated by the speaker. Hausa language belongs to the western branch of the Chadic language super family within the Afro-Asiatic language phylum (Sarkin & Umar, 2018). It is spoken by an estimated 40-50 million people as first and second language (Ethnologue, 2021). It is recognised as an indigenous national language in constitutions of both Nigeria and Niger (Sarkin & Umar, 2018. Hausa borrowed a lot of vocabulary from Arabic (Kraft qtd in Maiunguwa, 2018). The pronunciation of Hausa speakers of English is characterised by differences in the pronunciation of English sounds. For instance, /i:/ and /ɪ/ are produced as /i/ by Nigerian speakers of English, while /a:/ and /æ/ which are known respectively as back and front vowels are realised as /a/ in most cases. /u:/ and /ʊ/ are realised as /u/ in articulation by Nigerian speakers. The mid-back vowel /ɔ:/ and /ɒ/ of RP occur as /ɔ/ and in rare cases as /ɒ/ in Nigerian English. The mid-front vowel /ɜ:/ together with the mid-central vowel /ʌ/ and /ə/ are replaced with /ɛ:,a:,e,a,ɔ,e:,ɒ/ in Nigerian English (Jowitt, 2000).

Accurate perception and production of L2 phonemes set the groundwork for successful pronunciation (Mohammed, 2016). English monophthongs are among the most functionally loaded segments as they

form many confusable minimal pairs which are of high frequency in everyday language (Brown, 1998). Moreover, these vowels are phonetically so close to each other that they pose exceptional perceptual and articulatory problems for ESL learners. It is based on the above assertions that this study investigates perception and production difficulties faced by Hausa speakers of English as they relate to the /a/ vowel family.One of the things listeners use to judge English language learners is the fluency in speech. Million users of English as second language learners including Hausa speakers are taught in class by non-native speakers where L1 is the dominant language of the environment. This may result in difficulties with perception and production of English sounds, especially vowels, which renders communication unintelligible.

Vowels of English are believed to be the more difficult sounds for learners to produce according to California State Department of Education 1987. This is because the phonetic distance between these vowels is not big enough for correct identification (Mohammed Shrowg, 2016). This represents a great perceptual and production difficulty for ESL learners. The aim of this study is to investigate and identify difficulties faced by Hausa speakers of English in the perception and production of the selected English vowels. The objectives are to: Ascertain Hausa ESL learners' perception of /ʌ, ɜ: ə, a:,æ/, examine the production of these vowels and identify effects of both perception and production in achieving fluency. The study is guided by the following questions, How do Hausa ESL learners perceive /ʌ, ɜ: ə, a: æ/? How do Hausa ESL learners produce /ʌ, ɜ: ə, a: æ /? What are the effects of perception on production of these vowels?

This research thus contributes to the field of phonetics and phonology especially on perception and production of the selected vowels by Hausa speakers of English. The study is however, limited to selected English vowels tagged the /a/ vowel family /ʌ, ɜ: ə, a: æ/ vowels. Attention is given to the pronunciation of these vowels at word level. Forty Hausa speakers of English were selected among undergraduate students of English in Bauchi State University for the study. This study deals with sounds as they occur in words as perceived and produced in isolation. It pays close attention to the words with vowels that appear between consonants because that is where most misperception and mispronunciation occur.

2.0 Literature Review

Scholars have acknowledged that Nigeria English (NE) shares many existing features of English phonology, although some other rules of NE apply differently when compared to the standard accents or inner circle Englishes, (Bobda,280). The phonology of NE is affected by a variety of factors such as interlocutors' level of education, sociocultural background, psychological factors, socio-political factors, ethnic peculiarities, personal idiosyncrasies, religious affiliations, social background etc. These combined factors influence the various pronunciation patterns that are noticeable in NE. Thus, it is possible for educated Nigerians to speak non-standard English and sometimes revert to pidgin in an attempt to convert to the speech of their audience or listeners if they are mesolect, or adopt an acrolectal variety if his audience is considered to be an educated group (Banjo,1974).

Scholars like Jowitt (1991), Bambose (1971), Adetugbo (1984), Jibril (1982), Awonusi (2007), Bobda (2007) etc. have written much about Nigerian English but the literature available indicate that there is no uniformity in the description of Nigerian English Phonology. There is a disagreement on the number of phonemic inventories that can accurately describe the standard spoken English in Nigeria which would distinguish it from all other Englishes around the globe. This issue guided a number of publications on spoken NE vowels. Nigerian English pronunciation is characterised by differences in the pronunciation of English sounds (Maiunguwa, 2015). For instance, /ɪ/ and /i:/ are pronounced as /i/ by most Nigerian speakers of English. This denotes the length of the vowel sounds mid-way between the sounds. While /a:/ and /æ/ are known as back vowels, /ɒ/ and front vowel /æ/ are realised as /a/ in most cases. RP/ɛ, ɜ: and e/ appear as /ɛ, e:, e/ when articulated by Nigerian speakers just like /u:/ and /ʊ/ in RP which appear as /u/ and sometimes /u:/. The mid-back vowel /ɔ:/ and /ɒ/ of RP occur as /ɔ/ and in rare cases as /ɒ/ in Nigerian English. Mid and central vowel /ɜ:/ together with the mid central vowels /ʌ/ and /ə/ are replaced with /ɛ:,ə:,e,ɔ:,a,e:ɔ/ in NE and sometimes /ɜ:,ʌ,a/ (Banjo,1974).

Kachru and Smith (1992) report that there is high vowel restriction in new Englishes, most of the English spoken by non-native speakers is characterized by long vowel reduction. The RP long vowels /i:, u: and ɔ:/ are produced as short sounds /i, u and ɔ/ respectively. The schwa /ə/ is articulated as /a/ in East and South African English whereas the wedge vowels /a/ is produced as /ɔ / in West African English and /a/ in

East African English. The vowel /ɜ:/ is produced with variants /ɔ / /ɛ / or /a/ in the English spoken in West Africa. In a similar vein, there is a monophthongization of diphthongs where the speakers produce only one part of the diphthong. For instance, /ei/ is articulated as /e/ whereas /au/ is produced as /a/ (Bobda, 2007). None of the centering diphthongs /uə, eə, iə/ seem to be a common feature of standard Nigerian English phonemes. Triphthong are absent in NE though in most cases are produced as vowel sequences (Jowitt, 2000). Smirnova (1991) identified 14 vowels in Hausa. These include 10 monophthong and 4 diphthongs whereas Lindon-webb (1985) argues that there are 12 vowels in Hausa. 5 short vowels, 5 long vowels and 2 diphthongs. The present study adopts the classification of Sani which accommodates all the variations that exist in Hausa phonemes. The inventory is used in standard Hausa orthography and by local and international media. The chart is larger than the inventory of Newman which has 32 consonants.

According to Sani (2005), there are forty-eight phonemes in standard Hausa, comprising thirty-four consonants sounds and fourteen vowels sounds. There are two syllable structures in Hausa which are open and closed syllables. An open syllable is composed of a consonant followed by a vowel which in Hausa can be long, short or a diphthong. It is represented as CV, CVV. A closed syllable, on the other hand, is made up of a consonant followed by a short vowel and other consonants, and represented as CVC. In both types of syllables, the first consonant is technically known as the onset, the following vowel as nucleus or syllabic and final consonant in the case of closed syllable, as coda. Hausa is a tonal language with three logical tones: a falling tone, a low tone and a high tone which is not marked (Sani, 2005). There are 13 vowels in Hausa, out of which 5 are short while 5 are long and has only 3 diphthongs (Sani, 2005). These are orthographically written as: short *a, o, i, u, e,* and long *aa, oo, ii, uu, ee,* diphthong *ai, au, ui.* They are phonemically represented as short /a/ /ɛ/ /ɪ/ /ɔ/ /ʊ/, long /a:/ /ɛ:/ /ɪ:/ /ɔ:/ /ʊ:/ and diphthong /ai/ /aʊ/ /ʊi/. Therefore, English has 9 additional vowels in its vowel inventory more than Hausa. Oladimeji (2014), carried out research on the segmental articulatory features of Nigerian English using one hundred and fifty Nigerian students. They were interviewed orally and made to read several prepared texts. Their different performances and competences were recorded and evaluated for analysis. The noticeable areas investigated were the articulation of central vowels,

stops, affricates, continuants and fricatives which were found to be signs of regional identity in Nigeria. The phonological markers of identity peculiar to educated Nigerians were central vowels (82%), stops (66%), affricates (86%), continuants (24%), and fricatives (72%) which were signs of regional identity.

Abdulmalik (2014), examined the English pronunciation patterns of Hausa broadcasters. The study was guided by the way Hausa broadcasters articulate RP English consonants, vowels and consonant clusters. The researcher adopted optimality theory and descriptive research design. The data was obtained through production test and recording of news broadcast from four public broadcasting stations in Bauchi. Twenty-two Hausa broadcasters were selected. The findings revealed that most of the speeches by the respondents do not conform to RP English because it is characterised by semantic alteration; for instance, *pull* is rendered *full*, *heal* as *hill*, *upper* as *offer* etc. The speech is marked by the Hausa English accent but does not interfere significantly with meaning. Krzonowski, et al (2015) examined the effect of perception and production training on the production of the English vowels (/i:/, /i/, /æ/, /ʌ/ and /a:/) by French native learners. Forty-eight French first year students who had learned English in school only were grouped into three. The first group comprised those receiving 5 sessions of perceptual training (PE-group), while the second group were those receiving 5 sessions of production training (PR-group). The last group had no training (C-group). They were recorded at pre-test and post-test with a reading task of /bvd/ words, and their performance was evaluated by discriminant analysis based on sex-specific models trained on native speaker productions. The results showed improved classification rates for the vowels /ʌ/ and /i/ in the PR-group and only for /i/ in the PE-group. No improvement was observed for the C-group (37). Stopar Andrej (2015) investigated perception of four General British vowels by Slovenian University students of English as a foreign language. The analysis of /e/, /æ/, /ʌ/ and /ɜ:/ by 101 Slovenians includes the students' performance, the differences between the strong and the weak performers, and the respondents' most frequent misperceptions. The result shows that production difficulties mirrors perception difficulties; the misperception of L2 sounds are predictable and there is a correlation between the least successfully perceived GB vowels and the ones most typically heard as interchangeable (89).

Olaniyi & Josiah (2014) assessed the vowel articulation in three major varieties of English in Nigeria, namely: Hausa English, Igbo English and Yoruba English. They maintain that the speakers substitute RP vowels with the vowels from their native language, and further claim that Hausa English is closer to RP than the other varieties. They cited example of RP English wedge vowel /ʌ/ which is replaced with /ə/ in Hausa English and the sound /a/ is closer to RP wedge vowel. The studies reviewed indicated that there is a relationship between perception and production of sounds in English language. Several researches were conducted on perception and production of English vowels and even consonants; however, the researcher did not come across any research done on perception and production of the said vowels by Hausa speakers of English. Most of the studies reviewed such as that of Bolas, A , 2023; Bayona & Stoper A, 2008, used speech learning model (SLM) as a yardstick measuring the relation between speech perception and production thereby giving the model much significance in related researches. This study varies from the aforementioned since the aim is to investigate and suggest ways of improving perception and production of /ʌ,ə,ɜ:,a:,æ/ vowels by Hausa speakers of English.

Studies reviewed examined the relation between perception to production of some English vowels and consonants by either native or non-native speakers of English around the world. The studies focused on adults or young learners/speakers of English. Some of the researches were conducted in a laboratory using different voice analysis software; others were done using questionnaire and/or interview method. The studies reviewed by the researcher, mostly employed both qualitative and quantitative method of data analysis. However, none of the studies was conducted on /a/ vowel family by Hausa ESL speakers using Flege's SLM. It is against this background that this study investigates perception and production of the said vowels.

3.0 Theoretical Review

Speech Learning Model (SLM)

Speech Learning Model developed by Flege (1999) was adopted for this research. It proposes that the mechanisms and processes needed for L1 acquisition remain accessible for use in L2 learning. The formation or non-formation of new phonetic categories for L2 sounds will depend on the precision of L1 categories at the time L2 learning begins, the perceived phonetic dissimilarity of an L2 sound from the closest L1

sound, and the quantity and quality of L2 input that has been received. According to the model, the phonetic category making up the L1 and L2 phonetic subsystems interact with one another dynamically and are updated whenever the statistical properties of the input change. Some studies show that perception plays a vital role in production of second language sounds. For instance, Flege (1999) argues that L2 sounds may be perceived in terms of those of the L1 by the learner, making this perception different from that of the native speaker. Speech Learning Model (SLM) shows that the perceived relationship between L1 and L2 categories plays an important role in accurately perceiving or producing L2 sounds. According to him, the accuracy with which sounds are perceived suggests the accuracy of production, although sometimes production does not reach the same level of accuracy with perception. The SLM claims that "without accurate perceptual targets to guide sensori-motor learning of L2 sounds, production of the L2 sounds will be inaccurate" (1987,57). However, the model does not state that all target language errors have a perceptual origin, but that many do.

4.0 Methodology

Applied research was used to conduct this study because it is interested in the usefulness of ideas or theories in real life situation. It is one which deals with finding solution to the problem facing a society. Its concern is testing the acceptability of theories in environment where they are applicable. It applied quantitative method in the statistical analysis and qualitative in detail description of the data collected. The study examines perception and production of some English vowels by Hausa speakers using Flege's Speech Learning Model (SLM). This theory is relevant because it enables the researcher first measure perception of /ʌ, ə, ʒ:, a:,æ/ by ESL speakers then their productions respectively. The population for the study was 400 level undergraduate students of the Department of English, Bauchi State University, Gadau. Forty Hausa speakers of English specifically Guddiri dialect whose ages ranged between 20 and 35 years were selected as participants through purposive sampling. This is because the students have attained certain level of training in the area of phonology and are familiar with the sounds in question. Another factor is that they are potential graduates, some of whom may become teachers, public speakers and role models in various organisations in the society. The test materials for the study consists of Perception Test and Identification Test which have three tasks that examined /ʌ,ə,ɜ:,a:,æ/. The

reason for choosing these sounds is to investigate whether Hausa ESL speakers can discriminate and produce them correctly. For the purpose of this research, perception and production tests were conducted.

For the perception test, firstly, identification test, twenty-five monosyllabic words spoken in isolation by a non-native but experienced and internationally intelligible speaker of English were presented to the listening of the participants in a language laboratory. Participants were asked to write down the words on a sheet of paper as they listened. Secondly, discrimination test, another set of twenty-five words spoken in pairs were played and participants were instructed to tick in an answer sheet whether the vowels in each pair are the same or different. Lastly, force choice alternative test, twenty-five words, five each grouped a-e which contained vowels under study were presented on a paper to the participants to tick those vowels they thought were the same and leave out those that were different. In the production test, each participant was given twenty-five words which contained /a/ vowel family to read them out while he/she is being recorded. Three experienced English language

5.0 Result Presentation

Table 1: Result of the Identification Test

Participants' Response	/a:/		/ɜ:/		/ə/		/ʌ/		/æ/	
	C	Inc	C	Inc	C	Inc	C	Inc	C	Inc
A	7	18	6	19	9	16	11	14	14	11
B	12	13	2	23	10	15	13	12	10	15
C	5	20	3	22	10	15	20	5	16	19
D	5	20	5	20	15	10	20	5	15	10
E	3	22	3	22	13	12	13	12	12	13
F	3	22	4	21	15	10	15	10	14	11
G	12	13	2	23	7	18	12	13	11	14
H	8	17	3	22	8	17	12	13	9	16

In this test, the identification of /a:/ sound shows that group B and G had the highest score (48%). They correctly identified 12 words and incorrectly identified 13 words out of 25 each. Group H identified 8 words correctly and incorrectly identified 17 words their score is 32%. Group A correctly identified 7 words and incorrectly identified 18 words. Their

score is 28%. Group C and D both identified 5 words correctly and incorrectly identified 20 words out of 25, their total score is 20%. Group E and F scored only 12%, they identified 3 words each correctly and incorrectly identified 22 words

Table 2: Result of the Discrimination Test

Participants' Response	/ʔ/		/ʔ/		/ʔː/		/aː/		/ʔ /ˈ	
	C	Inc	C	Inc	C	Inc	C	Inc	C	Inc
A	23	2	23	2	12	13	12	13	20	5
B	20	5	15	10	12	13	17	8	13	12
C	23	2	23	2	20	5	11	14	21	4
D	23	2	23	2	17	8	17	8	18	7
E	18	7	9	16	13	12	23	2	12	13
F	18	7	16	9	12	13	12	13	14	11
G	23	2	20	5	18	7	18	7	23	2
H	24	1	21	4	17	8	19	6	21	4

The table revealed performance of each group in perception of the /a/ vowel family. Group H had the highest score in the series; they correctly discriminated 24 sequences (96%) out of 25 and incorrectly discriminated only 1 sequence. Next is A, C, D and G which discriminated 24 sequences (92%) accurately each and discriminated 2 sequences incorrectly. Group B discriminated 20 sequences (80%) correctly and incorrectly discriminated 5 sequences. Group E and F both discriminated 18 sequences (72%) correctly and incorrectly discriminated 7 sequences.

Table 3: Result of the 5 Alternative Force Choice Discrimination Test

Participants' Response	/ʌ/		/ə/		/ɜ/		/ɑ/		/æ/	
	C	Inc	C	Inc	C	Inc	C	Inc	C	Inc
A	2	3	2	3	1	4	2	3	1	4
B	2	3	3	2	0	5	3	2	2	3
C	2	3	3	2	1	4	2	3	1	4
D	2	3	2	3	0	5	3	2	0	5
E	2	3	4	1	1	4	2	3	1	4
F	3	2	3	2	1	4	3	2	1	4
G	2	3	3	2	1	4	3	2	1	4
H	1	4	3	2	0	5	2	3	1	4

The Result showed that group F got the highest score in the discrimination of /ə/ sound, correctly discriminating the sound 3 times out of 5 (60%) and incorrectly 2 times. Groups A, B, C, D, E and G discriminated the sound 2 times each correctly (40%) but discriminated it 3 times incorrectly. Group H which got the least score discriminated the sound once correctly (20%) and discriminated it 4 times incorrectly. This shows that all the groups perceived schwa /ə/ except H which misperceived the sound.

Table 4: Result of the Production Test

Participants' Response	/ə/		/æ/		/ɜ:/		/ʌ/		/a:/	
	TS	MS	TS	MS	TS	MS	TS	MS	TS	MS
A	77	3.1	64	2.5	75	3	63	2.5	75	3
B	79	3.2	65	2.6	76	3.1	68	2.7	77	3.1
C	100	4	96	3.8	96	3.8	102	4.1	101	4
D	108	4.3	100	4	93	3.7	93	3.7	104	4
E	75	3	79	3.2	70	2.8	71	2.8	76	3
F	85	3.4	76	3	75	3	65	2.6	68	2.7
G	75	3	62	2.4	68	2.7	77	3.8	100	4
H	76	3	91	3.6	81	3.2	71	2.8	60	2.4

The result of the production test reveals that performance of the participants is better. /ʌ/ sound got the highest score (67%) as it was produced better than any other sound in the /a/ vowel family. Next is /æ/ sound with 66% as its pronunciation was also better. /ə/ and /ɜ:/ sounds each had 63% production accuracy. The sound with least score is /a:/ which got 61% as the total score. Therefore, the participants had an average performance in the production of the /a/ vowel family. It also shows that group D participants got the highest score of 108 out of 125 with the mean of 4.3 which was rated near native-like. Next is group C with 100 and 4.3 as the mean. Group F got 85 with 3.4 as mean. Group B had a total score of 79 and a mean score as 3.2. Group A had 77 and a mean of 3.1. Group H got 76 and 3 as a mean. Groups E and G got 75 a piece with a mean score of 3. Based on the results, the participants' speech is rated near native-like for C and D, and different from native but understandable for the rest.

6.0 Discussion of Findings

From the data gathered one can deduce that most of the participants perceived /ʌ/ sound more than any other sound in the identification test. Although the sound does not appear in the Hausa vowel inventory, the participants identified the sound accurately. This is no doubt a result of training and exposure to the sound. The participants also perceived the /æ/ and /ə/ sounds correctly because the sounds are close to Hausa /a/ as argued previously by Jowitt, 2000, Olaniyi & Josiah 2014, .and the SLM itself. However, /ə/ is weaker than the /a/ while /æ/ is close to it. The result confirms this because of the participant's familiarisation with /ə/ sound in the course of learning English. The mid vowel /ɜ:/ and the long vowel /a:/ were mis-perceived by the participants, while /a:/ is shortened by the participants. The /ɜ:/ sound posed so much difficulty to the participants as such it was poorly identified because it is not obtainable in their mother tongue (MT) and is not close to any of their existing vowel sounds. The result of the AX discrimination test shows that the participants discriminated all the sounds clearly, with 60% and above as total score. This shows that they perceived the sounds more when there is an alternative. But result of the 5AFC discrimination test is poor compared to other tests. It shows that only /æ/ sound was clearly discriminated while /ʌ/ was partially discriminated by the participants. This shows that the participants perceived /æ/ and /ʌ/ sounds but misperceived /ə/, /ɜ:/ and /a:/ sounds. It also shows that the mid vowel /ɜ:/ was not discriminated by any of the participants, making it the most difficult sound to discriminate by Hausa ESL learners. Result of the production test was better as it shows that the participants produced all the /a/ vowel family correctly. Their total score ranges from 60% and above. Their production was rated different from native but understandable. This is as a result of the participants' continuous effort to distinguish themselves as ESL learners.

Findings of this study revealed that participants' performance was poorer in the perception of the mid vowel /ɜ:/. Even though its AX discrimination test and production test proved otherwise, its overall total score as indicated in the presentation of results above shows that the perception of the sound is loaded with fraught. This disproves some of the previous researches. The sound is foreign to Hausa phonology and the participants were not exposed to the sound in terms of study. Moreover, the long vowel /a:/ was not identified and discriminated as it should have been, so the sound is misperceived possibly due to nonexistence of the

long vowels in the MT of the participants. However, its production was rated different from native speaker which is understandable. It is evident that the participants were not well grounded in the study of the sound because its short form exists in the phonemes of their language.

The schwa /ə/ sound was averagely identified, discriminated and was correctly produced. Therefore, the participants perceived and produced the sound correctly even though some of the participants perceived it as /ɔ/ and /e/ as a result of high occurrence of the sound in English words and it is close to the one obtained in the participants' MT. Furthermore, /æ/ sound was identified, discriminated and chosen rightly by the participants. This is as a result of the closeness of the sound to the Hausa /a/. Consequently, the participants got 61.2% as their total score. The sound poses some little challenges to the participants as some of them misperceived it as /e/ in the identification of "man" as "men". In addition, /ʌ/ sound has the highest score of 65% among the /a/ vowel family. This proves that the participants are familiar with it. Another factor is its proximity to Hausa /a/ sound. It is probable that their training made them distinguish the sound accurately.

Generally, it can be inferred that /ʌ/, /æ/ and /ə/ sounds were correctly perceived by the participants while the long vowels /a:/ and /ɜ:/ were highly misperceived. Therefore, the study aligns with the Speech Learning Model (SLM) that a relationship between perception and production exists especially in the perception and production of /ʌ/, /æ/ and /ə/ sounds.

However, the case is not the same on the perception and production of /a:/ and /ɜ:/ sounds because perception of these sounds is poor, as it stands at 37% and 28% respectively. Their production is however quite significant as it stands at 61% and 63% respectively. So, this reveals that it is not in every case that accurate perception guarantees accurate production. The analysis of the research proves Flege's SLM theory, which claims that 'without accurate perceptual targets to guide sensorimotor learning of L2 sounds, production of L2 sounds will be inaccurate'.

However, the model does not state that all target sound errors have a perceptual origin. The result of this study confirms this assertion because the participants perceived and produced /ʌ/, /æ/ and /ə/ sounds correctly. However, they misperceived /a:/ and /ɜ:/ sounds but produced them accurately.

7.0 Conclusion

Based on the findings of this study, it is concluded that Hausa speakers of English perceived /ʌ, æ, and ə/, while they misperceived the long /a:/ and /ɜ:/ in the /a/ vowel family. To address the challenges therefore, teachers of phonology of English at different levels should be given first-hand training by native speakers of English in order to enhance the quality of both perception and production of English vowels. Students should be taught their L1 formally so as to enable them differentiate L1 sounds and those of the target L2 clearly. Laboratories and digital software should be introduced to the students so as to enable them perceive and produce English vowels accurately.

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Application of the Speech Recognition Technology in Accented English: Automation of the Dental Fricatives in Yorùbá English

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Abstract
Automated transcription also known as speech to text or automatic speech recognition converts voice to text in various languages and varieties through the use of machine learning models useable on smartphones, tablets, and computers. This form of artificial intelligence is notable for speed and automation. This article examines the use of speech to text among educated Nigerians in Kwara State and the effect of the Nigerian English accents on the technique. The data were sourced from some students of Kwara State University, Malete who speak Yorùbá and English as their first and second languages, respectively. The findings revealed how speech recognition technology predicts and identifies pronunciation errors peculiar to Yorùbá speakers of English, using the contrastive analysis (CA) approach. Speech to text displayed an overall disparity between speech and automated written output at the lexical level and the experimental results showed that the English dental fricatives map different segments other than the alveolar stops and that despite the predictions of Contrastive Analysis (CA), voiceless alveolar stop in Yorùbá English (YE) could be mispronounced in accented English leading to automation errors. Significantly, the speech recognition technology showed the underlying accent in the pronunciation of English words.

Keywords: Nigerian English, speech to text, contrastive analysis, language technology, Yorùbá English

1.0 Introduction

This is a socio-phonological study that examines the phonological patterns associated with English pronunciation among Yorùbá educated speakers of English and how their pronunciation is readable on automated software. According to Foulkes (2006:495), socio-phonology is the "descriptive account of phonetic and phonological variation in particular dialects, speech styles or speaker groups." The scope of this paper does

not use accentual markers to strengthen or alienate Yorùbá-English (YE hereafter); rather, this study uses the automatic speech recognition (ASR)'s artificial intelligence (AI) to extract useful information about YE. Using this AI, it displays the corresponding English word (or some English word) as an output.

Linguistic features characterize every speech community. These linguistic peculiarities form 'accent' of a particular speech domain. Accent, according to Yule (1997) is technically defined as "the description of aspects of pronunciation which identify where an individual speaker is from, regionally or socially." It is a distinctive mode of pronunciation of a language that is associated with a particular nation, locality, or social class that manifests at different levels such as word and sentence levels. Accent is the systematic phonological variation in speech (Language Files [LF], 2004). This paper focuses on the variation that characterizes the Yorùbá Nigerian English (YNE/YE) at the phonetic/phonological levels.

Contrastive Analysis (CA hereafter) investigates the differences between pairs (or small sets) of languages with the purpose of providing input to disciplines such as foreign language teaching and translation (Gast, 2012). According to Gast, it mostly deals with the comparison of languages that are 'socio-culturally linked', typically through bilingualism. It focuses on matters of performance. This paper discusses how Yorùbá, the participants' first language, interferes with their use of automatic speech recognition. These interferences were identified and explained using the error analysis procedures, a subset of the CA which is considered as more theoretical and practical in clarifying second language errors. For instance, British English has nine phonemic fricatives (/f, v, θ, ð, s, z, ʃ, ʒ, h/) while Yorùbá has four fricatives (/f, s, ʃ, h/). According to the tenets of CA, this difference is predicted to cause some learning difficulties for YE speakers. For the sake of simplifying the analyses here, only the automation of dental fricatives, /θ, ð/, in YE accent were focused on.

2.0 Literature Review

2.1 An Overview of Speech Recognition Technology

The act of programming a computer to work with language, written or spoken, is a model of language processing. In a publication titled "Language Files" by the Department of Linguistics, Ohio State University (LF, 2016), computers are said to be "ideal for testing linguists' theories about language processing, because programming a computer

requires explicitly specifying all details of an operation." Speech recognition involves the use of computers to transform spoken language into written language. Speech recognition technology can be divided into automatic speech recognition (ASR hereafter) and text machine translation (MT hereafter). Simply put, ASR is the task of converting spoken language into computer readable text (Kamath, Liu & Whitaker, 2019). MT on the other hand is a sub-field of computational linguistics that investigates the process of using artificial intelligence to translate content from one language to another without human involvement. Some examples of MT tools are Google Translate, Microsoft Translator, and Amazon Translate.

Speech to text (speech recognition) is one of the things that humans do with language that can be automated on a computing device or computer. Other automated actions include language translation, text to speech, speech generation/synthesis, etc. Speech recognition systems make use of acoustic cues by the computer. It converts an acoustic speech waveform into text. An acoustic model provides a way to map energy in the speech waveform onto phonemes. It is the conversion of an acoustic speech waveform into text. Early attempts to design systems for automatic speech recognition were mostly guided by the theory of acoustic phonetics, which describes the phonetic elements of speech (the basic sounds of the language) and tries to explain how they are acoustically realized in a spoken utterance (Juang & Rabiner, 2004). These elements include the phonemes and the corresponding place and manner of articulation used to produce the sound in various phonetic contexts The steps involved are acoustic modeling, pronunciation modeling, and language modeling (LF, 2016). Errattahi, Hannani, & Ouahmane (2018) define automated speech recognition systems as aiming at converting a speech signal into a sequence of words either for text-based communication purposes or for device controlling. Using emerging techniques on word error rate metric, they reviewed ASP errors detection and correction research.

ASR technologies provide the capability of automating natural language speaking in various forms via human-machine interface. While noting the progress of ASR, Juang and Rabiner (2004:4) state that "these technologies enable machines to respond correctly and reliably to human voices and provide useful and valuable services." According to them, it is "… a speaker-independent system that could deal with the acoustic

variability intrinsic in the speech signals coming from many different talkers, often notably different regional accents." This study adopts this generalization and attempts to test the Nigerian English accent focusing mainly on the challenges that remain for ASR in accented languages. The past few decades have seen considerable progress in automatically identifying the language of a speaker given of his/her speech (Biadsy, 2011). Automatic speech recognition (ASR) has grown tremendously in recent years. It is a useful way to interact with technology, significantly bridging the gap in human–computer interaction making it more natural and less time consuming. The objective of this system is to take input from the user in audio format and convert it into the words. Speaking mode, vocabulary size, and speaker enrollment are some parameters that characterize speech recognition systems. Speaking mode accepts isolated word input (requires the user to pause after each word) or continuous speech input. This study is based on the speaking mode, a method notable for its high recognition accuracy. In a study on ASR systems, the Chinese language and its many dialects/varieties, Zheng et al. (2005) note that accent is the most crucial issue for ASR systems and their usability. According to them, current ASR systems trained on Putonghua or Standard Mandarin often experience dramatic accuracy loss for speakers with strong accents.

The present study, using the standard metric of Word Error Rate (WER), the proportion of word errors to words processed (Gulzar et al., 2014), evaluates the ASR system to measure its usefulness for accented Yorùbá Nigerian English. This paper attempts to show the usability of the ASR systems and to demonstrate how such technology can be employed to identify some of the challenges that remain for ASR in accented language. Behravan et al. (2016) also note this. According to them, accent adversely affects the accuracy of conventional automatic speech recognition (ASR) systems. As noted by Biadsy (2011), automatically identifying the dialect or accent of a speaker given a sample of their speech is useful for technology because it can be employed to improve ASR systems. Hence, adopting an error analysis approach, this paper examines the application of modern tools to YE. Overall, as noted by Juang and Rabiner (2004), these automated systems were expected to work well for a vast population (literally tens of millions) of talkers without the need for individual speaker training. The focus at Bell Laboratories was in the design of a speaker-independent system that could deal with the acoustic variability

intrinsic in the speech signals coming from many different talkers, often with notably different regional accents.

2.2 Nigerian English

Accented English, which simply refers to English spoken with a particular accent, abound such that we have British English, American English, Scottish English, Australian English, Nigerian English, etc. The following description summarizes some of the features of Nigerian English and Yorùbá Nigerian English in previous studies. English is the official language of communication in education, commerce, government administration and the mass media in Nigeria. It has been noted that there is no uniform accent of spoken English nationwide (Jibril, 1986; Jowitt, 1991, Igboanusi, 2002; Gut (2008), Sogunro, 2012). Nigerian English is distinct, particularly at the pronunciation level (Jowitt, 1991). Many varieties of Nigerian English have been identified in the literature (Akinjobi, 2009). According to Igboanusi (2002: 34), Nigerian English can be defined as all the varieties of English used in Nigeria. It possesses certain linguistic features, which are specifically related to some aspects of the Nigerian environment, culture and indigenous languages. These features tend to nativise the use of English in Nigeria and can be identified in all registers of English, especially in culture-bound usage.

Sogunro (2012) notes that there is little or no known empirical study on the social patterns of Nigerian English (NE) accents. She asserts that while most educated Nigerians normally use ethnic accents, they sometimes switch to a foreign-sounding one, approximating to what they wrongly presume is Received Pronunciation (RP) or General American English. This according to Sogunro leads to a heavy manifestation of hypercorrection with the production of sounds that cannot be defined as typically NE or any other English accent in the world. Such hypercorrection occurs mostly in the speech of those who have had some level of exposure to oral English in school and want to display the fact.

Oke (1970:32) describes the social context of English in Nigeria as paradoxical – where the prestige language is also a cause for alienation. According to him, "the pupil or student even at [the] university level, for fear of "sounding funny" to others around him, often resorts to the vernacular or Pidgin-English or a brand of English which is commonly used by people in the environment." This implies that there is a socially-determined accent shifting in the use of different "brands" of English in

Nigeria. Simo Bobda (2000:260) confirms this style shifting for the whole of African English accents when he postulates that "each national accent in Africa has its own educational, stylistic, sex-related and ethnic variations." It can be assumed that these variations are what Oke refers to as brands (Sogunro, 2012). More than five decades later, this has not changed. Evidence abounds that this attitude still exists. For instance, on social media platforms, Nigerians (especially celebrities) who use an accent close to RP are often made fun of. Nonetheless, the automated speech recognition system/technology did not correctly type some Yorùbá-English (YE) texts in the current study, and this is a clear result of not wanting to come off as funnily humorous.

2.3 Dental Fricatives in Yorùbá English

Nigerian English is noticeably distinct at the pronunciation level (Jowitt, 1991). Using the Interference Theory to elucidate the English language situation in Nigeria, Jowitt (1991: page) notes some parameters for determining varieties within Nigerian languages. According to him, mother tongue interference plays a major role and therefore we have varieties such as Hausa English, Igbo English, Yorùbá English, etc. Yorùbá English (YE) is the variety of Nigerian English spoken in the south-western part of Nigeria. This may suggest that Yorùbá has influenced the spoken English by such speakers, however for this study, it is used as an identifier for the ethnic group and their spoken variety of the NE.

Dental fricatives /θ/ and /ð/ are segments that have received attention in NE and YE studies because they are predictable NE identifiers. Sogunro (2012) investigates the significant difference in the pronunciation of /p, v, z, θ, ð, ʧ, ʃ, ə:, e, ə, ʌ / among HE, IE and YE speakers on the basis of ethnicity. While comparing Cameroon English and Nigerian English, Simo Bobda (1995: page) concludes that /θ/ and /ð/ are generally realized as [t] and [d] respectively in NE. According to Okoro (2017:29), contrastively there are no dental fricatives in any Nigerian languages, therefore many Nigerian speakers of English substitute /t/ for /θ/ and /d/ for /ð/, thus confusing words like 'taught' with 'thought', and 'order' with 'other'. While focusing on the dental fricatives /θ/ and /ð/ in YE, Akande & Akinwale (2006) note that the pronunciations of these two sounds mark YE as different from other varieties of English. The substitutions of the alveolar stops [t] and [d] for the dental fricatives /θ/ and /ð/ respectively, are some of the pronunciation peculiarities of YE

(Akande & Akinwale, 2006).

Akande (2005) also examined university undergraduates' pronunciations of English fricatives and lax vowels including /θ/ and /ð/. The author gave a statistical breakdown of the result: out of the fifty participants in the study, 8 pronounced /θ/ correctly in the words where they occurred, and 6 pronounced /ð/ correctly in the same experiment. He reported that the remaining 42 and 44 participants pronounced /θ/ as [t] and /ð/ as [d] respectively. While the current study does not contend that majority of the participants did not pronounce the mentioned sounds correctly, it argues that the 42 and 44 incorrect pronunciations may not all be [t] and [d] respectively. A major drawback of Akande (2005) and Akande & Akinwale (2006) is that they employed a "deductive technique based on (lead) author's observation of the subjects' spoken English" (Akande & Akinwale, 2006:27).

Previous studies claim that [t] is the only substitute for /θ/ and [d] for /ð/ in YE. However, these claims have not been validated by ASR systems. Therefore, an experiment was conducted to empirically show how words containing these sounds will be automatically written/typed by electronic devices because, and according to Tsojon and Aji (2014), pronunciation is by far one of the several problems affecting most people learning English as a second Language (L2) in Nigeria.

This study pushes forward the discussion on /θ/ and /ð/ as it explores the possible words that machines will write for words like *think/thigh* which have been predicted as being substituted with [t]. This is because there are no meaningful words in English as *tink*/*tigh* respectively. It supports claims that YE in such instances are not /θ/ and /ð/, but they may also not be [t] and [d] always, especially at initial positions. For instance, /t/ is aspirated at the initial position in English but Yorùbá does not have such aspiration rule. With the use of current experimental tools, this study therefore shows what the dental fricatives corresponds to in automated speech system.

3.0 Methodology

This research is aimed at finding out if: YE automated outputs of the dental fricatives /θ/ and /ð/ are [t] and [d] respectively according to extant literature. Since not every word with dental fricatives in English has substitutes that are [t] and [d] words, are the automatically-typed words nonsensical? Also, before making recommendations for software

developers on the inclusion of YE accent in their systems, what is the popularity of such technological innovation among YE speakers?

For this experimental study, the pronunciation of the dental fricatives at initial position was given priority because, without controversy, Yorùbá consonants can occur at word or syllable initial (and medial) positions, and this was assumed to not pose a problem for YE speakers. Hence, a prepared word list containing /t, θ, ð/ consonants of English was given to each respondent to pronounce. /d/ initial words were excluded to control an obvious visual induced mindfulness. This word list (see Appendix 2) was read by twenty participants who were all Yorùbá indigenes, born and bred in various parts of Yorùbá land. They were all final year Linguistics undergraduates from Kwara State university. The data was obtained as the system took input from each participant in audio format and converted it into words as designed by ASR of Microsoft software. Most words on the wordlist were ordered in a way that 'similar' words in terms of dental fricatives and alveolars were placed far apart. For example, ***tank*** occurred as the first word, while ***thank*** occurred as the tenth word (See appendix 2).

The words were largely selected based on whether they have predictable alveolar substitutes. Hence, even though it has been noted that input /θ and ð/ map to [t and d] respectively in the utterances of many Yoruba speakers of English, selected words were chosen in pairs if they are meaningful either as dental fricatives or as alveolar stops initial words. For instance, tank vs thank; tree vs three; tick vs thick; and tin vs thing (generally, the emphasis is more on [t vs θ]). This was done to minimize the effects the contiguous segments/sounds might have on the focused consonants. Also, they all have the same place of occurrence (word initial position).

The Cambridge English Dictionary served as the basis of the native baseline for the evaluation of the participants' performance. The software used was Microsoft Word speech to text. This software is available on mobile phones and computers that can run the program. For this study, the instrument was an iPhone 13 mobile phone. This mobile version's artificial intelligence enabled prompts such as 'Try to say something', 'Tap the microphone to resume', as well as automated typing functionalities like ',' (comma); '.' (full stop); and '?' (question mark)'. Users can also hit 'space bar' and 'new line' functions without breaking the flow of the texts. All these were useful during an experiment whose data were solely isolated speech in which the user speaks the input clearly and without extraneous words.

Data for each participant were sorted into tokens of occurrences and counted afterwards. These were converted into simple percentages for overall analysis. Participants' productions were analyzed using Reference-Recognized Word Sequences Alignment (Errattahi, Hannani, & Ouahmane, 2018) of WER. This type of ASR evaluation focuses on error statistics to determine the accented speech based on pronunciation variation (of the YE). In the data that follows, English words that were supposed to be automated outputs ('inputs') are presented in bold print while resultant literal automated outputs have italic typeface. This is to distinguish the two forms in each structure.

To corroborate the need (or not) for YE accent in ASR systems, seventy additional students and ten faculties from the same department were purposively given a specially-designed questionnaire (see Appendix 1) bringing the overall number of participants to one hundred. The questions on the questionnaire were to obtain information on general awareness and usage of speech to text systems among educated Yorùbás. 80% of the general participants' population was aware of the ASR technology while only 30% of faculty used it at all (mostly for academic purposes). 70% of the students used it (for chats). Majority of the users admitted that they would have preferred it to manual typing if only it were more accurate.

4.0 Results and Discussion of Findings

The use of comparable corpora (a method used in contrastive linguistics) in the study of language varieties, e.g., English varieties, allows a cross-variety comparison of specific linguistic features. Learner corpora contain material from only one language, but the language represents non-native therefore it gives a bilingual output (Gast, 2012). Table 1 presents some examples to illustrate some speech sound errors.

Table 1: Input-Output automation errors

English word	Automated output	Error types (substitutions)
thank	*sync, tank*	coronal substitution; fortition
tank	*thank*	lenition/dentalization
tiny	*dining*	voicing
think labiodentalization	*sync, pink, fink*	substitution; stopping;
thick	*tick, sick*	fortition; coronal substitution

Brooks (2020) identified five main categories of spelling errors: omission, insertion, substitution, transposition, and grapheme substitution. The error types given in Table 1 are mostly substitution errors. Such errors consist in the replacement of a single letter by another single letter e.g., sick for tick. Grapheme substitutions on the other hand are errors that produce a spelling from the writer (or system) with a plausible but incorrect spelling choice, e.g., *thort* for *thought*. Overall, automated output mismatches are substitution errors and grapheme substitution errors, which are simply referred to as substitution here. The participants committed/pronounced phonological errors (phonetically inaccurate pronunciations) which the automatic recognition software converted to phonetically-plausible words when typed.

The use of different consonant sounds and words varied significantly in the substitutions. Based on this, the distributions of expected words versus other words are tabulated for all automated forms in Table 2. Not all substitute words had equal frequency of occurrence in automation, so to keep the table clean, results have been categorized according to the accuracy between intended input and automated output as: High (≥75% consistent occurrence as Input → Output by the participants); Average (>50% <75% as Input → Output by the participants); Low (<50% as Input → Output by the participants). The percentages are for words in bold prints. All words were expected to have 100%. Overall, each word had an output such that 16 input/pronounced words equaled 16 automated output texts.

Table 2: Frequency of expected/accurate automated output

Words	Automated output	Low	Average	High
tank	tank , thank			90%
three	three , tree, free			80%
than	done, then, Dan	0%		
thick	thick , tick, sick, take, fake		40%	
thing	thing , thin, tin, teen, dean, then	20%		
tin	tin , thing, see, seen, team, sin, sing	20%		
tiny	tiny , sign in, dining, time		60%	
think	think , sync, pink, fink		50%	
tint	tint , st, since		70%	

Words	Automated output	Low	Average	High
thank	thank , sync, tank, think	20%		
tree	tree , three, she, free, tweet, create		50%	
trunk	trunk , chunk, drunk			80%
that	that , dads, that's			80%
team	team , Tim, same		70%	
theme	theme , sing, see, seen, team	20%		
tick	tick , chick, sick, seek		60%	

Thank vs **tank**

Of all the sixteen words used for this ASR experiment, **tank** had the most consistent targeted output correlation with 90% correctness. YE bilinguals are familiar with the occurrence of /t/ because it is contrastive in both the Yorùbá and English languages. On the other hand, **thank** which is the direct 'alternate' to it on the word list predictably did not have an equal targeted output correctness; it had only 20% targeted output correctness. Other automated outputs for **thank** were *sync* at 5% and *tank* at 73%. 2% of the automated texts are considered irrelevant because of their high level of irregularities or mismatches. The ASR's **thank** and **tank** result showed CA prediction in both literature and performance; many YE speakers didn't pronounce its /θ/ and the automated text was *tank*; and **tank** had High accuracy.

Three vs **tree**

Although /t/ is contrastive in both languages, from the results of the automated text from the input/spoken word, **tree** didn't have the expected texted output. At only 50%, automation was sometimes the targeted output while the remaining 50% were scattered across words like *three, she, free, tweet,* and *create*. On the other hand, **three** which was predicted to be inconsistent between both words had more automated output correspondence with the targeted text at 80% accuracy. '*tree'* and '*free*' even at Low respectively were the incorrect automated typed words.

Than

Although **than** did not have an alternative in the data, it was the word with no accurate targeted outcome. At 0% it was never automated to the targeted output, **than**. Rather, words like *done* (30%), *Dan* (50%), and *then* (20%) were the automated output texts from it. The word *Dan* at 50% was as predicted by extant literature on YE, /ð/ → [d], and this also largely explains the occasional substitution of **than** with *done*. However,

'*then'* which was not tested has the same initial dental fricative sound as the targeted outcome and its seldom pronunciation by some participants could imply that those YE speakers could pronounce /ð/.

That

The word **that** was usually automated to the target word at 80%. The remaining automated words were rare and evenly distributed at 10% each as '*dads'* and '*that's'* respectively. These are considered as insignificant differences. Notably, **that**, **three**, and **trunk** were the second most consistent of all the spoken words at 80% after **tank**. However, these words do not have much in common that separate them from other words on the list. For instance, **that** has an initial dental fricative that the literature predicted to be inaccurately pronounced by Yorùbá speakers of English. It is also a CVC syllable word. However, it was a High.

Tint

There was 70% correctness between the pronunciation of the word **tint** and the automated typed text. 20% of the incorrect words were *since* and the remaining 10% was **st.** Combinatorially, *since* and ***st*** form 30% and together they revealed an occasional pronunciation of /t/ as [s] in YE.

Tiny

Often (60%), the targeted output was automatically typed for **tiny** while 10% were automatically typed as *sign in***,** 20% as *dining*, and the rest 10% as *time*. The result here yet showed the substitution of [s] for /t/. The output, '*dining',* showed that some participants produced the English /t/ with a shorter VOT (voice onset time). For example, RP English speakers produce /d/ with a VOT less than 30 milliseconds and produce /t/ with 50 milliseconds or longer. Arguably, the software which was not programmed for an accented English perceived this difference and hence the voicing alternation in the eventual mismatch.

Trunk

As mentioned earlier, '**trunk'** is one of words that had the highest target output correspondence at 80% accuracy. It was rarely automated to other words like *chunk* and *drunk* at 10% each. These rare instances of mismatches added to the overall observation. They once again showed that if there was a voiced alveolar stop initial word, they were the likely automated substitutes for the voiceless input counterpart in accented YE.

Think

The word **think,** is the only dental fricative initial word on the list that does not have an alveolar stop word counterpart. Though it was included

as a control for the variables that had dental fricative/alveolar stop counterparts based on the hypothesis in the literature on YE predictions, the result obtained from this word was insightful. For example, it only had 50% target-output match and 30% were automated as '*sync'*, 10% as '*fink'*, and 10% as *pink*. '*sync'* and '*fink'* were consistent with the general automated patterns of mismatch in the experiment. '*Pink'* did not have an established pattern when compared to other forms in the experiment.

Thick vs **tick**

There was more accuracy in the articulation of **tick** and its automated text, when compared to the result found in **thick**. For **tick**, 60% of the participants had the spoken word automatically typed as **tick**, 10% is typed as *chick*, 10% as *sick*, and 20% as *seek*. For **thick** however, it was only 40% target accuracy. The highest automated mismatch for **thick** was *tick* at 20%. Other words such as *take*, *sick*, and *fake*, were the remaining 40% of the automated text.

Thing vs **tin**

At only 20% participants seldom had their words automated as the target output, **thing**. Many of the other automated outputs for it had equal prevalence rate such as *thin* (20%), *tin* (20%), *teen* (20%), *dean* (10%), and *then* (10%). Notably one thing is common to all the substitute words: there is deletion of the word final velar nasal /ŋ/. So, for the 20% whose /θ/ was correctly decoded or perceived by the software, there was also the deletion of word final /ŋ/. This is explicable because even though Yorùbá language does not have a CVC syllable (closed syllable), a CVCC would be considered a highly marked syllable. Another like explanation is that /ŋ/ is not phonemic in the language. The substitution of **thing** with *dean* and *then* were considered extraneous.

The results for **tin** were unexpected going by CA hypothesis and extant literature predictions. From the experiment, there was only 20% correspondence between speech and automated texts. Substitute words such as *seen,* and *sin* had equal rate of automated outputs as **tin**. Other words like *see*, *sing* and *team* were also automated substitutions for **tin**. As noted earlier whenever there was a mispronunciation, similar [s] initial words were substitutes for /t/ initial targets. Phonetically, this indicates that in accented speech, there could be some simplification within places of articulation (alveolar place), hence the lenition process.

Theme vs **team**

The result showed that ASR frequently typed 70% of the **team** token

correctly. 20% of the inaccurately typed output was *Tim* (a word that is quite like the target output) while the remaining 10% was automated as *same*. Looking at the combination of sounds that make up the word **team**, there is no adequate evidence to justify this high level of accuracy, because for a Yoruba speaker of English, the word **team** is as different from Yoruba as the word *tin*, *tick*, or *tank*. They all have surface similarities in terms of syllable structure and phonotactics. The word **theme** on the other hand had only 20% target output correspondence. Other output forms for it include words such as *team* (40%), *see* (20%), *seen* (10%), and *sing* (10%). This result further showed that dental fricatives are substituted with alveolar stops and other fricatives.

5.0 Conclusion

Having gone through the analyses of the automation of dental fricatives and voiceless alveolar stop in YE, certain conclusions can be made from the study. According to extant literature, it has been assumed that the only substitute for dental fricatives such as **thing** is *tin*. This research shows that different speakers actually pronounce different words such *thin*, *tin,* and *teen,* instead of **thing**.

Another pattern found in the result was the voicing of the voiceless alveolar stops /t/, resulting in mispronunciations of words such as **trunk** and **tiny** as *drunk* and *dining* respectively. Also, for /t/ initial words the research shows that the more Yoruba speakers of English try at pronouncing certain English phonemes correctly, the more they sound inaccurately as shown in the automated texts. This finding supports Sogunro's hypothesis on hypercorrection. Some of the outputs do not follow extant literature's claims because the participants' pronunciations might have been said too consciously. Other fricatives such as [s] and [f] were the substitutes of many sounds in the experiment, and they are also substitutes for words that have alveolar stops initial. This shows that [s] initial words are prevalent choices for both dental fricatives and voiceless alveolar stops. If the automated mismatch is within the fricative segments, e.g., **think** as *sync* and *fink* then, the voicing is maintained. Furthermore, for this experiment, the ASR software did not leave any of the tokens, blank. Therefore, every articulated word had an automated text, whether accurate with what the speaker intended to articulate or not, however, they are not nonsensical words.

Finally, this study should advance research in ASR systems,

particularly in accented English. There is a large number of people who speak YE and systems should be able to adapt features that would make technology usable for these people as it is for other users. The findings of this paper will also help to improve the speech recognition accuracy because after identifying where errors are made, they can be predicated, and systems can be programed to accommodate YE accented English.

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Phonological Cues in Selected Political Rhetorics of Ayodele Fayose's Speeches on "Stomach Infrastructure"

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Abstract

Phonological cues articulated to achieve emotive persuasion within the broader context of political discourse are rare in phonological studies, hence the need for this study. The study adopts a quantitative research method using content analysis of 10 purposively selected excerpts from the speeches of Ayodele Fayose (former, Ekiti State Governor). The excerpts were transcribed and the phonological cues in them were analysed using discourse intonation theory. Findings revealed that rising intonation patterns create a friendly and inclusive tone. Stress was noticed to be strategically placed on key words to emphasise the importance of these concepts. The rhythmic flow of speech, combined with discourse markers and pragmatic functions, enhances the persuasive impact of the rhetoric. The study concludes that the nuance of phonological cues is instrumental in bridging communication gaps and the manner in which political messages, particularly those concerning essential welfare policies like the provision of food, are explored.

Keywords: Discourse intonation, Emotive language, Phonological cues, Political rhetorics and Stomach infrastructure.

1.0 Introduction

Nearly sixty- five years of independence and despite the availability of natural resources, poverty is observed to be endemic in Nigeria's Economic system. As a result of endemic poverty, Nigerians have been reduced to the behest of politicians that tie them to the gridlock of "Stomach infrastructure" Stomach infrastructure was introduced into the political lexicon, following the 2014 election in Ekiti State, when the PDP's gubernatorial candidate Ayodele Fayose mobilised voters with food items and defeated the then incumbent APC Governor, Kayode Fayemi. The ideology of stomach infrastructure as a concept projected by the Nigerian politicians on the vulnerable electorate who, for poverty, are encouraged to mortgage their fundamental right of freedom to choose who governs them in exchange for immediate gratification (Onwuka 2022).

In recent times, what we call politics in Nigeria has turned towards the base satisfaction of people's needs. Money and food items have become the inducement to disrupt the electorate's voting preferences. And with rampant poverty in Nigeria, it does not take serious reflection to see how people can be swayed to vote against their conscience with mere thousands of naira and a bag of rice. Advocates of stomach infrastructure believe that the government cannot be investing heavily on physical infrastructure when the stomach is empty. Nigerian politicians who are unwilling to share money openly or secretly to buy support are regarded as non-starters and rookies in politics and rarely get peoples' support (Onwuka 2022). Consequently, stomach infrastructure shifts attention away from the infrastructural deficit, like schools, hospitals, roads, electricity, water and other dividends of democracy, that is undermining real development in Nigeria, towards a more immediate and existential infrastructure. Stomach infrastructure, however became a Nigerian's political lexicon which needs to be researched in its context of language use and the patterns of intonation employed.

In political discourse, phonological cues such as intonation and stress patterns play a significant role in shaping the emotional and persuasive impact of speeches. According to Brazil (1997), intonation patterns, including rising and falling tones, contribute to the communicative value of speech by signaling emphasis, authority and emotional engagement. Similarly, Halliday (1985) emphasises the role of intonation in expressing information structure and interpersonal meanings, which are essential for effective communication. In the context of political rhetoric, phonological features are often strategically employed to influence audience perception and response. For instance, rising intonation can create a sense of inclusivity and engagement, while falling intonation conveys certainty and authority (Brazil, 1997). Stress patterns, which highlight key words or phrases, are used to draw attention to critical aspects of the message, making the speech more memorable and impactful. Additionally, prosodic features such as rhythm and tempo contribute to the overall delivery, enhancing the speaker's ability to maintain audience interest and reinforce key points (Couper-Kuhlen& Ford, 2017).

The primary objective of using emotive language is to draw the attention of the audience and make them more receptive to the message

being conveyed (Carnine, 2007, p. 347). Emotive language is not limited to literature but is also frequently used in various contexts, including advertising, public speeches and even personal writing. In advertising, emotionally charged language is used to attract the target audience's interest and evoke specific emotions, often to influence purchasing decisions. Public speeches, particularly by motivational speakers, rely heavily on emotive language to leave a lasting impact on the audience. The use of emotive language can have both positive and negative consequences. On the positive side, it can create an emotional bond between the writer/speaker and the reader(s)/listener(s), allowing readers/listener to relate better to the write-up/speech. Emotive language can sympathise, motivate and influence people, making it a powerful tool in communication. However, if used wrongly, emotive language can cause more damage than good, it can confuse, irritate, or create agitation in people, and refrain them from reacting properly (Macagno& Walton, 2014, p. 1). The tone of the speaker or writer plays a significant role in emotive language, it may determine the level of attention of the audience. The speed and pitch of the speaker's voice, as well as nonverbal cues like gestures, can significantly enhance the emotional impact of the message (Carnine, 2007). However, it is essential to use emotive language judiciously, being aware of its potential consequences and taking care to avoid misinterpretation or overuse (Macagno F, & Walton D., 2014 p.1).

2.0 Literature Review

2.1 Stomach Infrastructure and Discourse Intonation

Scholars have analysed stomach infrastructure within the broader context of political economy and patronage systems. Ogundiya (2017) highlights the trade-off between short-term material gains and the erosion of democratic values, arguing that reliance on stomach infrastructure undermines citizens' demands for responsive governance and institutional development. Ethical and legal dimensions of stomach infrastructure have also attracted scholarly attention. Adebayo (2019) examines the ethical dilemmas faced by politicians in balancing the immediate needs of constituents with broader principles of democratic governance and social justice. He calls for regulatory mechanisms to curb the abuse of stomach infrastructure as a tool for political manipulation. Also, the role of communication and rhetoric in promoting stomach infrastructure policies has been explored by scholars interested

in political discourse and persuasion. Adigun and Ololade (2020) analyse the linguistic strategies employed by politicians to frame stomach infrastructure as a form of benevolent leadership, leveraging emotional appeals and populist rhetoric to garner public support. Meanwhile, several scholars have explored how intonation contributes to meaning construction in discourse. Halliday's Systemic Functional Linguistics (SFL) framework emphasises the role of intonation in expressing information structure, modality, and interpersonal meanings (Halliday, 1985). Studies by Brazil (1997) and Butt and Benjamin (2014) also explore the interaction between intonation patterns and semantic/pragmatic functions in discourse, demonstrating how pitch contours signal discourse relations, focus, and attitude. While Couper-Kuhlen and Ford (2017) examine prosodic features in conversational storytelling, revealing patterns of pitch modulation, tempo and rhythm that contribute to narrative coherence and listener engagement. Pragmatic approaches to discourse intonation focus on how pitch patterns convey speaker intentions, attitudes and discourse coherence. Levinson (1983) introduces the concept of "intonational meaning" in pragmatics, highlighting the role of intonation in signaling illocutionary force and conversational implicature.

In Nigeria, the concept of stomach infrastructure is a controversial political rhetoric with various politicians using different phonological cues to sway public opinion and justify policies that prioritise short-term gains over long-term development. However, there seems to be a dearth of studies on the systematic analysis of the phonological cues on stomach infrastructure rhetorics adopted by politicians which influence the understanding of how language is used to shape public discourse and influence political decision-making.

Existing studies have dwelt on the ethical and legal dilemmas of stomach infrastructure, including its potential to undermine democratic values and accountability but this study investigate the phonological cues used in selected political discourse on stomach infrastructure policies in Nigeria, to uncover the linguistic strategies used by politicians to persuade their audiences. Hence, this study adopts a qualitative research design, using content analysis to investigate phonological cues in political rhetoric concerning stomach infrastructure policies in Nigeria.

2.2 Discourse Intonation Theory

Discourse Intonation is an approach to the teaching and analysis of everyday speech. The theory was developed at The University of Birmingham (UK) in the late 1970s and early 1980s. The originator of this approach was David Brazil (1925-1995). It became influential in English Language Teaching (ELT) in mid 1980s and 1990s, both for teacher training (language awareness) and classroom practice (pronunciation). This influence continues to grow, and DI is increasingly used in academic research.

Discourse Intonation attempts to explain how intonation patterns in English affect the communicative value of speech, through the use of falling and rising tones along with changes in pitch. The teaching of intonation seems to sit naturally with communicative language learning, but it is not an easy aspect of English to incorporate into the ESL classroom. Brazil's DI theory identifies four key components of intonation: prominence, tone, key and termination. Prominence refers to the emphasis placed on certain words or syllables, which helps to highlight important information in the discourse. Tone involves the use of rising and falling intonation patterns to convey different meanings, such as certainty (falling tone) or uncertainty (rising tone). Key refers to the pitch level at which a speaker begins a tone unit, which can indicate the speaker's attitude or the relationship between ideas. Finally, termination refers to the pitch level at the end of a tone unit, which can signal the completion of a thought or the introduction of new information (Brazil, 1997). The choice of Discourse Intonation theory is that, it provides systematic framework for analysing how phonological cues, such as intonation and stress contribute to the persuasive and emotive impact of political speeches. According to Brazil (1997), intonation patterns are not arbitrary but are used strategically to convey specific meanings and attitudes. This is particularly relevant in the context of political rhetoric, where speakers aim to persuade, motivate and connect with their audiences.

3.0 Aim and Objectives

The aim of the study is to investigate phonological cues in political rhetorics concerning stomach infrastructure policies in Nigeria. The specific objectives of the study are to:

i. Identify the role of phonological cues such as intonation and stress patterns in conveying persuasive messages and emotive appeals in political speeches advocating for stomach infrastructure policies in Nigeria;

ii. examine how phonological cues in political rhetoric on stomach infrastructure policies reflect the socio-economic backgrounds or educational levels of the audience; and

iii. explain the linguistic strategies politicians employ to leverage phonological cues effectively in communicating the benefits and objectives of stomach infrastructure policies to different target audiences in Nigeria.

Methodology

The study adopts a quantitative research method using content analysis of 10 purposively selected excerpts from the speeches of Ayodele Fayose (former Ekiti State Governor). The excerpts were transcribed and the phonologicl cues in them were amalysed.

4.0 Data Analysis

Excerpt 1

Excerpt	*"My dear brothers and sisters, as your leader, it is my duty to ensure that your basic needs are met. That's why I'm launching this food and cash empowerment program to support our vulnerable citizens. We will provide food items and a stipend to help you get back on your feet. As I always say, 'A hungry man is an angry man". Let us work together to build a Nigeria where no one goes hungry or lacks the means to live a dignified life.* *Thank you, and God bless Nigeria!"* - Ayodele Fayose
Pitch	The pitch is generally medium to high, conveying a sense of enthusiasm and conviction.
Tone	The statement begins with a rising intonation pattern ↗ ("My dear brothers and sisters..."), indicating a friendly and inclusive tone. The rest of the statement follows a falling intonation pattern ↘, conveying a sense of authority and certainty.
Prominence	Stress is placed on words like "duty", "basic needs", "vulnerable citizens", and "dignified life", emphasising the importance of these concepts.
Pauses	There are no significant pauses in the statement, indicating a smooth and confident delivery.
Prosody	The rhythm is steady, with a slight increase in pace towards the end, conveying a sense of urgency.

Discourse Makers	The phrase "As I always say" is used as a discourse marker to introduce a familiar quote.
Pragmatic Functions	The statement performs the pragmatic function of persuading and motivating the audience to support the food and cash empowerment programme.
Contextual Factors	The context is a political speech, and the speaker is trying to convince the audience of the importance of the programme. The use of intonation contributes to the overall persuasive and motivational tone.

Excerpt 2

Excerpt	*"We are not just building roads, we're building stomachs."* – Ayodele Fayose
Pitch	The pitch is medium to high, conveying a sense of optimism and enthusiasm.
Tone	The statement begins with a rising-falling intonation pattern ↗↘"We are not just building roads" creates a sense of contrast, while the falling-rising contour on "we're building stomachs" emphasise the importance of human needs
Prominence	Emphasis is placed on "not just" and "stomachs", drawing attention to the twist on the typical phrase "building roads"
Pauses	There is a slight pause on "roads" which allows the audience to process the initial clause before the unexpected twist.
Prosody	The rhythm is steady, with a slight increase in pace towards the end.
Discourse Makers	The phrase "not just" is used as a discourse marker to contrast, clarify and emphasise the government commitment to stomach infrastructure programme.
Pragmatic Functions	The statement performs the pragmatic function of reassuring the audience of the administration's commitment to poverty alleviation.
Contextual Factors	The context is a political speech, and the speaker laid emphasise on the government commitment to poverty alleviation programmes. The use of intonation contributes to the overall empathy and reassuring tone.

Excerpt 3

Excerpt	*"Stomach infrastructure is not just about food, it is about the well-being of the people* – Ayodele Fayose
Pitch	The pitch is high to medium, creating a sense of contrast and shift in the audience perspective.
Tone	The statement begins with a rising- falling intonation pattern ↗↘"Stomach infrastructure is no just about food" and falling-rising coutour on "it is about the well-being of the people*"*
Prominence	The stress is placed on words like "not just" and "well-being", this draw attention to the crucial elements of the message.
Pauses	There are no significant pauses in the statement, indicating a smooth and confident delivery.
Prosody	The rhythm is steady, with a slight increase in pace towards the end allowing the audience to absorb the message.
Discourse Makers	The phrase "not just" is used as a discourse marker to contrast and clarify the purpose of the programme.

Pragmatic Functions	The statement performs the pragmatic function reassuring the audience of the speaker's commitment to the well-being of citizens.
Contextual Factors	The context is a political speech, and the speaker is trying to convince the audience of their vision for the future. The use of intonation contributes to the overall persuasive and reassuring tone.

Excerpt 4

Excerpt	*"A hungry man is an angry man; stomach infrastructure is key to peace and stability" – Ayodele Fayose*
Pitch	The pitch is medium to high.
Tone	The statement begins with a falling-rising intonation ↓↗ "A hungry man is an angry man" and rising- falling coutour on "stomach infrastructure is key to peace and stability." This create a sense of logical progression
Prominence	The stress is placed on words like "hungry" "angry" "stomach infrastructure" "peace" and "stability", emphasising the importance of these concepts.
Pauses	There are no significant pauses in the statement, indicating a smooth and confident delivery.
Prosody	The rhythm is steady, this contributes to the overall persuasive effect of the speech.
Discourse Makers	The statement employs two discourse markers "is" connecting "*hungry and angry"* and "key" connecting "*infrastructure to peace and stability"*
Pragmatic	The statement performs the pragmatic function of establishing the cause-
Contextual Factors	The context is a political speech, and the speaker is trying to persuade the audience on the need to support the government stomach infrastructure policy.

Excerpt 5

Excerpt	*"Our Priority is to provide stomach infrastructure, because when the stomach is empty, the brain cannot function."* – Ayodele Fayose
Pitch	The pitch is high to medium, conveying a sense of empathy and concern.
Tone	The statement begins with a rising intonation pattern ↗("Our…"), create a sense of emphasis and falling intonation pattern ↘on "because when the stomach is empty, the brain cannot function", conveying a sense of authority and certainty.
Prominence	The stress is placed on words like "priority,", "stomach infrastructure" "empty" and "function". All these draws attention to the consequences of neglecting stomach infrastructure.
Pauses	There are no significant pauses in the statement, indicating a smooth and confident delivery.
Prosody	The rhythm is steady and moderate which allows the audience to absorb the message.
Discourse Makers	The phrase "because" is used as a discourse marker to connect priority to consequences and "when" connects condition to outcome
Pragmatic Functions	The statement performs the pragmatic function of showing empathy and reassuring the audience of the administration's commitment to supporting the most vulnerable citizens.
Contextual Factors	The context is a political speech, and the speaker is trying to convince the audience of the importance of investing in the nation's health and future prosperity. The use of intonation contributes to the overall persuasive and reassuring tone.

Excerpt 6

Excerpt	*"A well-fed population is a happy population."*- Ayodele Fayose
Pitch	The pitch is medium to high, conveying a sense of emphasis and importance of foods
Tone	The statement begins with a rising intonation pattern ↗ follows by falling intonation pattern ↘ conveying a sense of empathy and certainty.
Prominence	The stress is placed on words like "well-fed", "happy", and "population", emphasising the importance of the policy.
Pauses	There are no significant pauses in the statement, indicating a smooth and confident delivery.
Prosody	The rhythm is moderate.
Discourse Makers	The phrase "is" and "a" are used as discourse marker to express the speaker's view.
Pragmatic Functions	The statement performs the pragmatic function of persuading and reassuring the audience of the importance of collective effort and the government's commitment to addressing hunger and poverty.
Contextual Factors	The context is a political speech, and the speaker is trying to motivate the audience on the need for collective action to address national challenges.

Excerpt 7

Excerpt	*"Already, I am grooming your chicken for Christmas. I am getting your rice ready to do stomach infrastructure. When I defeated them, they said it was as a result of stomach infrastructure. How can an incumbent be saying that when he had the money, he had the power, he had the might but disconnected himself from the people. They are gone,"* – Ayodele Fayose
Pitch	The pitch is high, conveying a sense of excitement and confidence.
Tone	The statement begins with a rising intonation pattern ("Already, I am grooming..."), indicating a playful and teasing tone. The rest of the statement follows a falling intonation pattern ↘ conveying a sense of authority and certainty.
Prominence	The stress is placed on words like "grooming", "stomach infrastructure", and "disconnected", emphasising the speaker's actions and criticisms of the incumbent.
Pauses	There are short pauses between sentences, indicating a sense of drama and emphasis.
Prosody	The rhythm is varied, with a mix of rising and falling intonation patterns, conveying a sense of engagement and persuasion.
Discourse Makers	The phrase "How can an incumbent be saying that" is used as a discourse marker to express the speaker's incredulity and criticism.
Pragmatic Functions	The statement performs the pragmatic function of persuading and reassuring the audience of the speaker's commitment to their needs and criticisms of the incumbent.
Contextual Factors	The context is a political speech, and the speaker is trying to convince the audience of their ability to deliver on promises and criticize the incumbent's actions. The use of intonation contributes to the overall persuasive and playful tone.

Excerpt 8

Excerpt	*"People of Ekiti, "stomach infrastructure" is about ensuring that the basic needs of our citizens are met. My administration is focused on delivering food and financial aid to those who need it most. This is our pledge to you: no one in Ekiti will be left behind"* – Ayodele Fayose
Pitch	The pitch is medium to high, conveying a sense of sincerity and commitment.
Tone	The statement begins with a rising intonation pattern ↗ ("People of Ekiti..."), indicating a friendly and inclusive tone. The rest of the statement follows a falling intonation pattern, conveying a sense of authority and certainty.
Prominence	The stress is placed on words like "basic needs", "delivering", and "no one", emphasising the speaker's focus on the citizens' well-being and inclusivity.
Pauses	There are short pauses between sentences, indicating a sense of emphasis and clarity.
Prosody	The rhythm is steady, with a slight increase in pace towards the end, conveying a sense of determination.
Discourse Makers	The phrase "This is our pledge to you" is used as a discourse marker to express the speaker's commitment and promise to the people.
Pragmatic Functions	The statement performs the pragmatic function of reassuring and persuading the audience of the administration's commitment to their basic needs and well-being.
Contextual Factors	The context is a political speech, and the speaker is trying to convince the audience of their administration's focus on the citizens' needs and well-being. The use of intonation contributes to the overall persuasive and reassuring tone.

Excerpt 9

Excerpt	*"I will have a minister for stomach infrastructure and welfare of the people. You can tar all the roads here, you can do every good work on infrastructure but when the people are not happy when people have not looked after, not in a situation where you say Abacha loot must be shared in the market to nobody. When the money eventually ends in the pocket of the poor. So, for me, stomach infrastructure is part of being supportive of ordinary Nigeria, as will be necessary. Stomach infrastructure under my watch, as president of Nigeria, will be a major theme. No one is saying here that you will not do the needful in terms of developing the country, part of development is the welfare and well-being of the people."* – Ayodele Fayose
Pitch	The pitch is medium to high, conveying a sense of passion and emphasis.
Tone	The statement begins with a rising intonation pattern ↗ ("I will have a minister..."), indicating a sense of determination and commitment. The rest of the statement follows a falling intonation pattern ↘ conveying a sense of authority and certainty.
Prominence	The stress is placed on words like "stomach infrastructure", "welfare", "happy", "poor", and "wellbeing", emphasizing the speaker's focus on the people's needs and well-being.

Pauses	There are short pauses between sentences, indicating a sense of emphasis and clarity.
Prosody	The rhythm is varied, with a mix of rising and falling intonation patterns, conveying a sense of engagement and persuasion.
Discourse Makers	The phrase "So, for me" is used as a discourse marker to express the speaker's personal commitment and emphasis.
Pragmatic Functions	The statement performs the pragmatic function of persuading and reassuring the audience of the speaker's commitment to the people's welfare and well-being.
Contextual Factors	The context is a political speech, and the speaker is trying to convince the audience of their focus on the people's needs and well-being. The use of intonation contributes to the overall persuasive and reassuring tone.

Excerpt 10

Excerpt	*"Brothers and sisters of Ekiti, your well-being is our utmost concern. 'Stomach infrastructure' is a key component of our governance strategy. By ensuring that you have access to food and financial resources, we are laying the foundation for a more prosperous and equitable state. We are here to support you in every way possible."* - Ayodele Fayose
Pitch	The pitch is medium to high, conveying a sense of warmth and concern.
Tone	The statement begins with a rising intonation pattern ↗ ("Brothers and sisters..."), indicating a friendly and inclusive tone. The rest of the statement follows a falling intonation pattern ↘ conveying a sense of authority and certainty.
Prominence	Stress is placed on words like "well-being", "stomach infrastructure", "prosperous", and "equitable", emphasising the speaker's focus on the citizens' needs and welfare.
Pauses	There are short pauses between sentences, indicating a sense of emphasis and clarity.
Prosody	The rhythm is steady, with a slight increase in pace towards the end, conveying a sense of determination.
Discourse Makers	The phrase "We are here to support you" is used as a discourse marker to express the speaker's commitment and support.
Pragmatic Functions	The statement performs the pragmatic function of reassuring and persuading the audience of the government's commitment to their well-being and welfare.
Contextual Factors	The context is a political speech, and the speaker is trying to convince the audience of their government's focus on the citizens' needs and welfare. The use of intonation contributes to the overall persuasive and reassuring tone.

5.0 Discussion of findings

As observed from the analysis presented above, the discussion below answers the objectives the study seeks to achieve:

I. *to determine the role of phonological cues such as intonation and stress patterns in conveying persuasive messages and emotive appeals in political speeches advocating for stomach infrastructure policies in Nigeria*

The role of phonological cues, such as stress and intonation patterns, play a crucial role in conveying persuasive messages and emotive appeals in political speeches in the context of advocating for stomach infrastructure policies in Nigeria because it reflects intonation patterns which indicate enthusiasm when rising tune is used by the speaker and also depicts authority when the speakers intentionally employ the use of falling tone. However, the choice of words (e.g., "well-being", "stomach infrastructure", "prosperous", "equitable", "welfare", "happy", "poor", "basic needs", "delivering", "priority", "no one" etc.) reveals the speaker's stress placement on whether to ascertain the speaker's linguistic performance in his use of English words, one can also asserts that most of the speakers' tone are warm and appealing to the audience due to the fact that the politicians carefully select and produce their speeches base on social context of the masses, the speaker hereby enhance the use of prosody through the rhythmic flow of his speeches to effectively persuade the audience via the choice of words and vocabularies that are emotively appealing and advocating for stomach infrastructure policies in Nigeria.

ii. to examine how phonological cues in political rhetoric on stomach infrastructure policies reflect the socio-economic backgrounds or educational levels of the audience.

The analysis reveals that politicians strategically adapt their intonation, stress and tone to resonate with diverse audiences. For instance, rising intonation creates inclusivity and relatability, particularly for audiences with lower educational levels, while falling intonation conveys authority and certainty, appealing to more educated or critical listeners. Stress is placed on key words like "happy", "poor", "basic needs", "delivering", "priority", "well-being", "basic needs" etc. to emphasise immediate welfare concerns, aligning with the socio-economic realities of impoverished audiences. More so, the use of colloquial expressions and rhythmic prosody enhances relatability for less educated audiences, while nuanced intonation patterns cater to more sophisticated listeners. These phonological strategies ensure that the rhetoric is accessible, persuasive and emotionally engaging, reflecting the socio-economic and educational diversity of the Nigerian electorate.

iii. to explain the linguistic strategies politicians employ to, leverage phonological cues effectively in communicating the benefits and objectives of stomach infrastructure policies to different target audiences in Nigeria

As observed in the study, politicians employ some linguistic strategies to leverage phonological cues effectively in communicating the benefits and objectives of stomach infrastructure policies to different target audiences in Nigeria. Some of the observable linguistics strategies from the analysis are explained as below;

i. Tone

Rising Intonation : Starting statements with a rising intonation such as, "Brothers and sisters…" or "People of Ekiti...", creates a warm/friendly and inclusive tone. This approach makes the audience feel included and valued, which is crucial in engaging and persuading them.

Falling Intonation: Following with a falling intonation in the main body of the message conveys authority and certainty. This pattern helps in reinforcing the speaker's statements, making them sound more definitive and convincing.

ii. Stress on key words

Stress is placed on important words related to the policy, such as "well-being," "stomach infrastructure," "prosperous," "equitable," "basic needs," and "no one." This technique highlights the critical aspects of their message and ensures that these points stand out to the audience, making the speech more memorable and impactful.

iii. Discourse Markers

As observed in the expressions, phrases like "We are here to support you" and "This is our pledge to you" are used as discourse markers to express commitment and support. These markers serve to reinforce the speaker's promises and intentions, making the speech more cohesive and persuasive

iv. Pragmatic Functions

The speeches perform pragmatic functions that reassures and persuades the audience of the speaker's commitment to their well-being and needs. By addressing the audience's immediate concerns and framing the policies as essential and beneficial, the speeches build trust and support in the speakers.

v. Contextual Factors

The results from the study shows that the context of the political speeches often involves addressing the failures of incumbents and promising better welfare through stomach infrastructure policies. The use of intonation and stress patterns in this context helps to contrast the speaker's new approach with the shortcomings of previous administrations, making their message more compelling.

vi. Prosody

The rhythmic flow in speech as observed in the study, portrays careful modulation of intonation and stress, which helps to maintain audience interest and enhances the overall delivery of the message. This rhythm can make the speech more engaging and easier to follow, particularly for audiences who may not have high literacy levels. The rhythmic pattern aids in reinforcing key points, making the speech more persuasive and memorable.

6.0 Conclusion

The study concludes that phonological cues are instrumental in making political rhetorics on stomach structure policies persuasive and emotional. By tailoring these cues to the socio-economic background and educational levels of the citizens, politicians effectively communicate their messages and ensure that they communicate in such a way that the citizens clearly understand the message and find it compelling.

Moreso, the Nigerian politicians employ a range of linguistic strategies to deploy phonological cues effectively by adapting their language and speech patterns to different target audiences. They communicate the benefits and objectives of stomach infrastructure policies in such a way that the audience got convinced and easily subscribed to the political class ideology of stomach infrastructure. These strategies enhance the persuasive power of their speeches, making sure the message resonates with diverse group within the population. Ultimately, the nuanced use of phonological cues by politicians serves as a powerful tool in bridging communication gaps and fostering widespread support for their personal agenda.

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Phonological Nuances in the Sermons of Selected Pentecostal Pastors in Nigeria

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Abstract

This study investigates the phonological nuances in the sermons of selected Pentecostal pastors in Nigeria, focusing on how phonological features contribute to the effectiveness and distinctiveness of their oratory. The objective of this study is to identify and discuss the effects or impacts of phonological nuances like stress and intonation in the sermons of Pentecostal pastors in Nigeria. Pentecostal pastors are known for their emotive and dynamic delivery and offer a rich field for phonological analysis. This work examines stress patterns and intonation as phonological features that pastors employ to engage their congregations and convey their messages powerfully. The study adopts a qualitative method, including phonetic transcription and recording of sample messages. The analysis reveals that pastors do make use of stress patterns and often manipulate pitch and intonation to create emphasis and convey emotional intensity with a view to highlighting key points and maintaining audience engagement. This research contributes to the broader understanding of religious oratory in the Nigerian context by highlighting the interplay between phonology and rhetoric in Pentecostal preaching. The findings have implications for the study of phonology in oral traditions and the communicative practices.

Keywords: Phonological nuances, sermons, Pentecostal Pastors, Nigeria, phonological features

1.0 Introduction

This study investigates the phonological nuances in the sermons of Bishop David Oyedepo of Winners' Chapel and Pastor Enoch Adeboye of the Redeemed Christian Church of God (RCCG). Through detailed phonological analysis, the research examines how Pentecostal Pastors employ phonological features to enhance oratory skills thus engaging the congregations. The study focuses on aspects such as intonation, stress patterns and rhythm. By analyzing sermon recordings, the research identifies the distinct phonological strategies the pastor uses to convey their messages effectively, underscoring the importance of phonology in religious oratory within the Nigerian context.

Pentecostalism in Nigeria has grown significantly, characterized by dynamic and emotive preaching styles. Two prominent figures in this movement are Bishop David Oyedepo of Winners' Chapel and Pastor Enoch Adeboye of the Redeemed Christian Church of God (RCCG). Their sermons are notable not only for their theological content but also for their compelling delivery, which relies heavily on phonological elements to engage and persuade their audiences. This paper explores the phonological nuances in their sermons, highlighting the specific techniques they use to enhance their rhetorical impact.

2.0 Literature Review

2.1 Phonological Nuances in Pentecostal Sermons

Phonological nuances refer to the subtle and often intricate features of speech sounds and patterns that contribute to the distinctiveness and effectiveness of spoken language. These nuances encompass various elements of phonology, the study of the sound systems of languages, and how these sounds are organized and used to convey meaning. The key aspects of phonological nuances include intonation, stress patterns, phonetic variant, prosody and rhythm. Intonation is the variation in pitch while speaking, which can convey different meanings or emotions. For example, a rising intonation at the end of a sentence can indicate a question, while a falling intonation can signal a statement or command. Intonation can also mean the way the pitch (level) of the voice goes up and down in the process of speaking (Aremo, 2001:7). There are many kinds of tunes in English language but the rising and falling tunes are the basic and also the most important. The rising tune occurs usually when we ask Yes or No questions e.g: (↑)Are you the senior Prefect?

(↑) Can you read this Novel?

(↑) Should I expect you?

The arrow pointing up as indicated in the bracket above is the Rising Tune indicator while the arrow pointing down (↓) is the falling tune indicator respectively.

The Falling Tune normally occurs while asking 'wh' Questions, e.g:

(↓) When did she come?

(↓) Where were you?

(↓) Why are you looking sad?

Falling tune can also be used in expressions that are statements, commands and exclamations such as:

a. (↓) The Teacher is here (statement)

b. (↓) I am a Winner (statement)

c. (↓) Go home now (command)

d. (↓) Let me have the money now (command)

e. (↓) What a great day! (exclamation)

f. (↓) What a brilliant girl! (exclamation)

Stress Patterns refers to the emphasis placed on certain syllables or words within a sentence. Stress can alter the meaning of a word (e.g., 'record as a **noun** vs. re'cord as a **verb**) and highlight important information in a sentence. Stress pattern in English is very vital because when placed wrongly on any syllable of a word, such word can be mispronounced thus affecting the ultimate comprehension of such words in a sentence. This may be misleading to the audience. Stress pattern can be categorized into word or sentence stress. It is usually guided by some basic rules. For instance, in normal speech, speakers are expected to stress content words like nouns, main verbs, adjectives and adverbs only while grammatical words like pronouns, articles and prepositions are not stressed in a sentence. In word stress, monosyllabic words (words with only one syllable) are automatically stressed e. g. pail / ˊpeil/, boy/ ˊbɔi/ while in most cases, disyllabic words (words with two syllables) usually receive their stress marks on the first syllable e. g. London / ˊlʌndn/, master / ˊmœstə /. Note that the stressed marks on monosyllabic words are not indicated in the pronouncing dictionary but the present researcher indicated it for the sake of explanation. They are only stressed if they appear as content words in sentences. Stress as said earlier is very important because it can change the meaning, the class category and function of words.

Phonological nuances are crucial in effective communication, as they help convey emotions, emphasize important points, and engage listeners. In the context of religious oratory, such as the sermons of Pentecostal pastors, these nuances play a vital role in enhancing the delivery and impact of the message. Again, previous studies on religious oratory have emphasized the importance of phonology in effective communication. According to Crystal (2003), phonological features such as intonation, stress, and rhythm are crucial in conveying meaning and

emotion in spoken language. In the context of Pentecostal sermons, these features are often amplified to create a more engaging and persuasive message (Asamoah-Gyadu, 2005). This study builds on this body of work by focusing on the sermons of Oyedepo and Adeboye, examining how they utilize these phonological elements to connect with their congregations.

2.2 Sermons as an Entity of Religious Worship in Pentecostal churches

Sermons hold a central place in the worship services of Pentecostal churches. They serve as a primary means of delivering religious teachings, inspiring believers, and fostering spiritual growth within the congregation. Pentecostal sermons often emphasize passionate and dynamic preaching styles, focusing on biblical interpretations, personal testimonies, and the role of the Holy Spirit in the lives of believers (Peel, 2000). Sermons in Pentecostal worship are deeply rooted in Biblical Teachings. Preachers draw upon various passages from the Bible, exploring themes of salvation, sanctification, spiritual gifts, and the work of the Holy Spirit. The sermons aim to provide practical guidance, encouragement, and challenges for believers in their daily lives (Peel, 2000). Pentecostal sermons often incorporate experiential and personal testimonies to connect with the congregation. Preachers share their own encounters with God, miracles, and transformations as a way to illustrate the power and relevance of the Gospel in contemporary life. These testimonies create a sense of authenticity and allow believers to relate their own experiences to the teachings. Sermons in Pentecostal churches are intended to empower believers spiritually. They aim to instill a sense of faith, hope, and confidence in God's transformative power. Through exhortation, encouragement, and the interpretation of biblical promises, preachers seek to equip believers with the tools to overcome challenges, grow in their faith, and experience spiritual breakthroughs.

Pentecostal sermons are seen as the channel through which God communicates His message to the congregation. Preachers are regarded as vessels chosen by God to convey His divine truths. As such, sermons are approached with reverence and expectation, as the congregation anticipates receiving a word from God that will impact their lives. Pentecostal sermons emphasize the importance of anointing in the preaching ministry. Anointed preaching is believed to be infused with the

power of the Holy Spirit, enabling the preacher to speak with authority and effectiveness. The congregation seeks to be moved and transformed by the anointed message, which is perceived as a direct encounter with the divine (Ojo, 2018). In addition, Pentecostal sermons often include a call to action, urging believers to respond to the message and make commitments to God. This may involve repentance, surrendering to God's will, seeking spiritual gifts, or engaging in acts of service and evangelism. The aim is to inspire believers to live out their faith boldly and actively participate in God's mission. Pentecostal sermons are characterized by emotional and energetic delivery styles. Preachers utilize passionate oratory techniques, such as raising their voices, employing gestures, and engaging in spontaneous exclamations or prayers. This dynamic presentation aims to evoke emotional responses, create an atmosphere of worship, and facilitate a deeper spiritual connection (Meyer, 2003). Sermons in Pentecostal worship often elicit a communal response from the congregation. As the preacher delivers the message putting in some of the phonological nuances as identified above, congregants may express their agreement, affirmation, or response through vocalizations, clapping, raising hands, or engaging in corporate prayer. This interactive element emphasizes the sense of livelihood in Pentecostal sermons and worship services.

Several studies have examined the acoustic properties of infant or children directed speech (CDS) and adults directed speech (Bello, H., Yap, N. T., Chan, M. Y., & Nimehchisalem, V. 2020; Sjons, 2022). Sjon (2022) focused on the casual discussions mostly between children and parents where it was established that the articulation rate in CDS varied with respect to child's age, the type of relationship, (negative or positive) between the child and the parent, and how the articulation rate was lower in CDS than in ADS. However, the present study examines the phonological nuances in the sermon presentations of selected Pentecostal Pastors in south-western Nigeria who uses English to present their sermons. This is a totally different setting from that of the earlier studies. This is because the present study examines the subtle and often intricate features of speech sounds and patterns that contribute to the distinctiveness and effectiveness of spoken language as reflected in the sermons of Pentecostal Pastors like Pastor E.A. Adeboye, Bishop David Olaniyi Oyedepo. Also, most of these earlier studies were conducted in English as native language contexts in homes, schools and others. Their

works focused on first language (L1) speakers of English. This present study is however situated in a second language context (L2) within the religious setting where English is equally deployed.

3.0 Theoretical Framework

For the purpose of analysing the data, this work drew insights from Gile's (1985) Communication Accommodation Theory (CAT) as adapted by Gile, Marko & Gasiorek (2018) Communication Accommodation Theory being a sociolinguistic theory foregrounds the fact that people make adjustments while communicating in order to minimise the social differences between each other or among one another in the course of social interactions. The factors that lead to the accommodation activity are adjustments which can be through verbal communication or through gestures. The theory was evolved from speech adjustment theory, which demonstrates the value of psychological concepts to understand the dynamics of speech.

Communication Accommodation Theory elaborates the human tendency to adjust their behaviour while interacting. The reason behind this behaviour is to account for the social differences between the interactants. People accommodate their communication activities to get approval and to set a positive image in front of the interactants. The environment in which the interlocutors are interacting also affects the communication behaviour. CAT identifies three (3) types of accommodation processes namely (a) convergence (b) divergence and (c) maintenance. Convergence is a process where people tend to adapt the other person's communication characteristics to reduce the social differences. For instance, a pastor ministering to children may try to speak like them by trying to come to their levels in order to secure their attention thereby ensuring that they listen and comprehend his message. This phenomenon is an indication of convergence. Divergence is the process that contradicts the method of adaptation and in this context the individual emphasis is on the social difference and non-verbal differences between the interactants. For example, a pastor may decide to speak differently while presenting his messages especially in adults' contexts with a view to deviate from the speech patterns of his Founder or the General Overseer. In most cases, this is interpreted socially as pride or egocentrism. The two processes above are usually dependent on the characteristics of the interactants. People accommodate their communication while interacting with a person who has higher standards and other characteristics which they believe is better than them and the

divergent exhibits an opposite characteristic as it emphasises the difference among the close relations with each other. The third type which is maintenance refers to sustaining one's default level of communicating without adjusting for other. Although Giles, Marko & Gasiorek (2018: 37) identify the third type of process as maintenance as explained above, this study will however uphold and work with convergence and divergence because they are most relevant to the present study.

The Communication Accommodation Theory is influenced by social psychology and it is guided by four major assumptions which are as follows:

a. While communicating, there will be similarity and difference in the speech and behaviour. The characteristics that people exhibit, are based on our experiences and the cultural backgrounds that we grew up;

b. A conversation is evaluated by understanding the perception of the speech and behaviour of the other. Through evaluation, people decide to accommodate and fit in;

c. The social status and sense of belonging are determined by language and behaviours. While people communicate, they tend to accommodate the behaviours of those who are in the higher social status than them; and

d. Norms guide the accommodation process which varies in the degree of appropriateness. Norms define the behaviours of people and they are expected to act accordingly.

The communication accommodation theory is applicable in various communication processes. This theory is relevant to this study in the sense that it will assist in explaining the communication behaviour as would be reflected in the speeches of the respondents (the pastors, the children, and the adult congregants in relation to the presentation of sermons) which is the focus of this research.

4.0 Methodology

This study is qualitative in nature. The data for the study were two messages each totaling four (4) of Pastor E.A. Adeboye of the Redeemed Christian Church of God and Bishop David Oyedepo of the Living Faith Church (a.k.a), Winners Chapel. The messages were all drawn from Sunday services of the selected churches. They were drawn online from Youtube using Andoid Phone. The selected messages were listened to severally with the aid of a very effective Earpiece and thereafter transcribed for the purpose of analysis using Daniel Jones' (18th edition)

Cambridge English Pronouncing Dictionary. Ten (10) words common to the four messages were randomly selected and bolden with number 1- 10 for transcription while four sentences each drawn from the four messages were used to analyze the intonation patterns of the preachers.

5.0 Data Analysis

The analysis focuses on two phonological features such as intonation patterns and stress. Only two messages each were used for this analysis due to time constraint. The four messages are presented below:

Message 1: Faith is the Trigger (Bishop David Oyedepo)

(1) Good morning church. This (2) **morning** is an unusual morning**.** God will be (3) **speaking** to you from the title faith is the trigger. (4) **Faith** is the trigger to operate in the **s**upernatural realm. Faith is (5) **putting** God's (6) **word** to (7) **work** by believing him. Faith is (8) **acting** right words (9) **trust** in God. (10) **Shout** Halleluyah! Go for the gold. Again, Shout Halleluyah!

Message 2: You are the chosen Generation (Bishop David Oyedepo)
(1) **Good (2) morning** church, I welcome you to the (3) **faith** clinic which is the presence of the Lord this beautiful Sunday. (4) **Acting** right the word of God is the key. Do you know that God's (5) **word** works wonder? You must be ready to put it to **(6) work**. (7) **Putting** it to work pays off. You are a chosen generation (8) **shout** Halleluyah! You are special! You are gods **(9) speaking** right words always. (10) **Trust** God always.

Message 3: You shall sing a New Song (Pastor E. A. Adeboye)
(1) **Good (2) morning** brethren. I am sent to tell you the word of (3) **faith** that you will sing a new song if you can (4) **trust** God. Say after me, I will sing a new song. I don't know what type of songs you have been singing since the beginning of this year but my father sent me to let you know that God is (5) **putting** a new song in your mouth. You can have it by (6) **speaking** it. God's (7) **word** (8) **work**. (9) **Shout** Halleluyah! (10) **Acting** the word is the best.

Message 4: Behold, I will do a New Thing (Pastor E. A. Adeboye)
Beloved brothers and sisters, (1) **good** (2) **morning**. You are welcome to your new dawn seasons. God's (3) **word** is set to (4) **work** in your life and over those challenging situations. (5) **Trust** God always. (6) **Putting** God's word to work and (7) **acting** it rightly will bring your turn around. Not only that (8) **speaking** it will showcase your (9) **faith** and you will definitely (10) **shout** Halleluyah.

6.0 Discussion of Findings

6.1 Stress Patterns and Emphasis

Stress patterns are another phonological feature that significantly impacts the effectiveness of sermons. Both Oyedepo and Adeboye strategically stress specific words and phrases to highlight important theological points and ensure they resonate with their audiences. See the illustrations below:

Among the ten words selected for this study, the words **good**, **morning**, **faith**, **shout** and **trust** were used often by the two preachers and were emphasized but we noticed the degree of emphasis was higher in Bishop Oyedepo's messages than that of Pastor Adeboye. For instance, in the expression 'good morning' common to the two preachers as a matter of procedure in the course of delivering any sermon, the first syllable in the words morning in the expression **good morning /ˊmɔ:ni:ŋ/** and shout /**ˊʃaut/** in the expression **shout Halleluyah** was hyper pronounced (exaggerated) as observed from the sermons of Bishop Oyedepo and the only syllable in the monosyllabic word shout was also emphasized while we observed that although the first syllable in the word morning was stressed while the only syllable in shout was also stressed in Pastor Adeboyes's usual expression of **'somebody shout halleluyah'** but it was not exaggerated or hyper pronounced as observed in the sermons of Bishop David Oyedepo.

Also, in the expressions **trust God always** (Pastor Adeboye) and **trust in God** (Bishop Oyedepo), both pastors emphasized (stressed) the monosyllabic word trust /**ˊtr^st/** in the two sermons selected. This may be because the word trust occurred at the sentence initial position and probably because it's the key word that the two preachers intended to emphasize to their audience (congregants). It may also mean that the preachers wanted the congregants to take special note of the word to serve as the reference point on the sermon of the day. This is what Oyelekan (2023) referred to as using word stress to promote memorability in sermon delivery. The emphasis on vowel sounds /ɔ:/ and /^/ in words morning and trust are deliberate to draw the attention of the congregants to the pastors and the sermons and to also help them to pay particular attention to those words with a view to helping them retain the sermons.

The emphasis (stress) placed on words are more common in the sermons of Bishop Oyedepo and this can be taken as a strategy of 'noise'. Noise in this context may be described "as loudness that is deliberately made by the speaker (preacher) in order to have a weighty impression on interaction and perceptions with others'' (Oyelekan, 2023:93). In the case of Bishop Oyedepo, the noise was more prominent while Pastor Adeboye occasionally do exaggerate some of his words intentionally. The noise comes inform of loudness and increased lengthening of the vocal components in the stressed syllable of the articulated words. The loudness in the speeches of the preachers may also be a psychological strategy to guide against members' sleeping or dozing off while sermons are going on. While loudness and noise are very rare with Pastor Adeboye's message except for certain emphasizes in few instances, Bishop Oyedepo on the other hand is known for preaching loudly with emphasis on almost all his words as observed from the data collected.

6.2 Intonation

Both pastors use intonation strategically to emphasize key points and convey emotions. Oyedepo often employs a rising intonation to build anticipation and a falling intonation to conclude a statement emphatically. Intonation plays a crucial role in the delivery of Pentecostal sermons, serving to emphasize key points and convey a wide range of emotions. In the sermons of Bishop David Oyedepo and Pastor Enoch Adeboye, intonation patterns are meticulously employed to captivate and maintain the congregation's attention.

Oyedepo often utilizes a rising intonation to build suspense and engagement, particularly when narrating biblical stories or making prophetic declarations. Conversely, he uses a falling intonation to underscore the finality and authority of divine statements. Adeboye, known for his calm yet powerful delivery, employs varied intonation to differentiate between teaching, exhortation, and prayer, creating a dynamic auditory experience that helps listeners distinguish between different parts of his message: e.g.

↑(indicator for a rising tune)

↓ (indicator for a falling tune)

1. ↑Acting right the word of God is the key.
2. ↑You are special!

3. ↑You are gods speaking right words always
4. ↑Faith is the trigger to operate in the supernatural realm↓.
5. ↑Faith is putting God's word to work by believing him↓.
6. ↑Faith is acting right words

In all the six (6) sentences extracted from the two sermons of Bishop Oyedepo above, all the sentences were spoken with high tune where his voice goes up more often with the indicator (↑) showing rising tune than it goes down with a falling tune (↓) indicator only on sentences 4 and 5 only. The rising tune is an indication of loudness and noise as discussed earlier in this paper and it is deliberate to attract and sustain the attention of the congregants with a view to making them listen attentively to the sermon and take note of the key words for future references. Adeboye, on the other hand, uses a more varied intonation pattern, often modulating his pitch to maintain engagement and highlight important theological points. For instance, you can hear some expressions like this:

1. ↓You are welcome to your new dawn seasons.
2. …↓my father sent me to let you know that God is putting a new song in your mouth
3. ↓I am sent to tell you the word of faith that you will sing a new song…
4. ↓You can have it by speaking it
5. ↑God's word is set to work in your life and over those challenging situations.
6. ↑Putting God's word to work and acting it rightly will bring your turn around.

From the above excerpt, Pastor Adeboye used a mixture of falling and rising tunes probably as a matter of style and being naturally quiet (from observation), one can deduce that he only raises his voice intentionally to bring home a particular point unlike Bishop Oyedepo who spoke with rising tune in all the six sentences.

These are all nuances demonstrated in the rhythmic qualities of their sermons, which eventually contribute significantly to their overall impact. Bishop Oyedepo's sermons are characterized by a steady, almost musical rhythm, which escalates as he approaches climactic points. This

rhythm helps to maintain listener engagement, making the sermon more compelling and easier to follow. These are adopted as means of attention seeking by the preachers to ensure the congregants follow them wholly as they engage in their preaching (Oyelekan, 2023). Adeboye's rhythm, though less pronounced, incorporates deliberate pauses that allow for reflection and underscore the gravity of his statements. These rhythmic variations not only enhance the auditory appeal of the sermons but also aid in the structural organization of the message, guiding listeners through a coherent narrative.

6.3 Implications for Religious Communication

The phonological nuances observed in the sermons of Bishop Oyedepo and Pastor Adeboye highlight the broader implications for religious communication. These elements, stress and intonation demonstrate how phonological features can enhance the effectiveness of spoken messages in a religious context. They show that beyond theological content, the manner of delivery plays a pivotal role in how messages are received and internalized by congregants. This understanding can inform the training of future religious leaders, emphasizing the importance of phonological skills in effective preaching. Moreover, it contributes to the academic discourse on the intersection of phonology and rhetoric, particularly within the vibrant and dynamic setting of Nigerian Pentecostalism. The findings of this paper confirmed the reality of convergence as a communication strategy where speakers (preachers) adapt their presentations to the needs of the audience (congregants) thereby reducing the social differences. In essence, the preachers try as much as possible to speak in such a way that the audience (congregants) will be able to identify with them, listen and comprehend their sermons or messages with a view to bringing positive changes in them. This is the focus of any Preacher. This is confirming the relevance of Communication Accommodation Theory (CAT) of 1985 as adopted by Gile, Marko & Gasiorek (2018).

7.0 Conclusion

The phonological strategies employed by Oyedepo and Adeboye are integral to their effectiveness as preachers. Their use of intonation, stress,

rhythm, and code-switching enhances the delivery of their messages, making them more engaging and memorable. These techniques also serve to connect the pastors with their congregations on a deeper emotional and cultural level, reinforcing their authority and charisma. Again, Phonological nuances play a crucial role in the sermons of both Bishop David Oyedepo and Pastor Enoch Adeboye. By leveraging intonation, stress, rhythm, and code-switching, these pastors enhance their oratory skills thus ensuring that their messages resonate with their audiences.

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