

## A COMPARATIVE ANALYSIS OF MINIMAL PAIRS IN HAUSA AND ENGLISH LANGUAGES

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### **Abstract**

The paper aimed at doing a comparative analysis of minimal pairs in Hausa and English Languages with a view to bring to bare the problems Hausa speakers of English have in pronouncing English minimal pairs by means of comparison. The study is motivated into this investigation by some observed speech features of some Hausa speakers of English as they communicate in English. This is observable when, for instance, a typical Hausa native seems to give some English minimal pairs similar pronunciations irrespective of the sound contrast distinguishing them. Thus, one hears a Hausa speaker of English pronouncing the following pairs of words: cope, cop and cup; fame and firm; pen and pain; mother and murder; fun and phone; foam and form etc as if they were the same in spelling, pronunciation and meaning. It established the basic factor affecting the Hausa pronunciation of English minimal pairs. Contrastive Analysis Hypothesis developed by Robert Lado (1957) and Classical Phonology were used as theories for analysis. Data were collected through audio-tape recording. A Sensonic (Sony Recorder) was used as an instrument in recording. The population is drawn from three states in Northern Nigeria. The analysis revealed that most English and Hausa minimal pairs initial and final are consonantal, while medial are vowel based. Tone played a prominent role in distinguishing two or more lexical items in Hausa language. It recommended that the Hausa speakers of English (especially those in the study area) should make stringent effort to become fully aware of their innate tendencies to commit the pronunciation errors identified in this research work, so that they will be able to identify areas of similarity as well as difference between English and Hausa.

**Key words:** Hausa, Minimal Pair, Phonology, Morphology, Semantics

### **Introduction**

Hausa is the Chadic language (a branch of the Afroasiatic language family) with the largest number of speakers, spoken as a first language by some 44 million people, and as a second language by another 20 million. The total number of Hausa speakers is estimated at 64 million, according to Okafor (2004). The ancestral language of the Hausa people, one of the largest ethnic groups in Central Africa, Hausa, is

mostly spoken throughout southern Niger and northern Nigeria. It has developed into a lingua franca across much of Western Africa for purposes of trade (Frederick, 1974).

However, native speakers of Hausa, the Hausa people, are mostly found in Niger, in Northern Nigeria, and in Chad. Furthermore, the language is used as a *lingua franca* by non-native speakers in most of Northern Nigeria and Southern Niger, and as a trade language across a much

larger swathe of West Africa (Benin, Ghana, Cameroon, Togo, Ivory Coast) and parts of Sudan.

According to African Encyclopedia, Hausa has a rich tradition of 'oral literature'. There are many animal stories and fables, and there are also myths which give explanations of historical events. Written literature began about 200 years ago, with the use of the Arabic script (*ajami*) especially for religious writing. There are much modern writings in Hausa, such as the well-known novels of Alhaji Abubakar Imam, and historical and political works. Many modern writers use the Roman alphabet (the one used for English and most European languages) called *boko* in Hausa, but most religious writing is done in *ajami*.

However, the English language which is the language spoken by most Nigerians of diverse linguistic background, and the official language in the country, came to take its root in Nigeria through colonial experience. The importance of the language towards the economic, political, social, religious and scientific development in Nigeria cannot be overemphasized. Despite the importance accorded to English as an official language in Nigeria, the Hausa speakers of English in Northern Nigeria especially Zaria City, have been observed to have difficulties in the pronunciation of English minimal pairs. Most Hausa speakers of English in Zaria, appear to have come in contact with the language at a later stage of their school lives. This happened when they had already acquired the features of their first language and have become proficient in it before acquiring the second language (English). In attempting to pronounce some minimal pairs of English, the phonological system of the Hausa keeps on intruding into that of the second L<sub>2</sub> (English). The 'clash' takes place in the sub-conscious of the L<sub>2</sub> speakers of English, and results to utterances that are termed as 'substandard' through the acceptable and intelligible representation of English pronunciation in most cases. In some cases, if the problem has to do with the inability of the speakers to distinguish the contrastive features of sounds, it is termed as "error" and sometimes distorts the intelligibility of what is communicated.

### **Conceptual framework**

Phonology is a branch of linguistics which

studies the sound system of a language or it deals with the characteristics of speech sounds of a particular language. That is why we have the phonology of English, Hausa, Yoruba, Igbo etc. This makes the study of the phonology of a language to be specific. The term phonology according to Akmaijan et al (2008) is used in two ways; on the one hand, it refers to 'a description of the sounds of a particular language and the rules governing the description of the sounds. Thus, we can talk about the phonology of English, Chinese, etc. on the other hand, it refers to "part of general theory of human language that is concerned with the universal theory of properties of natural language sound system. Steward (1998) corroborates that, phonology is the study of the sound system of a language: how the particular sounds contrast in each language to form an integrated system for encoding information and how such systems differ from one language to another. Fromkin and Rodman (1998) define phonology as "the study of speech sounds for their functions values". Within phonology, two branches of study are usually recognised. They are: the segmental and suprasegmental. While segmental phonology analyses speech into discrete patterns, such as phonemes, i.e consonant and vowels, suprasegmental phonology analyses those features which extend over more than one segment, such as intonation, stress etc.

However, Morphology, as a branch of linguistics which is concerned with the study of how words are formed, has had a chequered history. Although everybody knows the importance of words in human language, but a separate branch of linguistics which is devoted to the study of the internal structure of words did not emerge until the early part of the nineteenth century (Katamba, 1993). Earlier before this time, morphology was treated as part of syntax. In fact, most scholars still discuss morphology together with syntax under the broad concept grammar. Because these scholars subsume morphology under syntax often limit themselves to aspects of word-structure that have obvious syntactic implications in their analysis of sentence-structure. We feel, however, that the treatment of word-structure within syntax is very unfortunate, as the method makes it difficult for the study of word-

structure to be given its proper place in the linguistic theory. Rules that guide word-formation are often different from those involved in sentence-formation. Hence a separate branch of study devoted to account for how words are formed in human language is worthwhile (Ndimele, 2008).

**Phonology** studies the rules governing the sounds system in a given language and as earlier mentioned, is actually divided into two parts: while segmental phonology deals with the actual phonemes - vowels and consonants of the language, the suprasegmental phonology deals with other features like stress, intonation/tone, syllable, diacritics, allophone and morphophonology- aspects of connected speech such as elision and assimilation, and a host of other features. For example, **Sanda** (stick) and **Randa** (drum), **Sako** (message) and **Soko** (idiot), **Baki** (mouth) and **Bako** (visitor) etc are minimal pairs in Hausa which resulted in the difference of one phoneme as mentioned above. Details of this treatment can be found in Clark, Yallop and Fletcher, including other phonology texts mentioned in this study. Meanwhile, this research covers both the two aspects, focusing only on the areas which directly concern the scope of the study. We should however know that though "language- systems are, to a very considerable extent, independent of the medium in which they are manifest, but the natural or primary medium of human language is sound. For this reason, the study of sound is of more central importance in linguistics than is the study of writing, of gestures, or of any other language-medium, whether actual or potential" (Lyons, 1981).

**Morphology**, as generally defined, appears to be the rules governing word formation. Aronoff and Fudeman' define morphology in different perspectives, but particularly see morphology in linguistics as "the mental system involved in word formation or the branch of linguistics that deals with words, their internal structure and how they are formed" (1970). The same way Tomori (1977) while summing up the distinctive definitions of morphology and syntax provided by the American linguist Bloomfield and others, puts that "Morphology is the study of the structure of words - the study of the rules governing the formation of

words in a language".

In this study, the relationship between morphology and phonology is actually through the orthographic realisation of letters or graphemes which then undergo some morphophonological modifications, and the result is semantic contrast between minimal set/minimal pairs under study. This is because morphology here interweaves with phonology in the sense that the former provides the paradigm of morphemes in successive order while the latter provides the sound distinctions, an abstract set of distinctive phonemes like that of the one said to be in a complementary distribution, in which the same set found in one grammatical environment cannot be found in another due to little variation in the system. For instance, **Giya** (alcohol) and **Jiya** (tomorrow), **Zama** (sitting) and **Sama** (sky/up), **Gado** (bed) and **Gaado** (inheritance), **Lema** (umbrella) and **Lemu** (orange) etc are Hausa minimal pairs distinguished through the orthographic realization of letters or graphemes. This also means that minimal pair, being the central topic of the research, is a phonological term which calls up orthography, morphology, and often results in semantic contrast.

**Semantics** has been defined by many linguists and semanticists to be the study of meaning. According to Saeed (2003) "Semantics is the study of meaning communicated through language". He goes further to add that "semantics is the study of meanings of words and sentences". To Crystal, the term semantics is also used in "philosophy and logic, but not with the same range of meaning or emphasis as in linguistics," so he defines it as "a major branch of linguistics devoted to the study-of MEANING in LANGUAGE" (Crystal, 1997, p. 273). It is in semantics that all or most aspects and components of meaning related concepts (which exhibit formal properties of words and sentences) are treated with the aim to investigating into what aspect of meaning is imbedded in the morphological entities known as words, or in syntactic structures such as sentences. This is obviously what Kempson in her (1977) treatment of *Semantic Theory* means to distinguish semantics' from pragmatics.

Therefore, it is important to note that the relationships between semantics and other aspects

of grammar concerned in this study (i.e. phonology and morphology) is in the fact that semantics happens to be the mal product of the morphophonological modifications. This is because, like earlier said, whatever morpheme or word modified at whatever level and angle through phonemic or orthographic substitution, it often results in different lexical item as a bye-product. For instance, **Giya** (alcohol) and **Jiya**(tomorrow), **Zama**(sitting) and **Sama**(sky/up), **Gado**(bed) and **Gaado**(inheritance), **Lema**(umbrella) and **Lemu**(orange) etc are Hausa minimal pairs distinguished semantically through phoneme or orthographic substitution. It is these lexemes (referred to as abstract minimal distinctive unit ill semantic system) that are seen as semantic contrast between minimal pairs under study. This is why the topic falls within the threshold of grammar of the speech sounds, which is a further justification to the fact that all the above-treated linguistic branches have contributed in one way or another in the realisation of minimal pair, and of course, phonology is the centre of the investigation.

### **Theoretical Framework**

The theoretical foundation for what became known as the contrastive analysis hypothesis was formulated by Lado (1957). In the 1950s, American linguist Robert Lado began to study errors – Contrastive Analysis (CA). His influential book *Linguistics Across Cultures* (Lado, 1957) in some ways complements Weinreich. Lado has the overall objective of helping language teaching. He describes a system of CA which lays down how to carry out a rigorous step-by-step comparison of the L<sub>1</sub> and L<sub>2</sub> 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” Lado (1957). 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” Lado (1957). In this view, L<sub>2</sub> learning

consists largely of the projection of the system of the L<sub>1</sub> on the L<sub>2</sub>. This will be successful when the two languages are the same – called “positive” transfer by some; it will be unsuccessful whenever the L<sub>2</sub> fails to correspond to the L<sub>1</sub> – “negative” transfer.

However, Classical phonology is an offshoot of structural grammar, which emphasizes the study of the structures of a language; hence, the emphasis on the dichotomy between ‘substance’ and ‘form’; phonemic and morphemic status; and analytical or discovery procedure. Therefore, the major goal of classical phonology, as Sommerstein (1977) puts it, is the investigation of the phonemic features serving the particular language being investigated or capable of serving in natural language, to distinguish utterances.

Thus, the establishment of the phoneme, and the explanation of phonemic and morphophonemic alterations constitute the focus of classical phonology. In this approach, the phoneme is seen as an irreducible contrastive sound unit. For example, there are three such units in /pæt/. But in reality there are problems connected with the discreteness of sound because the discreteness is not borne out in actual speech. Human sound is understood to be ‘continuous’.

### **Methodology and Instrumentation**

The study carried out the data through audio-tape recording. A Senonic (Sony Recorder) was used as an instrument in recording. However, in school environment, places such as class/lecture rooms, cafeteria, shops, football fields, relaxation centres, common rooms, faculties, restaurants etc, were areas of data collection. Other environments include places of worship; Churches and Mosques were used especially during sermon delivery or preaching by Imams/Malams or Pastors. Unconscious speeches of the respondents that could result into generating minimal pairs of both the languages under investigation were recorded using audio tape recording device. This was to allow the data free from being contrived. The population was Zaria town in Kaduna State. This was because Zaria belongs to the legitimate Hausa States (Hausa Bakwai) and is currently home of formal and informal education. The population was stratified of both male and female within the sampling population. The total number of sampling

population was thirty (30) (using fifteen to represent each gender). The respondents were selected on the basis of their levels of education. The first ten (10) were students of secondary schools (across senior classes, i.e. SSI-SS3); the second ten (10) were students of tertiary institutions (from polytechnics/monotechniques, colleges of education and universities); the last ten (10) were graduates and clerics. It is also important to re-emphasise here that all the aforementioned respondents were Hausa native speakers and have studied English as an official language of the country as stated in the scope of the study. The procedure for data analysis followed the pattern of the theoretical models for the study (i.e. Contrastive Analysis Hypothesis and Classical Phonology). Here, the study first displayed a **Data Presentation and Analysis**

number of English minimal pairs in order of successive pattern (in a tabular form), where the words sequence or rather minimal pairs are given alongside their sound contrast, followed by their semantic change. This is done for minimal pairs word initial, medial and final positions in English language. In the same vein, a number of Hausa minimal pairs are also presented in the same order as in the above. Such an exercise enabled the study to identify the similarities and, or differences between the two sets of minimal pairs under study. Finally, the data were then analyzed accordingly so as to display clearly the problem areas and to predict or explain possible reason(s) for the problems through the differences discovered and other possible factors identified.

**Table 1 English Minimal Pairs, INITIAL**

| Word         | Phonemic Contrast | Semantic Contrast   |
|--------------|-------------------|---|
| <u>B</u> old | /b/               | [adj] courageous  |
| <u>C</u> old | /k/               | [adj] chilled, etc  |
| <u>F</u> old | /f/               | [v] to prop; to twist...  |
| <u>G</u> old | /g/               | [n] the most expensive precious stone used for ornamentation, etc |
| <u>H</u> old | /h/               | [v] to grasp, to be in position of...                             |
| <u>S</u> old | /s/               | [v] the simple past and participle of 'sell' (to trade)           |

From the above table, we have seen that the English minimal pairs at initial have multiple sets with multiple spellings, and the pronunciations were also closely related but not similar. Again, the above table presented a minimal set of one form with different semantic entries. The varying semantic implications were as a result of the

contrast in a single phoneme at the initial positions of the words which then alters both the pronunciation and meaning of each word in each set. It can also be noted from the tables that English minimal set initials were basically consonantal; the affected segments were often consonants.

**Table 2 English Minimal Pairs MEDIAL**

| Word         | Phonemic Contrast | Semantic Contrast   |
|--------------|-------------------|---|
| <u>H</u> ot  | /ɒ/               | [adj] having a high temperature; causing a sensation of heat; etc   |
| <u>H</u> ut  | /ʌ/               | [n] a small simple or crude house; a shelter, etc   |
| <u>H</u> at  | /æ/               | [n] a covering for the head; etc  |
| <u>H</u> ear | /a:/              | [n] a hollow muscular organ in the body which maintains circulation of blood; central of thought, feeling, emotion, etc |
| <u>H</u> urt | /ɜ:/              | [v] to cause (mental) pain, distress or injury; to suffer pain, etc   |
| <u>H</u> eat | /i:/              | [n/v] condition of being hot/to make or become hot or warm, etc   |
| <u>H</u> it  | /i/               | [v] to strike hard with blow, any object, etc   |
| <u>H</u> oot | /u:/              | [n] owl's cry; a shout, sound etc made to draw attention to; etc  |
| <u>H</u> ate | /ei/              | [v/n] to dislike or disgust intensity; dislike, etc   |



As we have seen in the above table, it is obvious that the English minimal pairs medial have multiple sets with multiple spellings, and the pronunciations are also closely related but not similar. Again, the table presented a minimal set of one form with different semantic entries. The varying semantic implications were as a result of

the contrast in a single phoneme at the medial positions of the words which also alters both the pronunciation and meaning of each word in each set. But unlike the minimal pairs initial, it can be noted from the table above that the English minimal set medial are vowel based; i.e the affected segments are vowel sounds.

**Table 3 English Minimal Pairs FINAL**

| Word         | Phonemic Contrast | Semantic Contrast  |
|--------------|-------------------|--|
| <u>P</u> ad  | /d/               | [n] a piece of soft material used to protect, hold or fill out hollows                                       |
| <u>P</u> at  | /t/               | [v] to strike gently with a flat palm; esp. in affection, sympathy etc                                       |
| <u>P</u> al  | /l/               | [n] a friend; mate; comrade; associate; etc  |
| <u>P</u> ack | /k/               | [n/v] a collection of things wrapped up or tied together for carrying; etc/to pick up a dispersed items, etc |
| <u>P</u> ap  | /p/               | [n] a soft semi-liquid food for infants, etc   |

From table 3 presented above, it is seen that the English minimal pairs final have multiple sets with multiple spellings, and the pronunciations are also closely related, but not similar. Again, the table above presented minimal sets with different semantic entries. The varying semantic implications were as a result of the contrast in a

single phoneme at the final positions of the words which then alters both the pronunciation and meaning of each word in each set. Like in table above, it can be noted that the English minimal sets are consonant final and are the affected segments in the words.

**Table 4 Hausa Minimal Pairs INITIAL**

| Word          | Phonemic Contrast | Semantic Contrast                   |
|---------------|-------------------|-------------------------------------|
| <u>T</u> arba | /t/               | [v/n] hospitality, reception etc    |
| <u>K</u> arba | /k/               | [v/n] collect, accept etc           |
| <u>S</u> ada  | /s/               | [v] connect, join, put together etc |
| <u>F</u> ada  | /f/               | [v] fight, quarreling etc           |
| <u>w</u> uta  | /w/               | [n] fire                            |
| <u>b</u> uta  | /b/               | [n] kettle                          |

From the above table, it is obvious that the Hausa minimal pairs at initial have multiple sets with multiple spellings, and the pronunciations are also related but not similar. Again, the table presented a minimal set of one form with different semantic entries. The varying semantic implications are as a

result of the contrast in a single phoneme at the initial positions of the word which then alters both the pronunciation and meaning of each word in each set. Following the patterns in tables 1 and 3, it can also be noted that the Hausa minimal sets at initial affected the consonant segments.

**Table 5 Hausa Minimal Pairs MEDIAL**

| Word              | Phonemic Contrast | Semantic Contrast         |
|-------------------|-------------------|---------------------------|
| makarant <u>á</u> | /a/ the high tone | [n] school                |
| makarant <u>à</u> | /a/ the low tone  | [n] students, readers etc |
| wu <u>k</u> a     | /k/               | [n] knife                 |
| wu <u>y</u> a     | /y/               | [n] neck                  |
| bab <u>á</u>      | /a/ the high tone | [n] mother                |
| bab <u>à</u>      | /a/ the low tone  | [n] father                |
| hak <u>u</u> ri   | /u/               | [n] patience              |
| hak <u>o</u> ri   | /o/               | [n] teeth                 |

It can be observed from Table 5 above that the Hausa minimal pairs medial have multiple sets with multiple spellings, and the pronunciations are also closely related but not similar. Hausa as a tonal language with three sets of tones: high, low and falling. The high (´) and low (`) tones are said to occur on all types of syllables. A falling tone usually occurs on CVC syllables or on CV syllables with a long vowel or diphthong. However, the table above presented a minimal set

of one form with different semantic entries. The varying semantic implications were as a result of the contrast in just a single phoneme at the medial positions of the words which then alters both the pronunciation and meaning of each word in each set. Like in table 2, it can also be noted that the Hausa minimal set medial are vowel based; with the affected segments mostly vowel sounds, which could be either single or double.

**Table 6 Hausa Minimal Pairs FINAL**

| Word  | Phonemic Contrast | Semantic Contrast |
|-------|-------------------|-------------------|
| kunyá | /a/ the high tone | [n] ridge         |
| kunyà | /a/ the low tone  | [n] shy           |
| korá  | /a/ the high tone | [n] chase         |
| korà  | /a/ the low tone  | [n] infection     |
| ƙwarí | /i/ the high tone | [n] lake          |
| Ƙwarì | /i/ the low tone  | [n] arrow bag     |

Here we have Hausa minimal pairs at word final. In Table 6, we have multiple sets with multiple spellings, and the pronunciations are also closely related but not similar. Again, as we noted in table 5 above that Hausa is a tonal language, the usage has varying semantic implications which as a result brought about contrast in a single phoneme at the final positions of the words and then alters both the pronunciation and meaning of each word in each set. Unlike in English counterpart, the Hausa minimal pairs/sets final affect vowels only.

**Findings/ Discussions**

From the analyses in the foregoing, the following have been identified as the research findings:

- i. From the comparative analysis of English and Hausa minimal sets as seen above, it was found that most English minimal pairs initial are consonantal;
- ii. It was also found that most English minimal pairs medial are vowel based;
- iii. The analysis also revealed that most English minimal pairs final are consonantal, just like the initial ones;
- vi. It also showed that most Hausa minimal pairs medial are also vowel based (not so different from that of the English after all, except for the fact that they are either

single or double at the medial position in this case)

- v. However, it was found that most Hausa minimal pairs final affect both vowels and fairly consonants (totally different from that of the English);
- vi. It was again found that all English minimal pairs affect only one sound/segment in all positions, but the Hausa minimal pairs have dual treatment; i.e. in some positions, only one sound is affected while in others, two sounds are affected;
- vii. It was established that tone plays a prominent role in distinguishing two or more lexical items as demonstrated above;
- viii. Hausa is a tonal language while English is an intonation and stress time language;

**Conclusion**

From the study, the researcher is convinced to draw a conclusion that Hausa and English languages do not share exactly the same linguistic properties. Of course, similarities could occur in some areas, but differences abound in many areas, as demonstrated in the foregoing. Moreover, it could be concluded based on the analysis in the

foregoing that most Hausa natives of the same geographical background do not exhibit exactly the same linguistic habit.

From the comparative perspective, English and Hausa languages have their minimal pairs initial the same i.e they are consonantal. At the medial positions, they have single vowel based minimal

pairs with the exception of Hausa which sometimes have double vowels. At the final position, unlike English, Hausa minimal pairs affect both vowels and fairly consonants. Hausa is a tonal language while English is a stressed time language.

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