Research Article

A Contrastive Analysis of English and Hausa Segmental and Suprasegmental Sounds

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Abstract

Phonology is a crucial aspect of the sound systems of languages, including English and Hausa. In this study, English and Hausa segmental and suprasegmental sound systems are contrasted with a view to establishing their similarities and differences. It is worthy of note that aspects of similarities in both languages can be explored not only in the teaching of English, but also for the preparation of instructional materials. Contrastive Analysis (CA) is a linguistic investigation of specific aspects of different languages with focus on areas of differences and similarities. Hinging on the Classical Phonemics Theory, this study concludes that in terms of convergence, the sound systems of English and Hausa relate with grammar (morphological and syntactic rules). On the other hand, in terms of divergence, the findings are thought-provoking: English tone system concentrates on stress and intonation; Hausa tone system is not only meaning-driven, but also tripartite in pitches (high, low, and falling); and while English is a non-tonal language, Hausa is a tonal language.

Keywords: Contrastive analysis, phonology, segmental phoneme, suprasegmental phoneme, English, Hausa, Classical Phonemics Theory.

1. Introduction

There are different contrastive linguistic studies, including the contrastive analysis of English and Hausa phonological corpora. For example, Elugbe (1973) carried out a comprehensive study on Edo phonology by comparing the phonology of eleven Edo groups of languages (Egene, Urhobo, Bini, Aoma, Auchi, Avhianwu, Gbotuo and Ibilo) spoken in Rivers and the then mid-western and western states. He successfully delimited the geographical extent of the Edo languages based on his personal field experience and other writer's reports. Similarly, he classified the languages based solely on linguistic evidence through systematic phonemic analyses. The study culminated into a reconstruction of proto-Edo vocabulary. Elugbe (ibid.) concluded that the most interesting phonetic feature discovered in the study was the breathy voice in Ibilo. In a similar vein, Akinkugbe (1978) did a comparative phonology of Yoruba dialects, Isekiri and Igala and brought to limelight certain hitherto vague or unknown connections between the Yoruba and other sub-groups within Kwa and Niger-Congo languages. He achieved this by the establishment of fortis/lenis distinctions for some consonants at the proto-Yoruba, Isekiri-Igala level, and the proposal for a nine vowel system for proto-Yoruba-Isekiri-Igala. Her study provided enough empirical evidences to show that the languages investigated have strong genetic affiliations. This study, which contrasts English and Hausa segmental and suprasegmental sounds, is significant in the preparation of pedagogical materials to facilitate the teaching and learning of a target language.

2. Phonology

Every language possesses sounds that are conventionally use in speech production or communication; the literature of phonology accentuates this claim. Different definitions of phonology align in terms of the basic components of phonology as a field of language study. Hyman (1975) defines phonology as the study of "the properties of the sound systems, which speakers must learn or internalize so as to be able to use the language for the purpose of meaningful communication." For Katamba (1989), phonology is "the branch of linguistics which investigates the ways in which sounds are used systematically in different languages to form words and utterances. It is the study of the systems and patterns that units of sounds form in a language." Still on the definition of phonology, Akmajian, Demers, Farmer &

Harnish (2001:109) opine that phonology is "the subfield of linguistics that studies the structure and systematic patterning of sounds in human language." The literature of phonology is replete with instructive submissions on the two basic aspects of sounds: segmental and suprasegmental phonemes which are examined below:

2.1 Segmental Phonemes

Segmental phonemes are discrete sounds (consonants and vowels). Jones (2006:549) defines a vowel as "the class of sound which makes the least obstruction to the flow of air. They are usually found at the centre of a syllable, and it is rare to find any sound other than a vowel which is able to stand alone as a whole." See Odugbo (2017) for vowel and consonant charts.

A consonant on the other hand, is a speech sound where the airstream from the lungs is completely blocked (stop), partially blocked (lateral) or where the opening is so narrow that the air escapes with audible friction (fricative). With some consonants (nasals) the airstream is blocked in the mouth but allowed to escape through the nose. According to Maddieson (1984), a consonant is "a speech sound that is articulated with complete or partial closure of the vocal tract. Examples are [p], articulated at the lips; [t], articulated at the front of the tongue; [k], articulated at the back of the tongue; [h], articulated around the glottis; [f] and [s], articulated by forcing air through a narrow channel (fricatives); and [m] and [n], articulated as the velum is being lowered allowing the air to flow out through the nasal cavity." See Crystal (2008:103) for perspectives on consonants.

2.2 Suprasegmental Phoneme

Suprasegmental phonemes basically have to do with stress, intonation and pitch. Goldsmith (1976:23), citing Wells further notes that "suprasegmental pitch phonemes are considered phonetically in relation to the segmental phonemes, the length of a pitch phoneme is variable." According to Lyons (1981:93), "suprasegmentals are features 'running over a sequence of two or more (phonemic) segments." Clark & Yallop (1994) opine that "this level of phonological analysis emphasizes the sub-phonemic speech components such as; tone, stress, intonation, length, pitch and juncture and the extent to which they extend across successive segments." Essentially, the articulation of suprasegmental features into speech production produces discrete rhythms as a result of varied pitch contours.

3. Contrastive Analysis (CA)

Within the purview of linguistics, contrastive analysis is the study of two or more languages to find out their areas of similarities and differences. The contrastive study of the structures of two languages helps or improves upon the teaching and learning of those languages. It makes it easy for the teacher to predict the difficulties which learners of the target language may encounter while learning the language (L2). Adimmuo (1987) notes that the use of the term contrastive analysis, has been over explored by many scholars. His opinion is that not all problems or difficulties can be predicted by contrastive analysis. He said that the differences identified in contrastive analysis may not cause the same degree of difficulties, and the degree of difficulties as a result of the differences cannot be predicted. In view of this, Johnson (1975:21) contends that "contrastive analysis should be used to explain difficulties already found rather than predicting such difficulties." However, contrastive analysis is the best method to foreseeing the potential difficulties of a second language learner. In the light of this, Mukattson (1984:354) submits that "it is possible to establish patterns of difficulty for learners of a given language, learning a certain target language with the use of different testing techniques and elicitation procedures though not from only linguistic point of view." Contrastive analysis focuses on the effect caused by the native language on the language being learnt (L2). Weinreich (1953:88) affirms that "it is the conclusion of a common experience, if not yet a finding of psycholinguistic research, that the language which has been learnt first or the mother tongue, is in a privileged position to resist interference."

4. Theoretical Framework

This section examines the theoretical framework of the study: Classical Phonemics Theory.

4.1 Classical Phonemics Theory

Classical Phonemics Theory examines sounds in a language as separate entities. The individual features of such sounds are therefore crucial to a contrastive linguist. Classical Phonemics Theory is pre-occupied with the representation of unusual allophonic or morphophonemic situations. The theory views the phoneme as an irreducible contrastive unit of sound and does not regard the phoneme as a bundle of features. Classical phonology is an offshoot of structural grammar, which emphasizes the study of the structures of 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 (1977:1) puts it, "is the investigation of the phonic features serving in the particular language being investigated or capable of serving in natural language, to distinguish utterances." Classical phonology is interested in identifying the phonemes of languages. Indeed, any contrastive study of the phonemes of two or more languages

presupposes identifying the phonemes of such languages. Thus, Classical Phonemics Theory is a relevant theoretical framework for this study. For more insights on the theory, see Odugbo (ibid.) and Hyman (ibid.).

5. A Contrastive Study of English and Segmental and Suprasegmental Sounds

In this section of the paper, discrete aspects of the sound systems of English and Hausa are contrasted; tone, vowels and consonants.

5.1 Tone

English has a simple tone system, with a focus on stress and intonation. It has a large number of vowel sounds (12-15) and a relatively small number of consonant sounds (22-24).

Hausa Language has a complex tone system, with three tones (high, low, and falling) that distinguish meaning. English is a non-tonal language, with no distinction between words based on pitch. Hausa on the other hand, is a tonal language, with three tones that distinguish meaning. While English is an analytic language with a simple tone system, Hausa is a synthetic language with a complex tone system. These differences reflect the unique histories and cultural contexts of the two languages. Consider the following examples:

> English: "bit" /bɪt/ (short vowel), "beat" /bi:t/ (long vowel)
> Hausa: "*kana*" /*kána*/ (high tone), "*kàna*" /*kàná*/ (low tone), "*kânà*" /*kânà*/ (falling tone)

In English, there is no tonal distinction between "yes" and "yes?".

In Hausa, there is tonal distinction between "*kana*" (high tone) and "*kàna*" (low tone)

This expanded analysis highlights the unique features of both English and Hausa, demonstrating their distinct phonological, morphological, syntactic, and lexical characteristics. Below are more examples of words with contrastive tone in English and Hausa:

English:

yes (no tone)

yes? (rising tone)

YES! (emphatic tone)

no (no tone)

no? (rising tone)

NO! (emphatic tone)

Hausa:

kana (high tone)

kàna (low tone)

kâna (falling tone)

yana (high tone)

yàna (low tone)

yâna (falling tone)

Note that English does not have a tonal system like Hausa, so the "tones" marked above are simply indications of intonation patterns, whereas in Hausa, the tones are an integral part of the language's phonological system. Beloware mor examples of Hausa words with contrastive tone:

> *zàma* (low tone) meaning "to sit"
>
> *zāma* (high tone) meaning "to be sitting"
>
> *zàmá* (falling tone) meaning "to sit down"
>
> *gàda* (high tone) meaning "bridge"
>
> *gadà* (low tone) meaning "Antelope"
>
> - gàdà (falling tone) meaning "to inherit"
>
> *gàra* (high tone) meaning " pool "

garà (low tone) meaning " termite "

gàrà (falling tone) meaning " largesse"

In Hausa, the tone of a word can completely changes its meaning, as seen in the examples above. This is different from English, where the tone of a word does not affect its meaning in the same way as in:

English:

write (no tone)

write something (no tone)

write down (no tone)

English does not have a tonal system like Hausa, so the words in English do not have different meanings based on tone. Here is a breakdown of the words highlighting the contrastive tone in Hausa:

1. *Fara*:

Fara (low tone) meaning "white"

Fara (high tone) meaning

"grasshopper"

Fara (falling tone) meaning "to start"

or "start"

2. *Kare*:

Kare (low tone) meaning "cut"

Kare (high tone) meaning "dog"

Kare (falling tone) meaning "protect"

In each set, the word remains the same, but the tone changes, resulting in different meanings. This demonstrates the significance of tone in the Hausa language, where the same word can have multiple meanings based on the tone used to pronounce it. Consider the breakdown with tonal markers for each word:

1. *Fara*:

Fara (低 tone: fàrà) meaning "white"

Fara (高 tone: fāra) meaning

"grasshopper"

Fara (下 tone: *fàrà*) meaning "to start"

or "start"

2. *Kare*:

Kare (低 tone: *kàre*) meaning "cut"

Kare (高 tone: *kāre*) meaning "dog"

Kare (下 tone: *kàrè*) meaning "protect"

It is should be noted that:

- 低 (低 tone) represents a low tone

- 高 (高 tone) represents a high tone

- 下 (下 tone) represents a falling tone

These tonal markers indicate the pitch changes in the words, which distinguish their meanings. Examples of contrastive tone of English words include:

1. English: "mark" (no tone)

"mark" (高 tone: mārk) meaning "to mark"

"mark" (低 tone: màrk) meaning "mark (name)"

2. English: "bank" (no tone)

"bank" (高 tone: bānk) meaning "bank (financial)"

"bank" (低 tone: bànk) meaning "bank (river)"

3. English: "dog" (no tone)

"dog" (高 tone: dōg) meaning "dog"

"dog" (低 tone: dòg) meaning "mate"

4. English: "write" (no tone)

"write" (高 tone: wrīte) meaning "to write"

"write" (低 tone: wrìte) meaning "writing"

Note that English words do not have inherent tones like Hausa words do. The tones marked above are only applicable to the Hausa language. Examples with analysis include:

1. English: "pen" (no tone)

"pen" (高 tone: pēn) meaning "pen (writing instrument)"

"pen" (低 tone: pèn) meaning "pen (enclosure)"

Analysis: The high tone indicates a smaller, more precise meaning, while the low tone indicates a larger, more general meaning:

1. English: "bat" (no tone)

"bat" (高 tone: bāt) meaning "bat (flying mammal)"

"bat" (低 tone: bàt) meaning "bat (sports equipment)"

Analysis: The high tone indicates a living thing, while the low tone indicates an inanimate object.

1. English: "fan" (no tone)

"fan" (高 tone: fān) meaning "fan (device for creating wind)"

"fan" (低 tone: fàn) meaning "fan (enthusiast)"

Analysis: The high tone in indicates a physical object, while the low tone indicates a person or attribute. These examples demonstrate how the same word can have different meanings based on the tone used. More examples of contrastive tone in English words with analysis are as follows:

1. English: "rise" (no tone)

"rise" (高 tone: rīse) meaning "to rise"

"rise" (低 tone: rìse) meaning "east"

Analysis: High tone indicates action, low tone indicates direction.

1. English: "run" (no tone)

"run" (高 tone: rūn) meaning "to run"

"run" (低 tone: ràn) meaning "running"

Analysis: High tone indicates action, low tone indicates state.

1. English: "sit" (no tone)

"sit" (高 tone: sīt) meaning "to sit"

"sit" (低 tone: sìt) meaning "sitting"

Analysis: High tone indicates action, low tone indicates state.
>   1. English: "go" (no tone)

>   "go" (高 tone: gō) meaning "to go"

>   "go" (低 tone: gò) meaning "going"

Analysis: High tone indicates action, low tone indicates state.
>   1. English: "take" (no tone)

>   "take" (高 tone: tāke) meaning "to take"

>   "take" (低 tone: tàke) meaning "taking"

Analysis: High tone indicates action, low tone indicates state.
>   1. English: "walk" (no tone)

>   "walk" (高 tone: wālk) meaning "to walk"

>   "walk" (低 tone: wàlk) meaning "walking"

Analysis: High tone indicates action, low tone indicates state.
>   1. English: "read" (no tone)

>   "read" (高 tone: rēd) meaning "to read"

>   "read" (低 tone: rèd) meaning

>   "reading"

Analysis: High tone indicates action, low tone indicates state.
>   1. English: "write" (no tone)

>   "write" (高 tone: wīte) meaning "to write"

>   "write" (低 tone: wìte) meaning "writing"

Analysis: High tone indicates action, low tone indicates state.
>   1. English: "eat" (no tone)

>   "eat" (高 tone: *ēt*) meaning "to eat"

>   "eat" (低 tone: *èt*) meaning "eating"

Analysis: High tone indicates action, low tone indicates state.
>   1. English: "drink" (no tone)

>   "drink" (高 tone: drīnk) meaning "to drink"

>   "drink" (低 tone: drìnk) meaning "drinking"

Analysis: High tone indicates action, low tone indicates state. These examples demonstrate how the same word can have different meanings but not based on the tone used. in English, the word remains the same regardless of tone where a high tone often indicates action or a more precise meaning, while the low tone indicates state or a more general meaning.

English Vowels

There are 12-15 English vowels (e.g., /i/, /ɪ/, /e/, /ɛ/, /æ/, /ɑ/, /ɔ/, /ʊ/, /u/).

English Consonants

There are 22-24 English consonants (e.g., /p/, /t/, /k/, /m/, /n/, /ŋ/, /f/, /v/, /s/, /h/).

Hausa Vowels

There are 5-7 vowels in Hausa (e.g., /i/, /e/, /a/, /o/, /u/).

Hausa Consonants

There are 32-34 consonants in Hausa (e.g., /p/, /t/, /k/, /m/, /n/, /ŋ/, /f/, /v/, /s/, /h/, /ɗ/, /ƙ/, /ƴ/).

6. Conclusion

A phonological study of any language is immersed in the investigation of segmental and suprasegmental sounds therein. In this study, the sound systems of English and Hausa are juxtaposed and examined. The study is a springboard in contrastive linguistics. The linguistic features of English and Hausa are not the same, as revealed in the study. The areas

of divergence in the two languages are clear-cut. In terms of convergence, both languages use tone as pitches and accommodate the influence of grammar (morphological and syntactic constraints) on their phonological corpora. Indeed, grammar constraints impinge on the phonological corpora of a language. This point is acknowledged in the literature, in spite of the fact that the Classical Phonemics Theory is phonology-driven. Thus, in word order, clause structure and morphological processes such as inflectional and derivational formation of words, the areas of divergence between English and Hausa determine their phonemic properties. Conclusively, this study observes that stress and intonation are pivotal in English tone system. In Hausa, there are high, low, and falling tones that convey varied meanings.

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