

CONTRASTIVE ANALYSIS OF SOME SUPRASEGMENTAL FEATURES OF IGALA AND ENGLISH PHONOLOGY

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ABSTRACT: *This paper is an attempt to do a contrastive study of some aspects of the suprasegmental features of Igala and English phonology. It provides an opportunity to analyse the errors in the speech of Igala second language (L2) speakers of English. The framework used in the analysis is the autosegmental theory. Autosegmental theory lays claim to non-linear representation of sounds. Autosegmental phonology is adopted for its theoretical elegance and empirical relevance. A tiered approach to the study gives one an opportunity to analyse the speech errors in terms that are easy to appreciate; especially since the processes are characterized in such a way as to reflect the realities of phonological structure and organisation. Interviews and participant observation were used to obtain data. These were later supplemented by listening comprehension tests.*

KEYWORDS: Contrastive Analysis, Suprasegmental Features, Igala, English Phonology

INTRODUCTION

The idea of contrastive analysis evolved at the end of the Second World War. For some linguists, contrastive analysis is the comparison of the structure of two languages that can be compared. While some believe that it helps in an effective language teaching, others believe that contrastive analysis is required in order to predict, explain, correct and eliminate errors due to interference between first language (L1) and second language (L2). The usefulness of contrastive analysis in predicting errors is not in dispute. In an attempt to reinforce this aspect of the usefulness of contrastive linguistics, Lado (1957) observes that, contrastive linguistics is useful in the area of predicting from a systematic comparison of any two languages, the problems likely to be encountered by learners or even to deduce the most effective order of acquisition for the various structures of the target language. The relevant concepts revealing the predictive power of contrastive analysis is stated in theoretical studies by such scholars as Weinreich, Lado, Haugen, Nemser and Nickel.

Their assumptions are listed thus:

- ❖ The fundamental difference between the mother tongue and the target language can be compared, and the comparison is needed to predict the difficulties and knowing the errors which result in learning the second language.
- ❖ The greater the difference between the systems of the two languages, the greater is the learning problems and the potential areas of interference.
- ❖ Similarities between the L1 and L2 will facilitate learning.
- ❖ Interference results from the learner's identification of the structure of the L2 with that of the L1.

- ❖ The difficulties or problems are mainly due to the difference between the L1 and L2.

Apart from the fact that contrastive analysis has a place in the explicit presentation of structural differences, the problems they raise and the best way to overcome them, other scholars have argued that contrastive analysis is a tool or a technique for error analysis. Error analysis involves collecting samples of speeches of speakers in different contexts and analysing the actual errors made. Such analysis can help the analyst to make categorical statement on the relative frequency of different categories of errors. Catford (1968:120) summaries the above remarks by saying that, “in relation to L2 teaching, the most important role of contrastive analysis or, rather of the data obtained by contrastive analysis is explanatory rather than predictive”. Explanation of errors not just their prediction, is the main objective of contrastive analysis. Contrastive analysis and error analysis do not exclude but complement each other in eliminating the problems of second language learning.

The Model Used

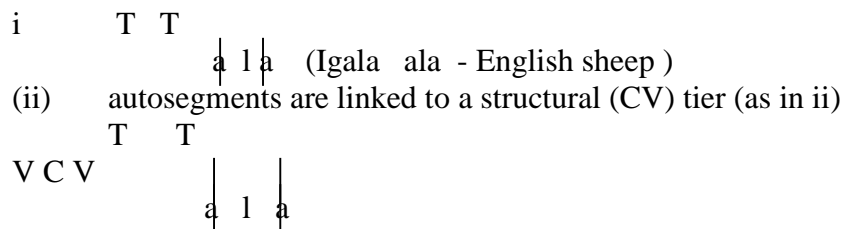
For the contrastive analysis of two languages L1 and L2 to be carried out, we need to establish a general framework within which both languages can be analysed. It is then that an effective comparison and contrast leading to prediction of a learner’s phonological difficulties can be achieved. In this paper, we shall utilize the tools of autosegmental model as general framework, to yield an effective comparison of some Igala and English suprasegmental features, noting the contrasts between them and to be able to predict with considerable success the learner’s phonological difficulties.

The autosegmental approach is an attempt to provide a more adequate understanding of the phonetic side of the linguistic representation. It postulates a multitier phonetic representation in which portions of the bundle of distinctive features are extracted and arranged on independent tiers or levels (Goldsmith 1976). Autosegmental Phonology constitutes a particular claim, about the geometry of phonetic representations. It suggests that the phonetic representation is composed of a set of several simultaneous sequences of these segments, with certain elementary constraints on how the various levels of sequences can be interrelated or associated (Goldsmith 1976).

It is a proposal at the same logical level as the SPE proposal that phonetic representation is a sequence of segments (Goldsmith 1976). It differs however from Sounds Pattern of English (SPE) by proposing explicitly that: (a) phonetic representation is multilinear or multitiered (Goldsmith 1976); (b) tiers are linked; (c) feature specifications have an internal hierarchical structure (Steriade 1982, Cements 1985, Sagey 1986); (d) some tiers may be morphemes (McCarthy 1979, 1981, Lieber 1987).

In summary, autosegmental phonology postulates a multitier phonetic representation in which portions of the bundle of distinctive features are extracted and arrayed on independent tiers or levels (Goldsmith 1976). Such features constitute segments in their own right; hence the term ‘autosegmental’. There is a consensus among autosegmental phonologists that, phonological representation is multitiered and that these tiers must be coordinated in order to obtain a well-formed phonological representation. But there are different views as to how to implement this co-ordination. The existing views can be summarized thus:

- (i) autosegments are linked to consonant and vowel segments or syllable (as in i)



The first position was adopted in early autosegmental studies (see Goldsmith 1976, 1979, Clements and Ford 1979). But the obvious problem is that it does not show the actual independence of the tiers since the autosegments are shown to be properties of the units bearing them (consonants and vowels) after the application of association convention.

The notion of a structural (CV) tier is contained in such works as McCarthy (1979, 1981), Halle and Vergnaud (1980), Clements and Keyor (1981) etc. They propose that autosegments are indirectly linked via the CV tier. It (CV tier) determines the timing relation of the autosegmental. It is not just a descriptive artefact. The CV model allows us to sustain the independence of the tiers. However, on the principles governing the linking of autosegments, Pulleyblank (1983: 31) offers the following universal association conventions: (a) from left to right (b) in a one to one relation. Association lines do not cross.

Autosegmentalists do not agree on how to handle these situations where there are unequal numbers of autosegments and their bearing units. At this juncture, we should mention that following advances in autosegmental phonology, a hierarchical organization of features has required that only the root tier (which defines the phoneme concept) be linked to the skeleton.

Feature Geometry

In its early stages, autosegmental phonology was a theory of suprasegmentals (e.g. tone, nasality, harmony, length etc.). Its concern was primarily to justify the postulated structure of phonetic representation. Three compartments were easily recognized - the autosegment compartment, the structural (CV) compartment and the phonemic melody. The structural compartment served to identify the notion of segment with respect to timing phenomena and suprasegmental behaviour (Anderson et al 1985:205). The phonemic melody contained the distinctive feature matrix composed of features that have not been autosegmentalised.

Autosegmental phonology adopted the Sounds Pattern of English (SPE) matrix model of feature specification. Implicit in the matrix model is the idea that the bundles of distinctive features have no internal organization whatsoever. Consequently, the features in a bundle of distinctive features are considered to be equally related. This position has been challenged following advances in autosegmental phonology. It has been proposed that distinctive features have an internal hierarchical organization which reflects the phonological or phonetic independence found among the features. Thus, the relative independence of any two features or feature classes is correlated with the number of nodes separating them. Within this dispensation, features need no longer be extracted from the bundle of distinctive features to find autosegmental status.

Suprasegmentals

Linguists have realised that Nigerians acquire greater communicative competence in their use of the segmental features than in their use of the suprasegmentals. Amayo (1980:124) also observes that “out of the various levels in which interference is manifested in Nigerian English;

it is relatively easier to overcome it at the syntactic and semantic levels than at the phonological level". However, this paper will reveal some of the problems encountered by Igala speakers of English in acquiring a perfect communicative competence in the use of the suprasegmentals of English.

Stress and Tone Compared

The use of variations in stress does account for major differences in the sound system of Igala and English. Tone is the only feature of Nigerian languages that can be easily compared with stress as used in English. In English, only one syllable per word can normally take primary stress. In other words, stress in English has a culminative function. There is the distinction between stressed syllable, that is, those bearing primary stress and the unstressed, those bearing other degrees of stress.

'import	i'mport
'increase	in'crease
'command	co'mmand

The occurrence of primary stress tends to bring about a weakening of neighbouring stresses especially those on the same word. As a result, the presence of a primary stress has a dissimilatory effect. For example:

eɪ xami'nation
 in dʌstriali'zation
 ɪmɑːʒiːn.

The Syllable Structures Compared

The table below shows the syllable structures of both English and Igala. V stands for vowel and C stands for consonant, except otherwise stated.

English	Igala
V /aɪ/ 'eye'	VCV [éla] 'meat'
CV /nəʊ/ 'no'	CV [pi] 'squeeze' ['bi'] 'born'
CVC /kæt/ 'cat'	CVC [ómà]
CCV /blu:/ 'blue'	CyV and CwV [mɛ] 'lick' [kwà] 'shout'
CCCV /streɪ/ 'stray'	-
CVCC /θæŋk/ 'thank'	-
CVCCC /wɔ:lst/ 'waltzed'	-
CVCCCC /tɛmpt/ 'tempts'	-

Primary stress tends to recur at fairly regular intervals in a sentence. This also brings about a reduction in the qualities of the vowels that occur between two primary stressed syllables. For instance;

'Jude is about to 'kill the 'cow.

'Jude will have ob'tained a 'permission to 'kill the 'cow.

'Jude would have been ob'taining a 'permission to kill a 'cow.

There is a tendency for a native speaker of English to run through the first syllable to the last of each of the three sentences using the same amount of time, despite the fact that they are separated by different numbers of unstressed syllables in each case. Igala, like other tone languages, is syllable-timed, while stress language such as English is stress-timed.

Predictions

Stress and Tone

(i) There might be a tendency in L1 learner (Igala) of L2 (English) to substitute the pattern in L2 with the one in his mother tongue thus imposing an equal amount of prominence on every syllable in English, irrespective of its pitch level.

(ii) Since Igala speakers are not familiar with the stressed forms and the unstressed syllables, there will be a tendency for an ineffective use of these two forms of syllable patterns in distinguishing between emphatic and contrastive sentences. For instance, only the strong forms of grammatical words are likely to be produced.

For example: 'was' /wəz/ may be rendered as [wɔs], 'of' /əv/ may be rendered as [ɔf]

(iii) In Igala there is tone spreading i.e., a tone tends to make the tones on the neighbouring syllables more like itself, as in /ôpià/ → [ɔpyâ] 'matchet'

In the example above, a low tone following a high tone becomes high falling tone, while a high tone following a low tone becomes low-rising tone. Igala tone rules are likely to be transferred to English. For example, English words with stressed and unstressed patterns may be produced as a high followed by a low tone realised as high falling tone. For example

English	Igala (speaker)
'import	import [impôɪt]
'excel	excel [esêl]

The unstressed stressed pattern may be rendered as a low followed by a high tone therefore producing a low rising tone.

in'crease	increäse
co'mmand	còmmãnd

Three degrees of stress are identified in English, the primary, secondary and zero. An L1 learner (Igala) of L2 (English) may convert these degrees of stress to tone levels as follows:

1. Primary stress may be substituted for high tone.
2. Secondary stress may be rendered as mid tone.
3. Zero stress as a low tone.

Rhythm

Since Igala is syllable-timed while English is stress-timed, there may be tendencies for the L1 (Igala) learner of English to transfer the Igala tonal rule to the English stress-timed rhythm. This may pose a great problem for the Igala learner of English. For instance:

The 'director has just admired your work.

May be rendered as

The /di/rec/tor/ has 'just /a/dmired/ your work.

Thus rendering the words syllable by syllable; therefore leading to irregular rhythmic pattern.

Intonation

The domain of intonation known as the tone group is unfamiliar to Igala speakers. As a result, Igala speakers may find it difficult to produce the gradual curve of pitch required for most intonation patterns in English. For example, in English, the tonic stress can be shifted from its normal position for accentuation. Consequently, the syllable to be emphasised may be made to initiate the pitch as in the following examples:

I will 'come on 'Friday

May be rendered as

'I 'will 'come 'on 'Friday

depending on whether one wishes to emphasise Friday or come. The rule guiding accentuation in Igala does not correspond to the one in English. However, shifting the tonic stress from its normal position for emphasis may be difficult. For example:

(i) ıJohn ıhates 'yam (not beans) and

(ii) ıJohn 'hates ıyam (he doesn't like it)

May be rendered identically as

'John 'hates yam

It may be difficult for Igala learner of English to break sentences into grammatical groups by using intonation, for instance,

'The ıboy who ılikes washing is a ıdry cleaner

May be rendered as

The boy, who likes wáshing is a drý cléaner.

Syllable Pattern

Syllable final consonants may present difficulties for Igala speakers; because Igala has an open syllable structure. Also, the preponderance of consonant clusters in English syllable structure is strange to Igala speakers. However, there may be a tendency to transfer the Igala syllable rule to English, thereby simplifying the cluster by inserting an epenthetic vowel to break the clusters or the final consonant may be deleted.

For example:

'Spread' /sprɛd/ may be pronounced [spírêd] or [spírédì]

'Clock' /klɔ:k/ as [kílɔk] or [kílɔkì]

'Junction' /dʒʌŋkɪn/ as [jɔ'kɔʔ]

'Benjamin' /bendʒəmin/ as [béndʒaɹni]

Formal Characterization of Some Errors in the Speech of Igala Second Language Speakers of English

When there is comparison of two languages, there are various options available to speakers in dealing with a problem. These are: deletion, interpretation, substitution, and insertion.

Stress

Igala speakers of English impose an equal amount of prominence on every syllable in English. Only the strong forms of function words are produced. They are not familiar with stressed forms and the unstressed syllables; therefore do not distinguish between emphatic and contrastive sentences. Only the strong forms are usually used, e.g.

Function words

- (i) was /wəz/ → [wɔs]
 of /əv/ → [ɔf]
 as /əz/ → [ɑ:s]
 and /ənd/ → [ɑ:nd]
 your /Jə/ → [Jɔ]

Sentences (emphatic)

- (ii) (a) 'di 'bɔi 'oupund 'di 'kɔpɔd 'in 'di 'rum ' and 'it'wɔs 'ful 'ɔf 'kɔkreufɪs (I.R.).
 (b) 'hi 'pikt 'ɔp 'sɔm 'gold baz 'wit handz 'and 'his 'kap 'fel ɪ dawn (I.R.)
 (c) 'di 'man 'is 'di 'ona 'ɔf 'di 'kat. (I.R.)
 (d) 'diz simd ei 'vəri kleva'plan.(I.R.)
 (Contrastive sentence)
 (e) 'hi na da driŋk nɔ slip (I.R.)

Furthermore, stress patterns of English are converted to syllable timed patterns. Accented syllables are rendered as high tones and de-accented as low tones. For example:

- (f) 'di bɔsɪz 'nɔmali stɔp 'wen 'eva dei gət \tu \di \dʒɔkʃn (I.R.)
 (g) 'laɪt \di \steuv \and let 'ɔz pri' pia rais \fɔ di \vɪsɪtɔ (I.R.)

Tone

Igala speakers of English tend to transfer the Igala tonal rules to English stressed and unstressed pattern, stress-time rhythm. For instance, words with stressed and unstressed pattern are produced as a high followed by a low tone, realised as high falling tone.

Example:

- 'import' /'ɪmpɔ:t/ → [ɪmpɔt̩]
 'excel' /ɪk'sel/ → [ɛsɛl̩]

The unstressed stressed patterns are rendered as a low followed by a high tone therefore producing a low rising tone, e.g.

- In'crease → increāse
 Co'mand → còmānd

- Primary stress is usually interpreted as high tone.
- Secondary stress is usually interpreted as mid tone.
- Zero stress as a low tone.

As earlier on indicated, Igala tonal rule is transferred to English stress-timed rhythm. As a result, Igala speakers of English render the words in a sentence syllable by syllable, therefore leading to irregular rhythmic pattern, e.g.

The /ti/fa/ has just /a/dmired your work.

Intonation

The domain of intonation known as tone group is unfamiliar to Igala speakers of English. Consequently, they do not produce the gradual curve of pitch required for most intonational patterns in English. For example, in English, tonic syllable can be shifted from its normal position for accentuation. For example -

- (a) ɪJohn ɪhates 'yam (not beans) and
 (b) ɪJohn 'hates yam (he doesn't like it)
 is rendered identically as
 'John 'hates yām.

Finally, it is difficult for Igala speakers of English to break sentences into grammatical groups by using intonation. This can be attributed to the non-existence of intonation in Igala. For example:

- (c) 'The ɪboy who 'likes 'washing is a 'dry 'cleaner
 is rendered as
 The boy, who líkes wáshing is a drý cléanèr.

Conclusion

Our discussion has been on the contrastive analysis of some suprasegmental features of Igala and English phonology, using the autosegmental framework. An attempt has been made to discuss and analyse some salient areas. This paper is by no means exhaustive, as there are other aspects of the suprasegmental features of both languages yet to be discussed. We can therefore conclude that this work has covered only parts of the aspects of both Igala and English phonology.

REFERENCES

- Anderson, J.M., Edwen, C.J., & Stan, J. (1985) Phonological structure: segmental, suprasegmental and extra-segmental *Phonology Yearbook* 2:203-224
- Armstrong, R.G. (1986) *Orthographies of Nigerian languages*. Lagos: National Language Centre. Manual IV.
- Catford, J.C. (1968) The articulatory possibilities of man In Malmberg 1968:309-342
- Chomsky, N. & Halle, M. (1968) *The Sound Patterns of English*. New York: Harper and Row.
- Clements, G.N. & Keyser, S.J. (1968) *CV phonology* Cambridge, MA: MIT Press.
- Clements, G.N. (1985) The geometry of phonological features *Phonology Year Book* 2:225-252.
- Gimson, A.C. (1975) *A Practical Course of English Pronunciation – A Perceptual Approach* London: Edward Arnold Ltd.
- Gimson, A.C. (1980) *English Pronunciation Dictionary*. (14th edition) London: ELBS, J.M. Dent and Sons Ltd.
- Gimson, A.C. (1980) *An Introduction to the Pronunciation of English* London: ELBS & Edward.
- Goldsmith, J. (1976) An overview of autosegmental phonology In *Linguistic analysis* Vol.2, No.1 1976.
- Goldsmith, J. (1979) *Autosegmental phonology*. Bloomington, Indiana: Indiana university, linguistic club Gerland press.
- Halle, M. & Vergnaud, J. R. (1981) Harmony processes In **Klein and Levelt 1981: 1-23**.
- Hyman, M.L. (1975) *Phonology: Theory and Analysis*. New York: Holt Rinehart and Winston
- Ladefoged, P. (2006) *A course in phonetics*. Boston: Thomson Wadsworth.
- Lado, R. (1957) *Linguistics across cultures*. Ann Arbor: University of Michigan press.
- Lieber, R. (1987) *An integrated theory of autosegmental processes*. Albany: State University of New York Press.

- McCarthy, J.J. (1979) Formal problems in semitic phonology and morphology Ph.D dissertation, M.I.T.
- McCarthy, J.J. (1981) A prosodic theory of nonconcatenative morphology *Ling.*12:374-418
- Miachi, Tom A. (1984) "Igala Orthography: A Report" Unpublished Ph.D. Thesis. Ibadan, University of Ibadan.
- Nemser, W. (1971) Approximative systems of foreign language learners *International review of applied linguistics*, 9:115-123
- Pulleyblack, D. (1983) *Tone in lexical phonology*. Dordrecht: Kluwer.
- Weinreich, U. (1953) *Language in contact: findings and problems*. New York: Linguistics Circle of New York press.