

Non-Native Perception and Interpretation of English Intonation

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ABSTRACT

This paper investigated the perception and interpretation of a sub-class of sentence intonation by some Nigerian users of English. In a test administered to one hundred and twenty third-year university students of English, they obtained 85.7% correct perception of changes in intonation but obtained only 25.7% correct interpretation of the meanings normally associated with the intonation contours on the ten sentences played back to them. It was concluded from the analysis that the concept of intonation was well known to the subjects, though the attempt to teach them English intonation through its structural analysis appeared not to have been very successful. The study recommends that emphasis should be placed on the teaching of the social meaning of English intonation to non-native learners instead of the analysis of its phonological structure.

Key Words: perception, intonation, non-native learners, phonology, and structure

1. INTRODUCTION

In a rather picturesque comment, Banjo (1979: 12) describes the appropriate use of stress and intonation as “the final hurdle, which a vast majority of speakers of English as a foreign language never manage to cross”. In a more specific observation, Cruz-Ferreira (1989: 24) identifies intonation, of all the supra-segmental features, as “the last stronghold of a foreign accent in speaking any L2” asserting further that that observation is true “even of speakers who otherwise have perfect or near perfect command of the phonetics of the L2”. Not surprisingly, the intonation of non-native English poses serious intelligibility problems to native speakers of the language, as reported by Tiffen (1974) on Nigerian English and Bansal (1976) on Indian English. Bansal (ibid. 21) observes concerning the use of sentence stress and intonation in Indian English as follows:

The sentence stress in Indian English is not always in accordance with the normal RP pattern and the characteristic rhythm is not maintained. The division of speech into sense groups and tone groups is sometimes faulty, and pauses are made at wrong places. The location of the intonation nucleus is not always at the place where it would be in normal English. The rising tone sometimes used at the end of statements must sound unusual to the RP-speaking listeners.

The problem of intonation for the users of English as a second language has been accounted for in various ways. For example, Amayo (1981) has argued that the supra-segmental features, of which intonation is a major component, are generally more elusive than the segmental and are therefore more inherently difficult to learn for foreign learners. As further observed by that writer, the supra-segmental features, particularly intonation, are much less researched and are, consequently, much less taught than the segmental aspects of English. Intonation also remains the most neglected in second language acquisition research in general, for, as observed by Cruz Ferreira (1989: 24), it has only recently begun to be “seriously and systematically taken into account both in the literature devoted to foreign language learning and in teaching itself”. That situation is very true of intonation, as it is of all the other prosodies of English in Nigerian school education. Consequently, Jowitt (2000: 64), after an examination of the form and the frequency of intonation patterns in educated Nigerian spoken English concludes that “certain patterns having a high frequency, constitute a system in Nigerian usage differing in important respects from native-speaker systems, though lacking stability”. Adejuwon (2003) also found that a majority of the radio newscasters in South-western Nigeria neither understood the intonation tunes that were played back to them, nor did they employ such tunes in their own newscasts.

One of the sources of the difficulty of English intonation for the foreign learner is, no doubt, the undue emphasis placed, in teaching, on its structural analysis rather than on its communicative value in EL2 programmes. Thus, the notions of tonality, tonicity and the tone group (Crystal 1972), also variously designated as the intonational phrase, phonological clause or sense group (Cruttenden 1990) are introduced to the foreign learner in that structuralist analysis expounded by Pike (1945), Abercrombie (1964), Kingdon, (1958) and O'Connor and Arnold (1973), to mention a few classic examples. Consequently, the description of tone (a misnomer for intonation types or tunes) as rising and falling, with many complex configurations such as ‘fall-rise’, ‘falling to mid’, and ‘low rising’ (Halliday 1967: 29) confuses the EL2 learner, whose primary business, like that of the non-linguist native speaker’s, is to use English intonation appropriately in everyday communication. Nor do the notions of tone group, foot and syllable (Halliday 1967: 12) help the non-native user of English to understand the language better. Even more perplexing is the demarcation of the tone group’s internal structure into the obligatory nucleus (the tonic or nuclear syllable) and the optional Head, Pre-head and Tail. As reported in an experiment (Currie 1980), a great deal of disagreement exists, even amongst trained phoneticians, on the identification of the tonic in sentences recorded from Edinburgh Scottish English speakers. In a nutshell, the adoption of the structuralist framework for teaching intonation to learners of English as a second language, which is in vogue in many a university lecture hall today, may have achieved little success.

2. INTONATION AND MEANING

The relationship between intonation form and function has been recognized from very early times. Pike (1972: 56) states the communicative import of intonation very vividly in the following words:

Actually, we often react more violently to the intonational meanings than to the lexical ones; if a man's tone of voice belies his words, we immediately assume that the intonation more faithfully reflects his true linguistic intentions.

Pike (1972: 56) comments further on the communicative importance of intonation in the following words:

If one says something insulting, but smiles in face and voice, the utterance may be a great compliment; but if one says something very complimentary, but with an intonation of contempt, the result is an insult.

Also commenting on the communicative importance of intonation, Gimson (1980: 264) describes changes in it as "the most efficient means of rendering prominent for a listener, those parts of an utterance on which the speaker wishes to concentrate attention".

The acknowledged importance of intonation in communication notwithstanding, there still are formidable obstacles in the way of a clear-cut analysis of the relationship between the form and function of intonation, not to mention its presentation to the non-native speaker of English. Three of the problems are pertinent to the discussion in the present paper.

The first problem arises from the existing tradition in which it is assumed that a one-to-one correspondence exists between intonation contours and the grammatical functions of utterances. That this assumption is not always right, or even largely so has, however, been amply demonstrated. For example, Cruttenden (1969) objects to such a claim by Halliday (1967), observing that there is no such one-to-one correspondence between an intonation form and its meaning. In a separate study, Brown (1977: 88), while observing that the difference between restrictive and non-restrictive relative clauses may be marked by tone group division in slow, formal speech, asserts, however, that "this sort of delicate distinction is usually lost in informal speech". Similarly, House (1983), in an experiment with native speakers in London, found that the assumption that the nucleus must play a focusing role is only partly substantiated. Even an issue as apparently simple and straightforward as the association of rising/falling intonation tunes with polar questions/affirmative statements was found to be contentious. For example, Pike (1972: 59) warns on the dangers inherent in such "definitions of meanings" of contours, asserting that there is hardly anything like a question or statement intonation contour. That writer narrates his experience further in the following words:

Specifically, it was a marked surprise to me to find that there are many different contours which can be used on questions, and that for any contour used on a question, I could usually find the same one used on a statement; likewise, for all – or nearly all – contours used on statements, I found the same ones used on questions (p. 59).

In the same vein, Cauldwell and Hewings (1996: 327) provide evidence to prove that the rules of intonation given in ELT books are “inadequate descriptions of what occurs in naturally-occurring speech”. They refer to the analysis of Yes/No questions by Fries (1964) and cite his finding to the effect that there seem to be no intonation sequences on questions that are not found on other types of utterances. Their verdict (331) is that studies of yes/no questions “in authentic speech support the view that the relationship between intonation and question form is more complex than that suggested in textbook rules”. Knowles (1987: 190) also expresses serious reservations on the communicative functions traditionally assigned to intonation rises and falls in English. More troublesome, of course, is the attitudinal interpretation of particular intonation contours as ‘insistent’ ‘friendly’, ‘tentative’, ‘compromising’ and so forth, which are very elusive in the absence of any definite contextual cues to aid the non-native hearer, or worse still, the non-native reader. It is noteworthy in this connection, that Trager (1972: 86) interprets only five of his nineteen illustrative utterance tokens, leaving the reader to puzzle out the remaining fourteen, on which no two readers or hearers may ever agree.

The second problem is that of perceiving clearly, in auditory terms, the difference between one tone and another, even amongst well-established specialists on the subject, as tones that are analysed as different are, in many cases, not practically identifiable as such by other phoneticians. In that respect, Cruttenden (1969: 311), in his highly critical review of Halliday’s book (Halliday 1967), complains regarding the tones specified as contrasting by Halliday: “The tones are not usually in contrast and the problem is therefore one of deciding which tone we are dealing with”. De Bot and Mailfert (1982: 71) confirm that the problem is real, stressing that even “trained phoneticians and language teachers were unable to perceive intonation correctly”. In the second phase of their intonation investigation at Kodak, as reported by de Bot and Mailfert (1982: 76), one of their sixteen students who had listened to their recorded tape gave an honest confession: “It must be very difficult to hear the differences in intonation”. Most non-native users of English almost certainly have this same problem of perception with English intonation.

The third problem has to do with the assumption, also in the traditional analysis, that the same meanings should be ascribed to particular intonation contours in native-speaker English as in non-native speaker English. That there may not be a definitive meaning for every English intonation contour acceptable to all phoneticians and native speakers of the language is, itself, a matter for concern. The inclusion of what he calls the “MEANING question” among his

numerous queries of the existing ideas on intonation by Stockwell (1972: 90) underscores this fact that there is no such agreement on the meaning of intonation contours. In this connection, in the final paragraph of his article Trager (1972: 86) affirms that, although the analysis of intonation patterns presented in his earlier work with Smith (Trager and Smith 1951) was based on American English, “we have heard enough other varieties, however, and have examined enough of reported intonation data for us to be convinced that the system set forth here holds for the whole of the English Language”. It is however very doubtful if Trager’s “whole of the English language” includes the numerous institutionalized new Englishes such as Nigerian English, Indian English or Chinese English, which have developed in various parts of the world in the past forty years. The intonation systems of those new Englishes differ from that of the native-speaker English usually analysed in the ELT textbooks in use in schools in ESL countries. For example, the intonation system of Nigerian English, as observed by Jowitz, (2000) differs radically as to its phonemic, syllabic and stress patterns from that of standard English presented in the ELT textbooks.

Intonation, in particular, of all the prosodic aspects of English, appears to be a fertile area for language transfer. It is this area in which the teaching of English to non-native learners is least welcome. It is, therefore, not surprising that it is the area in which that enterprise is least successful, for while the average educated non-native learner of English can attain a very high standard of grammatical accuracy in the language and master the pronunciation of its sound segments and word stress, s/he often cannot appropriately use its intonation with any reasonable degree of confidence. The description of intonation by Odlin (1989: 118) as “one of the crucial ferts of language transfer which foreign language teaching strategies seem not to have taken seriously” is, therefore, very appropriate.

It is clear from the brief review above that the perception and the interpretation of English intonation are highly contentious, both amongst phoneticians and native speakers of the language. Non-native speakers of English are, understandably, at a loss when faced with the task of using intonation in their English speech, or of interpreting it when they hear it from native-speaker speech. The first task, of using intonation on the model of the native speaker as presented in the ELT textbooks, they can handle very well, by simply adopting the avoidance strategy. They avoid the use of intonation, resorting instead to paraphrasing through syntactic expansion or some other simplification processes to disambiguate their potentially ambiguous utterances in order to make their meaning clear. For example, an educated Nigerian would often say “She gave biscuits to her dog” and “She gave dog biscuits to her friend” as a way of disambiguating test sentences 3 and 4 in the perception and interpretation of intonation test reported later in this study instead of employing contrastive intonation. It is the second task, of perceiving and correctly interpreting intonation when he or she hears it from a native speaker, which poses a real problem. The experiment reported below was therefore carried out on the extent to which some Nigerian university students would perceive and interpret the differences in the

contrasting restrictive and non-restrictive intonation contours on the five pairs of sentences played back to them.

3. THE EXPERIMENT

3.1 AIMS AND OBJECTIVES

The present study investigated the perception and interpretation of sentence intonation by a group of non-native learners of English in Nigeria. Specifically, it attempted to discover the subjects' level of perception as well as their interpretation of intonation contrasts in five pairs of English sentences. No attempt was made to examine the subjects' production as was done by Jowitt (2000). It was concerned only with finding out whether they could perceive and correctly interpret the differences in the intonation pattern of each of the five pairs of sentences that were played back to them. The data was analysed with a view to finding answers to the following specific research questions:

1. Did the subjects perceive the difference in the intonation contours with which the sentences in each pair were said?
2. Were they able to correctly interpret the intonation contour on each sentence? Or to what extent did their interpretation of the intonation contours agree with the standard interpretation in the ELT textbooks?
3. Did they agree amongst themselves in their interpretation of the intonation contrasts of the sentences played back to them?

The findings on the first question would help one to determine whether or not the subjects were aware of intonation as a significant component of the linguistic data. On the second question, if they correctly interpreted the intonation contours of the sentences played back to them, it would mean that they agreed with the standard or textbook interpretation of English intonation. That would also mean that English intonation is learnable for non-native users of the language. Such agreement would also be evidence that the textbook model is suitable for teaching English intonation to non-native learners of the language. Similarly, findings on the third question would indicate whether or not the subjects were adopting a common interpretive model for intonation which could, possibly, be that of their mother tongue (Rintell 1984; Willems 1982; van Els and de Bot 1987).

3.2 THE SUBJECTS

One hundred and twenty subjects were involved in this experiment. They were drawn from a common socio-linguistic background to avoid the bias of unforeseen socio-linguistic variables that could influence their performance and

vitate the findings. They were all native-speakers of Yoruba from the southwestern part of Nigeria. The choice of native-speakers of Yoruba enabled one to avoid potential problems caused by the influence of diverse mother tongues.

Yoruba is a tone language that is spoken in the southwestern part of Nigeria. According to Laniran and Clements (2003: 204), Yoruba operates “a register tone system with three distinctive tone levels, high (H), mid (M) and low (L)”. Though it is traditionally analysed as a tone language, native speakers of Yoruba appear to make use of intonation to discriminate between syntactically unmarked affirmative and interrogative sentences, as found out by Atoye.

The subjects were all third-year university undergraduates of the Department of English, Obafemi Awolowo University in Nigeria. Prior to the experiment, they had been exposed to the traditional analysis of intonation and its functions through the English Phonetics and Phonology courses. They therefore constituted a highly homogenous socio-linguistic group with regards to such variables as age, education, exposure to and training in English phonetics.

3.3 TEST DESIGN AND ADMINISTRATION

Each subject was given a sheet of paper on which the ten English test sentences had been arranged in pairs. The members of each pair were lexically and syntactically identical on paper since the intonation that differentiated them was not indicated in the sentences given to them. Commas and other intra-sentence punctuation marks were also avoided so as not to give away the intonation contours on the sentences. The subjects had, therefore, to rely absolutely on their auditory perception of the intonation contours of the pre-recorded sentences played back to them on an audio cassette-recorder.

The sentences were played back to the subjects using a different intonation contour on each member of a pair. The intonation used on each sentence gave it a different meaning from the other member of the pair. The two sentences in each pair therefore constituted an intonation minimal pair as they differed only in the intonation employed on them. As suggested by de Bot and Mailfert (1982: 76), “such recorded minimal pairs can be a useful technique” for teachers to show their students that intonation plays an essential role in communication.

The subjects were asked to listen carefully to the five pre-recorded pairs of sentences played back to them and to perform two tasks. For the first task, they were asked to indicate, in the space between each pair on the given piece of paper, whether they perceived any difference between the intonation contours of the two sentences. For the second task, they were asked to state the meaning of each sentence, using the intonation pattern with which it was said as a guide. It was expected that the subjects would indicate the same meaning for the two members in a pair if they did not perceive any variation in their intonation contours or if they did not think that the difference in intonation was linguistically significant.

The multiple-choice answer format suggested by Cruz-Ferreira (1989) was discarded in the present case because of its inherent problems. Such a format, like any multiple-choice objective question format, encourages guesswork on the part of the respondents and could lead to a false rating of their comprehension level. This is particularly so in Cruz-Ferreira's proposal in which one of the three suggested answers is "in fact not a possible interpretation", thus making guesswork highly profitable, as was that author's finding in an earlier experiment in which the format was used (Cruz-Ferreira 1983). In addition, the use of that format would inadvertently limit the possible range of interpretations that the subjects could otherwise have given, some of which may have escaped the researcher's own attention or even his or her imagination, and which may have been right, nonetheless. It also presupposes that only one meaning is associated with each intonation contour, in spite of the criticism of such a monolithic interpretation of intonation reviewed earlier in the present paper. The open-ended or 'free' format, adopted in the present experiment, led the subjects to actually do the interpretation, all by themselves, thus encouraging originality and diversity in their interpretation and making them fully involved as participants in a simulated communicative event.

The test sentences, some of which were adopted or adapted from the existing literature on the subject, are presented in 3.4 below, as they were printed on the paper given to the subjects, without any intra-sentence punctuation or indication of tone group boundaries or direction of pitch flow.

To give the reader a fair idea of what was played back to the subjects, the test sentences are presented in 3.5 with a slanting line indicating each tone-group boundary, which also indicated a pause and a change in pitch direction. The standard meaning of each of the test sentences is also paraphrased in 3.6.

3.4 THE TEST SENTENCES

1. She dressed and fed the baby.
2. She dressed and fed the baby.
3. She gave her dog biscuits.
4. She gave her dog biscuits.
5. The parable shows what suffering men can create.
6. The parable shows what suffering men can create.
7. He doesn't beat his wife because he loves her.
8. He doesn't beat his wife because he loves her.
9. He also translated the book
10. He also translated the book.

3.5 THE TEST SENTENCES INDICATING TONE GROUP BOUNDARIES

1. She dressed and fed the baby.
2. She dressed/and fed the baby.
3. She gave her dog/biscuits.
4. She gave her/dog biscuits.
5. The parable shows/what suffering men/can create.
6. The parable shows/what suffering/men can create.
7. He doesn't beat his wife/because he loves her.
8. He doesn't beat his wife because he loves her.
9. He also translated the book
10. He/also translated the book.

3.6 THE STANDARD MEANINGS OF THE TEST SENTENCES

1. Both actions were performed on the baby
2. She dressed herself and then fed the baby.
3. She gave biscuits to her dog.
4. She gave dog biscuits to a lady.
5. Men who are suffering can create something
6. The suffering that men can create.
7. He doesn't, reason is his love for her.
8. He does, but for some other reason than love.
9. In addition to his writing it/or translating other books.
10. In addition to other people who translated it.

4. ANALYSIS AND FINDINGS

At the end of the test, the subjects' answer sheets were collected for an analysis of their performance in each of the two tasks given to them. The analysis is presented in 4.1 and 4.2 below.

4.1 SUBJECTS' PERCEPTION OF INTONATION

In the perception task, the subjects were asked to indicate for each pair of sentences whether or not they heard any difference in the intonation of the sentences in that pair. Each subject therefore returned five answers for the five pairs of sentences, making six hundred answers for the one hundred and twenty subjects. Their responses were analysed to find out the extent to which they were

able to perceive the differences in the intonation of the members of each pair of sentences. The result of that analysis is presented in Table 1 below.

Table 1. Subjects' Perception of Variation in Intonation

	Frequency	Percentage
Perception	514	85.7
Non-perception	86	14.3
Total	600	100

As is obvious from the entries in Table 1 above, the subjects perceived the difference in the intonation of the test sentences in 514 of the 600 potential cases. This positive score of 85.7% was very good as it indicated that the subjects perceived variation in the intonation of the test sentences in a great majority of its occurrences. They failed to perceive the variation in intonation in only 86 cases (14.3%) of its occurrences.

The details presented above do not, however, tell the whole of the story. It is necessary, for example, to add that none of the students scored zero or failed to perceive the difference in the intonation on every pair of sentences. There was, equally, no pair of sentences in respect of which all the subjects scored zero or failed to perceive the difference in intonation. Every one of the subjects therefore perceived the difference in intonation in respect of one pair of sentences or the other. In fact, 59 (49.2%) of them scored 100% indicating that they perceived the variation of intonation in all the five sentence pairs. These and other relevant details of the subjects' perception of intonation are presented in Table 2 below.

Table 2. Subjects' Distribution by Perception Level

Perception Level	Number of Subjects	Percentage
0.39%	0	0
40%	3	2.5
60%	19	15.8
80%	39	32.5
100%	59	49.2
Total	120	100

It is observable from Table 2 above that 59 (49.2%) of the subjects perceived intonation differences in all the test sentences, thereby scoring 100% each in the perception test. It was also found out that no subject scored lower than 40%. In fact, only three (2.5%) of them scored 40%. The analysis also indicated that 117 (97.5%) of them scored 60% and above while 98 (81.7%) of them scored 80% and above. It is therefore evident from the subjects' perception profiles presented in Tables 1 and 2 above that the subjects perceived the differences in the intonation of most the sentences, thus indicating that they were all aware of changes in their intonation contours. It was concluded from those facts that all the subjects were

aware of intonation as part of the linguistic data. The answer to the first research question, therefore, was that the subjects perceived variation in intonation in the test sentences, which suggests that intonation might be employed in the subjects' mother tongue, though it is possible that they became acquainted with it through their study of English phonetics. The evidence is inconclusive as to the source of their knowledge of intonation.

4.2 SUBJECTS' OVERALL INTERPRETATION OF INTONATION

As mentioned earlier, the experiment consisted of ten sentences and involved 120 subjects. The number of potentially correct answers was therefore 1,200. However, only 308 of the interpretations offered were right or were in line with the textbook or traditional interpretations of the intonation contours used on the test sentences. The subjects overall performance in the interpretation test was therefore very poor, representing only an averaged score of 25.7% correct interpretation. They were wrong in 892 cases (74.3%) of their interpretations of the sentences. It was concluded from this result that the subjects' interpretation of intonation did not generally agree with the standard interpretation of intonation presented in the ELT textbooks. These findings are displayed in Table 3 below.

Table 3. Subjects' Overall Interpretation of Intonation

	Frequency	Percentage
Correct	308	25.7
Incorrect	892	74.3
Total	1,200	100

Deeper insight into the subjects' level of performance in the interpretation of English intonation in the test sentences is provided in the consideration of the sentence-by-sentence level of correct interpretation that follows.

Each of the ten sentences was interpreted by each of the 120 subjects. A total of 120 answers were therefore returned per sentence. The analysis indicated that there was no single sentence that was correctly interpreted by all the subjects. Conversely, there was no sentence that was wrongly interpreted by all the subjects. Some of the sentences, however, attracted or received a much greater percentage of correct answers than did some of the others.

As can be observed from Table 4 below, S8 proved the most difficult as it was correctly interpreted by the lowest number of subjects, (4, i.e. 3.33%), while S1 had the highest number at 57 (47.5%). The intonation of the sentences therefore presented varying degrees of interpretation problems to the subjects as displayed in the percentage column of Table 4.

Table 4. Sentence-by-Sentence Correct Interpretation of Intonation

Serial No.	Potential Score	Actual Score	Percentage
S1	120	57	47.5
S2	120	49	40.8
S3	120	47	39.16
S4	120	27	22.5
S5	120	18	15.0
S6	120	37	30.8
S7	120	21	17.5
S8	120	4	3.33
S9	120	21	17.5
S10	120	27	22.5
Total	1,200	308	25.7

The sentence-by-sentence interpretation reflects the subjects' overall poor level of interpretation of intonation by the subjects. For example, not one of the sentences was correctly interpreted by up to 60 (50%) of the subjects. Those correctly interpreted by the highest number of subjects include S1, S2, S3 and S6, attracting 47.5%, 40.8%, 39.16% and 30.8% respectively.

In answer to the second research question, therefore, it can be safely concluded from these findings that the subjects' level of overall correctness (25.7%) in the interpretation of intonation was very low. This finding implies that the subjects did not learn English intonation with any good degree of success, either because the teaching model was not suitable or it was not properly implemented. This also implies that the subjects, and, by extension, other non-native users of English, would often fail to interpret intonation correctly when employed in conversation with them by native speakers of English. Conversely, the speech of non-native speakers of English would attract a very low intelligibility level with native speakers, as reported for Nigerian English and Indian English respectively by Tiffen (1974) and Bansal (1976). Of greater significance, perhaps, is the fact that the non-native user of English may sound rude, pompous or insulting through the inadvertent misuse of intonation contours in verbal interaction with native speakers of the language. Greater emphasis should therefore be placed on the teaching of the communicative import of English intonation in non-native situations rather than on its phonological structure.

On a more general note, the discrepancy between the subjects' high level of perception of English (85.3%) and their very low level of correctness (25.7%) in its interpretation, as observed in the analysis above, indicates that there exists a world of difference between the mere ability to perceive intonation and the ability to correctly interpret it. This is probably true not only of linguistic phenomena but also of physical, spiritual and other perceptible phenomena.

The third research question, as to whether or not, or to what extent, the subjects generally agreed amongst themselves in their interpretation of English intonation attracts a more positive answer, as there was a very high degree of agreement in their answers. Most of their correct and even incorrect interpretations were either identical or very similar. The following two examples illustrate the point.

First, the typical correct interpretations of S1, which, as displayed in Table 4 above, attracted the highest number of correct interpretations, were:

- a. She performed both actions on the baby.
- b. Both actions were performed on the baby.
- c. She dressed the baby and fed the baby.
- d. She dressed the baby before feeding the baby.
- e. She dressed the baby first and then fed the baby.

Secondly, the typical interpretations of S8, which had the lowest number of correct interpretations, were also very similar as exemplified in the following:

- a. Pause after wife
- b. Plain statement
- c. Emphasis on love
- d. Emphasis on beat
- e. Declarative statement

The evidence therefore, suggests that the subjects had a fairly common interpretation of English intonation which, unfortunately, did not agree with the standard or native-speaker interpretation. As observed above, it is, however, not clear whether their common right and wrong interpretation could be traced more to their mother tongue intonation model or to their acquaintance with English intonation in the classroom.

Finally, the fact that the subjects indicated a high degree of agreement amongst themselves in their interpretation of the test sentences, in contrast to their very low degree of agreement with the standard interpretation, indicates that they were adopting a common interpretive model, very probably of their common mother tongue. Such transfer would be supportive of Terrence Odlin's description (Odlin 1989: 118) of intonation as "one of the crucial forts of language transfer" and of Banjo's (1979: 12) description of the supra-segmental features of speech as "the final hurdle which a vast majority of speakers of English as a second language never manage to cross".

5. CONCLUSION

This study investigated the perception and interpretation of English sentence intonation by some non-native users of English in Nigeria. In response to the research questions set for the study, the findings indicate a low level of accuracy

in their interpretation of intonation, in spite of a very high perception level of intonation by the subjects. To a large extent, the subjects also agreed amongst themselves in their interpretation of English intonation while differing widely from its standard interpretation.

The evidence from the study was inconclusive as to whether the subjects became familiar with the concept of intonation through their mother tongue or through their study of English phonetics, though the high level of agreement in their interpretation of the intonation contours tends to suggest its employment in their mother tongue and a probable transfer of their mother tongue interpretive model to English. The subjects' very low level of correctness in the interpretation of intonation, in spite of their exposure to its structural analysis in the classroom, suggests that the teaching of the structural analysis of intonation has not been of much help to the non-native users of English in this study. Greater emphasis on the teaching of the meaning of the intonation tunes in communication is, therefore, advocated instead of its structural analysis in the ESL classroom.

It is suggested that a similar test on the attitudinal interpretation of sentence intonation, even among non-native users of English at the university level, would be a valuable complement to the findings from the present study.

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