T. C. ANADOLU ÜNİVERSİTESİ
SOSYAL BİLİMLER ENSTİTÜSÜ

AN INVESTIGATION OF THE INTONATIONAL AWARENESS OF LEARNERS OF ENGLISH AS A FOREIGN LANGUAGE

(A COMPARISON BETWEEN LEARNERS TAUGHT BY NATIVE SPEAKER TEACHERS AND THOSE BY NON-NATIVE SPEAKER TEACHERS)

(Yüksek Lisans Tezi)

Seyhun TOPBAŞ

Eskişehir, 1987

SYMBOLS AND ABBREVIATIONS


: rising tone


: Falling tone


: level tone


: rising intonation pattern


: falling intonation pettern

: word boundary (tone-unit boundary)

EFL : English as a foreign language

ELT : English language teaching

S Native ST : Students of native speaker teachers of English

S Non-native ST: Students of non-native speaker teachers of English

CONTENTS

CHAPTER V

DISCUSSION AND SUGGESTIONS

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

1.1. BACKGROUND TO THE PROBLEM

In conversation we do perceive and react to the differences in the pitch of the voice and they play an important part in signalling meaning. It is partly from the intonation of an utterance that we understand what a speaker intends to say. In other words, inflection of the pitch of the voice might alter the semantic intention and/or interpretation of a given syntactic form according to different conditions.

Thus, broadly speaking, intonation can be defined as the inflection of the pitch of the voice in spoken communication. The primary function of intonation is to indicate the syntactical or attitudinal distinctions in speech.

Roach (1983) asserts that 'no definition is completely satisfactory, but any attempt at a definition must recognise

that the pitch of the voice plays the most important part'(Roach, 1983: p.112).

Presumably, all languages have intonation. But languages have their own characteristic ways of using the intonation patterns.

Speakers of a language who share the same system, are able to understand each other more fully through superimposing intonation on the intended syntactic form. As an example, a speaker may intend to convey a meaning with an intonation pattern that may have an acceptable meaning in his own language but have negative connotations in the target language and consequently may hamper communication. The same may be true within a language. This shows that intonation is a conventional system shared by a particular speech community (Wilkins, 1972).

Particular intonation patterns may convey particular meanings in one environment and different meanings in another environment. The intonation patterns of a language, distinct sequences of pitches, or inflections of pitches ending in a fall or rise, have different meanings expressing the attitude of the speaker, the type of question, the sequence relation between a phrase and a context, or the span of a grammatical structure. The particular intonation patterns that are associated with these and other meanings are characteristic of each language and

are therefore language specific. For example, some languages like Thai, Chinese, Vietnamese use intonation lexically to distinguish between words. These languages are called 'tone languages'. For example, in Chinese,

¯ma means 'mother'

ˊma means 'hemp'

ˇma means 'scold' (Roach, 1983: p.116).

In these languages the tone can determine the meaning of a word, and changing from one tone to another can completely change the meaning. In tone languages the pitch differences are already used at the phonematic level and their use at higher levels is therefore restricted.

Some languages, on the other hand, use intonation for syntactical purposes or for discriminating between attitudinal states. Such languages are called 'intonation languages'. English is a good example of one of these languages (Lado, 1969). For example, we can express emotions like surprise, hate, anger through intonation. We can also change the function of a sentence by turning an affirmative sentence into interrogative or an exclamatory.

example:

He is absent. 'affirmative'

He is absent? 'interrogative'

He is absent! 'exclamatory'

Because of the redundancy of language an error in the pronounciation of an individual sound rarely effects communication, whereas an error in intonation can lead to a different interpretation (Wilkins, 1977). Therefore, the acquisition of an accurate intonation may be considered to be a higher priority in the learning of a foreign language.

1.1.2. THE IMPORTANCE OF INTONATION

Evidence from studies in child language acquisition suggests that suprasegmentals are more fundamental linguistically than segments; and that intonation patterns are learned at the earliest stages of language learning and are embedded in the habit mechanism of our use of language (Bloom and Lahey, 1978; Crystal, 1975; Lado, 1961; Kaplan, 1969; Halliday, 1975; Lewis, 1961).

Crystal (1975) points out that at a very early age, children respond to the intonation of the voice at the expense of speech content and that non-segmental patterns are understood and produced prior to anything conventionally grammatical.

Lieberman (1967) observes intonation in child development and hypothesizes that the intonation of the breath-group takes on a linguistic function before

the child has acquired many of the distinctive features of the language around him.

Kaplan (1969) gives evidence from his study that eight - month - old children can discriminate regularly between a falling and rising sentence contours, spoken with normal stress(cited: Ferguson and Slobin, 1973: p.129).

Halliday (1975), from his observation of a child, states that infants begin to use special intonation patterns of their own. Though he is not using intonation as it is used in an adult system, he is adapting the elementary opposition between rising and falling which is significant in his functional system.

Teachers of pre-school children report that the normal child is likely to attend to story time better if intonation patterns are variable and even exaggerated in contrast to a more flat monotone reading (Bloom and Lahey, 1978).

Lewis (1936; 1951) reports that children's first inductions about content and form interactions are based on intonation. He notes three stages in children's language development and says that at the first stage the child shows discrimination between different patterns of expression in intonation. Then, these patterns together with the phonetic form is made effective in which the intonational

rather than the phonetic form dominates the child's response. At the third stage, the phonetic pattern becomes dominant while the function of the intonation pattern is subordinated (cited in Lieberman, 1967).

Leopold (1953) conducted an experiment on a 10 month-old and a 13 month-old infant and states that the only syntactic device used in his case was the interrogative intonation which was employed to ask for information (cited in Lieberman, 1967).

According to Berry (1969) variation in intonation is important for language learning. It is also considered to be a therapeutic tool (cited in Bloom and Lahey, 1978).

Ferguson (1973), in the study of child language development, states that:

> "Sentences may be said with different intonations in such a way that they have different meanings even though all the words are the same, and every sentence actually spoken has some kind of contour of the fundamental pitch and related phenomena as part of its total auditory content... Some features of intonation, voice quality, and the like, may be universal, and others may be so different in function from the sentence itself as to constitute a more or less autonomous channel for communication. But every language has its own system of sentence contours which the child has to acquire."
>
> (Ferguson, C.A., 1973: p.2)

These imply and lead one to conclude that intonation patterns are particularly deeprooted. Moreover, native speakers of any language learn to interpret anger, amusement, sarcasm, weariness, happiness, all the emotional states and attitudes that are expressed unconsciously by 'the way' things are said. By the time we are adults, we perceive these patterns at an unconscious level in our native language and few learners of foreign languages are ever taught that these patterns in the target language may be different. For example, listening to Slavic languages gives the impression that speakers are having an argument because the normal pattern is one which in English is associated with anger. †

In foreign language learning intonation assumes major importance because some understanding of how intonation modifies the function and the meaning of an utterance is essential in determining how teachers and students interpret each other's verbal activity.

Lado says that one knows the intonation of a language when he can produce and recognise functionally the intonation patterns of the language in the stream of speech. "Producing and recognising the intonation patterns is achieved when they include the distinctive pitch patterns and sequences of pitches, the stressed syllables and the meanings of the patterns in use." (Lado, 1961: p.119)

1.1.3. DEFINITION OF INTONATION

Intonation has attracted the interest of many researchers and therefore many languages were subjected to analysis in this respect.

Linguists and phoneticans vary considerably in the way they approach intonation. It is interpreted as a combination of physical and acoustic parameters by phoneticians. They reach this conclusion by analysing intonation in terms of physical and acoustic aspects and try to relate these observational results with linguistic function (Lehiste, 1971; Lieberman, 1967; Fry, 1958; Bolinger, 1958; Ladefoged, 1967). On the other hand, intonation is often a much vaguer concept in phonology, related mostly to unmeasurable phenomena such as expectations of speaker and hearer (Chomsky and Halle, 1968).

1.1.3.1. The form of intonation

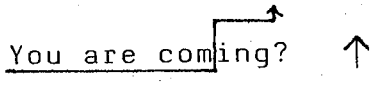
1.1.3.1.1. Tone-unit

Viewed phonetically, the rises and falls in the pitch of the voice in an utterance is composed of a number of 'tone-units' or 'tone-groups'. Each tone-unit represents a unit of information, which is to say that intonation has the function of dividing up an utterance into information units. Speakers select from a choice

of tones according to how they want the utterance to be heard, and listeners will hear utterances said with different tones. That is; people may differ in the way they move from the high pitch of an utterance to the low, or from the low pitch of an utterance to the high or they may fallow the utterance to flow into another. These constantly moving tones in English indicates the manner of the utterances of the speaker, as fall, rise or level (Roach, 1983).

If a speaker wants to say 'You are coming' in a definite, final manner, he will probably use a falling tone, which descends from a higher to a lower pitch, and represented by an arrow pointing downwards (↓). The fall could be said to give an impression of finality

If he wants to say 'You are coming' in a questioning manner, he may say it with a rising tone which ascends from a lower pitch to a higher one, and represented by an arrow pointing upwards (↑).



He may either say 'You are coming' or 'You are not coming' with a level tone which is not a frequent tone in English. This tone is represented by a horizontal

arrow. The level tone conveys saying something routine or in a monotone way.

1.1.3.1.2. Structure of tone-unit

A tone-unit can be said to have four main components. The organisation of these elements may be formulated as:

(pre-head) (head) tonic syllable (tail) Below is a brief description of these segments.

Nucleus or tonic syllable: Crystal (1969) puts forward that each tone-unit will have one peak of prominence in the form of a nuclear pitch movement. That is; each tone-unit has a tonic syllable (Crystal, 1969; Halliday, 1967; 1970; Roach, 1983), also called necleus, which is its most prominent part. The tonic syllable is the most heavily stressed syllable in a tone-unit, and carries the significant pitch movement. It is the last lexical word in a tone-unit.

Is it you

(Roach, 1983: p.122)

In the above sentence, the underlined syllable is more prominent than the other two and in this sentence it carries a rising tone. In an utterance of three sylables, with one tone-unit, the only syllable that is stressed

heavily is the third one. Therefore, in the above sentence 'You' is the tonic syllable

Head: The part of the tone-unit coming directly before the tonic-syllable is called the head. This extends from the primary stressed syllable of the first lexical word in the tone-unit up to the nucleus (tonic syllable). If there is no stressed syllable there cannot be a head.

Put it on the table.
└── Head ──┘

Pre-head: The pre-head is composed of all the unstressed syllables in a tone-unit before the head.

He doesn't know what to do
└Pre-head┘

The tail: Any syllables following the tonic syllable and the end of the segment in a tone-unit are called the tail.

Look at it, what did you say.
└tail┘ └── tail ──┘

(Roach, 1983: p.124)

1.1.3.2. The functions of intonation

Many suggestions have been made to isolate the different functions of intonation (Crystal, 1969, 1975; Halliday, 1961, 1963, 1970). Some writers approach to the function of intonation either as grammatical or attitudinal where as some refer to the function of intonation

as accentual (Halliday, 1970; O'Connor, 1961; Gimson, 1980). Roach (1983), in English Phonetics and Phonology, gives a definition that covers all the functions of intonation so below is a brief summary of basic functions of intonation as defined by Roach (1983).

Roach (1983: p.136) makes a distinction between the attitudinal function of intonation and several other functions that are called 'syntagmatic functions'. Syntagmatic functions include accentual, discourse, and grammatical functions.

1.1.3.2.1. Attitudinal function of intonation

The function of intonation enables one to express emotions and attitudes as he speaks, adding a special kind of 'meaning' to spoken language.

It has been expressed by many text book writers and linguists that intonation is used to convey a speaker's feelings and attitudes: how a speaker intends his utterance to be taken or what his attitude is as he speaks the utterance. However, to characterize different attitudes is a difficult task. The same sentence may be spelled out in different ways in different contexts, to convey anger, happiness, surprise, boredom etc.

The notion of expressing attitude is very complex.

This complexity might be due to the fact that the use of parameters like loudness, speech rate (i.e speed), voice quality (e.g harsh, husky, whisper etc) may vary from one speaker to another. It is also likely that speakers use different facial expressions, gestures and body movements which are all of great importance in conveying attitudes and emotions, consequently, it is difficult to write rules to indicate a speaker's attitude.

As intonation alone can not indicate attitude, Roach (1983) suggests that the attitudinal use of intonation is something that is best described through talking with and listening to English native speakers (Roach, 1983).

1.1.3.2.2. Accentual function of intonation

According to Roach (1983), "Intonation helps to produce the effect of prominence of syllables that need to be perceived as stressed, and in particular the placing of tonic stress on a particular syllable marks out the word to which it belongs as the most important in the tone-unit. This has been called the accentual function of intonation..." (Roach, 1983: p.143)

Example:

a. How beautiful <u>you</u> are.

b. How <u>beautiful</u> you are.

As can be seen the most important information in (a) is on '<u>you</u>' where as in (b) on 'beautiful'.

On the other hand, some writers claim that in the accentual function of intonation the placement of stress is said to be determined by intonation itself. They regard accent as the word or words which carries the primary tonic-stress. However, Roach sees the placement of stress as independent from intonation. But he also says that one aspect of stress can be regarded as part of intonation which is the placement of the tonic stress within the tone-unit. While the word stress is independent of intonation, the placement of tonic stress was a function of intonation. In fact, many writers agree that this aspect of stress is 'sentence stress' which Roach (1983) does not find appropriate.

1.1.3.2.3. Discourse function of Intonation

Two main areas can be identified in the study of intonation in relation to discourse: the first area is called 'attention focusing' which has been described as focusing the listener's attention on the most important part of the message. That is; the placing of tonic stress depends on the information content, and tends to be placed on words with high information content.

Example:

a. Mary went to study.

b. Mary went to Ankara to study.

As can be observed from the above examples, in (a) the tonic-stress is on 'study'. However, in (b) the tonic-stress is on 'Ankara' because it gives an information that Mary went to Ankara but not İzmir or anywhere.

Intonation can also indicate whether the tone-unit presents new information or given information.

Example: I wasn't married when I first met you.

As can be understood, in the above sentence, 'married' is the new information whereas 'you' is the given information. By placing the tonic stress on that particular word, the hearer understands what the new information is.

It is also noted in Roach (1983) that some writers proposed that the new information is indicated by a falling tone, while the given or shared information is indicated by a rising tone.

The second main area of intonational discourse function is concerned with the regulation of conversational behaviour. In general, speakers use various prosodic

components to indicate to others that they have finished speaking, that another person is expected to speak or that a particular type of response is required and so on. Therefore, intonation regulates the conversational behaviour.

1.1.3.2.4. Grammatical function of Intonation

Scholars working on intonation in English have engaged in the question of tonal contrasts from different aspects of grammatical light. At one extreme there is the main division of tunes based on an opposition of question and statement types, or into 'continuative' versus 'final' utterances (as stated by Hultzen sighted in Crystal, 1969). At the other extreme there is the detailed examination of a closed system of tonal contrasts within the context of a grammatical theory made by Halliday (1963). In between, there are scholars who distinquish different kinds and degrees of grammatical relevance. For example, O'Connor and Arnold's main division falls into four categories: Statement, question, command and exclamation (1961). Lee (1960) subdivides these types further and adds information on such specific forms as the intonation of certain adverbs.

Most scholars make an initial classification of intonation patterns based on three or four major

sentence types. The most important structures seem to be statements, two types of questions (questions beginning with an interrogative word and questions requiring a Yes/No answer), commands and exclamations.

Roach (1983) explains the grammatical function of intonation as fallows: the contrast between a falling intonation pattern and a rising intonation pattern often correlates with a distinction between a statement and a question (p.136). Listeners are able to recognise the syntactic structure of what is being said by using the information contained in the intonation pattern: such as, things as the placement of boundaries between phrases, clauses or sentences; the difference between questions, statements and commands; the types of questions; question-tags.

Let us observe the sentence 'Those who sold quickly made a profit.'

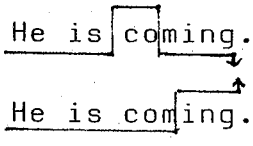
a) |Those who sold quickly | made a profit. |
b) |Those who sold | quickly made a profit |

(Roach, 1983: p.145)

As can be observed, the placement of boundaries to indicate the immediate constituents tend to coincide with what we have called 'tone-units' in the previous pages. Thus, once again it becomes more evident how

complex the phenomenon called intonation is. However, it is clear that using the intonation pattern chosen for one tone-unit can not be used for another. Doing so will result in syntactic change, consequently a change in meaning.

The above arguments present a clear evidence that the choice of the tone on the tonic syllable may signify the grammatical function of intonation. The use of a rising tone with questions is the most familiar one. Many languages have the possibility of changing a statement into a question by changing the tone from falling to rising. English also makes use of this type.



'falling intonation'

'rising intonation'

Crystal (1975) discusses the difficulty of generalizing the tonal types to occur in grammatical contexts in English because of the complexity in defining the intonation of the majority of sentences in speech. Referring to Stockwell (1960 a) he says that some structures are intonationally more restricted than others while some are more frequently used for the purpose of making grammatical contrasts than others.

"The intonation of some structures seems to be linguistically more important than others: it

> would be useful to know what intonation patterns most frequently characterize sentences, for example, particularly if one wished to bring such information in at an early stage in writing a generative grammar of English."
>
> (Crystal, 1975: p.274)

However, scholars in general seem content to take a basic number of sentence-types and define tunes or utterance-final contours accordingly. (Bloch and Trager, 1942; O'connor and Arnold, 1961; Kingdon, 1958)

In general, the following patterns represent the types of intonation patterns in English. It seems clear that in order to reduce the problem to teachable dimensions, a classification which recognises as few points of contrast as possible in accounting for the data should be preferred.

Falling intonation (↓): Falling intonation is used at the end of:

a. statements or declarative sentences

I am a student ↓

You are an American ↓

This is my book ↓

She works at the hospital ↓

b. commands or exclamations

Go to your room ↓

Get out of the class ↓

Bring me a cup of tea ↓

Do it yourself ↓

I'm very sorry ↓

Please do me a favor ↓

c. asking questions with question words

How are you? ↓

Where do you live? ↓

Who is the new teacher? ↓

What have you been doing? ↓

d. Question-tags= the whole statement is to be interpreted as a statement of fact, and indicates that the speaker is confident or certain that the information is correct or the hearer will agree with him.

I can go, can 't I? ↓

He hasn't eaten, has he? ↓

I was right, wasn't I? ↓

They don't agree, do they? ↓

Rising intonation: Rising intonation is normally used at the end of: ↑

a. Yes or No interrogative forms:

Are you coming? ↑

Shall I answer the telephone? ↑

Can he swim? ↑

Will you help me? ↑

Did they see it? ↑

b. Yes or No questions in statement forms:

I am mad? ↑

It's time for the class? ↑

He is not coming? ↑

You are not ready? ↑

He is gone? ↑

c. question-tags= indicates a lesser degree of certainty so that the tag functions more like a request for information.

You want a book, don't you? ↑

It will be easier, won't it? ↑

You are hungry, aren't you? ↑

Level intonation: The sustained or level intonation marks the end of a non-final constituent clause or phrase of a sentence or signals incompleteness →.

She is a beautiful girl → (but...)

It is doubtful → (that...)

While there's → (there is ...)

However, in most cases sentences in English like above have a falling intonation at the end so the level tone is not used frequently.

In this study, the primary concern is with the grammatical function of intonation, and only two main forms i.e 'rising' and 'falling' intonation patterns were chosen. Since the use of a level intonation pattern is restricted, it is not included in this study.

1.1.4. PROBLEMS RELATED TO INTONATION IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

Descriptions of intonation have been accessible to teachers and students since the beginning of the twentieth century. Several researchers have investigated the subject of intonation in language teaching from various aspects. Thus, the impression created in many teachers and learners is a question of 'how teachers and learners can get a working grasp of its significance.'

During the development of modern phonetics in the present century, it is hoped that scientific study of intonation would make it possible to state what the function of each different aspect of intonation was and that foreign learners could then be taught rules to enable them to use intonation in the way that native speakers use it.

However, despite the existence of a number of descriptions of the intonation of English, the incursion of intonation into the general language syllabus has

been minimal. While few English language course books like English 900 (Strevens, 1964, 1968) and Modern English (Rutherford, 1968) present intonation as an integral part of the total syllabus, a vast majority of them like Mainline (Alexander, Kingsbury and Vincent, 1975), Strategies (Abbs et al, 1975), Kernel Lessons (O'neil, 1972) etc ignore teaching (Brazil, Coulthard and Johns, 1981).

The majority of course books which include overt instruction on intonation use the incidental, not the systematic approach. In other words, intonation patterns are randomly selected and do not exemplify intonational categories drawn from a linguistic description of intonation choices and their meanings. The intonation patterns are presented for imitation, without giving emphasis to meaning or any contrast with other possibilities.

Accordingly, in teaching situations, intonation is not considered as part of the productive system of English and relegated to a secondary role. Consequently, this negligence of intonation constitutes a major difficulty for students to acquire it as a productive skill.

Briefly, the probable reasons for the negligence of teaching intonation or why it hasn't been given sufficient attention in EFL classes may be fourfold:

Firstly, suprasegmental phonology involves linguistically very technical and difficult information. Thus it covers the basic features of suprasegmentals such as stress, pitch, juncture and intonation (Crystal, 1969; Lehiste, 1977; Roach, 1983). Crystal (1975) states this fact as fallows:

> "The descriptive inadequacy in the systematic description of prosodic features is reflected and intensified in the teaching situation... It is still rare to find a general quide to English speech -as opposed to a specific study of intonation- which pays close and systematic attention to even the majority of variables the 'nonverbal' or 'suprasegmental' aspects of spoken language, or a grammar which has a section on intonation and stress near the beginning or anywhere."
>
> (Crystal, 1975: p.2)

He furthermore, states that the absence of a well-defined theory and procedures of analysis resulted in distortions and vague conceptual terminology in many of the textbooks that purport to be the introductions to intonation and related features in English (Crystal, 1975).

Secondly, segmental features may have seemed to language teachers more elusive than suprasegmental features (Lehiste, 1977). Though some teachers, surely,

are intuitively aware of the importance of monitoring students' verbal performance in intonation, most of them avoid teaching it formally and deal only with pronounciation of phonemes and allaphones of the target language.

Thirdly, language teachers may hope that students will somehow acquire intonation unconsciously, by listening to and repeating the model utterances, simply by imitating them. Mc Carthy (1978), who regards the acquisition of acceptable intonation patterns as automatic, given a responsible degree of exposure to the target language, has adopted such a procedure and claimed that after listening a number of times to a recorded phrase, it is quite hard for the student to reproduce it incorrectly. On the other hand, Leon and Martin (1972) maintained that 'of all the elements of a target language, the intonation patterns appear to be the most difficult to acquire... There is a good possibility that a faulty intonation will never be corrected no matter what methods are used." (cited: Pritchard, 1985)

A pattern may be used by the student which is clearly not one that occurs in the target language. In this case, the hearer will either simply not understand or will interpret it according to his own expectations. It may be true to assume that some aspects of intonation

are universal (e.g. inflecting pitch to convey intonational variations, attitudinal functions of intonation, etc). But still, inaccurate acquisition or learning of intonation may lead to faulty generalizations and may hemper communication in the target language.

Lastly, the omission of teaching intonation may arise from a belief that learners will absorb the phonology of the language inductively, without overt instruction, through exposure to speech data from native speakers. But an alternative argument always runs to the above statement is that when learning takes place beyond the stage ıof pubertly, the students' learning may be conditioned by his mother tongue. (Brazil, Coulthard and Johns, 1981)

If language interaction in which student and teacher engage is limited by their social roles and didactic purposes, the totality of meaning signalled by intonation cannot be accessible to the learner simply through interaction with the teacher. If this is true and when the teacher is a non-native speaker in near ideal teaching conditions, how much more limited will the opportunities to absorb the intonation system be if the teacher uses the mother tongue to talk about the target language, if the students never hear more than one isolated sentence at a time, and if the class

is too large to provide contact with the teacher for each individual in the class. The need to supplement language spoken in the classroom then becomes even greater, and its effectiveness more crucial.

Mc Carthy (1978) proposed a straight forward imitation of a good model who should be a native speaker of English. He says that when demonstrating an intonation pattern or contour, adequate repetition by the teacher is important and he should then insist on its imitation.

Roach, (1983) accounted for a different approach. He defends the fact of training students through listening to and talking to English native speakers. He, furthermore, argues that the efficient way to learn the intonation of a language is the way a child acquires the intonation of his first language. Therefore, according to Roach, listening regularly to colloquial English and talking to English native speakers is the most encouraging way to learn the intonation of English (Roach, 1983).

As can be followed through the above arguments, while Mc Carthy (1978) insists on imitation in teaching intonation, Roach (1983) adopts an approach which is more natural and based on first language acquisition theory.

Broughton (1978) shares Roach's (1983) views.

In his article 'Native Speaker Insight' (NSI) asserts that the native speaker has an intuitive relationship with his mother tonque. He defines NSI as the intuitive mastery of the features and processes of the native language that result from a maximum exposure to the language, an intimate relationship shared in varying degrees by all members of a speech community. He sees NSI as "a faculty, a relationship between the user and his language which is effective at all linguistic and paralinguistic levels and as culture specific as anybody of social mores." (Broughton, 1978:p.253)

Broughton (1978) then, points out the necessity of native speakers in the foreign language classroom and states that at the level of phonology, NSI enables the students to recognise and produce the phonemes of English, its features of stress patterns, rhythm, juncture and rhyme and intonation patterns.

According to the above views of Roach (1983) and Broughton (1978) it is proposed that the students, who are learning English as a foreign language, will acquire the target language intonation by themvelves by being exposed to talking to and listening regularly to the native speakers of that language. Obviously, the greater the range of speech data from native speakers to which the learner is exposed, the more likely he is to arrive at an internalisation of the intonation system.

This study attempts to observe if the above view holds true for Turkish students who are learning English as a foreing language. By this view it is implied that:

> 'Native speaking English teachers' students will perform better in Perception and Production tasks designed to observe their intonation skills.'

1.2. PROBLEM

In the light of the above assumption this study will seek an answer to the following question: Can we observe a significant difference between the students of native speaker teachers of English and the students of non-native speaker teachers of English in the perception and production tasks presented?

1.3. PURPOSE OF THE STUDY

The general purpose of this study is to compare the intonation skills of students of native speaker teachers of English and students of non-native speaker teachers of English.

The goal is to find an answer to the following questions:

1. Is there a significant difference in performance between students taking their courses from native

speaker teachers of English and students taking their courses from non-native speaker teachers of English in the perception tasks presented?

2. Is there a significant difference in performance between students taking their courses from native speaker teachers of English and students taking their courses from non-native speaker teachers of English in the production tasks presented?

3. Is there a significant difference between the perception tests presented within the student's of native speaker teachers of English and the students of non-native speaker teachers of English?

4. What kind of errors are made in the production tasks in terms of intonation skills?

1.4. IMPORTANCE

In this study, the notion of intonation skills in language teaching is going to be compared between the students of native speaker teachers of English and non-native speaker teachers of Engilish. This study is important because it is assumed that it will shed light on the problems which are confronted by the learners.

In our country, no studies observing the intonation

skills of students in foreign language learning have been done to date. It is assumed that this study will be a precursor to further research and investigation in this area.

1.5. LIMITATIONS

This study was limited to:

1. The first year students of the Education Faculty and preparatory students of the Open Faculty at Anadolu University. (At the Education Faculty there is no preparatory year.)

2. The testing of 'grammatical function' of intonation skills in English.

3. The testing of two basic tones (i.e rising (↑) and falling (↓) of the grammatical function of intonation skill in English.

4. The test sentences are introduced within their own context, a larger context e.g paragraph, additional sentences were not considered.

It is important to note that, in this study, practice time during this test and age were not a determinant factor.

1.6. DEFINITIONS

Phonetics: Phonetics is the study of speech sounds that occur in the languages of the world.

Phonology: The description of the systems and patterns of sounds that occur in a language.

Segmental: When we speak we produce a continuous stream of sounds. In studying speech this stream of sounds is divided into small pieces called segments. i.e 'pen', the word 'pen' can be divided as 'p' a first segment, 'e' a second segment and a third 'n'.

Suprasegmental: The contrastive sound features that extend over several segments are called suprasegmentals i.e stress, intonation.

Pulmonic airstream mechanism: The movement of lung air by the respiratory muscles. Most sounds are produced with a palmonic airstream mechanism.

Fundamental frequency: It is the principal correlate of pitch which corresponds to the frequency of vibration of the vocal cords.

Prominence: The extent to which a sound stands out from others because of its sonority, length, stress, and pitch.

Tempo: Tempo is the speed of speaking which is varied from time to time by the individual speaker. Some people employ more variation in tempo than others.

Voice quality: When we speak, we produce differences

in voice such as harsh, breathy, murmered or creaky. These different-sounding voice types are called voice quality.

Loudness: The degree of force with which air is expelled from the lungs by the pulmonic air stream mechanism while the vocal cords are in vibration. It is that aspect of auditory sensation in terms of which sounds may be ordered on a scale running from 'soft' to 'loud'.

Duration: An independently varying aspect of auditory sensation in terms of which sounds can be ordered on a scale running from 'long' to 'short'. Duration refers to the perceived length of a sound, sound-group, utterance or sentence.

Juncture: A suprasegmental phoneme which signifies transition between the segmental phonemes of words, phrases and clauses.

Rhythm: Speech rhythm is the periodic recurrence of a muscular movement (in which the muscles concerned are the respiratory muscles) producing an expectation that the regularity of succession will continue. The movements concerned in the rhythm of speech are those of the syllable and stress-producing processes, which together make up the pulmonic air-stream mechanism.

Pitch: Pitch is the highness and lowness of someone's voice, in which they are the arbitrary choices, that

carry auditorily perceptible linguistic information (Roach, 1983). In most simple terms when we speak, the vocal cords vibrate by the pressure of the escaping air which creates the sound and the perceptual correlates of the frequency of these vibrations is called 'pitch of the voice'.

Pitch variations in the intonation of a language constitutes a system of distinctive, contrastive units and patterns (Lado, 1961; Roach, 1983).

In English, there are four distinctive pitch units; low, mid, high and extra high and are graphically represented with small numbers above the line of print which are heard in a movement of rise and fall.

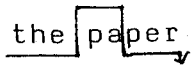
1 low

2 mid

3 high

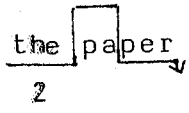
4 extra-high

The fundamental pitch level signals the linguistic message and the highest pitch phoneme is always the stressed syllable (Lado, 1961).

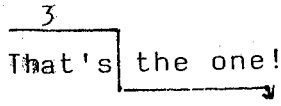


Pitch /2/ is usually the level on which one starts an utterance if there is special stress. That is; the

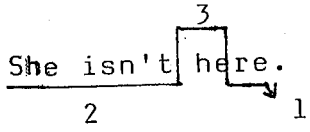
normal pitch of a speaking voice is /2/ in terms of its height.



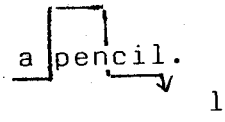
Pitch /3/ is used to express stress or prominence in the sentence or phrase.



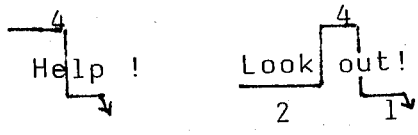
or when the voice (utterance) begins with pitch level /2/, it stays there till the primary stress is reached and then rises to the level of /3/ and then drops to level /1/



Pitch /1/ level is referred to as 'final' because it often occurs at the end of the utterance.

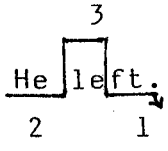


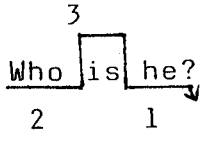
Pitch /4/ expresses special emotion and emphasis. It is quite a distance above the line.

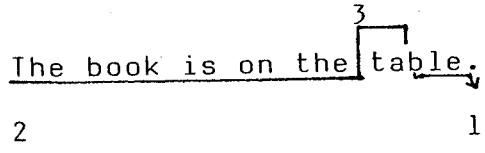


The absolute pitch of the units may vary considerably for different speakers and even for the same speaker on different occasions or in different parts of the same conversation. All the units are higher when speaking to someone at a distance, the intervals between units are greater when the speaker is emotionally excited, or they are lower when speaking softly. But the four units remain in relative contrast to each other as phonemes of pitch.

Intonation-pattern: Intonation patterns are formed by the characteristic use of pitch. Intonation could be defined as a general melodic contour which is distributed over sentences or parts of sentences and which conveys meaningful contrasts within phrases rather than giving lexical meaning to words. Generally intonation patterns are referred to by the use of the numbered pitch levels, starting with the stressed syllable on which a change occurs. For example, the /3-1/ intonation indicates a pattern that begins on level /3/ and ends on level /1/.







Stress: Stress is a stronger articulatory and respiratory muscular effort felt over the syllables and words. In any language some of the syllables in an utterance may be spoken with more force or intensity than others, these syllables are said to carry some degree of stress that are more prominent compared with other syllables. The function of stress is encountered in varied forms. When stress is utilised to verify the number of words in a language, it has a culminative function. In some languages the stressed syllables always come at the same place, it is fixed by automatic rules on a particular syllable in the utterance. This function of stress is called demarcative.

English is characterized as a 'freestress' language, that is, the stress is not dependent upon the place in the utterance, but can occur on any syllable depending upon various factors.

Word or lexical stress: The relative degree of force used in pronouncing the different sylables of a word.

súbject subjéct

Sentence Stress: The relative degree of force given to the various words in a sentence or utterance.

CHAPTER II

REVIEW OF RELATED LITERATURE

2.1. A LINGUISTIC SURVEY ON THE THEORETICAL APPROACHES

In the early analysis of English intonation, there have been many attempts in which different approaches have evolved.

One of the approaches has been viewed by most of the British linguists and phoneticians, who proposed a number of significant contours or pitch configurations and described them by means of 'tones' that occur on specific vowels (Armstrong and Ward, 1926; Palmer, 1922; Kingdon, 1958; Bolinger, 1958). The sequence of tones that may 'rise' and 'fall' determines the intonation pattern of the utterance. Some of the linquists group the tones -the smallest unit of intonation- into suprasegmental 'tone-groups' (Palmer, 1922) or 'tunes' (Armstrong and Ward, 1926) which are often related to certain sentence types.

Another approach was developed principally by American linquists who tried to apply the segmental techniques of taxonomic phonemics to intonation (Wells, 1945, 1947; Pike, 1945; Trager and Smith, 1951). They proposed that intonation should be specified in terms of a number of pitch levels, stress levels and junctures. According to them, the smallest units of intonation are phonemic 'pitch-levels', which are organized into pitch morphemes that are strict anolgies of segmental morphemes composed of segmental phonemes. That is; the segmental elements have been grouped into suprasegmental phonemic phrases, phonemic clauses and suprasegmental morphemes which also have the function of indicating the immediate constituent structure of the sentence (Lehiste, 1977; Crystal, 1975).

The earliest work was Sweet's (1892) who explained intonation by means of tones. He outlined his work basically on the three levels of intonation as being either level, rising or falling and the level tone may be either high or low, and the other tones may begin in a high or low pitch. He equated intonation with the pitch or fundamental frequency of the voice.

First important transcriptions were introduced by Palmer (1922) and developed by Kingdon (1958). Palmer (1922) stressed the need to distinquish the functional

unit of intonation and his distinction between head, nucleus and tail came to be widely used.

Palmer and Blanford (1924), employing Sweet's tones, grouped them into suprasegmental 'tone-groups' which are related to various types of sentences, commands, questions, statements. The tone-groups are of six, each consisting head, nucleus, and followed by a tail. The tone-groups are supposed to have definite functions and meanings however, they didn't take the emotional aspect of intonation into account.

Armstrong and Ward (1926) attempted to differentiate the emotional aspects of intonation from its linquistic function. They defined intonation in terms of ´perceived pitch` and stress in terms of ´breath force` and further emphasized that stress and intonation are so closely connected that it is often difficult to decide whether stress or intonation or a combination of two is responsible for certain effects. For them, two 'tunes' were essential in which Tune I starts on a medium pitch, continues on this pitch with some upward variations on stressed syllables until the pitch falls rapidly at the end of the sentence. Tune II starts at either high or a middle pitch and gradually falls but it ends with rising or level pitch. They divided sentences into sense groups and related them with these tunes. They use the terms sense-group and intonation interchangeably but never

attempt to provide a definition of 'sense group'. Furthermore, they don't discuss the meanings of the contours associated with each sentence (Liberman, 1967).

Jones (1932) expanded the tunes of Armstrong and Ward (1926) and by defining the relationship between intonation and sense-groups he states that intonation can be used to make the meaning of an utterance clearer. In his book An Outline of English Phonetics, intonation is defined as perceived pitch and he expresses the notion that intonation can potentially be used to clarify the meaning of a sentence but he doesnot state how a sentence is understood (Lieberman, 1967).

Pike (1945) was one of the first American Structuralists to attempt a framework of intonation. His approach formed a basis to later theories on this subject. He established the 'level' approach to intonation regarding relative heights of pitch as phonemic, which differs from the 'contour' approach. He refers the term 'contour' to configurations, but the essential component is not the succession of movements rising and falling but the succession of levels, with movements being incidental to getting from one level to another. Precisely, he means the actual acoustic pitch contours that occur when a speaker utters a sentence; then he defines 'contour' to mean a potential pitch contour that could occur if

a speaker produced a primary contour on each stressed syllable. He argued that intonational meanings are privative to intonation and are not to be confused with the syntactic uses to which they are put. He warned against insisting on question and statement intonations and further stated that intonational meanings were to be diligently abstracted from the meanings of words and syntactic constructions that occur with them and from their own particular manifestations at a given place and time (Lieberman, 1967; Crystal, 1975).

Wells (1947) pointing out Pike's pitch levels makes out another point that the 'pitch morphemes' have the function of indicating the immediate constituent structure of the utterance. The 'scope' of a pitch morpheme is the sequence of segmental morphemes that it is supposed to modify (Lieberman, 1967).

Followers of Pike (1945), Trager and Smith (1951, 1967, 1970) developed Pike's system by modifying the elaboration of the role of stress in intonation and the pitches that occur at pause points. They substituted terminal junctures, which are the intonational movements that punctuate the end of an intonation pattern, rise, fall and sustain. Their system is realized as a progression from Pike to Wells and to theirs. They tied the pitch contours directly to the immediate constituent structure implying that these pitch contours are always phsically realized (Lieberman, 1967; Crystal, 1975). They also

saw that the intonation pattern of certain utterances could change their meanings. However, since the notion of an underlying phrase marker does not occur in their grammar, they assumed that the difference in meaning somehow was part of the intonation itself (Crystal, 1975).

Lieberman (1965), on the other hand, having conducted a number of acoustic studies, demonstrates that the pitch levels and stresses of Trager and Smith (1951, 1967) system had no physical basis. He determines tha phrase structure of the utterance through the words of the message rather than through any special phonetic cues.

Bolinger (1958), on the other hand, rejects the phonemic function of the four pitch levels of Pike, Traper and Smith, and Wells and puts forward the movements of the melody and its configuration, which bears the meaning of intonation. He brings out enormous data and shows the distinction and similarities between music, as an highly elaborated form of art, and the melodies and rhythms of the sounds the speaker's play when they use language on intervals and combinations in which both have ties with emotion (Crystal, 1975; Lehiste, 1977).

After the second world war, the industry of teaching English to foreigners developed rapidly. New materials for teaching were needed, based on data of a more conversational kind.

Allen (1954) is one of the first who produced a textbook for foreign students of stress and intonation drills on a basic two-tune system.

Kingdon (1958) brought an important accumulation of data on the relation of stress and intonation. His analysis on intonation functions by stressing the need to see intonation patterns within single contexts. He avoids a system restricted to grammatical patterns and expands Palmer's (1922) principle adding prehead and body. However, Crystal (1975) notes that his approach is performance oriented and does not reflect the underlying structure of intonation in the language as a whole (Crystal, 1975).

Schubiger (1958) examines the major patterns of intonation interms of prehead, head, body, nucleus and tail within a broad grammatical framework and makes specific studies of the intonation of statement, command, exclamation, types of questions, question-tags, enumerations, adverbial clauses and a few more but her study of variations does not include emotion (Crystal, 1975).

Jones (1957), holding out the contribution of Armstrong and Ward (1926) asserts that a 'falling tone' is used in statements, WH-questions, command and invitations, whereas a 'rising tone' is used in Yes/No questions, dependent clauses, unfinished sentences and requests.

In the same way as Jones, Lee (1960) lists sentence types against pitch patterns. He gives example of a sentence 'Nobody | came and nothing | happened' which can be read well by two falling tones. Other writers have made the same kind of claim about tone choices in relation to sentence types.

Ockenden (1972) says that the falling tone is used in short complete statements, WH-Questions, Question-tags (when the speaker is sure what he says is right), orders and exclamations.

Wilkins (1977) points out, on the other hand, to the independent difficulty of deciding what should count as a command, and what counts as an invitation or an exclamation, since there is no invariant relationship between function and linquistic form (Wilkins, 1977).

O'Connor, after earlier publications in the pedagogy of intonation, collaborated with Arnold (1961) to produce an influential textbook on intonation in conversational English, placing considerable emphasis on the importance of the attitudinal function of intonation. Their study is accepted as the first real attempt on the complex range of attitudinal variables. They assert that a major function of intonation is to express 'the speaker's attitude to the situation in which he is placed' (p.2) and they attach these meanings not to pre-head, head

and nucleus seperately, but to each of ten tone-unit types as they combine with each of four sentence types: statement, question, command, interjection. The speaker may use the tone choice to convey that he is impressed, smug, happy self-satisfied and bored (Brazil, Coulthard and Jones, 1981).

More recently, serious attempts have been made to find some principled basis in the mass of data which has been accumulated.

Quirk's (1960) approach was developed within the context of survey of English Usage, which intends a descriptive register of spoken and grammatical forms of intonation in English (Crystal, 1975).

The system of intonation outlined by Halliday (1963, 1964, 1966, 1967; Halliday and McIntosh, 1964) is a general approach where he proposes the notion of grammatical contrasts. He presents phonological categories on the basis of meaningful grammatical contrasts. His task is twofold: to determine what phonological contrast expound grammatical meaning and what grammatical system are expounded by intonation. He analyzes three systemic variables '<u>tonality</u>' (the division of an utterance into tone-groups and the placement of tone-group boundaries), '<u>tonicity</u>' (the placement of the tonic-syllable and

foot within the tone-group and the consequent division of the group into tonic, pretonic elements of structure), and 'tone' which is divided into primary tone and secondary tone. Primary tone is the nuclear pitch movements, and secondary tone exists in the pretonic stretch of utterance. These three variables work interdependently with a fourth variable, rhythm (Crystal, 1975). Halliday treats intonation 'as a set of grammatical options directly analogous to those realised by morphology and the ordering of constituents within the sentence '(p.43)'. He gives five primary tones: falling, high-rising or falling-rising; low-rising; falling-rising and rising-falling which he relates them to a set of speech functions. His method is to show the effect of alternating certain tone choices while generally assuming that one is the 'neutral' choice for the given function. For example, tone I, falling is the neutral choice for statements, other tone choices are meaningful contrasts (Crystal, 1975; Brazil, Coulthard and Johns 1981).

Crystal (1975) presents an approach based on the view that 'any explanation of intonational meaning cannot be arrived at by seeing the issues solely in either grammatical or attitudinal terms' (Crystal, 1975 p:37). He brings out the parametric approach in which he deals with tones. He proposes three pitch levels and four types of nuclear movement as fall, rise-fall, rise and fall-rise (Crystal, 1975).

2.2. STUDIES ON INTONATION IN ENGLISH LANGUAGE TEACHING

Studies done on the perception and production of intonational sentences in the process of language teaching are fewer than the number of studies done on linquistic analyses of description.

Denes (1959) made fundamental frequency, intensity and duration measurements for six functional units of English intonation, using a Vocoder, embodied in nonsense syllables. He found that when voiced excitation was entirely replaced by hiss, the patterns remained recognizable. He also found that the use of monotone voiced excitation destroyed the recognition of the intonation patterns and that varging the fundamental frequency arbitrarily gave inconclusive results (Fry, 1971 cited in Crystal, 1969).

Uldall (1962) synthesized fourteen patterns of fundamental frequency variation for a single sentence in which the subjects were asked to evaluate them as questions or statements. She found that the subjects generally recognized that a pattern was a question or a statement though a number of patterns were divided equally by the subjects. When the pattern ended with a high frequency the judgements were in favor of question and when it ended with a low frequency in favour of statements.

Bot (1983) conducted a study on the visual feedback of English intonation to show the effectiveness and induced practice behaviour. The study attempted to show that audio-visual feedback is more effective in intonation learning than auditory feedback. In the experiment 63 students were used and they were given a pre-and post-test consisted of the same 12 English sentences and 50 sentences were chosen for practising. The practise time and feedback mode were used as factors. The results showed that audiovisual feedback is more effective than auditory feedback, where as practise-time did not seem to be a major factor, and that feedback modality was shown to influence learning behaviour (Bot, 1983).

James (1976) carried out an experiment to determine whether 'intonation' or 'the articulation of individual speech sounds' was more important to successful communication in learning a foreign language. His results indicate that, provided the phonemes are not incomprehensible, even when articulation is poor, an utterance with correct intonation is very acceptable.

Luthy (1983) conducted a study to determine how well non-native English speakers understand fourteen English intonation signals that generally do not have written correlates (i.e oh, aha, hım, yeah). Luthy recorded fourteen signals free of any verbal context. In the

first part of her study 25 native English speakers were included. They were supposed to determine the comprehensibility of the fourteen signals without the usual or verbal clues. Then, the fourteen signals were given to 42 foreign students of English to determine if there was a significant difference between them and the native speakers. The results of her study indicated that the foreign students may be missing or misinterpreting much that native speakers communicate quite automatically with the signals.

Berkovits (1984), did a study on the perception of sentence-final intonation. 40 students were included in his study in which 20 of them were native speakers of Hebrew, proficient in English and 20 of them were native English speakers, proficient in Hebrew. These subjects were timed on their responses to tones at the ends of complete and incomplete sentences in both languages, and they identified each utterance as either 'finished' or 'unfinished'. The data were presented by two experiments. In Experiment I, 24 pairs of sentences 12 in English, 12 in Hebrew were constructed which are lexically and syntactically well formed though prosodically incomplete. The results indicate that listeners perceive acoustic cues to sentence boundaries, and that perception of sentence-final intonation is not a function of language dominance. In the second Experiment, both the subjects who were aware of the unfinished intonation and those

who reported noticing nothing unusual about the sentences, responded significantly more slowly to incomplete utterances. These results indicate that listeners perceive acoustic cues to sentence boundaries. Few errors were made in identifying sentences as finished or unfinished.

So far, any experiment which tests the skills of non-native learners who learn the intonational aspects of the target (English) language from a native or a non-native speaker teacher haven't been encountered. This present study attempts to perform this task.

CHAPTER III

THE RESEARCH METHOD

3.1. RESEARCH DESIGN

This study is a crosssectional, comparative and experimental study.

In this study, Lado's (Lado, 1969) suggested 'Language Testing Method' was applied to test the intonation skills of students. According to this method, two different tasks were designed to test the intonation skills of the students. The first task was a Perception Task, consisting of two tests, which measured the student's skill in perceiving different intonation patterns presented. The second one was a Production Task measuring the skills of students in producing different intonation patterns presented in the target language as recorded by the 'Voiscope'.

3.2. VOISCOPE

The Voiscope is a hardware system designed to assist a range of work with speech. It does this in two main ways. Firstly, it provides information about the detailed nature of vocal fold contact during voice production and this Voiscope waveform is called Lx. Secondly, it gives an immediate stored display of the frequency of vocal fold vibration and this output is called Fx.

Lx is important because vocal fold contact is responsible for the main sound of the speaking and singing voice.

Fx is important because it is related to the auditory sensations of pitch and voice quality. The intonation contours are clearly defined by Fx.

During the recording phase, the subject is seated in front of the Voiscope. Two special electrodes is placed on the speaker's neck on the skin covering the wings of the thyroid cartilage, which is connected to the Voiscope and the Voiscope to an Oscilloscope for the display of the laryngograph wavefrom. As soon as a sentence is uttered or a voiced sound occurs, a waveform representing the intonation contour is displayed automatically on the screen.

3.3. SELECTION OF SUBJECTS

128 Students of Anadolu University took part in the Perception tests. 64 of these students, who were the students of Open faculty, were taking their courses from native speaker teachers of English. The other 64 students, who were the students of Education faculty, were taking their courses from non-native speaker teachers of English.

For the production tests, 40 students were selected randomly among those who were involved in the Perception tests. 20 of these were students of non-native speaker teachers of English (i.e students of the Education faculty). These students constituted the Experimental group. The other 20 subjects selected for this task were students of native speaker teachers of English (i.e Open faculty) and they formed the Control group.

Each student's native language was Turkish and they were nearly the same age between 18 and 20.

3.4. DATA COLLECTION AND DESCRIPTION OF TESTS

The perception task was divided into two tests. The aim was to test intonation receptively through 'comparison of intonation with intonation' without recurse to any specific meaning.

In the first test, the subjects were presented auditorily by 'pairs of sentences' through listening to the tape recorder, and asked to mark down whether or not the sentences were the same as to intonation.

In the second part of the test, the subjects were presented auditorily 'triplets of sentences' through listening to the taperecorder and again asked to mark down the sentence that had the different intonation pattern among the others. The aim of this task was to minimize the wild quessing that may affect the scores heavily.

The production task was constructed on different days. In this test, each subject was asked individually to read aloud sentences with different intonation patterns. During this test, an instrument called 'VOISCOPE' is used to obtain the intonation patterns visually and to record the sentences the subjects uttered. These configurations are printed out by the program of VOISCOPE comprising a graphic display of the sentences for the analysis.

In all the tests, sentences, that seemed to occur frequently, were chosen from a number of test books on English Intonation. Sentences were chosen among those consisting of alternations of rising ↑ and falling ↓ intonation.

The sentences were intended to be as colorless as passible so as to allow the intonation to add as much as possible to their meaning. In the conduct of the experiment no attempt was made to provide a context of situation for any of the sentences.

All the sentences used in the experiment were also recorded and configurated by the Voiscope as spoken by a native speaker of English. All were spoken on a steadily falling and rising intonation. As subjects were asked to pay attention to the intonation patterns only, some of the sentences were identical and some of them were not. Hence, non-identical sentences were not comtaminated by semantic factors.

3.4.1. PERCEPTION TEST

Perception test is composed of two sections. In the first part of the perception test, Perception Test I, 12 pairs of sentences were used and each pair of sentences were presented with their alternative intonation patterns. Altogether, 68 pairs of sentences were presented in succession and subjects were asked to mark whether the intonation of the pairs were the same or different (Appendix D).

Example:

Stimulus	Expected Response
1. a. It's an animal. ↑	
b. He's a student. ↑	Same
2. a. It's an animal. ↑	
B. He's a student. ↓	Different
3. a. It's an animal. ↓	
b. He's a student. ↑	Different
4. a. It's an animal. ↓	
b. He's a student. ↓	Same

In the Perception Test II, 15 triplets of sentences were used and these triplets of sentences were also presented with their alternative intonation patterns. The sentences of the triplets were again either identical or different and the triplets always had one sentence with a different intonation, and the subjects were asked to mark down only that one which was different. Thus, 90 pairs of sentences were presented in succession (Appendix D).

Example:

Stimulus	Expected Response
1. a. Has he gone ↓	
b. Where am I going ↑	A
c. He has gone ↑	

2. a. Has he gone ↑
   b. Where am I going ↑ C
   c. He has gone ↓

3. a. Has he gone ↓
   b. Where am I going ↓ C
   c. He has gone ↑

4. a. Has he gone ↑
   b. Where am I going ↓ B
   c. He has gone ↑

5. a. Has he gone ↑
   b. Where am I going ↓ A
   c. He has gone ↓

6. a. Has he gone ↓
   b. Where am I going ↑ B
   c. He has gone ↓

For the perception tests, the students were given two answer sheets that were prepared beforehand by the experimenter according to the test type. On each sheet, the name of the students and their faculty were written (Appendix F). Following the instructions, the students were presented the test material through a tape recorder and were asked to mark out their responses.

3.4.2. PRODUCTION TEST

The production test was composed of 21 sentences

with rising and falling intonation. They included samples of affirmatives, commands, questions, question-tags and affirmatives in question form. Each sentence was typed on separate cards (9 x15 cm) and kept in an envelope before they were presented to each student. The order of presentation and the sentences are given in Appendix E.

In order to perform the production tests, a Voiscope was used. To obtain pitch variations more reliably, laryngeal movements of the subjects were observed and recorded via two surface electrodes attached to the laryngeal region of each subject. This information was fed into a BBC microcomputer which was interfaced with the Voiscope.

Each subject was tested individually in the production test. The experimenter presented the cards one by one and asked each subject to read the sentences printed on the card aloud.

The 21 sentences were printed out seperately for each of 40 students. On each paper, the students' name and faculty were written on the top left hand side. Just below the graphed form of the intonation contour, there is its corresponding sentence (Appendix C).

All the test items in the perception and production tests randomized before they were presented.

3.5. DATA ANALYSIS

The perception task data were analyzed in terms of correct responses. In each test, each correct response was given 1 point. Thus, the highest score a student might get, was 68 points in Perception Test I, and 90 points in Perception Test II. The scores of the control group for Perception Test I is given in Table I and for Perception Test II is given in Table III (Appendix A). The scores of the experimental group for Perception Test I and Perception Test II is shown in Table II and Table IV (Appendix A).

In order to achieve the goal of this study set in Chapter I, statistical techniques were applied. To determine the difference between the experimental group and the control group in Perception Tests, a two-tailed Student's T-test for small samples was applied and the results of the two groups are compared at the 0,05 confidence level.

In the Production Test, each student's responses for the 21 sentences were analyzed seperately. Each response was compared with the standard form and marked according to the deviation from the standard form. For each correct response the subject got a mark of 1 point and since there were 21 sentences the highest score

a student might get should be 21. For instance, the sentence "I'm very sorry." should be read with a falling intonation. If the student read this sentence with a falling intonation, the response was regarded as correct and, he got a score of 1. However, if the student read the sentence with a rising intonation he wasn't given any credits and scored zero (Appendix C). The scores of the Production Test for both the control group and experimental group is shown in Tablo V and Table VI (Appendix B).

Two-tailed T-test was used to test whether the difference between the control and experimental group was significant at 0.05 confidence level.

To analyze the type of errors made in each group, the correct scores and percent correct scores were computed for each sentence and sentence groups. The aim of error analyses was to observe types of errors and to find out whether the two groups behaved differently in terms of errors made.

In order to achieve this the sentences were grouped among each other as affirmatives, commands, yes/no questions, WH-Questions, Question-tags and statement-questions.

3.6. METHODOLOGICAL ASSUMPTIONS

It is assumed that:

1. The responses of the students to the oral presentation of a set of sentences will determine their perception, while their responses in producing intonation by reading a set of sentences as recorded by the Voiscope determined their production behaviour.

2. All the students were exposed to English language under the same conditions by class hour and procedure .

3. The degree of their exposure to English language was the same.

4. Reading aloud will mimic the natural spoken form of an utterance.

CHAPTER IV

ANALYSIS OF RESULTS

The general aim of this study is to compare the intonation skills in the target language between the control group, who are the students of native speaker teachers of English (SNative ST) and the experimental group, who are the students of nonnative speaker teachers of English (SNon-native ST) from a perception and production point of view.

To achieve this goal, several null hypotheses were formulated according to the questions mentioned in Chapter I.

4.1. RESULTS OF THE PERCEPTION TESTS

The first question to be answered was: Is there a significant difference between the control group

(S Native ST) and experimental group (S Non-native ST) in the Perception Test I (i.e pairs of sentences)?

This question was investigated by testing the following null hypothesis.

H_o= There will be no significant difference between the control group (S Native ST) and experimental group (S Non-native ST) in perception Test I.

In Perception Test I, in terms of correct scores, the highest score in the control group was 67 and the lowest score was 34 out of 68 questions (Appendix A: Table 1). The highest score the experimental group achieved was 65 and the lowest was 28 out of 68 questions (Appendix A: Table 2).

The distribution of the differences between the experimental group (S Non-native ST) and the control group (S Native ST) in the Perception Test I is summarized in Table 1.

As can be observed from Table 1, the control group reached a mean value of $\overline{X}$= 53,67 and the standard deviation is calculated as s= 9,28. The experimental group reached a mean value of $\overline{X}$= 52,16 and the standard deviation is calculated as s= 8,82. The t-test run, which the value is t= ,95 p<1,96 at the 0.05 level of

Table 1

The Results of T-Test Showing the Difference Between Control Group (S Native ST) and Experimental Group (S Non-native ST) in Perception Test I

	N	$\bar{X}$	SD	t	P	Level of Significance
Control group (S Native ST)	64	53,67	9,28	,95	<1,96	0.05
Experimental group (S Non-natives ST)	64	52,16	8,82			

significance, shows a non-significant difference between the experimental group and control group in the perception of rising and falling intonational sentences of English. Thus we failed to reject the null hypothesis set above. In other words, there did not appear any significant differences between the two groups in Perception Test I.

The second question to be answered was: Is there a significant difference between the control group (S Native ST) and the experimental group (S Non-native ST) in the Perception Test II (İ.e triplets of sentences)?

This question was investigated by testing the following null hypothesis.

Ho= There will be no significant difference between the control group (S Native ST) and the experimental group (S Non-native ST) in the Perception Test II.

In the perception Test II, the highest score the control group scored was 78 and the lowest one scored was 32 out of 90 questions (Appendix A: Table 3). The experimental group reached a score of 80 as the highest score and the lowest score was 28 out of 90 questions (Appendix A: Table 4).

The distribution of the differences between the control group and the experimental group in the Perception Test II is shown in Table 2.

Table 2

The Results of T-Test Showing the Difference Between Control Group (S Native ST) and Experimental Group (S Non-native ST) in Perception Test II

	N	$\overline{X}$	SD	t	P	Level of Significance
Control group (S Native ST)	64	51,59	11,45	,45	<1,96	0.05
Experimental group (S Non-native ST)	64	50,68	12,66			

The results of Table 2 justifies that, in the perception Test II, the control group reached a mean value of $\overline{X}$= 51,59 and its standard deviation is s= 12,45. The experimental group reached a mean value of $\overline{X}$= 50,68 where the standard deviation is s= 12,66. The t-value between control group and experimental group is calculated as t= .,41, p<1,96 at the 0.05 confidence level. This result indicates that there is no significant difference between experimental group and control group in the perception of sentences of English with rising and falling intonation. Accordingly, we failed to reject the second null hypothesis set above.

The third question to be answered was: Is there a significant difference between Perception Test I and Perception Test II within the experimental group (S Non-native ST)?

This question was investigated by testing the following null hypothesis.

Ho= There will be no significant difference batween Perception Test I and Perception Test II within the experimental group (S Non-native ST).

Table 3 presents the distribution of the differences between Perception Test I and Perception Test II within the experimental group (S Non-native ST).

Table 3

The Results of the T-Test Showing the Difference Between Perception Test I and Perception Test II Within Experimental Group (S Non-native ST)

	N	$\overline{X}$	SD	t	P	Level of Significance
Perception Test I	64	52,16	8,82			
				,76	<1,96	0.05
Perception Test II	64	50,68	12,66			

As can be seen from the above Table 3, in the Perception Test I, the mean value reached by the experimental group is $\overline{X}$= 52,16 and the standard deviation is s= 8,82 whereas the same group reached a mean value of $\overline{X}$= 50,68 in the Perception Test II. The standard deviation is s= 12,66. The t- value t= ,76 p< 1,96 at the 0.05 confidence level shows no significant difference between the Perception Test I and Perception Test II. So we failed to reject the null hypothesis set above.

The fourth question to be answered was: Is there a significant difference between Perception Test I and Perception Test II within the control group (S Native ST)?

This question was investigated by testing the following null hypothesis.

Ho= There will be no significant difference between Perception Test I and perception Test II within the control group (S Native ST)?

Table 4 presents the distribution of the differences between Perception Test I and Perception Test II within the control group (S Native ST).

Table 4

The Results of T-Test Showing the Difference Between Perception Test I and Perception Test II Within Control Group (S Native ST)

	N	$\bar{X}$	SD	t	P	Level of Significance
Perception Test I	64	53,67	9,28			
				1,07	<1,96	0.05
Perception Test II	64	51,59	12,45			

Table 4 suggests that, the control group reached a mean value of $\bar{X}$= 53,67 in the Perception Test I, where the standard deviation is s= 9,28. In the Perception Test II, the mean value of the same group is $\bar{X}$= 51,59 and the standard deviation is calculated as s+ 12,45. The t-test computed within the control group between Perception Test I and Perception Test II, in which t= 1,07 p<1,96 also shows no siginificant difference

between the tests at the 0.05 significance level. Thus, we failed to reject the null hypothesis set above.

4.2. RESULTS OF THE PRODUCTION TESTS

4.2.1. RESULT OF T-TEST

In the first series of analysis in the Production Test the following question is answered: **Is there a significant difference between the control group (S Native ST) and the experimental group (S Non-native ST) in the Production Test as recorded by the Voiscope?**

This question was investigated by testing the following null hypothesis.

Ho= There will be no significant difference between the control group (S Native ST) and the experimental group (S Non-native ST) in the Production Test.

Table 5 summarizes the distribution of the differences between the control group (S Native ST) and the experimental group (S Non-native ST) in the Production Test where the intonation skills of the subjects were observed as recorded on the Voiscope (Appendix C).

Table 5

The Results of T-Test Showing the Difference Between Control Group (S Native ST) and Experimental Group (S Non-native ST) in Production Test

	N	df	$\overline{X}$	SD	t	P	Level of Significance
Control group (S Native ST)	20	19	11,1	3,31	1,64	<2,093	0.05
Experimental group (S Non-native ST)	20	19	9,2	3,85			

As Table 5 clarifies, the mean value calculated for the control group is $\overline{X}$= 11,1 where the standard deviation is found as s= 3,31. The experimental group reached a mean value of $\overline{X}$= 9,2 and the standard deviation is calculated as s= 3,85. The t-test formula which is computed at the 0.05 confidence level according to df 19 (N-1), t= 1,64 P<2,093 is considered as non-significant. Accordingly, we failed to reject the null hypothesis set above.

4.2.2. ERROR ANALYSIS OF THE PRODUCTION TESTS

Error analyses was performed in terms of percentages. The goal was to find an answer to the question: What kind of errors are made in the Production Test in terms of intonation skills?

4.2.2.1. Error analysis in affirmative sentences

Table 6 shows the distribution of the total scores and percent total scores of the control group and experimental group for the affirmative group of sentences. The affirmative group of sentences is expected to have a falling intonation.

Table 6

Distribution of Correct Scores and Precent Correct Scores of Control Group (S Native ST) and Experimental Group (S Non-native ST) in Affirmative Sentences

	CONTROL GROUP			EXPERIMENTAL GROUP		
AFFIRMATIVES	N	Correct Scores	% Correct Scores	N	Correct Scores	% Correct Scores
I'm very sorry.	20	15	75	20	8	40
The teacher is coming	20	20	100	20	16	80
John likes smoking.	20	16	80	20	12	60
I don't understand you	20	13	65	20	9	45
This shirt is very expensive	20	16	80	20	13	65
She prefers apples and oranges	20	17	85	20	15	75
$\bar{X}$=	20	16,2	80,8	20	12,2	60,9

As can be observed from Table 6, in the control group percent correct scores among 20 subjects, for six sentences, range from 65% to 100%, wheras the percent correct scores of the experimental group range from 40% to 80%. The first sentence 'I'm very sorry' was scored correctly by 15 subjects in the control group where the percent correct score is calculated as 75%. However, only 8 subjects from the experimental group skored this sentence correctly (40%). The second sentence was scored correctly by all the subjects in the control group (100%). From the experimental group on the other hand, 16 subjects scored correctly where the percent correct score is 80%. The third sentence was scored correctly by 16 subjects (80%) from the control group. In the experimental group, the number of correct scores were 12 and the percent correct score is 60%. The fourth sentence 'I don't understand you' was scored correctly by 13 subjects in the control group, where the correct percent score is 65%, whereas 9 of the subjects from the experimental group scored correctly the fourth sentence (45%). The fifth sentence was scored correctly by 16 subjects (80%), however, the experimental group scored 13 correct responses (65%). The number of correct scores for the last sentence in the control group is 17 where the percent correct score is 85%, whereas 15 subjects from the experimental group scored correctly the last sentence (75%).

The mean value of the correct scores responded to the affirmative group of sentences is calculated as $\overline{X}$= 16,2 in the control group where the mean percent correct score is $\overline{X}$%= 80,8%. The mean value of correct scores is $\overline{X}$= 12,2 in the experimental group where the mean percent correct score is $\overline{X}$%= 60,9. As can be observed from the range of percent scores the scores of the control group are higher than the experimental group. For example, none of the sentences, which are responded by the experimental group, has reached 100% score.

4.2.2.2. Error analysis in Commands

Table 7 shows the percentage distribution of the scores for control group and experimental group in commands, which is expected to have a falling intonation.

Table 7

Distribution of Correct Scores and Percent Correct Scores of Control Group (S Native ST) and Experimental Group (S Non-native ST) in Commands

	CONTROL GROUP			EXPERIMENTAL GROUP		
C O M M A N D S	N	Correct Scores	% Correct Scores	N	Correct Scores	% Correct Scores
Answer my question	20	16	80	20	16	80
Please get me some cigarettes	20	9	45	20	5	25
$\overline{X}$=		12,5	62,5		10,5	52,5

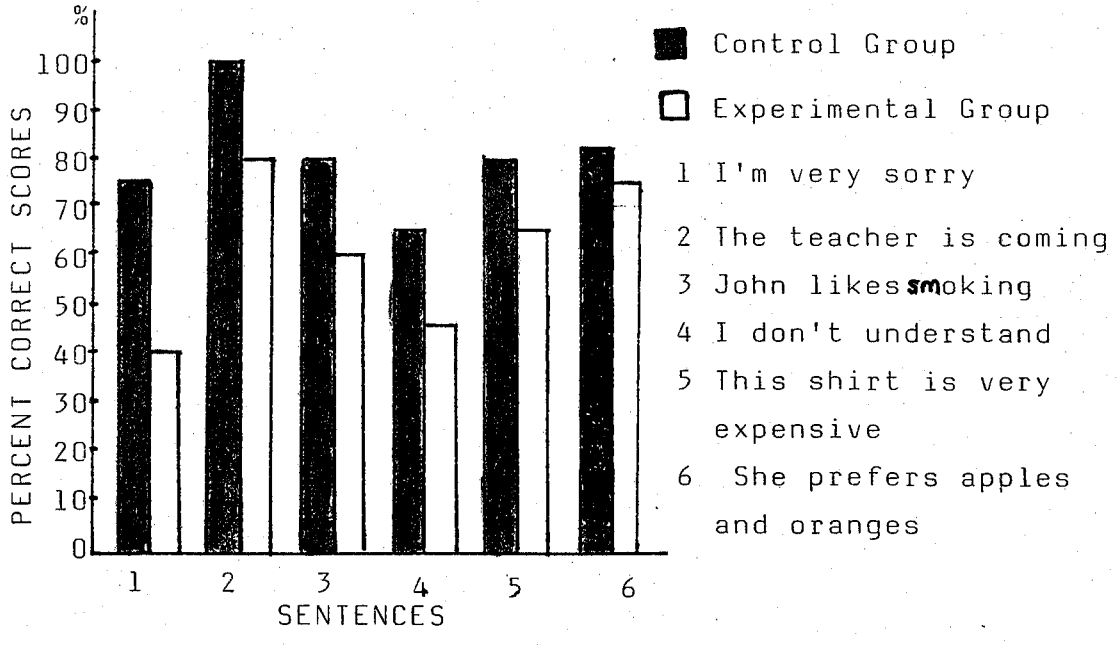


Figure 1: Percentage Distribution in Control and Experimental Groups for Affirmatives.

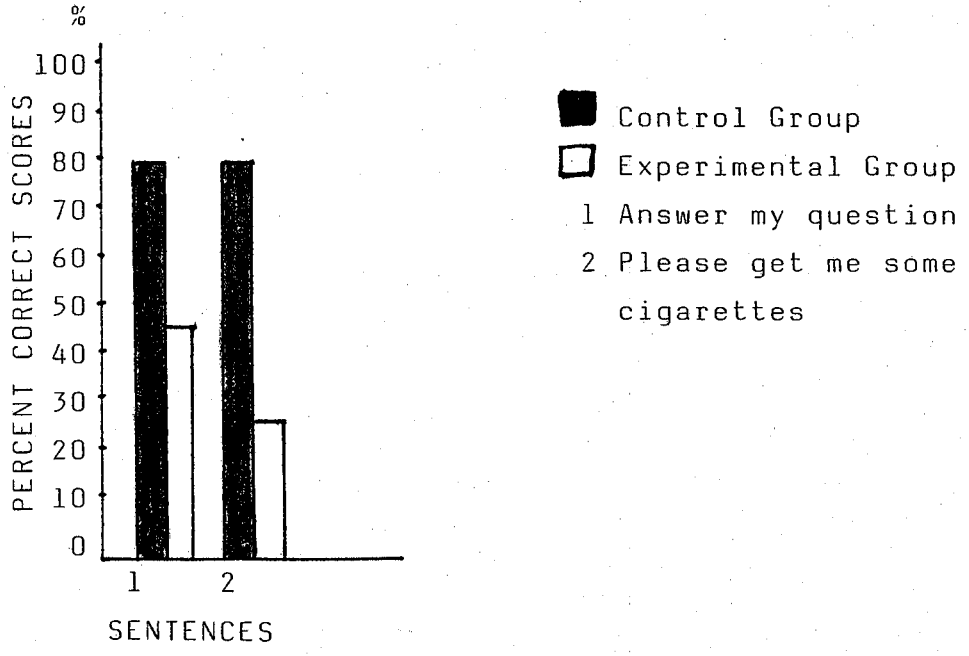


Figure 2: Percentage Distribution in Control and Experimental Groups for Commands.

It can be clearly seen in Table 7 that, in both the control group and experimental group 16 subjects responded correctly to the first sentence where the percent correct score is 80%. However, the second sentence was scored correctly by 9 subjects from the control group (45%) and by 5 subjects from the experimental group (25%).

The mean value of the number of correct scores for the control group is calculated as X= 12,5 where the percent correct score is X%= 62,5. However, the mean value of the experimental group is X= 10.5 and the mean percent correct score is X%= 52,5. These results indicate a small difference in favor of control group.

4.2.2.3. Error analysis in Yes/No question group

The distribution of the number of correct scores and the percent correct scores for the control group (S Native ST) and the experimental group (S Non-native ST) is shown in Table 8. Yes/No questions are expected to have a rising intonation.

When Table 8 is examined, the control group gave correct responses of 8 where the percent correct score is 40% to the sentence 'Can you give me some information?' However, from the experimental group only 4 subjects have correct responses. The second and third sentence

Table 8

Distribution of Correct Scores and Percent Correct Scores of Control Group (S Native ST) and Experimental Group (S Non-native ST) in Yes/No Questions

YES/NO QUESTIONS	CONTROL GROUP N	Correct Scores	% Correct Scores	EXPERIMENTAL GROUP N	Correct Scores	% Correct Scores
Can you give me some information?	20	8	40	20	4	20
Do you know her?	20	13	65	20	9	45
Shall I answer the telephone?	20	13	65	20	15	75
$\overline{X}$=		11,4	56,7		9,4	46,7

are given correct responses by 13 subjects from the control group (65%). On the other hand, the experimental group gave 9 correct responses (45%) to the fourth sentence where as the fifth sentence was responded correctly by 15 subjects. The mean value of the correct scores in the control group is X= 11,4 where the mean percent correct core is X%= 56,7%. The mean value of the correct scores in the experimental gorup is X= 9,4 and the mean percent correct scores is X%= 46,7%. The results of the mean percentages between the groups shows a small trend in favor of control group.

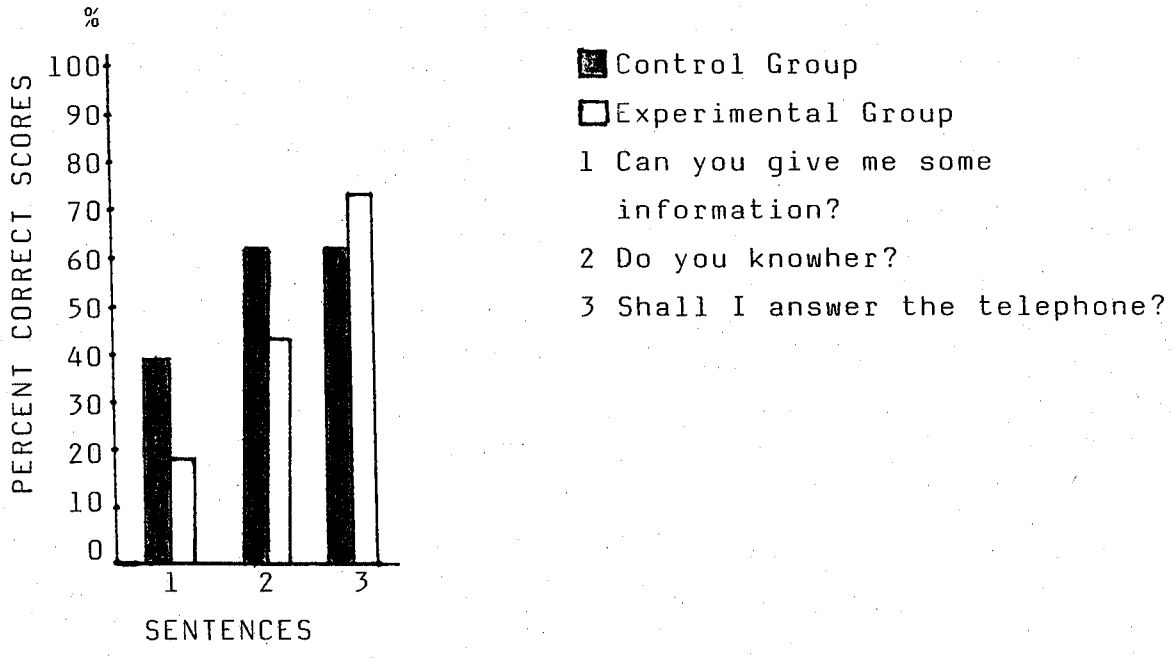


Figure 3: Percentage Distribution in Control and Experimental Groups in Yes/No Questions.

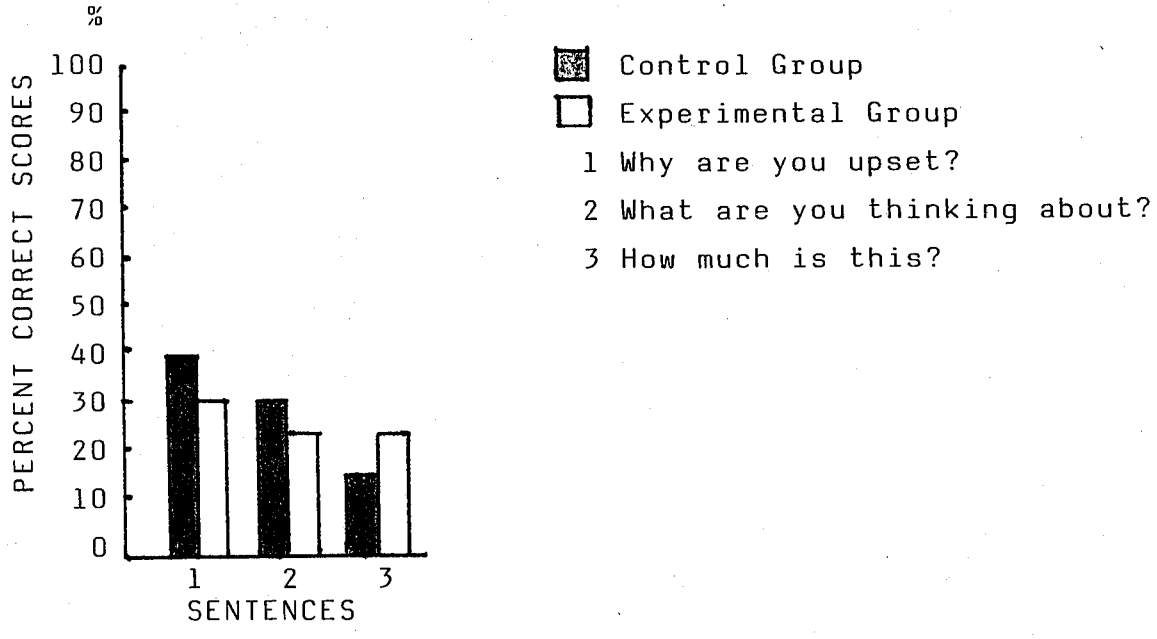


Figure 4: Percentage Distribution in Control and Experimental Groups in WH-Questions.

4.2.2.4. Error analysis in WH-Question group

Table 9 presents the distribution of the number of correct scores and the percent correct scores for the control group (S Native ST) and the experimental group (S Non-native ST) in WH-Question group. WH-Question group is expected to have a falling intonation.

Table 9

Distribution of Correct Scores and Percent Correct Scores of Control Group (S Native ST) and Experimental Group (S Non-native ST) in WH-Questions

	CONTROL GROUP			EXPERIMENTAL GROUP		
WH-QUESTIONS	N	Correct Score	Correct Score %	N	Correct Score	Correct Score %
Why are you upset?	20	8	40	20	6	30
What are you thinking about?	20	6	30	20	5	25
How much is this?	20	3	15	20	5	25
$\bar{X}$=		5,7	28,4		5,3	26,7

As can be examined from Table 9, 8 subjects from the control group and 6 subjects from the experimental group gave correct responses to the first question, which means 40% of the subjects from the control group and 30% of the subjects from the experimental group

gave correct responses. The second sentence was given 6 correct responses from the control group and 5 correct responses from the experimental group. The percent correct scores for the second sentence are distrubed as 30% and 25%. The lowest correct responses given in WH-Questions is to the third question where only 3 subjects from the control group responded correctly (15%). The experimental group gave 5 correct responses (25%). The mean correct scores of the control group X= 5,7 and the mean percent correct score is X%= 28,4. The mean correct score of the experimental group is X= 5,3 and the mean percent correct score is X%= 26,7. These results indicate that both groups show nearly the same performance.

4.2.2.5. Error analysis in statement-question group

Table 10 Shows the percentage distribution for the control group (S Native ST) and experimental group (S Non-native ST) in the statement-question group. The statement-question group is expected to have a rising intonation.

When Table 10 is examined, it can be clearly seen that the weakest performance were held in the statement-question group. Moreover, the experimental group showed less performance compared to the control group. Most of the incorrect responses were given to the first sentence

Table 10

Distribution of Correct Scores and Percent Correct Scores of Control Group (S Native ST) and Experimental Group (S Non-native ST) in Statement-Questions

STATEMENT-QUESTIONS	CONTROL GROUP N	Correct Score	% Correct Score	EXPERIMENTAL GROUP N	Correct Score	% Correct Score
He always tells lies?	20	2	10	20	1	5
It's time for the class?	20	14	70	20	9	45
You went to the movies?	20	6	30	20	5	25
He is not ready?	20	8	40	20	4	20
$\bar{X}$=		7,5	37,5		4,7	23,8

where the control group give only 2 correct responses and the experimental group give only 1 correct response. The next lowest response, which was scored by 5 subjects from the experimental group and by 6 subjects from the control group, was given to the third sentence. For the fourth sentence, 8 subjects from the control group scored correctly whereas the experimental group could achieve only 4 correct responses. The correct responses given to the second sentence was better than the others. The control group scored 14 correct responses, however the experimental group scored 9 correct responses. The percent correct scores range from 70% to 10% in the control group, whereas the percent correct scores of the experimental group range from 45% to 5%.

The mean percent correct scores are distributed as X%= 37,5% for the control group and X%= 23,8% for the experimental group. Though the mean percent correct scores of both groups are low, when the groups are compared, the control group achieved better than the experimental group.

4.2.2.6. Error analysis in Question-tags

Table 11 presents the distribution of the number of correct scores and the percent correct scores for the control group (S Native ST) and the experimental group (S Non-native ST) in Question-tag group. In the Question-tag group the second and third tags are expected to have a falling intonation. The first tag is expected to have a rising intonation.

Table 11

Distribution of Correct Scores and Percent Correct Scores of Control Group (S Native ST) and Experimental Group (S Non-native ST) in Question-tags

	CONTROL GROUP			EXPERIMENTAL GROUP		
QUESTION-TAGS	N	Correct Scores	% Correct Scores	N	Correct Scores	% Correct Scores
You want a book, don't you?	20	18	90	20	13	65
He hasn't eaten, has He?	20	1	5	20	6	30
It's a nice day today, isn't it?	20	3	15	20	8	40
X=		7,3	36,7		9	45

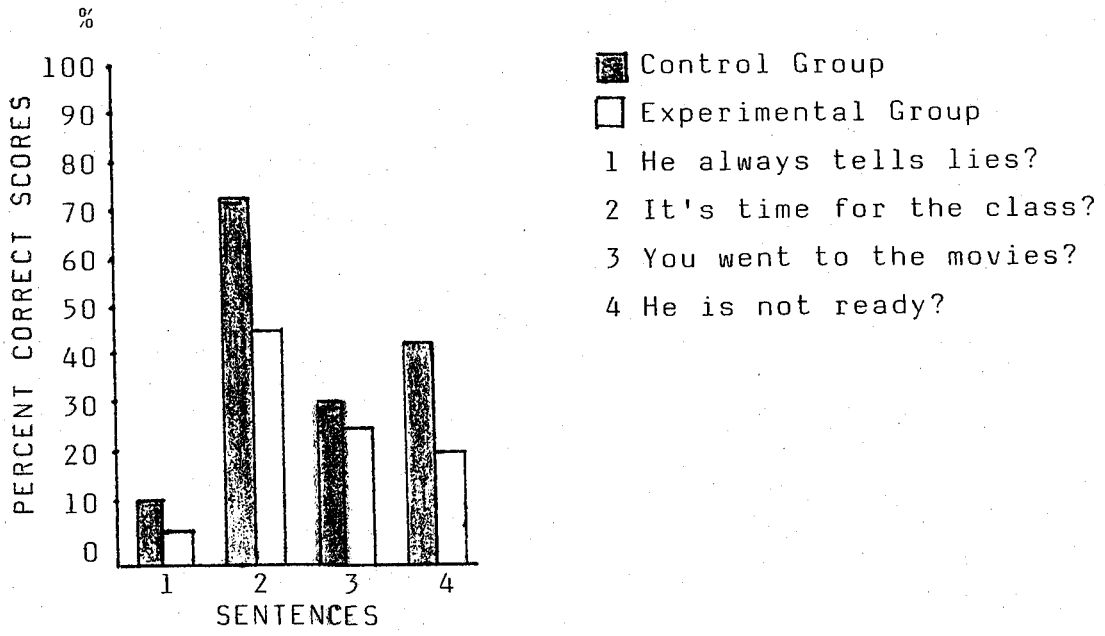


Figure 5: Percentage Distribution in Control and Experimental Groups for Statement-Questions.

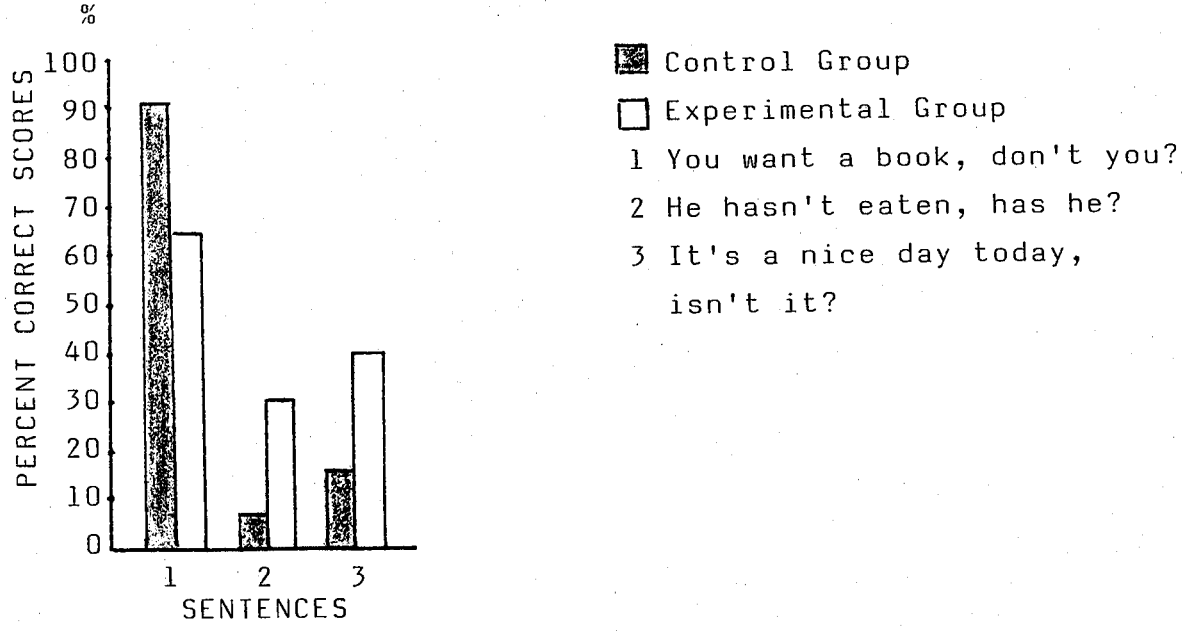


Figure 6: Percentage Distribution in Control and Experimental Groups for Question-tags.

Table 11 indicates that, the control group achieved a good performance in giving response to the first question-tag which was scored correctly by 18 subjects (90%). The experimental group scored 13 correct responses (65%) to the first question tag. On the contrary, the control group showed the weakest performance in giving response to the second question-tag in which only one subject scored corretly (5%). From the experimental group 6 subjects responded correctly where the percent correct score is 30%. The last question-tag was scored correctly by 8 subjects from the experimental group (40%) and by 3 subjects from the control group (15%).

The mean percent correct scores are distributed as X%= 45% to the experimental group and X%= 36,7% to the control group. These results indicates that the experimental group achieved a better performance compared to the control group in question-tag group. In fact, the question-tag group is the only group the experimental group could achieve good performance compared to the other groups of sentences.

The general mean percentage distribution for the six group of sentences in both groups are shown in Figure 7.

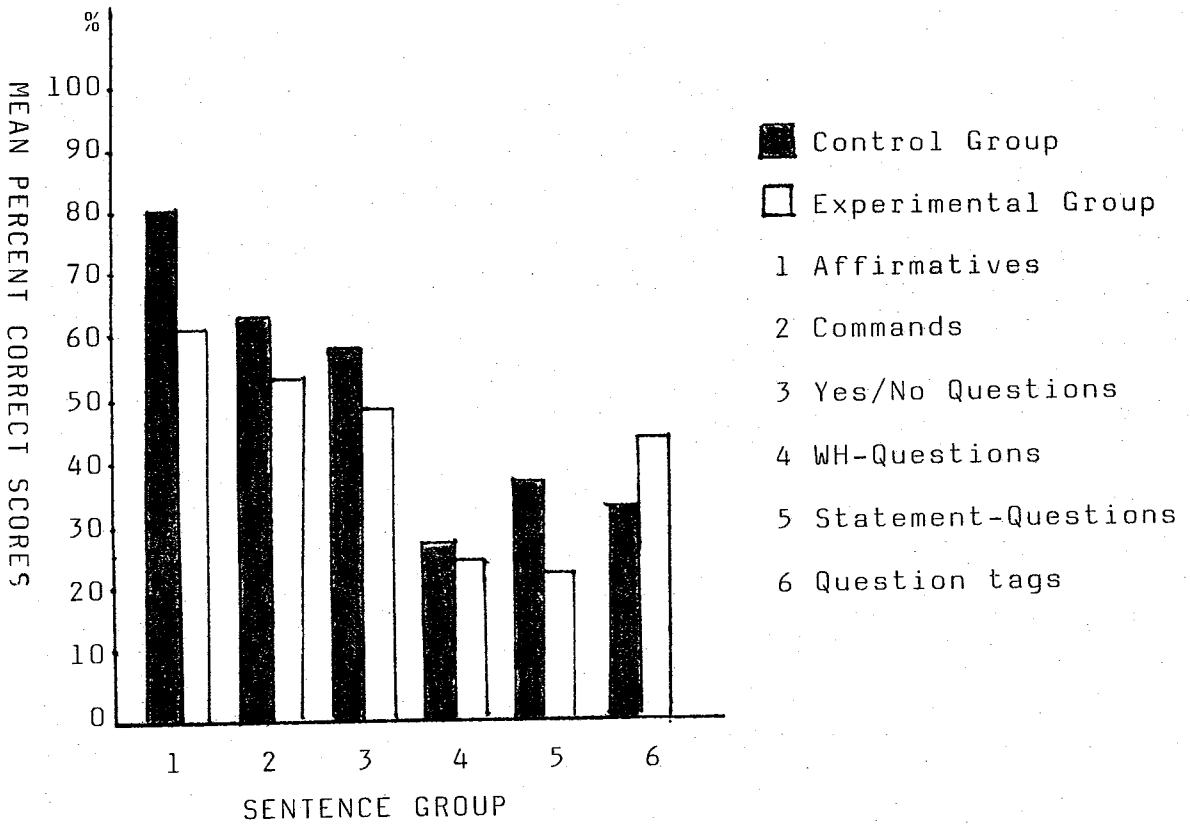


Figure 7: Mean Percentage Distribution in Control and Experimental Groups for Six Sentence Groups.

CHAPTER V

DISCUSSION AND SUGGESTIONS

5.1. DISCUSSION

Born out by the analysis of experimental results both in perception and production tasks was an indication of non-significant difference between the students of native speaker teachers of English and those of non-native speaker teachers of English in terms of intonation skills in sentences of English used in this experiment. Accordingly, we failed to reject the null-hypotheses formulated in previous pages. Moreover, the results of the data collected revealed that both the experimental group and the control group can not be confidently considered to show satisfactory performance.

In the beginning of this study, it was implied that the more the students were exposed to native speakers

of English, the better they should be in perceiving and producing the intonation of the target language. In other words, this implied an expectation that the students whose teachers are native speakers of English would perform better in the tasks designed than the students whose teachers are non-native speakers of English.

When the results of Perception Test I and Perception Test II between the experimental group (S Non-native ST) and the control group (S Native ST) is compared, the t-value indicated a non-significant difference. However, when the scores and the mean values of the experimental group and the control group are examined a small trend in favor of the control group is observed.

When results of Perception Test I and Perception Test II are compared within the control group and experimental groups respectively, the t-values again showed a non-significant difference between the test conditions. But when we look at the scores and the mean values of each test, it can be observed that both the control group and experimental group performed better in Perception Test I than in Perception Test II. The reason why the performance of the groups are higher in Perception Test I than in Perception Test II might be due to the easiness of Perception Test I. Because in Perception Test I there were only pairs of contrastive sentences with intonation

whereas in Perception Test II there were triplets of contrastive sentences. And consequently, it was more difficult to distinquish the sentence that has different intonation among the others. Therefore, the results lead us to suppose that the students have difficulty in perceiving sentences with intonation when the sentences appear in a variety of sentences with different intonation.

As indicated by the results of error analysis, the experimental group showed the weakest performance in the Production Tests. Though the t-value between the experimental group and the control group indicated no significant difference between the groups in the Production Test, when the errors are analyzed in terms of percentages, a small trend in favor of the control group is observed. However, this does not mean that the students whose teachers are native speakers of English performed much better in the Production Test. Because the proportions, as demonstrated by figures 1, 2, 3, 4, 5, 6, 7, show a small difference between the groups. Moreover, in general both the experimental group and control group seemed more likely to produce the sentences with a level tone, contrary to our expectations. This is justified by the graphs obtained from the Voiscope (Appendix C).

The most interesting observation in error analysis is that; the incidence of errors made by the subjects

in both groups was magnified on the same sentence types. These can be summarized as below.

The affirmative sentences were more or less responded to correctly by both groups. The incorrect responses observed on affirmative sentences arises out of reading them with a level tone (Appendix C: Figures 4, 7, 9, 10, 11). On the contrary, only the first sentence 'I'm very sorry' was responded with a rising tone from both groups, though its expected tone was falling (Appendix C: Figure 1, 2, 3). In commands, subjects of both groups failed to read the sentence 'please get me some cigarettes' with a falling tone, prefering a rising tone instead similar to a statement-Question(Appendix C: Figures 11, 12).

Despite the overall number of incorrect responses in the Production Test, the largest number of errors for both groups of subjects was found in the case of statement-question and WH-Question type. Both groups produced approximately the same number of errors on these question types(Appendix C: Figures: 1, 3, 5, 13, 15). These results in fact seem to reveal a negative transfer from Turkish. In standard Turkish we may express questions as a statement question type. But since Turkish is accepted to be a stress-timed language, stress plays an important role in expressing such sentences rather than intonation.

Sinemaya gitti? (She went to the movies?)

Çocuklar uyudu? (The children slept?)

Hoca gelmedi? (The teacher didn't come?)

Dersine çalışmadın? (You didn't study?)

However, the rising tone, as in above examples, in most cases might not be suitable since the roots of the verbs are stressed. Moreover, in Turkish, the 'mI' (mi, mı, mü, mu) free morpheme is used to form questions and serves three functions: when it occurs at the end, the whole statement is questioned thus it has a thematic function. It may also follow an element of a sentence emphasized in questions, in this case the marker indicates the preceding word, is the one that is questioned.

Sen mi çarşıya gittin? (Did you go to shopping? You not anybody)

Sen çarşıya mı gittin? (Did you go to shopping? Shopping: not park)

Sen çarşıya gittin mi? (Did you go to shopping?)

It can also take personal endings and can be a predicate adjective or a predicate noun.

Hasta mısın? (Are you ill?)

O babanmıydı? (Is that your father?)

When the place of the 'mI' morpheme is changed stress comes on the syllable preceding the 'mI' morpheme. Therefore, it is easier to express these statements with the 'mI' morpheme rather than by intonation. Another point to be mentioned here is that it is said that in the dialects of eastern Turkey the 'mI' question morpheme is not often used and such sentences are questioned by lengthening the last syllable of the last word (Gencan, 1975). However, these sentences are also not used with rising intonation. These sentences usually end with a level or falling intonation.

Köye gidecekseen? (You will go to the village?)
Şehre inecekseen? (You will go to downtown?)
Paran vaar? (You have money?)

The majority of the subjects from both groups also had difficulty in producing the WH-Questions with a falling intonation though the WH-Questions presented were expected to have a falling intonation. The questions presented were almost responded with a level and rising tone (Appendix C: Figures 4, 5, 17, 18, 19).

When the question-tags are examined, it is observed that in both groups the students have a tendency to produce the question-tags with a level or rising intonation though the question-tags presented may be expected to have a falling intonation (Appendix C: Figures 5, 13, 21).

In English, the question-tags are commonly used for asking confirmation or agreement. In the tag system, in an affirmative sentence, the auxiliary verb is repeated in the negative; in a negative sentence, the auxiliary verb is repeated in the affirmative. The auxiliary is followed by the appropriate subject pronoun.

John is coming, isn't he?
Mary can't come, can she?
She came yesterday, didn't she?

A rising intonation on the question tag implies that the speaker is uncertain, and the falling intonation implies that he or she is more certain. So, beacuse of the changes in form, the tags themselves present a problem for students in learning them. However, in Turkish, we make use of question-tags in a different structure the form of which does not change. We add the 'mI' free question morpheme to the 'değil' free negative morpheme in a statement either negative or affirmative.

Çarşıya gittin, değil mi?
(You went to shopping, didn't you?)

Bugün hava güzel, değil mi?
(It's a nice day today, isn't it?)

Yemek yemedin, değil mi?
(You haven't eaten, have you?)

The stress in suchsentences is placed on 'değil' pereceding the 'mI' morpheme; the tone at the end is usually level or falling. So, in fact though the students use these tones in their native language, they fail to reproduce them in English. This is because the structure of tags in English is complex and therefore constitutes a problem for the student. Moreover, since the students are not certain about the intonation of the tag, they fail in choosing the appropriate tone.

The ongoing discussion above clarifies that there is a general problem in this specific area. The probable reasons can be summarized as follows.

The main fault with the rising and falling tona and using a level tone in most cases instead, seems from the impression that students are unable to manipulate their voices with more complex patterns. Haycraft (1971) says that 'students using a wide voice range rarely have difficulty with rising tone-Italian, Scandinavian, Finnish and Dutch students are most likely to have trouble' (p.73). From this it is implied that languages which have intrinsically narrow pitch ranges may cause a problem in this respect. Therefore, from the results of error analyses we may assume that Turkish subjects, who took part

in this study, are not using a wide voice range, thus they fail to produce an audible rising or falling tone This seem an important issue as it is widely accepted that students transfer the intonation system of their native language to English, and the distortion may cause a problem in both producing and perceiving these patterns.

Demirezen (1987) claims that 'the prosodic control and assimilatory power of the native tonque are felt so strongly that non-native speakers, i.e Turkish speakers in our case, suffer from inadequacy and fumble towards perfection' (Demirezen, 1987: p.108).

To avoid comparison and interference from the student's mother tonque, the intonation patterns of the target language must therefore be taught. This will enable the students to distiquish between the rising and falling tones especially.

Another reason for the incorrect responses, especialy in WH-Questions, may be explained as that: students are used to producing utterances in a questioning manner, somehow with a rising intonation, often when the rising intonation is not suitable. This might be due to their faulty generalisation

which appears at the very beginning while they are taught Yes/No questions. Consequently, it may be assumed that they think or generalize that all the questions should be asked with a rising intonation because of not being informed about the patterns.

Persistent use of the incorrect tones may also arise from shyness because the students seem to be uncertain about the pattern. In sentences the rising tone shows a more friendly disposition and the falling tone a more compromising frame of mind. The detachment of the falling tone, often when the falling tone is not suitable would be more acceptable but boring. So the students either exaggerate the tones or utter them with a level or falling tone because of shyness.

We may assume then the failure to acquire satisfactory intonation patterns of English by Turkish students may also come from the fact that they have little awareness of intonation in their native language. They may not have developed a conscious knowledge on how they use it. However, this aspect need be independently studied.

Another important point in this study to explain why the control group, whose teachers are native speakers

of English, couldn't perform well might be due to their previous experience it is likely that most of the students were neither exposed to native speakers of English, nor taught these patterns. Moreover, the skills, being taught are reception-oriented rather than production-oriented.

The negligence of teaching intonation may probably be due to our ignorance about the nature of the process of teaching and learning intonation, the lack of knowledge of what and how to teach our students to perceive and produce. The ability to understand the slow formal speech of the classroom where a foreign language is being taught doesnot entail an ability to understand the language as spoken to and by native speakers. The native speaker knows which word should bear the tonic stress for a sentence in isolation or within a discourse. The native speaker also knows about the other parameters involved since he uses them. Further, the native speaker's experience of the language may give the student access to the transitional probabilities of elements in the foreign learner's speech which might be obscure and this may facilitate the identification of the student in context. However, as stated in the previous chapters, the classroom is not a suitable place for a student to learn intonation even from a native speaker. If the student is to understand the English used in speeches,

public lectures and radio-TV broadcasts, he must be exposed to the spoken language used in these situations and he must be taught about these patterns in order to extract the message.

The writers, who claimed that the aspect of teaching intonation is too difficult to teach in a systematic way, felt that students will learn intonation the way the children do. However, it is evident from the ongoing discussion that in a classroom environment the acquisition of intonation, as the way children do, is a complicated process. Brazil (1986), asserts that"

> "There does not seem to be sufficient reason for believing that 'the natural method' (i.e exposure to the target language) will be sufficient condition for students to learn intonation by themselves, Nor is it enough to provide occasions for imitation. There has to be some provision for the presentation of intonation."
>
> (Brazil, 1986: p.130)

On the basis of data presented, what we can conclude from this study is that Turkish students appear to have difficulty in both perceiving and producing the intended meanings of intonation patterns in English.

It is also hoped that the evidence presented in this study will emphasize the need for a methodology

for a systemic teaching of intonation either by teachers who are native or non-native speakers of English.

Since the learner will have only a fraction of the total language experience of the native speakers, it seems that considering ways of integrating the teaching of intonation, besides other aspects of the language, into the language syllabus is crucial.

5.2. SUGGESTIONS FOR FUTURE STUDIES

- The 'learning behaviour' of intonation between the students of native and non-native speaker teachers of English can be examined in a longitudinal study.

- A methodological model for the teaching of intonation to Turkish students can be designed.

- A contrastive analysis of the intonation skills of students in their native and target language can be examined.

REFERENCES

Berkovits, R. (1984) "Perception of Sentence Final Intonation", Language and Speech, 27, 4. 291-308.

Bloom, L. and Lahey, M. (1978) Language Development and Language Disorders, NewYork: John Miley and Sons, Inc.

Bolinger, D. (1972) "Around the Edge of Language: Intonation", In D. Bolinger (eds.) Intonation, Selected Readings, Middlesex, England: Penguin Books ltd. 19-30.

----------(1972) "Relative Height", In D. Bolinger (eds.) Intonation, Selecled Readings, Middlesex, England: Penguin Books ltd. 137-155.

Bot, K. (1983) "Visual feed back of Intonation I: Effectiveness and Induced Practice Behaviour", Language and Speech, 26, 4. 331-349.

Brazil, D; Coulthard, M. and Johns C. (1981) Discourse Intonation and Language Teaching, Essex: Longman Group ltd.

Brown, G. (1976) "Phonological Theory and Language Teaching", In J.B. Allen and P. Corder(ed) Papers in Applied Linguistics, Vol.2, London: Oxford University Press.

Broughton, G. (1978) "Native Speaker Insight", ELT Journal, Vol.XXXIII, P.4. 253-257.

Crystal, D. (1972) "The Intonation System of English", In D. Bolinger (eds.) Intonation: Selected Readings, Middlesex, England: Penguain Books Ltd. 110-136.

----------(1975) Prosodic Systems and Intonation in English, London: Cambsridge University Press.

----------(1975) The English Tone of Voice: Essays in Intonation, prosody and Paralanguage, London: Edward Arnold Ltd.

Dean, L. Fand Wilson, K. (1963) Essays on Language and Usage, Oxford: Oxford University Press.

Demirezen, M. (1986) Phonemics and Phonology: Theory Through Analysis, Ankara: Bizim Büro Basımevi.

Ferguson, C. and Slobin, D.I. (1973) Studies of Child Language Development, NewYork: Holt, Rinehart and Winston, Inc.

Fry, D.B. (1974) "Prosodic Phenomena", In Bertil Malmberg (ed.) Manual of Phonetics, Amsterdam: North-Holland Publishing Company, 365-406.

Gencan, T.N. (1975) (3rd Ed.) Dilbilgisi, İstanbul: Türk Dil Kurumu Yayınları.

Gimson, A.C. (1980) An Introduction to the Pronounciation of English, London: Edward Arnold Ltd.

Halliday, M.A.K. (1973) "The Tones of English", In W.E. Jones and J. Laver (eds.) Phonetics in Linquistics: A Book of Readings, London: Longman Group Ltd. 103-126.

----------(1975) Learning How To Mean-Explorations in the Development of Language, London: Edward Arnold ltd.

Haycraft, B. (1975) The Teaching of Pronounciation, London: Longman Group ltd.

Kingdon, R. (1959) The Groundwork of English Intonation, London: Longman, Green and Co Ltd.

Kurath, H. (1964) A Phonology and Prosody of Modern English, Michigan: The Univervisty of Michigan Press.

Ladefoged, P. (1975) A Course in Phonetics, NewYork: Harcourt Brace Jovanovich, Inc.

Lado, R. (1964) Language Testing: The Construction and Use of Foreign Language Tests, NewYork: McGraw-Hall Company.

Lehiste, I. (1977) Suprasegmentals, Cambridge, Massachusetts: The M.I.T. Press.

Lieberman, P. (1967) Intonation, Perception, and Language, Cambridge, Massachusetts: The M.I.T. Press.

Luthy, M. (1983) "Nonnative Speakers' Perceptions of English 'Nonlexical' Intonation Signals", Language Learning, 33, 1. 19-36.

Mac Carthy (1978) The Teaching of Pronounciation, Cambridge: Cambridge University Press.

Mc Intosth, A. and Halliday, M.A.K. (1967) Patterns of Language: Papers In General, Descriptive and Applied Linguistics, Bloomington: Indiana University Press.

O'Connor, J.D. (1976) Phonetics, Middlesex; England: Penguin Books Ltd.

Paulston, B.C. and Bruder, M.N. (1976) Teaching English as a Second Language: Techniques and Procedures, Boston: Little, Brown and Company.

Pike, K. (1958) The Intonation of American English, Michigan: Cushing-Malloy Inc.

Prator, Jr. C. and Robinett, B.W. (1972) Manual of American English Pronounciation, NewYork: Holt, Rinehart and Winston, Inc.

Pritchard, R. (1985) "The Teaching of French Intonation to Native Speakers of English", IRAL, 23.5. 118-147.

Roach, P. (1983) English Phonetics and Phonology, Cambridge: Cambridge University Press.

Robinett, B.W. (1980) TESOL: Teaching English to Speakers of Other Languages, Minneapolis: University of Minnesota Press.

Robson, C. (1979) Experiment, Design and Statistics in Psychology, Middlesex: Penquin Books.

Sinclair, J. McH. and Brazil, D. (1982) Teacher Talk, Oxford: Oxford University Press.

Stockwell, R.P. (1972) "The Role of Intonation", In D. Bolinger (eds.) Intonation Selected Readings, Middlesex: Penguin Books Ltd. 87-109.

Tench, P. (1981) Pronounciation Skills, London: The Macmillan Press Ltd.

Trager, E.C. and Henderson, S.C. (1983) The PD's: Pronounciation Drills for Learners of English, New Jersey: Prentice-Hall. Inc.

Uldall, A. (1973) "Attitudinal Meanings Conveyed by Intonation Contours". In W.E. Jones and J. Laver (eds.) Phonetics in Linguistics: A Book of Readings, London: Longman Group Ltd. 324-335.

----------(1972) "Dimensions of Meaning in Intonation". In D. Bolinger (eds.) Intonation: Selected Readings, Middlesex: Penguin Books Ltd. 250-259.

Wilkins, D.A. (1977) Linguistics in Language Teaching, London: Edward Arnold Ltd.

----------(1978) Second language Learning and Teaching, London: Edward Arnold Ltd.

APPENDICES

APPENDIX A

Table 1

Perception Test I Scores Over 68 Questions
Ranked from Highest to Lowest in
Control Group (S Native ST)

N= 64

67	66	66	66	65	64	64	63	62	62	62	62	62
61	61	61	61	61	60	60	60	60	59	59	59	59
59	59	59	58	58	57	57	57	57	55	54	53	50
50	50	50	49	49	49	49	49	48	47	47	46	45
44	43	42	41	39	38	38	37	36	35	35	34	

Table 2

Perception Test I Scores Over 68 Questions
Ranked from Highest to Lowest in
Experimental Group (S Non-native ST)

N= 64

65	65	64	64	62	61	61	61	61	60	60	60	59
59	59	59	59	59	58	58	58	57	57	57	57	57
56	56	56	55	55	55	55	55	54	53	53	53	52
52	52	51	50	50	49	48	47	46	46	45	45	42
41	41	41	40	40	39	38	37	37	36	33	27	

APPENDIX A (CONTİNUED)

Table 3

Perception Test II Scores Over 90 Questions Ranked from Highest to Lowest in Control Group (S Native ST)

N= 64

78	77	74	74	71	69	68	68	68	68	66	65
65	63	62	62	60	60	60	59	58	56	56	56	56
55	55	55	54	51	51	50	50	49	48	47	47	46
46	46	45	45	45	43	42	41	41	40	40	39	39
39	38	38	38	37	37	37	36	36	36	35	34	32

Table 4

Perception Test II Scores Over 90 Questions Ranked from Highest to Lowest in Experimental Group (S Non-native ST)

N= 64

80	74	70	70	69	68	66	65	65	65	64	63	63
61	61	61	61	60	60	60	60	58	56	55	55	55
55	54	52	52	52	51	51	51	51	50	50	50	47
46	44	44	43	42	42	41	40	40	39	39	38	38
36	36	35	35	35	34	33	33	32	30	30	28	

APPENDIX B

Table 5

Production Test Scores Over 21 Sentences Ranked from Highest to Lowest in Control Group (S Native ST)

N= 20

16	15	14	14	14	13	13	13	12	12
12	11	11	10	10	9	8	6	5	4

Table 6

Production Test Scores Over 21 Sentences Ranked from Highest to Lowest in Experimental Group (S Non-native ST)

N= 20

16	15	14	13	12	11	11	11	11	11
8	8	7	7	6	6	6	5	4	2

APPENDIX C

Figure: 1

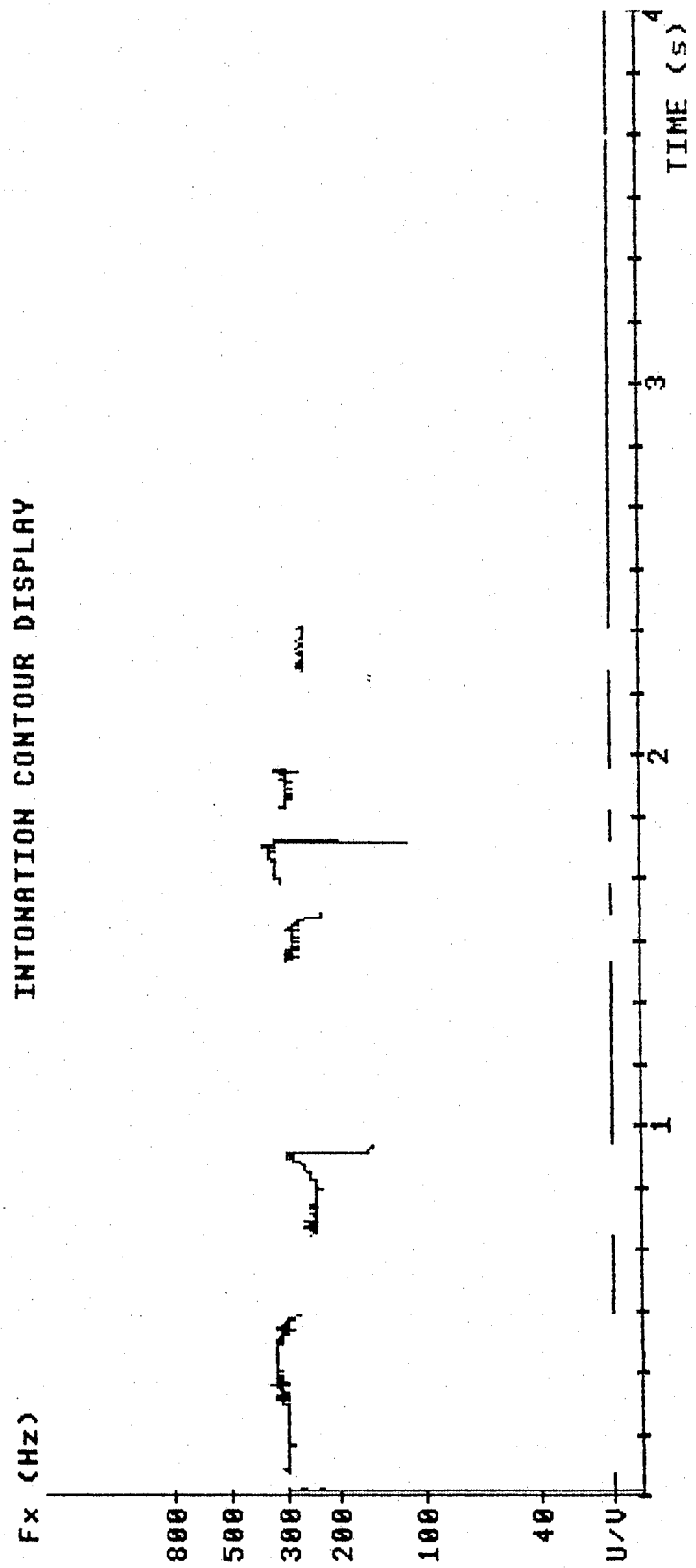


Figure: 2

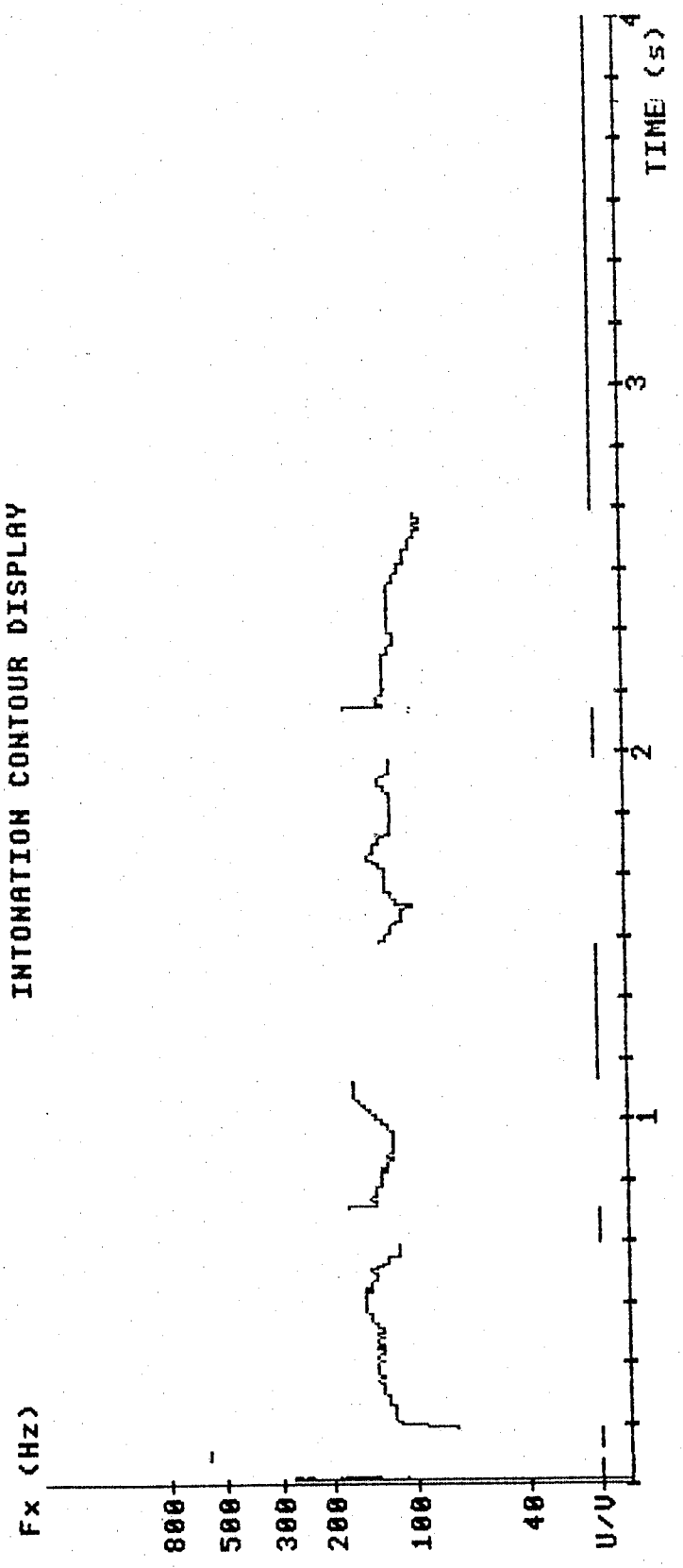

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/U
1
2
3
4
TIME (s)
I'mvery sorry.
Healways tellslies?

Figure: 3

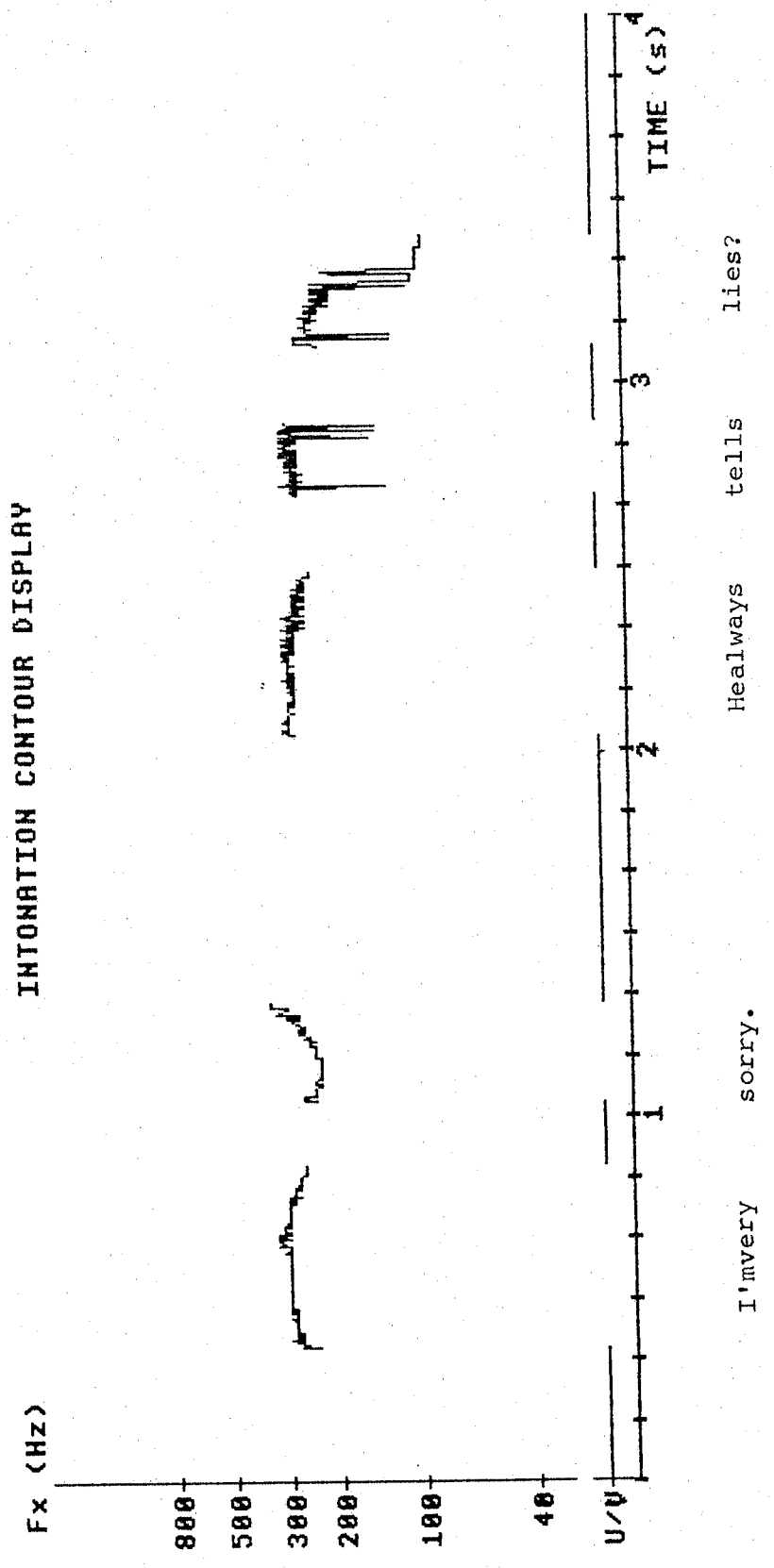

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
I'mvery sorry.
Healways tells lies?

Figure: 4

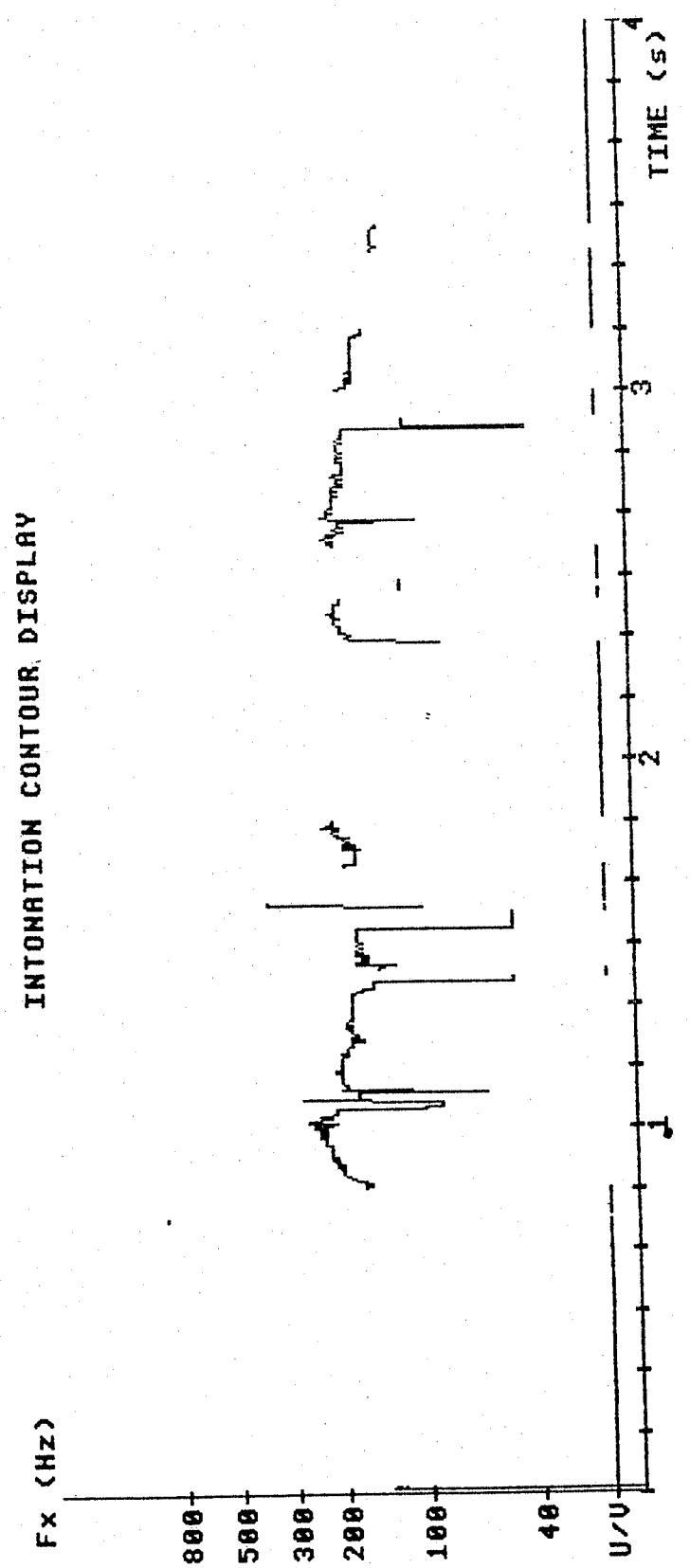
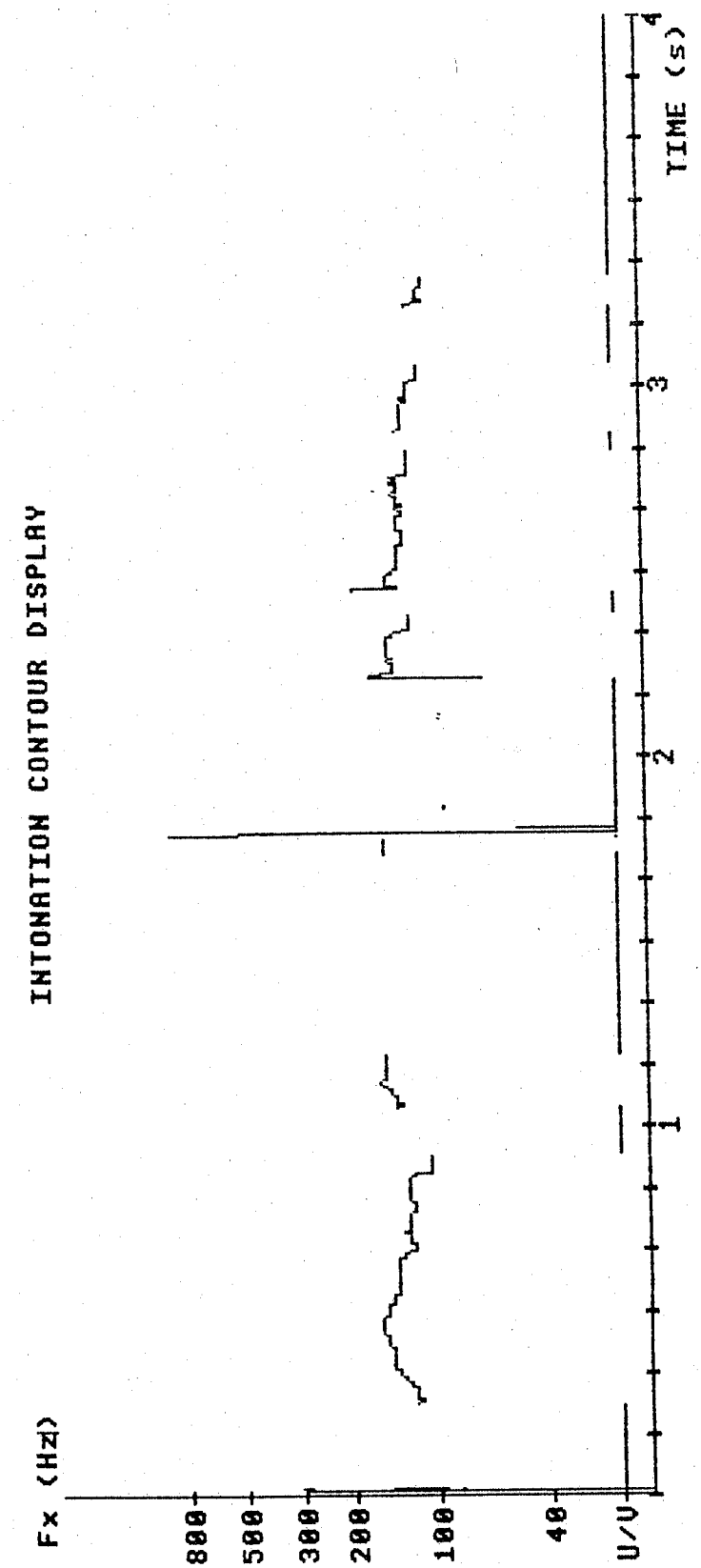

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Whyareyou up set? An swermy questi on.

Figure: 5


INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Whyareyouup set?
An swermy ques tion.

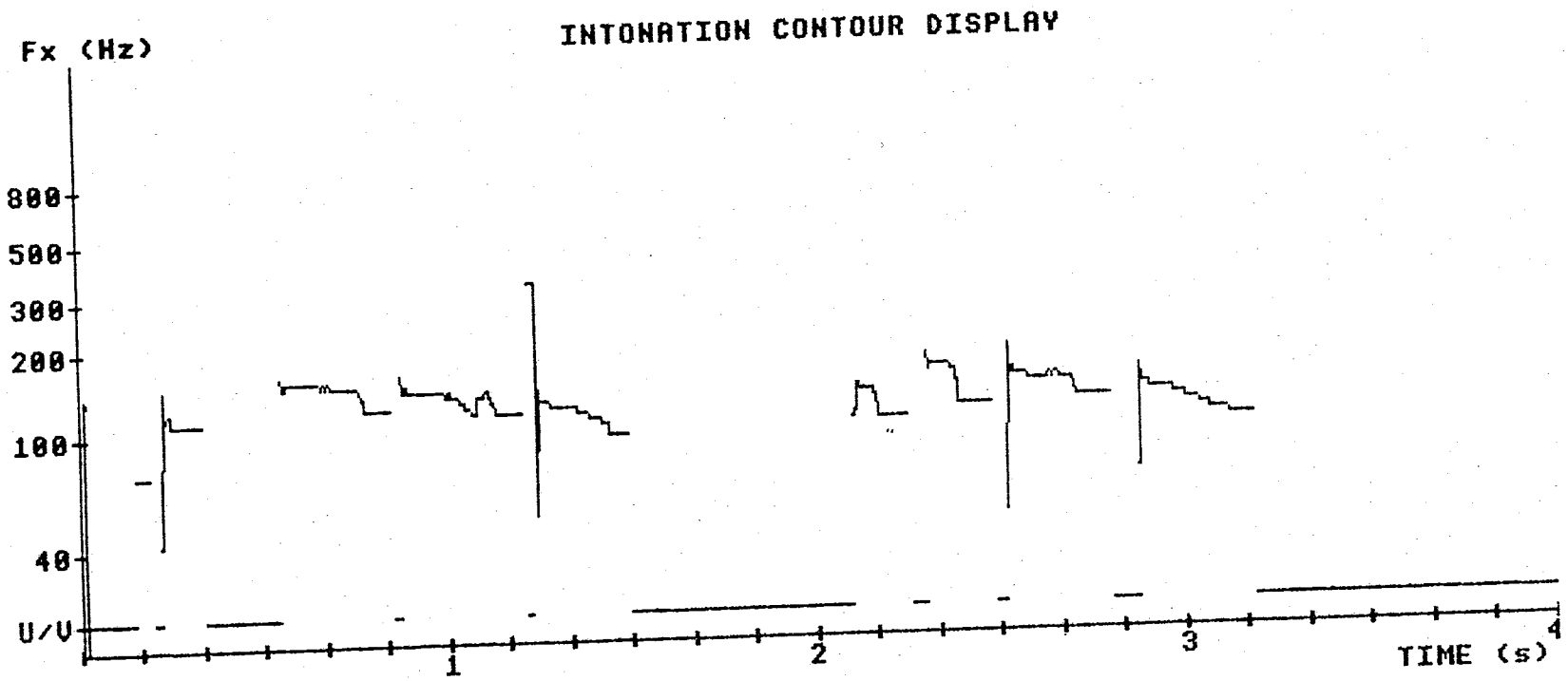

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
It' stimefor thecla ss?
Thetea cher isco ming.

Figure: 6

Figure: 7

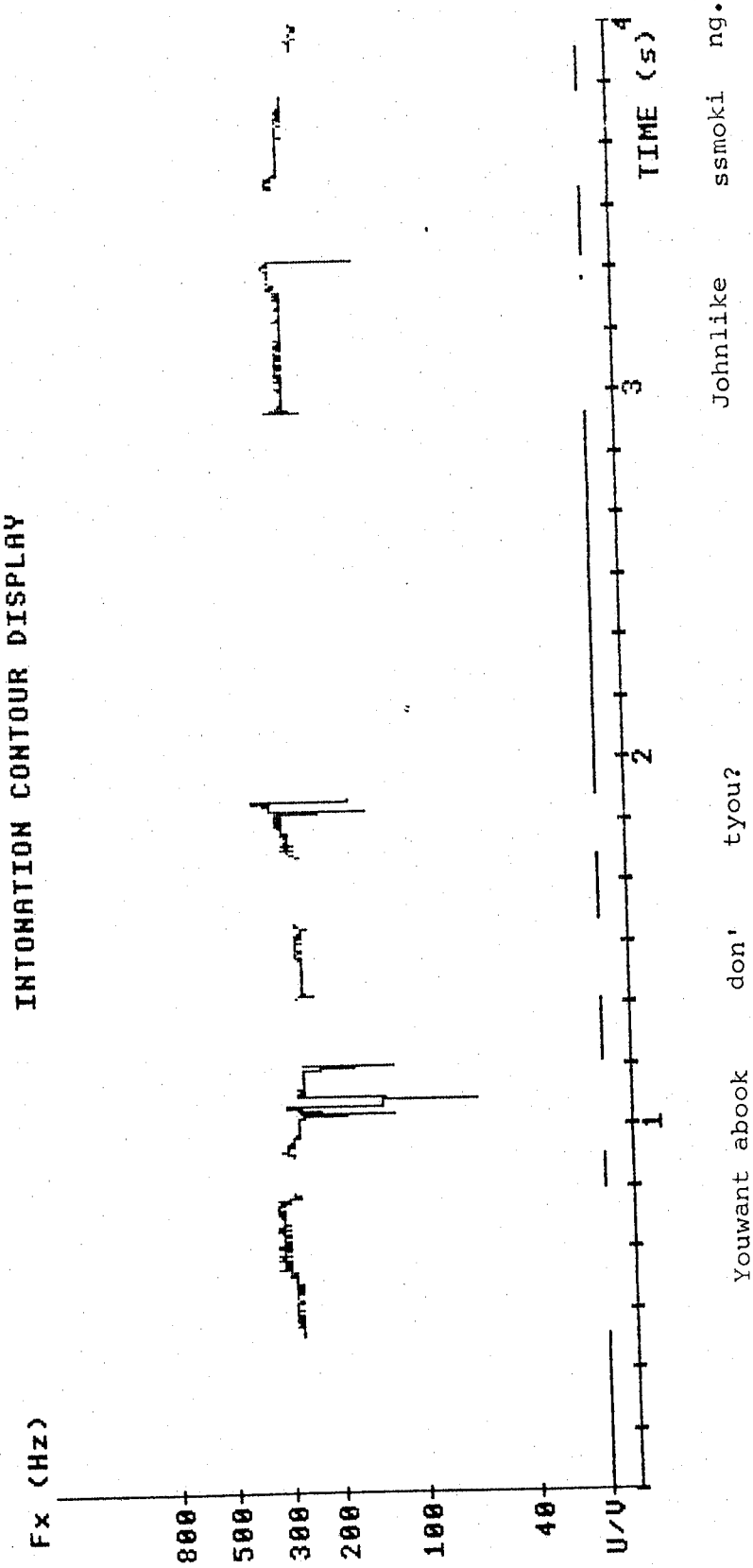

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Youwant abook don' tyou?
Johnlike ssmoki ng.

Figure: 8

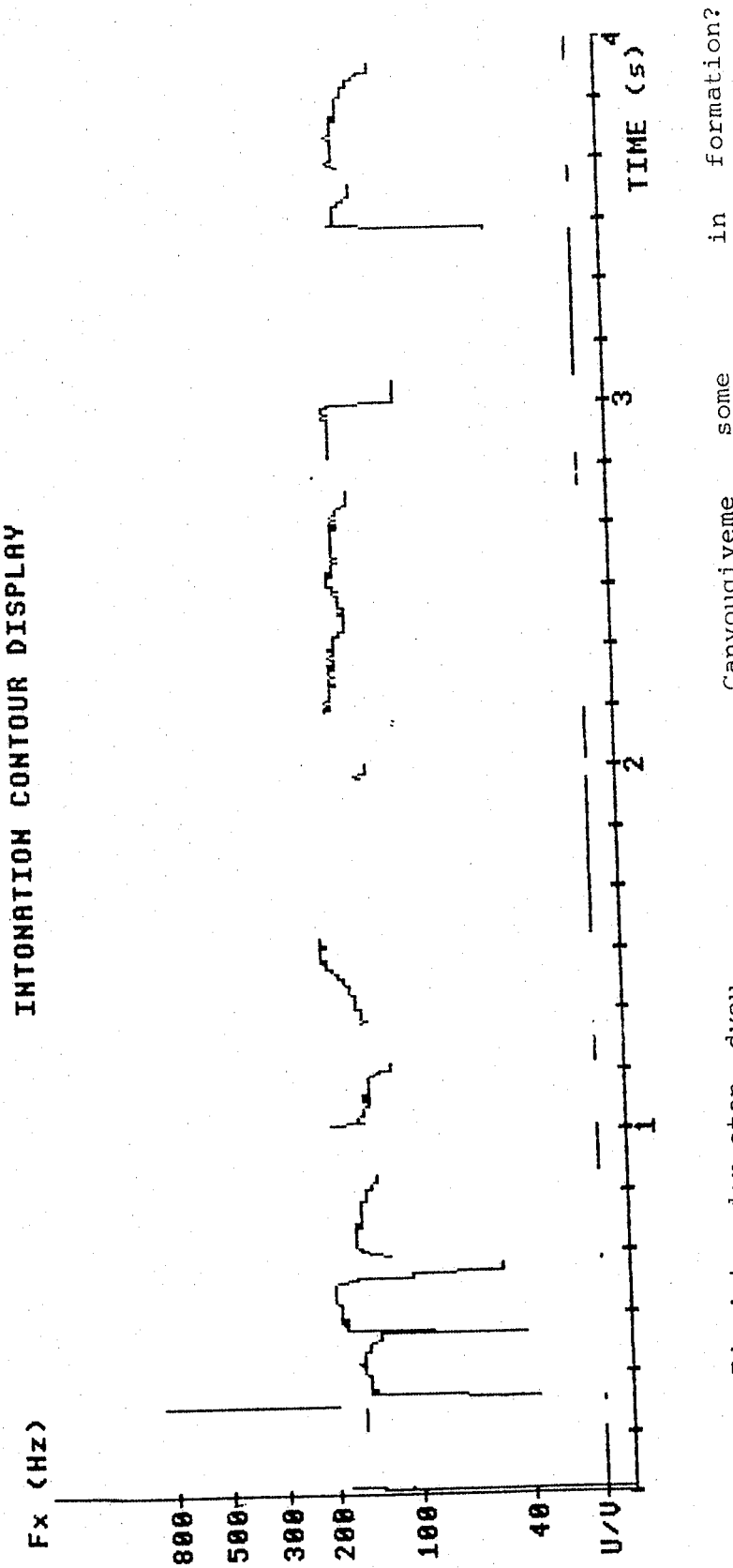

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Idon' t under stan dyou.
Canyougiveme some in formation?

Figure: 9

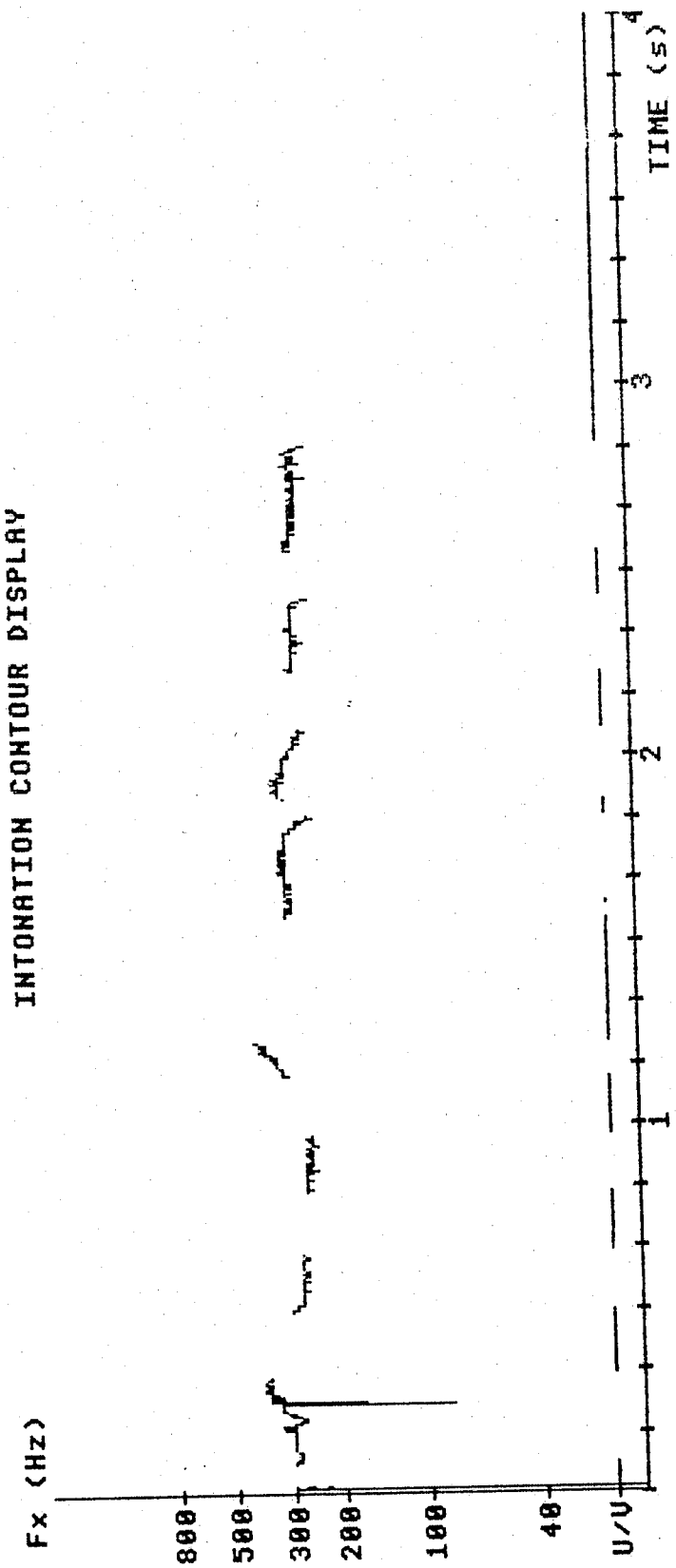
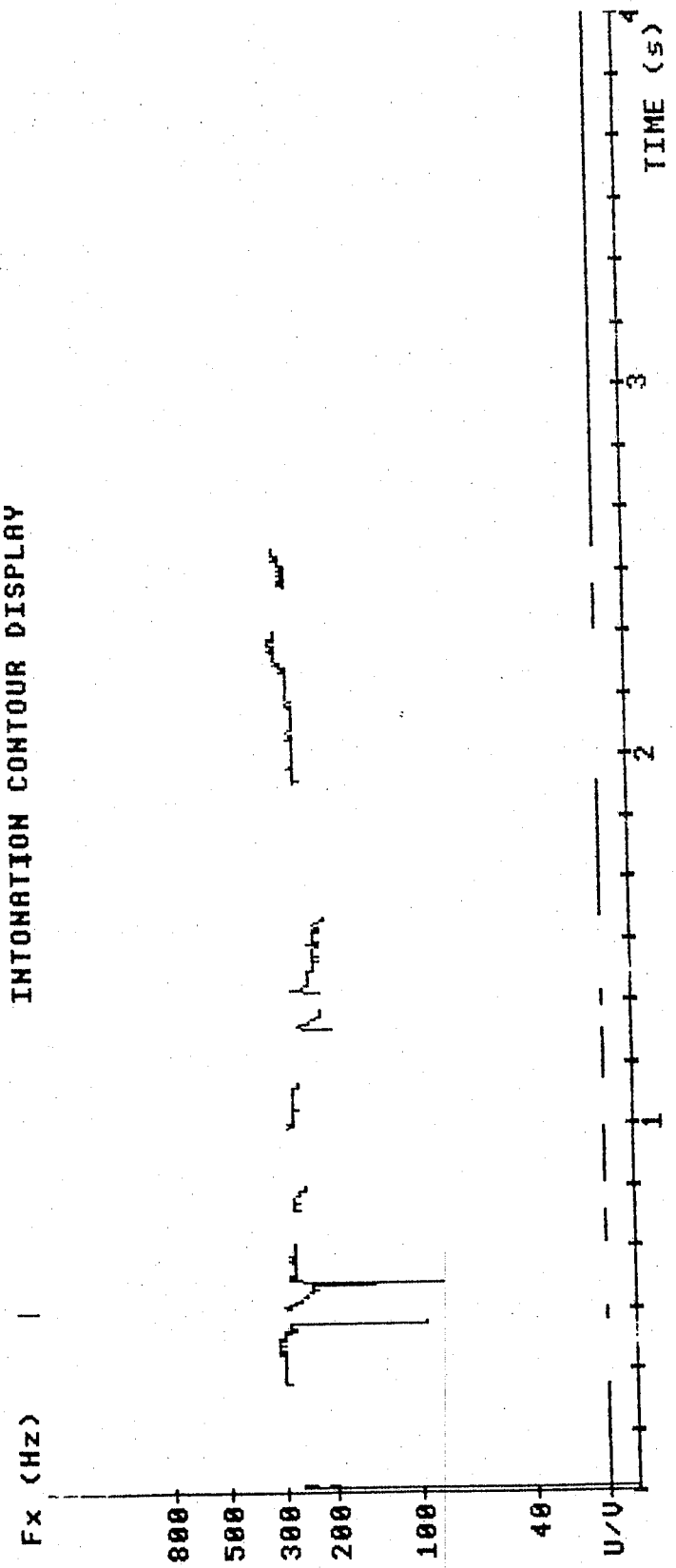
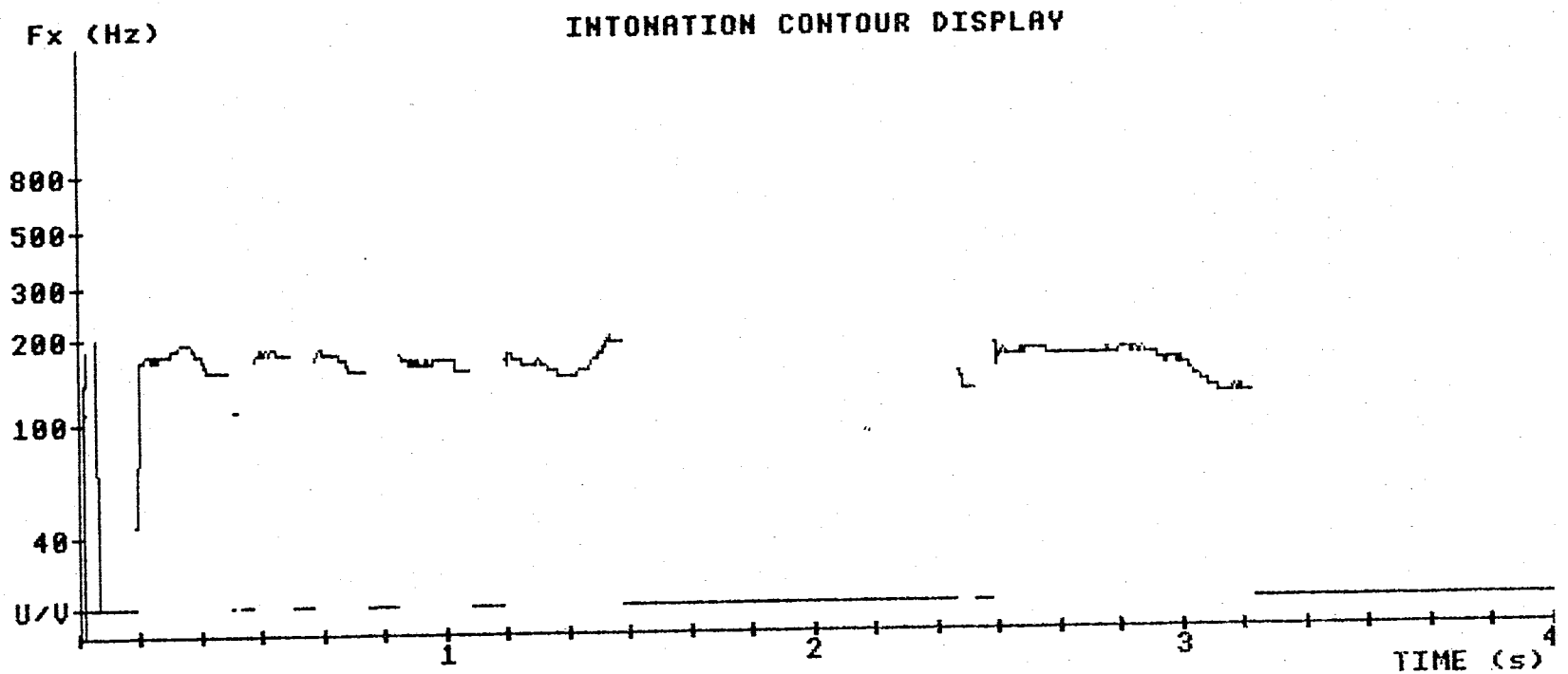

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/U
1
2
3
4
TIME (s)
Idon't under stand you.
Canyou giveme somein formation?

Figure: 10


INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Pleasegetme some ciga rettes.
Doyouknow her?



Pleasege tmeso meciga rettes

Do youknowher?

Figure: 11

Figure: 12

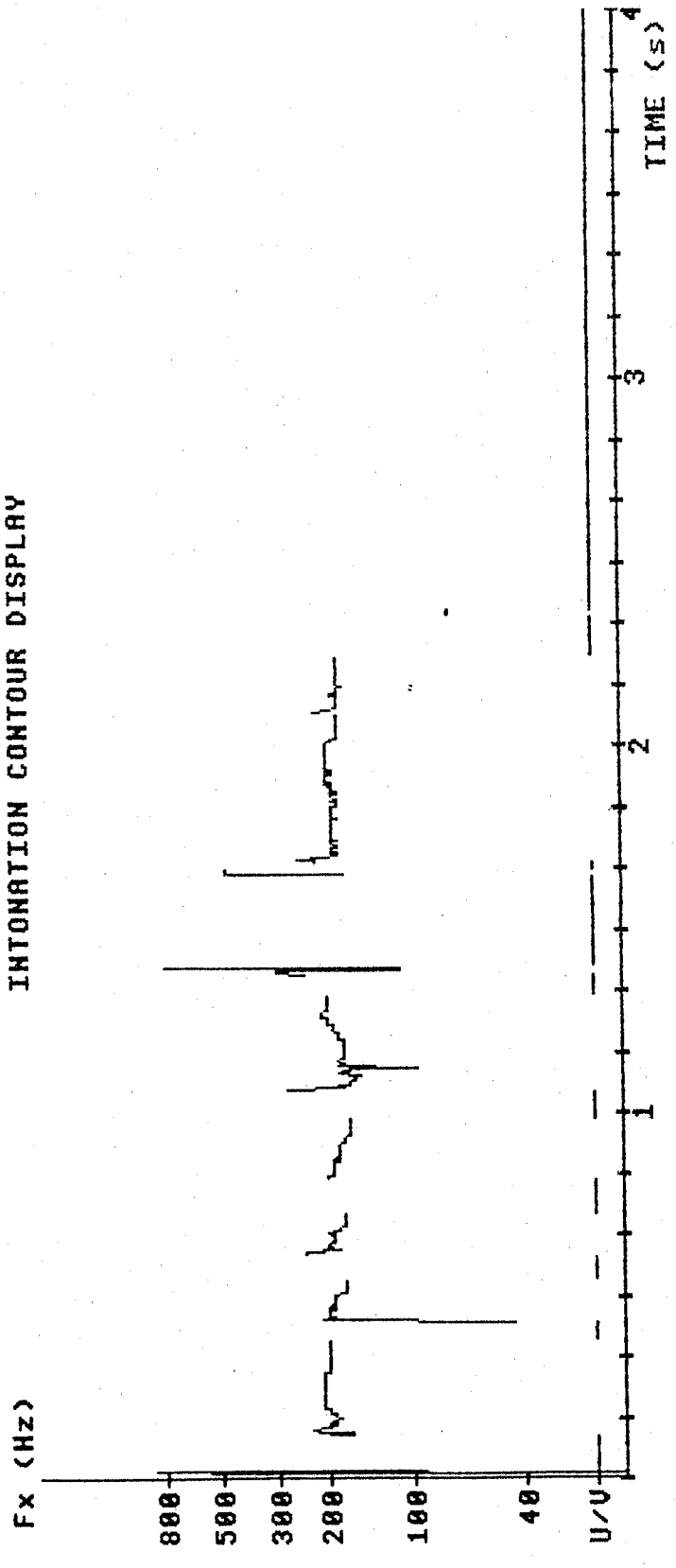

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Pleasegetmesome cigar rettes. Doyouknowher?

Figure: 13

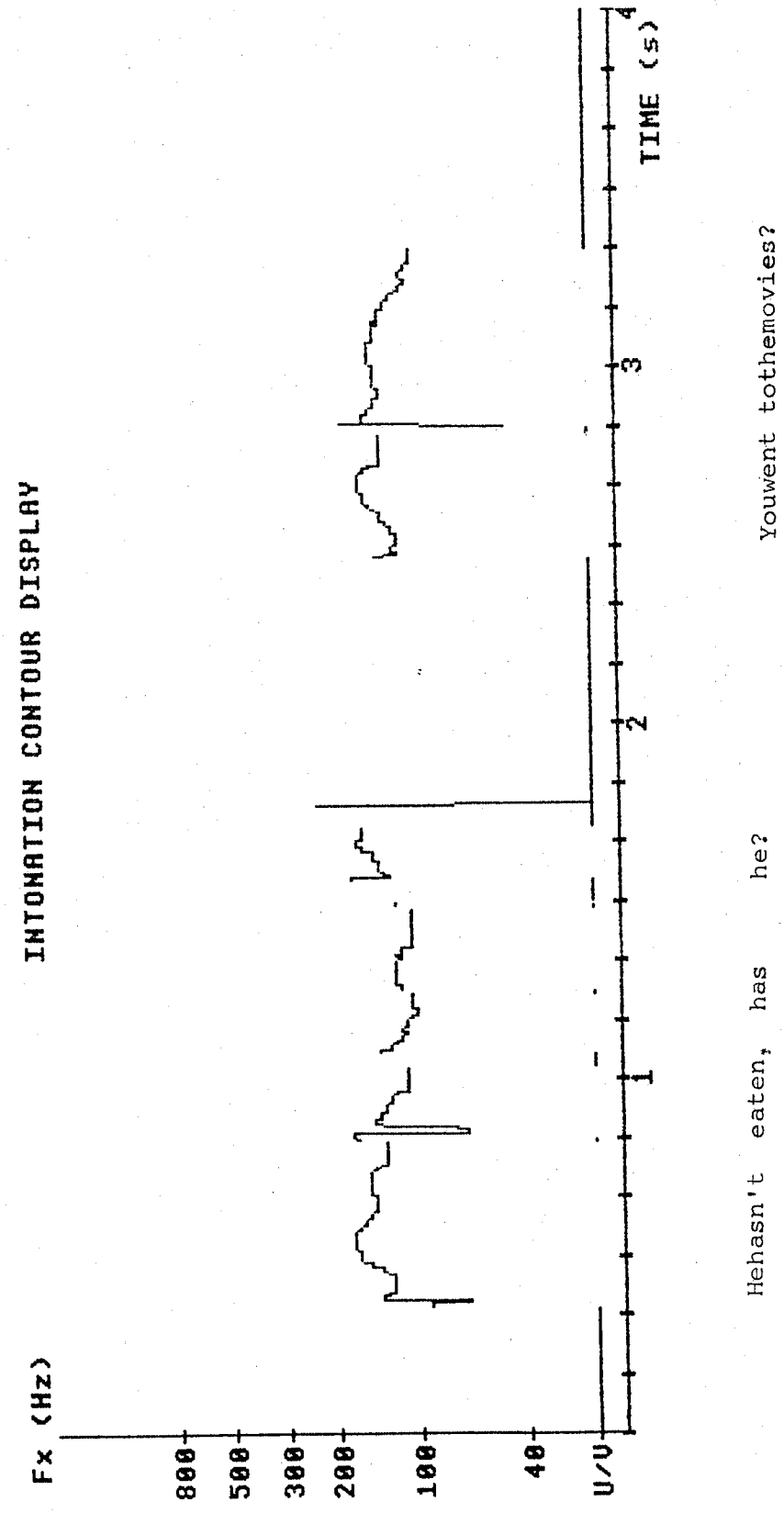

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/U
1
2
3
4
TIME (s)
Hehasn't eaten, has he?
Youwent tothemovies?

Figure: 14

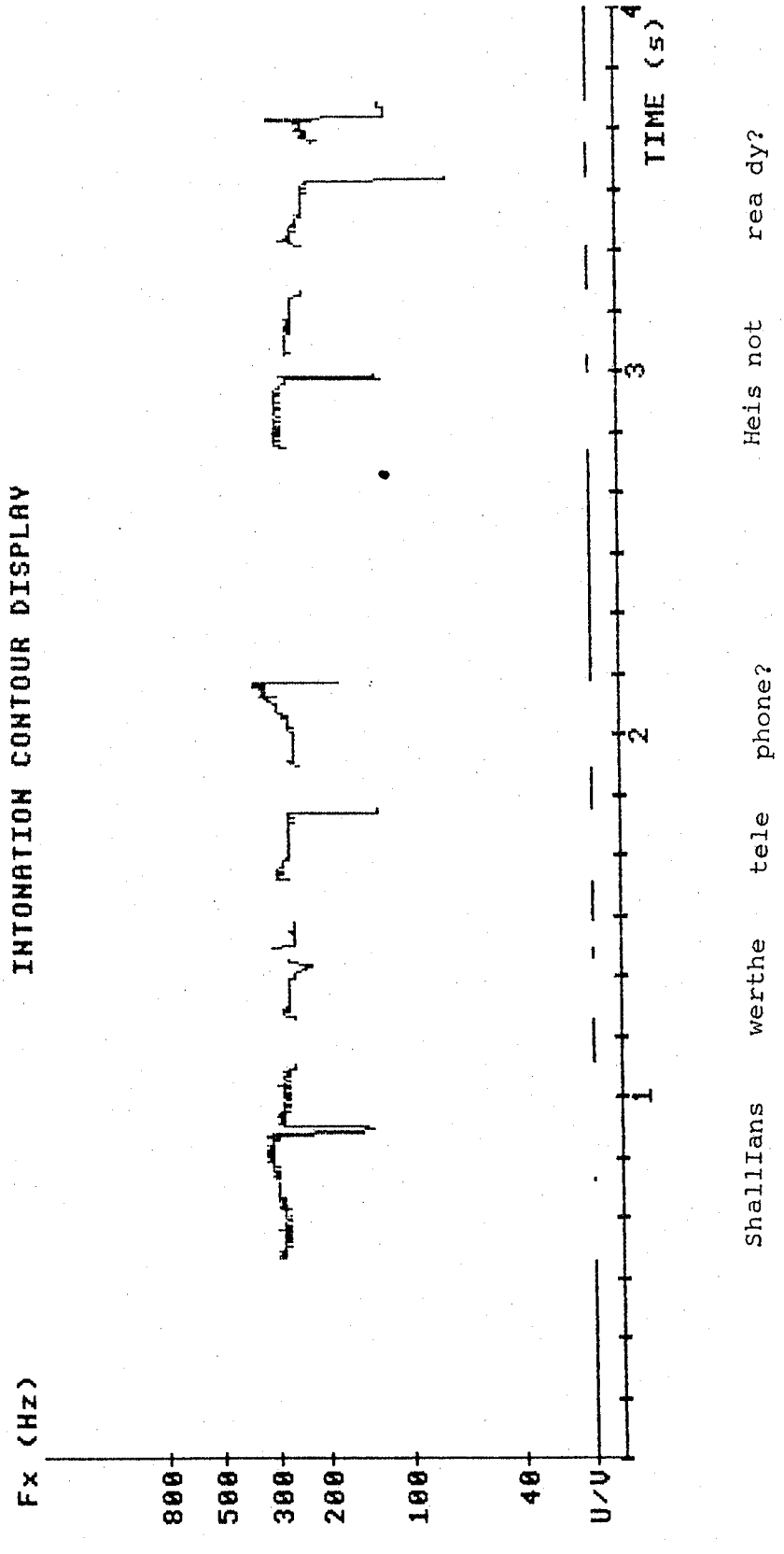
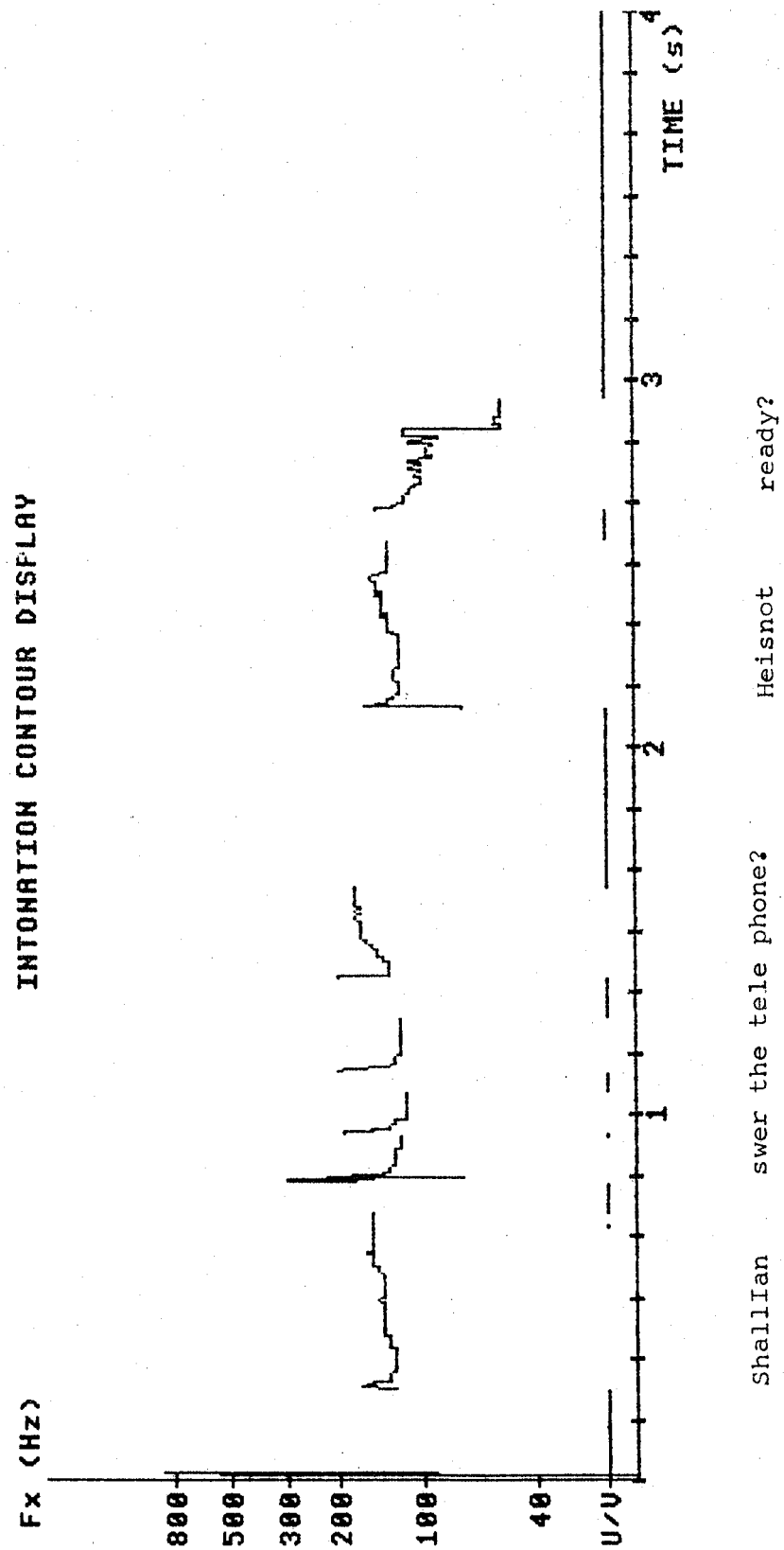

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
ShallIans werthe tele phone?
Heis not rea dy?

Figure: 15


INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
ShallIan
swer the tele phone?
Heisnot
ready?

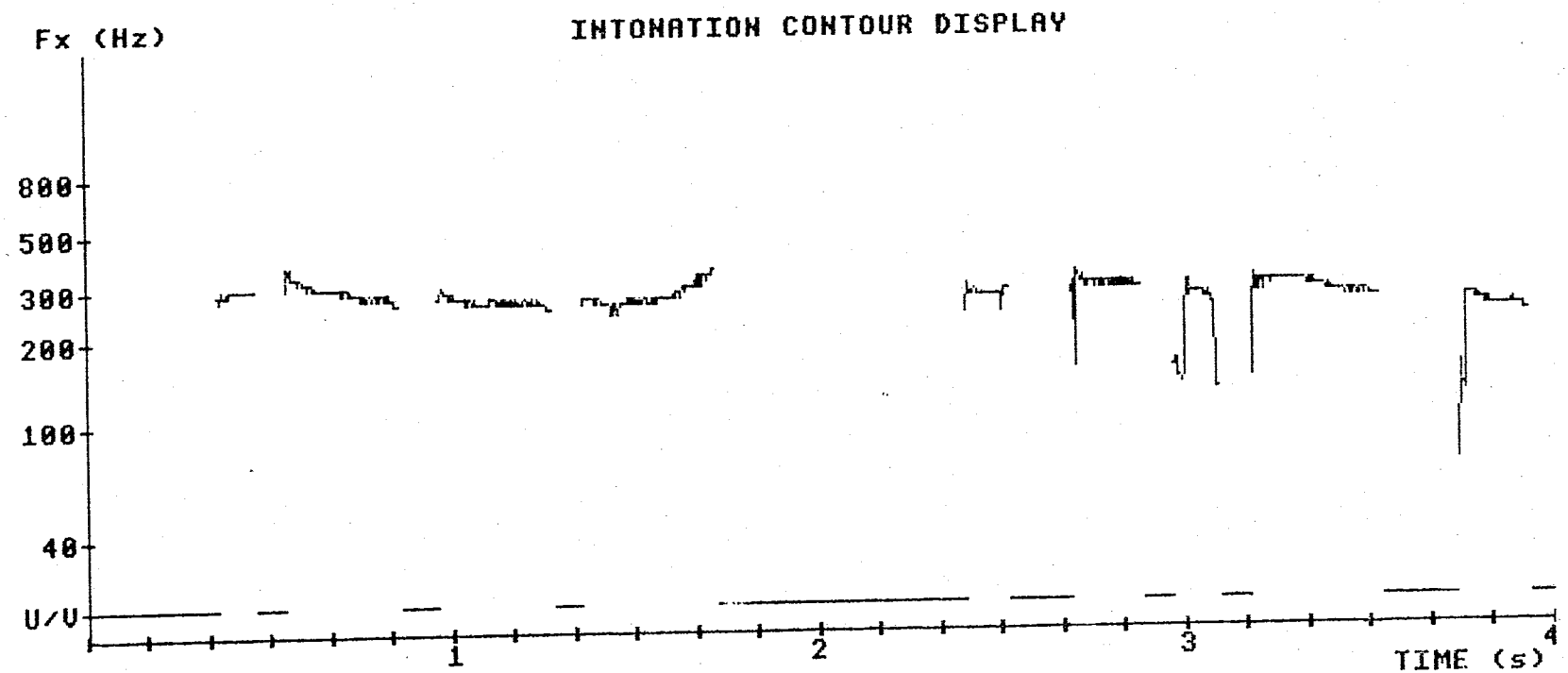
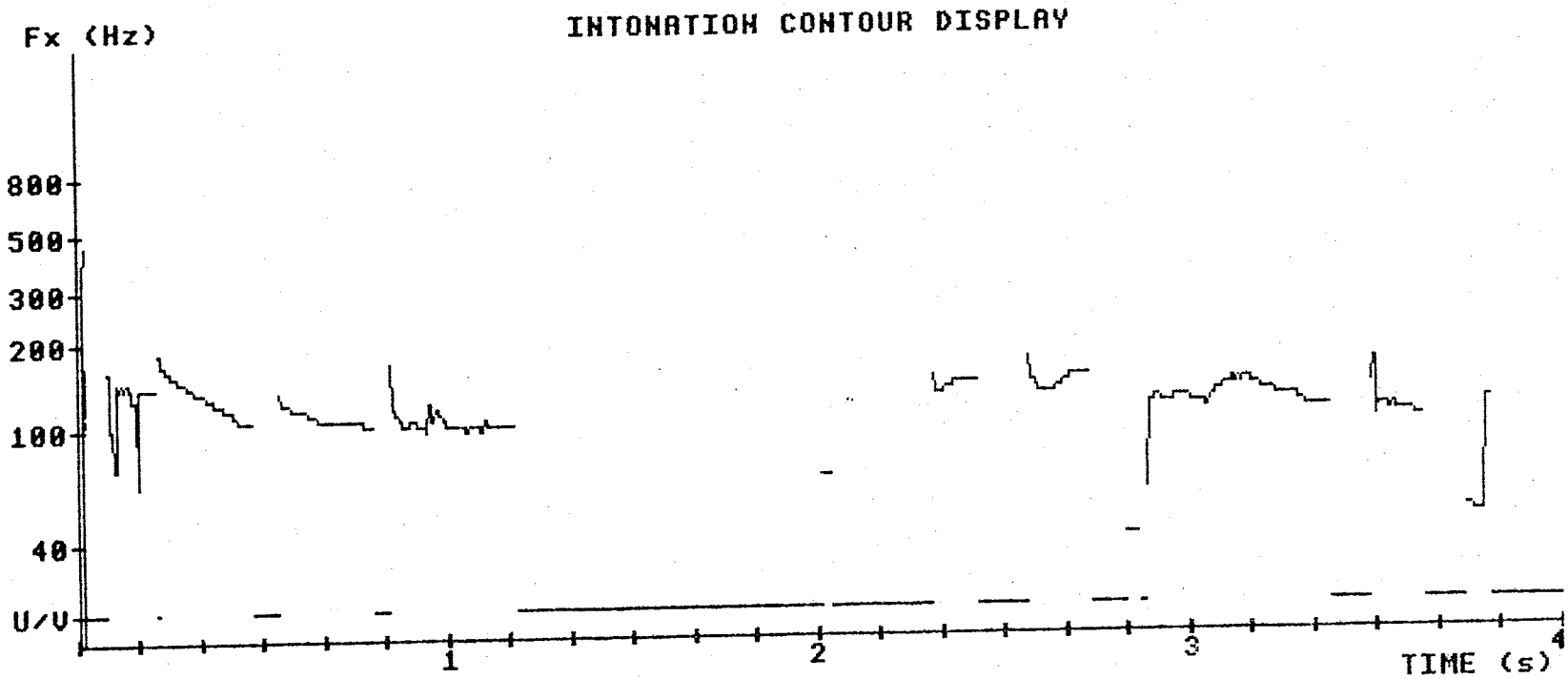

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Wha tareyou thinking about?
Thi sshirt is veryexpen sive.

Figure: 16



Whatareyou thinking about?

Thi sshirt isverye xpens ive.

Figure: 17

Figure: 18

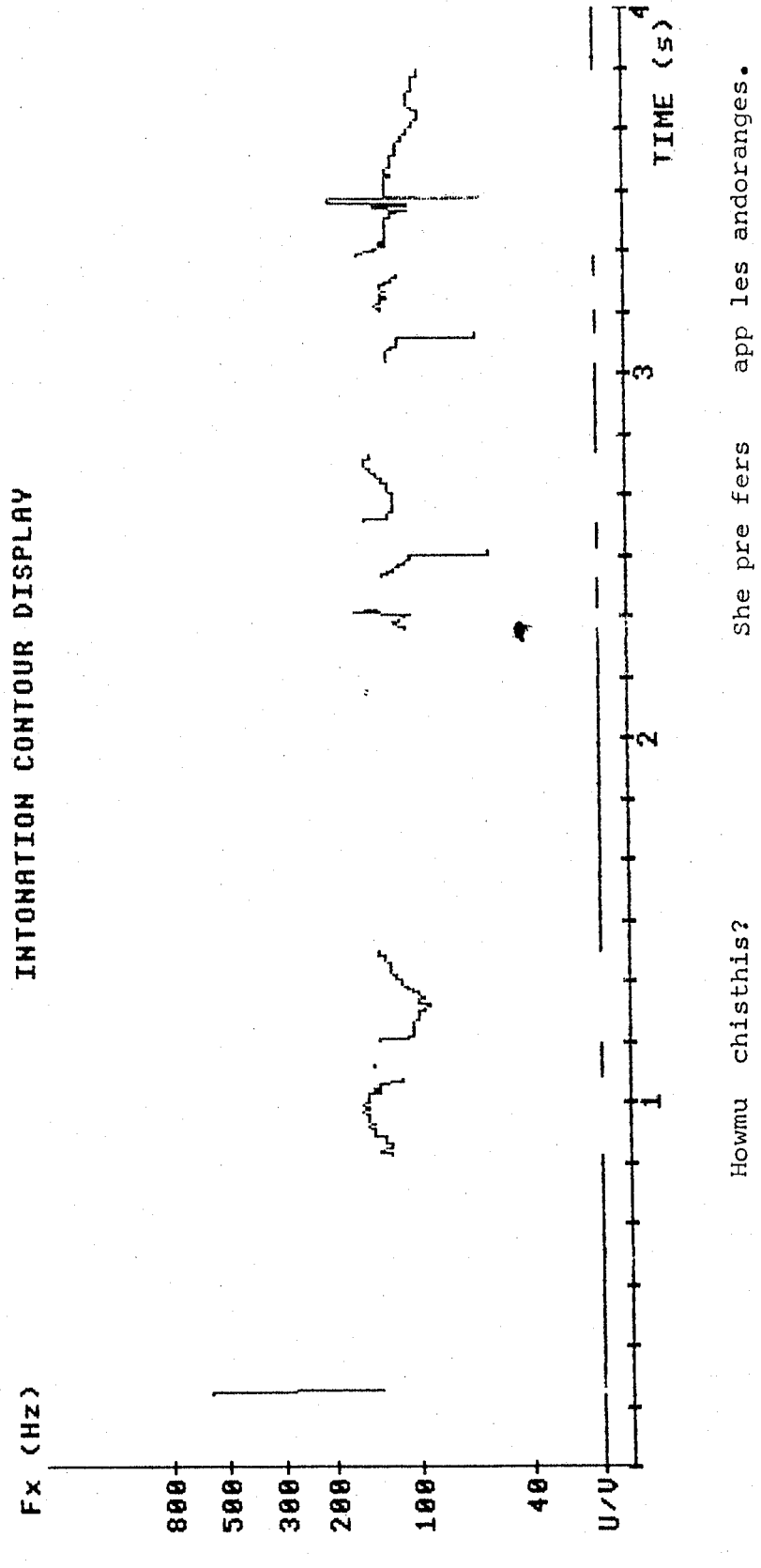

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
Howmu chisthis?
She pre fers app les andoranges.

Figure: 19

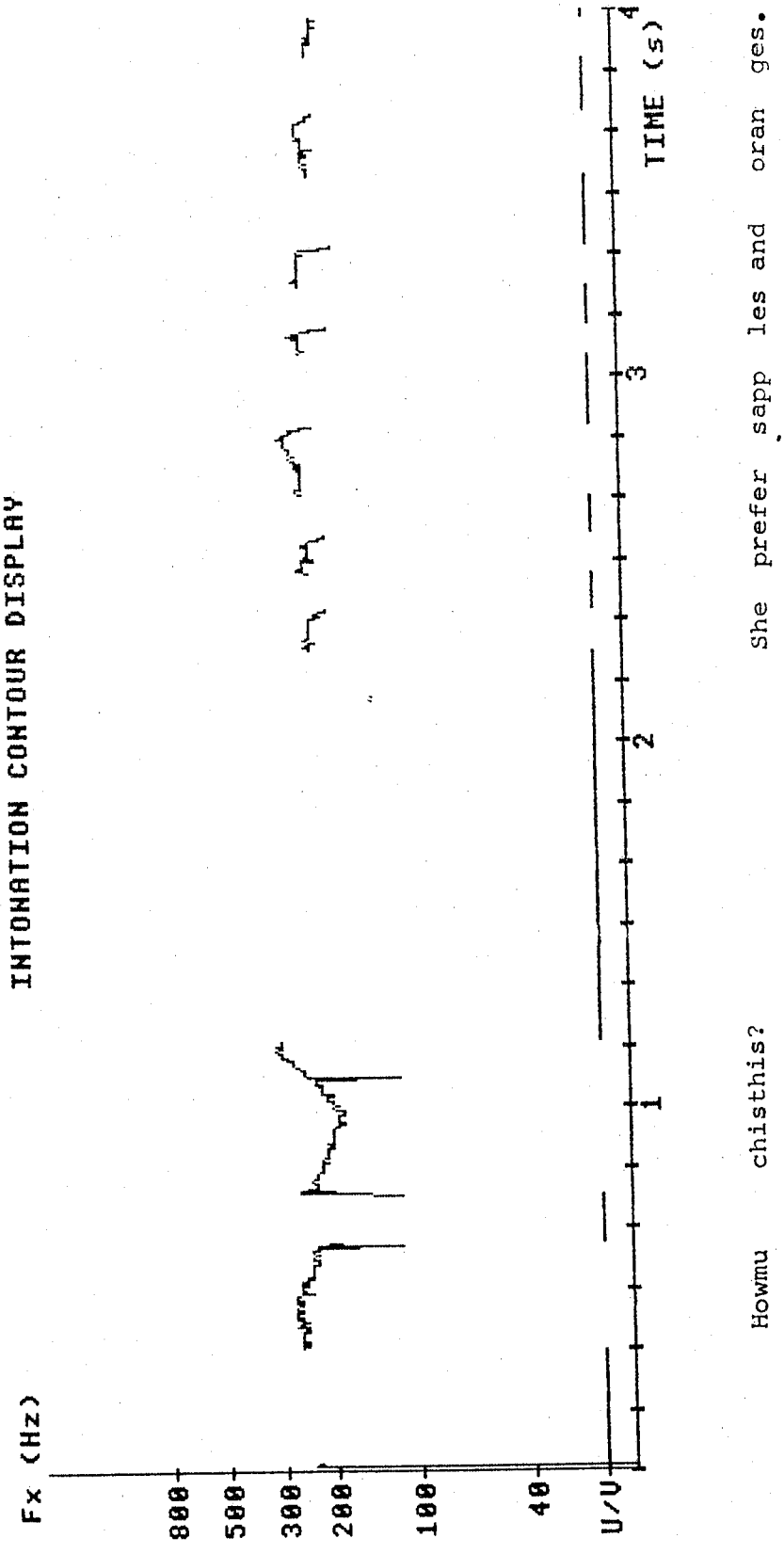

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/U
1
2
3
4
TIME (s)
Howmu chisthis?
She prefer sapp les and oran ges.

Figure: 20

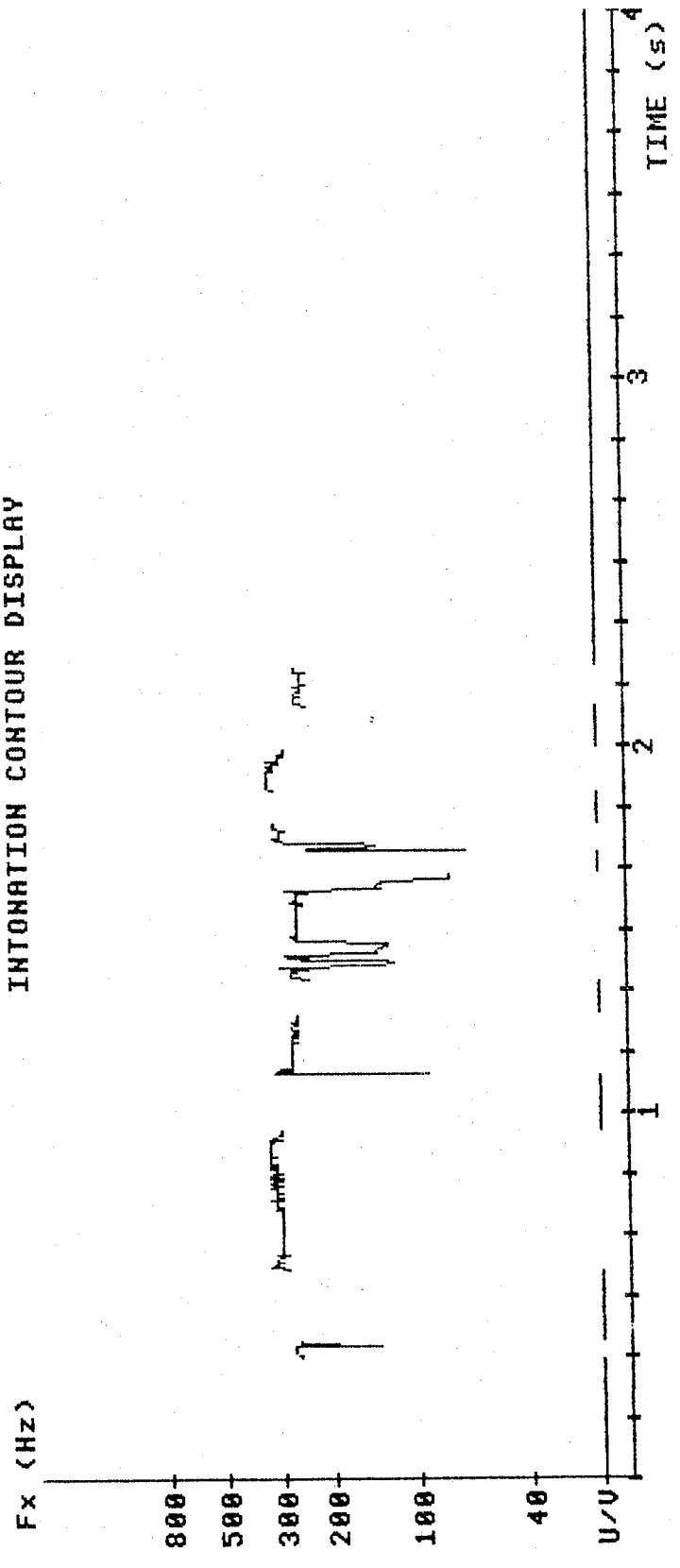
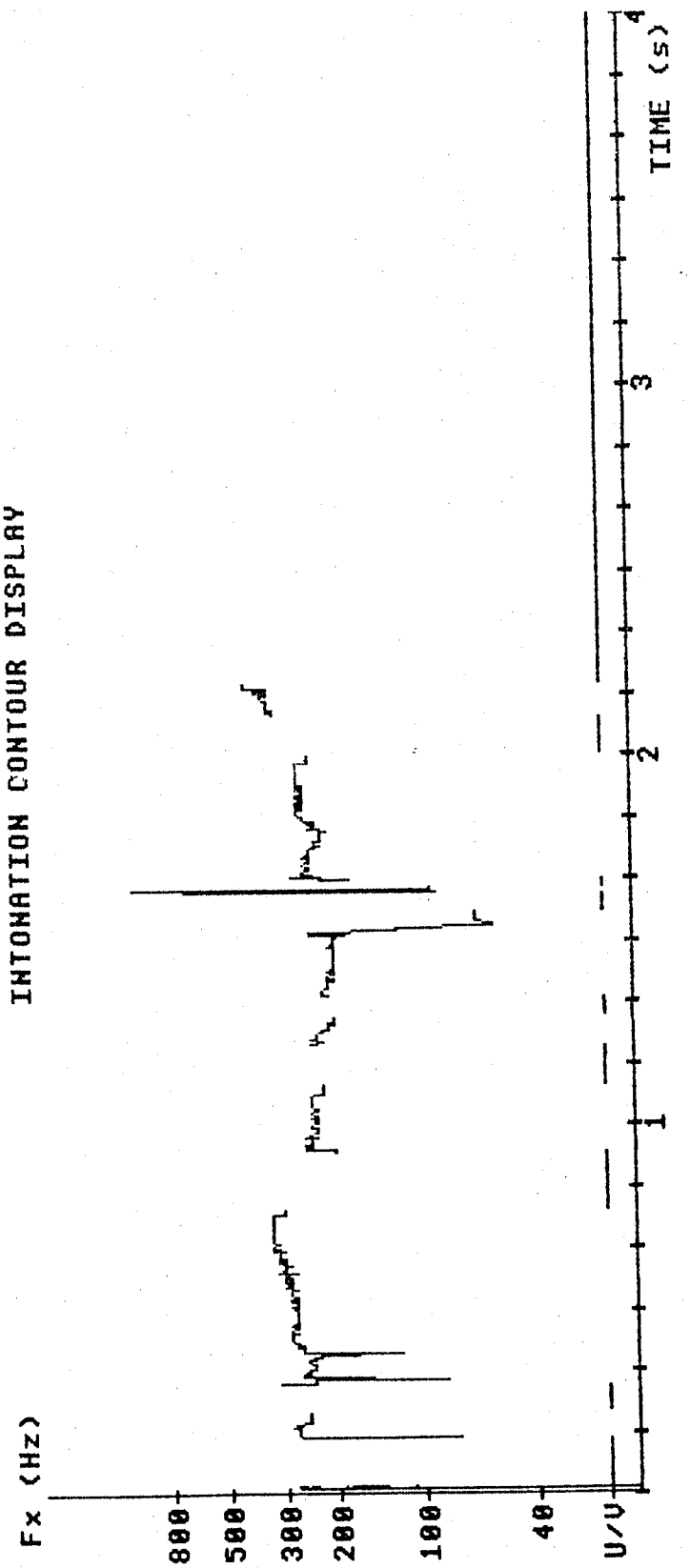

INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
I t'sanice day today, isn't it?

Figure: 21


INTONATION CONTOUR DISPLAY
Fx (Hz)
800
500
300
200
100
40
U/V
1
2
3
4
TIME (s)
It' saniced ay to day, isn't it?

APPENDIX D

PERCEPTION TEST I (PAIRS OF SENTENCES)

1. Was he mad ↓
   Was he mad ↓
2. You've bought one, haven't you ↓
   You've bought one, haven't you ↑
3. What are you doing ↑
   How old are you ↑
4. He isn't here, is he ↓
   She finally arrived, didn't she ↓
5. Were they all here ↓
   Were they all here ↑
6. Come here ↑
   Come and sit ↑
7. What are you doing ↓
   How old are you ↓
8. Have the men paid ↑
   Have the men paid ↓
9. Dreadful weather, isn't it ↓
   Dreadful weather, isn't it ↑
10. He isn't here, is he ↑
    She finally arrived, didn't she ↑

11. Am I planning to marry George ↑
    Am I planning to marry George ↓

12. Was he mad ↑
    Was he mad ↑

13. What time is it ↓
    It's two o'clok ↓

14. Was he mad ↑
    Was he mad ↓

15. Will you have cake or pastry ↓
    Will you have cake or pastry ↓

16. Were they all here ↑
    Were they all here ↑

17. You've bought one, haven't you ↑
    You've bought one, haven't you ↓

18. Am I planning to marry George ↓
    Am I planning to marry George ↓

19. What are you doing ↑
    How old are you ↓

20. Do you like dogs ↓
    Are you interested in music ↓

21. It's an animal ↑
    He's a student ↑

22. Dreadful weather, isn't it ↑
    Dreadful weather, isn't it ↓

23. He lives in Luton ↓
    He lives in Luton ↑

24. Do you like dogs ↑
    Are you interested in music ↑

25. What time is it ↓
    It's two o'clock ↑

26. You want to go to the movies ↓
    You want to go to the movies ↓

27. He lives in Luton ↑
    He lives in Luton ↑

28. It's an animal ↑
    He's a student ↓

29. Have the men paid ↑
    Have themen paid ↑

30. Good morning ↓
    Good morning ↑

31. Come here ↑
    Come and sit ↓

32. Do you like dogs ↓
    Are you interested in music ↑

33. Good morning ↑
    Good morning ↑

34. Was he mad ↓
    Was he mad ↑

35. Were they all here ↓
    Were they all here ↓

36. Do you want an apple or a pear ↑
    Shall we drive or shall we go by train ↑

37. Will you have cake or pastry ↓
    Will you have cake or pastry ↑

38. You've bought one, haven't you ↓
    You've bought one, haven't you ↓

39. Come here ↓
    Come and sit ↑

40. What time is it ↑
    It's two o'clock ↑

41. He isn't here, is he ↓
    She finally arrived, didn't she ↑

42. You want to go to the movies ↑
    You want to go to the movies ↓

43. Dreadful weather, isn't it ↓
    Dreadful weather, isn't it ↓

44. He isn't here, is he ↑
    She finall arrived, didn't she ↓

45. Have the men paid ↓
    Have the man paid ↓

46. Am I planning to marry George ↓
    Am I planning to marry George ↑

47. Do you want an apple or a pear ↑
    Shall we drive or shall we go by train ↓

48. Will you have cake or pastry ↑
    Will you have cake or pastry ↑

49. He lives in Luton ↑
    He lives in Luton ↓

50. Have the men paid ↓
    Have the men paid ↑

51. Wvere they all here ↑
    Were they all here ↓

52. Good morning ↓
    Good morning ↓

53. Come here ↓
    Come and sit ↓

54. What are you doing ↓
    How old are you ↑

55. Good morning ↑
    Good morning ↓

56. It's an animal ↓
    He's a student ↓

57. Dreadful weather, isn't it ↑
    Dreadful weather, isn't it ↑

58. It's an animal ↓
    He's a student ↑

59. You've bought one, haven't you ↑
    You've bought one, haven't you ↑

60. He lives in Luton ↓
    He lives in Luton ↓

61. Do you like dogs ↑
    Are you interested in music ↓

62. You want to go to the movies ↑
    You want to go to the movies ↑

63. Will you have cake or pastry ↑
    Will you have cake or pastry ↓

64. Do you want an apple or a pear ↓
    Shall we drive or shall we go by train ↑

65. Am I planning to marry George ↑
    Am I planning to marry George ↑

66. Do you want an apple or a pear ↓
    Shall we drive or shall we go by train ↓

67. What time is it ↑
    It's two o'clock ↓

68. You want to go to the movies ↓
    You want to go to the movies ↑

APPENDIX D (CONTINUED)

PERCEPTION TEST II (TRIPLETS OF SENTENCES)

1. This is my wife ↓
   My wife likes smoking and drinking ↑
   My wife is going ↑

2. The teacher speaks English ↓
   The teacher speaks English, Italian and French ↓
   The teacher doesn't speak any language ↑

3. Where do you come from ↓
   You come from London ↑
   How did you come ↑

4. What time is it ↑
   It's two o'clock ↓
   Is it ↓

5. These are your books, aren't they ↑
   Those aren't your pens, are they ↑
   That man is a teacher, isn't he ↓

6. You've paid, haven't you ↓
   You won't come, will you ↓
   It will be easier, won't it ↑

7. She's a lawyer ↑
   She's not a lawyer ↓
   She's a lawyer and she wants a job ↑

8. What time is it ↑
   It's two o'clock ↑
   Is it ↓

9. Go to your room ↑
   I'll go to my room and cry ↓
   Don't go ↓

10. These are your books, aren't they ↓
    Those aren't your pens, are they ↓
    That man is a teacher, isn't he ↑

11. Has he gone ↓
    Where am I going ↓
    He has gone ↑

12. Where do you come from ↑
    You come from London ↓
    How did you come ↓

13. You've paid, haven't you ↓
    You wan't come, will you ↑
    It will be easier, won't it ↓

14. Who's coming ↓
    Are you coming ↑
    You're coming ↑

15. Where do you come from ↑
    You come from London ↑
    How did you come ↓

16. What did you ask ↓
    Did you say something ↑
    When did you say ↑

17. Who's coming ↓
    Are you coming ↓
    You're coming ↑

18. Do you like tea ↓
    Do you like tea or coffee ↑
    Do you like tea or coffee or milk ↓

19. The coffee is hot ↑
    The coffee is hot ↓
    I'd like hot coffee ↑

20. These are your books, aren't they ↓
    Those aren't your pons, are they ↑
    That man is a teacher, isn't he ↓

21. Where do you come from ↓
    You come from London ↑
    How did you come ↓

22. What a ridiculous idea ↓
    I think that's a good idea ↑
    What a strange sensation ↑

23. What time is it ↑
    It's two o'clock ↓
    Is it ↑

24. This is my wife ↓
    My wife likes smoking and drinking ↓
    My wife is going ↑

25. Go to your room ↓
    I'll go to my room and cry ↓
    Don't go ↑

26. Has he gone ↓
    Where am I going ↑
    He has gone ↑

27. Where do you live, Mr. Jackson ↓
    Mr. Jackson, this is Mrs. Smith ↓
    I'm glad to meet you, Mrs. Smith ↑

28. What a ridiculous idea ↓
    I think that's a good idea ↑
    What a strange sensation ↓

30. Do you like tea ↓
    Do you like tea or coffee ↑
    Do you like tea or coffee or milk ↓

31. What did you ask ↓
    Did you say something ↓
    When did you say ↑

32. Who's coming ↑
    Are you coming ↓
    You're coming ↑

33. Go to your room ↓
    I'll go to my room and cry ↑
    Don't go ↑

34. She's a lawyer ↓
    She's not a lawyer ↓
    She's a lawyer and she wants a job ↑

35. The cofffe is hot ↓
    The coffee is hot ↑
    I'd like hot coffee ↑

36. What a ridiculous idea ↑
    I think that's a good idea ↓
    What a strange sensation ↓

37. She's a lawyer ↓
    She's not a lawyer ↑
    She's a lawyer and she wants a job ↓

38. What did you ask ↑
    Did you say something ↓
    When did you say ↑

39. Where do you live, Mr. Jackson ↓
    Mr. Jackson, this is Mrs. Smith ↑
    I'm glad to meet you, Mrs. Smith ↓

40. What a ridiculous idea ↑
    I think that's a good idea ↓
    What a strange sensation ↑

41. She's a lawyer ↑
    She's not a lawyer ↓
    She's a lawyer and she wants a job ↓

42. What time is it ↓
    It's two o'clock ↑
    Is it ↑

43. Has he gone ↑
    Where am I going ↑
    He has gone ↓

44. Where do you come from ↑
    You come from London ↓
    How did you come ↑

45. These are your books, aren't they ↑
    Those aren't your pens, are they ↓
    That man is a teacher, isn't he ↑

46. The coffee is hot ↓
    The coffee is hot ↓
    I'd like hot coffee ↑

47. This is my wife ↑
    My wife likes smoking and drinking ↓
    My wife is going ↓

48. These are your books, aren't they ↓
    Those aren't your pens, are they ↑
    That man is a teacher, isn't he ↑

49. Go to your room ↑

I'll go to my room and cry ↓

Don't go ↑

50. Has he gone ↑

Where am I going ↓

He has gone ↓

51. Do you like tea ↑

Do you like tea or coffee ↑

Do you like tea or coffee or milk ↓

52. Go to your room ↑

I'll go to my room and cry ↑

Don't go ↓

53. Where do you live, Mr. Jackson ↑

Mr. Jackson, this is Mrs. Smith ↓

I'm glad to meet you, Mrs. Smith ↓

54. The teacher speaks English ↓

The teacher speaks English, Italian and French ↑

The teacher doesn't speak any language ↓

55. Do you like tea ↑

Do you like tea or coffee ↓

Do you like tea or coffee or milk ↓

56. Go to your room ↓

I'll go to my room and cry ↑

Don't go ↓

57. Where do you live, Mr. Jackson ↑
    Mr. Jackson, this is Mrs. Smith ↑
    I'm glad to meet you, Mrs. Smith ↓

58. The coffee is hot ↓
    The coffee is hot ↑
    I'd like hot coffee ↓

59. What a ridiculous idea ↑
    I think that's a good idea ↑
    What a strange sensation ↓

60. What did you ask ↑
    Did you say something ↑
    When did you say ↓

61. The teacher speaks English ↑
    The teacher speaks English, Italian and French ↓
    The teacher doesn't speak any language ↓

62. She's a lawyer ↓
    She's not a lawyer ↑
    She's a lawyer and she wants a job ↑

63. These are your books, aren't they ↑
    Those aren't your pens, are they ↓
    That man is a teacher, isn't he ↓

64. You've paid, haven't you ↓
    You won't come, will you ↑
    It will be easier, won't it ↑

65. Where do you live, Mr. Jackson ↑
    Mr. Jackson, this is Mrs. Smith ↓
    I'm glad to meet you, Mrs. Smith ↑

66. Do you like tea ↑
    Do you like tea or coffee ↓
    Do you like tea or coffee or milk ↑

67. She's a lawyer ↑
    She's not a lawyer ↑
    She's a lawyer and she wants a job ↓

68. You've paid, haven't you ↑
    You won't come, will you ↑
    It will be easier, won't it ↓

69. This is my wife ↑
    My wife likes smoking and drinking ↑
    My wife is going ↓

70. The coffee is hot ↑
    The coffee is hot ↓
    I'd like hot coffee ↓

71. Where do you live, Mr. Jackson ↓
    Mr. Jackson, this is Mrs. Smith ↑
    I'm glad to meet you, Mrs. Smith ↑

72. You've paid, haven't you ↑
    You won't come, will you ↓
    It will be easier, won't it ↓

73. This is my wife ↓
    My wife likes smoking and drinking ↑
    My wife is going ↓

74. Who's coming ↑
    Are you coming ↑
    You're coming ↓

75. What did you ask ↓
    Did you say something ↓
    When did you say ↑

76. You've paid, haven't you ↑
    You won't come, will you ↓
    It will be easier, won't it ↑

77. Has he gone ↓
    Where am I going ↑
    He has gone ↓

78. Who's coming ↑
    Are you coming ↓
    You're coming ↓

79. The coffee is hot ↑
    The coffee is hot ↑
    I'd like hot coffee ↓

80. The teacher speaks English ↓
    The teacher speaks English, Italian and French ↑
    The teacher doesn't speak any language ↑

81. Has he gone ↑
    Where am I going ↓
    He has gone ↑

82. This is my wife ↑
    My wife likes smoking and drinking ↓
    My wife is going ↑

83. Who's coming ↓
    Are you coming ↑
    You're coming ↓

84. What time is it ↓
    It's two o'clock ↓
    Is it ↑

85. The teacher speaks English ↑
    The teacher speaks English, Italian and French ↑
    The teacher doesn't speak any language ↓

86. Do you like tea ↓
    Do you like tea or coffee ↓
    Do you like tea or coffee or milk ↑

87. What did you ask ↓
    Did you say something ↑
    When did you say ↓

88. Where do you come from ↓
    You come from London ↓
    How did you come ↑

89. What a ridiculous idea ↓

I think that's a good idea ↓

What a strange sensation ↑

90. The teacher speaks English ↑

The teacher speaks English, Italian and French ↓

The teacher doesn't speak any language ↑

APPENDIX E

PRODUCTION TEST

1. I'm very sorry. ↓
2. He always tells lies? ↑
3. Why are you upset? ↓
4. Answer my question. ↓
5. It's time for the class? ↑
6. The teacher is coming. ↓
7. You want a book, don't you? ↑
8. John likes smoking. ↓
9. I don't understand you. ↓
10. Can you give me some information? ↑
11. Please get me some cigarettes. ↓
12. Do you know her? ↑
13. He hasn't eaten, has he? ↓
14. You went to the movies? ↑
15. Shall I answer the telephone? ↑
16. He is not ready? ↑
17. What are you thinking about? ↓
18. This shirt is very expensive. ↓
19. How much is this? ↓
20. She prefers apples and oranges. ↓
21. It's a nice day today, isn't it? ↓

APPENDIX F

Teacher:
Faculty:
Instructions: Listen to the following triplets of sentences and mark those which are the same.

	A	B	C
1.	0	0	0
2.	0	0	0
3.	0	0	0
4.	0	0	0
5.	0	0	0
6.	0	0	0
7.	0	0	0
8.	0	0	0
9.	0	0	0
10.	0	0	0
11.	0	0	0
12.	0	0	0
13.	0	0	0
14.	0	0	0
15.	0	0	0
16.	0	0	0
17.	0	0	0
18.	0	0	0
19.	0	0	0
20.	0	0	0
21.	0	0	0
22.	0	0	0
23.	0	0	0
24.	0	0	0
25.	0	0	0
26.	0	0	0
27.	0	0	0
28.	0	0	0
29.	0	0	0
30.	0	0	0

	A	B	C
31.	0	0	0
32.	0	0	0
33.	0	0	0
34.	0	0	0
35.	0	0	0
36.	0	0	0
37.	0	0	0
38.	0	0	0
39.	0	0	0
40.	0	0	0
41.	0	0	0
42.	0	0	0
43.	0	0	0
44.	0	0	0
45.	0	0	0
46.	0	0	0
47.	0	0	0
48.	0	0	0
49.	0	0	0
50.	0	0	0
51.	0	0	0
52.	0	0	0
53.	0	0	0
54.	0	0	0
55.	0	0	0
56.	0	0	0
57.	0	0	0
58.	0	0	0
59.	0	0	0
60.	0	0	0

	A	B	C
61.	0	0	0
62.	0	0	0
63.	0	0	0
64.	0	0	0
65.	0	0	0
66.	0	0	0
67.	0	0	0
68.	0	0	0
69.	0	0	0
70.	0	0	0
71.	0	0	0
72.	0	0	0
73.	0	0	0
74.	0	0	0
75.	0	0	0
76.	0	0	0
77.	0	0	0
78.	0	0	0
79.	0	0	0
80.	0	0	0
81.	0	0	0
82.	0	0	0
83.	0	0	0
84.	0	0	0
85.	0	0	0
86.	0	0	0
87.	0	0	0
88.	0	0	0
89.	0	0	0
90.	0	0	0

Faculty:

Name and surname:

INSTRUCTION: Listen to the following pairs of sentences and write down if their intonation is same or different:

PERCEPTION TEST

	S	D
1.	0	0
2.	0	0
3.	0	0
4.	0	0
5.	0	0
6.	0	0
7.	0	0
8.	0	0
9.	0	0
10.	0	0
11.	0	0
12.	0	0
13.	0	0
14.	0	0
15.	0	0
16.	0	0
17.	0	0
18.	0	0
19.	0	0
20.	0	0
21.	0	0
22.	0	0
23.	0	0
24.	0	0
25.	0	0
26.	0	0
27.	0	0
28.	0	0
29.	0	0
30.	0	0

	S	D
31.	0	0
32.	0	0
33.	0	0
34.	0	0
35.	0	0
36.	0	0
37.	0	0
38.	0	0
39.	0	0
40.	0	0
41.	0	0
42.	0	0
43.	0	0
44.	0	0
45.	0	0
46.	0	0
47.	0	0
48.	0	0
49.	0	0
50.	0	0
51.	0	0
52.	0	0
53.	0	0
54.	0	0
55.	0	0
56.	0	0
57.	0	0
58.	0	0
59.	0	0
60.	0	0

	S	D
61.	0	0
62.	0	0
63.	0	0
64.	0	0
65.	0	0
66.	0	0
67.	0	0
68.	0	0