I dedicate this thesis to my family and more particularly

to my uncles and my parents for all the sacrifices they accepted to endure to allow us to complete our studies

to my very special husband, Mohamed, for his love, constant support and encouragement, and for never allowing me to give up

to our daughter, Selina, the fruit of our love and determination

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ALGERIAN INTONATIONAL PROFICIENCY IN ENGLISH: AN EMPIRICAL STUDY

Nadia Benrabah
Department of Phonetics and Linguistics
University College London

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University of London

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Abstract

Rather than a thorough analysis, the present work should be regarded as a contribution to the study of intonation. More particularly, it concentrates on the intonational proficiency of a sample of Algerian speakers of English (ASE).

The investigation consisted mainly of two experiments. The first one was a Production Test and aimed at gathering a speech sample of ASE, as well as a sample of native speech to be used as a control. So a test was designed and submitted to twenty ASE (ten males and ten females) and five native speakers (two males and three females). The test consisted of ten units. The first four were highly controllable and also analysed instrumentally; whereas the remaining ones were increasingly less controllable.

The second experiment was a Perception Test and aimed at evaluating the data by an audience of 160 native English listeners. Here, due to the large number of utterances, only the first four units were considered.

From the outset, a number of questions were raised, the most important of which are as follows. How successful do ASE manage to be in manipulating intonation so as to convey specific meanings? What are the major errors and how can they be categorized? How do ASE make Halliday's three dimensional decisions (i.e. 'tonality', 'tonicity' and 'tone')?

Despite numerous errors, most Algerian utterances were correctly understood. ASE tend to divide their speech into far more intonation groups than natives do. 'Tonicity' and 'tone' errors did also occur.

While attempting to answer those questions, further observations were made. The speech rhythm of the ASE tends to be syllable-timed. Rhythmic errors took place, e.g. failure to use weak forms . Short vowels tend to be

lengthened. Another peculiar finding is the existence of falling and rising 'gestures' independent of nuclei. Equally peculiar is the existence of fall-level and rise-fall-level tones. Finally, the error causing the most serious communication breakdown is wrong placement of stress.

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I would also like to express my thanks to the 20 Algerian speakers who agreed to take part in the first experiment for they actually made this work possible. I extend my thanks to the 160 anonymous native English informants who so keenly volunteered for the second experiment. Their cooperation did indeed enrich the findings.

I take this opportunity to express my deepest gratitude to Dr. Susan M. Ramsaran who supervised both my M.A. and the current study. She managed to guide me through every stage of the present work even when the conditions were quite unfavorable. I would also like to thank her for her friendship and humour.

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Finally, I wish to thank my husband, Mohamed, for taking off my shoulders half the load of house work and responsibility to allow me to complete this work, and also for accepting "Intonation" to be a frequent subject of discussion.

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"The brain is so determined
to find meanings, it makes
dreams out of random signals"

Sharon Begley
(Newsweek No. 33, August 14th, 1989)

Part One :

Theoretical Framework

Chapter one

Introductory

I. 1. PURPOSE OF THE PRESENT WORK

The present work was originally motivated by a problem the current writer met the first time she came to Great Britain. After having studied English for ten years (seven years in Secondary school[1] and three at the university[2]) the current author legitimately believed she would not have too much trouble communicating with native English people if she had a chance to spend some time in an English speaking country. That did not prove to be the case. Although communication per se was somehow attained, numerous difficulties arose involving mainly reactions, and attitudes on the part of various English people.

What actually happened was that although the current experimenter did not mean to be rude, impolite or unfriendly especially with people she had never met before, her interlocutors very frequently felt she was being impolite. Moreover, as one assumes a person always says what s/he means, or intends to signify, the various English persons whom she happened to talk to took the view that she was purposely, or deliberately being unkind, insistent and probably disagreeable. It took her about a year to become aware of the problem. Something was seriously missing in the curriculum or in the French and Algerian systems and methods of T.E.F.L.[3], and that was intonation. The reason why she was considered as being rude and insistent in her requests was due to her frequent use of falling nuclear tones where native English speakers use rising tones, or high rises where natives use high falls, eg: She (B) might have answered speaker A in the following way:

A: I spoke to John about the party.

B: You spoke to ↘Paul about it. (with a mid/low fall)

instead of a more courteous, tactful and definitely more polite:

You ↘ spoke to ˅Paul about it (with a fall-rise)

Or similarly in a situation where, after a terrible misunderstanding, B very gratefully thanks A in the following manner:

B: ,Thank you

with a rise instead of a very grateful

`Thank you!

which only a High Fall (on 'Thank') can convey (see also O'Connor & Arnold, 1973). A similar case would be a polite request uttered in the following way: Post this ↘letter ₀for me, as opposed to a more courteous `Post this ,letter °for me.

The conclusion the present author reached was the following one. Allowances are made for mistakes made by foreigners at the segmental level. However none will be made for errors at the level of intonation. Thus, if a native speaker of Japanese says to an English person:

/ led ɪz ə verɪ nɑɪskʌlə /

there are some chances that the English person will make sense of the sentence despite the mistake, i.e. the substitution of /l/ for /r/. However, even though no mistake is made at the segmental level, if a foreign speaker of English says

,Put them on the ↘table

instead of, say,

`Put them on the ,table

the English listener will assume the speaker deliberately meant to be commanding, probably rude, and not showing any sign of enthusiasm. Or similarly, if a foreign speaker of English says to an English person:

You're coming tomorrow, `aren't you ?

The English listener will interpret the speaker's utterance assuming he said what he actually meant to signify. In other words, he may not even answer, for the speaker's utterance suggests that he already knows the answer and is merely looking for confirmation. The (high) fall in the tag question suggests that the speaker expects a 'Yes' from his interlocutor.

If on the other hand, the foreigner had said:

You're coming tomorrow ,aren't you ?

the English hearer will again interpret the speaker's utterance assuming that he (the speaker) said what he really meant to express. Hence, the listener will reply, and provide the information the speaker is asking for. And this is suggested by the low rise in the tag which implies that the speaker is really asking a question, and waits to know whether the answer is 'yes' or 'no'.

If the speaker had mispronounced a particular sound, say, /t/ in 'tomorrow' and had said:

You're coming pomorrow aren't you ?

the listener will probably make sense of the utterance by correcting the mistake assuming that the speaker must have meant 'tomorrow' and not 'pomorrow'. It is interesting to note, however, that similar corrections seem to occur less frequently with intonation. "If the speaker said it this way, this must be the way he meant it to be" is a tacit assumption among the majority of English people. This idea is well stated in Bradford (1988: 51,Teacher's book) followed by Taylor (1989). Bradford explains how intonational choices are "planned at a deeply subconscious level". Native speakers may not be able to explain differences in intonation but they "cannot help responding to the effect". As O'Connor

& Arnold (1973: 2) explain in their introductory sections, the English listener

> "will probably assume that the ... effect given by the tune was the one which the speaker deliberately set out to give. This is very important — English speakers are able to make a good deal of allowance for imperfect sound-making, but being for the most part unaware of the far-reaching effects of intonation in their own language, they are much less able to make the same allowance for mistakenly used tunes."

O'Connor & Arnold (1973) is the approach adopted and taught in the Phonetics Department at University College London where the present investigator has been an internal post-graduate student for four years. It has had a great impact on her English. It is also responsible for her realizing that the main difficulties she met were at the level of intonation rather than at a segmental level. One must admit how sad it was to realize that never, throughout the previous ten years[4] (of English study), had there been any attempt to make pupils/students realize the importance of intonation in English. Unfortunately, the curriculum throughout the seven years in high school concentrated mainly on lexical and grammatical items. Even in the sessions supposed to develop oral skills, never was the word 'intonation' mentioned, let alone explained and exemplified.

So the current work was motivated by a desire to understand and, therefore, to study intonation, but more particularly, the intonation adopted by Algerian speakers of English. This, it was hoped, might help reveal the scope of the problem.

Throughout the experimental work conducted for the purpose of the present study, there has been a constant attempt to try and answer five major questions:

1) How successful do Algerian learners of English manage to be in manipulating English intonation?
2) Where do the major problems occur ?

3) How can they be categorized ?

4) Which type of errors recurs most frequently?

5) Which type of errors causes the most serious communication breakdown ?

For this, two experiments were set up. The first experiment, or 'The Production Test' was designed to

- gather a significant amount of data (spoken Algerian English) to be analyzed,
- evaluate the intonational proficiency of a sample of Algerians speaking English,
- try and see if the Algerian subjects were able to manipulate English intonation so as to convey specific meanings.

The second experiment, or the 'Perception Test', aimed at assessing how successful the Algerian informants managed to be in actually conveying those specific meanings via intonation. A sample of the data gathered for the purpose of the first experiment was presented to an audience of 160 native English listeners. The aim was to see if the native audience understood the meaning each Algerian was expected to convey, and to what extent communication broke down; in other words, to what extent were the Algerian speakers of English misunderstood.

The thesis is divided into two major parts. Part one aims at providing a theoretical framework for the present study. Part II presents an experiment on Algerian intonational proficiency in English. It is hoped that this will contribute an insight into the major intonational difficulties Algerian learners of English may face when communicating with a native audience. Furthermore, another aim is to provide some new information that would contribute to the progress of this branch of language study, which has recently been developing rapidly. There is no doubt that such information will be extremely helpful to a better

understanding of intonational phenomena, and more particularly non-native English intonational phenomena.

Chapter II aims at shedding some light on various experimental works that have been conducted on (non-) native English intonation and rhythm.

Chapter III is a step by step description of the two experiments aiming to collect a corpus of data to be observed and analyzed. The various stages in the actual administration of the tests are also described. The first experiment involved essentially Algerian Speakers of English (ASE) and a control group whereas, the second one involved an audience of Native English Listeners (NEL).

Chapter IV provides the results of the two experiments respectively and also includes some figures.

Chapter V is devoted to a discussion of the most striking Algerian intonational phenomena. It ends up with an 'assessment' of the methodology and choices made at various stages of the experiments.

Finally, Chapter VI, with its conclusions, is followed up by chapter VII which attempts to distance itself from the current experiments and speculate on further implications. In addition, and taking into consideration the major findings of the current study, some suggestions are made both for application in the (English) language classroom, and for further (very much needed) research.

Prior to reviewing the various experiments that have been conducted around the subject, it will perhaps be useful first, to clarify all the technical terms and concepts that will be used regularly throughout the thesis. Such is the aim of the following sections.

I. 2. SOME BASIC CONCEPTS

I. 2. 1. 'PROSODY' VERSUS 'SUPRASEGMENTAL'

Going back to the early Greeks, the term 'prosody' was already associated with the melody or "melodic features of spoken language" (Couper-Kuhlen, 1986: 1). Throughout the ages, however, 'prosody' underwent various extensions and/or developments in meaning, so that nowadays one cannot mention the word without feeling the vagueness and ambiguity that surrounds it. This is all the more striking if one remembers that another term, i.e. 'suprasegmental' has been introduced in the literature, which, instead of clarifying matters, has added to the confusion. One can clearly see that a problem of terminology remains in the whole body of literature.

Opinions are still diverging regarding the meaning of the terms 'prosody' and 'suprasegmental'. It would perhaps be easier to distinguish between two different types of analysis. The first one concentrates essentially on a description of speech sounds or segments. The second one devotes itself to the study of features which do not solely affect a given segment but stretch over one or more syllables and/or longer utterances. Such features are said to belong to another level of analysis: the suprasegmental or prosodic one. So, the immediate conclusion would be that anything which is not segmental is suprasegmental.

However things are not as easy as they might appear to be. For, the real confusion lies in those very words 'suprasegmental' and 'prosodic'. Some authorities use both terms interchangeably (Gimson 1980: 60; Cruttenden 1986: 1). And while some prefer the term 'prosodic' (Cruttenden[5], 1986; Crystal, 1969) others favour 'suprasegmental' (mainly American structuralists). Matters are made even worse when it comes to categorize the features. While Cruttenden identifies the following characteristics as prosodic features:

- pitch
- length
- loudness

as well as

- voice quality (Cruttenden, 1986: 1)

Gimson (1980: 60, 61) prefers to categorize this last feature together with "voice set"[6] under the heading of 'paralinguistic'. Characteristics like "length, pitch, and a degree of stress", as well as "rhythm, tempo, loudness, etc." are included under the heading of prosodic features (Gimson, 1980: 60-61). Crystal (1969) also considers a category that comprises what he calls 'paralinguistic features'. He makes a distinction between features that are linguistically significant (capable of changing meaning), termed prosodic and those which are not, termed paralinguistic.

So to sum up, two different designations are used in the literature: prosody and suprasegmental. It is common among American structuralists to prefer the term 'suprasegmental' to refer to "features whose domain extends over more than one segment" (Lehiste, 1970: 1; Couper-Kuhlen, 1986: 2). This would seem to suggest that features such as "vowel length, sound reduction, elision, coarticulation, assimilation, and dissimilation" should be included together with "stress, rhythm and intonation" (Couper-Kuhlen, 1986: 2). It is argued that in some languages phenomena like vowel harmony or nasalization would also be included (Couper-Kuhlen, op. cit.; Hyman, 1975: 186-7).

In the British tradition, however, the preference is for the term "prosody". This designation usually comprises features like pitch, length, and loudness. Sometimes, another term (i.e. "paralinguistic") is added on to the list, to comprise features like "voice qualifiers" (or 'voice qualities') and "voice qualifications"[7] (Crystal, 1969: 133; see also Laver, 1980).

In the present work, the use of both words will be avoided whenever possible. When necessary, "prosodic" (in Gimson's sense) is the term that will be adopted as it is felt to be closer to represent the various intonational features that will be dealt with throughout the thesis. The designation "suprasegmental" may encompass far more features than the present experimenter wishes to discuss within the scope of the current study. However, if the focus is on one particular feature, then the reader will be provided with the relevant information regarding the feature under discussion.

Note that it is common in the literature to view speech as three-dimensional (Couper-Kuhlen, 1986: 5). In other words, speech can be described from the point of view of the speaker (here, one is mainly concerned with the ARTICULATORY dimension), from the point of view of the hearer (or AUDITORY sometimes also called 'perceptual' or even 'receptive'), or in terms of the physical signal transmitted from the speaker to the hearer (ACOUSTIC).

The present investigation will be mainly concerned with the auditory dimension although most of the observations will be supported by evidence taken from the acoustic dimension (e.g. laryngograph traces obtained for each individual speaker). The reader is referred to chapter III (sub section III.5.) where ample details are provided.

I. 2. 2. PITCH

Although there is no one-to-one relationship between them, 'pitch' and 'fundamental frequency' of the voice are intimately related. It would probably be useful, first, to clarify each term.

So, viewed from the third dimension (acoustic), pitch coincides with the fundamental frequency of the voice. The fundamental frequency of the voice relates to the number of times the vocal folds complete a cycle (one opening and closing) in one second. Frequency is measured in hertz or

cycles per second. One complete opening and closing constitutes a cycle. If the vocal cords complete 200 cycles in one second, the frequency is said to be 200 Hz (hertz).

Viewed from the second (i.e. auditory) dimension pitch is the perceptual term used to refer to the "varying heights of the pitch of the voice" over one or more syllables (Cruttenden, 1986: 2). As Ladefoged puts it (1982: 168), it "enables a listener to place it [the pitch of a sound] on a scale going from low to high without considering its acoustic properties".

This explains why pitch is often correlated with frequency. Although **frequency** is a term belonging to the acoustic dimension, it is related to pitch in the sense that the rate of vibration of the vocal folds will determine the hearer's perception of a 'high' or 'low' pitch. The higher the rate of vibration, and the higher the pitch heard, or the lower the rate, the lower the pitch.

One must be cautious, however, as experimental evidence has shown that there was no "parallel correlation between pitch and frequency: other factors than frequency" (e.g. length, loudness...) "may affect our sensation of pitch" (Crystal, 1980: 272).

I. 2. 3. LOUDNESS VERSUS INTENSITY

If the perceptual term 'pitch' is related to the acoustic measurement of 'frequency', so is **loudness** to **intensity**.

According to Borden and Harris (1980: 41), "the intensity of a signal is directly related to its loudness". Besides, loudness "as perceived by the listener is related to the breath-force which a speaker uses" (Cruttenden, 1986: 3).

In other words, the loudness of a sound is said to correspond to variations in the pressure of air coming from the lungs which is directly responsible for the size or "**amplitude**" of the vibrations of the vocal folds. So the more air pressure (**intensity** measured in decibels or dB), the

bigger the size (amplitude), the louder is the sound heard. The correlation, however, is not perfect or absolute, for, any increase in intensity does not always coincide with an equal increase in the perceived loudness.

So while the nearest physical correlates of loudness are 'intensity' and 'amplitude', loudness is the "subjective, psychological sensation of judged intensity" (Borden and Harris, 1980: 41). It is the designation used to refer to the hearer's perception of that feature, and it can be placed on a scale going from soft to loud (Crystal, 1980: 215; Ladefoged, 1982: 169; Cruttenden, 1986: 3, Fry, 1979: 89-94; Denes and Pinson, 1963).

Gimson (1980: 27) sums up the relationship quite clearly:

> "More strictly, what is 'loudness' at the receiving end should be related to *intensity* at the production stage, which in turn is related to the size or *amplitude* of the vibration and the speaker's feeling for 'stress'

I. 2. 4. LENGTH (OR DURATION) VERSUS TIME

Here again, one cannot talk about length and time without referring to the dichotomy: psychological versus physical. If one agrees that any speech sound extends in time, then length refers to the duration of time, as perceived by the hearer, that is needed for a particular sound to be articulated. Time, on the other hand, refers to the physical (or acoustic) measurement of that duration (Crystal, 1969; Ladefoged, 1982; Couper-Kuhlen, 1986; Cruttenden, 1986). The following diagram, taken from Couper-Kuhlen (1986: 7) illustrates quite clearly the relationship between the three dimensions:

ARTICULATORY		ACOUSTIC		AUDITORY
Vibration of vocal folds	————	Fundamental frequency (f_0)*	————	Pitch
Physical effort	————	Amplitude (intensity)	————	Loudness
Timing of articulatory movements	————	Time	————	Duration

* Fx is now more usual than F_0

I. 2. 5. STRESS VERSUS ACCENT

As clearly explained in Ladefoged (1982: 224), stress is also a prosodic feature. Besides, it "applies not to individual vowels and consonants but to whole syllables — whatever they might be. A stressed syllable is pronounced with greater amount of energy than an unstressed syllable."

In fact, several factors may contribute to the hearer's perception of stress. Pitch, loudness, duration, or quality, for example, may act concomitantly or separately. A high pitched syllable might be heard as stressed as compared to a low pitched syllable which might be perceived as unstressed. And so will a louder syllable as opposed to a weaker one. Length and quality may also affect one's perception of stress. If after a succession of three / la / a speaker utters the same syllable but with the longer vowel / a: / e.g.

(1) / la la la la: la la la la: /

the fourth and last syllables respectively will be heard as stressed. In the same way, the fourth and last syllables of (2) below

(2) / la la la lo la la la lo /

will be perceived as stressed due to the change in the quality of the vowel.

Each English word has an intrinsic stress. Moreover, English is a language which makes use of stress contrastively. Hence, stress helps to distinguish between categories of words, such as nouns vs. verbs (Gimson, 1980: 232):

NOUNS	VERBS
INsult	inSULT
INcrease	inCREASE
IMport	imPORT
DIScount	disCOUNT

adjectives vs. nouns, or between compound nouns which have a single stress on the first element, and adjectival phrases which have two stresses (one on each element), etc.

Sometimes, the term accent may be found in the literature. At times, this can cause some confusion especially when a given author does not bother to define the words (accent and stress). Whereas some authorities favour the former, for others, the preference is for the latter. On some occasions, though, the two terms are used interchangeably.

In the present study, a difference will be made between them. Stress will be the designation used to refer to the syllable (of a given word) that is more prominent than its neighbours.

Accent, on the other hand, will be the stressed syllable of an intonation group (see definition below), which, due to its semantic weight, and hence its importance within the utterance is highlighted by the speaker. That particular syllable will be highlighted by added pitch prominence. In other words, an accented syllable is one which is both stressed and carries a pitch prominence. Note that any stressed syllable has the potential for accent (Bolinger, 1972a: 22).

I. 2. 6. INTONATION AND INTONATION GROUP

"INTONATION" says Cruttenden (1986: 9)

> "involves the occurrence of recurring pitch patterns, each of which is used with a set of relatively consistent meanings, either on single words or on groups of words of varying length."

For Ladefoged (1982: 99) "the intonation of a sentence is the pattern of pitch changes that occurs". Thus, "the part of the sentence over which a particular pattern extends is called a tone group."

There does not seem to be any controversy in the literature regarding what intonation really is. In fact, most authorities would agree that broadly speaking, the term intonation refers to the variation in the pitch patterns of a given utterance. It is the organization of tones (cf. sub section I. 2. 8. below) into tunes.

It is also a well established fact that no one speaks continuously without stopping. One needs to pause from time to time. Therefore, there is a need to divide one's utterances into more or less shorter units, e.g. sentence i) below will never be uttered all in one blow

i) Before we arrived the manager who is always very busy had reminded his secretary to have all the files ready for our 10 o'clock meeting.

Instead, a number of potential pauses might be observed throughout the delivery of sentence i), as in sentence ii) below

ii) Before we arrived | the manager | who is always very busy | had reminded his secretary | to have all the files ready for our 10 o'clock meeting ‖

Note that those pauses are potential in the sense that the tone unit boundaries are not necessarily realised as actual pauses in a rapid delivery. This was well illustrated in the way native English speakers (i.e. the controls) read the short dialogues and the reading passage (see chapters V and VI).

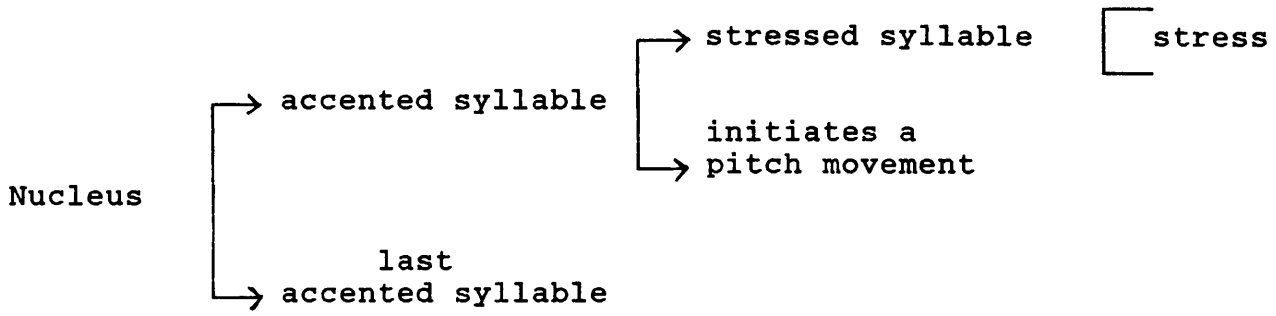
The single vertical line indicates a short (potential) pause within the same sentence. Whereas, the double vertical lines indicates no close syntactic connection with what follows. So each line or (potential) pause, divides the utterance into shorter meaningful units. These units are variously referred to as 'sense group', 'tone group', 'word group', 'tonality', 'tone unit', 'intonation group'... (see Armstrong & Ward, 1926; Kingdon, 1958; Halliday, 1967; Crystal, 1969; O'Connor & Arnold, 1973; Cruttenden, 1986, among others). In fact, all those different labels serve the same purpose: they mean the same thing. In the present work, **INTONATION GROUP** will be used.

I. 2. 7. NUCLEUS

Since the term **accent** has already been clarified, it will be easier to define **NUCLEUS**. The nucleus has also been variously called 'tonic syllable', 'pitch accent', 'sentence stress', 'focus' (Cruttenden, 1986; House, 1983; Hirst, 1977; Chomsky and Halle, 1968; Bresnan, 1971-72; Gussenhoven,1984). But although various designations have been used to refer to it most analysts recognize the existence of such a syllable. In the present work the term 'nucleus' or 'nuclear syllable' will be preferred.

So the nucleus is the syllable which is given most of the weight in the intonation group. It is the last accented syllable of an intonation group. The main difference between the accented syllable and the nucleus is that while there is usually only one nucleus per intonation group, there might be more than one accented syllable. One may come across a

rising or falling head which, due to the pitch movement it initiates, becomes an accented syllable. So a nucleus is necessarily accented. But an accented syllable is not necessarily a nucleus. The following diagram shows the respective characteristics of a stressed syllable, an accented one and a nucleus:



I. 2. 8. NUCLEAR TONES

Every syllable that one utters is said on a certain pitch — a musician might prefer to call it a 'note'. As opposed to music, in spoken language one is mainly concerned with "relative pitch" (Byrne & Walsh, 1977) or tones (hence, the label 'nuclear tones').

It seems that there are as many sets of nuclear tones posited as there are analysts. But, most authorities recognize a number of basic similar tones, i.e. falling, rising, falling-rising, rising-falling and level. There are, of course, numerous variations of those. Some authors also distinguish between high and low moving tones (Palmer, 1922; Kingdon, 1958; O'Connor & Arnold, 1973). The current writer will adopt O'Connor & Arnold's (1973) basic tones. In other words seven nuclear tones will be posited as a basis for analysis. These are:

TONES		TRANSCRIBED
High Fall	(HF)	`Yes
Low Fall	(LF)	̀Yes
High Rise	(HR)	´Yes
Low Rise	(LR)	,Yes
Fall-Rise	(FR)	ˇYes
Rise-Fall	(RF)	ˆYes
Level	(L)	›Yes

Four types of head are also identified, namely:

High	Head	ˈ
Low	Head	ˌ
Falling	Head	↘
Rising	Head	↗

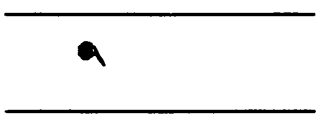
Note that although O'Connor & Arnold's tones and intralinear system of notation have been adopted in the present study, these were at times improved so as to suit the current investigator's needs, and to allow her to represent more accurately the observed patterns. Such improvements will be discussed in due course.

I. 2. 9. PITCH RANGE

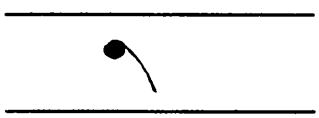
Pitch range is the designation that will be used to refer to "the normal high and low limits of the voice" (O'Connor & Arnold, 1973: 7). Two arbitrary limits will be set: a high and a low one. Voice pitch is said to vary between those two limits, or pitch range.

It is common in the American tradition to posit a number of pitch levels —— usually four —— going from extra high, high, mid, and low (Pike, 1945; Trager & Smith, 1951). The current work will follow the lines of the British tradition, more particularly O'Connor & Arnold's, and posit only three

relative pitch heights: high, mid, and low. Furthermore, a speaker's pitch range will be schematically represented by two horizontal lines standing for the top and bottom of the voice range respectively. The width will be the distance within the pitch range covered by a particular nuclear tone. There follows an illustration:



`John
(narrow fall)



`John
(wide fall)

I. 3. RHYTHM

I. 3. 1. INTRODUCTION

Amidst all the research about rhythm that has been carried out over the centuries four basic concepts seem to emerge: (1) perception, (2) recurrence, (3) pattern and (4) mind imposing regularity. When added up together, those four points could in fact constitute a broad definition — and a better understanding — of rhythm. Rhythm is a perceptual phenomenon and has to be tackled from the point of view of the hearer. So the 'hearer' (1) is the starting point. Furthermore, s/he will hear as rhythmical any 'more or less' (4) 'regular' (3) 'recurrence' (2) of a particular event.

I. 3. 2. ISOCHRONISM

Behind the term ISOCHRONISM lies the assumption that English "has more or less *isochronous* feet" (Catford, 1982: 85). But what does it mean? Or what do 'isochronous' and 'feet' mean exactly? The foot is defined as a unit consisting of at least one stressed syllable and (optionally) any succession of unstressed syllables that may follow up until "but not including" the next stressed syllable. So the foot, also called "rhythm group" (Cruttenden, 1986: 24) is

said to start from one stressed syllable to the next (exclusive) e.g. (1) [Jane] [came] consists of two feet. Consequently, any succession of intermediate unstressed syllables belongs to the preceding foot e.g. (2) [John a-] [-rrived] [yesterday] consists of three feet. Under such circumstances, one might wonder what happens to any sequence of unstressed syllables at the beginning of an utterance as 'The' or 'The gui-'in (3) The [carpenter was] [late] and (4) The gui- [tar is] [broken] respectively which both consist of two feet. ANACRUSIS is the designation Cruttenden uses (following established usage) to refer to such cases of unstressed syllables at the beginning of an utterance.

One can hardly deal with isochronism without necessarily referring to the notion of TIME (see subsection I.3.3. below). For, if English rhythm is said to have "more or less isochronous feet" (Catford, 1977: 85) or "an isochrony based on stresses" (Cruttenden, 1986: 24) it means that each foot has approximately the same duration; in other words, that strong stresses tend to come at more or less equal intervals in time. It follows that in sentence (2) 'John arrived yesterday' each of the three feet has the same duration; moreover, the length of the second foot ('-rrived') is about equal to the length of the first consisting of two syllables or the third foot consisting of three syllables. This 'theory', however, has been variously challenged on the grounds that in any given stretch of speech feet are not always equal in duration. Experimental evidence has long supported such claims. Classe (1939) was among the first scholars to try and verify the (isochrony) hypothesis making use of instrumental measurements. Yet, he failed to find experimental evidence to support the authenticity of English rhyhthm isochronism. And so did a few others (Shen & Petersen, 1962; O'Connor, 1968; Ohala, 1972).

Despite the failure to find experimental evidence to support the 'theory' of perfect isochronism in English, there seems to be a tacit consensus among authorities. There is a tendency in English for stresses to come at more or less equal intervals in time. For this to be achieved, intervening unstressed syllables are 'compressed', this in turn resulting in a reduction of long vowels and a weakening of full vowels.

Although implicitly present in previous accounts (cf.Taig, 1929; Fogerty, 1936; Alvarez de Ruf, 1978) an additional and important factor needs to be more explicitly discussed: the time factor. Besides, one can hardly talk about the time factor without necessarily opposing it to the accent factor or merely referring to what came to be known as the "temporal" versus "non-temporal" (or "accentual) approaches to rhythm respectively.

I. 3. 3. CONTROVERSY: TEMPORAL VS. ACCENTUAL APPROACHES

Although the time factor has been approached differently a concensus seems to have been reached. None would deny its very existence in any possible form of event. For there is indeed a progression of time from the outset to the end of an event.

In a discussion relating to the "time factor" — and, in the present case the perception of time lapses — one has to be always cautious about defining the term and making clear whether one is dealing with perceived or physical duration. It is, unfortunately, not within the scope of the present work to review all available experiments that have been conducted around the subject (the reader is directed to Vierordt (1868), Woodrow (1951), Fraisse (1963) mentioned in Alvarez de Ruf (1978) to name but a few. With regard to the present study, 'perceived' duration is discussed in greater detail. But, first, what is the difference — if any — between the two? Physical duration is that length of time

that can be measured instrumentally with great accuracy. This physical duration, however, often seems to contradict "protensity" which is the label used to designate the duration which the hearer perceives or the 'perceived duration' (Woodraw, 1951 in Alvarez de Ruf, 1978: 38). The two are said to be closely related. It is even argued that the latter depends on the former (Curtis, 1916, in Alvarez de Ruf,1978: 38). Although this last view has been challenged, for the purpose of the present investigation, it will be assumed that physical duration and perceived duration (or "protensity") are different.

Proponents of the temporal approach to rhythm argue that time is the basis of "English rhythmical prominence" (Crystal, 1969: 27). Crystal reports Omond (1921: 267) to assert that "verse considered apart from time is a dead thing". Two basic concepts are central to the temporal discussion: periodicity and isochrony. By the former is meant "the recurrence of an event at regular periods or intervals", and by the latter "the equal duration of these intervals in time" (Couper-Kuhlen, 1986: 51). So for the "timers" (Couper-Kuhlen, 1986: 52; Crystal, 1969: 27) the basis of metrical units (i.e. feet) is time. A sequence of stimuli is rhythmical because there is a recurrence of an event at regular intervals in time.

Opposing this view is the non-temporal or "accentual" approach to rhythm. Adherents of this view hold that it is accent, and not time which is the most significant and decisive characteristic of rhythm. Hence, for the "accenters" (Couper-Kuhlen, 1986: 52) a sequence of stimuli is perceived as rhythmical because the sensory impressions are related to one another in terms of salience. Advocates of the accentual view argue that the notion of repetition which seems to be central to the temporal theory is not that significant; moreover (Couper-Kuhlen, 1986: 52),

> "If the repetition occurs at all, it only serves to draw one's attention to the pattern. The movements of a dancer, for instance, are perceived as rhythmic if they are structured in terms of salience; whether the pattern recurs or not is secondary."

Crystal (1969: 29) also argues against the temporal view claiming it to be untenable:

> "It is now clear that the temporal thesis is untenable [...] There were no objective measurements put forward in support of the temporal theory when it was propounded, and when these did come to be made it was readily demonstrable that great variations in terms of temporal length existed between prominent and unprominent syllables. Occasionally, even, the latter could be longer than the former."

Here, one could argue that despite those results, further psychological studies (see Alvarez de Ruf, 1978) have shown that "given a succession of intervals of different duration" (Couper-Kuhlen, 1986: 52) long intervals tend to be underestimated and short intervals overestimated (Vierordt, 1868 in Alvarez de Ruf, 1978: 35). Furthermore, this impression of more or less equal length of time is in fact imposed by the hearer's mind (Nadia Benrabah, forthcoming).

The time versus accentual views have opposed each other for centuries, and needlessly, as it may, as Adams seems to suggest (Adams, 1979: 12) "since clearly the rhythmic impulse must be marked in some way for perception of rhythm to occur at all". It seems true, in fact, as some scholars have pointed out (Brown, 1911; Adams, 1979; Couper-Kuhlen, 1986) that at a "superficial level at least" the temporal and accentual theories may be reconciled (Couper-Kuhlen, 1986: 53). For, "intervals of time, in order to be measured, must first be marked" (Adams, 1979: 57). Adams also also reports Tempest (1930) to maintain that "space in time is not even comprehensible to the mind unless there is some mark by which it may be recognized" (Adams, op.cit.), "this mark, in the

case of auditory rhythm, being a time-occupying sound" (Tempest, 1930 reported in Adams, 1979: 57). Brown (1911:344) shares the same view:

> "A rhythm is temporal in so far as there is any regular return of similar features. But at the same time such a rhythm will also be accentual since there must always be points of emphasis whose return can be marked."

It is also the present writer's belief that the two competing views are reconcilable. For there must be some basis for grouping sequences of syllables together to form rhythmic units. Although it has been challenged, the view that English rhythm is isochronous will be maintained here. There is indeed a recurrence of similar events at regular intervals in time; and those events are nothing but the stresses or the accented syllables. It may be argued that this last view is pedagogical in orientation and probably adopted by most teachers and those involved with foreign learners of English. That is true. Throughout the present study Gimson's view in relation to "rhythmic nature of connected English" will be adopted (Gimson, 1980: 282):

> "The accented syllables follow each other at roughly equal intervals of time; any intervening unstressed syllables are said rapidly."

I. 3. 4. STRESS-TIMED VERSUS SYLLABLE-TIMED RHYTHM

In connection with the fundamental concepts of 'time', 'accent', and 'isochronism' came to be debated the notion of stress- vs. syllable-timed rhythm. It is a widely accepted assumption that all languages are spoken with some sort of rhythm (Abercrombie, 1967: 96-97; Allen, 1975). Furthermore, (Adams, 1979: 86),

> "all speech rhythm exists in time, but the speakers of different languages divide time differently, and thus even though some feeling of rhythm is experienced whatever the language spoken, the particular timing and

> organization of the rhythm units of a language determine a rhythmic succession which is an essential and distinctive feature of the phonological structure of that language."

Adams (op.cit.) summarizes quite well what the discussion involves. There is a tendency in English to space stresses uniformly and consequently "destroying any possibility of even time spacing of syllables" (Pike, 1945: 34). Despite varying number of syllables in rhythm units, in order to achieve a similar time value, the syllables of longer rhythm units are compressed and uttered more rapidly so as to fit within the time limits; while those of the shorter ones are expanded and produced more slowly. This explains why "man" and "manager" in the pairs (1) and (2) below or "Tom will" and "Tom'll do it" in (3) and (4) respectively (taken from Pike, 1945) have different number of syllables but, have the same time value:

(1) The '<u>man</u>'s '<u>here</u>

(2) The '<u>ma</u>nager's '<u>here</u>

(3) If '<u>Tom</u> will '<u>I</u> will

(4) If '<u>Tom</u>'ll do it '<u>I</u> will

In longer utterances (or rhythm units) the same effect is achieved by not only squeezing intervening syllables but also by reducing vowels, deleting segments or syllables, and using weak forms. This characteristic, typical of English rhythm, is non-existent (but cf. Danes in Adams, 1979: 86) in some other languages such as French, Spanish, Yoruba, Telugu, where each syllable is given the same time value. In such languages, instead of stresses, it is the syllables which tend to come at more or less equal intervals in time. And because each syllable is given the same time value, utterances with greater numbers of syllables take more time to be pronounced than those with fewer syllables. Equally, one does not witness any reduction, weakening or elision similar to those that take place in English. Unstressed syllables in English, are "crushed together" (Pike, 1945: 34)

this having the effect of focussing on the stressed syllables. By contrast, it will be shown in Chapter V that such a phenomenon is practically non-existent in Algerian Arabic where all syllables are given the same value. This could explain one of the fundamental and recurrent problems that foreign learners of English (here ASE) are facing, and more particularly those whose mother tongue has a syllable-timed rhythm (Adams, 1979; Anderson, 1972; Gimson, 1980). Instead of making appropriate use of weak forms in grammatical or function words, reducing or weakening vowels in these words which are not marked (i.e. not stressed), foreign speakers of English tend to grant time and prominence to unstressed syllables. This results in both stressed and unstressed syllables alike to be given the same value. Consequently, their English often has a staccato rhythm, and very frequently, "the general impression is that of a SPOKEN CHANT" (Pike, 1945: 35), or of a mechanical speech continuum similar to those computer-made synthetic "word-grouping" (for this can hardly be called "speech" at all).

The notion of isochronism is intimately related to the dichotomy stress- vs. syllable-timed rhythm. For, when a language is classified as stress timed, the rhythm of that language is said to have isochronous stress. While the rhythm of a syllable-timed language is said to have isochronous syllables (Pike, 1945; Abercrombie, 1967; Catford, 1982). Furthermore, it is claimed that the rhythm of all human languages belongs to one or the other category (Abercrombie, 1967: 97; Pike, 1945). Hence, while English, Russian and Arabic are classified as stress-timed languages, French, Telugu and Yoruba are said to have a syllable-timed rhythm (Abercrombie, 1967: 97). Roach (1982) questions the very consensus that has been reached among some authorities regarding this classification. He attempts to test instrumentally Abercrombie's (1967: 98) assertion that any language can be assigned to one or the other category on the

following bases:

(1) "there is considerable variation in syllable length in a language spoken with a stress-timed rhythm whereas in a language spoken with a syllable-timed rhythm the syllables tend to be equal in length."

(2) "in syllable-timed languages, stress pulses are unevenly spaced."

Roach tested the particular languages which Abercrombie labelled syllable-timed vs. stress-timed languages. Unfortunately, far from supporting Abercrombie's claims, the results of Roach's experiment showed that it was on the contrary impossible "to separate the two groups of languages on this basis" (Roach, 1982; 78). Another instance involving the questioning of a widely accepted view, is the categorization of French as a syllable-timed language. Wenk & Wioland's (1982) experiment tried to disprove the widespread assumption that in a syllable-timed rhythm, each syllable is given the same time value, and consequently, that an utterance of ten syllables should take twice as much time to be produced as one with five syllables. They measured the inter-syllable intervals of the sentence (1982: 193): "Il a sollicité ma collaboration, car Pierre aime toujours l'art". The first sequence "Il a sollicité ma collaboration" consists of twelve syllables, and should therefore require twice the amount of time of the second sequence "car Pierre aime toujours l'art" consisting of six syllables. The results showed that instead of representing twice the time of the second sequence, the first utterance needed, in fact, a shorter lapse of time than the second (1982: 194).

From the above account, it seems clear that traditionally it has been common to explain any differences in rhythm between languages (or groups of languages) in terms of time. Consequently, most of the debate was mainly directed towards justifying how those temporal factors could be inherent to rhythm. Although it was a valuable and convenient means of

describing and explaining differences in rhythm, up to recent times, it turned out that isochrony was clearly not an adequate and a reliable criterion. In the light of more recent experiments (Lehiste, 1977; Donovan & Darwin, 1979; Darwin & Donovan, 1980; Roach, 1982; Wenk & Wioland, 1982; Scott, Isard & de Boysson Bardies, 1985) the problem has been reassessed, and the traditional concepts called into question. The results of these studies led some scholars to simply reject pure isochronism, while others accepted a compromise, that is a "tendency" towards isochronous rhythm. Besides, in the past, most of the research focussed on productive rather than perceptual isochronism. This is well illustrated in the various experiments measuring inter-stress or inter-syllable intervals.

Rhythm is not only a temporal phenomenon, but also one dependent upon stress, and the constituents and structure of the syllable. If one attempts to measure inter-syllable intervals, one has to bear in mind that the structure, and the length of the segments constituting the syllable(s) involved have a considerable effect on the duration of the whole interval.

The syllable has been the centre of hot debate regarding its nature and definition. It is, however, not within the scope of the present work to give an account of the various views held. For the sake of practicality, Roach's (1982: 76) view will be accepted as valid:

> "[...] it is felt to be intuitively more satisfying to aim to measure as nearly as possible from the PHONOLOGICAL beginning of the syllable [...], so that if the syllable begins with a consonant cluster, one measures from the beginning of that cluster."

This is all the more significant if one has to deal with a language possessing in its phoneme inventory short and long vowels, long (or double) consonants; or which grants some lengthening faculties to some segments e.g. / v ɓ ʒ / in

French or voiced consonants as is the case in English; or which even allows other phonological processes to affect the respective length of each and every segment.

In addition, a further element recently came out of a number of experiments (Dauer, 1983 reported in Den Os, 1983a: 17; Allen, 1975). This may explain why one could not find any significant difference in inter-stress intervals between 'stress-timed' and 'syllable-timed' languages (Den Os, 1983a: 17):

> the "placing of stresses at more or less regular intervals (from 0.2 to 1 second) is a universal property of temporal organization of speech (also in syllable-timed languages)"

So arose a desire to look for "other properties than isochrony to explain differences in rhythm" (Den Os, 1983a: 17). The notion of syllable structure is currently the focus of such research and debate.

Notes to Chapter One

1 From '6ème' to 'terminale'.

2 Leading up to a 'licence d'enseignement' or a level similar to a B.A. in English studies.

3 As the present author underwent the French system up to the 'baccalauréat' or 'classe de terminale', and the Algerian system for three years at the University of Oran.

4 Except for one of the six semesters constituting the 'licence' courses at the university of Oran.

5 Although Cruttenden admits his preference for the term 'prosodic', he does not give any hint about a difference of meaning between the two.

6 [...] identification of the speaker" on the basis of the "recognition of his own peculiar voice quality (or 'voice set')".

7 Voice qualifiers (sometimes called 'voice qualities'): are features such as whisper, creak, falsetto, etc... which contrast with Voice qualifications (sometimes called 'non-linguistic' cf. Couper-Kuhlen, 1986: 3) comprising features like: cry, sigh, cough, sneeze, laugh, giggle, etc... So, 'voice qualifiers' + 'voice qualification' = **PARALINGUISTIC FEATURES** (the reader is also referred to Laver, 1980).

8 Reported in Adams (1979: 9).

9 Taig (1929: 17, in Alvarez de Ruf, 1978: 5).

Chapter Two

Review of Related Literature

II. 1. INTRODUCTION : STATEMENT OF THE PROBLEM

Considering the last five decades or so, one cannot fail to notice the huge amount of literature that has been published on the subject of prosodic[1] features (cf. Palmer, Pike, Halliday, Crystal, Bolinger, Cruttenden, Brazil, O'Connor and Arnold, Couper-Kuhlen, to mention just a few). This has allowed great progress to be realized in one's understanding of what has often been referred to as the suprasegmental[1] aspects of speech. It does not mean, however, that all authorities agree on the various principles and/or aspects of prosodic analysis.

Considering the problems encountered in prosodic analysis, no consensus has yet been reached as to what the right solutions are. Similarly, as far as the functions of intonation are concerned opinions are still diverging as to whether intonation performs primarily an attitudinal, a grammatical, or even a discoursal function. What remains, in fact, is a number of schools of thought, each with a different approach which determines its own system and orientation.

It goes without saying that a multiple view to the same problem(s) can indeed prove very enriching. However, it may also constitute a serious hindrance and cause some dramatic difficulties especially in the field of contrastive linguistics as Anderson (1972) points out. A different approach to prosodic analysis may imply, if not a separate notational system of transcribing intonation, mainly

major differences in fundamental orientation. Comparing the work of Pike (1945) on the intonation of American English and that of von Essen (1946) on German, Anderson (1972: 2) makes the following comment:

> "When one then goes on to try and compare the relevant features of the transcribed intonation contours isolated by the various investigators, the problem becomes acute. For example, whereas Pike attempts to isolate a large number of recurrent intonation contours in terms of sequences of pitch levels and to assign them specific meanings, von Essen takes a more syntactic orientation, regarding all contours as variations of three basic types: terminal, progredient or interrogative."

Similarly, Engler & Hilyer (1970: 101), aiming to compare the American and the British intonation systems, do not miss the opportunity to state how difficult a comparison between the two approaches can be:

> "This difference of approach made comparison of the two descriptions [the American and the British] difficult in many ways. For instance pitch variations are more sharply treated in the British system and stress variations in the American. Also one tune in the British system may well be several contours in the American system."

What seems to come out of comments similar to Anderson's and Engler & Hilyer's is that it is the diversity in terms of approach, terminology, concepts, or aim(s) of the various intonational studies which makes a comparison or merely a starting point rather difficult.

II. 2. GENERAL SURVEY

Although a brief survey on the development of prosodic research follows, the reader interested in more thorough studies is referred to a number of works where ample details are provided. These include Pike (1945: section 2), Hadding-Koch (1956), O'Connor (1957a, 1957b), Stubelius (1961),

Magdics (1963), Crystal & Quirk (1964: chapter two), Lieberman, P. (1967), Peck (1969), and Crystal (1969), Couper-Kuhlen (1986) to name just a few.

II. 2. 1. THE FORM OF ENGLISH INTONATION

II. 2. 1. 1. EARLY WORK ON INTONATION

John Hart (1569) seems to be one of the earliest works where reference to the melody in spoken English is made in connection with a discussion about rules for punctuation usage[2]. Throughout the next few generations, punctuation was mainly defined in terms of syntactic relationships. One had to wait until 1633 to find one of Charles Butler's work where particular attention was devoted to voice pitch, i.e. "falling pitch at a period, and level or rising pitch at a comma" (Pike, 1945: 3). He linked the two main tunes (i.e. rise and fall) with punctuation and grammatical contrasts. This idea will be taken into consideration in the present experiment (also following McNaught and Warkentyne - see sub section III. 2. 2. 2. 1.).

It is in the course of the next century — in 1775 — that the first impressive attempt to discuss English intonation expressly was found in the work of Joshua Steele (1775). Steele bore in mind that music evolved by steps as opposed to speech which progressed by glides. Thus, and thanks to a fairly complicated musically based system of notation, he set out to demonstrate how pitch changes could occur upon syllables. But his approach presented obvious weaknesses (see Pike, 1945: 4).

Several years later, John Walker (1787) proposed some symbols to be used for rising and falling pitches. This was to be followed by a "blank" period during which no more progress in the field seemed to have been achieved up until the late nineteenth and early twentieth century. From then on, studies on intonation could be classified into two major

traditions namely: the American and the British Approach.

The American tradition is mainly represented by work similar to Wells (1945), Pike (1945) or Trager and Smith (1951). In this approach, intonation is discussed in terms of "pitch phonemes". Adherents of this school identify four contrastive pitch levels: 1, 2, 3, 4 (1 being the highest and 4 the lowest in Pike (1945) and vice versa in Trager & Smith (1951)). "Intonation was described in terms of a series of movements from one of these levels to another" (Roach, 1983, Tutor's book: 42). The "pitch phoneme" theory has been widely criticised though.

The British approach (mainly the London school) will be devoted more attention as it has had the greatest influence on the present study both in its orientation (essentially pedagogical) and practicality (notational system).

II. 2. 1. 2. THE BRITISH APPROACH

Rather than going through a detailed chronological investigation of all the available studies on intonation, the following sections aim at shedding some light on the most outstanding analyses. Attention will be devoted to those which have had a strong impact on current trends, and which have also dictated various choices at several stages of the experiments (e.g. choice of test sentences/system of notation, etc.).

Perhaps it should be mentioned, first, that most of the research around the subject of intonation in the early twentieth century was essentially based on auditory analyses conducted by various phoneticians and linguists. This was mainly due to the lack, at the time, of instrumental equipment to measure acoustic signals. Instrumental analyses were only made possible from the 1930s onward, thanks to major technological developments. One of the main preoccupations of this early twentieth century was to devise a system of notation that would objectively represent

intonational phenomena. Most of the progress done in the field of intonational phenomena was initiated by British linguists several decades earlier than their American colleagues. Their primary objective was directed towards pedagogical ends: i.e. to satisfy the demand for textbooks and material that would be useful in the context of the teaching of English to foreigners. This explains the inevitable limitations of the published material (severely selective and over-simplified) in the early part of the twentieth century. These limitations were primarily the result of a necessity to render matters more straightforward and accessible to the foreign learner.

The British school is characterized by an approach to intonation in terms of "tones" and/or "tunes" which occur on specific vowels (Anderson, 1972: 8). Those tones are themselves grouped into suprasegmental "tone patterns". Furthermore, the "sequence of tones that may rise and fall determines the intonation pattern of the utterance" Lieberman (1967: 171). This definition will be retained in the current work.

The contribution Sweet became well known for is to be found in his A New English Grammar (1892). Although he devotes only a short section of this work to the matter (Sweet, 1892: 228-229), his approach has had a substantial impact on subsequent "tone" analyses. However, one might feel that Sweet's analysis lacks explicitness and needs further examplification (Pike, 1945: 6).

Daniel Jones was already familiar with Sweet's notational system of transcribing intonation. Yet, it did not prevent him from adopting, in Intonation Curves (1909) and in the first and second editions of Outline of English Phonetics (1918, 1922), a musically based system of notation where each syllable was symbolized by a bar on a musical stave. Later, however, he (1932) discarded the material he had used so far and readily adopted and expanded Armstrong and Ward's (1926)

two-tune theory which appeared to fit the data gathered in Jones (1909). Like his predecessors, Daniel Jones (1972) also identifies three basic intonation patterns: falling, rising, and level.

Palmer (1922; 1924) made a substantial contribution to the study of intonation, a contribution which later influenced a great many scholars. He is among the first to realize and point out the necessity of distinguishing the functional units of intonation. He claims that the sentence may be divided into three distinct parts. Each section, he says, consisting of either one or more syllables, can have its own intonation which may contribute to the whole. The three divisions he mentions are: the head (segment preceding the main stress of the sentence i.e. nucleus), the nucleus (consisting of the nucleus syllable), and the tail (consisting of any syllable/s following the nucleus). Obviously, in this division, the nucleus remains the central part of the sentence or phrase. The part played by the head and the tail is to link the nuclear tones in connected speech. Although it may be judged arbitrary to a certain extent, Palmer's distinction became widely known and was later to be either adopted or improved by various linguists. The current author has adopted this division of the utterance into several meaningful units, but expanded it further in a way similar to O'Connor & Arnold (1973).

Palmer also adopts an intralinear, or textual notation for transcribing intonation, which is believed to be "clear and easy to follow". In addition, he identifies four major 'nuclear tones', i.e. [↘ ↗ ∼ ⌣] and "three types of head (inferior, superior, and scandent)" which contrast "independently of the nuclei" (Crystal, 1969: 36). Mainly for the sake of clarity, only the first two symbols have been retained in the present study. As to the types of head, four have been recognized: high, low, rising, and falling (cf. O'Connor & Arnold, 1973). Palmer thus distinguishes six

main "tone patterns" (his earlier head and nucleus groups) each of which consisting of a head and a nucleus: 1 , 2 , 3 , 4 , 5 and 6 (Palmer & Blandford, 1927).

Palmer and Blandford (1927: 18-24) also try to ascribe specific functions and meanings to the tone patterns. But a glance at all their 'specifications' suffices to point to the following weakness. Some of the groupings' functions and/or meanings present frequent overlapping, e.g. Tone pattern 1 is used in:

> "statements having the nature of 'declarations' or 'assertions' [...] commands [...] questions beginning with an interrogative word [...] and 'rhetorical' questions. It is the pattern that occurs with by far the greatest frequency."

One must admit that the declared use tone pattern 2 presents some remarkable resemblance to tone pattern 1. For, the authors maintain that tone pattern 2 is also used in "assertions" and "special questions with a one word prominence" such as "where?". Palmer & Blandford are not very explicit when it comes to explaining what difference — if any — there is between "questions beginning with an interrogative word" where tone pattern 1 is used, and "special questions with a one word prominence such as 'where?'", with which tone pattern 2 is used. The allocation, by the writers, of a special and distinct symbol to tone pattern 1, and tone pattern 2 clearly suggests that the two tone patterns ought to be distinguished. Therefore, similar overlapping should not occur. Note that the existence of such overlapping[3] seems to be acknowledged by the authors, and more particularly in notes similar to: "In all the above, the [...] intonation may be replaced by [...]". As Pike (1945: 6) puts it, it appears that the "effort to define usage in terms of grammatical form fails to give clear cut distinctions."

A work which also made an influential contribution to the field of intonational studies, is Amstrong & Ward (1926). Their system of notation adopted to transcribe the overall intonation of a sentence is characterized by a stream of dots and dashes (or curves when necessary) to depict the various pitch movements. This series of dots and dashes is plotted between two horizontal lines representing the whole range of the human voice. The top line stands for high pitch, whereas the bottom line stands for low pitch. This schematic representation of the pitch range of the voice has been widely used since. It has also been adopted here as it proved very useful to capture the relative pitch heights and movements of any given speaker's voice.

While the dots correspond to the pitch of unstressed syllables, the dashes are used to symbolize the pitch of stressed syllables. The curves, when they are used, have the same function as the dashes. The only difference being that they provide the reader with additional information. They illustrate the pitch movements of the main stress (i.e. nucleus) i.e. the direction it follows. Dots and dashes are plotted between the two horizontal lines according to the relative pitch of each syllable. Still, the most important aspect of the system Amstrong & Ward became well known for, is the postulation of two tunes, Tune I and Tune II, with variations of them. Amstrong & Ward (1926: 4) believe that "English intonation can be reduced to two tunes with variations of these due to special circumstances". They argue that Tune I consists of a sequence of stressed syllables constituting a descending scale, where the pitch of the voice falls to low on or after the last stressed syllable. They also provide the reader with a number of remarks regarding the pitch of stressed versus unstressed syllables (Amstrong & Ward, 1926: 4-6). Tune II, on the other hand, is said to be similar to the first tune up to the last stressed syllable which is "on a low note" and from

where a slight change occurs. Any "syllables that follow rise from this point". The rise taking place on this last low stressed syllable, however, "is gradual and rarely reaches as high a note as the first stressed syllable" (Armstrong & Ward, 1926: 20). Furthermore, one is led to understand that in sequences where no unstressed syllables follow, the last stressed syllable, "the rise" — a substantial characteristic of this tune — is realized "on the last stressed syllable itself" (Armstrong & Ward, 1926: 20). The authors also propose a number of guide-lines concerning the various circumstances where the two tunes (I & II) can be used. Hence, while it is asserted that Tune I is mainly used in "definite decided statements", commands, exclamations and Wh questions Tune II is said to be used when "facts may be implied rather than stated" (see also Pike, 1945: 7).

The aim of Armstrong and Ward's work being primarily pedagogical, it presents some unavoidable limitations. Their system appears to be inadequate to cover the entire gamut of English intonation[4]. But this seems to be acknowledged by the authors who admit that their "attention has been given to the simplest forms of intonation used in conversation." They are indeed "aware that there are other varieties and deeper subtleties of intonation than are [...] recorded" in their work. But, they argue that such variations would not impede communication between a non-native English speaker and a native for instance (Armstrong & Ward, 1926: 1).

It seems to the present writer that the authors' final point is quite debatable. Their remark could, perhaps, be acceptable if one had a "real beginner" in mind. Yet, their argument would still be rather frail, for the authors seem to neglect an important factor which may discredit and invalidate their whole reasoning, i.e. the passive knowledge of English as a foreign language. It is far from impossible that even a non-native speaker of English may be capable of feeling that an utterance like `Come ,here spoken with a

high fall on 'Come' and a low rise on 'here' is quite different from the same utterance spoken with a low head on 'Come' and a low (or even a high) fall on 'here', the former version being definitely friendlier and more polite than the commanding latter. Yet, if he is not made aware of the implications and connotations of those tones, he may well find himself in embarrassing situations.

Roger Kingdon (1958) is actually a refinement of Palmer (1922), fact which he fully admits (Kingdon, 1958: xviii). The author refers briefly in his preface to the confusion that often spreads among a great many scholars between stress and intonation. He believes the two should be kept separate, and argues that such misinterpretation could be avoided if in order to "disentangle the stress element from the tonetic one" one breaks "down a tune into its component parts and" does not "treat it always as a whole" (Kingdon, 1958: xv). He claims that the "essential elements of intonation" should be "presented and described separately and then assembled into tunes". Kingdon adopts Palmer's division of head, nucleus and tail; but, he (1958: 12,22,25) feels the head should be sub-divided into three more sections, namely: the **pre-head** ("any unstressed or partially stressed syllables which precede the first stress", the **head** ("first full stress of the group"), and the **body** (sequence of fully stressed and unstressed syllables occurring between the head and the nucleus). The pre-head, head, body, nucleus and tail together constitute the complete intonation pattern of an utterance, which is called the "tune". Note that the notion of body was not retained here as it was not felt one would gain much in introducing 'body' as another unit of analysis.

Kingdon defines "tone" as "an association of stress with pitch or with pitch range" (Sledd, 1960: 174); furthermore, he claims that the tones may be divided into two main categories: the STATIC "producing a note of constant pitch" and the KINETIC or moving tones "producing a tone of varying

pitch" (Kingdon, 1958: xxv). The pitch may either go up or down or each way successively. Every intonation group contains a "tonetic nucleus" or a "nuclear tone". The "nuclear tone" is usually associated with the last fully stressed syllable of an intonation group. In other words, it is a combination of (full) stress and pitch change: stress because it is located on a fully stressed syllable — the last in the group — and pitch because it also coincides with the major pitch movement of the group[5]. It is at, or from this point that the most significant pitch movement — or change in its direction — of the group takes place.

Kingdon's most significant contribution to the field is the development of an inter-linear system of notation adequate for representing all his tones. Each tone is symbolized by a particular "tonetic stress mark" which is placed just before the syllable bearing the tone:

TONE I				
	*	High Rising Tone	[´]	
	*	Low Rising Tone	[,]	
TONE II				
	*	Falling Tone	[`] or	[ˎ]
TONE III				
	*	Falling Rising Tone	undivided	[v]
	*	Falling Rising Tone	divided	[` ,]
TONE IV				
	*	Rising Falling Tone	[ˆ]	
TONE V				
	*	Rising Falling Rising Tone		[~]

Apart from Tone V most of Kingdon's tones have been adopted here. Note that following O'Connor & Arnold (1973) his Tone III divided will be called Fall + Rise.

Schubiger's early publication (1935) was a rather unsatisfactory attempt to present a scientific description of English intonation (Pike, 1945; Lindström, 1978; Fox, 1979). Her later publication, however (1958), is a considerable

improvement on her original monograph (1935). The work is divided into two major parts. The first one deals primarily with intonation per se, or "Intonation Proper"; whereas, the second one includes a discussion about intonation as "conditioned by sentence stress" (1958). Schubiger divides the spoken utterance into five distinctive units which correspond to Palmer's three units:

	(1)	(2)	(3)	(4)	(5)
SCHUBIGER 1958 (following Kingdon)	Pre-head	Head	Body	Nucleus	Tail
PALMER 1922			Head (1)	Nucleus (2)	Tail (3)
O'Connor & Arnold (1973)	Pre-head (1)		Head (2)	Nucleus (3)	Tail (4)

All parts but the nucleus are optional.

As far as the tonal movements about the nucleus(i) are concerned, Schubiger identifies four simple glides: two falling and two rising, and three compound glides: the fall-rise, the rise-fall and the rise-fall-rise.

When positing the rise-fall, Schubiger explains that in addition to the upward movement or glide on a pre-nuclear stressed syllable, an upward trend may take place at the beginning of the falling nucleus. She adds that the result is either a high or a low rise-fall instead of a high or a low fall respectively (Schubiger, 1958: 33). But if one follows this line of reasoning, it seems that one could further argue that the high-fall does not actually exist. Instead, only the rise-fall does since the high-fall is (almost) always preceded by an on glide movement (her "upward trend"). This was clearly shown on the traces produced by a number of native speakers (i.e. the controls) in the present study. This could also be supported by Knowles' examples and traces of falling "humped shaped"

contour on "No" as spoken by a native speaker of English (Knowles, 1987: 122-123). Even the monosyllabic "no" while intended to be a fall is not really a fall after all:

`No

but rather a <u>rise-fall</u>:

(´) `No

Despite the frequent occurrence of a slight rise preceding the fall it is for the sake of simplicity that this type of fall is better categorized as a fall rather than a rise-fall. This on-glide gesture is often neglected[6]. Note that the present writer does not deny the existence of a rising-falling nuclear tone as distinct from a high fall, but would rather argue in favour of a rise-fall starting on the nuclear syllable itself rather than on a pre-nuclear stressed syllable as Schubiger seems to suggest (Schubiger, 1958: 33). Thus, a (high) rise would occur on the nucleus, and a falling tone would spread equally over the tail syllables if any, and if not, the whole rise falling tonal movement would occur on the nuclear syllable itself. Schubiger believes that neither the rise-fall nor the rise-fall-rise are essential features of English intonation however characteristic they may be (Schubiger, 1958: note 1: 33). This point is quite debatable. The acquisition of such tones as well as other aspects of English intonation may represent a challenge to the advanced learner. This is more particularly so if s/he aims to acquire a higher standard of proficiency and sophistication in the language (see also chapters VI and VII).

As has already been mentioned earlier, the primary motivation for research and publication within the British tradition in the late 19th and early 20th century, has been to meet pedagogical needs, on the one hand, and fill in the vacuum left by the lack of sufficient information and facts about the form and function of intonation on the other.

Although valuable and probably necessary at the time, such an orientation presented the inescapable limitations discussed earlier. As Crystal puts it (1969: 41) there resulted an urgent need for more theoretically oriented research as this was definitely lacking. However, during the first part of the present century, a number of linguists have attempted to fill in this gap. Among them are Halliday (1961, 1964, 1967, 1970a), Crystal & Quirk (1964), Crystal (1969), Jassem (1952) to mention just a few. More recent attempts have also been made to attribute particular functions to intonation. These will be discussed in the following sections.

II. 2. 2. THE FUNCTIONS OF INTONATION

Over the years, intonation has been attributed various functions. Numerous contrasts have been reported to be signalled by intonation, e.g. indexical, illocutionary, informational, grammatical, attitudinal, discoursal. The following sections will attempt to cast some light on some of the major functions of intonation, namely the grammatical, the attitudinal and the discoursal functions. The reader is referred to Halliday (1961, 1964, 1967, 1970), O'Connor & Arnold (1973), Brazil (1975, 1978a, 1978b), Brazil et al. (1980), Gussenhoven (1983a, 1983b, 1984) for a more comprehensive discussion (see also Couper-Kuhlen, 1986, Cruttenden, 1986).

II. 2. 2. 1. INTONATION AND GRAMMAR

II. 2. 2. 1. 1. HALLIDAY

In Britain, Halliday (1964, 1967, 1970a, 1970b) is often regarded as a pioneering work in the field. He represents one of those important attempts to look for a more rigorous theoretical model for the study of intonation. Halliday is known to have tried to integrate the study of British English intonation into an overall framework as part of the grammar

of the language. He (1967: 10) argues that "all *contrast* in meaning can be stated either in grammar or in lexis". Furthermore, as intonation contrasts in English are "clearly not lexical", it follows that they are grammatical[7] or to use the author's own wording: "they are exploited in the grammar of the language". Halliday believes the relationship between intonation and grammar to be fundamental. Hence, his primary aim is to study the grammatical function of intonation. He (1964: 169) makes the claim that one cannot "fully describe the grammar of spoken English without reference to contrasts expounded by intonation". The author goes one step further when he asserts that "only those distinctions which are shown in the grammatical description to be meaningful are represented in the phonological analysis."

Halliday (followed up by El-Menouffy, 1969) admits as a fact that pitch cannot easily be segmented discretely. Yet, he takes the view that a description of intonation in terms of phonological systems expounding grammatical systems is possible. His analysis relies on the following fundamental assumption. There are three basic phonological systems operative in British English (BE) intonation. In other words, BE intonation is regarded as involving three distinct and meaningful sets of choices which are labelled: 1) <u>tonality</u>, 2) <u>tonicity</u>, and 3) <u>tone</u> respectively. These three "systemic variables" are retained in the present study:

<u>Tonality</u>: is the term used to refer to the distribution of any stretch of spoken discourse into tone groups (delimitation of tone group boundaries).

<u>Tonicity</u>: is the designation adopted to characterize the assignment within the tone group of the tonic syllable (as well as the pre-tonic section if any).

<u>Tone</u>: is the label used to indicate the choice of primary or secondary tone (i.e. the kind of pitch movement) to take place on the tonic syllable.

Thus, intonation contrasts are believed to operate within these three phonological dimensions/systems. Furthermore, Halliday argues in favour of considering each level of selection as independent of the other two. This final point seems contradictory for there also appears to be a suggestion that the second choice (i.e. 'tonicity') should be made prior to the first (i.e. 'tonality') as the latter seems to be dependent upon the recognition of the former (Halliday, 1967: 21; see also Crystal, 1969: 383).

Although it is claimed that the Tone Group (TG) does not coincide with any grammatical unit, it is for the sake of simplicity that Halliday chooses the clause as his starting point, for he notices that they are co-extensive: in other words, that very frequently the extent of the former does correspond to that of the latter (Halliday, 1967: 3). Yet, although the TG is the nearest equivalent to the clause in grammar, it does not follow that each clause corresponds to a TG. He (1967:3-4) regards the TG as a meaningful unit in its own right, as " one <u>unit of information</u> [...] one 'block' in the message the speaker is communicating; and so it can be of any length.

II. 2. 2. 1. 2. <u>THE TRANSFORMATIONAL GENERATIVE DISCUSSION</u>

A number of attempts have been made to discuss intonation in the light of Transformational Generative (henceforth T.G.) theories. Broadly speaking, adherents of the Generative School believe in the predictability of sentence stress in English. The argument is that sentence stress can, in fact, be accounted for in terms of syntax.

Following is a review of the main T.G. discussion concerning intonation. This section will be divided into two major parts. The first one will aim at casting some light on a number of attempts that have been made to incorporate, not only intonation, but also and mainly context within a T.G. Grammar of English. The second part will survey the various

contributions and polemics surrounding the validity of the Nuclear Stress Rule (henceforth N.S.R.) as advocated by Chomsky and Halle (1968).

II. 2. 2. 1. 2. 1. CONTEXT

Stockwell (1960) suggests incorporating intonation within the framework of a generative grammar of English, for he (1960: 360) believes that

> "Chomsky's rules [(Chomsky,1957)] do not at present generate intonation patterns as elements in terminal strings, nor do they show the optional and obligatory choices of intonation patterns that are available with any given sequence of formative."

To this end, he provides the analyst with a set of ordered generative rules which would supplement the ones already proposed in Chomsky (1957), and whose function, he claims, would be to assign intonation patterns to various English sentences. Furthermore, Stockwell (1960: 361) not only makes the claim that this set of rules allows a large number of intonation patterns to be generated in the constituent structure rules; but he also argues that it enables him to account for what he refers to as the "normal" or "colorless" intonation pattern of English sentences, which he cares to define (1960: 362).

The "normal" or "colorless" intonation is, in fact, the starting point of Stockwell's analysis. He asserts that further rules can be established which would operate on the "colorless" intonation pattern, so as to derive from it various contrasting intonation patterns.

But Stockwell's statements do not appear particularly convincing to Gunter (1966). He actually criticizes Stockwell's analysis as well as most current attempts to analyze intonation in the light of T.G. theories. The reasoning is that because they are primarily "sentence-generating", generative grammars are not equipped to take

into consideration the significant role played by the context in establishing the location (and/or "shift") of the nuclei. This point is made particularly clear in a paper published in 1966 where the author argues in favour of a context grammar which should be able to account for appropriate nucleus placement in dialogues (Gunter, 1966; see also Gunter, 1972).

Following Gunter's suggestions, there have been some attempts to incorporate context within the framework of a T.G. approach to intonation. In this respect, it is interesting to mention Hirst's discussion (1977) with regards to context. Hirst (1977: 85) shares the view that context is crucial in the process of nucleus (his "centre") placement. He claims that context can easily be accounted for if the analyst introduces — as he did — a new level of description of sentences via the concepts of "reduced" versus "non-reduced" surface structure (henceforth in this chapter S.S.). This, he continues, enables him to justify the position of the feature centre (i.e. nucleus) in sentence (1) below:

(1) I °thought he was 'married[8].

as opposed to sentence (2):

(2) I 'thought he was °married.

Hirst makes the claim that sentence (1) is actually the "reduced" version of the complete or "non-reduced" S.S. (3):

(3) (He's °married.) I °thought he was 'married.

Sentence (3), and more precisely the portion included in the parentheses, is said to constitute the contextual information to be accounted for in this particular example. Taking as a starting point "one of the basic principles of the 'standard' theory of T.G. grammar, namely that

"1) the semantic interpretation of a sentence is entirely determined by its deep structure [...]

and that,

2) the phonetic representation of a sentence is entirely determined by its surface structure" [present author's numbering].

Hirst shows that out of context, a sentence like: 'I thought he was married' does not provide the analyst with sufficient information to reconstruct the deep structure to which it corresponds (and "hence its semantic interpretation"), nor to establish its phonetic representation. Therefore, he formulates a first rule, to be applied to the "non-reduced" S.S., which assigns "the feature centre to the last stressed formative before each boundary, provided that formative is not strictly identical to a formative occurring earlier in the same sentence" (Hirst, 1977: 88). This explains why, due to the nuclearity of the lexical item "married" in the first part of the "non-reduced" S.S. (3), the same formative cannot be assigned the feature centre in the "reduced" S.S. (1). Then, a second transformation rule, which Hirst terms the "ellipsis" is introduced. Its major function is to delete part of the information in the "non-reduced" S.S. which is recoverable from the intonation of the "reduced" S.S.. Thus, in sentences (1) and (3) above, the information contained in the parentheses in the "non-reduced" S.S. (3), namely the "implied" sentence: "He's married", becomes redundant; and consequently, it may be suppressed since the same information is recoverable once the correct "intonative features" have been assigned to the "reduced" S.S.(1). Of course, the speaker may choose to utter the "implied" sentence, but Hirst (1977: 92) explains that it is "when the speaker comes to say the sentence however, that in the case of" sentence (3) "he decides that part of the sentence is redundant and does not need to be spoken".

Although interesting, Hirst's analysis is still in need of further clarification. For, although one is led to more or less accept or at least understand the introduction of the "ellipsis" transformation affecting the "non-reduced" S.S., one still cannot help remaining rather skeptical about it. Such skepticism is probably the result of Hirst not being specific enough, and not providing the reader with sufficient information with regards to this deletion process. The reader's prior knowledge of this process of deletion seems to be tacitly assumed[9]. Similarly, Hirst's analysis lacks some specifications regarding how all the relevant contextual information — needed to establish the appropriate interpretation of the "reduced" S.S. — is, in fact, incorporated into the "non-reduced" S.S.. In addition, one could further argue that the introduction of the concept of "non-reduced" S.S. is not as efficient as it first appears to be. For, although it enables the analyst to tackle the problem of context within a T.G. framework as Hirst tries to demonstrate, it also makes it possible to envisage an unlimited, hence uncontrollable, number of "non-reduced" S.S.. In other words, "any sentence, with any intonation, could be claimed to constitute the non-reduced structure of another sentence" (Cruz-Ferreira, 1983: 17). So Hirst's attempt is certainly in need of further alterations and a more rigorous explanation.

II. 2. 2. 1. 2. 2. THE NUCLEAR STRESS RULE (N.S.R.)

With the exception of attempts similar to those reviewed above, it seems that the bulk of the literature on the T.G. discussion about intonation follows one of the most influential theory of stress-assignment, i.e. the classical framework proposed in Chomsky and Halle (1968). The authors assert that there are some principles which govern the assignment of stress within an utterance. They argue that sentential stress is entirely predictable from the stress of

individual words together with information about the surface structure constituent. In addition, sentence stress is said to be: 1) cyclic, 2) a property of vowels, and 3) representable on a single scale: 1,2,3,4,... with no theoretical limit.

In their attempts to demonstrate how the complex stress pattern of English words/compounds, as well as sentence stress are 'structure dependent', and hence predictable, they introduce two basic rules which are both cyclic, namely: the Compound Stress Rule (C.S.R) and the Nuclear Stress Rule (or N.S.R.). Not much will be said here about the C. S. R. (see Chomsky & Halle, 1968). The N.S.R., on the other hand, will be devoted more attention, for it seems that much of the controversies that followed Chomsky and Halle's stress assignment proposals, surround primarily the validity of the N.S.R. as advocated by the authors under review.

The principles of the N.S.R. are as follows. Once the generative rules of word-level phonology[10] have been applied, the N.S.R. is considered. The function of the N.S.R. is to assign primary stress to the right-most primary stressed vowel within the domain of application of the rule. Furthermore, thanks to a general convention of stress-assignment, whenever the N.S.R. assigns primary stress to a primary stressed vowel, all other 1-stress vowels within the domain under consideration are lowered in value by one, e.g.

[s	The	man	sings	s]	
		1	1	=>	word stress rule
		2	1	=>	N.S.R.

Unfortunately, the general predictions made by Chomsky and Halle's N.S.R. have not proved to be operative in a number of situations. As early as 1946, Newman had already offered a number of contrasting examples:

1/ a- George has $\underset{1}{\underline{\text{plans}}}$ to leave

b- George has plans to $\underset{1}{\underline{\text{leave}}}$

where the sentences have roughly the meanings:

a- George has documents to leave

b- George is planning to leave

respectively. Or:

2/ a- Helen left $\underset{1}{\underline{\text{directions}}}$ for George to follow

b- Helen left directions for George to $\underset{1}{\underline{\text{follow}}}$

meaning roughly:

a- Helen left directions (i.e. information) which George is able to follow

b- Helen left directions to the effect that George should follow

respectively.

Chomsky and Halle do acknowledge that there are classes of exceptions to which the N.S.R. does not apply because it has proved unable to account for their stress patterns. Therefore, they propose to modify the rule so as to allow the ambiguity of cases similar to those just mentioned to be resolved by contrastive tonic placement (Chomsky & Halle, 1968).

At this point, it may be interesting to mention Bresnan's (1971) view with regard to these categories of exceptions. She believes and claims that the N.S.R. does not need to be subjected to any special modifications for, all the examples cited earlier, together with several other "apparent" exceptions to the N.S.R., are, in fact, predictable. They are predictable given the assumption that "the N.S.R. of English is ordered within the transformational cycle after all syntactic transformations" (Bresnan, 1971: 257). In her (1971) paper, Bresnan attempts to handle these categories of exceptions. She concentrates on a number of syntactically complex constructions, the stress pattern of which seems to violate the general predictions made by Chomsky & Halle's N.S.R.

Much debate followed Bresnan's paper (see also Kenning, 1977). But before considering the various arguments the paper attracted, the following point should perhaps be noted.

It seems that one of the obvious weaknesses which immediately strikes the reader's eye is a major contradiction in Bresnan's line of reasoning. The author proposes to support the general theory (more particularly the efficiency and predictions) presented in the S.P.E. with regard to sentential stress. But in so doing, she does not seem to realize that her argumentation relies — maybe too heavily — on the very rejection of one of Chomsky and Halle's basic assumptions, i.e. the S.P.E. explicitly states (1968: 15) that: it is "clear even from a superficial examination that these [complex prosodic] contours are determined in some manner by the surface structure of the utterance."

Yet, it looks as though the whole foundation of Bresnan's analysis is precisely the heavy reliance on the deep structure of an utterance. She (1971: 263) claims that her ordering hypothesis:

> "explains the facts that the stress patterns of certain syntactically complex constructions reflect those of the simple sentences embedded within them in deep structure."

So, soon after its publication, Bresnan's paper (1971) found itself under the scrutiny of various scholars.
One of the first criticisms came from George Lakoff (1972). Unconvinced by Bresnan's assertions, Lakoff examines every point in her argumentation. He particularly questions her ordering hypothesis which she claims would, once proved, be evidence for the existence of a deep structure[11].

In an attempt to dismantle (the basis of) Bresnan's analysis, Lakoff challenges her account for certain stress patterns with examples such as:

1) Bury the man you kílled
2) Sam finally met the man who Sheila used to dáte.
3) Sue is the girl to dáte.

where he believes Bresnan would predict the following stress patterns :

1) Bury the mán you killed.
2) Sam finally met the mán who Sheila used to date.
3) Sheila is the gírl to date.

and which, according to Lakoff, would only occur in situations where the stress is contrastive. Lakoff takes the view that stress is not dependent upon underlying structure alone, as Bresnan claims it to be; but it is also function of surface structure. Furthermore, he argues that rule ordering cannot account for such dependency. As the title of his paper suggests, Lakoff believes in a global nature of the N.S.R.. The "Nuclear Stress Rule", he asserts, "is a global rule which applies to surface structure, but it has a global environment referring to other levels" (Lakoff, 1972: 285).

Bresnan's paper faced further criticism. Berman & Szamosi (hence forth B.& S.) among others (1972), made an attempt to prove her observations inadequate, and show where they run into serious difficulties. B.& S. (1972: 304) argue that "to the extent that sentential stress depends on surface structure, it is surface structure which is relevant". Their claim is supported by examples where Bresnan, relying on underlying structure, fails to predict the correct stress pattern of a number of sentences (B.& S., 1972). Furthermore, B. & S. argue that in such cases, surface structure is essential for determining the correct assignment of sentence stress. The authors, however, are very cautious in making such an assertion. For, they take the view that primary stress assignment is not always dependent on surface structure. They make the claim that Bresnan's hypothesis is unworkable. It makes too many incorrect predictions and

fails to capture certain generalizations (see B. & S., 1972). Therefore, they reject it on the grounds that there are far too many cases where primary stress assignments depend on other factors than structure, particularly semantic factors (B. & S., 1972: 319).

Bresnan (1972) set out to answer back the criticism that had been levelled against her 1971 paper. In this reply, she reasserts her position and views. She also attempts to make some clarifications over a few issues her original paper raised.

On the other hand, "Accent is Predictable if you're a Mind Reader". Such is the title of the article Bolinger published following the T.G. debate (see Bolinger, 1972b). He draws attention to one of the fundamental assumption of the T.G. approach to intonation which is taken for granted in the whole of the above debate i.e. that sentential stress — or placement of the sentence nucleus/accent — is predictable and can be accounted for in terms of syntax. Bolinger questions and rejects this view on the grounds that Transformational Generativists are confusing two distinct domains which ought to be clearly kept separate, i.e. the domain of syntax and that of prosody (1972b: 644).

Bolinger makes the claim that a theory which argues in favour of the predictability or "the possibility of any syntactic structural explanation of stress assignment" is untenable. He takes the view that the distribution of sentence stress (his sentence 'accent') is dependent upon the speaker's intentions, and upon the semantic weight he wishes to allocate his sentence (or utterance). Therefore, the whole context of situation has to be taken into consideration. "What counts", he says, "is RELATIVE semantic weight. For this it is necessary to take account of the entire context, including the context of situation" (Bolinger, 1972b: 635).

The author provides the reader with a profusion of examples illustrating the mistake of relating to syntax what actually belongs to semantics, and which, he asserts, stems from "concentrating on the commonplace" (1972b: 634).

In the following phrases, Bolinger says that due to their high predictability the verbs do not receive primary stress (accent). Instead, the noun preceding each of these verbs does:

1) wórk to do
2) fóod to eat
3) clóthes to wear
4) léssons to learn

For, as Bolinger rightly points out not surprisingly work is to be done, food is to be eaten, clothes are to be worn and lessons are to be learnt, etc. But obviously, the choice of one verb instead of another is the speaker's. Therefore, the possibility of having the verb rather than the noun (or vice-versa) accented can hardly be predicted since the decision regarding which of the verb or the noun is to be the point of information focus in the sentence is "speaker-dependent". For that reason, unless one is a "mind-reader", hence able to know in advance what the speaker's intentions are, sentence accent is not predictable from syntax (Bolinger, 1972b: 644).

At this point, one could perhaps argue that "high predictability" is not the only possible explanation as Jill House suggests in Studies in the Pronunciation of English (1990, edited by S. Ramsaran) where she mentions nouns' ability to attract the nucleus.

SUMMARY :

The purpose of the previous sections, then, was to cast some light on a number of attempts that have recently been made to discuss intonation in the light of T.G. theories. Hirst (1977) was an attempt to incorporate context within the framework of a T.G. grammar of English. But as was noted

earlier, the reader's prior knowledge of certain processes — particularly the deletion process — seems to be tacitly assumed.

So it appears that the focal point in the T.G. debate concerns primarily the placement of the tonic syllable in the sentence (i.e. nucleus, or even sentence/tial stress). Followers of the T.G. School make the following assertion: sentence stress is predictable. Moreover, it can be accounted for in terms of syntactic structural facts.

The interest, as well as the bulk of the literature concerning a possible T.G. explanation of intonational phenomena, seems to have been triggered by the general predictions made in the classical layout proposed in Chomsky & Halle (1968). Although the authors acknowledge the failure of their basic rule — the N.S.R. — to correctly predict and capture the stress pattern of a number of syntactic constructions, Bresnan attempts to remedy this apparent weakness (Bresnan, 1971; 1972). She tries to handle these categories of exceptions together with other complex syntactic constructions which apparently violate the general predictions established by the N.S.R.. Her argument relies heavily on the cyclicity of the transformational rules and on the existence of an underlying representation, or structure. But one cannot fail to notice that this last argument is contrary to Chomsky & Halle's basic assumption, i.e. that the complex prosodic contours are in fact determined by surface structure.

Bresnan's statements are rejected by Berman & Szamosi (1972) and also Lakoff (1972) who questions the whole of her argumentation.

Berman & Szamosi claim that it is surface rather than underlying representation which is relevant in the process of predicting the correct stress pattern of English sentences. Still, they assert that there are other factors which are also relevant. These are the semantic factors.

Opposing this is Lakoff's view who believes that both surface and underlying representations are relevant. He also argues in favour of a global nature of the N.S.R.. He explains that although applying to the surface structure of a sentence, the N.S.R. has a "global environment referring to other levels" (Lakoff, 1972: 285).

On the other hand, Bolinger takes a more drastic step. He questions and rejects the T.G. basic assumption about the predictability of sentential stress from syntax. He takes the view that unless one is a "mind reader" one cannot foretell where in an utterance the sentence stress is going to fall: because its position in the sentence is entirely dependent upon the speaker's intentions and on how he wishes to distribute the semantic weight over his utterance. It is, therefore, necessary to take into consideration the whole context of situation.

Considering the aforementioned facts, one must acknowledge the failure of a T.G. Grammar to account for English prosodic phenomena satisfactorily. Like Bolinger, the present author regards the speaker's role in deciding where or how to distribute the sentence nucleus in his utterance(s) as crucial. Any stressed syllable in a given stretch of speech is eligible to be assigned the main accent. However, the decision to accent one syllable/word instead of another depends on the speaker's intentions and on the message(s) or meaning(s) he wishes to express.

II. 2. 2. 2. INTONATION AND ATTITUDE

Intonation has also been attributed an attitudinal function. Although the study of intonation and attitude has been approached from at least three different angles, followers of this school share a common belief. They take the view that the role of intonation in conveying the speaker's mood and attitude (towards the hearer, subject-

matter, situation, etc.) is of paramount importance.

Various scholars have attempted to establish the link between intonation and attitude. A number of them have seen in some acoustic parameters of intonation a direct relation to "certain intuitively determined 'attitudes'" (Couper-Kuhlen, henceforth C-K, 1986: 175). A famous experiment is Lieberman & Michaels' (1962). The authors selected a set of neutral statements and recorded eight different versions of each of them involving eight different "emotional modes". Instrumental manipulation allowed them to isolate a number of acoustic parameters (e.g. pitch, amplitude) and hence alter each rendering of the utterances. The newly-made sentences were presented to listeners for identification of the "emotional modes".

However, numerous criticisms have been levelled against experiments similar to Lieberman & Michaels. The lack of a theory of intonation as well as the "unmotivated choice of 'emotional modes'" has been reported to be among the major weaknesses (C-K, 1986: 176).

Uldall (1960, 1964) represents another attempt to investigate intonation and attitude. She attempts to establish a direct relation between a "motivated choice of attitudes" and "overall intonation contour" (C-K, 1986: 176). Her experiment relies heavily on the theory of affective meaning expounded in Osgood et al. (1957). She tries to measure the "affective meaning of intonational patterns" by synthetically imposing various intonational contours to four sentence types: statements, yes/no and wh-questions, and commands. Native listeners are then asked to rate the speaker's emotion on a scale of pairs of adjectives (Uldall, 1964):

bored	-	interested	disapproving	-	aproving
polite	-	rude	deferential	-	arrogant
timid	-	confident	impatient	-	patient
sincere	-	insincere	emphatic	-	unemphatic

tense	-	relaxed	agreeable	-	disagreeable
authoritative	-	submissive	genuine	-	pretended
unpleasant	-	pleasant	weak	-	strong

Uldall claims that her experiment(s) revealed some links between a number of parameters and particular attitudes. However, the results are not so convincing as questions are still raised about the spontaneity of the imposed intonations. In addition, the forced-choice adopted made randomization of the answers possible. Besides, as well noted in C-K (1986: 178) "it was not possible to add, delete or alter attitudinal descriptors of the utterances produced". Further weaknesses have also been highlighted (C-K, 1986: 178-9).

Finally, the third attempt to describe intonation and attitude differs from the previous two which were mainly instrumental. This approach, essentially auditory and pedagogical in orientation is well illustrated in the work of O'Connor & Arnold (1973) although already present in Schubiger (1958).

In a section devoted to the "Function of Intonation Proper" Schubiger presents a description of major intonation patterns within a broad grammatical framework. Furthermore, an analysis of the intonation of a number of syntactic structures is attempted. These include statements, commands, exclamations, yes/no and wh questions, tag questions, non final sense groups, enumeration. Schubiger must be given credit for providing the reader with a profusion of examples to illustrate the various meanings that may be signalled by intonation.

O'Connor & Arnold (1973) expand further the claims made earlier by Schubiger. They take the view that intonation conveys, among other things, "the speaker's attitude at the moment of speaking to the situation in which he is placed". They argue that attitudinal differences may be achieved by a

combination of one of the ten tone groups they posit with five sentence types, i.e. statements, yes/no and wh questions, commands, interjections.

The common criticism levelled against such an approach is that considering the number of tone groups and the descriptive labels or "descriptors", O'Connor & Arnold allow for an unlimited sometimes overlapping number of different categories. It has been argued (Crystal, 1969: 294-6) that between Schubiger (1958) and O'Connor & Arnold (1961) about 300 different labels have been used to refer to "specific human behaviour patterns". Brazil et al. (1980) claim that an approach similar to Schubiger or O'Connor & Arnold makes misleading generalizations (1980: 118), and lacks "clearly defined meaning oppositions". Besides, they assert that the meaning glosses do not offer "a rigorous, self-consistent framework through which to assign intonation to an entire text" (1980: 127). They believe that course books attempting "to teach intonation in terms of attitudinal meanings" (1980: 118) do not "give the student a valid generalization on which he can base his own interpretation and production of utterances" (1980: 119). They take the view that there are "no arguments for teaching intonation in terms of attitude, because the rules for use are too obscure, too amorphous, and too easily refutable" (1980: 120). Another weakness of an approach similar to Schubiger's and O'Connor and Arnold's is that it does not clearly draw the line between the attitudinal and the grammatical meaning of intonation (Cruttenden, 1970: 188). Whether one is using a rise or a fall in an utterance like "You're coming" seems to have an attitudinal as well as a grammatical implication, i.e.: "surprise versus non surprise" or "question versus statement" respectively (see also C-K, 1986: 182).

Despite such criticisms, the influence of Schubiger and O'Connor & Arnold will be noticeable in the following chapters. It is the present author's belief that as long as

one is cautious when drawing conclusions the value of such attitudinal oriented work cannot be disregarded. Besides, it is O'Connor & Arnold's tradition as taught in the Phonetics Department at University College London, which has made the present writer become aware of her "problem" (see Chapter One).

II. 2. 2. 3. INTONATION AND DISCOURSE

During the last two decades has emerged an awareness that a discussion of intonation within frameworks similar to those reviewed in the previous sections is inadequate and wanting. Such frameworks are seen as incapable of really getting to grips with natural spontaneous speech. In Britain this and similar facts are already made explicit in Crystal (1969), and Brown et al. (1980) among others.

Since the 1970s there have been several attempts to integrate intonation into the framework of a discourse analysis (Brazil, 1975; 1978a; 1978b; Brazil et al., 1980). This approach has come to be known as the discoursal approach (hence the label 'Discourse Intonation').

The role of intonation in discourse, and more particularly in speaker-hearer-interaction is regarded as crucial, and so is the importance of discoursal context (see also Sinclair & Coulthard, 1975).

The basic assumption of the discoursal approach is that language IS discourse and communication "where utterance value depends crucially on interactive function within the discourse" (Brazil et al., 1980: ix). Intonation is viewed as "one aspect of the description of interaction". It is further argued (1980: 11) that

> "intonation choices carry information about the structure of the interaction, the relationship between and the discourse function of individual utterances, the interactional 'givenness' and 'newness' of information and the state of convergence and divergence of the participants"

Brazil (1975, 1978a, 1978b) and Brazil et al. (1980) argue in favour of regarding intonation choices as depending "ultimately on the speaker's assessment of the state and extent of the common ground between himself and his listener(s)" (1980: 83). Cruttenden (1986: 97) further explains that a discoursal

> "approach to the meaning of tones deals in concepts like the shared mutual knowledge of speaker and listener(s), the desire of a speaker to dominate listener(s), and the sort of expectations which a speaker has about a listener's reply."

Gussenhoven (1983a, 1983b, 1984) also regards the tones' meanings as essentially discoursal (see also Cruttenden, 1986: 117). The main difference apparently between his tones and Brazil's is that the latter is essentially a two-tone approach; whereas the former could better be classified as a three-tone approach. Brazil's basic tonal distinction is between his "proclaiming" (symbolized "*p*") and "referring" ("*r*") tones or his falling and falling-rising tones respectively. He argues that those two tones are by far the commonest in English. Note that he also recognizes a "'neutral' tone (level or low-rise)" (Cruttenden, 1986: 117). Gussenhoven's basic tonal distinction, however, is between the fall, the fall-rise, and the rise.

So the interaction between the speaker and the listener, the common beliefs or knowledge that both have about the world, dictate the various intonation choices. However, one cannot help feeling the difficulty in separating the attitudinal from the discoursal. This is also suggested in Cruttenden (1986: 97):

> "In practice it is not always easy to separate such a discoursal approach to tones from an attitudinal approach which involves labels like 'protesting', 'detached', 'interested', 'impressed',and 'encouraging'"

He further notices that "there are a number of emotions like joy, anger, fear, sorrow, which are not usually associated directly with tones, but may be indicated by a combination of factors like accent, range, key, register, overall loudness, and tempo". Criticizing an attitudinal approach similar to O'Connor & Arnold (1973), Brazil (1978: 4-5) explains why one should look for a "discourse analysis perspective":

> "Adopting a discourse analysis perspective, one would want, rather, to classify the occurrence of one declarative-mood utterance as a response to a preceding one in terms which cut across the traditional classification into sentence-types."

Brazil's and his co-workers' argument looks persuasive. Yet, it is the present author's feeling that it remains valid only from the point of view of the native speaker of English (or at least one who knows English perfectly). It becomes frailer when the foreign learner (i.e. non-native speaker) of English is involved. For in order to be able to respond to a preceding utterance and use an appropriate intonation, one has to have a prior knowledge about the meaning that a given intonational choice may convey. In a situation where the speaker is aware of the type of relationship existing between him/her and the listener (and aims to keep it as it is) his/her selection of a fall-rise (or "referring" tone) to contradict or correct the listener in a "polite way" is indeed attitudinal. Furthermore, this 'attitudinal knowledge' is a necessary prerequisite to any discoursal consideration. In this respect, the discoursal approach seems to impinge on the attitudinal function.

On the other hand, one might speculate that for an advanced learner, Brazil's approach may be an interesting challenge. So thinks Taylor (1989:232): "the material will work best with upper-intermediate and advanced groups working with a teacher" (but see also Sinclair et al., 1972 reported in Couper-Kuhlen, 1986). Bradford (1988) is an attempt to

integrate the teaching of intonation within a communicative approach (Taylor, 1989: 233). But although she uses Brazil's work as a starting point she has made some alterations so as to simplify it, make it more understandable to the learners and easier to teach (Bradford, 1988; Taylor, 1989).

II. 2. 2. 4. INTONATION AS MULTIFUNCTIONAL

It seems clear from the above discussion that no consensus has yet been reached as to what the real function of intonation is. It seems to the present author that although each approach tries to distance itself from any other, and set the basis of its own orientation, there are still some degrees of 'overlapping' between all approaches. For although he argues in favour of a grammatical role of intonation, Halliday does not totally reject the possibility that intonation may also convey the speaker's attitude. Similarly when Brazil, or Brazil et al. argue against an explanation of intonation purely and solely in terms of attitudes combined with various sentence types they do not explicitly reject the attitudinal role of intonation. They explain how in order to understand intonation one must place it within a wider discoursal context, a communicative approach. Yet when they claim that such an approach is capable of taking into consideration the type of relationship existing between the participants, the "structure of the interaction", "the state of convergence and divergence of the participants" one cannot help remembering O'Connor & Arnold (1973: 4) explaining how intonation conveys "the speaker's attitude, at the moment of speaking, <u>to the situation in which he is placed</u>" (present author's underlining). O'Connor & Arnold's "situation in which he is placed" seems to have a wider significance.

Schubiger (1958) believes in an attitudinal function of intonation, yet also acknowledges a grammatical role. She argues in favour of regarding intonation as a system independent of grammar but which does, however impinge on

grammar in two respects. The first of these is discussed under the heading "The Function of Intonation Proper". She states that the "predominant function of intonation [...] is to give voice to the speaker's attitude. It is akin to what in grammar is listed under the heading *mood* or *modality*" (S., 1958: 38). In other words, while intonation would make use of, say, a terminal fall to express a simple fact or make a statement, grammar would make use of the indicative mood. Moreover, if the speaker wishes to give an order, or make a polite request, he may well use intonational means in conjunction with grammatical ones e.g.

Use of / to express	grammatical means	intonational means
a fact	indicative	terminal fall
a command	imperative	terminal fall (possibly with wider pitch range)
a polite request	imperative	terminal (low) rise (possibly preceded by a high head)

Table 1: How Intonation Impinges on Grammar

Schubiger argues that intonation is "superposed upon our utterances" to express a variety of attitudes. Grammatical means are often used to express various attitudes. But it also frequently happens that intonational means are used and "superposed" upon utterances — and hence, used in conjunction with grammatical means — to express the speaker's attitude(s). As Schubiger (1958: 38) puts it:

> "Very often we also use adverbs, or a special turn of syntax, to express our attitude. We may say e.g. *Isn't it terribly hot*? *You really are a fool*. But just as

> often we say "*Isn't it* ˏ*hot* ˊ*You* ˏ*are a fool*, with an emotional tone-pattern. When the urge to give vent to our feelings predominates over the wish to make a communication, we often use a special class of sentence, the exclamation. But more important than this grammatical category is the emotional intonation, which is always superposed on exclamatory sentences."

The present writer takes the view that although grammatical or syntactic choices are often dictated by the speaker's attitude to the subject matter, nevertheless, it frequently happens that these grammatical choices in themselves are not sufficient to fully express the speaker's intent. As was shown in Table 1 above, if one relies on purely grammatical means to express modality — and more particularly the semantic meaning the speaker wishes to express — one would have to face the following problem. There appears to be no way one can make a distinction — via grammar — between a polite request and a command in cases similar to (1) and (2) below:

(1) Post this letter for me.
(2) Just put it on the table.

The need for intonation here, seems obvious. For, if one considers syntax only, although (1) and (2) are distinguished from, say,

(3) It is raining.
or (4) The man is walking down the street,

in which the indicative mood is used instead of the imperative, both (1) and (2) could either express an order or a polite request. Apparently, grammar classifies both sentences within the same category. The only way one can distinguish between the two ('order' or 'polite request') is by using a falling versus a (low) rising tone respectively. There is no doubt that these are intonational means.

If a group of listeners is presented with only the variations of pitch with no words nor sentences, and a second

group <u>with</u> words and sentences (with or without intonation[12]) and if each group is asked to decide whether an utterance is an order or a polite request, the present writer believes that there is a chance that the first group will have a higher rate of success (i.e. correct identification) than the second. In order to make a correct decision, the listener needs (to hear) intonation more than grammar. Hadding-Koch and Studdert-Kennedy's experiment (1964) seems to support this belief. The experiment consisted in altering the fundamental frequency contour of the utterance "For Jane" spoken on a monotone in English and in Swedish. An English and a Swedish audience were then asked to listen to the English/Swedish (respectively) version and to decide whether they heard a statement or a question. The results showed that when nothing else was offered, listeners were forced to look for (listen to) the only clues available that might help them determine what the utterance was i.e. pitch (variations). As the authors found out (1964: 355-6):

> "The results confirm [...] that listeners make use of the entire f_0 contour in identifying questions and statements. Not only terminal rise or fall, but also preceding peak and turning point are relevant."

They (1964: 356) discovered that

> "for a given f_0 at the other two points [i.e. peak and turning point] ... an increase in f_0 at the third point [i.e. end point] led to an increase in the number of questions heard."

Besides, it was found that their informants' responses "varied as a function of the fundamental frequency at all three of the variable points of the contours: peak, turning point, and end point" (1964: 350). Furthermore, they noted that (1964: 353-4)

> "The effect of terminal rise or fall is immediately obvious and very much as expected: for all three series the higher the terminal rise, the higher the number of question responses."

Sometimes then, grammar seems unable to make a distinction between the two categories ('order' vs. 'polite request'). By contrast, intonation does offer some other means to reach this end (for example, the use of a falling versus rising tone respectively).

Given this, it may seem difficult to resist the temptation to reject (the importance of) grammar on the grounds that its role in expressing the speaker's intent is insignificant, and take the view that intonation, and intonation alone, is relevant (as seem to suggest the results of Hadding-Koch and Studdert-Kennedy's experiment). One has to be cautious and partial, however. The role of grammar cannot be denied. But the function invested in intonation seems to be of greater weight when it comes to expressing the speaker's attitude(s). Grammar only carries the "crude outlines of modal variations" (Bolinger, 1959: 198); whereas, intonation is one of the most important means by which more subtle shades are superposed upon syntactic markers.

This final point is discussed at length by Schubiger (1958) who does not limit her analysis to the basic and ever so familiar patterns like "fall-for-statements", and "rise-for-questions" (Bolinger, 1959). She also discusses with a profusion of examples, various other patterns bearing specific connotations (Schubiger, 1958).

The second aspect where Schubiger believes Intonation to impinge on grammar is discussed in the second part of her book, "Variations conditioned by sentence-stress", under the heading "Variations conditioned by sentence-structure". She claims that all her tone patterns are susceptible of a number of variations which are conditioned by sentence-stress; moreover, those variations have a different function. It is argued that it is not so much the form but rather the place of the nuclear glide in the utterance or tone group which is important. For instance, whereas the terminal direction of a glide — fall or rise (or "juncture" to use Trager & Smith's

terminology, 1951) — gives some indication about the speaker's attitude, its place in the utterance reveals which is the weightiest element in the sentence. While those variations in the location/shift of the nuclear glide(s) are said to be determined either by the speaker's emotion or by the context (linguistic as well as situational), they may also be conditioned by sentence-structure. And this is where Schubiger believes intonation to impinge on, or come into contact with grammar. She explains (1958: 90) that

> "There is, [...] no direct relation between sentence structure and tonetic stress [...] But as the place of the nucleus or nuclear tone-group is determined by the weight of the elements of an utterance, and as certain elements of the sentence are intrinsically weightier than others, tonetic stress incidentally becomes a means of grammatical differentiation, though of limited range."

To sum up Schubiger's view then, one could quote one of her own footnotes (1958: 90-91):

> "The absence of direct relation between intonation and sentence structure does not imply that intonation has nothing to do with syntax [...] intonation is by far the most important means of expressing the speaker's attitude, his mood; and modality is a category of syntax. Tonetic stress, too, has a syntactical function. It determines which element in an utterance is weightiest [...] and it therefore bears a resemblance to other means of giving prominence, e.g.: word order."

Considering the actual state of the art, the present author takes the view that *the* function of intonation has a much wider dimension than ever asserted in any previous approaches. Although the present study has concentrated on the attitudinal implications of intonation it is believed that intonation is in fact multidimensional, hence multifunctional. So far the approach which seems nearer to get into grips with the nature of intonation is perhaps the recent communicative approach. If one agrees that language is a means of communication, then intonation ought to be regarded as an inherent part of that language which may

contribute to the overall meaning one wishes to convey. One often hears phrases like 'language specific' versus 'language universals'. Intonation is universal in the sense that every language makes use of it. This could explain the existence of some similarities between the intonation of several languages (see also Bolinger, 1964a, 1978). But intonation is also language specific. In other words, its use implies the knowledge of conventional usage in a given language in the same way that one knows its orthography, grammar and vocabulary. So rather than being "superimposed upon our utterances" (Pike, 1945) or "around the edge of language" (Bolinger, 1964b, 1972a) intonation should find its place in language study 'adjacent' to grammar, semantics, lexis etc. Although intonational choices are often unconscious, it is a fact that a set of choices are made from the language 'intonational system'[13]. The selection from an intonational system is very similar to choices made from the grammatical or any other systems. The use of a particular word/grammatical structure/pronunciation instead of another actually depends on how convincing the speaker wishes to be, what the purpose of his intervention is, what kind of audience he aims to reach. Intonational choices act similarly. They may be used quite independently of any words, grammar (e.g. babies' 'intonation', cf. Bot, 1986: 113), or in conjunction with other means known. This is where intonation may be seen as impinging on other levels or domains. Intonation has indeed a grammatical, an attitudinal, a discoursal function. But its power could also far reach those dimensions.

II. 2. 2. 5. FURTHER EXPERIMENTAL WORK

II. 2. 2. 5. 1. INTONATION

Numerous studies have concentrated on the intonation (including stress and rhythm) of (non-) native speakers of

English as well as other languages. However, to the current author's knowledge there is to date no study entirely devoted to Algerian intonation. Various investigations have concentrated on the study of dialectal, regional varieties of Algerian Arabic or Algerian French. But most of them are purely concerned with lexico-morphology, loan words (Dekkak, 1979) or code switching. The very few studies devoted to some phonetic/phonological aspects of Algerian Arabic/French/English are mainly concerned with segmental aspects (intonation being often neglected). It appears that the only serious attempt to concentrate both on segmental and intonational aspects of Algerian English (though also Algerian French and Arabic) is Moḥamed Benrabah (1987). Although essentially concerned with the intelligibility of advanced speakers of English, he also devotes a whole chapter to a discussion on both segmental and intonational aspects of Algerian Arabic, Algerian French and R.P. (Benrabah, M., 1987: 27-88). Nevertheless, considering the scope of the study, M. Benrabah places more emphasis on segmental than intonational variations. The intonational choices selected in his "Experiment E" are quite straightforward examples of fall-for-statements and rise-for-questions. It remains that this study has contributed to filling the vacuum in research on phonetic/phonological aspects of Algerian speakers of English. But more research is still very much needed.

As to the intonation of native and foreign speakers of English one may instance the work of Anderson (1972), Backman (1977), McNaught (1978), Scuffil (1982), Cruz-Ferreira (1983, 1989).

Scuffil (1982) and Cruz-Ferreira (1983, 1989) are mainly concerned with comprehension of intonation. Scuffil investigates "how English native speakers and German speakers with some knowledge of English interprate the intonation patterns of English R.P." (Scuffil, 1982: 1). Cruz-Ferreira (1983) is a similar attempt with Portuguese informants.

Using sound spectrograms, Backman (1977) devotes her attention to the intonation problems met by eight Spanish speakers of English. She discovered that 78 % of her informants' utterances contained inappropriate intonation. She identified four categories of errors. Spanish speakers had a narrower pitch range than natives, narrower (pre-final) rises, higher pitch of unstressed syllables and a tendency to place pitch prominence to the left.

McNaught (1978) fills the vacuum left for too long in the field of non-native intonational performance. His work is a modest but interesting attempt to study the intonation proficiency of a sample of twenty French learners of English (all first year university undergraduates), with a view to highlighting the major differences and similarities between English and French (McNaught, 1978: II). McNaught was mainly interested in investigating his informants' 1) division of English utterances into intonation groups, 2) use of main accents, 3) use of "new" versus "given" information, 4) use of types of patterns with particular sentence types, as well as "some other aspects of French speakers' prosodic competence in English" (1978: II). The results of his investigations showed that his informants divided their utterances into far more intonation groups than the average native English speaker. McNaught attributed this to interference from French language habits. The effects of such interference on native speakers cannot be neglected. It can "provoke embarrassing situations, due to mis-interpretation on the part of the native English listener" (1978: 80), and can seriously affect communication. McNaught made another interesting observation. French speakers tend to give a separate intonation group to sentence initial items like 'yes', 'well', 'but', and 'now' (McNaught, 1978: 16, 81). While English relies more on nucleus shifting to make a meaning distinction French seems to "place more importance on division of intonation groups". This could, in a way,

explain the wide variety of tunes in English as compared to French (McNaught, 1978: 81). The effect such behaviour has on native English listeners is also worth noting. Unexpected division (into intonation group) makes an utterance more difficult to understand. As far as main accent placement is concerned, French influence seems very transparent indeed. Whereas French is known to have a preference for a fixed main accent group finally, in English, the preference is for a mobile nucleus. This makes it one of the main differences between French and English. Note also that in French, main accent is essentially grammatical, in the sense that it signals the end of an intonation group. But in English, it is mainly (though not always) semantic, as it is used to highlight the item of an utterance which carries most of the speaker' intent. McNaught's informants have a clear tendency to place the nucleus not only group finally, but also on the wrong word. The author also notices the subjects' apparent failure to recognize "new" versus "given" clues. He is very cautious, however, and offers another alternative. It is possible that the French informants did recognize the "new" versus "given" clues. But those were signalled in a way specific to French, as French seems to grant more importance to the "verbal idea" (McNaught, 1978). The use of particular intonation patterns with specific sentence types in French sometimes coincides with those used in English in similar context. This, however, is not always the case. Yet, French informants tend to use in the English utterances the patterns they normally use in similar situations in their mother tongue. Here again, interference from French is highlighted. Finally, McNaught also noticed a narrower pitch range in the English spoken by French speakers. He refers to the works of Denes (1959) and Denes & Milton-Williams (1962) for English, and Léon & Martin (1970) for French. The afore mentioned authors found out that English male average pitch range

varied from 66 Hz to 411 Hz, while the male French average pitch range varied between 70 and 335 Hz.

II. 2. 2. 5. 2. RHYTHM

Throughout the following chapters, it will be shown that the major problems ASE meet are rhythm related. Among other features, will be highlighted the informants' tendency to lengthen unstressed syllables. In connection with this tendency, one may note that similar phenomena have variously been reported in the literature.

Garner (1985) is an attempt to investigate vowel length and voice onset time of French speakers of English. The study has revealed the subjects' tendency to lengthen unstressed syllables and also to reduce stressed ones. This is particularly striking when the unstressed syllables contain short vowels (e.g. French speakers' realization of / ə / as a 'longer' vowel). Garner attributes this to clear interference from French rhythm often described as syllable-timed. In other words, the lengthening of unstressed syllables and reduction of stressed ones, result from an attempt — whether conscious or not — to reduce the difference between distinct syllables, to "equalize" them so as to give them the same (perceptual) value.

Another interesting study is D.S. Taylor (1981) which concentrates on the rhythm of forty nine non-native speakers of English with different mother tongues. The results of the experiment have revealed the informants' failure to keep a significant difference between stressed and unstressed syllables. This is seen as the main factor responsible for giving the informants' speech this typical syllable-timed rhythm.

So rhythmic errors have frequently been held responsible for cases of communication failure, so often perhaps that it has now become a well known fact. This is well illustrated in the results of several experiments conducted throughout

the past decades (cf. Bansal, 1969; McNaught, 1978; Adams, 1979; D.S. Taylor, 1981; Garner, 1985; see also Tiffen 1974, Wilkins 1972, Nelson 1983, 1984, Chela de Rodriguez 1980 & 1983 reported in Mohamed Benrabah, 1987: 126). The results of the current investigation also contribute to reinforcing the above claims.

Notes to Chapter II

1 See discussion in Chapter One: Introductory, sub section I.2.1..

2 Information collected from Pike (1945: 3, 173).

3 The fairly large number of distinctions — or 'tone patterns' — established by the authors is probably the direct cause of such overlapping.

4 In fact, there still does not seem to be any real system for handling everything in English intonation. There are indeed conventional ways of representing descriptive analysis; however, a convention for <u>explaining</u> systems or patterning is still lacking.

5 Note that in the present work, a syllable which is both stressed and carries or establishes a new pitch trend will be called accented syllable (see chapter One).

6 Later in Chapter IV and mainly Chapter V, peculiar rising and falling 'gestures' in Algerian English intonation will be discussed. It will be shown how such 'gestures' could not be neglected in the same way this on-glide can.

7 It is the present writer's belief though that these are not the only logical possibilities. Intonation contrasts in English can also be attitudinal or even discoursal (O'Connor & Arnold, 1973; Brazil, 1978).

8 Hirst's transcription has been adopted here together with one of his numerous examples. The symbol [°] is placed before the centre or accented syllable, and ['] before the stressed syllable(s).

9 One must admit though that this also appears to be the case of all T.G. analyses as they are meant to represent what every speaker knows subconsciously. This presents an obvious danger. In trying hard to explain everything the T. Generativist can easily fall into the trap of forcing rules on to events or phenomena. As a result s/he will have to face an exaggerated high number of cases to be regarded as "exceptions" to the main postulated rule (cf. Chomsky and Halle's account of word stress rules, 1968).

10 Which assign a maximum stress (i.e. primary stress or 1-stress) to each lexical morpheme within a given constituent (i.e. phrase or sentence).

[11] For a discussion against the existence of a deep structure in the sense formulated by Chomsky and Halle see McCawley (1968), Lakoff (1969, 1970b, 1971), Postal (1970) and Smith and Wilson (1979).

[12] Note that, as will be discussed later (sub section VI.13), one of the weaknesses of Unit IV seems to support the argument the present writer is expounding.

[13] Even if there is still no consensus about what should actually be included (i.e. regarded as meaningful) in such a system (House, 1983: 72).

Part Two :

Experimental Work

Chapter III

Experimental Design

Structure and Administration of the Tests

III. 1. APPROACH TO THE PROBLEM : INTRODUCTION

The present experiment is only a preliminary investigation. And there is no doubt that there is still a need for further research on the subject.

The primary objective of this work is to try and have an overall picture of the intonation adopted by the Algerian speakers of English (ASE), and see if some generalizations can be drawn as regards the patterns used.

The experimental work conducted for the purpose of the present study consisted of two experiments, the Production Test and the Perception Test.

The aim of the Production Test was to gather a sample of spoken Algerian English to be analyzed. It was submitted to twenty ASE and also to a group of five native English speakers used as controls. The controls' performance was regarded as the norm against which to assess the Algerian utterances (but see further discussion about the controls' performance in sub section V.11.). The Production Test consisted of ten units and was designed with a view to elicit a number of variables the most important of which being:

=> specific nuclear tones/pitch contours (cf. Units I, III, IV, V, & VI)

=> nucleus placement/shifting (cf. Unit II)

=> division of utterances into meaningful Intonation Groups (cf. Units VII to X)

The Perception Test involved mainly native English informants as listeners and ASE with the controls as speakers. Its aim was to have a sample of data gathered in the course of the Production Test to be assessed and evaluated by an audience of 160 Native English Listeners (NEL).

The aim of the present chapter is to shed some light on the various stages in the experimental design of both tests. Furthermore, it will also include a description of the content, rationale and administration of each test.

III. 2. EXPERIMENT ONE: THE PRODUCTION TEST

One point should be made clear from the outset. The test set up for the present experiment ('Experiment One' or 'Production Test') does not have the pretension of focussing on every prosodic[1] feature one may come across when analyzing the non-native utterances. The analysis of the data collected for the purpose of this experiment will be limited to those aspects of intonation that may prove particularly relevant in the context of teaching English as a Foreign Language (T.E.F.L.) in Algeria. It is hoped that more information will be gathered for application in the foreign language classroom (see chapter VII). Thus, a priority will be given to those characteristics of British English (R.P.) intonation that are most likely to cause problems to the Algerian learner[2] on the one hand, or that he is most likely to meet[3] on the other.

III. 2. 1. ANALYSIS PROCEDURE : STRATEGIES

III. 2. 1. 1. INTRODUCTION

The method adopted in the Production Test was, to some extent, similar to McNaught's experiment (1978). He investigated the "productive intonational competence" of a sample of twenty French learners of English. In his

experiment, the twenty subjects were presented with sixty two pairs of English sentences, in the written form, representing the majority of sentence types that occur in English, and in a "conversational style" (McNaught, 1978). Each pair of sentences consisted of a stimulus sentence (SS) and a response sentence (RS). The S.S. aimed at providing an adequate linguistic context for the production of the intended R.S.. The informants were required to read aloud the R.S. after hearing the stimulus spoken on a tape by a native speaker (the experimenter himself).

III. 2. 1. 2. PRESENT EXPERIMENT

The first steps in the conduct of the present experiment were very similar. The major sentence types occurring most frequently in English were established. Those considered to be most likely to be encountered by an Algerian learner if faced with a native audience were selected, e.g.

- neutral statements => affirmative
  => negative
- tag questions
- yes/no and wh questions
- echo questions
- polite requests
- commands
- listing => complete
  => incomplete

Those sentences were then represented in a series of short dialogues (as further explained in section III.2.3.1.). The dialogues consisted of a stimulus and a response sentence. They were numbered and typed on several sheets (see Appendix C) which were then inserted into the plastic covers of a booklet.

The booklet also included two (longer) dialogues (cf. Unit VIII) and a reading passage (cf. Unit VII), typed in a

similar way, in addition to two colour pictures (cf Units V & VI; see also sub sections III.2.3.1.5. to III.2.3.2.1.2.).

The rationale behind the use of a booklet made of plastic slides was twofold. First, it was very practical and clean. Only one sample of each unit (and the entire written material) was necessary[4] since the informants underwent the experiment individually. Hence, the same booklet was presented each time to all the subjects in turn. Besides, it enabled the experimenter to keep good control over the whole process of the experiment by eliminating the possibility of bewildering the informants when providing them with a confusing number of separate pages and pictures. All the test material was neatly presented in a single booklet easily handled. When reaching the bottom of a page, the informant had simply to turn the plastic slide as one normally turns each page of a book.

Second, it presented an obvious advantage. It prevented the production of unnecessary and "unwanted" noise due to manipulating each sheet of paper. This problem was originally met when conducting the first pilot study[5].

III. 2. 1. 3. STIMULUS SENTENCES

III. 2. 1. 3. 1. RECORDING

The stimulus sentences were all spoken by an educated female native speaker of British English with an R.P. accent, who also happened to be a lecturer in the Department of Phonetics and Linguistics at University College London.

A recording session was arranged in a sound proof recording cubicle available in the Department of Phonetics and Linguistics, U.C.L.. It took place as follows.

The native speaker was presented with the first unit of the written material; oral instructions (see below) were given to her; and she was then allowed two minutes to get familiar with the test material, i.e. take a quick look at

the short dialogues. Once this was done, she was asked whether she had any query and whether her task was perfectly understood. If not, any doubt raised was clarified before the recording could start.

III. 2. 1. 3. 2. INSTRUCTIONS

The native speaker was required to read aloud and clearly:

1) The number of the exchange* (short dialogue) to be read,

   and pause for two seconds.

2) The first part of the exchange — speaker A's utterance* — in a natural way,

   then pause again for four seconds.

[* see Appendix C]

The following examples are taken from Unit I exchange 4, and Unit II exchange 1 respectively (see Appendix C1 & C2). Note that the double inverted commas: " " indicate what the native speaker read aloud:

Unit I - exchange 4

" 4 " => + 2 seconds

A: "Why don't you have dinner with us?" => + 4 seconds

B: I'd like to, but I really can't today.

(It's kind of you to invite me;but I'm sorry I can't today)

[Variable elicited: Fall-rise => polite way to refuse]

Unit II - exchange 1

" 1 " => + 2 seconds

A: "Does Tom want to go?" => + 4 seconds

B: John wants to go.

[Variable elicited: Nucleus on 'John' => contrast]

As is further explained in sub section III.2.3.1. the utterance of speaker B in each exchange has been underlined. This was done in the hope of making things easier to the Algerian subjects when faced with the written material. They were asked to read only the sentence which was underlined in each exchange. The same procedure was adopted for all four units.

Usually, in each exchange both speaker A and B (S.S. & R.S. respectively) spoke only once. But it sometimes happened that speaker A was allowed to speak twice, a first time before the R.S., and a second time after it. In such cases another pause of four seconds was needed. Therefore, further instructions were given when necessary as in Unit III (see Appendix C3) where the native speaker had to read both parts of speaker A's utterance allowing a four seconds' pause beween the two. Following are two examples taken from Unit III, exchange 1 and 2 respectively:

<u>Unit III - exchange 1</u>

	" 1 "	=> + 2 seconds
A:	"How did he find the play?"	=> + 4 seconds
B:	<u>He liked it</u>.	
A:	"I'm glad"	=> + 4 seconds

[<u>Variable elicited</u>: Fall => Statement of fact]

<u>Unit III - exchange 2</u>

	" 2 "	=> + 2 seconds
A:	"She read 'Babylon Revisited'"	=> + 4 seconds
B:	<u>She read it</u>?	
A:	"Yes, she said she enjoyed it."	=> + 4 seconds

[<u>Variable elicited</u>: Rise => question, surprised]

III. 2. 1. 3. 3. TIMING

The time allowed between each utterance was considered to be the maximum length of time required within and between the dialogues from the point of view of the native speaker, but the minimum from the experimenter's view point.

On the one hand, in order not to go beyond the time (i.e. one hour, see sub section III.3.1.1.1.) initially allocated to the native speaker to achieve her task, fifteen to twenty seconds for each dialogues were felt to be a reasonable length of time. Thus, it was thought, the native speaker would probably have time to imagine the response, but not so much as to get bored.

On the other hand, a pause of four seconds between each utterance was the minimum length of time as far as the present experimenter was concerned. For, as the length of the response sentences varied throughout the Units, the period of time allowed for each one of them also had to vary, some being shorter, while others longer. The present writer had, therefore, planned to carry out some tape editing work which would allow her to leave an adequate length of time for each test response. A lapse of four seconds would provide a reasonable margin to edit wherever necessary, without affecting the following utterance.

Furthermore, when tackling the problem of timing, one also had to take into consideration another criterion: the Algerian informants.

Too short a period of time between and within the dialogues would inevitably confuse and probably irritate the subjects. This would lead to a situation where in order to avoid speaking the R.S. when the stimulus was already going on to the next utterance, the subjects would read the test sentences as quickly as possible. They would concentrate on what came next rather than their actual task (i.e. 'listening and answering' but not 'answering while listening'), thus failing to be natural.

On the other hand, too long a period of silence between the stimulus and the response or, as sometimes happened between the stimulus-response-stimulus, would break the natural transition that should exist within the dialogues. The problem of timing had, therefore, to be tackled very carefully.

III. 2. 2. THE TEST MATERIAL

III. 2. 2. 1. SETTING UP THE TEST

It was desired that the test should be presented in a way that would already be familiar to the students. In other words, all the selected items included in the test were such that they would very much look like the material the students might manipulate in a language laboratory, or even a classroom situation, e.g.

- reading passage (simple narrative)
- dialogue/monologue (free speech)
- picture description
- asking questions (about a picture, scenery, a speech, a comment...)
- answering questions

etc...

The familiar material was preferred for obvious reasons. Unnecessary concentration on relatively unimportant[6] semantic or grammatical features or even structural[7] aspects of the written material could distract the informants' attention from the original task. This is one of the reasons why simplicity was the rule in the selection of the sentences making up the test material. The syntactic structures and vocabulary were kept as clear and simple as possible. Complex sentences were avoided.

III. 2. 2. 2. PRESENTATION

The aim of the test was to make the student-subjects read on the one hand, and speak — more or less freely — on the other. Hence, the test material was initially divided into two major parts, each requiring the informants to achieve one of these tasks.

But before going into minute details, perhaps it would be helpful first to consider the general outline summing up the corpus of the test.

PART I READING

A. Sentences (cf Units 1,2,3, & 4)*

B. Passage (cf Unit 5)*

C. Dialogues (cf Unit 6)*

[* written material]

PART II SPEAKING

A. Picture description or "Asking questions" (cf Units 7 & 8)

B. Guided speech or "Answering questions"

C. Free speech (monologue)

Half of the entire test consisted of written material to be read aloud. Consequently, a critic may legitimately put forward the following comment. Reading does not reflect the way one speaks. Moreover, giving subjects written material to be read aloud can be criticized for three main reasons.

The first is that reading requires certain skills. Someone who does not know (because s/he was not taught) the basic principles involved in reading can not be expected to read properly — although he may well speak properly. Therefore, the informants' reading abilities will not necessarily reflect their speaking proficiency. Reading rudiments are usually taught at an early age at school. This, of course, is true as far as first language acquisition is concerned. Yet, questions may be raised about reading in a foreign language:

=> Can first language reading skills be transferred to the foreign language?

=> Does each language require specific skills?

It is unfortunately not within the scope of the present work to investigate the various studies that have dealt with this interesting aspect of language. Obviously, the main question regarding the present Algerian informants is whether they were taught how to read in English or not. Unfortunately, on the basis of their Secondary School curriculum, the answer seems to be 'no'.

The second criticism that could be levelled against written material to be read aloud is that even if possessing the necessary reading skills, one does not speak the same way one reads. The two activities — speaking and reading — involve two different registers, style ..., and different intonational patterns. Reading is much more like acting (although one might argue that speaking is more spontaneous and natural, in other words more like what acting ought to be). Therefore, some intonational features are often exaggerated depending on the mood to be conveyed, the topic dealt with or other related factors. Such exaggerations are often dictated by the necessity to communicate specific feelings, beliefs, strong points of view, etc. Reading is much more formal than speaking (in conversation).

The final reason is that reading is more restricted in terms of intonational phenomena or prosodic features in general. More variety is present in spontaneous free speech with regard to pauses, breaks, number of word groups, tunes, choice of nuclear tones, etc. (Susan Ramsaran, 1978), as the situation will dictate the selection and occurrence of each of those features.

As a reply to similar criticism, the present author would argue that the problems involved when giving subjects written

material to read aloud were felt to be outweighed by a number of other factors.

It seems necessary, as in any similar experiment, to set up a highly controlled framework within which to analyze the variables present in the data once collected. For, it seems very tempting to gather a large amount of data consisting mainly of natural free speech. This may, it is true, prove very enriching and interesting in the sense that the data will probably reveal numerous peculiar intonational phenomena. Those might not necessarily appear in a reading passage, for example, where the restrictions are in some way inherent in the topic dealt with among other parameters.

Still, controlling similar data must prove more difficult as none of the sentences spoken in the entire stretch of spontaneous speech would have been previously set up by the experimenter to test one — and only one — variable. There is no need to expand on the well known fact that in order to be valid a test should study one variable at a time.

In the present experiment, the variables could only be elicited within sentences. Therefore, the test should be set up in such a way that each elicited sentence or utterance should contain one single variable to be analyzed. This means that no two different variables should be included in the same sentence. For two different variables, two different sentences are needed.

On the other hand, the need for (or the use of) spontaneous speech — the major carrier of most natural intonational habits — involves a further difficulty. Most of the time, natural free speech occurs in places where the speaker feels at ease, and free from any constraint — be it physical, psychological or social. Furthermore, such situations may come about in the street, in a stadium as well as in a club or anywhere else. Yet the settings where spontaneous speech is more likely to take place are usually very poor locations for a good quality recording to be made.

A high fidelity recording can be carried out in a sound proof recording cubicle. But once again, the mere presence of a microphone added to all the instruments needed to conduct any recording will inevitably have an impact on the informants' behaviour in the first place, and on their speech in the second. The setting will impair — if not destroy — all the spontaneity that could have been expected from them.

Of course, a superficially familiar context where the subjects would be at ease might be created by means of a preliminary conversation with the experimenter on topics of potential interest to the students, or involving strong emotions, definite personal points of view, etc.

Nevertheless, one must not be too naïve, as this should not lead one to believe that all obstacles will thus be removed.

Such artificially familiar context created via similar ways can only reduce the problems. It cannot, unfortunately, get rid of them entirely. For, the informants will be speaking to the experimenter, a total stranger to them. Therefore, their speech cannot but be more or less conditioned by the type of relationship existing (or established) between them and the experimenter.

It is hoped that it becomes now easier to understand the present author's decision to give informants written material to read aloud.

On the one hand, it is quite difficult — although not impossible — to provide a high fidelity recording of natural free speech in locations where such speech is most likely to be produced. This is due to the overwhelming background noises which would cause the utterances to be unclear or inaudible[8], or as Léon & Martin (1970: 3) put it:

> "Le corpus peut être enregistré 'sur le terrain' ou en studio d'enregistrement. La première possibilité offre parfois plus de garantie de spontanéité mais présente

l'inconvénient d'apporter des bruits de fond qui peuvent rendre l'interprétation des analyses physiques difficiles"[9]

On the other hand, it is also almost impossible to expect natural free speech to be uttered in front of a microphone and other similar instruments under experimental conditions.

Still, it is possible to provide a more or less good quality recording of speech in a classroom, a language laboratory, or, even better, a sound proof recording cubicle.

In addition to that, one should be able to control the variables included in the speech. The task of controlling cannot be done once the speech has been uttered, but rather before it is produced. Therefore, one should know beforehand what the subject is to say — or more likely to say. This justifies the importance of establishing an initial inventory of all the variables to be tested first; second, to select, invent, or quote sentences each of which contains one single variable to be examined; third, to insert each sentence within a logical context — making use of stimulus sentences, dialogues or whatever might seem necessary; and finally, to ask the informants to read aloud the newly made written material.

III. 2. 3. CONTENT AND RATIONALE OF THE PRODUCTION TEST

III. 2. 3. 1. THE WRITTEN MATERIAL

In Units I, II, III, and IV the informants were asked to read aloud a number of sentences. All those four units have a basic common denominator: they are all presented in the same way. They are made up of a succession of very short dialogues. Each short dialogue is actually an exchange between two imaginary persons A and B where A is the stimulus (S.S.) and B the test or response sentence (R.S.). Both the S.S. and the R.S. were included in the booklet and presented to the subjects in the written form. It was believed that

allowing the informants to have access to the entire dialogue before it was actually produced would enable them to deduce — even unconsciously — the appropriate intonation to be adopted in each R.S..

Furthermore, all the R.S. — those the informants were required to read aloud — were underlined. This was done in the hope of avoiding any possible confusion in the subjects' mind. Thus, the informants could listen to the S.S. through a pair of headphones first, and then, read aloud the underlined R.S. as naturally as possible.

III. 2. 3. 1. 1. UNIT ONE: PITCH CONTOURS

Unit I was designed to establish if the students subjects were able to use specific intonational features that were appropriate to the situation they found themselves in, and, more importantly, to the overall message or attitude they wished to convey. Note that these intonational features were those the present experimenter was trying to elicit, e.g. direction of the pitch movement (say, falling vs. rising tone in tag questions).

In addition to the relevant S.S., the informants were given the exact meaning of the underlined R.S. between brackets. The meaning was not underlined as it was not meant to be read aloud. For each unit, written instructions explaining accurately the whole procedure were provided in the booklet. However, in order to make sure that the subjects had perfectly understood their task, detailed instructions were again given to them orally before the recording could start. Informants were also reminded that it would not always be the speaker from the tape who would be the first one to speak. Sometimes, they would be the first to start the short dialogue(s) as in Unit I sentences 3, 6, 9, 10 (cf Appendix C1). So, particular attention was required from them.

Note that the same oral instructions were given to all the informants for every unit. Once this was done, the informants were given two minutes to become familiar with the sentences.

In Unit I (see Appendix C1), several syntactic types were tested. Among them were some declarative, tag questions (cf. sentences 2, 6, 10.), restricted versus unrestricted choices (cf. sentences 11 versus 7), limited versus unlimited listing (cf. sentences 18 versus 15),

-> polite refusal (cf. sent. 4, 13)

-> polite disapproval or disagreement (cf. sent. 17, 1)

-> polite request (cf. sent. 16, 19)

interjections, etc.

Note that the dialogues designed to elicit similar syntactic structures which still contrasted for some reasons were always separated, e.g.

<u>R.S. designed to elicit tag questions:</u>

Such test sentences offered two possibilities:

a) The speaker (R.S.) expects the listener (S.S) to agree with him/her => search for confirmation, hence, falling tone in the tag

b) The speaker (R.S.) is uncertain and needs to check again with the listener (S.S.). In this case, the speaker is asking a real question, and demanding further information: 'Am I right? Yes? No? If not, please correct me' (=> rising tone in the tag).

A sentence designed to elicit situation a) was never presented next to one designed to elicit situation b). The same procedure was adopted for dialogues designed to elicit a limited versus unlimited listing, or other syntactic structures involving contrasting pairs. The reasoning behind this decision was twofold.

First, it was undesirable that the subjects should read two successive contrasting sentences in exactly the same manner without paying sufficient attention to the cues provided for between brackets.

Or vice versa, read each one differently in the expectation that a difference should be made between the two syntactic structures (this being suggested by a different gloss for each sentence). Hence, the subjects might simply make a random distinction either by using a rise in the first sentence and a fall in the second or merely by altering some other features in one or both sentences.

Second, the results of a pilot study conducted with native speakers (see sub section III.4. below) indicated that it would be unwise to present two contrasting sentences one immediately before/after the other. For, instead of eliciting the contrast, the pair actually confused the native speakers.

III. 2. 3. 1. 2. UNIT TWO : NUCLEUS PLACEMENT

The purpose of Unit II (see Appendix C2) was to examine the placement and shifting of nuclei. More accurately, the aim was to investigate the informants' ability to make a difference between the marked and the unmarked position of the nucleus (last accented syllable in an intonation group) in English. The main questions raised were:

1) Do they use cues of context to decide where to locate the nucleus in the utterance/sentence/intonation group?

2) Are they able to alter the neutral (or unmarked) position of the nucleus according to what they wish to express, that is
   - -> contrast
   - -> emphasis
   - -> a difference between 'new' versus 'given' information ?

As was previously mentioned in section III.2.3.1. above, Unit II was similar to Unit I as far as its presentation was concerned.

Pairs of sentences were presented to the informants in the written form. And similarly, each set included a Stimulus Sentence (A) spoken from the tape, and an underlined Response Sentence (B) that the informants were to read as naturally as possible.

As opposed to Unit I (see section III.2.3.1.1. above), III, and IV (sections III.2.3.1.3./4. below) the Stimulus Sentences in Unit II were felt to carry sufficient information for the subjects to accomplish their task. Therefore, no meaning associated with the underlined R.S. was given between brackets.

However, as proved necessary following the results of the first pilot test, further information was sometimes needed to clarify the meaning of a particular utterance. This information was then added between parentheses following the R.S. in question. It was provided either

-> to complete the R.S. (but could be avoided, i.e. not spoken)

-> or to give more details about the psychological context within which the R.S. had to be read.

Note that this situation arose with only three sentences, namely: Response Sentence B in

- dialogue 2,
- dialogue 7, &
- dialogue 13

respectively.

The informants were of course reminded not to read aloud the portions contained in the parentheses.

So Unit II aimed at testing both marked and unmarked positions of nuclei. The reader is referred to Appendix C2 for more information and details regarding the various locations of the nuclei.

III. 2. 3. 1. 3. UNIT THREE : PITCH CONTOURS

Unit III was actually a continuation of Unit I. The intonation patterns of the following syntactic types were tested in different situations:

1) simple declarative (affirmative and negative)
2) yes/no questions
3) wh – questions
4) tag questions
5) echo questions
6 polite requests
7) commands
8) - limited listing
   - unlimited listing
9) - restricted choice
   - unrestricted choice

Although the objective was similar in both Units, the two were separated and presented in a slightly different way so as to avoid boredom, mechanical answering, or even fatigue.

Obviously, it also aimed at providing the informants with some variations, hoping this would prevent them from realizing that they were actually reading a limited number of similar syntactic structures. Besides, considering the length of the test (ten units) this diversity was necessary.

Unit III was also made up of a series of very short dialogues consisting of stimulus and response sentences.

The structure of each set in Unit III was as follows:

one dialogue:

speaker	A:	Stimulus Sentence 1	(or S.S. 1)
	B:	Response Sentence	(or R.S.)
	A:	Stimulus Sentence 2	(or S.S. 2)

Considering what speaker A from the tape said (S.S. 1), the subjects were expected to read aloud sentence B (R.S.) in a way that would logically suggest or lead to the next reply from speaker A (i.e. S.S. 2).

Although this unit looks slightly different from the first one where the subjects were provided with an explicit meaning associated with each R.S., the informants' task was, in fact, similar in both units. The subjects were led to adopt an intonation that was appropriate to the meaning they wished to convey in each syntactic type.

Note that on some occasions (see also Unit II 'Nucleus Placement', sub section III.2.3.1.2.), a problem was sometimes encountered while setting up Unit III. At times, it was difficult to include in the linguistic context all the information that was needed to justify the use of specific intonational features. In such cases, more details were therefore added and included in the parentheses adjacent to the R.S. in question. The informants were asked to consider those details before speaking the underlined R.S. but not to read them aloud. This problem was encountered with four sentences, namely: R.S. B in

- dialogue 7,
- dialogue 8,
- dialogue 15, and
- dialogue 20

respectively.

The reader will find in Appendix C3 information about the nuclear tones expected in each R.S. of this unit.

III. 2. 3. 1. 4. UNIT FOUR : ORDER VS. POLITE REQUESTS

The syntactic types Unit IV was more particularly concerned with were commands versus polite (or friendly) requests. The main question raised was the following one:

> Are the Algerian informants able to make a distinction between a strict order and a friendly or polite request by intonational means?

Note that here again, as in Unit II, no explicit meaning associated with each R.S. was thought necessary. It was felt that the Stimulus Sentences were providing all the information that was needed. Therefore, no gloss was given in addition to the S.S.. However, following the results of the pilot study some additional information was felt necessary in the case of a particular sentence (see Appendix C4, dialogue 4, R.S. B, Unit IV). Consequently, further details were included between parentheses before that Response Sentence. The informants were also reminded to consider it but not to read it aloud with the underlined sequence.

III. 2. 3. 1. 5. THE READING PASSAGE (UNIT VII)

In Unit VII, informants were presented with a short text to read aloud. Before starting the recording, the informants were given some time to get familiar with the text. It was decided that the maximum time granted for that purpose would be two minutes. But as the recording of each informant proceeded, one soon realized that this period was more than sufficient. For none but two Algerian informants actually needed two minutes to get familiar with the text. All the other subjects felt they were 'ready' long before the time was over. The passage was selected for its shortness and simplicity. It was taken from Byrne & Walsh (1977: 118).

Units VII, VIII, IX and X had a common objective. Instead of concentrating on nuclear tones or nucleus placement or shifting, they aimed to see how Algerian speakers divided their speech into meaningful intonation groups (IG). The style was obviously moving from formal (reading passage) to gradually more casual (dialogues, guided speech, and free speech).

Appendix C7 shows the reading passage divided into fourteen IG. This was considered as the maximum number of meaningful IG into which the text could be divided. Note that as shown in chapter IV, most of the controls did not divide the passage into so many IG. Although fewer IG were perfectly possible and accepted, more were not.

III. 2. 3. 1. 6. THE DIALOGUES (UNIT VIII)

Unit VIII consisted of two short dialogues both taken from Byrne & Walsh (1977: 117-118). The aim was to see how ASE divided a written dialogue into meaningful intonation groups. Both dialogues involved an exchange (longer than those presented in the first four units) and taking place between speakers A and B.

In order to allow the subjects to play both parts (A and B) the dialogues were each recorded twice. The first time the informants played the part of speaker A, while the experimenter played the part of speaker B. The second time, the roles were reversed. Some tape editing work was carried out later which enabled one to obtain the complete dialogue(s) spoken entirely by all subjects in turn. Then, like the reading passage (Unit VII above) and Guided and Free speech (Units IX and X below) the dialogues were divided into IG. The number of IG and words per IG was calculated (see Chapter IV).

III. 2. 3. 2. THE REMAINING MATERIAL

III. 2. 3. 2. 1. PICTURE DESCRIPTION

Units V and VI consisted of two colour pictures. They were presented with a view to elicit yes/no and wh questions, respectively. The following sections explain how this was achieved.

III. 2. 3. 2. 1. 1. PICTURE ONE : YES/NO QUESTIONS (UNIT V)

Unit V was designed to elicit yes/no questions. The picture represented a landscape. the informants were asked to try and discover where the picture was taken. To do this, they could ask questions, but only questions which could be answered by 'yes' or by 'no'. Note that even if the correct place was found this was not told to the subjects so as to elicit more samples of yes/no questions. For each subject, only ten yes/no questions were selected for analysis (cf Appendix C5).

III. 2. 3. 2. 1. 2. PICTURE TWO : WH QUESTIONS (UNIT VI)

The second picture was the basis of Unit VI which aimed to elicit wh questions. The picture represented an untidy office in a house. The informants were asked to take the role of a teacher and guide an unwilling pupil (i.e. the experimenter) into a description of the picture by asking questions. Of course, the teacher should take care not to ask questions which could simply be answered by 'yes' or by 'no'. So the subjects were encouraged to ask other types of questions.

Similarly in this unit, for each informant only ten wh questions were selected for analysis (cf Appendix C6).

III. 2. 3. 2. 2. GUIDED SPEECH (UNIT IX)

This Unit was designed to elicit some free speech within a

limited controlled framework. In other words, the informants' speech was guided (hence the title 'Guided Speech'). The point was to make all the subjects produce more or less similar sentences without having them reading any. Besides, it was hoped that this Unit would have more chance to capture more 'natural' speech in a way the previous Units were unable to. This time the informants would feel — even unconsciously — that THEY would be choosing their own sentences/utterances to express their own views and make their point clear. Additionally, they would probably be too much involved with trying to find out what to say next that they would not have sufficient time to think about the way things ought to be said.

This Unit consisted mainly of a series of questions spoken by the experimenter. Two sets of questions were selected. The first set was meant to elicit simple and short statements of the type shown between brackets in Appendix C9. The second set of questions was designed to elicit longer and sometimes more complex statements.

Twenty six questions were prepared altogether, thirteen for each set. Before starting the recording the informants were told that this time, instead of reading sentences, they were required to answer a number of questions that the experimenter would ask. The informants were reminded not to answer the questions with 'yes' or 'no' nor even with one-word replies but to make complete sentences. Any query was immediately clarified. A test question was used before the recording could start. The question selected was actually question N°. 1 of the first set, i.e. "What's your name ?". If the informant answered properly, that is making a complete sentence, the experimenter assumed that the task had been understood and the recording could start. If, on the other hand the informant answered with a one-word utterance (e.g. "Sabrina" or "Mustapha"), s/he was carefully corrected: "My name is Sabrina" (answer n° 1 in Appendix C9) or "My name is

Mustapha". Usually, after having been corrected, the informants always realized what they had done wrong. Then, the recording could proceed. Although question No.1 was used as a test at the beginning of this Unit, no convincing argument was found to justify any decision to discard the answer to that first question. Therefore, answer 1 was kept and due consideration was given to it like all the others.

A sample of two and a half minutes of guided conversation was selected for each informants. The sample was then divided into intonation groups (see Appendix D9). The number of IG and words per IG was calculated (see chapter IV).

III. 2. 3. 2. 3. FREE SPEECH (UNIT X)

As its title suggests, Unit X aimed to elicit free spontaneous speech. The informants were recorded for five minutes (sometimes more) while narrating a situation where they had been frightened.

A sample of two minutes of each informant's monologue was selected for analysis. The samples of Free speech were also divided into intonation groups (see Appendix D10). The number of IG was also calculated as well as the number of words per IG (see chapter IV).

The rationale behind the administration of units VII to X was to see if a change in the number of IG and words per IG was noticeable when the style differed. The figures are shown in chapter IV, and chapter V discusses this aspect further.

III. 2. 4. SELECTION OF INFORMANTS

The twenty informants selected for the purpose of the present study were all Algerian speakers of English. All of them were attending the first year course of the B.A. in English Studies at the University of Oran (Algeria).

The aim of the following sections is to shed some light

on the criteria taken into consideration when selecting the Algerian informants.

III. 2. 4. 1. MINIMUM KNOWLEDGE OF THE LANGUAGE REQUIRED

At this point, it is perhaps worth giving some brief background details about the Algerian system of education[10].

In Algerian Secondary Schools, pupils are taught a second foreign language[11] in their third year.

This means that when they reach the university — and if they have not repeated any year in Secondary School — they have been learning a second foreign language for five years[12]. These five years represented the minimum knowledge of the language required to be eligible to undergo the present experiment.

Note that although some Secondary School pupils might have repeated one or more years, and therefore would have been learning English for more than five years, no Secondary School pupil was selected for the present experiment, as the following sections will explain.

III. 2. 4. 2. LEVEL OF INTEREST IN THE LANGUAGE

As was just mentioned, no Secondary School pupil was selected for the current experiment. The rationale was twofold.

First, pupils were not considered to be fluent enough in English to be tested on an even more complex aspect of the language (such as intonation). They had to have completed at least the full five years Secondary School programme of English as a foreign language.

And second, English is not only a foreign language in Algeria; but it is also one among a number of other subjects being taught in Secondary Schools. In addition, there is a particular tendency among pupils in scientific sections — although this may not be generalized.

This tendency is to consider scientific subjects as the most important ones. This often leads to a situation where a decrease — if not a complete lack — of interest in subjects like modern languages can be noted.

For these reasons, the present researcher did not want to run the risk of selecting a sample of pupils who would not be interested in English at all or at least not sufficiently. This would already have altered the results of the experiment. For example, some might have chosen/used patterns randomly, spoken the utterances in an unnatural way, or in a way they would never have used, etc.

III. 2. 4. 3. HOMOGENEITY

Coming back to the teaching of English in Secondary Schools in Algeria, it may be interesting to note the following.

When they reach their third year, and whatever field they are in, pupils are required to chose another foreign language to learn. Some may choose German, or Spanish, others may prefer English. If one considers, say, the literature section one may notice that within the same group (or roll) of pupils sometimes three different languages have been selected: Spanish, German or English. And similarly within other groups of various sections. The result is that each language class may gather pupils from different sections (from Science, Literature, etc...). For example, an English class may well consist of both Science and Literature pupils. The same applies to most other language classes.

Considering such classes, it soon became clear that there was no way one could know in advance whether the pupils in question were sufficiently interested in English, or not. It was desirable to consider subjects showing similar interest in English, and also attending the same course (in the same section). This is what is meant by 'homogeneity'.

Thus, for the reasons previously mentioned, and also for the sake of homogeneity, the current researcher decided to consider B.A. students in English studies. Those students were thought to show sufficient interest in the language when registering themselves for the B.A. in English studies of their own free will.

III. 2. 4. 4. KNOWLE DGE ABOUT THE INTONATION OF ENGLISH

After some thought, first year students were chosen to take part in the experiment.

The choice of first instead of second or third year students was dictated by the necessity to deal with 'naïve' informants as far as English intonation was concerned.

Moreover, it was decided that the experiment would be carried out during the first semester, or S.1[13], of the academic year. This was justified by the desire to avoid the following problem.

Some "Initiation to the Intonation of English" was scheduled to be given to the students in the Phonetics Course during the S. 2. More practice in the field was to be given during the next two years (the next four semesters).

Thus, the risk of having informants already too familiar with general aspects or patterns of English Intonation was immediately eliminated.

The 'naivety' criterion was preferred in order to avoid the students being influenced in some way by what they might have learnt — learnt, or, most of the time, merely remembered (whether rightly or wrongly) about the subject.

Such influence would have hindered the process of 'naturalness' the experiment was aiming at[14].

As was already mentioned, the aim of this experiment was to try and find out how they were actually speaking, and not how they believed they ought to speak. Speech produced this way would be hypercorrected and too self-conscious. Far from

being natural it would not at all represent the type of speech that it was hoped to capture.

Another detail should also be mentioned. Never, neither before nor while the experiment was being conducted, was the word 'intonation' mentioned (nor even the word 'test'). This was avoided for an obvious reason. No hint about what the experimenter was actually investigating or looking for, had to be given to the informants before the test had been conducted.

Once each student had undergone the test, he was handed an information sheet carefully set up at some earlier time. It actually consisted of a questionnaire requiring some information about the informants' background (see Appendix A part A). It was thought that some information about the informants' background might prove very useful when analyzing the data (e.g. number of years a given subject had been learning English, if one of his/her parents was a native speaker of English, etc...).

In the questionnaire, the term 'intonation' was mentioned twice, once in

> Question N° 16:
>
> Have you had any special training in English Intonation?
>
> Yes ☐ No ☐
>
> If yes, give details.

and a second time in

> Question N° 17:
>
> Can you think of any factor which may have influenced your English intonation?
>
> Yes ☐ No ☐
>
> If yes, give details.

But again, this questionnaire was each time given to the students once they had undergone the whole test, never before.

III. 3. EXPERIMENT TWO : THE PERCEPTION TEST

It has to be made clear from the outset that the second experiment (involving the Perception Test) did not aim to test the perceptual abilities of the Algerian informants. Rather, it involved native English listeners.

The Perception Test essentially aimed at assessing or evaluating the Algerian speakers' performance by an audience of native English listeners (judges).

The decision to incorporate such a test in the experimental design was dictated by a desire to capture the utterances — or parts of them — which were clearly "unEnglish". As a trained phonetician, the present author was perhaps able to detect a wide range of errors made by the Algerian learners. However, being also a non-native speaker of English, it was feared that some minute peculiarities, which only a native ear could detect, might go unnoticed despite their importance. For there is no doubt that English intonation *is* very subtle indeed; and so are the various (shades of) meanings that can be associated with it. So it was felt that the reactions of a native audience would surely enrich the observations, possibly the findings, and of course the discussion.

III. 3. 1. PROCEDURE

III. 3. 1. 1. SETTING UP THE TEST

As the aim of the Perception Test was to play the Algerian and the controls' utterances to the native judges (sub-section III.1. above), the first task was to decide which utterances would be listened to. Ideally, one would have welcomed the possibility of playing all the Algerian speech to a native audience. However, considering the large corpus of

data gathered in the first experiment (ten units), for obvious reasons this was, although not impossible, rather ambitious and time consuming. So it was decided that only the first four units would be considered for native evaluation. The rationale was threefold.

First, those four units presented the advantage of having a highly controlled framework as opposed to the other units (e.g. Guided and Free Speech, units IX and X respectively). And second, they were designed with a view to elicit specific meanings. Some sentences even involved very subtle shades of meaning or attitudes which only a native ear could naturally pick up e.g.

You've ↘given him ˅my money (polite way to correct)

(see Appendix C1 Unit I, sentence 17)

And finally, the first four Units were also analyzed instrumentally (see sub section III.5. below).

The next question was how to present the material to the judges? But before attempting any answer, one had to decide first upon the number of Native English Listeners (NEL) who would listen to a speaker's utterances.

III. 3. 1. 1. 1. NUMBER OF NATIVE ENGLISH LISTENERS (NEL)

At first, a selection of five NEL for each speaker was decided upon. However, it was quickly realized that as the speaker-informants mainly involved non-native speakers of English, five NEL would probably not be sufficient. The results might not reveal much especially if the opinions diverged (as they eventually did on several occasions).

Although one might argue that even ten NEL may not be enough, considering the large number needed to cover the whole experiment, it was felt that one would at least be on the safe side when deciding upon ten judges for each speaker.

Besides, various scholars have adopted this procedure quite successfully (cf. Bansal, 1969; Tiffen, 1974; M. Benrabah, 1987).

Following Lado (1961) one hour was considered to be the maximum length of time within which to assign a given task to any informant. If the informant is allowed to take part in an experiment beyond a sixty minutes period, then fatigue, boredom and/or similar factors may interfere with the experiment and affect the subject's reactions and performance. Therefore, an attempt was made to keep such undesirable and uncontrollable variables to a minimum.

For the above reason, for each of the four units, the Algerian speakers were divided into four groups of five. In addition, four controls were selected on a random basis (one for each unit, see Fig.4 in Chapter IV). As each speaker/group of speakers had to be listened to by ten different judges, the cooperation of 160 NEL was needed altogether.

III. 3. 1. 1. 2. NUMBER OF SENTENCES PER SPEAKER

(1) CONTROLS

Since from the outset it was assumed that the controls' performance would constitute the norm (see sub section III.1.), it was decided to play all the controls' utterances (for the unit concerned) to the NEL. A 100% correct identification by the NEL would be evidence that the norm could actually be relied upon for generalizations (for further discussion about the norm and the controls' performance see sub section V.11.).

(2) ALGERIAN SPEAKERS OF ENGLISH (ASE)

The first four units comprised 1680 Algerian utterances. So to cut down on this large figure, a number of sentences were omitted (e.g. when they were clearly right or wrong).

Also, it sometimes happened that the Algerians' performance regarding particular sentences was similar. Therefore, instead of playing to the NEL all the twenty sentences, only two or three (sometimes less) representative of all the others were considered. It was assumed that any similar sentence (not played to the NEL) would have obtained the same reaction.

Altogether, 1501 Algerian utterances were played (305, 465, 325 and 406 in Units I, II, III and IV respectively).

III. 3. 1. 1. 3. SELECTION OF ALGERIAN UTTERANCES

The Algerian utterances were selected after the recordings had been analyzed by the present experimenter. This was done for obvious reasons, e.g. to identify the doubtful utterances, i.e. those which included doubtful choices of nuclear tones, or unusual rhythms etc.

The utterances fell into three main categories, namely "correct", clearly "incorrect", and those which were in some (perhaps subtle) way non-native. This last category was viewed as the most important one (cf. sub section III.3.1.2.3.3., and for assessement of the C-category see also sub section V.11).

III. 3. 1. 1. 4. TAPE EDITING

Once the Algerian utterances were selected, a lot of tape editing work had to be done so that the desired sentences were all re-recorded on separate tapes. Each sentence was recorded twice. This would allow the NEL to listen to the same utterance twice before making a decision.

The sentences were presented (i.e. recorded) in the same order as they appeared in the first experiment so as to allow for sufficient time between contrasting pairs of sentences as well as similar sentences spoken by different speakers. For each unit, the NEL listened to all the sentences spoken by

the first speaker, then to those uttered by the second speaker, etc. up to the last speaker of the group. In each group, the control was always recorded at the end, that is after the last Algerian speaker.

III. 3. 1. 2. TEST MATERIAL

III. 3. 1. 2. 1. LAYOUT OF THE ANSWER SHEETS

Once the utterances were selected and tape edited, they were typed so as to provide the NEL with a written version of the spoken utterances. It was hoped that this would allow the NEL to concentrate on their real task without being distracted by pronunciation mistakes.

Following McNaught (1978) (see also Warkentyne, 1972, reported in McNaught), punctuation marks were avoided in Perception Tests I, III and IV (involving Units I, III and IV respectively). This was done in order not to give away any hint about how the utterances were supposed to be spoken.

Punctuation was kept in Perception Test II (cf. Unit II), as in this case, it could not really help in determining the information focus (or location of the nuclei).

III. 3. 1. 2. 2. PSYCHOLOGICAL CONTEXT

The importance of contextual information in the decoding of any spoken utterance (and perhaps also 'written') is viewed as crucial (O'Connor and Arnold, 1973; McNaught, 1978; Warkentyne, 1972; Brazil, 1975; Brazil et al. 1980; Cruz-Ferreira, 1983; Cruttenden, 1986). However, it was decided not to provide the NEL with the stimulus sentences that the Algerian speakers had heard prior to speaking the Response Sentences. This might have influenced the judges' decisions. And the aim of the Perception Test was to try and see what the utterances as spoken by the Algerians actually meant to them. Instead, glosses were provided.

III. 3. 1. 2. 3. GLOSSES

For each sentence, the answer sheets offered two possible glosses: meaning A and meaning B. In addition, a third possibility was allowed: the C-category.

III. 3. 1. 2. 3. 1. GLOSS A

Meaning A was the correct gloss, or at least the gloss that the Algerian speakers (and the controls) were expected to convey. Most of the time gloss A took the same form as the contextual information provided to the Algerian subjects in the first experiment. Sometimes, it was rephrased so as to suit the purposes of the Perception Test, e.g. if one compares Unit IV ('Order vs. Polite Request') with Perception Test IV one can note the following. In Unit IV, the Algerian speakers and the controls were provided with relevant information suggesting that the Response Sentences (RS) ought to be uttered with the force of an order, or as a polite request. In Perception Test IV, however, the NEL were not given this contextual information. Instead they were asked to decide whether the utterance expressed

a) an order
b) a polite request
or something else c) other ...

With regards to the ASE, if a high percentage of native listeners identified this gloss (A) as the one the speaker intended, then this would mean that the Algerian informant was successful in manipulating intonation so as to convey a specific meaning. This, of course, by no means implies nor proves that the Algerian speaker has used the intonational means he was expected to (see discussion in chapter V).

III. 3. 1. 2. 3. 2. GLOSS B

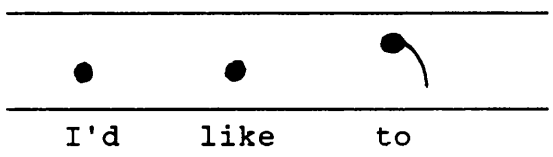
The second choice, meaning B, was the incorrect meaning, i.e. not the meaning the speaker was expected to convey.

Gloss B took two forms. It was either worded so as to convey the complete opposite of meaning A, or simply a different meaning.

Note though that sometimes, gloss B was altered so as to agree with the speaker's realization of a given utterance. An illustration follows.

When a tonicity or tone error (or both simultaneously) led to a complete change of meaning, gloss B was designed so as to express the new meaning, e.g. the utterance "I'd like to" (cf. Appendix C1 Unit I, sentence 4) was designed to elicit a falling-rising tone on "like". All the native speakers who took part in the first pilot test and first experiment produced the expected pattern.

Now instead of producing a fall-rise on "like", speaker M20 used a high fall and located it on the last syllable of the group, (i.e. "to") as shown on the following diagram (broad representation):



Obviously, the meaning of the utterance was drastically changed following at least two (tonicity and tone) errors. The location of the nucleus on "to", for example, transformed this function word into a content word, namely perhaps "two" standing for "two items". Consequently, the new utterance as spoken by the speaker could mean a strong contradiction of a previous suggestion to offer him a single apple for instance, when he wanted two, or simply a particular emphasis on "two" (as opposed to 'three'). But it could also mean something else. This is why the next category discussed in section

III.3.1.2.3.3. below was included in the answer sheets.

If a high percentage of native listeners identified gloss B as the intended one, this would obviously mean that the speaker failed to use the intonation pattern/features that was/were appropriate to the meaning s/he was expected to convey.

Note, again, that it is perfectly possible that the Algerian speaker had used a perfectly acceptable English intonation. However, if the NEL did not identify the correct gloss, his utterance, although perhaps appropriate in other circumstances, would be regarded as incorrect.

III. 3. 1. 2. 3. 3. <u>C - CATEGORY</u>

As mentioned in the above sections, a third possibility was offered to the native listeners. The open-ended type of test adopted in the current study perhaps ought to be discussed further. Various views are held (Scuffil, 1982; Cruz-Ferreira, 1983 and 1989) regarding which type of test is better. Following Scuffil (1982), Cruz-Ferreira (1983) rejects the open-choice (or open-ended type of) test on the grounds that it allows for an unlimited, often irrelevant number of answers in what she calls a "dustbin" category where almost anything could be found. And she adopts the forced-choice test.

This type of test, where only a limited number of worded possibilities are offered to the informants (two and three in Cruz-Ferreira, 1983 and 1989 respectively), presents the advantage of forcing the subjects to make a decision. This may be very practical from the point of view of the researcher. Thus, the informants cannot escape the responses. Any possibility of 'don't know' answers — which might be quite embarrassing to the experimenter — is eliminated from the start. However, this may also cause frustration among the subjects if not entirely satisfied with any of the (two/three) choices. Moreover, it may also lead

to a situation where, in order to avoid the dilemma, informants will select answers on a purely random basis. This will inevitably introduce an undesirable variable which might seriously affect the experiment. Cruz-Ferreira (1983) acknowledges this possibility of randomization of the answers. She therefore devises a statistical way to account for it. Yet, doubts are still raised as to the validity of such a method. For, those statistics can only contribute to making the results more or less 'acceptable'. However, it will still remain that any departure from the results or any discussion about them cannot but be purely hypothetical as based on random, hence unreliable answers.

Anyhow, the present author preferred to avoid — as far as possible — any randomization of the answers which might distort the results or hide important features. Therefore, an open-choice test was adopted. The rationale was twofold. First, it eliminated frustration among the NEL. When offered a third (open) choice the NEL had a chance to suggest any other meaning they had understood and which neither gloss A nor gloss B expressed clearly. Or perhaps if one of the two glosses was the closest to express the intended meaning but still failed to capture a maybe more subtle shade of meaning, then they could select their own wording.

And second, when allowing an open category the possibility of randomization diminished significantly. Note that the NEL were warned that if they felt the speaker conveyed neither A nor B, but were not sure what else s/he actually conveyed, they were invited to select the C-category and write down any comments relevant to the utterance. It was hoped that these comments could give a hint — as they did on several occasions (see sub section V.12.) — about which meaning the NEL had understood despite minor/major mistakes which may have distracted them (see examples in section V.12. below).

All the comments written under the C-category were carefully examined. Sometimes, they were reclassified as A

or B if there were any suggestion that the judges had actually understood meaning A or meaning B. But at times, doubts were raised, and the comments could not be confidently reclassified as either A or B. In such cases, the judges' comments were left untouched as "C".

III. 3. 1. 2. 4. NOTE ABOUT GLOSSES A AND B

In the above description, gloss A has been referred to as the correct meaning whereas gloss B as the incorrect meaning. In the answer sheets, however, the two glosses were randomized and renamed for obvious reasons.

III. 3. 1. 2. 5. NOTE ABOUT GLOSSES B AND C

Cruz-Ferreira (1983, 1989) makes a distinction between

1/ meaning understood
2/ meaning misunderstood
and 3/ meaning not understood

The present author takes the view that whether the meaning has been misunderstood and not understood comes in fact to the same thing: the correct meaning has not been understood. It is on such grounds that gloss B and category C will be regarded as suggesting the same idea: the speaker failed to convey the correct meaning.

III. 3. 1. 3. CONTENT AND RATIONALE OF THE PERCEPTION TEST

In all four Perception Tests, the NEL (Native English Listeners) were presented with a booklet containing written instructions about their task as well as a written version of all the sentences they were about to hear in turn. Although basically similar the tasks varied slightly from one Perception Test to another. A summary of the tasks required from the NEL for each test follows.

III. 3. 1. 3. 1. PERCEPTION TEST I (CF. UNIT I: PITCH CONTOURS)

In Perception Test I (P.T. I) the native judges were asked to listen to each utterance as spoken by the speaker, and then to tick the box appropriate to the meaning they had understood (i.e. the meaning the Algerian speaker had actually conveyed), e.g.:

P.T. I Sentence 1: I ↘like her ˅name

Do you think the speaker meant to say:

A) She has a lovely name ☐

B) I like her name ... but not her manners maybe ☐

or C) Other: ..... ☐

Tick appropriately

Note that the intonation marked is the version that the present researcher expected to elicit if the ASE were competent.

III. 3. 1. 3. 2. PERCEPTION TEST II (CF. UNIT II: NUCLEUS PLACEMENT)

In Perception Test II, the NEL had to imagine the speaker was responding to a stimulus which they could not hear. They were asked to listen to the utterance and then select the sentence they believed the speaker was responding to, e.g.:

P.T. II Sentence 1: John wants to go.

Do you think the speaker is responding to:

A) Does Tom want to go? ☐

B) Does John want to stay? ☐

C) Other: ..... ☐

Tick appropriately

III. 3. 1. 3. 3. PERCEPTION TEST III (CF. UNIT III: PITCH CONTOURS)

In Perception Test III, the native English judges were asked to choose the most suitable answer to the utterance spoken from the tape, e.g.:

P.T. III Sentence 2: She ,read it

What do you think would be the most appropriate answer?

A) Yes! She said she enjoyed it ☐

B) I knew she would ☐

or C) Other: ..... ☐

Tick appropriately

III. 3. 1. 3. 4. PERCEPTION TEST IV (CF UNIT IV: ORDER VS. POLITE REQUEST)

In this final Perception Test (P.T. IV) the native English listeners were required to decide whether the utterance spoken from the tape was a polite request or an order, e.g.:

P.T. IV Sentence 5: 'Draw the `curtains

Do you think the speaker meant to

A) make a polite request ☐

B) give an order ☐

or C) other:..... ☐

Tick appropriately

III. 3. 1. 4. SELECTION OF INFORMANTS

Considering the huge number of native speakers that were needed for the Perception Test to be valid and reliable, the present investigator was in no position to be too "choosy" and demanding. Any volunteer was welcome. However, two necessary minimum conditions had to be fulfilled.

III. 3. 1. 4. 1. BRITISH CITIZENS

R.P. (Received Pronunciation) which is a British English accent has been chosen as a model constituting the norm in the present study. Consequently, it was most logical that native British reactions would be more relevant to the assumptions made here than, say American or Australian reactions. Therefore, an attempt was made to consider only British volunteers.

Note that some varieties of British English were dismissed, more particularly Scouse (Liverpool/Mersyside English) and Irish. Such varieties could be a hindrance on some occasions as it frequently happens that a rise in similar varieties may convey what R.P. does with a fall (Knowles, 1978; Wells, 1982, vol.2).

III. 3. 1. 4. 2. PHONETICALLY NAIVE

The second condition that the NEL had to fulfill was the following one. They had to be naïve as far as phonetics and more particularly English intonation were concerned. Any special training in Phonetics or English intonation could interfere with the decision making. There would be no way to know whether the judge's selection is entirely based on his intuition (which was desirable) or on his knowledge about how English people should say things in certain circumstances (which was undesirable).

In order to avoid phonetically trained English informants, the present experimenter looked for the cooperation of informants outside the Department of Phonetics and Linguistics (as most of the NEL selected were students). Note, however, that a few first year B.Sc. Speech Sciences students were selected. This was done after confirmation by their teachers that they had not undergone any training in Phonetics at the time they were considered for the experiment.

III. 3. 1. 5. ADMINISTRATION OF THE PERCEPTION TEST

III. 3. 1. 5. 1. LOCATION

As most of the native English judges were UCL members of staff or students, arrangements were made for the use of a room at the Department of Phonetics and Linguistics (University College London) for the purpose of the listening sessions. The informants either agreed "on the spot" to take part in the experiment or appointments were made for a later date. On some occasions, the listening sessions took place at the students' home.

III. 3. 1. 5. 2. INSTRUCTIONS

The instructions were given both in the written form, and then orally as follows (see also sub sections III.3.1.3. and III.2.3.1.1. above).

Once the booklet had been presented to the NEL, they were given about two minutes to read those instructions and have a quick look at the sentences. Note again that this period proved to be more than was necessary as most of the judges did not feel the need to go through all the sentences.

In order to make sure that the NEL had perfectly understood their task, the same instructions were again given orally and questions were invited. Any doubts raised were immediately clarified.

The first sentence was taken as an example. However, it was not disregarded in the analysis for this reason as all the informants had clearly understood their task and had provided an answer for that sentence with no difficulty.

III. 3. 1. 5. 3. TEST SENTENCES

III. 3. 2. 5. 3. 1. TIMING

The sentences of each pair were played at an interval of about five seconds (see also Cruz-Ferreira, 1983, 1989). For

example: P.T.I sentence 1 ("I like her name") was played once. A pause of five seconds followed. Then the sentence was played a second time. After the second hearing the informants were allowed between fifteen to twenty seconds to answer.

The amount of time allocated to the NEL to make a decision and write any comments when necessary varied from one listener to another. The time was greatly reduced when the listening session involved only one person or two. But when groups of several judges were considered, the sessions took more time as some listeners needed more time to think than others. But an attempt was made to obtain a decision within about fifteen to twenty seconds after the second hearing. It was decided that not more than thirty seconds altogether should be allowed for each utterance (some sentences being longer than others). This time was calculated so as not to allow the experiment to take more than one hour. Calculation was done on the basis of the maximum material to be covered by the NEL. The listeners would listen to a maximum of six speakers (five Algerians and one native) each uttering a maximum of twenty sentences[15].

As was explained in section III.3.1.1.2. above, it frequently happened that less than twenty sentences per speaker or less than five Algerian speakers were played. Besides, none of the judges needed thirty seconds for every sentence. And although the perception tests were purposely designed so as to take one hour if necessary but not more, never did any session take a full hour. The time used varied between twenty minutes (minimum) and forty five minutes (maximum).

III. 3. 1. 5. 3. 3. CATEGORIZATION

The native English listeners were told that after hearing each pair of sentences from the tape, they would have to choose between one of the two glosses A and B.

However, they were reminded that although only two possible choices were offered to them, they could, if they felt neither A nor B was accurate enough, select the C-category and were invited to offer their own suggestions (see further discussion in sub-section III.3.1.2.3.3. above and V.12 below).

III. 3. 1. 5. 3. 3. UNDERLINING

The NEL were also requested to underline on the booklet any utterance or part/s of any utterance which for some reasons, sounded unEnglish to them. Any comments and suggestions were also invited.

The intention behind this decision was self explanatory. It was hoped that this would help when analyzing the data as it would draw attention to particular features which might — although not necessarily — have gone unnoticed.

Note that for the purpose of the present work, pronunciation errors (i.e. errors in the articulation or production of any given consonant or vowel segment) were disregarded as the main interest of this study was intonation (but see discussion about syllable/vowel length in Chapter V). However, it was decided not to tell the NEL to disregard such mistakes when underlining an utterance (or part/s of it). This might have given away a hint about what the experiment was investigating.

One has to admit though, that considering the type of task that was required of the native judges, there were some chances that they might guess what the purpose of the experiment was. But this could not be guaranteed at 100%. Besides, it was the present author's initial view (see also Bradford, 1988: Tutor's book: 51; Taylor, 1989: 232) that intonational phenomena and choices are made without the speaker being aware of them. They are "planned at a deeply unconscious level" (Bradford, 1988: 51). Native speakers intuitively respond and react to intonational choices. They

may be annoyed or even quite upset by a speaker's use of a particular intonation pattern. One may have frequently heard a comment similar to: "It's not what she said, but the way she said it" (cf the example of genuine vs. casual "Thank you" mentioned by O'Connor and Arnold, 1973: 2; and see also Chapter I: Introductory). However, they are often unable to explain why (Bradford, 1988: 51):

> "but in the case of intonation they cannot usually explain what is wrong. However, they cannot help responding to the effect."

Evidence of this was clearly shown in the listeners' performance. On the booklet only three out of 160 judges were able to explain why they had underlined a given section of an utterance.

However, it was safer and perhaps wiser not to draw more attention to the aims and purposes of the investigation than was reasonably necessary.

III. 3. 1. 5. 4. QUESTIONNAIRE

In order to make sure first that all 160 native volunteers were British subjects and phonetically naïve (see sub section III.1.4. above), a questionnaire (see Appendix A part B) was designed and submitted to them at the end of each listening session.

In addition to the above-mentioned information, the questionnaire was designed with a view to obtain any other information about the NEL's background which could be relevant to the experiment and valuable when analyzing the data. Such information included the following.

III. 3. 1. 5. 4. 1. TIME SPENT IN GREAT BRITAIN/EXPOSURE TO ALGERIAN ENGLISH

It was quickly realized that cases could arise of British citizens having spent most of their lives in a foreign country. Because they have been exposed to foreigners

(possibly Algerians) for a long period, their judgements might not be similar to natives who have spent most of their lives in Great Britain. Their English may have been subjected to various — maybe local — alterations. It was hoped that the questionnaire would shed some light on this or similar aspect/s. Subjects selected had to have spent most of their lives in Great Britain.

Note that some informants had spent between six months and two years continuously in a foreign country, and a very long time ago. But they had never been in close continuous or regular contact with Algerians. So they were included in the experiment.

III. 3. 1. 5. 4. 2. EDUCATIONAL BACKGROUND

For the sake of homogeneity with the group of Algerian informants it was decided to consider native subjects with at least the same minimum educational background as the ASE (i.e. First year BA).

Most of the native English informants were undergraduate and postgraduate students attending a course of study at UCL or other London Colleges. Some were members of staff at UCL.

III. 4. PILOT TESTS

III. 4. 1. PRODUCTION TEST

Two pilot tests were carried out prior to conducting experiments one and two. The first pilot study related to the first experiment. Five native speakers of English were recorded. The objective was to see if their actual performance agreed with the assumptions made when designing the test sentences.

On the whole and despite some variations from one speaker to another, native performance agreed with the current investigator's assumptions.

At the end of each recording session, however, the native speakers were invited to make any comments about the test (e.g. if too much material had to be covered, or if the instructions were not clear enough, etc.). Following some remarks, a number of alterations were made in order to improve the test. For example, at first, contrasting pairs of sentences were presented one after the other in order to elicit the variable (see also Cruz-Ferreira, 1983). It was thought that this would make the informants choose between two possible uses. However, native comments suggested that rather than eliciting the desired choice (of tone, tonicity or tonality), drawing attention to the contrast confused the informants. This resulted in them being no longer sure about common usage. This was the case with tag questions as search-for-confirmation versus real-question, or pairs similar to the following one (vocative versus appositional):

This is my `father ,Jerry

This is my `sister `Alison

Consequently, the sentences were reorganized. An attempt was made to separate contrasting pairs. Also following native comments, context sentences were improved.

III. 4. 2. PERCEPTION TEST

The second pilot test related to the second experiment (i.e. the Perception Test) and involved one native speaker. Its aim was similar to that of the first pilot study. An obvious objective was to make sure that the native judge was able to interpret the control's utterances as expected. The results were satisfactory as the native reaction showed that the intonational patterns or features which were elicited (and produced by the native speakers) did convey the meaning expected.

The second pilot study also enabled further corrections and improvements to be made in the test.

III. 5. INSTRUMENTATION

III. 5. 1. INTRODUCTION

Considering the field of study (i.e. spoken language), the only way one can gather information about the intonation adopted by Algerian speakers of English is to conduct a series of recording sessions so as to collect samples of speech to be analyzed. This is why recording sessions were arranged (Experiment One: Production Test). In addition, due to the present experimenter's particular interest in intonation, it was decided that the Lx/Fx input (i.e. variation in the fundamental frequency of the speakers' respective voices) would also be recorded.

The following sections will be mainly concerned with a description of the equipment used throughout the whole experimental work. Successively, information will be given on three main aspects of the experiment:

- the recording sessions (Experiment I)
- the listening sessions (Experiment II)
- the analysis of the data collected.

III. 5. 2. THE RECORDING SESSIONS (PRODUCTION TEST)

Figure 1 is a sketch showing how each recording session took place. All Algerian informants took part in the experiment under the same conditions in the same setting. It was believed that this would prevent any overt variable from interfering with the recording session.

Once each Algerian subject was comfortably sitting, s/he was presented with the booklet. On the informant's right lay tape recorder I. This first tape recorder was an ordinary radio cassette, reference: SANYO Radio Cassette Recorder, Model N° M7950LG. It was used to play the stimuli that the subjects had to listen to before producing his/her utterances. The stimuli (or Stimulus Sentences) had been recorded on a separate tape at some earlier time (see sub

section III.2.1.3.1.). The Algerian informant listened to those stimuli through a pair of HD414X SENNHEISER headphones connected to Tape Recorder I.

A pair of electrodes were positioned on the informant's neck just in front of and facing the larynx so that the vibrating action of the vocal folds could be felt. The signal received through the electrodes was then fed into a portable laryngograph. This laryngograph was in turn connected to a THANDAR oscilloscope which converted the information received into a visual signal that could be seen on a small screen. The fact that the laryngograph was a portable type made it easier to transport it all the way to Algeria where the recordings took place. The electrodes were maintained in place by means of a strap that could easily be fitted around the informant's neck. Note that the fundamental frequency (rate of vocal folds vibration) signal was recorded on tape recorder II simultaneously with normal speech as the laryngograph was also connected to this second tape recorder.

Tape recorder II which was used to record the informant's speech was a SUPERSCOPE Cassette Recorder, type CD-330 (Marantz). In order to obtain a good quality recording, an AKG-D109 'clip-on' microphone connected to tape recorder II was used. The 'clip-on' microphone presented the welcome advantage to be easily attached on to the informant's shirt or jumper and then be completely forgotten. This, it was hoped, would partially eliminate the concomitant apprehensive and anxious feeling on the informant's part often linked with the presence of a microphone.

Both oscilloscope and laryngograph as well as tape recorder II were placed on the table on the informant's left.

The experimenter sat just opposite the Algerian subject. The main reason was to have good control over the whole progress of the experiment. The idea was to provide the subject with some encouragement (when necessary). Besides,

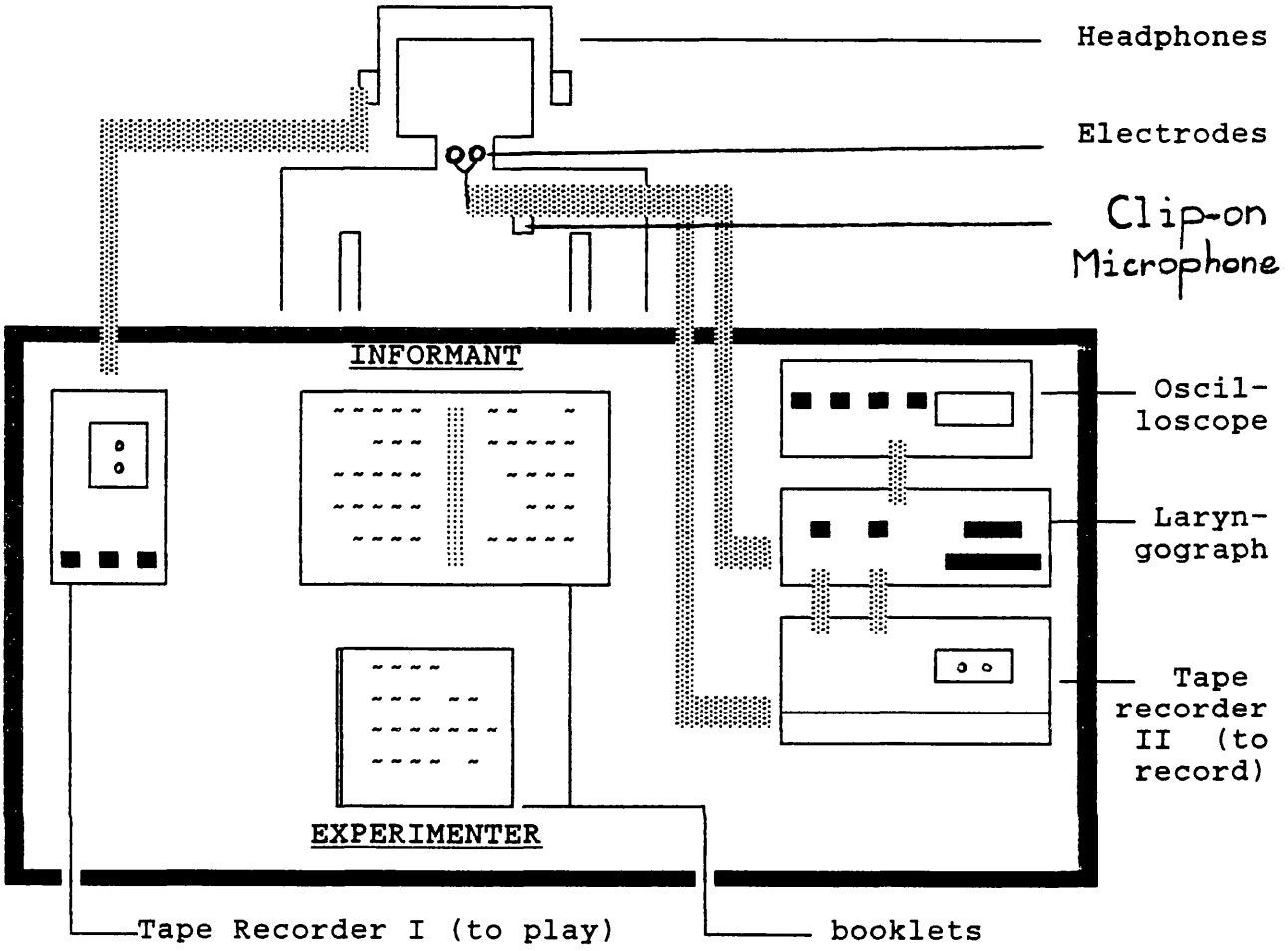


Fig. 1 : Recording Session (Production Test)

being just in front of the informant made it possible and easier to become aware of any problem that might have arisen during the recording session and which could have gone unnoticed had the experimenter sat, say, behind the subject. It also made possible regular and meticulous checking of the equipment in use at various stages of the entire session.

III. 5. 3. THE LISTENING SESSIONS (PERCEPTION TEST)

As was explained earlier, the listening sessions involved a different type of subjects. This time, instead of Algerian speakers, native British English informants were used. They were required to listen to the non-native speakers of English and then say what they had understood.

Except for the tape recorder that was used to play back the Algerian utterances to the native English informants, no other special equipment was used nor necessary. The reader is referred to fig.2 which shows in a very schematic way, how the session was conducted. Once each native English informant was comfortably sitting s/he was presented with the small booklet containing the written version of all the utterances s/he was about to listen to. Next to (or as usually happened in front of) the NEL were the experimenter, the tape recorder and a watch.

Two tape recorders were used to cover all the listening sessions. The first one, which was more frequently used (and also preferred for its easy handling and practicality) was a SUPERSCOPE Cassette Recorder, type CD-330 (Marantz). One of the real advantages of the Marantz was that it was a rechargeable cassette recorder. This proved very practical especially when, in order to conduct the test the present experimenter had to carry it to the informant's home or sometimes even to use it in places where no appropriate square plug was available. The second tape recorder was a UHER Cassette Recorder, type CR-240.

III. 5. 4. ANALYSIS OF THE DATA

The data was analyzed using both an auditory and an instrumental technique. The auditory technique will be discussed in chapter IV (sub section IV.2.3.1.1.). The following sections will mainly concentrate on the instrumental technique.

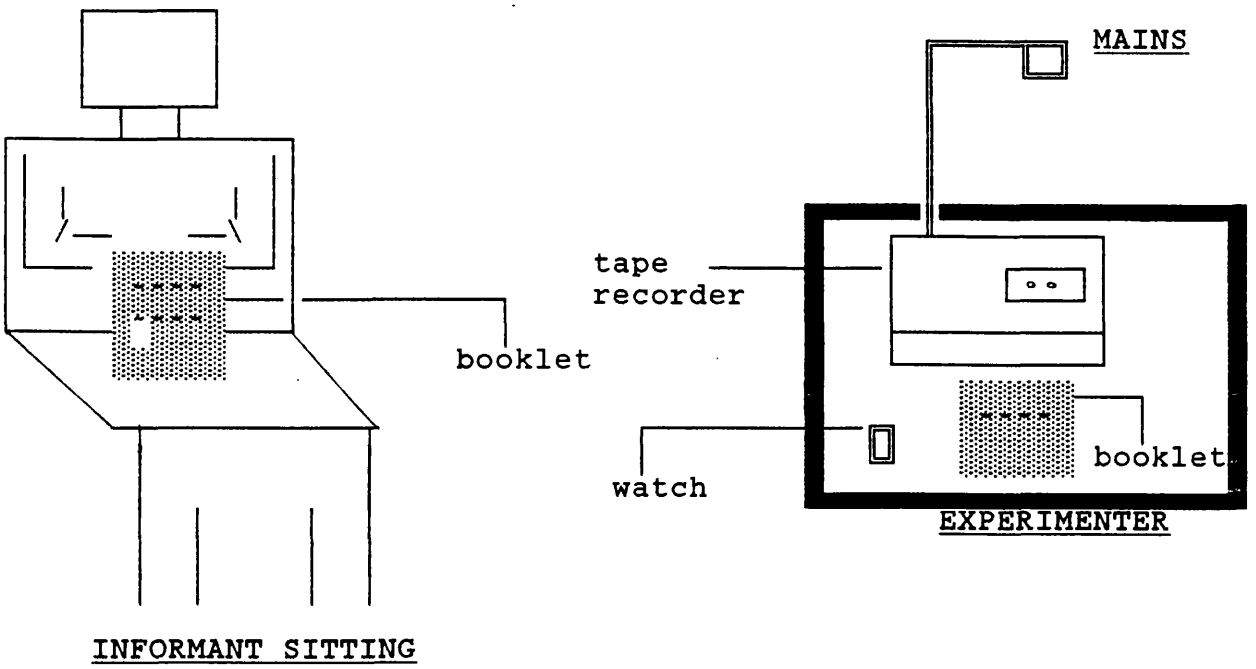


Fig. 2: The Listening Session (Perception Test)

Instrumental techniques have frequently been criticised and sometimes even rejected on the grounds that they hardly focus on what the human ear perceives as meaningful, significant or at all relevant.

The fact is that since the 1930s, technological advances have made possible the conception, development and use of highly sophisticated machines and apparatus to conduct new experiments. The main concern, first, was primarily to verify judgements made by various scholars and also to provide further information about physical events. Acoustic measurements were made in the hope of finding a relationship between physical events and perception of these, or, to use Crystal's own terms (1969: 91):

> "The focus was clearly on the relationship between physical properties of sounds and their perceived values."

Due to their high level of sophistication some machines are capable of providing a faithful representation of physical events. At the same time, they can also produce much minute detail and information. Although some may be valuable, the rest may well be simply irrelevant. Besides, their profusion can hide significant phenomena. The researcher has to be aware of this. This may lead him/her to take necessary steps to ensure that irrelevant details are eliminated as much as is technically possible.

But, generally speaking, the introduction of complex, highly sophisticated machines and equipment has greatly contributed to substantial progress in various fields. It has also helped towards a better understanding of physical properties and basic principles involved in the production, generation, transmission and perception of (speech) sounds, as well as other aspects of human language (Fry, 1979; Borden & Harris, 1980; and also Crystal, 1969 for a survey of further works). There is no doubt, today, that results of various instrumental studies and experiments have also been beneficial to other branches of Science, e.g. psychology, psychopathology, psychotherapy, speech science therapy, etc.

So the auditory technique adopted in the present analysis was also supplemented by an instrumental one.

III. 5. 4. 1. EQUIPMENT

In the case of the Production Test, the instrumental technique involved the use of the following equipment: a tape recorder (Marantz, Model CD-330), a set oscilloscopes (Telequipment), a voiscope (Laryngograph Ltd.), a Kemo band filter (0-01 Hz — 100 KHz Dual Variable Filter, Type VBF/8), a Model B BBC Microcomputer equipped with a disk filling system, a CUMANA Double Disc Drive and a Philips Monitor 80.

The software used was a "Fundamental Frequency Contour Plotting Program" designed by a member of the staff at the

Department of Phonetics, Wolfson House, University College London. The software was specially designed for use with the Model B BBC Microcomputer.

III. 5. 4. 1. 1. PROCEDURE

The procedure of analysis is schematically represented on the following diagram (Fig. 3: "System Hardware"):

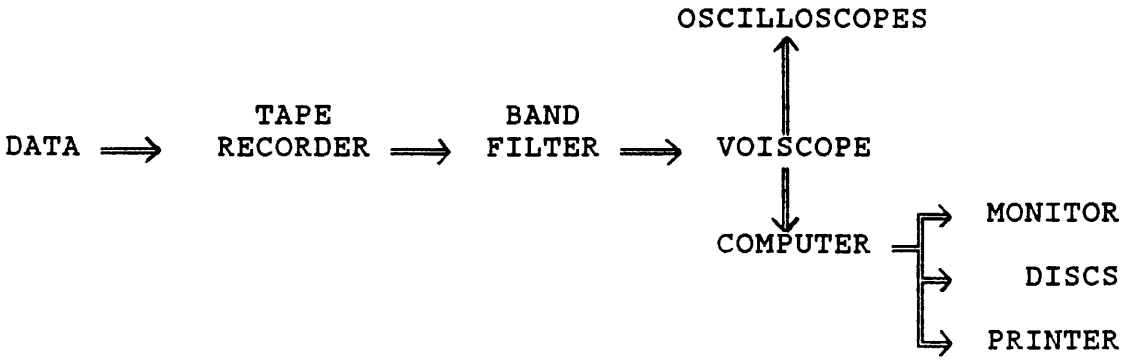


Fig. 3: System Hardware

III. 5. 4. 1. 2. FX (VOICE FUNDAMENTAL FREQUENCY) INFORMATION

Before the 1960s, it was still rather difficult to extract the fundamental frequency of the human voice from the speech waveform. The development of the Laryngograph helped significantly in surmounting this difficulty (Fourcin and Abberton, 1971; Bootle, 1986). The Laryngograph involves the use of a pair of electrodes positioned on the subject's neck (facing the larynx). The main function of the electrodes is to "measure the impedance changes across the larynx" (Bootle, 1986: 49). As is rightly pointed out by Bootle, the advantage of using such a technique is twofold. First, it is capable of providing a direct measurement of vocal folds vibrations. And second, it can also "show voice quality (falsetto, creaky, breathy and normal voice)".

Perhaps the reader will recall that in the Production Test a laryngograph equiped with a pair of electrodes was used. Thus, all the data (including the Fx information) were stored on cassettes which could then be played back on a tape recorder.

So the tape recorder (with a data cassette in) could transmit its Fx (voice fundamental frequency) input to the voiscope via the band filter (see discussion in sub section III.5.4.1.5. below). The voiscope then took the audio signal (Fx output) as its input, and converted it into a visual signal.

Note that the voiscope was also connected to the set of oscilloscopes. This was very practical as it enabled an almost immediate visual display of the traces.

For a better analysis each trace could be held on the screen by setting the "flow/hold" switch on the voiscope panel to the position "hold". The traces could also be expanded further right or left or even further up or down. Again this could be achieved by altering (i.e. turning) one of the two "Position" knobs on the oscilloscope panel ("Position ↕ " for up or down expansion; and "Position ↔ " for left or right expansion).

III. 5. 4. 1. 3. THE MICRO COMPUTER

The visual signal was then fed into the microcomputer which in turn, converted it into a computer signal which provided a new visual display of the original audio output on the monitor screen.

Once the appropriate option had been selected on the main menu, the computer was able to plot a trace (intonation contour) of fundamental frequency against time.

In order to start off the display of the trace on the screen, the space-bar on the microcomputer keyboard had to be pressed at the same time as an utterance (from the tape) was spoken. Pressing it again cleared the screen. The space-bar

had to be pressed at exactly the right time as pressing it too soon or too late resulted in the beginning or the end of the trace being missed out. Thus, a careful and accurate use of this key in conjunction with the start/stop switch of the cassette player enabled a meticulous study of any portion of the utterance. The portion (or the whole utterance) could also be compared with that of another speaker, thanks to another feature which the software offered. Instead of erasing the previous trace, pressing the "break" key caused another trace to be superimposed above the first. When used accurately this feature made comparison between two or more patterns (usually portions of these) easier. Again, the "break" key had to be pressed at exactly the right moment for the desired portion only to appear on the monitor screen. Obviously, several trial-and-error attempts were needed before the desired (part of the) trace(s) appeared on the screen.

III. 5. 4. 1. 4. THE PRINTER

As the microcomputer was also equipped with a printer, it was possible to obtain a hard copy (print-out) of the trace(s) (see Appendix E) visible on the monitor screen by pressing one of the function keys (F0).

The previous section explained how several trial-and-error attempts were needed before the desired (portion/s of) traces were visible on the screen. However, although time consuming and perhaps tiring those efforts were often rewarded by the possibility of simultaneous printing of two, sometimes three portions of two/three different speakers' utterances. This made comparison between two or more traces easier.

III. 5. 4. 1. 5. THE BAND FILTER

A low and high pass band filter was used. The present section aims at justifying its use in the analysis procedure.

The "filter" used here had basically the same function as any ordinary, say, coffee or cigarette filter. Its main function was to get rid of some "characteristics" whilst preserving others.

The low and high pass band filter enabled one to attenuate "the amplitude of certain ranges of frequency while allowing other frequency bands to pass with very little reduction of amplitude" (Fry, 1979: 58). In other words, the filter was used to get rid of unwanted irrelevant elements without altering the rest of the data. A range between 10 and 400 Hertz was set, that is, the low pass band filter was set to 1 x 10 Hertz and the high pass to 400 Hertz. The intention was to eliminate any "background noise" below 10 Hertz and above 400 Hz. Those were considered to be the lowest and highest limits that could be achieved without interfering with and altering the relevant Lx (Vocal fold vibration) information present in the recorded data.

It was thus possible to capture relevant Lx information within the range of 10 and 400 Hertz, and obtain a reasonable printing of the coordinate displays (traces). A print out was taken for all sentences of Units I to IV.

III. 5. 5. COMPARING AUDITORY AND INSTRUMENTAL TECHNIQUES

The auditory technique was carried out first. Then the instrumental one was conducted as explained in the above sections. Once the analysis using each technique respectively was completed the results — that is the intonation patterns drawn on the one hand (see sub section IV.2.3.1.1.), the voiscope/oscilloscopes' signals and microcomputer print-outs on the other — were compared.

When the results of both techniques disagreed the two analyses were carried out again until satisfaction was reached. It sometimes happened that the auditory technique was given priority over the instrumental one. For, it was felt that the weight of the former was heavier than that of

the latter. Besides, one must always be cautious when reading the Fx information, as the purpose of the visual displays is mainly to supplement the auditory feedback. In addition, and as Bootle (1986) points out, this type of display changes very rapidly, perhaps too rapidly for the observer's eye to interpret, let alone to relate it to the auditory characteristics of speech. An illustration follows.

At times, the visual signal for a given utterance showed a fall on a particular syllable when the current experimenter could still perceive a rise even after several hearings. The trace was then expanded in all possible directions. The results showed that a slight rise did in fact take place, but its range was so narrow that it was difficult to see it on the screen. Only enlargements could show this.

As a security, however, whenever such cases occurred, the utterance/s in question was/were played to a phonetically trained native speaker of English. It was decided that this would be done whenever a particular or any peculiar features took place with any sentence. If no agreement was reached, then a third native speaker, also a trained phonetician would have been called in to decide. But this final case never arose. The first native speaker listened to a large number of sentences taken at random. Her observations were checked against the current author's. Regarding the main variables that the test material was designed to elicit agreement was always reached. Cases of disagreement about other features took two forms:

i) The native speaker picked up a particular detail which the current experimenter had not noticed, but did notice once her attention was drawn to it,

or

ii) The experimenter had picked up a particular detail which the native speaker had not noticed, but did so once her attention was drawn to it.

Notes to Chapter III

[1] See further discussion in Chapter One: Introductory.

[2] Eg. stressed versus unstressed syllables/words, stress versus syllable timed rhythm, nucleus location, choice of nuclear tone etc.

[3] If faced with a native English speaking audience.

[4] Note though, that the experimenter had a copy of the written material (exception being made of the two pictures), also presented as plastic folds. This enabled the current writer to follow the informants' progress throughout the session.

[5] While the first pilot study relates to the first experiment (or to the Production Test), the second one relates to the second experiment or Perception Test).

[6] As compared to the variables that were tested.

[7] The structure or the form of the units presented.

[8] Note though that it is possible to conduct a recording in similar locations with a microphone that can be fixed on the speaker's tie or jacket. Although the quality of the recording can thus be improved, it cannot completely eliminate the background noise that may be present in, say, a busy street.

[9] "The corpus can be recorded 'on the spot' or in a recording studio. The first possibility sometimes offers more guarantee of spontaneity but presents the drawback of providing background noises which may render the interpretation of physical analyses more difficult."

[10] Note that this very system is currently under close scrutiny in Algeria, and about to be reviewed.

[11] Either English, Spanish or German.

[12] The current educational system adopted in Algerian Secondary Schools is known as "l'Ecole Fondamentale". This system has been put into practice throughout the country in 1980. From then on, pupils were taught a second foreign language one year earlier. In other words, a six year programme was adopted as opposed to the five years in the old system. But one should perhaps point out that none of the students involved in the present experiment had gone to such schools. So all underwent the old system. Note that the first foreign language, i.e. French is taught in Primary Schools.

[13] For the sake of simplicity, each semester will henceforth be referred to by the capital letter "S" followed by a

number, as follows. This B.A. in English studies consisted of three years or six semesters:

S.1 and S.2	=>	first year
S.3 and S.4	=>	second year
S.5 and S.6	=>	third year

Note, though, that since September 1984 the B.A. in English Studies now consists of a four year programme.

[14] The test was designed to elicit as much natural speech as was reasonably possible. But one has to bear in mind the following factor. The utterances had to be elicited in a way that could easily be controlled. This necessity for controlling the data was one of the main reasons why some level of 'naturalness' was inevitably irradiated. An illustration of this in the corpus of the test would be the items where the students were required to read some sentences. In order to overcome the difficulty involved in reading (i.e. the reading skills), the experimenter tried to give only simple and straightforward sentences. Besides, the students were given some time to have a look at the sentences before reading them aloud. To overcome the second difficulty (i.e. context of situation), the researcher always tried to give some relevant detail and information about the psychological context within which each sentence had to be read. Such information was given either between brackets, or within the short dialogues themselves (cf. Units I, II, III, or IV).

[15] Due to technical problems beyond the current investigator's control, it occasionally happened that the quality of the recording made of part of a speaker's speech was affected. It was believed that playing to the judges utterances with poor sound quality might affect their respective decisions. For, instead of looking for the clues that would help them carry out their task, the judges might be distracted and probably annoyed by the poor sound quality. Note that this difficulty was only met with in short sections of two speakers' speech. But it was still taken into consideration when the problem of deciding which utterance to select and play to the the NEL was tackled. This explains why sometimes one group consisted of four (instead of five) Algerians and a control. At other times also, an utterance was simply not presented to the NEL for it did not present any particular problem. Besides, the necessity to reduce the number of sentences to be played to the judges dictated the decision to 'omit' some utterances.

Chapter IV

Results

IV. 1. INTRODUCTION

The aim of the present chapter is to provide the reader with numerical information regarding the Algerian intonational performance in all the Units. The figures will be presented in the form of tables.

Note that at various stages of the analysis and description of the data, it was necessary, or at least useful to make use of tables. These presented the practicality of providing a great deal of different information together, making observation and comparison easier. However, for reason of space, not all tables that were needed and used during the analysis of the data will be reprinted here. The tables that are reproduced in this chapter are the last ones arrived at. Furthermore, they constitute only a summary ("Total") of the results obtained in each unit. The reader is referred to Appendix D for more details about each individual sentence.

In Appendix D 1 to 4, two distinct tables are drawn for each sentence. The first one presents the results of the native English reactions to the Algerian and the controls' utterances. The second table shows the actual performance of the Algerian speakers. Their various intonational patterns/ features are described.

The decision to present the two tables together in the Appendix was dictated by a desire to render the comparison between Algerian performance and native English reactions to it easier.

So for the first four units at least, only a summary table is presented in the current chapter. For the sake of clarity, section IV. 2. below will be devoted to a step by step description of a detailed table with a view to highlight the method adopted to obtain the various figures (scores).

IV. 2. SCORING PROCEDURE

Prior to dealing with the scoring procedures as such, perhaps it would be wiser, first, to clarify Table 2, and later Table 3, as these are the key to understanding what follows.

IV. 2. 1. DESCRIPTION OF TABLES 2 AND 3

Perhaps the reader will recall (see sub section III.3.1.1.) that the sentences spoken by the Algerians were far too numerous to be all listened to by a native judge within less than one hour. Therefore, it was decided to divide the Algerian speakers into four groups (of recordings). The four groups into which the speakers were divided are shown in column 1 (entitled "Group"). Each group usually consisted of five (sometimes less, see Fig. 4) Algerian speakers and one native English speaker serving as a control. These are shown in column 2 ("Speaker"). Note that the same control was used in all four groups. But for each unit a different control was used. In other words, for Unit I control A was used, for Unit II control B, for Unit III control C and finally for Unit IV control D. This explains why each control was actually listened to four times (once in every group) as shown in Fig. 4 below. (Note that 'AS' means 'Algerian Speaker.')

Furthermore, each of the four groups was presented to ten different NEL. So, for each unit, the cooperation of at least 40 native judges was needed. It sometimes happened that

Unit III Sentence 10 : *Would you like ´tea or `coffee*

1 Group	2 Speaker	3 Correct A	4 Incorrect B	5 Other C	6 CasA	7 CasB	8 Total
1	F 3	10	0	0	-	-	10
	F 2	7	3	0	-	-	10
	F 9	10	0	0	-	-	10
	F 18	-	-	-	-	-	-
	M 10	5	5	0	-	-	10
	Control	10	0	0	-	-	10
2	M 11	10	0	0	-	-	10
	M 6	10	0	0	-	-	10
	M 7	10	0	0	-	-	10
	F 8	7	3	0	-	-	10
	F 5	10	0	0	-	-	10
	Control	10	0	0	-	-	10
3	M 14	5	5	0	-	-	10
	M 13	7	3	0	-	-	10
	F 19	9	1	0	-	-	10
	M 12	10	0	0	-	-	10
	F 4	9	1	0	-	-	10
	Control	9	1	0	-	-	10
4	F 17	10	0	0	-	-	10
	M 16	10	0	0	-	-	10
	M 15	10	0	0	-	-	10
	M 20	6	4	0	-	-	10
	Control	9	1	0	-	-	10
TOTAL	Control	38	2	0	-	-	40
ALL 4 GROUPS	A. S.*	155	24	1	-	-	180

*Algerian Speakers

Table 2:
Informants' scores in detail (sentence 10 Unit III)

Unit IV Sentence 2: *'Stop `talking* (order)

1 Group	2 Speaker	3 Correct A	4 Incorrect B	5 Other C	6 CasA	7 CasB	8 Total
1	F 3	8	1	2	1	-	10
	F 4	9	0	1	-	-	10
	F 8	10	0	0	-	-	10
	F 5	9	0	2	1	-	10
	F 2	6	3	1	-	-	10
	Control	10	0	0	-	-	10
2	M 10	8	2	0	-	-	10
	F 9	10	0	0	-	-	10
	M 7	6	4	1	-	1	10
	M 15	10	0	0	-	-	10
	M 6	9	1	0	-	-	10
	Control	10	0	0	-	-	10
3	M 16	8	2	0	-	-	10
	M 14	9	1	0	-	-	10
	M 13	7	3	0	-	-	10
	M 12	10	0	0	-	-	10
	M 11	10	0	0	-	-	10
	Control	10	0	0	-	-	10
4	M 20	10	0	0	-	-	10
	F 19	6	3	1	-	-	10
	F 18	9	1	1	1	-	10
	F 17	9	1	0	-	-	10
	F 1	-	-	-	-	-	-
	Control	7	2	1	-	-	10
TOTAL	Control	37	2	1	-	-	40
ALL 4 GROUPS	A. S.*	163	22	9	3	1	190

*Algerian Speakers

Table 3:
Informants' scores in detail (sentence 2 Unit IV)

eleven judges (instead of ten) listened to a given group as was the case in Unit II group 3. But this was unintentional.

Altogether twenty ASE were recorded (ten male and ten female speakers). Each Algerian speaker was allocated a reference number consisting of a letter and a number. The letter was either 'M.' or 'F.', 'M' standing for 'male' and 'F' for female. The numbers ranged from 1 to 20. The Algerian speakers were divided into groups on a random basis as no justification was found to group them in any specific order.

Before explaining what column 3 ("Correct") is, the following clarification ought to be made. Here, "Correct" means 'correct from the point of view of the experimenter' since each sentence was designed to elicit one particular meaning. Put differently, an utterance, as spoken by a given speaker, was regarded as correct if the judges identified the gloss the informant was expected to convey[1]. Conversely, an utterance as spoken by a given speaker was regarded as incorrect if the informant failed to convey to the judges the meaning the investigator expected him/her to.

So applied to Unit IV (see Appendix C4), for instance, Column 3 ("Correct: A") shows the number of times an utterance was understood as an order when the speaker was expected to produce one or as a polite request when he was expected to utter a polite request — hence the label "correct" identification. By contrast, column 4 ("incorrect: B") gives the number of times an utterance was understood as a polite request or an order when the speaker was supposed to produce an order or a polite request respectively — hence the label "incorrect" identification (see sub section IV.2.2. below).

Column 5 ("Other: C") shows the number of times the C-category was selected. Moreover, columns 6 ("C as A") and 7 ("C as B") indicate the number of times selection C was reclassified as A or B respectively on the grounds of judges'

Unit I		Unit II	
Group 1: 5	A. S. + control A	Group 1: 5	A. S. + control B
Group 2: 5	A. S. + control A	Group 2: 5	A. S. + control B
Group 3: 5	A. S. + control A	Group 3: 5	A. S. + control B
Group 4: 5	A. S. + control A	Group 4: 5	A. S. + control B

Unit III		Unit IV	
Group 1: 5	A. S. + control C	Group 1: 5	A. S. + control D
Group 2: 5	A. S. + control C	Group 2: 5	A. S. + control D
Group 3: 5	A. S. + control C	Group 3: 5	A. S. + control D
Group 4: 5	A. S. + control C	Group 4: 5	A. S. + control D

Fig. 4: Organization of speakers in groups

comments (see sub section III.3.1.2.3.3. on 'C-category').

And finally, column 8 ("Total") indicates the total number of judgements obtained for a particular utterance as spoken by a given speaker (usually 10 sometimes 11).

IV. 2. 2. NATIVE REACTION

The results of the native reactions to the Algerian utterances were obtained in the following way.

As was just mentioned, all speakers were listened to by ten different judges. For every utterance as spoken by each individual speaker, the present researcher counted the number of judges who felt that the speaker intended the correct gloss (meaning A), the incorrect one (meaning B), or neither of the two and/or something else (C-category). Moreover, and

although they were not very numerous, cases of reclassification of C as A, or C as B were also considered. Hence, the final column ("Total") represents the total number of judges who listened to that particular utterance. It can also be obtained by adding A, B, and C, and subtracting from this figure all cases of reclassification of C as A, and C as B. In other words,

$$A + B + C - (C \text{ as } A) - (C \text{ as } B) = \boxed{\text{Total}}$$

So although the figures in every row actually referred to the number of judges, it also represented the Algerian speakers' scores for each sentence. Here are a few examples.

If one considers Perception Test III, sentence 10 (see Appendix C3), as spoken by speaker M20 (Group 4), one can see, from Table 2, that the informant's score is [6, 4, 0] (or [6A, 4B, 0C]). This, in fact, means that 6 native judges understood gloss A, 4 identified gloss B, and none C. Similarly, in Unit IV, sentence 2: "<u>Stop talking</u>" was supposed to be uttered with the force of an order. In group 1 (see Table 3), this utterance as spoken by the control was understood as an order by ten judges (10 'A'). No judge understood it as a polite request (0 'B'). Moreover, the "Other" category was never selected (0 'C'); hence, no case of reclassification occurred. This makes, for that speaker, the score [10 0 0] (or [10A 0B 0C]). As for speaker F3, her utterance was understood as an order by 8 judges (8 'A'). Only one judge felt it sounded more like a polite request (1 'B'). And two judges preferred to select the "Other" category (2 'C'). The comments made by one of them enabled a reclassification of his response as A i.e. 'order' (1 'C as A' and 0 'C as B'). Hence the speaker's score [8 1 2: 1/0] (or [8A 1B 2C: 1C as A /0C as B]).

IV. 2. 3. ALGERIAN PERFORMANCE

IV. 2. 3. 1. INTONATIONAL PATTERNS

The Algerian speakers were evaluated on the basis of an auditory technique also supported by an instrumental one (see section III.5.4.). Both were conducted by a trained phonetician.

IV. 2. 3. 1. 1. AUDITORY TECHNIQUE

All Algerian test sentences were carefully studied, described, and transcribed thanks to an auditory technique carried out by the present investigator. An intonational pattern was drawn for each of them. This point leads to a discussion about the type of transcription adopted in the current work.

IV. 2. 3. 1. 2. SYSTEM OF NOTATION

Various systems of notation for transcribing the intonation of English have been proposed throughout the ages. Going back to the work of Joshua Steele (1775), one may recall how he managed to represent the "ups and downs" of the human speech voice on a musical stave.

Lines have also been frequently used, rather than mere curves. Another — possibly logical — evolution and sophistication of an ideal notational system is perhaps the introduction of dots and dashes (see also Amstrong & Ward, 1926) where a different symbol was used to represent stressed (i.e. dashes) and unstressed (i.e. dots) syllables.

As a matter of fact, several authorities have, at one stage or other, influenced and dictated the choice of the system adopted in the current study. However, O'Connor & Arnold (1973) is perhaps the work which has had the greatest influence. Throughout the present and next chapters, the reader will not fail to come across several transcription

details that will remind him/her of O'Connor & Arnold's now well established system of notation.

Although the general lines of their system have inspired the current description, several amendments have been made when felt necessary. This was mainly dictated by a desire to provide a better rendering of Algerian English intonation, e.g. short arrows moving to/or away from a given syllable are sometimes drawn within the diagrams so as to depict peculiar rising/falling pitch movements. Such movements did not necessarily affect stressed syllables (see sub section V.5.2.).

Any sequence of (Pre-Head), (Head), Nucleus, and (Tail)[2] (the parentheses meaning 'optional') constituted a complete intonation pattern. High and low pre-heads were distinguished as well as four types of heads: high ['], low [ˌ], rising [↗], and falling [↘]. The nuclear tones retained were the high fall [`], low fall [ˎ], low rise [,], high rise [´], level [›], fall-rise [ˇ], and rise-fall [ˆ]. No distinction was made between high and low fall-rise and rise-fall, unless when particularly specified. Any high or low stressed syllables following the head or the nucleus was represented by [°] or [₀] respectively. So those seven basic tones or combination of two or more of them were first felt sufficient to depict the general shape of Algerian English intonation (see however sub section V.5.2.).

The inter-linear notation was complemented by a diagram on which each intonation pattern was drawn. The diagram consisted of two parallel horizontal lines representing very schematically the pitch range of the human voice. While the top line represented the highest limit of the voice, the bottom line stood for the lowest.

The pitch range has been divided into three basic heights: High, Mid and Low, which must be regarded as relative. And because they ought to be regarded as relative, Pike's (1945) or Trager & Smith's (1951) four pitch levels were not felt

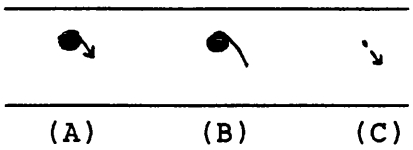
reliable and appropriate. For, it seems that the extremely narrow range existing between their pitch levels 2 and 3 (Pike) or 3 and 2 (Trager & Smith) makes it rather difficult or at least quite arduous to make a constant AND consistent distinction between them. When the technique adopted is purely auditory, one must admit that doubt may be raised about the human ear's ability to make this constant AND consistent distinction. It was therefore decided to fuse levels 2 and 3 (or 3 and 2) into one: Mid.

On the diagrams different symbols have been used to represent stressed and unstressed syllables, i.e. large dots [•] for the former, and smaller dots [.] for the latter. Another improvement of O'Connor & Arnold's system is the introduction of a small circle within the diagram [o]. It is meant to represent a syllable which is not stressed but which is given the same value. This is very similar to the syllables of a syllable-timed language. In the present case, the main difference between such a syllable and a stressed one is that although it is not actually stressed, it seems to be lengthened. Although it was noticed that something peculiar was taking place on such syllables, it was not possible to alter the lines and directions set out at the outset of the present study. However, one had to find a way to represent this unusual feature. Besides, it was felt that symbolizing such syllables as [•] or [.] would hide the peculiarity. This is why the circle was introduced. It is, of course, possible that experimental evidence will later show that this feature is not at all significant. But, it may also prove the contrary. So three types of syllables were identified:

i)	stressed	[•]
ii)	unstressed	[.]
iii)	unstressed lengthened	[o]

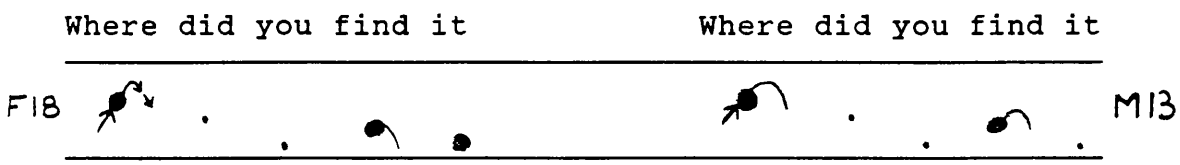
The circle was mainly used to point out this particularity of Algerian English rhythm hoping it will initiate further (perhaps instrumental) investigations.

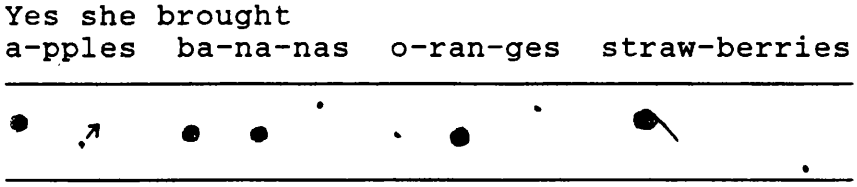
Lines are also used with short arrows to show the direction of the pitch movement occurring on a given syllable. In general, the single line is used for nuclei, and arrows for syllables (not necessarily nuclear) on which a peculiar pitch movement takes place, e.g.:



(See further discussion in chapter V.)

The difference between (A) and (B) is that (B) is a nucleus (last accented syllable of an intonation pattern) whereas (A) is not. (A) may be any stressed syllable in the pattern from which a pitch movement begins. (C) shows that pitch changes can also occur upon unstressed syllables. The pitch movement may either be a continuation, in the tail, of the pitch movement initiated on the nucleus. Or, it may be simply independent of any nuclei:





Note that when a noticeable pitch movement occurs on an unstressed but lengthened syllable, it is represented by a dash showing the direction taken, e.g.

He went to London		He went to London
	compared with	

In example (C) above, the syllable is unstressed but not particularly long. This is represented by the dot and the small arrow.

Once the intonational transcription of all sentences was completed, counting was done as follows.

First, the present investigator concentrated on the particular variable that each test sentence was designed to elicit. If, for example, the variable was a falling nuclear tone in a "search-for-confirmation" tag, the current author counted the number of Algerian speakers who used a fall in the tag. Also counted were the number of speakers who did <u>not</u> use a fall but, say, a rise in the tag. The result constituted the total number of "falls" or "rises" recorded in the second sets of tables presented in Appendix D1 to 4. Other intonational features were also reported on the tables.

These figures (i.e. number of "falls", "rises", etc.) were then assessed against those obtained via the native audience (first set of tables, "Native Reaction", Appendix D1 to 4).

From the outset, it was clear that the researcher would have to face four possibilities. If one considers, say, a fall in a tag question, as the variable being tested and elicited, the four probabilities are :

1/ a high percentage of falls	coincides with	a high percentage of correct identifications
2/ a high percentage of rises	" "	a high percentage of incorrect identifications
3/ a high percentage of falls	" "	a high percentage of incorrect identifications
4/ a high percentage of rises	" "	a high percentage of correct identifications

Cases 1/ or 2/ did not deserve much attention as they were expected from the hypothesis formulated prior to designing the test sentences. For, if one considers the association of

- a fall in the tag with a mere "search-for-confirmation",

&

- a rise " " with a "real question",

as the norm, then cases 1/ and 2/ were the logical possibilities. However, cases 3/ and 4/ are not logical occurrences. Therefore, more attention was devoted to the whole utterance for all speakers whenever cases similar to 3/ and 4/ occurred. The pre-nuclear contour (or anything that preceded the main nucleus under study) was described again with full details.

IV. 3. UNIT ONE : 'PITCH CONTOURS'

Perhaps the reader will recall (see Chapter III) that this first unit was designed with a view to elicit specific intonational features (usually 'nuclear tones'). The aim was to see if the ASE were able to use an intonation that was appropriate to the meaning or attitude they had to convey.

IV. 3. 1. NATIVE REACTIONS

IV. 3. 1. 1. ALGERIAN SPEAKERS OF ENGLISH

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	1542	1438	140	6	2	3112
%	49.5	46.25	4.4	0.2	0.05	100

Table 4 : Summary of Native Reaction to Algerians' Performance (Unit I)

IV. 3. 1. 2. CONTROLS

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	734	79	9	2	-	820
%	89.5	9.5	1.25	0.25	-	100

Table 5 : Summary of Native Reaction to Controls' Performance (Unit I)

IV. 4. UNIT TWO : 'NUCLEUS PLACEMENT'

The aim of Unit II was to see if the ASE were able to use the cues of context (i.e. 'new' vs. 'given' information, contrast, emphasis) when locating or shifting the nucleus.

The following tables show how many ASE (and Controls) utterances were interpreted by the NEL as expressing the meaning a given sentence was designed to elicit. That particular meaning could be expressed by placing the nucleus on a particular word. Note, though, that as will be discussed further in chapter V (section V.7.), 'correct' interpretation by the NEL did not always coincide with a 'correct' nucleus placement by the Algerian speaker(s).

IV. 4. 1. NATIVE REACTIONS

IV. 4. 1. 1. ALGERIAN SPEAKERS OF ENGLISH

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	2834	1765	287	92	25	2500
%	59.5	37	6	2	0.5	100

Table 6 : Summary of Native Reaction to Algerian Performance (Unit II)

IV. 4. 1. 2. CONTROLS

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	905	108	28	16	-	1025
%	88	10.5	3	1.5	-	100

Table 7 : Summary of Native Reaction to Controls' Performance (Unit II)

IV. 5. UNIT THREE : 'PITCH CONTOURS'

Unit III had the same objective as Unit I, i.e. to see if the ASE were able to use particular intonational features (mainly nuclear tones) to convey specific meanings or attitudes. The following tables show the number (and percentage) of ASE who managed to convey to the NEL the meaning/attitude that each sentence was designed to elicit.

IV. 5. 1. NATIVE REACTIONS

IV. 5. 1. 1. ALGERIAN SPEAKERS OF ENGLISH

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	1804	1373	109	24	12	3250
%	55.5	42.5	3.5	1	0.5	100

Table 8 : Summary of Native Reaction to Algerian Performance (Unit III)

IV. 5. 1. 2. CONTROLS

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	620	171	14	5	-	800
%	77.5	21.5	1.5	0.5	-	100

Table 9 : Summary of Native Reaction to Controls' Performance (Unit III)

IV. 6. UNIT FOUR : 'ORDER' VERSUS 'POLITE REQUEST'

Unit IV was designed with a view to elicit 'orders' and 'polite requests'. The objective was to investigate ASE's ability to make a difference between the two categories by using appropriate intonational features (mainly 'falling tone' for an 'order' and 'rising tone' for a 'polite request').

The following tables show how many ASE conveyed an 'order' or a 'polite request' to the NEL when the utterance was designed to elicit an 'order' or a 'polite request' respectively (cf. column 'A: Correct'), and vice versa (cf. column 'B: Incorrect').

IV. 6. 1. NATIVE REACTION

IV. 6. 1. 1. ALGERIAN SPEAKERS

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	2774	899	302	45	60	3870
%	71.5	23	8	1	1.5	100

Table 10 : Summary of Native Reaction to Algerian Performance (Unit IV)

IV. 6. 1. 2. CONTROLS

	A Correct	B Incorrect	C Other	C as A	C as B	TOTAL
Figures	581	178	76	7	28	800
%	73	22	9.5	1	3.5	100

Table 11 : Summary of Native Reaction to Controls' Performance (Unit IV)

IV. 7. UNIT FIVE : YES/NO QUESTION (PICTURE 1)

The aim of Unit V was to see what kind of nuclear tones ASE tend to use in 'yes/no questions'.

The tables below represent a summary of the results shown in Appendix D5. The total numbers of falling, rising and level tones used by the ASE and the Controls respectively were counted and reproduced here.

Note that although only one control was used in each of Units I to IV, three were randomly selected in the remaining units.

IV. 7. 1. ALGERIAN SPEAKERS

Total Tones : 200	FALLS		RISES				LEVEL
	H	L	HR	LR	FR	HF + LR	High
	33	2	106	76	6	6	1
TOTAL	35		194				1

Table 12 : Algerian Speakers' 'Tone' Choices in Yes/No Questions

IV. 7. 2. CONTROLS

Total Tones 30	FALLS H	FALLS L	RISES HR	RISES LR	RISES FR	RISES HF + LR	LEVEL High
Control A	7	-	-	-	3	-	-
Control C	1	-	2	4	-	3	-
Control E	8	-	1	-	1	-	-
TOTAL	16		14				0

Table 13 : Controls' 'Tone' Choices in Yes/No Questions

IV. 8. UNIT SIX : WH-QUESTIONS

As opposed to Unit V, the focus of the present Unit was the 'wh question'. The results shown in Appendix D6 have been reproduced here as explained in the case of Unit V above (sub section IV.7.)

IV. 8. 1. ALGERIAN SPEAKERS

Total Tones : 200	FALLS H	FALLS L	FALLS RF	RISES HR	RISES LR	RISES FR	RISES HF + LR	LEVEL H	LEVEL L
	86	85	1	10	7	-	5	4	2
TOTAL	172			22				6	

Table 14 : Algerian Speakers' 'Tone' Choices in Wh Questions

IV. 8. 2. CONTROLS

Total Tones 30	FALLS H	FALLS L	RISES HR	RISES LR	RISES FR	RISES HF + LR	LEVEL High
Control B	10	-	-	-	-	-	-
Control C	8	2	-	-	-	-	-
Control D	7	3	-	-	-	-	-
TOTAL	25 + 5 = 30				0		0

Table 15 : Controls' 'Tone' Choices in Wh Questions

IV. 9. UNIT SEVEN : READING PASSAGE

The following two tables show how the ASE and the Controls divided the Reading Passage into Intonation Groups (IG). While the second column represents the expected number of IG, the third one shows the actual number for each speaker. The final column indicates the difference between the expected and the actual number of IG.

Note that the 13 expected IG shown in column 2 represented in fact the maximum that were allowed (see sub section III.2.3.1.5. above). Appendix C7 shows the Reading Passage divided into 13 IG.

IV. 9. 1. ALGERIAN SPEAKERS

	Expected number of intonation groups	Actual number of intonation groups	Difference
F 1	13	15	+ 2
F 2	13	16	+ 3
F 3	13	14	+ 1
F 4	13	16	+ 3
F 5	13	16	+ 3
M 6	13	15	+ 2
M 7	13	14	+ 1
F 8	13	17	+ 4
F 9	13	14	+ 1
M 10	13	13	-
M 11	13	17	+ 4
M 12	13	17	+ 4
M 13	13	17	+ 4
M 14	13	14	+ 1
M 15	13	15	+ 2
M 16	13	22	+ 9
F 17	13	16	+ 3
F 18	13	13	-
F 19	-	-	-
M 20	13	13	-
TOTAL			
Figures =	247	294	+ 47
Mean ≈	13	15.5	+ 2.5

Table 16 : Algerian Speakers's 'Tonality' Choices in the Reading Passage

IV. 9. 2. CONTROLS

	Expected number of intonation groups	Actual number of intonation groups	Difference
C. B	13	14	+ 1
C. C	13	12	- 1
C. E	13	10	- 3
TOTAL Figures =	39	36	- 3
Means ≈	13	12	- 1

Table 17 : Controls' 'Tonality' Choices in the Reading Passage

IV. 10. UNIT EIGHT : DIALOGUES

Here again, for the two dialogues the number of IG used by each ASE and Control was counted and reproduced in the following tables. The reader is referred to Appendix C8 which shows both dialogues divided into 18 and 17 IG respectively.

IV. 10. 1. DIALOGUE A

IV. 10. 1. 1. ALGERIAN SPEAKERS

	Expected number of intonation groups	Actual number of intonation groups	Difference
F 1	18	22	+ 4
F 2	18	21	+ 3
F 3	18	19	+ 1
F 4	18	29	+ 11
F 5	18	29	+ 11
M 6	18	23	+ 5
M 7	18	26	+ 8
F 8	18	27	+ 9

M 10	18	19	+ 1
M 11	18	30	+ 12
M 12	18	23	+ 5
M 13	18	22	+ 4
M 14	18	24	+ 6
M 15	18	23	+ 5
M 16	18	30	+ 12
F 17	18	25	+ 7
F 18	18	21	+ 3
F 19	-	-	-
M 20	18	24	+ 6
TOTAL			
Figures =	342	459	+ 117
Means ≈	18	24	+ 6

Table 18 : Algerian Speakers' 'Tonality' Choices in Dialogue A

IV. 10. 1. 2. CONTROLS

	Expected number of intonation groups	Actual number of intonation groups	Difference
C. B	18	17	- 1
C. C	18	17	- 1
C. E	18	17	- 1
TOTAL Figures =	54	51	- 3
Means ≈	18	17	- 1

Table 19 : Controls' 'Tonality Choices in Dialogue A

IV. 10. 2. DIALOGUE B

IV. 10. 2. 1. ALGERIAN SPEAKERS

	Expected number of intonation groups	Actual number of intonation groups	Difference
F 1	17	22	+ 5
F 2	17	19	+ 2
F 3	17	19	+ 2
F 4	17	22	+ 5
F 5	17	19	+ 2
M 6	17	24	+ 7
M 7	17	20	+ 3
F 8	17	22	+ 5
F 9	17	20	+ 3
M 10	17	19	+ 2
M 11	17	27	+ 10
M 12	17	21	+ 4
M 13	17	22	+ 5
M 14	17	21	+ 4
M 15	17	25	+ 8
M 16	17	23	+ 6
F 17	17	19	+ 2
F 18	17	18	+ 1
F 19	-	-	-
M 20	-	-	-
Total Figures =	306	382	76
Means ≈	17	21	4

Table 20: Algerian Speakers' 'Tonality' Choices in Dialogue B

IV. 10. 2. 2. CONTROLS

	Expected number of intonation groups	Actual number of intonation groups	Difference
C. B	17	17	-
C. C	17	16	- 1
C. E	17	17	-
TOTAL Figures =	51	50	- 1
Means ≈	17	16.5	- 0.5

Table 21 : Controls' 'Tonality' Choices in Dialogue B

IV. 11. UNIT NINE : GUIDED SPEECH

IV. 11. 1. ALGERIAN SPEAKERS

	Number of I.G. (=)	Number of words (=)	Number of words/I.G. (≈)
F 1	62	141	2.3
F 2	68	168	2.5
F 3	49	140	2.9
F 4	71	172	2.4
F 5	65	133	2
M 6	52	108	2
M 7	65	154	2.4
F 8	51	136	2.5
F 9	71	171	2.4
M 10	75	167	2.2
M 11	63	123	2
M 12	50	135	2.8
M 13	66	151	2.3

M 14	48	98	2
M 15	54	119	2.2
M 16	64	157	2.5
F 17	67	150	2.2
F 18	61	158	2.6
F 19	85	220	2.6
M 20	62	119	1.9
TOTAL Figures =	1249	2920	46.7
Means ≈	62.45	146	2.3

Table 22 : Algerian Speakers' 'Tonality' and Words per I.G. in Guided Speech

IV. 11. 2. CONTROLS

	Number of I.G. (=)	Number of words (=)	Number of words/I.G. (≈)
C. A	73	262	3.6
C. C	71	260	3.7
C. D	42	191	4.5
TOTAL Figures =	186	713	11.8 ≈ 12
Means ≈	62	237.6	3.9 ≈ 4

Table 23 : Controls' 'Tonality and Words per I.G. in Guided Speech

In Unit IX ('Guided Speech') and X ('Free Speech') were counted not only the number of IG (second column), but also the number of words per IG (third column). The tables shown above indicate the total number of IG and words per IG counted for each speaker. Appendix D7 shows how each speaker divided his/her 2.5 minutes of Guided Speech into ("meaningful") IG.

IV. 12. UNIT TEN : FREE SPEECH

In Unit X, a sample of 2 minutes of each speaker's monologue was considered. The procedure adopted here was as explained in the above section (IV.11.). Appendix D8 shows how the ASE and the Controls divided their monologue into IG.

IV. 12. 1. ALGERIAN SPEAKERS

	Number of I.G. (=)	Number of words (=)	Number of words/I.G. (≈)
F 1	83	194	2.3
F 2	75	229	3
F 3	68	209	3
F 4	60	145	2.4
F 5	70	145	2
M 6	49	122	2.5
M 7	90	203	2.2
F 8	70	164	2.3
F 9	72	193	2.6
M 10	83	182	2.1
M 11	72	128	1.7
M 12	78	198	2.5
M 13	85	185	2.1
M 14	56	116	2
M 15	68	145	2.1
M 16	84	188	2.2
F 17	80	169	2.1
F 18	72	183	2.5
F 19	110	265	2.4
M 20	85	188	2.2
TOTAL Figures =	1352	3128	46.2
Means ≈	67.6	156.4	2.3

Table 24 : Algerian Speakers' 'Tonality' and Words per I.G. in Free Speech

IV. 12. 2. CONTROLS

		Number of I.G. (=)	Number of words (=)	Number of words/I.G. (≈)
C. A		85	345	4
C. B		101	330	3.3
C. D		69	357	5
TOTAL Figures	=	255	1032	12.3
Means	≈	85	344	4

Table 25 : Controls' 'Tonality' and Words per I.G. in Free Speech

Notes to Chapter IV

[1] The meaning/gloss that the present investigator wanted him/her to convey.

[2] As defined by O'Connor and Arnold (1973).

Chapter V

Discussion

V. 1. INTRODUCTION

The present chapter will attempt to interprete and discuss the results obtained and presented in the preceding chapter. First, a number of general remarks will be made about various sentence types, as well as the variables that the test sentences were designed to elicit. Then light will be shed on some aspects of Algerian English intonation which contributed to make the informants' speech so characteristically "unEnglish". The NEL's reaction to various intonational features will be discussed and so will the controls' performance. Finally, some attention will be devoted to a number of methodological choices made at various stages of the current experimental work.

V. 2. GENERAL REMARKS REGARDING PARTICULAR SENTENCE-TYPES

V. 2. 1. TAG QUESTIONS

Deciding whether to use a rise or a fall in a tag question in English depends largely on whether one is:

a) asking a real question (and waiting for an answer which may either be 'yes' or 'no');

or merely

b) looking for confirmation (i.e. expecting the hearer to agree with him/her). (See Gimson, 1980; O'Connor and Arnold, 1973.)

Those two cases will henceforth be called 'real-question' and 'search-for-confirmation' respectively (cf. Appendix C1, Unit I Sentence 6), e.g.:

a) You saw him at the party, `didn't you (fall)
(meaning: I'm almost certain that you saw him at the party)

b) You saw him at the party, ,didn't you (rise)
(meaning: I think that you saw him at the party, but I'm not sure and I would like you to confirm this).

In the case of a) the speaker expects the answer to be 'Yes I did'; whereas in b) the speaker is not sure as the answer could either be 'Yes, I did' or 'No, I didn't'.

So if the nuclear tone used in the tag in R.P. may give a hint about the speaker's knowledge of the matter (whether he knows or doesn't) this does not prove to be the case with the ASE. For, there appears to be a tendency among them to use a rise in the tag without any apparent consideration as to whether the utterance is a 'real-question' or just a 'search-for-confirmation'.

At this point, it should perhaps be mentioned that at the end of the recording sessions in English, the Algerian informants were asked to translate the test-sentences of the first four units into Algerian Arabic (A.A.). A number of interesting observations were made regarding tag-questions. But further evidence was needed to be able to speculate on any other aspects of A.A. intonation. Therefore, this data was left aside for further study.

But, as far as tag-questions in A.A. are concerned, the following observations were made. A.A. offers two choices of tag-questions which could be exemplified as follows:

1)	/jɛk/	meaning:	'isn't it?'
2)	/ulɛla/		
or	/la/	meaning:	'am I wrong?'
(abbreviation)			('or not?')

Both 1) and 2) can be used as tags regardless of whether the preceding part of the sentence is in the affirmative or in the negative. It appears that the only difference between / jɛk / and / ulɛla / is that while the former is almost always used in conjunction with a falling tone, the latter is usually used with a rise, e.g.:

1)	/ ʃuftɛh fil ħafla | ̀jɛk /	FALL
2)	/ ʃuftɛh fil ħafla | ulɛ́la /	RISE
	| ʼla	RISE

It seems that the use of a rise or a fall in A.A. is entirely determined by the choice of words. If the speaker chooses to use / jɛk / a falling tone will also be adopted, and vice versa for / ulɛla / which would attract a rise. But in R.P. there is no such situation where the selection of a word/tag will also dictate the use of a given nuclear tone instead of another. Therefore, it is possible that the ASE relied more on the type of sentence the utterance was. If it ended with a question (cf. word order: auxiliary + subject) ASE could only interpret it as a question and hence use a rise. As rises have been reported to be universal tones for questions (Bolinger, 1978).

V. 2. 2. COMPLETE VERSUS INCOMPLETE LISTING

Here again, few Algerians used a final rise when the listing was incomplete. The tendency was either to use a final falling or a level ending tone. The occurrence of the rise-fall-level and fall-level tones to suggest open-endedness will be discussed in detail in sub section V.5.1.

It is probable that the Algerian speakers were too much involved with reading and/or pronouncing the test-sentences correctly that they did not pay sufficient attention either to the meaning(s) provided for between parentheses or to the contextual information. This raises again the problem of reading skills and also of fluency. Did the Algerian

informants' poor reading abilities affect their speech and intonation when reading aloud sentences? And if so, how much of their errors have to be attributed to poor reading skills? Would the results have been different had their English be more fluent? Here is another set of questions in need of further investigation.

V. 2. 3. VOCATIVE VERSUS APPOSITIONAL

As far as the following pair of sentences is concerned,

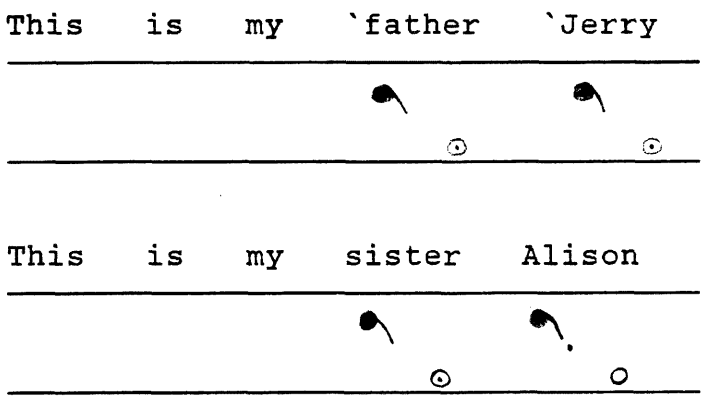
This is my `father ,Jerry

versus

This is my `sister `Alison

the Algerian speakers conveyed correctly the meaning of the second utterance (i.e. "This is my sister. Her name is Alison"), but faced some difficulty with the first one (i.e. "Jerry, you wanted to know my father; now here he is").

On the whole both sentences were pronounced as if the speaker was giving the name of the person s/he is introducing; i.e. 'Jerry' becomes the name of the father and 'Alison' remains the name of the sister, e.g.:



The meaning distinction between the two sentences was rarely maintained. This was mainly due to the use of a second high fall on 'Jerry' which had the effect of changing

the meaning. Although two possibilities were accepted, i.e.

`Father ₀Jerry

or `Father ,Jerry

the fall + rise was practically absent in the Algerian speech sample.

V. 2. 4. USE OF THE FALL RISE

In R.P., the falling-rising nuclear tone — sometimes in conjunction with a falling head (O'Connor and Arnold, 1973) — is often used to express a polite disaproval, refusal, contradiction or even apologies (cf. Appendix C1, Unit I, Sentences 1, 4, 13, 17 and Appendix C4, Unit IV).

It seems that Algerian speakers are very 'shaky' as far as politeness in English is concerned. Instead of falling-rising tones, simple falls are often used. This frequently results in making the utterance sound more abrupt, brusque, rude and insisting to a native ear. Rather than making a polite request, several Algerian speakers ended up being demanding, commanding and certainly unfriendly.

V. 2. 5. YES/NO VERSUS WH QUESTIONS

No particular difficulty was met regarding yes/no and wh-questions. The majority of Algerian speakers tend to use a final rising tone in yes/no questions and a falling tone in wh questions. Out of 200 tones, 179 final rises were recorded in Unit VII (Yes/No Questions) and 20 final falls only. This represents about 89.5% of rises against 10% of falls. Note that one case of final level tone was also observed.

As to the wh questions, 172 falls were recorded (≈ 86%) against 21 rises (≈ 10.5%). Seven level tones took place (≈ 3.5%).

So it would seem to be a fair generalization to say that the tendency among ASE is to use a rise in yes/no questions

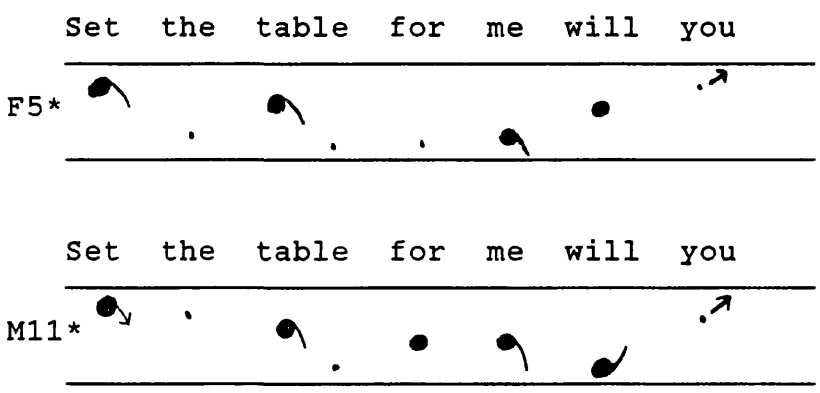
and a fall in wh questions (see Appendix D5 & D6).

However, it was noted that the native controls varied significantly in the type of nuclear tone they used in yes/no questions (cf. Appendix D5). Despite some variations from one control to another, it seems that the occurrence of (high-) falls was about as equal as the occurrence of rises: 16 falls took place against 14 rises (see Table 13 in chapter IV). The number of falls was even higher than the number of rises.

Considering those results, one can hardly assert that in yes/no questions native English speakers use rises or use falls all the time. The above figures clearly show that rises and falls are equally used (for further discussion about controls' performance see sub section V.11. below).

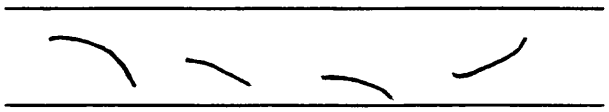
V. 2. 6. SUCCESSION OF SEVERAL NUCLEI OR ACCENTED SYLLABLES

The Algerian speech sample studied also presented peculiar patterns involving successions of several nuclei/accented syllables within the same intonation group. It is as if a succession of new pitch trends was initiated one after the other. Below are some examples.

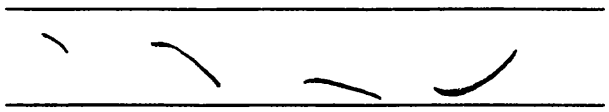


[* see prints 14 and 15 Appendix E]

Schematically F5's utterance could be represented as:



and M11's as:



Instead of one single falling pre-nuclear contour where each successive syllable is pitched slightly lower than the preceding one, e.g.

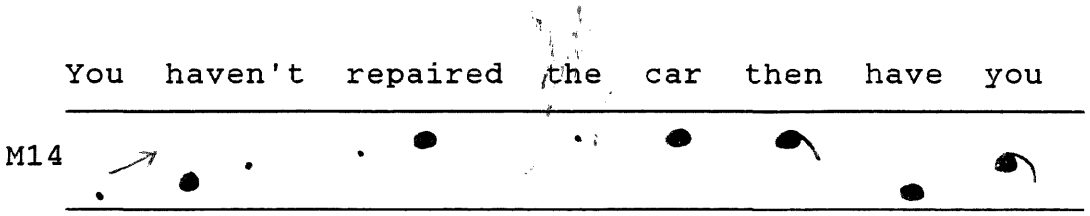
it is as if the Algerian falling pre-nuclear contour was divided into several sections making the whole pattern look and sound quite original indeed.

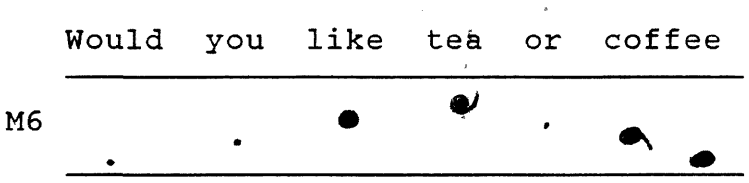
Note that the syllables initiating those falling pitch trends are accented syllables. And the pitch direction initiated by these accented syllables are followed up by the next syllable(s). This is why M11's "*Set*" was represented as a falling gesture rather than a falling accented syllable, because the next syllable does not clearly follow its pitch movement. Comparing it with the syllables following F5's "*Set*" or both speakers' "*ta*-"(-ble) one can see that "*the*" in the second case (M11) is pitched at nearly the same height as "*Set*". It is pitched definitely lower in the version of F5.

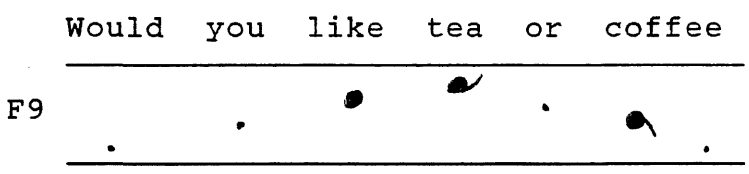
V. 2. 7. PRE-NUCLEAR-RISING CONTOUR

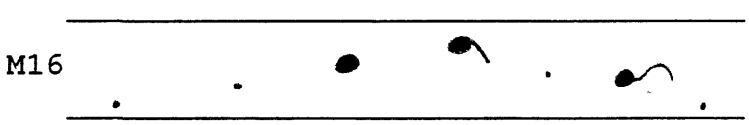
In conjunction with or independently of any similar successions of several accented syllables/nuclei the following phenomenon was observed.

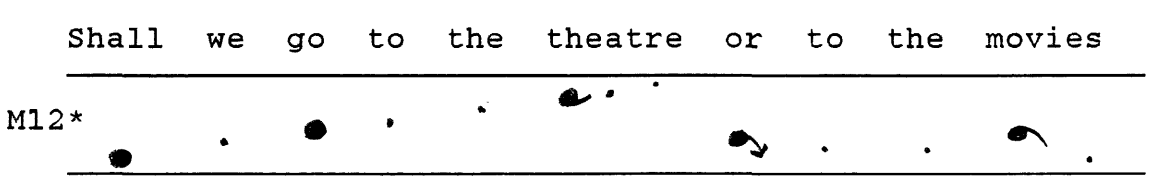
The speech sample of Algerian English also presented a tendency to have a pre-nuclear rising contour as shown in the examples below:

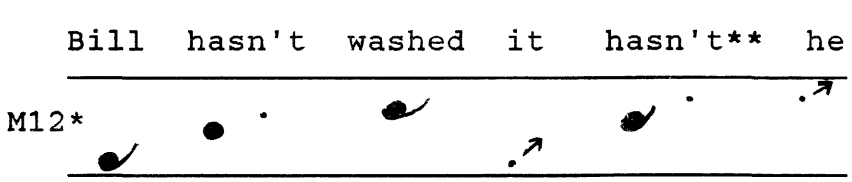












**M 12's mistake

- Stressed
+ Long
+ Pitch Movement

[* see prints 16 and 17 Appendix E]

V. 3. DIVISION INTO INTONATION GROUP

The data also revealed ASE's tendency to break their speech into very short intonation groups as compared to the controls. The expected number of IG for the Reading Passage was 13 (see Tables 16 & 17 in Chapter IV). While the controls had an average of 12 IG (i.e. -1), ASE had about 15.5 IG (+ 2.5). As far as the Dialogues (A and B) are concerned the difference widens: 24 IG (+ 6), and 21 IG (+ 4) respectively against 17 IG (- 1) and 16.5 IG (- 0.5) for the Controls (see tables 18 to 21 Chapter IV).

The results look similar for Guided and Free Speech (Units IX & X). The average number of IG in the 2.5 minutes sample of Guided Speech for the ASE was 62.45 against 62 for the controls. However, during the same period, with about the same number of IG, the controls were able to utter far more words than the ASE (nearly twice the number). The total number of words pronounced by the ASE in the 62.45 IG was 146. It was 237.6 for the controls. ASE had about 2.3 words per IG, whereas the controls had about 4 W/IG. The sample of Free Speech revealed the same tendency: 156.4 words within 67.6 IG for the ASE, and 344 words within 85 IG for the Controls (see Tables 22 to 24, Chapter IV).

V. 4. SYLLABLE-TIMED RHYTHM

The notion of stressed-timed rhythm and/or pure isochrony in English has long been debated (Pike, 1945; Shen and Peterson, 1962; Crystal, 1969; Gardner, 1985, to name but a few). Experimental evidence has shown that what the human ear perceives as regular beats is far from representing real physical events. In fact, it is the hearer's mind which imposes a regularity which often does not exist (Alvarez de Ruf, 1978; Gardner, 1985: 11; Nadia Benrabah, forthcoming).

However, for the sake of clarity when describing a given language, one may find it useful to say that in languages

like English, stress tends to recur at regular intervals in time. This results in any succession of unstressed syllables between two stress beats to be 'crushed' or 'compressed' together so as to say them more rapidly. For that purpose, English is well known for its use of vowel elision, reduction or weakening, and similarly for its preference for weak rather than strong forms in most grammatical unstressed words (Gimson, 1980; Roach, 1982).

This being said, the first thing that strikes the observer's ear in the sample of Algerian English, is the tendency to have a staccato, more like a syllable-timed rhythm. Every syllable is given the same value. This impression is reinforced by the total absence of weak forms. Nearly all function words are used in their strong form. Below are some examples:

(1) I am happy

F19 [ʔaɪ ʔam hæpi:] as opposed to

RP /aɪm ˋhæpɪ/

(2) What do you think he can do with this computer

F2 [wat du: ju: θi:ŋk hi: kæn du: wi:d di:s kɔmpju:tœr]

RP /ˈwɒt djʊ°θɪŋk ɪ kənˋdu: wɪð ðɪs kəmpju:tə/

(3) What is his job

F8 [wat ʔi:z hi:z dʒɔb]

RP /ˈwɒts ɪz ˋdʒɒb/

(4) Then where do you think he is working

M10 [ðe wɛ: du: ju: θi:ŋk hi: ʔi: wɜ:ki:ŋg]

RP /ðn ˈweə djʊ°θɪŋk ɪz ˋwɜ:kɪŋ /

Note though that elision of /h/ in pronouns is not obligatory in R.P.

(5) What kind of books does he read

M14 /wat kaɪnd ʔɒf bu:ks dɒz hi: ri:d/

RP /ˈwɒkᵊkaɪnd əvˋbʊks dəz ɪ̥ri:d/

The insertion of the glottal stop before vowels in syllable initial position (see (1) and (2) above) can also be held responsible for this staccato type of rhythm. This is particularly striking when the word in question is a grammatical item such as "am", "is", "of", etc... . In connected conversation, those words are never preceded by glottal stops in RP unless when stressed for particular emphasis. Instead, words are linked together with some kind of 'liaison' sound as in / aiʲæm / (Mortimer, 1985). In order to avoid the insertion of glottal stops, syllable-initial vowels tend to be linked to the preceding final consonant as in / ðɪz‿ɪz‿ə maɪs‿ɔ:gəst‿a:ftənu:n /

In addition, the long vowel in words like / ʔi:z/ for 'is' makes this lexical item sound more like a content word. This can even lead to communication breakdown as shown in the following utterance as spoken by an Algerian informant:

/ðø mɛn ʔi:z ði: ɒnli: li:ŋk bitwi:n ðɛm/

which could mean both :

a) The man is the only link between them,

b) The men ease the only link between them;

although the speaker intended meaning a). One may also note the narrower range of vowel qualities in Algerian English. If R.P. makes use of two distinct qualities for the following short versus long vowels:

1)	/ i:/ versus / ɪ /	3)	/ ɔ: / versus / ɒ /
2)	/ u:/ versus / ʊ /	4)	/ ɜ: / versus / ə /

it is quite noticeable that similar contrasts (particularly the first two pairs) are absent in Algerian English. The tendency is to use a vowel of the type [ɨ] for the first pair, and [ʉ] for the second. Both are usually (though not consistently) long. Thus, in function words like 'you', 'do' etc. / ʉ: / is the only vowel used. The short variety, [ʊ] is never used.

Similarly, in function words like 'is', 'his', 'he', 'she', etc..., the Algerian preference is for a vowel quality sharing more resemblance with R.P. / ɨ: / (closer and more front) than / ɪ / which is practically absent; e.g.

/ hɨ: went tʉ: pæris / instead of
/ hɪ 'went tə 'pæris /

The use of / ʉ: / and / ɨ: / in such grammatical items tends to lengthen those words. The immediate result is that function words in Algerian English are less easily distinguishable from content and stressed words where full/long vowels are also used. Instead, they sound very similar. It is as if Algerian English consisted only of (a series of) content words with full vowels, hence giving the speech a staccato 'machine-gun' type of rhythm. Even polysyllabic words where R.P. usually stresses one syllable keeping the remaining one(s) weak , e.g.

'comfortable' /'kʌmftəbl/ literature /'lɪtrətʃə /

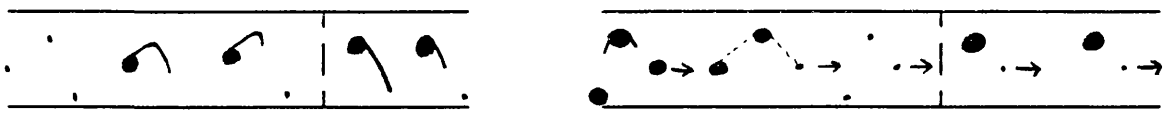
in Algerian English each syllable is given the same value. Moreover, in order to match the stressed syllables, the so-called short vowels are held longer even if not stressed (this lengthening phenomenon is further discussed in sub section V. 6 below).

V. 5. PECULIAR TONES

V. 5. 1. FALL-LEVEL AND RISE-FALL-LEVEL TONES

The study of the sample of Algerian speech revealed the existence of peculiar 'rising-falling' and 'falling' tones. Their peculiarities stemmed from their original ending.

After an initial rise from, say, mid to high in the case of the 'rising-falling' tone, instead of merely falling from high to mid/low, the pitch is slightly lowered and sustained on a level pitch. For this reason, and in order to distinguish them from the classic 'rise-falls' and 'falls', those tones will be called Rise-Fall-Level and Fall-Level respectively. So instead of taking the traditional forms ∧ and \ the Algerian tones tend to look like ∧– and \– respectively as shown below :



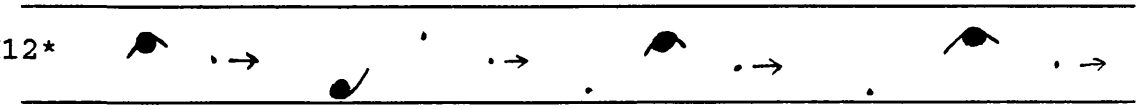
Rise Falls & Falls (R.P.) — Rise-Fall-Levels Fall-level (Algerian)

The peculiar ending of those Algerian tones was mainly responsible for the difficulty in identifying and naming them.

Note that not all Algerian informants used those tones. However, their occurrence was frequent enough in the speech sample studied for not being disregarded. Furthermore, although their usage varied slightly from one speaker to another they tend to be used in the same situation as the following examples clearly illustrate:

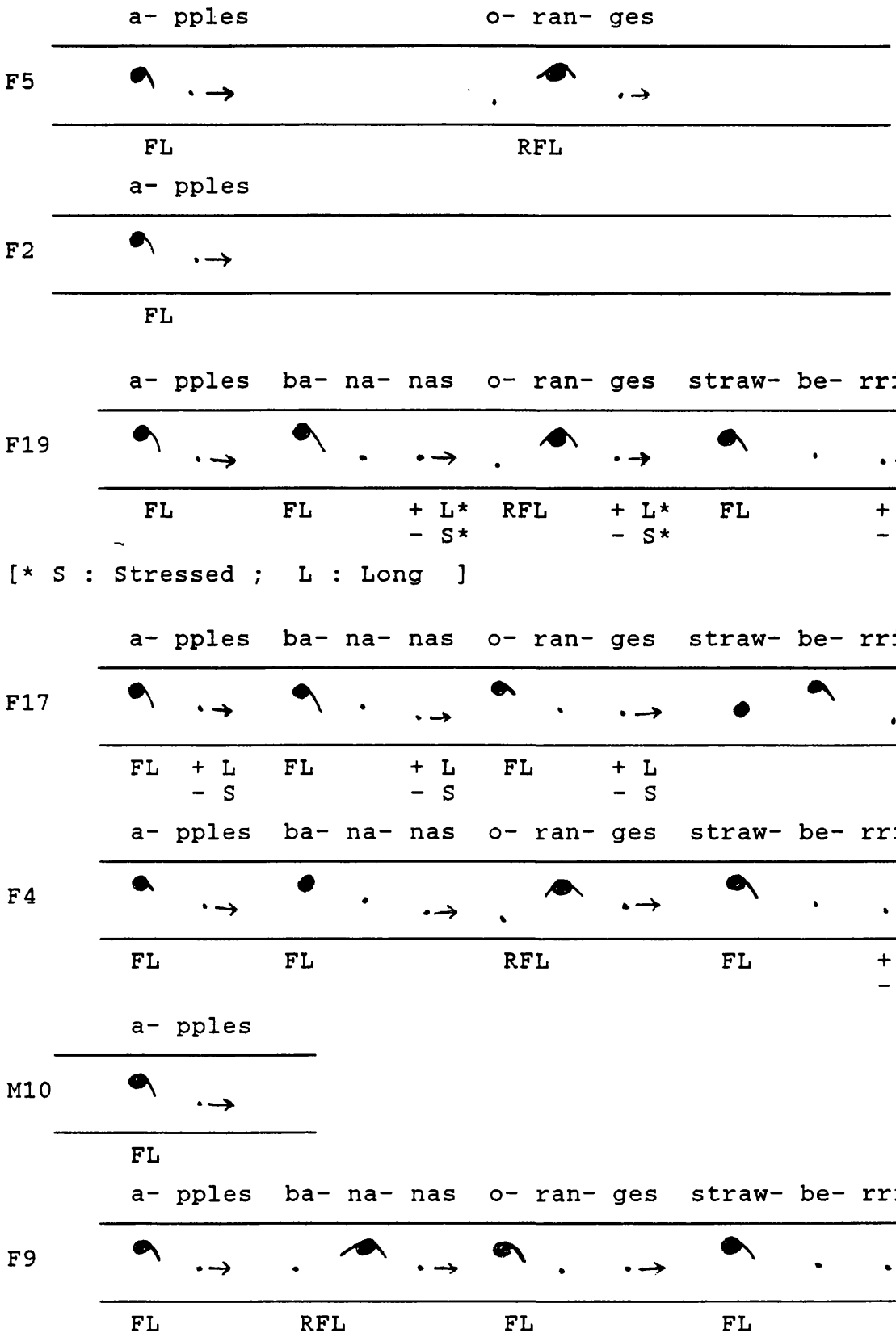
Yes she brought
a- pples ba- na- nas o- ran- ges straw- be- rries

M12*



RFL RFL RFL RFL

(* see print 1 in Appendix E)


a- pples
o- ran- ges
F5
FL
RFL
a- pples
F2
FL
a- pples
ba- na- nas
o- ran- ges
straw- be- rries
F19
FL
FL
+ L*
- S*
RFL
+ L*
- S*
FL
+ L*
- S*
[* S : Stressed ; L : Long]
a- pples
ba- na- nas
o- ran- ges
straw- be- rries
F17
FL
+ L
- S
FL
+ L
- S
FL
+ L
- S
a- pples
ba- na- nas
o- ran- ges
straw- be- rries
F4
FL
FL
RFL
FL
+ L
- S
a- pples
M10
FL
a- pples
ba- na- nas
o- ran- ges
straw- be- rries
F9
FL
RFL
FL
FL

a- pples

M13

FL

I like (er) written expression or yes oral expression

M20

RFL + L - S

RFL + L - S

And the weather wasn't fine.
It was (er) raining and (er) blowing and so on

F19

RFL

RFL

Your daddy used to travel a lot you know
He went to Lon-don Pa - ris Am - ster - dam

F9

RFL FL FL

He went to Lon-don Pa - ris Am - ster - dam

M12

FL FL RFL

He went to Lon-don Pa - ris Am - ster - dam

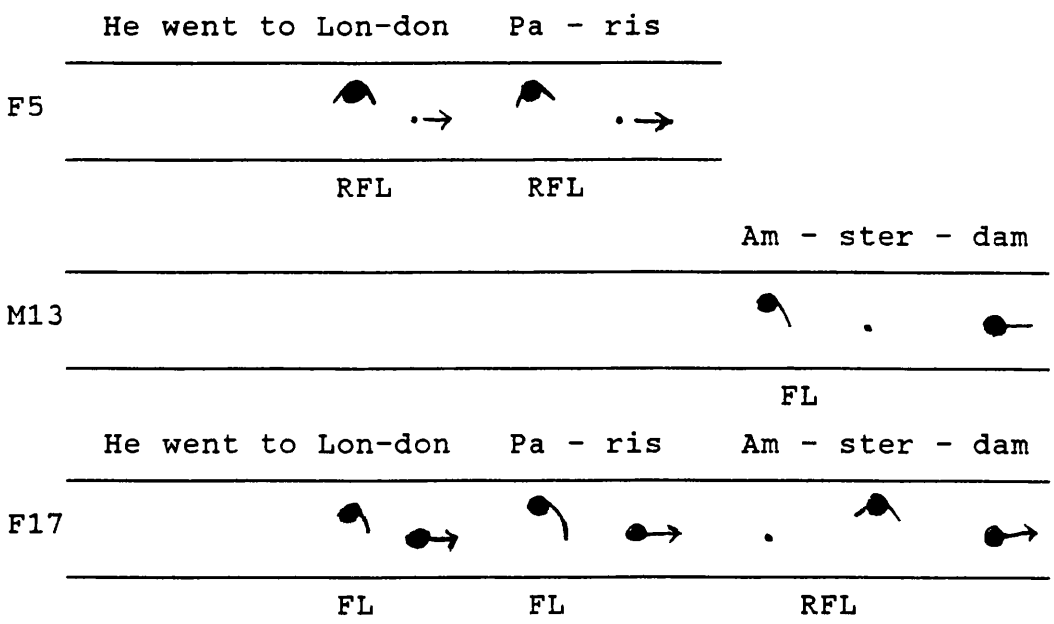
F18

FL FL FL

He went to Lon-don Pa - ris Am - ster - dam

M20

RFL FL FL



The above examples clearly show that the Rise-Fall-Level and the Fall-Level are used to suggest open-endedness, or incomplete listing.

It was believed that these tones were particular to Algerian English intonation. But a very recent paper (Leach, 1988) suggests that this finding has further implications. In this paper, Leach reconsiders the classic description of French intonation. He raises the question of whether French intonation should best be described in terms of tones or tunes. He also posits the existence of a rising-falling nuclear tone in French ending with a sustained level pitch. This tone, he says, suggests an open-endedness. He (1988: 134) also mentions a number of authorities who, long ago, have called attention to this phenomenon (e.g. Coustenoble and Armstrong, 1934: 221; Fónagy and Bérard, 1972; and Fónagy et al., 1979).

Leach identifies three possible level endings which, due to the resemblance, he names after his tunes 1, 2 and 4 posited at the beginning of his paper: Tunes (1-), (2-) and (4-) where [-] means 'level ending'. His level ending tones/tunes look like this (Leach, 1989: 134):

C'est Marie-Jeanne (1-) Marie-Jeanne (2-) tu dors? (2) Marie-Jeanne (4-)

However, the existence of such tones in the above studies are discussed in connection with a description of French not Algerian English intonation. This fact will prove to be of real significance (see discussion below).

At an early stage of the current study, the present author suspected that the intonation habits of Algerian Arabic would probably interfere with the intonation adopted by ASE. This was justified by the belief that intonation is that aspect of language which is acquired unconsciously.

French is a second language in Algeria. And due to the wide discrepancy existing between Arabic and English in terms of, say, writing systems (French and English sharing more similarities), it was believed that French could have an impact on ASE as far as segments, syntax, spelling, etc were concerned. But because it is so different from English in those and many other respects, Algerian Arabic was an unlikely — though not impossible — candidate for interference to occur at those levels.

Apparently, in the process of acquiring a new language, the learner tends to look for similarities rather than differences. As said earlier, intonation is this aspect of language which one acquires without being aware of it. Intonation is not taught at school in the way grammar or orthography are for instance. Therefore, it becomes more difficult at this level to consciously look for similarities and/or differences between one's mother tongue and the target language. Consequently, the language that is more likely to interfere with the target language was thought to be the speaker's mother tongue, i.e. in the present case Algerian Arabic.

However, the existence of (rise)-fall-level ending tones/tunes in French alters the whole reasoning and has the following significance.

If Leach's statements are true for French, then it would suggest that French rather than Algerian Arabic is the language which actually influences the speakers' intonation when speaking English. This is all the more striking when one recalls that Algerian Arabic is the first language of all twenty speakers. Furthermore, nineteen out of twenty speakers reported always speaking Algerian Arabic at home and seventeen with friends. Only two reported always speaking French at home and four with friends (cf. Appendix B).

This is evidence against the tendency to consider the speaker's mother tongue as the automatic source of negative influence or transfer. The target language may be subjected to interference from the learners' second language or possibly any other language(s) known to them. It seems that the language presenting more similarities with the target language will have the greatest impact on the learners. It may be the most likely source of interference regardless of whether it is the mother tongue, the second or a foreign language.

This state of affairs could also be explained on the grounds that learners tend to adopt the same learning strategies as those used for the acquisition of a foreign language learnt previously. This fact has already been mentioned by Ihebuzor (1982, about Nigerian English) and also by M. Benrabah (1987, about Algerian English). Ihebuzor (1982) noticed that English, the second language in Nigeria, was the language which had the greatest influence on his informants when learning French. Similarly, M. Benrabah found that the pronunciation of his Algerian informants was significantly influenced by French (second language in Algeria).

This could suggest that ASE are learning and producing English intonational patterns through a kind of 'filter' which, in the present case, has some French characteristics. This learning strategy is further enhanced by the fact that English has more in common with French than with Arabic.

The fact that very little is known today about acquisition of intonation both in L1 and L2 (although more information about errors in L2 is available than in L1, see Bot, 1986: 114), makes generalization and speculation difficult and purely hypothetical. Bolinger (1978) like a number of other scholars believes intonation to be the best candidate for universality. He asserts (1978: 515) that it is a fact "that human speakers everywhere do essentially the same things with fundamental pitch". Some authorities, however, argue that if there are some intonation universals, intonation is not universal in all respects. If this was the case, then it would become rather difficult to detect interference — if any — at this level. Besides, a number of studies have shown that it is possible to recognize a given language on the basis of intonation (Maidment, 1976; O'Hala & Gilbert, 1978).

The influence of French on Algerian English intonation would perhaps benefit from a contrastive analysis of the intonation systems of both languages, although this is not certain. Backman (1979) explains how even the contrast between English and Spanish intonation did not help to explain many errors made by her sample of Spanish learners (see also Bot, 1986: 115).

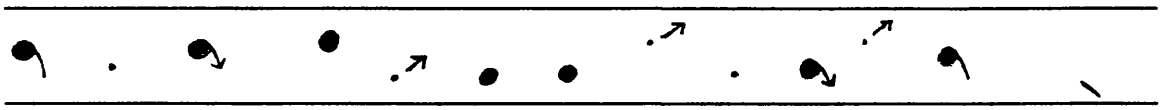
Bot (1986: 113) mentions a number of studies (Zobl, 1980; Wode, 1981) aiming to discover a possibility of "L2-specific developmental error". He further notes that several "observations have shown that certain types of error are made by nearly all learners of a given language, irrespective of their mother-tongue". Yet, any hypotheses about acquisition

of L2 intonation would undoubtedly benefit from more information about acquisition of intonation in L1 (Bot, 1986: 113).

V. 5. 2. RISING VS. FALLING 'GESTURES'

The discussion relating to the existence of (rise)-fall-level tones in Algerian English leads to another interesting finding. Perhaps it should be noted first that the level ending tone can either occur on a stressed or an unstressed syllable. (This point will be further discussed in sub section V. 6. below.) This is probably what makes those tones so specific to Algerian English.

Yet another similarly interesting phenomenon was observed in the Algerian speech sample. It is the existence of what will be called rising and falling 'gestures' independent of any nuclear pitch movements. This could be widely illustrated by another realization of the sentence mentioned above (i.e. 'Yes she brought apples, bananas, oranges, strawberries ...') as spoken by M 16, as well as a few other utterances :



Yes she brought a-pples ba- na- nas o- ranges straw- berries

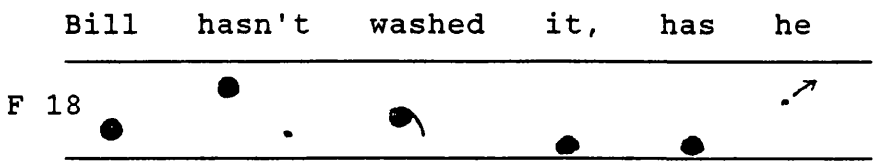
If one considers the word "apples" one can see that the first syllable is pitched higher than the second and is stressed as opposed to the second one which is not. However, a pitch movement, or a 'rising gesture' is initiated on that unstressed syllable. The rising gesture here is all the more surprising as it does not seem to be part of any major preceding pitch movement. The same odd rising gesture occurs on the final unstressed syllable of the following words 'bananas' and 'oranges'.

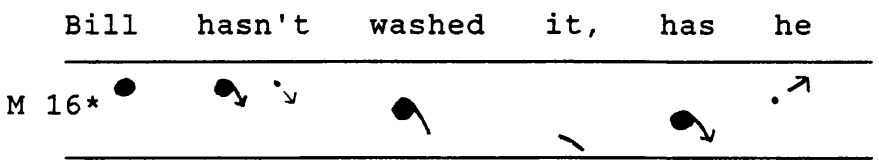
Following the above interpretation of the rise-fall level and the fall-level tones, one could argue that what takes place on those syllables might in fact be interpreted as a fall-rise (on 'apples' and 'oranges') or even a mid rise (on 'bananas'). Continuing this reasoning, in the case of the fall-rise, one could say that the fall might be initiated on the preceding stressed syllable with the rise starting on the unstressed syllable itself. This could of course be supported by the high to low relationship between the two syllables of, say, 'apples' ('a-' versus '-pples'). The syllable preceding the rising gesture is not only stressed but also pitched higher which might be interpreted as a subtle fall from high to mid. But if this reasoning could perhaps be applied to 'apples' — although not convincingly — it would be more difficult to try and apply it to 'oranges' where only a slight (low) downfall movement is observed on the stressed syllable. Besides, that stressed syllable '-ran' is pitched lower than the following unstressed '-ges'.

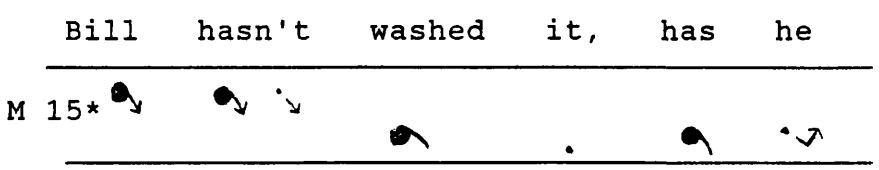
Similarly, one can hardly call 'mid rise' what takes place on 'bananas' with the last syllable simply continuing the pitch direction initiated on the preceding stressed syllable -na-. This is hardly believable especially when no noticeable rising movement actually occurs on -na-. In addition, this would not account for the falling gesture which takes place on the stressed syllable 'brought'. 'Brought' and 'a-' (of 'apples') are a succession of two high pitched stressed syllables. The main difference between the two is that no particular pitch movement occurs on 'a-' but a falling gesture does take place on 'brought'.

Falling and rising gestures may both occur on either stressed or unstressed syllables alike. Further cases of such rising and falling movements revealed that those gestures could actually occur quite independently of —

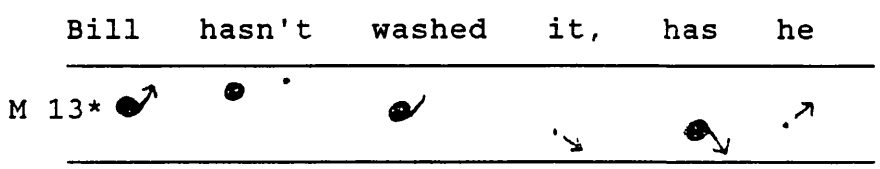
though sometimes also in conjunction with — a major nuclear pitch movement. Following are some more illustrations:

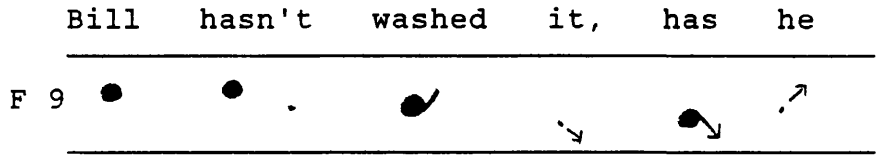


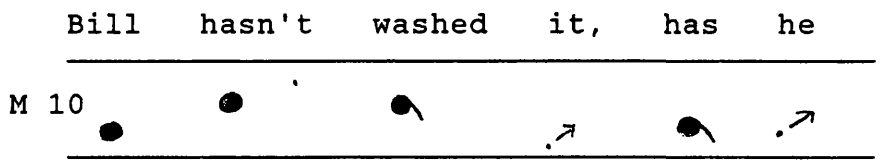




[* see prints 2 and 3 Appendix E]







Bill hasn't washed it, has he

M 7 (narrow range)

Bill hasn't washed it, has he

F 8

Bill hasn't washed it, has he

M 20*

Shall we go to the the-a-tre or to the mo-vies

F 4

[* see prints 4 and 5 Appendix E]

Shall we go to the the-a-tre or to the mo-vies

M 11

Stop shou-ting you two

M 11*

Stop shou-ting you two

M 13*

Stop shou-ting you two

M 15*

No (they) They did-n't want to tell her

M 16*

Where are you li-ving

M 20*

Where are you li-ving

M 16*

[see prints 6 to 11 Appendix E]

She read it

M 13*

She read it

F 8*

[see prints 12 and 13 Appendix E]

So what all the above examples clearly show is that unlike in English where they are usually closely related (they work in some sort of co-ordinated way), stress and pitch in Algerian English seem to work as independent parameters.

Usually in English a syllable which is both stressed and carries or establishes a (new) pitch trend is identified as an accented syllable. Hence, by definition the nucleus is the last accented syllable of the intonation group. This is not so evident in Algerian English.

Considering the utterance 'she read it' as spoken by speakers M13 and F8, if one compares M13's *'it'* with F8's *'she'*, one can hardly call *'it'* an accented syllable, let alone a nucleus. Both syllables initiate a new pitch movement. However, if *'she'* is stressed *'it'* is not.

The question that one is tempted to ask in the case of M13's version is: where is the nucleus then? A probable answer — although not really satisfactory — could be to say that the nuclear tone is a subtle fall rise where the fall is initiated on *'read'*. And the rise taking place on *'it'* is nothing but part of the rising tone.

This and similar interpretations, however, did not entirely satisfy the current researcher because they did not really depict what actually happened. Besides, one would not be able to make a difference between traditional falling-rising tones in English and similar phenomena.

In addition, an interpretation as a fall-rise might fail to capture the originality of similar rising versus falling gestures. The lengthening of *'it'* may also be held responsible for this 'peculiarity'.

The unsatisfactoriness of such an interpretation may also be due to the notation system adopted in the present study.

It seems that the most difficult task in the present (and any similar) investigation is to abstract oneself from any previous knowledge of well known and established theories about English intonation. For, here, far from dealing with R.P. or a native variety of English, one is mainly concerned with a non-native variety of English: Algerian English. Therefore, the mistake one is not immune to make is the following one.

When adopting a notation system for transcribing non-native English intonation, the researcher has to be cautious not to force on to the non-native variety well known phenomena occurring in, say, R.P. intonation (e.g. which words/syllables are stressed/accented/made nuclear and which are not). The system of small and large dots, of dashes and arrows has been widely used to describe English intonation. This system (see also O'Connor & Arnold, 1973) has been adopted here as it offered the advantage of providing a simple yet meaningful visual representation of a complex interaction of (un)stressed syllables and varying pitch movements. However, it is possible that even such a system of notation is not detailed enough to get to grips with such minute details as those mentioned earlier. Perhaps an interpretation in terms of tunes rather than tones might capture similar features. No definite answers will be given, unfortunately. And it is to be feared that those and similar questions will remain unanswered until further research is conducted. As there is an obvious and urgent need for more data to be gathered and analyzed.

V. 6. LENGTHENING OF UNSTRESSED SYLLABLES

In the various points that have been discussed above (sub sections V. 4., V. 5.) one particular feature is always present.

In connection with the discussion about the syllable-timed rhythm, for example, it was shown how, in order to give the same value to every syllable, there was a tendency among Algerian speakers to lengthen the vowel of unstressed syllables. Similarly, in the case of the fall-level and rise-fall-level tones, the level ending often coincided with an unstressed syllable. The same phenomenon took place with the rising or falling gestures which could occur upon any syllable regardless of whether that syllable was stressed or unstressed.

Hence, whenever a sustained level pitch or a rising/falling gesture coincides with an unstressed syllable, in order to allow the pitch movement to take place, that unstressed syllable is slightly lengthened. For further illustration of this point, the reader is referred back to the diagrams drawn above in sub section V. 5. 2. (sse also prints in Appendix E) for the sentence "Bill hasn't washed it, has he" or even "She brought apples, bananas, oranges, strawberries ..." where the lengthening of unstressed syllables can clearly be seen.

It has been argued (McNaught, 1978) that utterance final syllables tend to be lengthened. Therefore, one could say that the lengthening of the utterance final syllable of, say, "strawberries" was in fact predictable.

However, such an argument cannot hold as it will still not account for the lengthening of other word final unstressed syllables which occur medially in the utterance. This is the case of "-pples", "-nas" and "-ges" of "a*pples*", "bana*nas*", and "oran*ges*" respectively.

It is hoped that the above discussion has shown how all the points dealt with are in fact linked to one another. Besides, one can hardly talk about the staccato rhythm, the rise-fall-level or fall level tones or even the rising vs. falling gestures without mentioning the lengthening faculty of unstressed syllables.

The peculiarity of Algerian English intonation — for some part at least — lies in the unusual role played by unstressed syllables. In English such syllables are almost regarded as insignificant in the sense that they tend to fade away in connected speech. Evidence of this is the reduction (i.e. weakening or elision) of unstressed vowels. Unstressed syllables usually follow the pitch trend already established earlier in the intonation group, rather than initiate one of their own. In Algerian English, however, unstressed syllables seem capable of playing an important role as

nuclei or stressed syllables in English. They

1- may be lengthened;
2- may continue the pitch movement established by a previous nucleus;
3- or themselves initiate a new pitch trend quite independently of any nucleus(i) or any other accented syllable(s).

All three points — and more particularly perhaps their lengthening 'ability' — give unstressed syllables a significance they would probably not have otherwise. Those aspects also constitute evidence in favour of regarding stress and pitch in Algerian English as two parameters working either jointly as is usually the case in English, or quite independently of one another.

The fact that a great number of Algerian utterances sounded unEnglish to the native listeners may probably be attributed to instances where stress and pitch worked as unrelated parameters.

V. 7. NUCLEUS PLACEMENT

A glance at the results obtained in Unit II (see chapter IV for a summary and Appendix D2 for more details) reveals that a majority of NEL (60%) identified the correct meanings, against 35.5% who heard something different (i.e. incorrect).

This would suggest that, on the whole, Algerian speakers tend to make nuclear the correct syllable(s)/word(s).

However, the reader will perhaps notice that the gap between 60 and 35.5% (correct vs. incorrect identification respectively) is not wide enough for one to be so easily convinced. In addition, it sometimes happened that the NEL's judgements did not agree with the Algerians' performance. On some occasions high scores have been obtained by Algerian speakers who, in fact, had not located their nucleus on the correct word. Consequently, and for those reasons at least,

further investigation was needed. A closer look at those patterns shed some light on what the present writer believes to be the most important finding of the present study.

Generally speaking, whenever the NEL identified — hence understood — the correct meaning, the Algerian speakers did in fact locate or shift the utterance's nucleus correctly. Similarly, when the incorrect meaning was identified by the NEL, it also coincided with a wrong nucleus placement.

However, at times NEL's identifications and Algerians' performance contradicted one another. Further investigation was done as follows. Each sentence with a high score and a wrong nucleus was re-examined. This greatly helped at clarifying and understanding those puzzling results.

First, it showed that usually those cases involved a nucleus located in final position in the utterance.

Second, and most importantly, it was noticed that in most cases, although it was not made nuclear, the word/syllable which was supposed to become the nucleus was at least stressed. Below are some examples. (Note that the syllable which is highlighted and underlined is the expected nucleus):

Sentence 2: This is the easiest way

59.5% of the NEL identified the correct gloss.

High Scores Coinciding with Correct Nucleus

	A (Correct)	B (Incorrect)	C (Other)
F 2	10	1	0
M 11	10	0	0
M 12	10	0	0
F 17	10	0	0
F 18	10	0	0
M 14	9	1	0
F 9	5*	4	1

* F 9's version presented two nuclei, which is probably what slightly confused the judges:

,This is the 'easiest `way

Further High Scores Coinciding with Incorrect Nucleus

	A Correct	B Incorrect	C Other	Actual Nucleus	Expected Nucleus Stressed
F 3	8	2	0	way	This
F 4	7	4	0	way	This
M 6	7	4	0	is	This

The following two examples are even more striking as there are only four and two high scores respectively coinciding with a correct nucleus placement. Those figures (i.e. 'four' and 'two') have to be assessed against the high percentage of correct identifications by the NEL for sentences 3 and 4 (62.5% and 79% respectively).

Sentence 3: But does she want to come

High Scores Coinciding with Correct Nucleus

	A	B	C	C as A
F 5	9	1	2	1
F 18	9	1	1	1
M 7	8	2	0	-
M 20	8	2	0	-

Further High Scores Coinciding with Incorrect Nucleus

	A	B	C	C as A	Actual Nucleus	Expected Nucleus Stressed
F 9	10	0	-	-	come	want
F 19	9	1	-	-	come	want
M 11	8	2	0	-	come	want
M 12	7	2	1	-	come	want
F 3	7	2	1	-	come	want
F 4	4	2	2	2	come	want
M 6	7	3	2	1	come	want
F 2	6	2	4	1	come	want
M 13	6	3	1	-	come	want
M 16	6	2	2	-	come	want

The above figures show that only four Algerian speakers obtained high scores for their correct placement of the nucleus. However, ten other Algerian speakers obtained high scores despite their incorrect nucleus placement. Yet in all ten cases one can clearly see that '<u>want</u>' was stressed each time.

<u>Sentence 4</u>: She said she <u>was</u>n't going to meet him

Here, 79% of the judges identified the correct meaning despite only two correct nuclei:

High Scores Coinciding with Correct Nucleus

	A	B	C	C as A
F 18	9	1	1	1
M 12	7	2	1	-

Further High Scores Coinciding with Incorrect Nucleus

	A	B	C	C as A	Actual Nucleus	Expected Nucleus Stressed
F 9	10	0	0	-	him	wasn't
F 5	9	1	2	1	meet	wasn't
F 19	9	1	0	-	him	—
M 20	8	2	0	-	meet	wasn't
M 11	8	2	0	-	him	wasn't
M 7	8	2	0	-	him	wasn't
F 4	7	4	2	2	him	wasn't
M 6	7	3	2	1	meet	wasn't
F 3	7	2	1	-	meet	wasn't
M 13	6	3	1	-	meet	wasn't
M 16	6	2	2	-	him	wasn't
F 2	6	2	4	1	meet	wasn't

Here again the same striking observation can be made. Except for F 19 all eleven speakers stressed 'wasn't'

The above and further similar examples seem to suggest that even if it is not made nuclear, as long as the word carrying the important information is stressed, then the correct meaning will probably be conveyed. (This importance of stress will be further discussed in sub section V. 10.).

V. 8. 'NEW' VERSUS 'GIVEN' INFORMATION

It is a now well established fact about R.P. that native speakers of English make use of 'new' versus 'given' information before locating their nucleus(i). In other words the nucleus tends to be located on the last word containing the new information. If this word happens to be the last

word of the intonation group (IG) then the nucleus will be located finally. If, on the other hand, the new information is carried out by the very first word of the group, then the 'native' nucleus will be shifted from its straightforward final position to an earlier one.

Similar nucleus shifting may be regarded as evidence that the speaker has recognized the cues of 'new' versus 'given' information and is actually making use of them.

Considering the cases where the majority of ASE did not shift their nuclei from their usual final position, the first conclusion one may draw is that the speakers failed to recognize the cues of 'new' versus 'given' information. One has to be very cautious, however, when making such statements as the following hypothesis will try to show.

Unit II ('Nucleus Placement') revealed that the tendency among ASE was to place the nucleus on the final word/syllable of the I.G. or sometimes perhaps on the penultimate word/syllable. Algerian speakers' failure to shift a final nucleus following the introduction of a new piece of information may not necessarily mean that they failed to recognize the 'new' versus 'given' cues. They may well have recognized those cues and yet not show them in the way native speakers do.

The examples selected to support the argument developed in the previous section (V. 7.) could also be used here. It is, in fact, possible that the Algerian informants did recognize the 'new' versus 'given' cues but showed it by stressing the word carrying the most important new information without actually making it nuclear. This was clearly illustrated in sentence 3 ("But does she <u>want</u> to come") and sentence 4 ("She said she <u>was</u>n't going to meet him") where '<u>want</u>' and '<u>was</u>n't' were not made nuclear but at least stressed.

So two possible questions may be raised here:

i) Is it that the ASE failed to pick up the cues of 'new' versus 'given' information as seems to suggest the incorrect placement of the nucleus(i)?

or

ii) Is it that they did pick up those cues but showed/expressesd it differently?

The second alternative, may be suggested by the mere stressing of a word which was expected to become the nucleus.

If case ii) is true, one may further question the fluency factor or even the informants' reading abilities. Assuming that the 'new' versus 'given' cues have been picked up, are the Algerian speakers fluent enough in English to convey the correct meaning by nucleus shifting? Do they all know that nucleus shifting is the means usually used by native speakers to convey different information? The same could be applied to reading. Those queries were suggested to the current author when analyzing the Algerian samples of Guided Speech. On a number of occasions, it was noticed that when the ASE were required to read aloud a number of sentences designed to elicit a particular variable (e.g. nucleus shifting) they failed to achieve their task correctly. However, things were different when the choice of words, expressions or topics was theirs. As more of their feelings interacted with their speech they became quite capable of shifting a nucleus in the same way and situation native speakers do. Excerpts from speakers F 9 and F 5's Guided speech could provide some nice illustrations. In excerpt 1, the speaker is stating which lectures she likes most:

<u>Excerpt 1</u> (F 9)

I 'like [›er] | 'more ˋmost | of the ˎsubjects ‖
specia´lly | 'written ex´pression | ,grammar |
'listening compre´hension | and ˋreading compre∘hension ‖

The final intonation group (IG) shows a shifted nucleus. 'Comprehension' would have been the nucleus had it not been

for the new piece of information (i.e. 'reading') introduced in this final I.G.. The speaker deliberately chose to highlight this new information. In addition, 'comprehension' is part of the 'given' information as it already occurred in the preceding I.G.. It was even made nuclear.

Excerpt 2 (F 5)

we `learn | `some | e`xamples | 'on `cardinals | ´vowels | [and er on er] `English ₒvowels ‖

Similarly, here, the nucleus in the last I.G. has been shifted from its final position (i.e. 'vowels') to 'English' the last new information.

So nucleus shifting on the basis of 'new' versus 'given' information could occur in freer speech among Algerian speakers.

V. 9. UNUSUAL STRESS

The data revealed another tendency among Algerian speakers which is to stress pronouns in final position. Below are a number of illustrative examples (see Appendix C3, Unit III, sentences 1, 2, 4, 9 and 12 respectively) :

19 ASE considered	Stressed Only	Nuclear	Total
a) He liked it	9	4	13
b) She read it	11	7	18
c) We've seen it before, haven't we	12	7	19
d) You haven't repaired the car then have you	14	3	17
e) Yes but anyway we've made it haven't we	15	4	19
TOTAL	61	25	86

Table 26 :

Unusual Stressing of Final Pronouns

The above table speaks for itself. Out of 95 utterances final pronouns were either stressed or made nuclear 86 times. In the present case nearly all Algerians consistently stressed final pronouns or made them nuclear (less often nuclear than stressed though).

It is quite uncommon in English to stress final pronouns, let alone to make them nuclear. The immediate result of such unusual stress habit is to confuse the native listeners. This is betrayed by the overall scores obtained by the NEL for all ASE:

	A	B	Total NEL
Sentence 1	60	49	110
Sentence 2	75	41	120
Sentence 3	98	91	190
Sentence 4	100	78	180
Sentence 5	108	58	170

Table 27

Correct vs. Incorrect Identification by the Judges

This table shows how native opinions diverge as a result of inappropriate stress. This is particularly striking in the case of the third sentence ("We've seen it before, haven't we") where all 19 ASE either stressed the final pronoun or made it nuclear. The NEL are not quite sure about what to make of those utterances. This is expressed by the absence of a clear-cut majority in most of those five cases.

Considering the sentence "He liked it" one can see from Table 1b (Appendix C3, Unit III, sentence 1), that '*it*' has been stressed 13 times (out of 19). The effect on the NEL is striking. 49 judges interpreted the utterance as a question despite the fall used by all speakers. Out of this number,

39 coincided with a stressed or nuclear '*it*'.

This seems to suggest that when final pronouns are unusually stressed NEL cannot but interpret the utterance as one ending with a rise. This statement may be further generalized. Native speakers are so sensitive to stress/nucleus placement that any unusual stress disturbs and confuses them. Sometimes it may also cause serious communication breakdown.

V. 10. IMPORTANCE OF STRESS

The Perception Test shed some light on a number of cases where the Algerian speakers' realization of a given utterance puzzled the native judges. This took place quite frequently and it was particularly striking when the situation involved a wrong stress. Wrong placement of stress by the ASE sometimes completely distracted the judges' attention from their original task. And the only way the NEL could draw attention to such hindrance was by underlining the word in question or writing a comment under the C-category, e.g. in Unit III, sentence 15: "Shall we go to the theatre or to the movies" the sentence or part of it was underlined 34 times. Some judges even added the comment "Difficult to understand". The word which caused all this trouble was 'theatre' and it was underlined sixteen times. This word has only two syllables in R.P. with the first syllable stressed /ˈθɪətə /. A common Algerian mispronunciation of this lexical item was a word consisting of three syllables with the second one stressed as / θiˈeɪtə /. Note that although / θɪˈetə/ is now common in R.P., the NEL perhaps reacted to the unusual diphthong which is not common.

This case was not unique (see Unit I sentence 1 "I like her name" discussed in sub section V. 12.). This was similarly observed in the straightforward statement "He liked it" (Appendice C3 and D3, Unit III, Sentence 1). Unusual stress on the final pronoun "it" resulted in the utterance to

be understood as a question by a significant number of NEL although no rise of any form took place (45.5 % of incorrect identification against 54.5 % correct). This is another illustration of the importance of stress in English and the problem that it may cause to the Algerian learner.

It was seen how stress could either help communication or simply break it. Stress seemed to have a positive influence when the correct meaning was understood by the NEL even though the most important word was not made nuclear but simply stressed. Stress, on the other hand, could cause serious communication breakdown when used inappropriately, i.e. when stressing the wrong syllable or word.

So it is not so much the lack of stress which is important and causes serious problems to the Algerian learner, but which syllable *is* actually stressed. Stressing an unusual word (e.g. final pronouns) or syllable may simply confuse the native listener and be responsible for serious communication breakdown. This point was well exemplified in Kenworthy (1987: 18; see also Bansal, 1969). In English then stress is indeed an essential part of a word's identity and ought to be regarded as a constant 'meaning-conveying' parameter. Therefore, inappropriate use of stress may well convey something ... but something which does not make sense.

V. 11. NATIVE CONTROLS' PERFORMANCE

In the following sections light is shed on some of the methodological choices made throughout the experiments. An attempt is made to assess them and also to try and understand the problems which some of those choices provoked.

Judging from the data, it is also possible to make the following remarks regarding the controls' performance.

The selection of the controls for each unit in the perception tests was achieved on a purely random basis.

But it should be noted that the controls' performance varied slightly from one speaker to another. Furthermore,

native speakers were not immune to mistakes. And while some performed quite well in a number of units, they did not do so well in others. Put differently, native speakers did not produce accurately (at 100%) the various intonation patterns that were expected of them. A good illustration could be control C's realization of the straightforward statement "He liked it" with a low rise (He ,liked it) when a fall was expected. It could also be control D's use of falls in polite requests when rises were expected. Those two cases were not unique. And deviations from the norm were observed with all the controls at one time or other.

This shows how very cautious one must be when tackling the problem of intonation which is far from being a straightforward subject. The controls' performance showed quite clearly that there is no such thing as one-specific-intonation-for-one-specific-situation. So many factors seem to interfere with the speaker's decision to use such intonation rather than such other. Factors like personality, mood, time, relationship between interlocutors, attitude vis-à-vis the subject matter, or even any other element which may contribute to the making of a contextual situation should certainly not be disregarded. Further investigation into those particular parameters or the interplay of each of them might well reveal their deeper role in the selection of intonation. Considering the scope and time limits of the present study, it was unfortunately not possible to investigate further the role of those parameters.

Although some deviation from the norm took place, the current researcher decided not to select a control on the basis of his/her performance in one particular unit. The rationale was to highlight even native speakers' failure to use the nuclear tones that were expected in given situations.

Perhaps it should be mentioned at this point that those expectations were essentially based on the current writer's theoretical background. This was mainly influenced by the

orientation adopted in the Department of Phonetics and Linguistics at University College London, i.e. O'Connor and Arnold's (1973) approach.

However, although O'Connor and Arnold propose a number of situations where a particular nuclear tone is used instead of another, they do not dismiss the fact that any nuclear tone could actually be used with any sentence type. Their view then, as well as the various points they widely examplify, ought to be considered as a 'floor' rather than an absolute 'truth'. Furthermore, it is the present writer's belief that O'Connor and Arnold (1973) is an attempt to present a picture of what the majority of native speakers *tend* to do. This does not mean that native speakers are consistent in their various usage of intonation (factors like personality, mood etc., may be decisive). But at least, one may say that there is a general tendency among them to use the same intonation in the same (specific) situation.

On the other hand, another not less interesting observation was made. Even though a control "wrongly" used a given nuclear tone — and hence conveyed more meaning B than A — usually the NEL identified meaning B as the one intended by the control. B was perhaps the incorrect meaning as far as the present test was concerned. But it was still the correct meaning from the point of view of the control's performance.

So this means that the NEL interpreted the controls' utterances on the basis of their knowledge — whether conscious or not — about conventional usage of intonation. Furthermore, it also implies that this knowledge of conventions is shared by all native speakers. Therefore, any message will be decoded on this common ground. This could even reinforce the above claim. Despite some variations in native speakers' use of intonation, interpretation of intonation is achieved on a common basis. This explains why when interpreting the controls' utterances a divided

opinion among the judges (shown by a score like [5A 5B]) never arose. Numerous NEL even said they found it easier to identify the glosses when the speaker was a native.

V. 12. C-CATEGORY

Far from being a 'dustbin' as suggested by Cruz-Ferreira (1983) (cf. sub section III.3.1.2.3.3. above), the C-category in the present experiment proved to be the most important, interesting and stimulating category. For, any selection of meaning A or B by the NEL meant in a straightforward way that the ASE conveyed the correct or incorrect meaning with no further implications.

Even though it necessitated a considerable amount of time-consuming work of assessment and/or recategorization, the C-category proved to be full of insight. First, it did not gather an unlimited number of irrelevant answers. The number of the C-selection by the NEL was insignificant as compared to the A- and B- selections (see Table 28).

	ASE in %				Controls in %			
	A	B	C1*	C2*	A	B	C1*	C2*
Unit I	49.5	46.25	4.5	4.25	89.5	9.5	1.25	1
Unit II	59.5	37	6	3.5	88	10.5	3	1.5
Unit III	55.5	42.5	3.5	2	77.5	21.5	1.5	1
Unit IV	71.5	23	8	5.5	73	22	9.5	5

*C1: before reclassification as A or B
C2: after reclassification as A or B

Table 28 :
Comparison of A, B, & C-Selections by the NEL

The number of C-selection with irrelevant comment or suggestion or with none at all was even more negligible. Second, it enabled one to draw attention to a particular aspect of the utterances which, although probably important, might have gone unnoticed, e.g.:

Unit I Sentence 1: I ↘like her ˅name

A) I like her name ... but not her manners maybe (CORRECT)

B) She has a lovely name (INCORRECT)

C) Other ...

For, this utterance as spoken by speaker M 11 seven NEL identified the correct meaning (A). Reliance on this, and this only, could have led to the straightforward conclusion that M 11 successfully conveyed meaning A with no apparent difficulty.

However, M 11's realization of the sentence made three NEL select the C-category with the following comments:

NEL 3: "but not ___'s (someone else's) name"

NEL 4: "her name as opposed to someone else's name"

NEL 5: "I like her name better than other people's name"

The above comments drew attention to the same fact. All three NEL seemed to be responding to a stress/nucleus on 'her'. And it is a fact that M 11 did actually stress 'her'. Although tone choice was what Unit I was about, this important matter of stress has proved a distraction to three listeners. This shows that even though most of the native judges understood the correct meaning, it was not without trouble. Three NEL were able to draw attention to the aspect

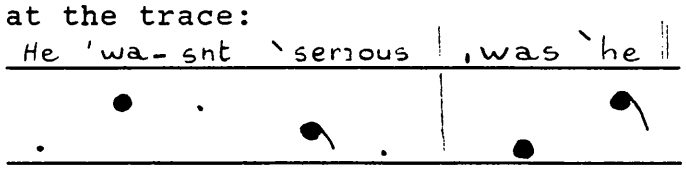
of the utterance which caused the confusion thanks to the C-category. Note that among the seven other judges three underlined '<u>her</u>'.

Third, when the weaknesses of Unit IV are discussed in section V. 13. below, it will be shown how useful the C-category was in detecting potential problems.

And finally, the C-category helped in shedding light on which aspect of the Algerian utterance was responsible for a divided opinion among the NEL (cf. score 5A against 5B), e.g. in Unit I Sentence 2: "***He wasn't serious, was he***" (see Appendix C1) M13 obtained the score [5 : 5]. One NEL made the following comment under C) :

NEL 2: "He wasn't serious, but maybe he was"

And two others underlined '***<u>was he</u>***' in the utterance. A further look at the trace:



enabled to make the following remarks. First, a fall in the first part of the utterance suggests a straightforward statement of the fact that "He wasn't serious". Then, one can note that a high fall has been used in the tag. However, the peculiarity lies in the position of the nucleus. For, it is not '***was***' which is made nuclear but '***he***'. The first syllable of the tag is pitched low. And the high fall on '***he***' automatically starts higher than '***was***'. The fall in the tag on its own might have expressed a search-for-confirmation. However, it appears that the NEL could only interpret this low to high relationship (between '***was***' and '***he***') as a rise. And a rise suggests that the speaker is not sure about the fact stated. This is probably what NEL 2's comment implies. He could have simply selected A). Yet, the

C-category was preferred. Besides, it did truly reveal the problem. So the C-category proved to be more helpful than embarrassing. It even contributed to redirect attention to particular aspects of the utterance which might otherwise have gone unnoticed. It was not so important to the present author to find out how much of the utterances were correctly understood by the NEL. Rather, it was when some utterances were not correctly understood, that it was interesting to try and discover why this was so. In this respect, the role of the C-category was crucial.

V. 13. WEAKNESSES OF UNIT IV ('ORDER' VS. 'POLITE REQUEST')

A number of judges appeared to already have some prejudice regarding a few utterances — even prior to listening to them. Their final decisions often showed that they were relying on syntax to determine whether a spoken utterance was an order or a polite request, e.g.

(1)	**Post this letter for me**	(imperative only)
(2)	**Could you help me please**	(question form + 'please') 'please')
(3)	**Stop shouting you two**	(imperative)

In the case of sentence (1) very often (A) (i.e. 'order') was ticked by the native judges while the utterance was meant to be a polite request. Similarly, (B) (i.e.'polite request') was frequently selected as an answer to sentence (2) when the utterance, as spoken by the speaker, seemed rather curt and insistent and therefore, sounded more like a command than a polite request. The experimenter purposely presented a number of ambiguous sentences. These were ambiguous in the sense that in purely grammatical terms they could either be commands or polite requests, as the imperative was used in the written form of the material presented to the judges (compare (1) and (3) 'polite request' and 'order'

respectively). It was originally thought that this would force the judges to listen carefully to the speaker(s) — and unconsciously to the intonation adopted in each case — before deciding what the utterance expressed. It, unfortunately, turned out that possibly due to a clumsy presentation of the test material or to a probably vague choice of terms (cf. 'polite request' when the speaker was 'persuading' instead) a significant number of listeners allowed themselves to be influenced by syntax which they relied on appropriately. A possible solution to this problem could have been not to offer a written version of the material to the judges for this particular unit. Instead, one could have asked them to make a decision on purely perceptual grounds. The task required from them should perhaps have been:

a/ "listen and tell" rather than

b/ "read - listen and then tell".

It would have been best, maybe, to discard the "read" section in b/ and in this particular unit. For, so many uncontrollable variables can — and did — interfere between b/'s "read" and "tell".

If one wanted to evaluate further the methodology adopted in the current experimental design, the following remark could also be made. In retrospect, it appears that it was not ideal to lay such emphasis on syntactic structures as it was done here in setting up the test(s). For, no matter how well formulated the instructions are, no matter how well presented the test material is, asking informants to read aloud sentences leads to the following difficulty. It is quite unusual to read a number of sentences or any written text without trying to understand. The need to understand presupposes the "reader's" ability to interpret any clues contained in the written message which might help him guess what the meaning is. And clearly, the way a sentence is

constructed (e.g. word order, indicative/interrogative mood etc.) may be crucial. The reader will use any clues available. This explains why, even before listening to a speaker's utterance, the NEL had already an idea about what the sentence was. And, although the clues available in the written text were not directly relevant to the NEL, they still affected their decision.

V. 14. SUMMARY

So if one had to explicitly answer the questions formulated in Chapter one, the following remarks could be made. Considering the high percentage of success obtained by the ASE in the first four units (49.5%, 59.5%, 55.5%, and 71.5% respectively; see Chapter IV), it would seem that the Algerian informants were quite successful in 'manipulating' intonation so as to convey specific meanings. However, this statement needs further clarification as it is far from providing an accurate picture of Algerian speakers' performance. This high figure hides the important fact that, on several occasions, the ASE failed to use the same intonational means as natives do. This leads one to believe that allowances were indeed made by the NEL even for mistakes at the level of intonation. This was widely illustrated by numerous mistakes at each of Halliday's three dimensional levels (i.e.'tonality', 'tonicity' and 'tone') as well as at several others.

It was noticed that probably due to a very slow tempo, and lack of fluency, ASE tend to divide their speech into far more intonation groups than native speakers normally do. The number of IG and word per IG was calculated for both groups. ASE were seen to have an average of 62.45 IG in Guided Speech (2.5 mns) and 67.6 IG in Free Speech (2 mns) as compared to the controls who had 62 and 85 IG respectively. As to the number of words per IG (W/IG), it was in the range of 2.3 W/IG for the Algerians and 4 W/IG for the controls.

Despite Algerians' high scores (59.5%) in Unit II ('Nucleus Placement') a closer look at their actual performance enabled one to make a number of observations.

On numerous occasions, although cases of wrong placement/shifting of an utterance's nucleus were recorded, the NEL still managed to understand the correct meaning. It was shown how the judges were greatly helped by the speaker's stressing the key word without actually making it nuclear. Further instances were observed of Algerian speakers' failure to shift the nucleus following the introduction of new information. This raised some questions about the informants' ability to recognize the cues of 'new' versus 'given' information, and if they did recognize those cues were they able to expressed them and how ?

On the other hand, it was noticed that appropriate use of nuclear tones sometimes coincided with a high number of incorrect meaning understood by the NEL. And conversely, inappropriate nuclear tones adopted by the ASE nevertheless coincided with a high number of correct identifications.

It soon became clear that the former case resulted from inappropriate placement of stress or nucleus on syllables which are not usually highlighted in English.

No definite answers could be found as to the latter case. It is very probable that allowances were made by the NEL who, despite Algerians' realizational errors, managed to get the meaning right.

The existence of fall-level and rise-fall-level tones to suggest open-endedness was already mentioned (sub section V.5.1. above). And in connection with this discussion a hint was given about the possibility of regarding French rather than Algerian Arabic as the source of interference with the Algerian English intonation.

Similarly, the unusual role played by unstressed syllables was highlighted. Their lengthening faculty when in final position has been reported by various authorities (see

McNaught, 1978). However, quite peculiar in the case of the Algerian learners was their inconsistent lengthening of unstressed syllables/vowels regardless of their position in the word/utterance.

It was seen how stress and pitch were quite capable of working as independent parameters. A striking illustration of this was the existence of rising versus falling 'gestures'. Those 'gestures' could occur both on stressed and unstressed syllables alike. But more importantly, they could take place quite independently of any major nucleus or accented syllable. The total absence of weak forms, and lengthening of unstressed syllables resulted in giving the Algerian speech a characteristically staccato syllable-timed rhythm.

So those are the major findings. Stemming from them, a number of implications may be drawn. Besides, further recommendations may be made to improve Algerian intonational proficiency in English. Those two aspects will both be the subject of the next chapter. In addition some suggestions will be made for further research.

Chapter VI

Conclusion

At the outset of this work a hypothesis was formulated which stimulated the current investigation. This hypothesis was mainly based on a number of difficulties met by the present author when faced for the first time with a native English speaking community (see Chapter One: Introductory). It was believed that the right choice of nuclear tone(s) in English was crucial if one aimed at successfully conveying specific meanings or attitudes.

The results of the present experiments, however, failed to support the above hypothesis. One could perhaps speculate further on the possible reasons.

The sample of Algerian informants gathered for the purpose of the current study was a homogeneous group of beginners. And as beginners, they were still at a stage of attempting to find themselves amidst all the difficulties that they met. Such difficulties involved essentially basic usage and aspects of the English language (both in the written and spoken medium). Hence, their main concern was to try and acquire and/or improve their four basic skills. Those skills would, probably, at a later stage, help them improve their handling of English. But it was clear that at the time the recordings took place their handling of English was still wanting and in need of more improvements. One may recall ASE's very slow tempo (see chapters IV & V), as well as their tendency to divide their utterances into far more intonation groups than natives. The number of words per intonation group was also seen to be in the range of one or two (cf. chapter

IV). The results might have been different, however, had a group of intermediate or even advanced learners been considered.

It is probable that the difficulties met with regards to appropriate uses of nuclear tones represented, in fact, a concern particular to learners having reached an advanced level of proficiency in English. For, after having acquired the basic principles of English usage, improving further one's handling of intonation can be a challenge to the advanced learner. This may be interpreted as a desire to acquire a more sophisticated standard of proficiency in the language. The presence versus absence of similar motivation may either significantly improve or impede performance.

So no matter what the learner's motivations are — whether to acquire basic skills or achieve a higher standard of sophistication in the language — the following points ought to be remembered.

The results of this study clearly showed that far more important than 'right' nuclear tone(s) was the <u>right</u> allocation of stress both within the word and within the utterance.

Furthermore, it was shown that despite numerous mistakes at all three-dimensional levels (i.e. "tonality", "tonicity" and "tones") most Algerian utterances were correctly understood by the native judges. This has led the current investigator to believe that allowances were made by the NEL for mistakes made at all three levels.

On the other hand, it was also highlighted that wrong placement of stress could lead to serious communication breakdown. Stress is therefore an essential part of a word's identity and an utterance's meaning. As rightly noted by Kenworthy (1987: 18) native speakers tend to rely heavily on stress(es) to decode any message. This is quite understandable if one recalls that usually in English only 'content' words are stressed as they carry a heavier weight

of meaning. It is not the case of 'grammatical' or 'function' words which are, therefore, reduced and unstressed. This may also contribute to explaining why any unusual stress in the Algerian utterance(s) confused and sometimes even completely distracted the judges' attention from their original task.

If, say, a function word is unusually stressed by an Algerian speaker, the NEL will assume that the speaker deliberately meant to stress it in order to convey a specific meaning. The quotation selected as an opening to the present work (Begley, 1989) is quite relevant here:

> "The mind is so determined to find meaning, it makes dreams out of random signals"

Despite being confused, the NEL will try to decode, to interpret the message at all cost. Because they instinctively <u>need</u> to understand even if this means imposing a meaning which is not there.

This, in fact, characterizes quite well the nature of Mankind. The need to understand is so deeply buried in one's mind that it almost becomes an intrinsic part of it. Isn't it true that the need to understand phenomena, to be able to explain them is at the core of any research ? Isn't it what enabled Mankind to gather an immeasurable amount of knowledge and information about the world ? Isn't it the greatest stimulus of all ?

Chapter VII

Practical Implications & Further Suggestions

VII. 1. INTRODUCTION

It was noticed in the previous chapters that ASE faced a number of difficulties when dealing with intonation. Most of their errors were seen to result essentially from wrong rhythm. Stress was also noted to be of paramount importance, but it was not the only cause of the problem. The following errors were recorded at various levels:

1) failure to use weak forms,
2) lengthening of unstressed syllables,
3) wrong allocation of stress,
4) wrong division of utterances into meaningful intonation groups,
5) wrong placement of the nucleus,
6) failure to use the cues of 'new' versus 'given' information to shift the nucleus,
7) wrong choice of nuclear tones.

It seems crucial to the present author that all teachers of EFL in Algeria ought to concentrate on the above errors. For, most of them were seen to be essentially responsible for serious communication breakdown.

The importance of stress, rhythm and intonation in English has often been highlighted in the literature (Gimson, 1980; Roach, 1986; see also Razook, 1983; Kenworthy, 1987). And it now becomes clear that there is a universal awareness that features of connected speech are indeed crucial if one aims

to acquire an acceptable mastery of the English language. Evidence has been provided to show how failure to master part or all of those features was directly responsible for serious communication failure. Furthermore, and as rightly pointed out by Taylor (1989: 232) it is quite difficult to understand why intonation, which is first acquired by a (native) child, remains, however, the last aspect of the language taught to the foreign learner.

The situation is particularly critical in Algeria. On the basis of Algerian Secondary School curricula and textbooks, it looks as though features of connected discourse are practically non-existent. Little — if nothing at all — has been done to incorporate those aspects of the English language into a teaching programme.

It is the current author's belief that considering the major problems encountered by the ASE, Algerian performance would be greatly improved by an adequate teaching programme incorporating aspects of stress, rhythm and intonation at an early stage.

However, it should be noted that giving special lessons entirely devoted to such features would be useless. Theoretical discussion should be avoided at all cost more particularly so at early stages (e.g. Secondary Schools). Instead the teacher should try and "integrate" those aspects into his/her teaching programme.

At this point, it should perhaps be worthwhile mentioning Kenworthy (1987; see also Mortimer, 1985) which the present writer regards as a good reference and as a good starting point for more innovative, stimulating and adequate teaching methods. Kenworthy argues in favour of an "integrated teaching of pronunciation" (1987: 113, 122). She explains how the teacher's role is of paramount importance and how "consistency and planning" are also necessary. She suggests various ways to make the learner become aware of variations

of stress, or of the way words are pronounced in connected speech as opposed to their citation forms.

Following are some suggestions for application in the language classroom. The major areas where improvement should be made are highlighted. Furthermore, the EFL teacher is invited to concentrate on those aspects of the English language if s/he wants the Algerian learners to significantly improve their handling of English and help them acquire a higher standard of proficiency in English.

VII. 2. PRACTICAL APPLICATIONS TO THE LANGUAGE CLASSROOM

VII. 2. 1. WORD STRESS PATTERNS

When the teacher is introducing new words, the emphasis should also be placed on the correct location of stress within polysyllabic words. The stress pattern of a word should be regarded as part of its identity and as important to accurately convey meaning (Kenworthy, 1987: 18, 115). Awareness may be achieved by asking learners to individually repeat the new word and inviting the rest of the class to correct any mistake. This very simple technique has been widely and successfully used in the past to draw attention to various aspects of the language (e.g. grammar, vocabulary, etc.) In addition, the stressed syllable may be compared to neighbouring unstressed syllables.

The EFL teacher should also pay particular attention to his/her repetition(s) of any given word. For, s/he must always bear in mind that each time s/he "speaks he or she is presenting a spoken model" (Kenworthy, 1987: 113). One has too often heard learners complaining "this is not the way my teacher pronounced it". This problem, however, is inevitable when the majority of EFL teachers are non-native speakers themselves. A possible way to lighten the effects of such hindrance would be for the EFL teacher to constantly use a

good pronouncing dictionary. Whenever in the slightest doubt, s/he should never hesitate to check her/his pronunciation. Daniel Jones' English Pronouncing Dictionary (now revised by S.M. Ramsaran) is a well established work of reference in the field. It is mainly concerned with (British) R.P. English. And it offers the advantage of using IPA symbols.

VII. 2. 2. CONTENT VERSUS FUNCTION WORDS

As the learners' proficiency increases, their attention should be drawn to the fact that some words in English are less important to meaning than others. Without actually calling upon a complex terminology (i.e. 'content' vs. 'function' words) the EFL teacher should be able to make them realize the importance of ,say, nouns or verbs as opposed to prepositions or articles.

This can be done very simply by gradually suppressing the grammatical words of an utterance and asking the learners if they can still understand what is meant. When no more words can be omitted without affecting the message, learners may be led to understand that as long as the remaining words are 'louder' than the others the accurate meaning will be conveyed. It is particularly important to let the learners themselves deduce the 'rules' e.g. nouns and verbs are more important to meaning than articles and pronouns. The learners should then be invited to pay particular attention to that category of words. This could perhaps help to counteract Algerian tendency to stress pronouns even when in utterance final position (see subsection V. 9. above).

VII. 2. 3. WEAK FORMS AND LINKAGE

In the same way pupils are taught to use 'contracted' forms of various phrases, e.g. to say "isn't" instead of "is

not", "I'm" instead of "I am", or even "won't" instead of "will not", the weak forms can be introduced to them.

After having drawn attention to the minor role played by the category of 'function' words the EFL teacher may gradually introduce the most commonly used weak forms. Because they are not so important to meaning these words do not need to be pronounced 'accurately' (i.e. in their citation form). Instead, they may be reduced.

The teacher should avoid presenting an exhaustive list of weak forms all in one go. It might put off the learners and confuse more than help them. It might be easier to deal with separate classes of words, e.g. articles, then prepositions, then pronouns, etc.. A limited number of weak forms should be introduced each time. They may even be included in the passage/text studied. The pupils' success in recognizing and using the weak forms will dictate the number and speed at which those "reduced forms" will be introduced.

Similarly, learners should be encouraged to link words together (Mortimer, 1985: 45-60). This could help to counteract the tendency to insert glottal stops before vowels occurring word initially (see subsection V. 4. above). This is quite feasible during a session devoted to the reading aloud of a short passage. It may even be pointed out to them how more rapid their speech delivery is when they use weak forms and link words together, e.g.

It is his keys and he wants them back

/ɪt ɪz hɪz kiːz ænd hiː wɒnts ðem bæk/

as opposed to

/ ɪts hɪz 'kiːz n hɪ'wɒnts ðm'bæk/

Similarly

He has got to take it from John for the meeting

/ hiː hæz gɒt tuː teɪk ɪt frɒm dʒɒn fɔː ðə miːtɪŋ /

as opposed to

/ hɪz 'gɒt tə°teɪk ɪt frəm°dʒɒn fə ðə'miːtɪŋ /

VII. 2. 4. 'TONICITY'/'TONALITY'/'TONES'

If regular gradual attention is devoted to the above features, soon the learners will realize the importance of stressing content words and leaving grammatical words unstressed.

Their attention should also be drawn to the fact that in any phrase there is always one word which is more important than the others. A simple statement from the text being studied may be used for that purpose, e.g. 'John broke my glasses'. A series of questions may be asked each drawing attention to one particular word (e.g. 'What did John break?' 'Who broke my glasses?' etc). The aim should be to make the learners realize that highlighting (i.e. stressing) one word instead of another may affect meaning. They could thus become aware of the importance of correct nucleus placement/shifting for good, productive and successful communication. Furthermore, nucleus shifting exercises could help to counteract the Algerian tendency to have an utterance final nucleus (cf. sub section V. 7.).

It was seen that the Algerian learners divided their speech into far more intonation groups than native speakers normally do (see sub section V. 3.). The tendency was to grant a separate intonation group to nearly every one or two words. Although the role of fluency may be quite significant, the EFL teacher should also devote some time to reading sessions highlighting how the learners can divide long utterances into (perhaps short but) meaningful groups of words. Similarly, the part played by variations of pitch in the speaker's intent or attitude should also be highlighted and widely examplified.

VII. 2. 5. ENGLISH TEACHER TRAINEES

As regards to the future teachers of EFL, an equally adequate teaching programme should be designed. The emphasis

should be particularly placed on the role of features of connected speech in interactive communication. It is strongly suggested that theoretical discussion should be supported by extensive practical sessions. Experience has shown that the teaching of theories with absolutely no practical session (to put those 'theories' into practice) is useless. For, the aim is not merely to tell the learners what native speakers do. Rather, it is to make them understand that if they 'do it' they will have more chance to better understand and be better understood by native speakers. The following pilot experiment (also reported in Mohamed Benrabah, 1989) might be used as an illustration.

When redesigning a language laboratory programme for first year English 'Licence' (i.e. B.A.) students, the current author and her husband introduced tape recorded material of native speech (RP). At one stage, the students were presented with a number of sentences spoken at normal speed and involving the use of weak forms. The students were requested to write down the sentences (or at least what they had understood). Needless to say that although they were given sufficient time to perform their task, very few had understood the sentences and were capable of reproducing them. Besides, a frequent reaction among the students was "Why does he speak like that?" as if for some reason the native speaker was speaking nonsense.

This reaction, added to the major findings of the current study show how very important those features of connected speech are in interactive communication. Teacher trainees should be given as much practice as possible, first to develop their perceptive abilities, then their productive skills. Extensive and well planned use of the language laboratory is also important. This has to be understood in the light of the following facts.

There is no doubt that exposure to the target language may significantly improve Algerians' performance. Exposure can

either be achieved by a stay in the host (English speaking) country, or with constant, regular interaction with native English speakers. The former alternative is quite remote as not all Algerian teacher trainees have the possibility to visit an English speaking country. The latter is becoming rarer due to the disappearance of native English teachers in Algerian universities. Most of them have been replaced by Algerians. Therefore, the role and importance of the language laboratory in this context is easily understandable. It offers the only possibility for the Algerian teacher trainees to listen to as much native speech as is practically possible. And they very much need exposure to fluent natural connected discourse. The students can also assess their own pronounciation against natives'. In this respect, the language laboratory presents the advantage of giving the students a chance to record their own voice, recognize the mistakes and try to correct them by several repetitions. The language laboratory programmes should therefore be designed very carefully. They should be as innovative and creative as possible. And the emphasis ought to be particularly placed on the features of connected speech as it is now clear that their role in interactive communication is of paramount importance.

VII. 3. SUGGESTIONS FOR FURTHER RESEARCH

It is hoped that the present work succeeded in highlighting some of the major aspects of Algerian English intonation, as well as the main difficulties learners are facing in this complex area.

A number of features discovered would greatly benefit from further investigations. This is the case of the (rise-) fall-level tones, the rising versus falling 'gestures' as well as the lengthening of unstressed syllables/vowels.

Instrumental measurements could also prove very useful especially if used in conjunction with an auditory technique.

Similarly, more benefit could be gained from information about Algerian rhythm. Experiments could be devoted to the study of the rhythm of Algerian Arabic (AA), Algerian English (AE) or even Algerian French (AF). Is the rhythm of AA stress-timed or syllable-timed? Standard Parisian French has traditionally been described as a syllable-timed language. However, recent publications (Wenk and Wioland, 1982; see also Den Os, 1983, and Scott et al., 1985) suggest that this view is still debated. But in either case, how could AF be categorized and described? What effect — if any — do AA and AF respective intonation have on ASE?

Furthermore, considering the problems encountered in Perception Test IV (see subsection V.13.) one could try and improve the unit. A similar (or even different) test might be conducted in the hope of gathering more information about Algerian speakers' realization of 'polite requests' and 'commands' in English.

It might also be interesting to conduct experiments similar to the current ones, but this time involving intermediate or even advanced learners possibly teachers of English.

One could reverse the situation and use Algerians as listeners and native English informants as speakers (cf. Cruz-Ferreira, 1983; 1989). Another possibility could be to use Algerians both as speakers and listeners. This might provide valuable information about Algerian comprehension of intonation.

Similar experiments might be conducted with the same groups of informants both prior to and after introducing a particular teaching programme (cf. Adams, 1979). And if improvement is noticed in the subjects' performance, one could try and see which type of errors improved more significantly than others or in which order.

So there seems to be an unlimited number of questions that could be the subject of further research. It has already been noted (see chapter II) that there has been a very limited number of studies concentrating on phonetic/phonological aspects of Algerian Arabic, Algerian French or even Algerian English. It is perhaps time to realize the importance of this gap and encourage further research. Only this could help provide a better insight into the real problems Algerians are facing when learning a new language, and English in particular. Besides, this could also have a universal significance as it could contribute to a better understanding of foreign language learning, and hence help in foreign language teaching.

APPENDIX A

QUESTIONNAIRE SUBMITTED TO THE INFORMANTS

PART A : ALGERIAN SPEAKERS OF ENGLISH

1. Name ..... Sex M ☐ F ☐

2. Place of birth .....

. How long did you stay there?.....

3. Where are you living now?.....(city, wilaya)

.....(country)

4. Have you always been living in that country?.....

(yes or no)

5. If no, where have you been living before?

..... how long .....

..... " " .....

..... " " .....

6. Nationality .....

7. Is one of your parent a native speaker of English? .....

(yes or no)

8. What is your first language (mother tongue)? .....

9. What other language(s) do you speak and how much ?

	.....	.....	.....
fluently	☐	☐	☐
almost fluently	☐	☐	☐
slightly	☐	☐	☐
average	☐	☐	☐

10. What language do you speak at home and how often ?

	.....	.....	.....
always	☐	☐	☐
sometimes	☐	☐	☐
seldom	☐	☐	☐

11. What language(s) do you speak with friends and how often ?

	.....	.....	.....
always	☐	☐	☐
almost always	☐	☐	☐
sometimes	☐	☐	☐
seldom	☐	☐	☐

12. Have you ever been to an English speaking country?
.....(yes or no)

. If yes, where ..... for how long .....
..... " " .....

. on which occasion? holiday .....
studies .....
else .....(give details)

13. Do you think it has in some way influenced your English?.....(yes or no)

. How much completely ☐

slightly ☐

not at all ☐

14. How long have you been studying English
as a subject .....
as a means of instruction .....

. Have you ever been taught by a native English teacher in your English classes? .....
(yes or no)

. If yes, where?

Cours Moyen ☐ for how long .....

High School ☐ " " .....

University ☐ " " .....

elsewhere ☐ " " .....

(give details)

15. Have you had any special training in Phonetics or spoken English? ..... (yes or no)

. If yes give details .....

16. Have you had any special training in English Intonation ? ..... (yes or no)

. If yes, give details .....

17. Can you think of any factor which may have influenced your

English pronunciation .....

English intonation .....

18. Would you like your name to be mentioned in case the results of this research are published ? ..... (yes or no)

Oran, date .....

Sign please .....

PART B : NATIVE ENGLISH LISTENERS

1. Name ..... Sex M ☐ F ☐

2. Place of birth .....

3. How long did you stay there ?.....

4. Have you always lived in the UK? .....

If no, please say where you have been living and for how long ....

....

....

....

6. Where are you living now? .....

7. How long have you been living there? .....

8. What is your occupation ? .....

9. Have you had any particular training in Phonetics or Spoken English ? .....

If yes, please give details .....

.....

10. Have you had any special training in the Intonation of English ?

If yes, please give details .....

.....

11. Have you ever spoken to foreigners (foreign speakers of English) ? .....

If yes, please state how long/ how often and on wh ich occasion .....

.....

12. Have you ever spoken to Algerians (Algerian speakers of English) ? .....

If yes, please state how long/ how often and on wh ich occasion .....

.....

Appendix B : ASE's Background

1. Age

	Male	Female
aged between	19 - 21	17 - 20

2. Place of birth

	Male	Female	Total
Western Algeria	9	9	18
Morocco	1	1	2

3. All twenty ASE lived in Oran at the time the experiment was conducted.

		M	F
4./5.	17 spent most of their life in Western Algeria	8	9
	1 " " her " in Marocco (F 3)	-	1
	2 " " their " in France (M10,M12)	2	-

6. All twenty speakers are Algerians.

7. None has a parent who is a native speaker of English.

8. Arabic is the first language of all twenty speakers.

9. The other languages that they speak are:

	French (20)		English (20)		Spanish (4)		German (2)	
	M	F	M	F	M	F	M	F
fluently	5	4	-	-	-	1	-	-
almost fluently	3	2	5	3	-	1	-	-
average	2	4	5	6	1	-	-	-
slightly	-	-	-	1	1	-	2	-

10. At home they speak the following language(s):

	Arabic (20)		French (13)	
	M	F	M	F
always	9	10	-	2
sometimes	1	-	4	5
seldom	-	-	2	-

11. With friends they speak the following language(s)

	Arabic (20)		French (18)		English (17)		Spanish (2)		German (1)	
	M	F	M	F	M	F	M	F	M	F
always	8	9	-	4	-	-	-	-	-	-
almost always	1	1	5	2	-	1	-	-	-	-
sometimes	1	-	3	4	3	6	-	1	1	-
seldom	-	-	-	-	4	3	-	1	-	-

12/13. None has ever been to an English speaking country.

14.a) The number of years they have spent learning English is:

	7 (4)		6 (6)		5 (9)		2 (1)		1 year + 1term		1 term	
	M	F	M	F	M	F	M	F	M	F	M	F
as a subject	2	2	4	2	4	5	-	-	-	-	-	-
as a means of instruction	-	-	-	-	-	-	-	-	1	-	9	9

14.b) Three ASE have been taught by a native English teacher in Secondary school, two for three years, and one for four years. One has had a native English teacher at the university for two years and a term, another for a year and a term, and eighteen for a single term.

15. All speakers had some vague notion about what phonetics is (i.e."involves pronunciation"). Two had attended some laboratory sessions. But none had undergone any exhaustive course on phonetics or spoken English.

16. None of the subjects had ever had any training in English intonation, except for two. One of them stated that this had been very basic, e.g. "when commenting BBC news or dialogues". And the other one had had some initiation rather than undergone any exhaustive course.

17. Eleven ASE couldn't think of any factor which may have influenced their English pronunciation. Nine of them could and mentioned:

=> the media: - BBC World Service: 5
- Pop music : 3
- Reading : 1

=> native English friends
- for two years* : 1
- for five years (friend) : 1

[* classmates, casual relationship]

18. Although the majority were willing to have their name mentioned in case the results of this research were published, a few did not want to. Consequently, it was decided not to mention any name but give each informant a reference number consisting of a letter (M or F) followed by a number (from 1 to 20).

19. This questionnaire was only submitted to the Algerian speakers of English, not to the native English controls. The rationale is evident and self-

explanatory. The questionnaire was designed to capture any information about the Algerian informants' background that could help in determining whether any factor could have influenced or affected the speakers' English in any way. It would not really be logical to evaluate in a similar manner the English spoken by native speakers as this is their mother tongue.

Appendix C :

EXPECTED INTONATION PATTERNS WITH JUSTIFICATION

C 1 UNIT I

Response sentences are underlined.

1- A: The girl over there? It's Lynda, my girlfriend. Do you like her?

B: I ˇlike her ˇname ‖ ...(I like her name,... but not her manners maybe)

=> FALL-RISE

* Polite way of saying s/he does not like her.

2- A: He said he'll beat me !

B: He wasn't serious | ,was he ‖ (I don't think he was serious, but I'm not sure)

=> RISE

* Tag question: the speaker is not sure about his statement; he wants to check: real question.

3- B: They `aren't ₀going to the ₀movies ‖ (They aren't going to the movies)

A: Oh! But they promised to take me with them!

=> FALL

* Simple negative declarative (neutral).

* NOTE :

Some Algerian speakers located the nucleus on the first syllable of 'movies'. Although this is not really "wrong" nor unEnglish, it should be said that under similar experimental conditions all (but one) native speakers preferred to place the nucleus on 'aren't'. The fact that one native speaker did choose 'mo'(-vies) as the nuclear

syllable clearly shows that it is a perfectly acceptable possibility. Yet, one should also note the contrastive placement. Selecting one or the other word as the nucleus may result in an alteration in the shade of meaning.

4- A: Why don't you have dinner with us?

B: I'd ˅like to | but I really can't today ‖ (It's kind of you to invite me, but I'm sorry I can't today)

=> FALL-RISE

* Polite refusal.

5- A: I don't think he's very clever.

B: 'I think he's an ˆidiot ‖ (I not only believe he's not very clever; but I also think he's an idiot)

=> RISE-FALL

* Exclamation. The speaker shares the listener's point of view even to a further extent.

6-A: You saw him at the party | `didn't you ‖ (I'm almost certain that you saw him at the party)

B: Yes, but just for a couple of minutes.

=> FALL

* Tag question: this is a definite statement. The speaker wants to confirm his belief. He expects the listener to agree.

7- A: Shall we order the desert?

B: Yes of course | 'Would you °like some ,fruit | or an ,icecream ‖ (You may choose between fruit, ice cream or anything else)

=> RISE (on the last item, i.e. 'icecream')

* This is an unrestricted choice. The choice is not limited to those two items.

8- A: Thanks for the money mum! Bye! See you later!

B: `Wait a ,minute dear ‖ Could you tell me where you are going? (Could you please wait and tell me where you going?)

=> SPLIT : FALL + RISE

* Pleading

9- B: This is my `sister |`Alison ‖
(This is my sister; her name is Alison)

A: She's a very nice girl!

=> FALL ON 'ALISON'

* 'Alison' is the sister who is being introduced to someone.

* Compare with sentence No. 12 where 'Jerry' is not the father, but a friend maybe. The speaker's father is being introduced to Jerry. A distinction should be made in such terms between the two sentences.

10- B: They ˇaren't going to the ˇmovies | are they ? ‖ (I don't think they are going to the movies, but I'm not entirely sure)

A: No, they changed their mind.

=> FALL-RISE

* The tag question was not the variable that was tested here. Instead of the rise on "are they", the sentence was actually designed to elicit a fall-rise (with a falling head) starting in the utterance preceding the tag. It is a pattern

that seems fairly natural here to the native English speaker (controls).

11-B: '<u>Would you °like a °table for ,two | or for `five</u> ‖ (You may choose between two sorts of tables only: a table for two, or one for five)

=> <u>FALL</u>

* This is a restricted choice; a <u>fall</u> was expected on the last item i.e. 'five'.

12-B: <u>This is my `father ₀Jerry</u> ‖ (or: `<u>father |_,Jerry</u> ‖) (Jerry, you wanted to meet my father; now here he is)

A: Nice to meet you sir.

=> cf comments about sentence n° 9

* There should not be a fall on '<u>Je</u>rry' as this might suggest that 'Jerry' is nothing but the father's name.

13-A: I'm really lost. What should I do?

B: <u>I ↘don't °want to be ˅rude</u> | but I've already got my own problems ‖ (I'm sorry, but I can't help you now)

=> <u>FALL-RISE</u> (with falling head)

* Polite and tactful way to refuse to help.

14- A: ,<u>Hello</u> | Can I help you ‖ (Polite way of answering the phone)

B: Yes. Can I have extension 426 please ?

=> <u>LOW-RISE</u>

* Friendly, nice, polite way to answer the phone.

15-A: <u>Your daddy used to travel a lot you know</u>

<u>he went to ,London |_,Paris |_,Amsterdam</u> ‖ (he went to London, Paris, Amsterdam, and many other places too)

=> <u>RISE</u> (on the last item at least)

* The listing is incomplete. The most important thing is to have a rise (or sustained pitch) on the last item of the list i.e. 'Amsterdam'.

16-A: Can I see the doctor please ?

B: You'll 'have to `wait | I'm a,fraid ‖ He's quite busy now ‖ (I'm sorry, but you'll have to wait a bit because the doctor is busy now)

=> SPLIT : FALL + RISE

* Polite and tactful request.

17-A: I've given him his money.

B: You've ↘given him ˅my money ‖ (With all respects, you've given him the money you just borrowed from me)

=> FALL-RISE (with falling head)

* Polite way to contradict.

18-A: What did he buy ?

B: He bought a ,tie | a pair of ,socks | and a `shirt ‖

[or He 'bought a °tie | a pair of °socks | and a `shirt ‖]

(He bought three things: a tie, a pair of socks and a shirt)

=> FALL (on the last item, i.e. 'shirt')

* The list is complete. So a fall is expected on the final item of the list.

19-A: Hello, can I speak to the department secretary please?

B: `Just a ,moment please ‖ (Would you like to wait a moment please? I'll check if she's in)

=> SPLIT : FALL + RISE

* With a (low) rise on 'moment', this is a polite way of asking somebody to wait.

20-A: Small insects always frighten me!

B: `Don't be ,silly ‖ (Don't be silly dear, they won't do you any harm)

=> SPLIT : FALL + RISE

* nice and friendly.

C 2 UNIT II The nuclei are underlined and highlighted.

1- A: Does Tom want to go?

B: John wants to go ‖

=> Contrast : it is John and not Tom who wants to go.

2- A: Which is the easiest way to do it ?

B: This is the easiest way ‖ (to do it)

=> New information

3- A: Could she come do you think ?

B: But does she want to come ‖

=> Last content word which is not already 'given' information.

4- A: Did she say she was going to meet Peter ?

B: She said she wasn't going to meet him ‖

=> contrast

5- A: Now, which of these two pencils do you want?

B: The grey one ‖

=> contrast (as opposed to the blue pencil for instance).

=> or unmarked position (last content word of the intonation group).

6-A: Would Friday be convenient

B: I think Sunday would be ‖

=> contrast (as opposed to Friday).

7- A: Do you like my new clothes ?

B: I like the hat ‖

=> unmarked position (last content word of the intonation group)

8- A: Let's eat something. You must be hungry!

B: Oh Yes | I am hungry ‖

=> emphasis

9- A: Look! Here's a picture of my little Wendy.

B: I think she looks exactly like her mother ‖

=> unmarked position (neutral)

10-A: Do you like swimming ?

B: I hate swimming ‖

=> contrast (I do not like swimming, I hate it)

11-A: Shall we have a walk ?

B: I've already had one ‖

=> unmarked position (last content word)

12-A: I've got my boots, my socks, my pull-over...

B: Don't forget your coat ‖

=> unmarked position (last content word of the tone group)

13-A: I want you to take my bag with you.

B: Why do you want me to do it ‖

=> contrast : (Why me instead of you?)

14-A: Take your umbrella with you. I think it's going to rain.

B: Do you <u>rea</u>lly think it's going to rain? ‖

=> <u>emphasis</u> (Are you sure ?)

or simply:

=> <u>last content word</u> (which is not included in the already 'given' information).

15-A: We are going to the theatre tonight.

B: <u>Where</u> did you say you were going? ‖

=> <u>echo question</u> (the speaker is asking for repetition; new information).

16-A: I understand she seldom came to the club.

B: She <u>ne</u>ver comes ‖

=> <u>emphasis</u>

17-A: The film was a success!

B: The <u>mu</u>sic was a success ‖

=> <u>contrast</u> (as opposed to the film)

18-A: I hope they'll bring the chess game with them.

B: They <u>al</u>ways bring it with them ‖

=> <u>emphasis</u>

19-A: I think he needs a new coat. That'll be a nice birthday present, won't it?

B: I'm sure it will. What do you think of <u>that</u> one ‖

=> <u>contrast</u> ('that one' as opposed to all the others).

20-A: I have so much work to do!

B: Would you like some <u>help</u> ‖

=> <u>unmarked position</u>

21-A: The Watson's invited us to their daughter's wedding. She married Peter Smith.

B: She married Jack Smith ‖

=> contrast (she married Jack Smith , not Peter Smith)

22-A: John disappeared last night.

B: Now, isn't that strange ‖

=> unmarked position

23-A: Andrew had an accident yesterday, and I was angry because he didn't come. I thought he'd changed his mind. Isn't that terrible?

B: It is terrible ‖

=> emphasis

24-A: My father's leaving next week.

B: When exactly?‖

=> nucleus on the Wh word

25-A: It was a strange story, wasn't it?

B: Yes | it was a strange but interesting story ‖

=> new information

C 3 UNIT III

1- A: How did he find the play?

B: He `liked it ‖

A: I'm glad.

=> FALL : definite statement

2- A: She read "Babylon Revisited".

B: She ,read it ‖

A: Yes. She said she enjoyed it.

=> RISE * High rise: surprised, casual question
* Low rise: more emphatic
-> whether the High or the Low rises were selected did not matter so much as long as the nuclear tone was a rise.

3- A: Can I come in ?
B: 'What do you `want ‖
A: Well, I think I'd better come back later when it's more convenient.
=> FALL: casual, normal wh -question.

4- A: He saw the film "China Town" yesterday.
B: I'm not sure but...| We've seen it before | ,haven't we ‖
A: Probably, but a very long time ago.
=> RISE IN THE TAG QUESTION: the speaker is not certain, and wants to check.

5- A: Did you see anything new at the market?
B: Yes | today there were ,plates |_,glasses | and `mugs‖
or
Yes | today there were 'plates | °glasses | and `mugs ‖
A: Did you buy any?
=> FALL ON THE LAST ITEM: the list is complete (limited).

6- A: I wonder where Peter is. Have you seen him?
B: Just a second please...‖ Now | ´what do you °want ‖
A: I'm trying to find Peter.
=> RISE: echo question aiming at making the listener to repeat his statement or question. (nice and friendly, showing interest)
NOTE: A difference should be made between sentence 6 and sentence 3 above.

7- A: I found your ring

B: 'Where did you `find it ‖ (I looked for it everywhere but I didn't find it)

or 'Where did you ^find it ‖ or ↗Where did you `find it ‖

A: Under the sofa

=> FALL

* High head + High Fall -> straightforward
* Rising Head + High Fall -> more emphatic
* High Head + Rise Fall -> much more emphatic

(RISE excluded)

8- A: What a game! I'm feeling thirsty now

B 'Would you °like ,tea | or ,coffee ‖ (or anything else to drink)

Possibility of High instead of Low Rises (more casual).

A: Oh! Yes, I'd love something to drink. What about lemonade?

=> RISE: on both 'tea' and 'coffee' unrestricted choice; the guest may have tea, or coffee or even something else which isn't mentioned.

9- A: What did I do yesterday? Well, I've been gardening all day long.

B: You haven't repaired the car then | `have you ‖

A: No, I'm sorry, but I promise I'll do it tomorrow.

=> FALL: in the tag question. The speaker expects confirmation.

10-A: Thanks for inviting me !

B: Don't mention it dear! Would you like ´tea | or `coffee ‖

A: Tea please.

=> FALL: on the last item 'coffee'.
This is a case of restricted choice; the guest can only choose between tea or coffee.

11-A: It's so sad Tom's gone now.
B: He's ´gone did you °say ‖
A: Yes, he left this morning.
=> RISE : statement turned into a question.
* High rise = more casual, surprised
* Low rise = more emphatic
* Fall-rise or Fall + Rise also possible
The most important thing is not to have a fall.

12-A: It wasn't that easy after all
B: Yes | but anyway we've made it | `haven't we ‖
A: We certainly have!
=> FALL IN THE TAG : the speaker expects agreement.

13-A: It's surprising how many things she brought with her!
B: Yes | she brought ,apples | ba,nanas |,oranges | ,strawberries ‖
or Yes | she brought ›apples | ba›nanas | ›oranges | ›strawberries ‖
A: And pears, pineapples, peaches...
=> RISE (or SUSTAINED PITCH) on every item especially the last one as the list is incomplete.

14-A: And believe me or not, she refused to help him.
B: She re ˇfused to °help him ‖
A: That's right. He had to do it himself.
=> Fall Rise (searching query)

15-A: I'm feeling down, and I don't really know why...

B: Now get up, let's do something. Shall we go to the ,theatre | or to the ,movies ‖

A: You must be right, I should go about a bit. Well how about going dancing?

(possibility of high instead of low rises)

=> unrestricted choice; the listener may choose to go to the theatre, to the movies or anywhere else.

16-A: The car is now in the garage.

B: Bill hasn't washed it | ,has he ‖

A: Yes, he's just finished.

=> RISE IN THE TAG :

* High rise or low rise: does not matter as long as a rising nuclear tone has been selected.
* The speaker is not sure, and needs to check.

17-A: Do you need any help mum?

B: 'Set the ,table °for me °will you ‖

A: By all means !

=> LOW RISE on 'table' : polite request.

18-A: I told you I didn't want you to take my racket!

B: And I told you I'll take it anyway!

C: Now for God sake | 'stop `shouting you ₀two ‖

=> FALL :

order; the speaker is commanding the two other persons to stop shouting.

19-A: And does she know the truth now?

B: No | They 'didn't °want to `tell her ‖

A: How awful! She should have been the first one to know.

=> FALL : (negative) declarative.

20-A: I live in Oran.

B: ´Where are you °living ‖

A: In Oran.

=> (HIGH) RISE : echo question; the speaker is asking the listener to repeat again.

C 4 UNIT IV

1- A: He said he's sorry...he hasn't finished his work yet.

B: 'Tell him to °finish it to`morrow ‖

=> FALL : order

NOTE: possibility of a low fall.

2- A: There's a good film on T.V. tonight...

B: 'Stop `talking ‖ Can't you see I'm recording ‖

=> FALL : order, command.

3- A: Look! I've got a new bicycle.

B: `Lend it to me ,please ‖

=> FALL + RISE (SPLIT) : polite request

↓ ↓

(Lend) (please)

4- A: You look worried. What is it ?

B:(Could you do me a favour?) `Post this ,letter ₒfor me ‖

=> FALL + RISE (SPLIT) : polite request

↓ ↓

(Post) (letter)

5- A: The neighbours are watching us through their windows.

B: 'Draw the `curtains ‖

=> FALL : command

(possibility of low fall)

6- A: What did you say

B: 'Pay more a`ttention ‖ otherwise I stop talking ‖

or ↗Pay more a`ttention ‖

=> <u>FALL</u> : order (possibility of a rising head with a high fall: more emphatic).

7- A: Where are you going?

B: To the beach ‖ Can I 'give you a ,lift ‖

=> <u>RISE</u> : polite request (possibility of a high rise)

8- A: Here you are. All the books you asked for.

B: Thank you so much ‖ Just 'put them on the ,table ‖

=> <u>LOW RISE</u> : polite request

9- A: Don't talk to her like that! Who do you think you are?

B: 'Mind your °own `business ‖

=> <u>FALL</u> : order

10-A: I'm sorry, but with all that noise... I didn't hear you.

B: 'Could you °pass me the ,salt °please ‖

=> <u>RISE</u> : polite request

11-A: I know you're a bit angry with me...but I need to talk to you now.

B: 'Go and °talk to °someone `else ‖

=> <u>FALL</u> : order

12-A: Exᵛcuse me °sir ‖ or Ex`cuse me ,sir ‖

B: Yes?

A: 'Could you ,help me °please ‖

=> <u>RISE</u> (in first utterance):
either fall-rise or split (fall + rise) = polite.

=> <u>RISE</u> (second utterance) : polite request

13-A: I don't know what the time is! Why don't you just ask someone?

B: Excuse-me please | 'Do you °have the ,time ‖

=> <u>RISE</u> : polite request
(possibility of High rise)

14-A: It's cold outside!

B: 'Go and °get your `coat ‖

=> <u>FALL</u> : command

15-A: I think you have to fill in this form.

B: You must be right ‖ 'can I °use your ,pen ‖

=> <u>RISE</u> : polite request
(possibility of a High rise but would be more casual).

16-A: What shall I do with this dirty thing?

B: 'Throw it a`way ‖

=> <u>FALL</u> : order

17-A: I almost broke it!

B: Be more `careful ‖

=> <u>FALL</u> : order

18-A: Do you think I can have another drink?

B: Of course you can ‖ `Do ₀help your,self ‖

=> <u>(LOW) RISE</u> : on 'self' : polite, friendly

19-A: Well, if nobody else does, I'll tell her the truth.

B: `Don't ‖ or you'll regret it ‖

=> <u>FALL</u> : order

20-A: It's almost time to go, isn't it ?

B: Are you ,ready ‖

=> <u>RISE</u> : polite request

Appendix C5 - Picture 1

(Yes/No Questions)

Appendix C6: Picture 2

(Wh Questions)

Appendix C 7 : Reading Passage

Television.

Television ‖ I have to confess that I like it ‖ Lots of people don't ‖ At least | that's what they say ‖ but it's quite fashionable | to look down on it ‖ Talk about a particular programme | and they always seem to have watched it ‖ In fact | it's a pleasant way of passing the time ‖ If we're honest | we'll admit it ‖

Extract taken from BYRNE & WALSH (1977: 118) Pronunciation Practice.

Appendix C 8 : Dialogues

DIALOGUE A

Discussing the Fair ‖

A: Are you going to the fair Dick ‖

B: Who's organizing it ‖

A: Our Youth Club ‖ It'll be good ‖ There'll be sideshows | a drink tent | food | and music ‖ Do come ‖

B: I'll try ‖ I'm going to town | but I'll try to be back early ‖ When does it start ‖

A: Three o'clock ‖ That's not too early | is it ‖

B: No ‖ I'll see you there ‖

DIALOGUE B

A tea party ‖

A: Milk and sugar ‖
B: Please ‖
A: Would you like a roll | or a sandwich ‖
B: A roll please ‖ Thank you Sue ‖
A: Pat ‖
B: A sandwich please ‖
A: How's your job Pat ‖ Are you busy ‖
B: At present | I haven't a lot to do ‖ It can't last though ‖ When my boss gets back from Italy | we'll be pretty busy ‖
A: Forget it ‖ Let's enjoy our tea ‖

Byrne, D. & Walsh, G. (197 : 118) Pronunciation Practice (teacher's book)

Appendix C 9 : Guided Speech

The first set of questions was meant to elicit straightforward, short positive as well as negative declarative of the type shown between brackets below. The second set was designed to make the informants utter longer and sometimes more complex sentences.

SET ONE :

1- What is your name ?
(My name is Sabrina)
2- Where are you living ?
(I live in Oran)

3- What's your occupation ?
(I am a student)

4- (If a student) What are you studying ?
(I am studying English)

5- Where are you studying ?
(I'm studying at the University of Oran)

6- Is it far from where you are living ?
(Yes, it is a bit/very far.
No, it is not v that/ very far.)

7- How far is it ?
(It is almost 15 minutes' walk from my house/ 30 minutes by train / bus ...)

8- Ok! Now, do you like music ?
(Yes, I like music.
No I don't like music)

9- Why do /don't you like music ?
(I like music because ...
I don't like music because ...)

10- (If s/he likes it) What kind of music do you like ?
(I like classical music
I like pop music, jazz,...) [possible listing]

11- And what about dancing? Do you like dancing ? Why ?
(cf questions 8- & 9-)

12- Do you like reading ? Why ?
(cf questions 8- & 9-)

13- If yes, What sorts of books do you prefer/ would you look for ?
(I like adventure books,
I like books about Science-fiction
" " " dealing with philosophical matters ...)

SECOND SET :

1- You said you were studying English. Do you like it ?
(Yes, I like it very much!
I don't like it very much , but ...)

2- What do you like most about it ?
(possible listing, eg:
I like Conversation, Reading Comprehension and Written Expression.)

3- Is there anything you don't particularly like?
What do you hate most about it?
(I don't like ...)

4- Do you have any plans for the future ? What do you intend to do once you've gained your degree ('licence') ?
(possibility of a longer and more complex utterance)

5- Now, do you like children ? Why ?
(Yes I (do) like children, because ...
No, I hate/ do not like children because ...)

6- How easy/ difficult do you think raising children must be?
(I don't think it is very difficult ...
I think it must be very difficult, because ...)

7- And what do you think of the generation gap ?
(I think it is the product of imagination ...
I think it is a real problem especially if ...)

8- What do you think of the misunderstanding which often exists between parents and children ?

(It doesn't exist, if you can make an effort ...
It can be very serious especially if the age gap between the parents and the children is very big/ but this is not always true ...)

9- Do you think this problem can/ cannot be solved ? And if yes, how?

(Yes, I think it could be solved if ...
No, I don't think it can be solved, because ...)

10- Do you think it is often due to the inability to listen to what the other has to say, thinks, feels about something ?

(Yes, I think so.
Yes, probably, but also ...)

11- What do you think of drugs (drug-addiction)?

(I think that it is a fine thing ...
I think it is a very bad habit which can destroy your health and yourself ...)

12- How would you react if you just discovered that your young child (or close relative) was a smoker/ drug addict?

(I'll tell him "it's your business"...
I think I would be shocked ...)

13- What would you do ?

(I'll tell him "it's your business"...
I'll try to discourage him/her to continue/ send him to the doctor/ psychiatrist / talk to him/her ...)

Appendix D 1 :

Results Unit One

(1) Sentence 1 : I ↘like her ˅name

(1a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	TOTAL
Control	Figures	32	9	0	-	-	41
	%	78	22	0	-	-	100
A. S. *	Figures	57	114	14	-	2	183
	%	31	62.5	7.5	-	1	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 3 A. S. & 11 NEL

(1b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	RISES FR	RISES FRG	Rising Head	TOTAL F	TOTAL R
I	-	-	-	-	-	-	-	1	1	-	-
like	1	-	-	-	-	-	-	1	-	1	-
her name	3	5	5	-	1	3	1	-	-	13	5
										14	5

(2) Sentence 2 : He wasn't serious ,was he

(2a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	40	1	0	-	-	41
	%	97.5	2.5	0	-	-	100
A. S. *	Figures	50	11	1	1	-	61
	%	82	18	1.5	1.5	-	100

* Group 1: 3 A. S. & 10 NEL Group 3: 2 A. S. & 10 NEL
Group 2: 0 A. S. & 10 NEL Group 4: 1 A. S. & 11 NEL

(2b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	TOTAL F	TOTAL R
was	-	1	-	1	6	1	1	8
he	3			3	4	-	3	7
							4	15

(3) Sentence 3 : *They `aren't °going to the `movies*

(3a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	40	1	0	-	-	41
	%	97.5	2.5	0	-	-	100
A. S. *	Figures	14	5	2	-	-	21
	%	66.5	24	9.5	-	-	100

* Group 1: 0 A. S. & 10 NEL Group 3: 0 A. S. & 10 NEL
Group 2: 1 A. S. & 10 NEL Group 4: 1 A. S. & 11 NEL

(3b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	Falling Head	TOTAL F	TOTAL R
aren't	2*	-	-	-	-	-	1	2	-
movies	6	9	2	-	-	1	-	17	1

* M 14 : had two nuclei, one on aren't and one on movies

(4) Sentence 4 : *I'd ˇ like to*

(4a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	40	1	0	-	-	41
	%	97.5	2.5	0	-	-	100
A. S. *	Figures	72	59	43	1	-	173
	%	41.5	34	25	0.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 4 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 3 A. S. & 11 NEL

(4b) ALGERIAN PERFORMANCE

18 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	FR	LEVEL M	LEVEL L	+ S - N	+ S + N	TOTAL F	TOTAL R	TOTAL L
I'd										15	-	-	-	-
would	1									-	1	1	-	-
like	5						1	-	-	11	6	5	1	-
to	7	-	1	1	-	-	-	1	1	5	11	8	1	2
												14	2	2

(5) <u>Sentence 5</u> : *'I think he's an ^idiot*

(5a) <u>NATIVE REACTIONS</u>

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	23	17	1	-	-	41
	%	56	41.5	2.5	-	-	100
A. S. *	Figures	18	19	4	-	-	41
	%	44	46.5	9.5	-	-	100

* Group 1: 1 A. S. & 10 NEL Group 3: 1 A. S. & 10 NEL
Group 2: 1 A. S. & 10 NEL Group 4: 1 A. S. & 11 NEL

(5b) <u>ALGERIAN PERFORMANCE</u>

- 19 ASE considered : 16 HF <u>i</u>diot
  2 LF <u>i</u>diot
  1 RF <u>i</u>diot

(6) <u>Sentence 6</u> : *You saw him at the party `didn't you*

(6a) <u>NATIVE REACTIONS</u>

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	40	1	2	2	-	41
	%	97.5	2.5	5	5	-	100
A. S. *	Figures	74	44	7	3	-	122
	%	60.5	36	6	2.5	-	100

* Group 1: 3 A. S. & 10 NEL Group 3: 4 A. S. & 10 NEL
Group 2: 3 A. S. & 10 NEL Group 4: 2 A. S. & 11 NEL

(6b) ALGERIAN PERFORMANCE

18 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	RISES FR	+ S - N	+ S + N	TOTAL F	TOTAL R
di-						1	-	16	1*	-	1
-dn't								2			
you	2		1	11	3	-	1	-	18	3	15
										3	16

(7) Sentence 7 : *'Would you °like some ,fruits or an ,ice cream*

(7a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	34	7	0	-	-	41
	%	83	17	0	-	-	100
A. S. *	Figures	76	105	2	-	-	183
	%	41.5	57.5	1	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 3 A. S. & 11 NEL

(7b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	RISES FR	MID LEVEL	TOTAL F	TOTAL R	TOTAL L
like				-	1	-	-	-	-	1	-
fruits	2	2	-	10	2	-	1	1	4	13	1
ice -	1	1	-						2	-	-
cream	1	-	9	2	3	1	-	1	10	6	1
									16	20	2

(8) Sentence 8 : *`Wait a ,minute dear*

(8a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	38	3	0	-	-	41
	%	92.5	7.5	0	-	-	100
A. S. *	Figures	66	126	2	-	-	194
	%	34	65	1	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(8b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	RISES FR	+ S - N	+ S + N	TOTAL F	TOTAL R
wait	3							16	3	3	-
mi-	11	2	-	-	-	-	-	7	13	13	-
nute								1	-	-	-
dear	1	-	6	-	-	6	-	6	13	7	6
										23	6

(9) Sentence 9 : *This is my `sister | `Alison*

(9a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	38	3	0	-	-	41
	%	92.5	7.5	0	-	-	100
A. S. *	Figures	148	46	0	-	-	194
	%	76.5	23.5	0	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(9b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	R F	RISES M	RISES L	RISES FR	HIGH LEVEL	+ S - N	+ S + N	TOTAL F	TOTAL R	TOTAL L
This	1	-	-						15	1	1	-	-
is									7	-			
my									8	-			
sis-	14	1	1					1	2	17	16	-	1
ter								-	2	-	-	-	-
A-	12	1	2	1	-	-	-	-	3	16	16	-	-
-li-	-	-	-	-	-	-	-	-	1	-	-	-	-
-son	-	-	2	-	1	-	-	-	8	3	2	1	-
											35	1	1

(10) Sentence 10 : *They ↘aren't going to the ˅movies | are they*

(10a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	32	9	0	-	-	41
	%	78	22	0	-	-	100
A. S. *	Figures	65	126	3	-	-	194
	%	33.5	65	1.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(10b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	FALL RISE	+ S - N	+ S + N	TOTAL F	TOTAL R
aren't	1	-	-	-	18	1	1	-
going	1	-	-	-	17	1	1	-
mo-	6	1	10	1	1	18	17	1
vies	-	-	-	-	6	-		
							19	1

(11) Sentence 11 : *'Would you °like a°table for ,two or for `five*

(11a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	41	0	0	-	-	41
	%	100	0	0	-	-	100
A. S. *	Figures	119	23	1	-	-	143
	%	83.5	16	0.5	-	-	100

* Group 1: 3 A. S. & 10 NEL Group 3: 3 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 3 A. S. & 11 NEL

(11b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	LEVEL H	LEVEL M	TOTAL F	TOTAL R	TOTAL L
two	2	1	1	4	9	-	2	-	4	13	2
five	5	2	10	-	-	-	-	2	17	-	2
									21	13	4

(12) Sentence 12 : *This is my `father ₒJerry*

`father ,Jerry

(12a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	41	0	0	-	-	41
	%	100	0	0	-	-	100
A. S. *	Figures	60	131	4	1	-	194
	%	31	67.5	2	0.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(12b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	LOW LEVEL	TOTAL F	TOTAL R	TOTAL L
This	2	-	-					2	-	-
is	2	-	-					2	-	-
fa-	12	2	-		1			14	1	-
ther										
Je-	5	3	6	1	-	1	1	14	2	1
-rry								32	3	1

(13) Sentence 13 : *I don't want to be rude*

(13a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	38	3	0	-	-	41
	%	92.5	7.5	0	-	-	100
A. S. *	Figures	62	92	10	-	-	164
	%	38	56	6	-	-	100

* Group 1: 3 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 4 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(13b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	FALL RISE	MID LEVEL	TOTAL F	TOTAL R	TOTAL L
want	1	-	-	-	-	1	-	-
rude	6	2	6	2	2	14	2	2
						15	2	2

(14) Sentence 14 : *,Hello*

(14a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	36	5	0	-	-	41
	%	88	12	0	-	-	100
A. S. *	Figures	89	101	4	-	-	194
	%	46	52	2	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(14b) ALGERIAN PERFORMANCE

19	FALLS			RISES			MID	+ S - N			TOTAL		
ASE	H	M	L	H	M	L	LEVEL	H	M	L	F	R	L
He-	1						1	7	2	-	1	-	1
-llo	1	-	2	3	5	2	4	-	1	1	3	10	4
											4	10	5

(15) Sentence 15 : *He went to ,London ,Paris ,Amsterdam*

(15a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	40	1	0	-	-	41
	%	97.5	2.5	0	-	-	100
A. S. *	Figures	90	92	2	-	-	184
	%	49	50	1	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 4 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(15b) ALGERIAN PERFORMANCE

	FALLS			RISES			FALL	RF	LEVEL			R	TOTAL		
	H	M	L	H	M	L	LEVEL	LEVEL	H	M	L	G	F	R	L
London	2	1	-	-	4	-	4	3	1	2	-	- 1	3	4	10
Paris	1	-	-	1	4	-	6	1	-	1	-	- 2	1	5	8
Amsterdam	9	1	-	-	3	-	4	1	-	1 - 1	-		10	3	6
													14	11	24

(16) Sentence 16 : *You'll 'have to `wait I'm a,fraid*

(16a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	33	6	2	-	-	41
	%	80.5	14.5	5	-	-	100
A. S. *	Figures	100	64	20	-	-	184
	%	54.5	34.5	11	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 4 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(16b) ALGERIAN PERFORMANCE

19 ASE	FALLS			RISES			FR	HIGH LEVEL	TOTAL		
	H	M	L	H	M	L			F	R	L
wait	12	-	3	-	1	-	3	-	15	4	-
I'm a-	2								2	-	-
fraid	3	2	4	-	1	1	3	1	9	5	1
									26	9	1

(17) Sentence 17 : *You've ↘given him ˅my money*

(17a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	31	6	4	-	-	41
	%	75.5	14.5	10	-	-	100
A. S. *	Figures	44	90	9	-	-	143
	%	30.5	63	6.5	-	-	100

* Group 1: 4 A. S. & 10 NEL Group 3: 3 A. S. & 10 NEL
Group 2: 4 A. S. & 10 NEL Group 4: 3 A. S. & 11 NEL

(17b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	MID LEVEL	TOTAL F	TOTAL L
my	5			-	5	-
mo-	5	1	7	-	13	-
-ney				1	-	1
					18	1

(18) Sentence 18 : *He 'bought a (˙,) tie a pair of (˚,) socks and a `shirt*

(18a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	40	1	0	-	-	41
	%	97.5	2.5	0	-	-	100
A. S. *	Figures	166	28	0	-	-	194
	%	85.5	14.5	0	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(18b) ALGERIAN PERFORMANCE

18 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	LEVEL H	LEVEL M	TOTAL F	TOTAL R	TOTAL L
tie				1	3	11	-	3	-	15	3
socks	-	-	2	1	7	3	1	4	2	11	5
and	1								1	-	-
shirt	8	-	9						17	-	-
									20	26	8

(19) Sentence 19 : *'Just a ,moment please*

(19a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	38	3	0	-	-	41
	%	92.5	7.5	0	-	-	100
A. S. *	Figures	67	79	6	-	-	152
	%	44	52	4	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 3 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 2 A. S. & 11 NEL

(19b) ALGERIAN PERFORMANCE

19 ASE	FALLS H	FALLS M	FALLS L	RISES H	RISES M	RISES L	RISES FR	LEVEL H	LEVEL M	LEVEL L	TOTAL F	TOTAL R	TOTAL L
Just	5	-	-								5	-	-
mo-	11	-	1	-	-	1	1	-	1	-	12	2	1
ment please	1	2	1	-	1	5	2	-	-	1	4	8	1

(20) Sentence 20 : *`Don't be ,silly*

(20a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	CasA	CasB	Total
Control	Figures	39	2	0	-	-	41
	%	95	5	0	-	-	100
A. S. *	Figures	105	83	6	-	-	194
	%	54	43	3	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 11 NEL

(20b) ALGERIAN PERFORMANCE

19	FALLS			RISES			MID	TOTAL		
ASE	H	M	L	H	M	L	LEVEL	F	R	L
Don't	3	-	-					3	-	-
si-	8	1	3	1	1	2	1	12	4	1
-lly	1	-	-				1	1	-	-
								16	4	1

Appendix D 2 :

Results Unit Two

Sentence 1: *John wants to go*

(1a) NATIVE REACTIONS:

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	32	8	2	1	-	41
	%	78	19.5	5	2.5	-	100
A. S. *	Figures	47	132	23	3	4	195
	%	24	67.5	12	1.5	2	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(1b) ALGERIAN PERFORMANCE

	John	wants	to	go	Total
Figures	4	8	-	7	19
%	21	42	-	37	100

(2) Sentence 2 : *This is the easiest way*

(2a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	2	-	-	-	41
	%	95	5	-	-	-	100
A. S. *	Figures	109	71	4	-	-	184
	%	59.5	38.5	2	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 4 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(2b) ALGERIAN PERFORMANCE

	This	is	the	easiest	way	Total
Figures	6	2	-	3	7	18
%	33.5	11	-	16.5	39	100

To the above figures has to be added a special case of two intonation groups, hence two nuclei, one on 'This' and the other on 'way' (cf. speaker F 9):

,This | is the 'easiest `way ‖

(3) Sentence 3: *But does she want to come*

(3a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	40	1	1	1	-	41
	%	97.5	2.5	2.5	2.5	-	100
A. S. *	Figures	122	61	18	6	-	195
	%	62.5	31.5	9	3	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(3b) ALGERIAN PERFORMANCE

	But	does	she	want	to	come	Total
Figures	-	1	1	4	-	13	19
%	-	5	5	21	-	68.5	100

(4) Sentence 4 : *She said she wasn't going to meet him*

(4a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	38	2	2	1	-	41
	%	92.5	5	5	2.5	-	100
A. S. *	Figures	162	36	12	4	1	205
	%	79	17.5	6	2	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 6 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(4b) ALGERIAN PERFORMANCE

	She said she wasn't	going to meet	him	Total
Figures	2	1	9	7	19
%	10.5	5	47.5	37	100

(5) Sentence 5: *I like the hat*

(5a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	41	0	0	-	-	41
	%	100	0	0	-	-	100
A. S. *	Figures	152	35	13	5	-	195
	%	78	18	6.5	2.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(5b) ALGERIAN PERFORMANCE

	I	like	the	hat	Total
Figures	-	-	-	19	19
%	-	-	-	100	100

(6) Sentence 6 : *The grey one*

(6a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	40	1	0	-	-	41
	%	97.5	2.5	0	-	-	100
A. S. *	Figures	97	14	0	-	-	111
	%	87.5	12.5	0	-	-	100

* Group 1: 4 A. S. & 10 NEL Group 3: 1 A. S. & 11 NEL
Group 2: 2 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(6b) ALGERIAN PERFORMANCE

	The	grey	one	Total
Figures	-	10	9	19
%	-	52.5	47.5	100

(7) Sentence 7 : *I think Sunday would be*

(7a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	4	2	2	-	41
	%	90	10	5	5	-	100
A. S. *	Figures	86	96	28	11	4	195
	%	44	49	14.5	5.5	2	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(7b) ALGERIAN PERFORMANCE

	I	think	Sunday	would	be	Total
Figures	-	-	3	4	12	19
%	-	-	16	21	63	100

(8) Sentence 8 : *Oh! Yes I am hungry*

(8a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	2	0	-	-	41
	%	95	5	0	-	-	100
A. S. *	Figures	68	126	1	-	-	195
	%	35	64.5	0.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(8b) ALGERIAN PERFORMANCE

	Oh	Yes	I'm	(am)	hungry	Total
Figures			1		18	19
%			5.5		94.5	100

(9) Sentence 9: *I think she looks exactly like her mother*

(9a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	40	1	2	2	-	41
	%	97.5	2.5	5	5	-	100
A. S. *	Figures	137	58	5	5	-	195
	%	70	30	2.5	2.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(9b) ALGERIAN PERFORMANCE

	I think she looks exactly like her mother	Total
Figures	19	19
%	100	100

(10) Sentence 10: *I hate swimming*

(10a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	41	0	0	-	-	41
	%	100	0	0	-	-	100
A. S. *	Figures	165	22	12	1	3	195
	%	84.5	11.5	6	0.5	1.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(10b) ALGERIAN PERFORMANCE

	I	hate	swimming	Total
Figures		12	7	19
%		63	37	100

(11) Sentence 11: *I've already had one*

(11a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	0	4	2	-	41
	%	95	0	10	5	-	100
A. S. *	Figures	113	63	32	13	-	195
	%	58	32	16.5	6.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(11b) ALGERIAN PERFORMANCE

	I've	already	had	one	Total
Figures	-	6	-	13	19
%	-	31.5	-	68.5	100

(12) Sentence 12: *Don't forget your coat*

(12a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	25	15	1	-	-	41
	%	61	36.5	2.5	-	-	100
A. S. *	Figures	146	44	15	10	-	195
	%	75	22.5	7.5	5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(12b) ALGERIAN PERFORMANCE

	Don't	forget	your	coat	Total
Figures	1	-	-	18	19
%	5.5	-	-	94.5	100

(13) Sentence 13: *Why do you want me to do it*

(13a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	25	16	0	-	-	41
	%	61	39	0	-	-	100
A. S. *	Figures	52	138	5	-	-	195
	%	26.5	71	2.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(13b) ALGERIAN PERFORMANCE

	Why	do	you	want	me	to	do	it	Total
Figures	-	-	-	-	2	-	8	5	19
%	-	-	-	-	10.5	-	42	26.5	100

(14) Sentence 14: *Do you really think it's going to rain*

(14a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	35	6	0	-	-	41
	%	85.5	14.5	0	-	-	100
A. S. *	Figures	130	56	10	1	-	195
	%	66.5	29	5	0.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(14b) ALGERIAN PERFORMANCE

	Do you		really	think	it's	going	to	rain	Total
Figures	-	-	4	8	-	-	-	7	19
%	-	-	21	42	-	-	-	37	100

(15) Sentence 15: *Where did you say you were going*

(15a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	41	0	2	2	-	41
	%	100	0	5	5	-	100
A. S. *	Figures	149	22	22	7	1	185
	%	80.5	12	12	4	0.5	100

* Group 1: 4 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(15b) ALGERIAN PERFORMANCE

	Where	did	you	say	you	were	going	Total
Figures	7	-	-	7	-	-	5	19
%	36.5	-	-	36.5	-	-	26.5	100

(16) Sentence 16: *She never comes*

(16a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
	Figures	35	5	1	-	-	41
	%	85.5	12	2.5	-	-	100
	Figures	111	72	23	10	1	195
	%	57	37	11.5	5	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(16b) ALGERIAN PERFORMANCE

	She	never	comes	Total
Figures	-	8	11	19
%	-	42	58	100

(17) Sentence 17: *The music was a success*

(17a) ALGERIAN PERFORMANCE

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
	Figures	31	8	5	3	-	41
	%	75.5	19.5	12	7	-	100
	Figures	46	145	11	3	4	195
	%	23.5	74.5	5.5	1.5	2	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(17b) ALGERIAN PERFORMANCE

	The	music	was	a	suc-cess	Total
Figures	-	5	-	-	6 + 8	19
%	-	26.5	-	-	73.5	100

(18) Sentence 18: *They always bring it with them*

(18a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
	Figures	41	0	0	-	-	41
	%	100	0	0	-	-	100
	Figures	149	41	8	3	-	195
	%	76.5	21	4	1.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(18b) ALGERIAN PERFORMANCE

	They	always	bring	it	with	them	Total
Figures	-	6	3	1	2	7	19
%	-	31.5	16	5	10.5	37	100

(19) Sentence 19: *What do you think of that one*

(19a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
	Figures	23	16	2	-	-	41
	%	56	39	5	-	-	100
	Figures	80	96	26	7	-	195
	%	41	49	13.5	3.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(19b) ALGERIAN PERFORMANCE

	What	do	you	think	of	that	one	Total
Figures	3	-	-	-	-	2	14	19
%	16	-	-	-	-	10.5	73.5	100

(20) Sentence 20: *Would you like some help*

(20a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
	Figures	38	2	1	-	-	41
	%	92.5	5	2.5	-	-	100
	Figures	169	22	4	-	-	195
	%	86.5	11.5	2	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(20b) ALGERIAN PERFORMANCE

	Would	you	like	some	help	Total
Figures	-	-	6	-	13	19
%	-	-	31.5	-	68.5	100

(21) Sentence 21: *She married Jack Smith*

(21a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	3	2	1	-	41
	%	90	7.5	5	2.5	-	100
A. S.	Figures	61	132	2	-	-	195
	%	31.5	67.5	1	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(21b) ALGERIAN PERFORMANCE

	She	married	Jack	Smith	Total
Figures	-	-	9	10	19
%	-	-	47.5	52.5	100

(22) Sentence 22 : *Now isn't that strange*

(22a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	B as A	Total
Control	Figures	40	2	1	41
	%	97.5	5	2.5	100
A. S.	Figures	152	45	2	195
	%	78	23	1	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(22b) ALGERIAN PERFORMANCE

	Now	isn't	that	strange	Total
Figures	-	-	-	19	19
%	-	-	-	100	100

(23) Sentence 23: *It is terrible*

(23a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	40	1	-	-	-	41
	%	97.5	2.5	-	-	-	100
A. S.	Figures	82	110	9	-	6	195
	%	42	56.5	4.5	-	3	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(23b) ALGERIAN PERFORMANCE

	It	is	terrible	Total
Figures	-	-	19	19
%	-	-	100	100

(24) Sentence 24: *When exactly*

(24a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	31	9	1	-	-	41
	%	75.5	22	2.5	-	-	100
A. S.	Figures	131	52	2	1	-	184
	%	71	28.5	1	0.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 4 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(24b) ALGERIAN PERFORMANCE

	When	exactly	Total
Figures	14	4	18
%	77.5	22.5	100

(25) Sentence 25: *It was a strange but interesting story*

(25a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	4	0	-	-	41
	%	90	10	0	-	-	100
A. S.	Figures	118	76	2	-	1	195
	%	60.5	39	1	-	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(25b) ALGERIAN PERFORMANCE

	It was a strange but interesting story		Total
Figures	10*	9	19
%	52.5	47.5	100

* -res- was the stressed syllable

Appendix D 3:

Results Unit Three

(1) Sentence 1 : *He `liked it.*

(1a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	5	34	1	-	-	40
	%	12.5	85	2.5	-	-	100
A. S.	Figures	60	49	6	4	1	110
	%	54.5	44.5	5.5	3.5	1	100

* Group 1: 1 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 2 A. S. & 10 NEL Group 4: 3 A. S. & 10 NEL

(1b) ALGERIAN PERFORMANCE

	FALL RISE	FALLS HF	MF	LF	NUCLEAR	STRESSED BUT NOT NUCLEAR	TOTAL STRESSED
He	-	-	-	-	-	2	2
liked	1	13	1	-	15	4	19
it	-	1	-	3	4	9	13
Total	1	18			19	15	34

(2) Sentence 2: *She ´read it*

(2a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	36	4	0	-	-	40
	%	90	10	0	-	-	100
A. S.	Figures	75	41	12	6	2	120
	%	62.5	34	10	5	1.5	100

* Group 1: 2 A. S. & 10 NEL Group 3: 4 A. S. & 10 NEL
Group 2: 2 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(2b) ALGERIAN PERFORMANCE

	Stressed	Nuclear	RISES HR	MR	LR	FR	Rise Fall	Rising/ Falling Gesture
She	9	-	-	-	-	-	-	2*
read	17	12	-	8	2	1	1	-
it	11	7	5	2	-	-	-	-
Total	37	19	18				1	2

(3) Sentence 3: *'What do you `want*

(3a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	3	0	-	-	40
	%	92.5	7.5	0	-	-	100
A. S.	Figures	111	57	4	-	2	170
	%	65	33.5	2.5	-	1	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 2 A. S. & 10 NEL

(3b) ALGERIAN PERFORMANCE

(3b1) PATTERNS WITH ONE NUCLEUS

	Falls			Rises		Stressed but not nuclear	Stressed and nuclear	Head		Intervening unstressed			
	HF	MF	LF	Fall Rise	Mid Rise			H	M	H	M	L	DS*
What	1	-	-	-	-	16	1	15	1				
do + you										7	4	2	4
want	8	3	3	1	1	1	16	-	-				
Total	9	3	3	1	1	17	17						

* DS = Descending Scale

(3b2) PATTERNS WITH TWO NUCLEI

	First Fall			Second Fall			Intervening unstressed			
	H	M	L	H	M	L	H	M	L	DS
What	2	-	-							
do + you							1	-	-	1
want	-	-	-	1	1	-				

(6) Sentence 6: *´What do you °want*

(6a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	7	32	1	-	-	40
	%	17.5	80	2.5	-	-	100
A. S.	Figures	86	100	6	2	-	190
	%	45	53	3	1	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(6b) ALGERIAN PERFORMANCE

(6b1) PATTERNS WITH ONE NUCLEUS

	FALLS			RISES				Stressed but not nuclear			Intervening unstressed			
	HF	MF	LF	Fall Rise	HR	MR	LR	H	M	L	H	M	L	DS*
What	1	-	-	-	-			13	4	1				
do + you											6	5	-	7
want	3	6	2	1	1	3	1			1				

(4) Sentence 4: *We've seen it before ,haven't we*

(4a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	10	29	1	-	-	40
	%	25	72.5	2.5	-	-	100
A. S.	Figures	98	91	2	1	-	190
	%	51.5	48	1	0.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(4b) ALGERIAN PERFORMANCE

	High Fall	RISES HR	MR	LR	Stressed but not nuclear	Nuclear	Unstressed
ha-	1	-	6	5	7	12	
ven't							19
we	2	4	1	-	12	7	

(5) Sentence 5: *Yes today there were ,plates ,glasses and `mugs*

(5a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	34	5	1	-	-	40
	%	85	12.5	2.5	-	-	100
A. S.	Figures	50	27	4	-	1	80
	%	62.5	33.5	5	-	1	100

* Group 1: 2 A. S. & 10 NEL Group 3: 3 A. S. & 10 NEL
Group 2: 1 A. S. & 10 NEL Group 4: 2 A. S. & 10 NEL

(5b) ALGERIAN PERFORMANCE

	FALLS HF	MF	LF	RISES HR	MR	LR	LEVELS HL	ML	LL
plates	1			4	14				
gla -		1			5	10		1	1
- sses					1				
mugs	5	2	12						

(7) Sentence 7: *'Where did you `find it*

(7a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	40	0	0	-	-	40
	%	100	0	0	-	-	100
A. S.	Figures	115	5	2	2	-	120
	%	96	4	1.5	1.5	-	100

* Group 1: 2 A. S. & 10 NEL Group 3: 3 A. S. & 10 NEL
Group 2: 3 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(7b) ALGERIAN PERFORMANCE

	FALLS			high fall	RISES		
	HF	MF	LF	with on glide	HR	MR	LR
Where							
did you							
find	10	4	1	2			
it	2	-	-	-		2	

(8) Sentence 8: *Would you like ,tea or ,coffee*

(8a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	38	2	0	-	-	40
	%	95	5	0	-	-	100
A. S.	Figures	53	136	5	1	3	190
	%	28	71.5	2.5	0.5	1.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(8b) ALGERIAN PERFORMANCE

	FALLS			RISES			TOTAL	
	HF	MF	LF	HR	MR	LR	Falls	Rises
like	5*	-	-	1	1	-	5	2
tea	3**	1	-	8	2	-	4	10
co -	1	6	5‡*	1	4	-	12	5
- ffee	-	-	-	-	2	-	-	2
							21	19

* 2 narrow; ** 1 wide; ‡* 1 narrow

(10) Sentence 10 *Would you like ´tea or `coffee*

(10a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	38	2	0	-	-	40
	%	95	5	0	-	-	100
	Figures	155	24	1	-	-	180
	%	86	13.5	0.5	-	-	100

* Group 1: 4 A. S. & 10 NEL Group 3: 5 A. S. & 11 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(10b) ALGERIAN PERFORMANCE

	FALLS			RISES			TOTAL	
	HF	MF	LF	HR	MR	LR	Falls	Rises
like	2	-	1	3	1	-	3	4
tea	3	2	-	10	-	-	5	10
co -	3	4	8	1	2	1	15	4
- ffee								
							23	18

(9) Sentence 9: *You haven't repaired the car then `have you*

(9a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	36	4	0	-	-	40
	%	90	10	0	-	-	100
A. S.	Figures	100	78	4	-	2	180
	%	55.5	43.5	2	-	1	100

* Group 1: 4 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(9b) ALGERIAN PERFORMANCE

	FALLS			RISES			High	S*	N*
	HF	MF	LF	HR	MR	LR	FR		
have	1	-	1	1	8	5	-	-	-
you	1	-	-	-	1	-	1	14	3

(11) Sentence 11: *He's ´gone did you °say*

or *He's `gone did you ,say*

(11a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	40	0	0	-	-	40
	%	100	0	0	-	-	100
A. S.	Figures	176	14	0	-	-	190
	%	92.5	7.5	0	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(11B) ALGERIAN PERFORMANCE

	FALLS			RISES			TOTAL	
	HF	MF	LF	HR	MR	LR	Falls	Rises
He's	-	-	-	-	-	-	-	-
gone	14	-	1	3	-	1	15	4
did	-	-	-	-	3	5	-	8
you	-	-	-	-	-	-	-	-
say	-	-	-	1	8	-	-	9
							15	21

(12) Sentence 12: *Yes but anyway we've made it `haven't we*

(12a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	3	0	-	-	40
	%	92.5	7.5	0	-	-	100
A. S.	Figures	108	58	4	-	-	170
	%	63.5	34	2.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 4 A. S. & 10 NEL
Group 2: 4 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(12b) ALGERIAN PERFORMANCE

	FALLS			RISES			Stressed	RG	FG
	HF	MF	LF	HR	MR	LR		*	**
ha-	2	-	-	-	13	-	17	1	1
ven't									
we	2	-	-	-	2	-	18	-	-

* Falling gesture follosed by a mid rise ('*we*')

** Rising gesture followed by a high fall ('*we*')

(13) Sentence 13: *Yes she brought* (›)*apples ba* (›)*nanas* (›)*oranges* (›)*strawberries*

(13a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	3	0	-	-	40
	%	92.5	7.5	0	-	-	100
A. S.	Figures	101	78	12	1	-	190
	%	53	41	6.5	0.5		100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(13b) ALGERIAN PERFORMANCE

		a-	pples	ba-	na-	nas	o-	ran-	ges	straw-	be-	rries
	H	-	-		-			-		-	-	-
Rise	M	2	1		1			2		1	-	2
	L	4	-		3			4		-	2	-
Fall	H	2		6	2		1	4		1	1	
Rise	M	-		-	-		-	-		-	-	
	L	-		1	-		-	-		-	-	
Rise	H	1		-				1				
Fall	L	-		1				-				
	H	6		2	-		1	3		7	-	1
Fall	M			-	-		-	-		-	4	-
	L			-	1		-	1		1	-	-
High Level		2		1			1					
Mid Level Gesture			2			1			1			1
+ long			6			3			4			3
-	H		6	-	2	10	-	-	10	-	1	3
stress	M		3	2	6	3	7	2	1	1	7	-
(S)	L		3	5	3	3	9	-	3	3	1	7
+ S	H	11	-	9	2		3	8		8	5	1
+ nu-	M	2	1	-	1		-	2		1	-	2
clear	L	4	-	2	4		-	5		1	2	-
+ S	H	2		-				-		2	-	-
- nu-	M	-		1				2		3	2	1
clear	L	-		-				-		-	-	2
R.	H		-			2			1			-
G.	M		2			-			1			1
*	L		2			-			1			1

* Rising Gesture

(14) Sentence 14: *She re˅fused to °help him*

(14a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	33	7	0	-	-	40
	%	82.5	17.5	0	-	-	100
A. S.	Figures	93	61	10	4	-	160
	%	58	38	6.5	2.5	-	100

* Group 1: 3 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 4 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(14b) ALGERIAN PERFORMANCE

	HF	Rise Fall	RISES HR	MR	LR	RISING GESTURES : 3 -stress	+stress	+long
refused	-	-	-	1	3	-	-	-
to help	-	1	1	-	-	-	-	-
him	1	-	6	5	1	2	1	2

(15) Sentence 15: *Shall we go to the ˊtheatre or to the ˊmovies*

(15a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	35	5	5	5	-	40
	%	87.5	12.5	12.5	12.5	-	100
A. S.	Figures	21	168	3	1	1	190
	%	11	88.5	1.5	0.5	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(15b) ALGERIAN PERFORMANCE

	FALLS			RISES			RG	FG	+ S	- S.*
	HF	MF	LF	HR	MR	LR	*	*	- N*	+ Long
Shall									5	
we									1	
go to the	4	-	-	-	1	-	-	1	13	
the-	7	-	-	-	-	1	-	3	6	
-a-	-	1	-	-	1	-	-	-	2	1
-tre							12	-	-	13
or to the	-	1	-				-	2	9	1
mo-	5	6	2	1	2	1			2	
vies	-	-	1				1	-	5	3

* FG = Falling Gesture; RG = Rising Gesture;

+-S = +-Stressed; N = Nuclear

(16) Sentence 16: *Bill hasn't washed it ´has he*

(16a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	31	6	3	-	-	40
	%	77.5	15	7.5	-	-	100
A. S.	Figures	101	63	6	-	-	170
	%	59.5	37	3.5	-	-	100

* Group 1: 4 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(16b) ALGERIAN PERFORMANCE

	FALLS		RISES		RISING	+
	HF	LF	HR	LR	GESTURE	LONG
has	2	7	-	1	-	-
he	1	-	1	-	14	15

(17) Sentence 17: *'Set the ,table for me °will you*

(17a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	33	6	1	-	-	40
	%	82.5	15	2.5	-	-	100
A. S.	Figures	139	44	9	2	-	190
	%	73	23	5	1		100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(17b) ALGERIAN PERFORMANCE

	FALLS			RISES			FG	R G		
	HF	MF	LF	HR	MR	LR		H	L	+ LONG
Set	4						3			
ta-	16		2							
-ble							1	-	-	
for							2	-	-	1
me	1	1	3			3	1	-	1	2
will				7	2	-				
you				1	-	1	1	7	2	13

(18) Sentence 18: *'Stop `shouting you ₒ two*

(18a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	18	22	0	-	-	40
	%	45	55	0	-	-	100
A. S.	Figures	53	128	9	-	-	190
	%	28	67.5	4.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(18b) ALGERIAN PERFORMANCE

	FALLS			RISES		F G			R G			+
	HF	MF	LF	HR	MR	H	M	L	M	L	RFG	Long
Stop	1					4						
shou-	6				1	1	2					
-ting	4					1	4	2				13
you							2	1			1	7
two	8	4	4			-	1	-	1	1	-	3

(19) Sentence 19: *No they 'didn't ₒwant to`tell her*

(19a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	0	1	-	-	40
	%	97.5	0	2.5	-	-	100
A. S.	Figures	56	24	10	-	-	90
	%	62	27	11	-	-	100

* Group 1: 0 A. S. & 0 NEL Group 3: 3 A. S. & 10 NEL
Group 2: 3 A. S. & 10 NEL Group 4: 3 A. S. & 10 NEL

(19b) ALGERIAN PERFORMANCE

	FALLS H	FALLS M	FALLS L	LOW LEVEL	F G H	F G M	R G	+ S +N H	+ S +N M	+ S +N L	+ S -N H	+ S -N M	+ S -N L	+ Long
didn't							1				14	4	-	-
want to	1	-	-		3	1	-	1	-	-	8	8	2	-
tell	4	5	3			1		2	5	2	-	2	3	-
her	1	2	3	1				1	1	4	-	-	2	11

(20) Sentence 20: *ˊWhere are you ºliving*

(20a) NATIVE REACTIONS

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	36	4	0	-	-	40
	%	90	10	0	-	-	100
A. S.	Figures	53	127	0	-	-	180
	%	29.5	70.5	0	-	-	100

* Group 1: 4 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(20b) ALGERIAN PERFORMANCE

	FALLS H	FALLS L	RISES H	RISES L	R G H	R G M	R G L	F G H	F G L	RFG	+ S - N	+ S + N	+ Long
Where			-	2	2	2	1			4	16	2	-
are											2		
you													
li-	4	1	3	-	-	-	-	1	2	-	11		
-ving			1	-	5	2	2				-	1	14

Appendix D 4 :

Results Unit Four

(Native Reactions Only)

(1) <u>Sentence 1</u> : *'Tell him to °finish it to`morrow*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	28	8	6	-	2	40
	%	70	20	15	-	5	100
A. S.	Figures	128	59	7	1	3	190
	%	67.5	31	3.5	0.5	1.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(2) <u>Sentence 2</u>: *'Stop `talking*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	2	1	-	-	40
	%	92.5	5	2.5	-	-	100
A. S.	Figures	163	22	9	3	1	190
	%	85.5	11.5	5	1.5	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(3) <u>Sentence 3</u>: *`Lend it to me ,please*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	11	28	1	-	-	40
	%	27.5	70	2.5	-	-	100
A. S.	Figures	69	114	9	0	2	190
	%	36.5	60	4.5	0	1	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(4) <u>Sentence 4</u> *`Post this ,letter ° for me*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	20	15	6	-	1	40
	%	50	37.5	15	-	2.5	100
A. S.	Figures	66	116	10	-	2	190
	%	34.5	61	5.5	-	1	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(5) <u>Sentence 5</u>: *'Draw the `curtains*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	25	14	5	-	4	40
	%	62.5	35	12.5	-	10	100
A. S.	Figures	133	47	16	3	3	190
	%	70	24.5	8.5	1.5	1.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(6) Sentence 6: *'Pay more a`ttention*

or *↗Pay more a`ttention*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	27	13	3	-	3	40
	%	67.5	32.5	7.5	-	7.5	100
A. S.	Figures	164	20	10	2	2	190
	%	86.5	10.5	5	1	1	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(7) Sentence 7: *Can I 'give you a ,lift*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	1	1	1	-	40
	%	97.5	2.5	2.5	2.5	-	100
A. S.	Figures	142	29	21	1	1	190
	%	74.5	15.5	11	0.5	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(8) Sentence 8 : *Just 'put them on the ,table*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	24	16	2	1	1	40
	%	60	40	5	2.5	2.5	100
A. S.	Figures	101	86	7	3	1	190
	%	53	45.5	3.5	1.5	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(9) Sentence 9 : *'Mind your °own `business*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	1	1	1	-	40
	%	97.5	2.5	2.5	2.5	-	100
A. S.	Figures	167	14	15	6	-	190
	%	88	7.5	7.5	3	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(10) Sentence 10: *'Could you °pass me the ,salt °please*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	22	15	4	1	-	40
	%	55	37.5	10	2.5	-	100
A. S.	Figures	159	15	6	-	-	180
	%	88	8.5	3.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 4 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(11) Sentence 11: *'Go and °talk to °someone `else*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	0	2	1	-	40
	%	97.5	0	5	2.5	-	100
A. S.	Figures	136	44	18	3	5	190
	%	71.5	23	9.5	1.5	2.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(12) Sentence 12: a) *Ex ˅cuse me °sir*

or *Ex`cuse me ,sir*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	35	2	3	-	-	40
	%	87.5	5	7.5	-	-	100
A. S.	Figures	172	9	9	-	-	190
	%	91	4.5	4.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

Sentence 12 b) *'Could you ,help me °please*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	30	8	3	-	1	40
	%	75	20	7.5	-	2.5	100
A. S.	Figures	177	10	4	1	-	190
	%	93	5.5	2	0.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 4 A. S. & 10 NEL

(13) Sentence 13: Excuse me please

'Do you °have the ,time

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	35	3	2	-	-	40
	%	87.5	7.5	5	-	-	100
A. S.	Figures	183	9	9	-	1	200
	%	91.5	4.5	4.5	-	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

(14) <u>Sentence 14</u>: *'Go and °get your `coat*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	20	17	8	-	5	40
	%	50	42.5	20	-	12.5	100
A. S.	Figures	153	41	14	1	7	200
	%	76.5	20.5	7	0.5	3.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

(15) <u>Sentence 15</u>: *'Can I °use your ,pen*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	37	2	1	-	-	40
	%	92.5	5	2.5	-	-	100
A. S.	Figures	184	11	5	-	-	200
	%	92	5.5	2.5	-	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

(16) <u>Sentence 16</u> : *'Throw it a`way*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	10	24	16	-	10	40
	%	25	60	40	-	25	100
A. S.	Figures	115	71	23	1	8	200
	%	57.5	35.5	11.5	0.5	4	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

(17) <u>Sentence 17</u>: *'Be more `careful*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	34	5	2	-	1	40
	%	85	12.5	5	-	2.5	100
A. S.	Figures	78	112	33	3	20	200
	%	39	56	16.5	1.5	10	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

(18) <u>Sentence 18</u>: *`Do ₀help your,self*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	34	3	5	2	-	40
	%	85	7.5	12.5	5	-	100
A. S.	Figures	172	22	19	12	1	200
	%	86	11	9.5	6	0.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

(19) <u>Sentence 19</u>: *`Don't*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	39	1	-	-	-	40
	%	97.5	2.5	-	-	-	100
A. S.	Figures	137	48	20	2	3	200
	%	68.5	24	10	1	1.5	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

(20) <u>Sentence 20</u>: *'Are you ,ready*

Speaker		Correct A	Incorrect B	Other C	C as A	C as B	Total
Control	Figures	31	2	7	-	-	40
	%	77.5	5	17.5	-	-	100
A. S.	Figures	147	9	47	3	-	200
	%	73.5	4.5	23.5	1.5	-	100

* Group 1: 5 A. S. & 10 NEL Group 3: 5 A. S. & 10 NEL
Group 2: 5 A. S. & 10 NEL Group 4: 5 A. S. & 10 NEL

Appendix D 5 :

PICTURE DESCRIPTION 1 : YES/NO QUESTIONS

Control and

Algerian Samples Selected

CONTROL E

1)	'Would I be ₀right in ₀saying it's in `Switzerland ‖	HF
2)	`Is it| ›in| `Europe ‖	HF
3)	'Is it in Y ugos`lavia ‖	HF
4)	'Is it `Austria ‖	HF
5)	↘Is it `Spain ‖	HF
6)	Is it a ᵛsmall ₀country ‖	FR
7)	Is it `so small| that it's ›not inde`pendent| is it part of a`nother ₀country| a `bigger country‖	HF
8)	'Do they ›speak| `French ₀there ‖	HF
9)	'Do they °speak any `other ₀language ‖	HF
10)	Do they speak ´two other °languages ‖	HF
TOTAL	8 HF,1 FR,1 HR	

CONTROL A

1)	Was the| picture taken somewhere in `Europe ‖	HF
2)	Was it in ᵛFrance ‖	FR
3)	Was it in `Switzerland ‖	HF
4)	Was the 'photograph taken in `Switzerland ‖	HF
5)	Was it taken in `Austria ‖	HF
6)	Was it in ᵛGermany |	FR
7)	Was it a| a 'very `small ₀country ‖	HF
8)	Was the photograph taken in Anᵛdora ‖	FR
9)	Was it a mediter`ranean ₀country ‖	HF
10)	Is the place `famous for its ₀mountains ‖	HF
TOTAL	7 HF, 3 FR	

CONTROL C

1)	Is this near the Mediter,ranean ‖	LR
2)	Is it in| Ja´pan ‖	HR
3)	Is this in the southern ,continent ‖	LR
4)	Is this in ,Europe ‖	LR
5)	Are those the `Alpes in the ,background ‖	HF + LR
6)	Is this´Switzerland ‖	HR
7)	Is this `Iceland ‖	HF
8)	Is it in| the British ,Isles ‖	LR
9)	Do people go `skiing a lot ,here ‖	HF + LR
10)	Is it `eastern ,Europe ‖	HF + LR
TOTAL	1 HF, 4 LR, 2 HR, 3 HF + LR	

SPEAKER F 1:

1)	'Is it in Al,geria ‖	LR
2)	Is 'this a´sea ‖	HR
3)	Is 'there °any ,snow | 'over´there ‖	HR
4)	Is 'there any ˅school | there ‖	HR
5)	Are 'they mo´ving ‖	HR
6)	ˌIs 'this in´summer ‖	HR
7)	ˌIs 'this `country | ˃far | ˌfrom Al´geria ‖	HR
8)	Is 'it ,beautiful ‖	LR
9)	Are 'there ˌany ,forests ‖	LR
10)	ˌIs 'it ˌin ,Europe ‖	LR
TOTAL	4 LR & 6 HR	

SPEAKER F2 :

1)	ˌIs 'it in´France ‖	HR
2)	ˌIs 'it a vi´llage ‖	HR
3)	ˌAre´there |´boats more |`bigger | ˌthan 'this´ones ‖	HR

4)	ˌAre ´there | ˌany in ˅habitants | in this ,village ‖	LR
5)	Is it 'nice to ,visit ‖	LR
6)	`Are the ₒmountains ,high ‖	HF + LR
7)	ˌIs this a ,river ‖	LR
8)	´Does| this ,village| be,long| ˃to| a ,country | which is deve,loped ‖	LR
9)	ˌIs 'it an ´Arabic | ´village ‖	HR
10)	Are 'there ₒany ani´mals ‖	HR
TOTAL		5 HR, 4 LR, 1 HF + LR

SPEAKER F 3

1)	Is this 'country in Eu´rope ‖	HR
2)	'Is it Switzer´land ‖	HR
3)	'Is it´Italy ‖	HR
4)	'Is it´England ‖	HR
5)	Is it in in the 'north of´Europe ‖	HR
6)	Is it in´Belgium ‖	HR
7)	ˌIs it a´lake ‖	HR
8)	Is it a ,town ‖	LR
9)	Is it inˌNether´lands ‖	HR
10)	Is it in ˃France ‖	HL
TOTAL		8 HR, 1 LR, 1H

SPEAKER F 4

1)	Is the 'picture ᵒtaken in´England ‖	HR
2)	Is there any ,snow | on the `mountains | on the 'top of the `mountains ‖	HF
3)	Is it a `European ,country ‖	HF + LR
4)	'Is it `winter ‖	HF
5)	'Is it a ᵒbig´town ‖	HR
6)	Are ,they | ,crossing the ,river ‖	LR
7)	'Is it Portu,guese ‖	LR

8)	This picture| Is ´it | ,taken | in `Portugal ‖	HF
9)	ˈIs °it a ,town ‖	LR
10)	'Are the °mountains ˌvery ´high ‖	HR
TOTAL	3 HF, 3 HR, 3, LR, 1 HF + LR	

SPEAKER F 5

1)	Is it a | a European ´country ‖	HR
2)	Is it very far from | Al ´geria ‖	HR
3)	Did you ,see it ‖	LR
4)	'Do many people °live ´there ‖	HR
5)	Is there 'always °snow on the ´mountains ‖	HR
6)	Is it in ´France ‖	HR
7)	Is it a ´boat ‖	HR
8)	Is those ´trees ‖	HR
9)	Is it a 'very big ´town ‖	HR
10)	Is it in Swiss Switzer ´land ‖	HR
TOTAL	1 LR, 9 HR	

SPEAKER M 6

1)	'Is it a ´town ‖	HR
2)	'Is it a ´city ‖	HR
3)	Did you ´see it ‖	HR
4)	Is it ´large ‖	HR
5)	'Did you ´visit it ‖	HR
6)	Do you 'recog´nize | her ´name ‖	HR
7)	It is in ´Europe ‖	HR
8)	Is it in ´Western °Europe ‖	HR
9)	Is it in ´Switzerland ‖	HR
10)	›Is it | the ´Thames ‖	HR
TOTAL	10 HR	

SPEAKER M 7

1)	Are `there | any ,boats | in the ,sea ‖	LR
2)	Is this `town | ↖situated | in En,gland ‖	LR
3)	Is it su'rrounded by moun,tains ‖	LR
4)	Are they sno´wy ‖	HR
5)	Is the city ˇbig ‖	FR
6)	'Do you live `in ‖	HF
7)	'Does it con°tain `buildings ‖	HF
8)	Do the in`habitants | have `light | and `water ‖	HF
9)	Are `there | any `people | on the ,beach ‖	LR
10)	'Is the °weather ,sunny ‖	LR
TOTAL	3 HF, 1 HR, 1FR, 5 LR	

SPEAKER F 8

1)	`Is ₒthis | a ,sea ‖	LR
2)	'Are ,those ,boats ‖	LR
3)	Do you´see | 'someone swim,ming ‖	LR
4)	Is´it a ci,ty ‖	LR
5)	,Are´there very 'high moun,tains ‖	LR
6)	´Is | the 'sky ,blue ‖	LR
7)	Is´it in ,Spain ‖	LR
8)	,Has | this `picture | `been | 'taken in sum,mer‖	LR
9)	Are´there some `people | some,where ‖	LR
10)	Is it an `African coun,try ‖	LR
TOTAL	10 LR	

SPEAKER F 9

1)	Are´there | 'high °moun↖tains ₒin ₒthis ₒpicture‖	LF
2)	'Do you´think| they ›are | `recent | `mounₒtains‖	HF
3)	,Are 'they´Alp‿s ‖	HR
4)	,Is´it a `sea ‖	HF
5)	It 'isn't °Switzer´land ‖	HR
6)	`Is ₒit a´village ‖	HR

7)	'Are ›there| ›many | `trees | on the 'moun´tains‖	HR
8)	'Can you´see | ,snow | on the `top|of the 'moun´tains ‖	HR
9)	'Can you °see a 'va´lley ‖	HR
10)	'Is °it ,cold ‖	LR
TOTAL	2 HF, 1 LF, 6 HR, 1 LR	

SPEAKER M 10

1)	Isn't ,it | near ,by| the 'Lac Lément in Switzer,land ‖	LR
2)	It is at 'least in a Euro,pean °country ‖	LR
3)	Is it in Nor´way ‖	HR
4)	Is it in´England ‖	HR
5)	Is it in´Belgium ‖	HR
6)	Or in 'western´Germany ‖	HR
7)	Is it in 'northern´Italy ‖	HR
8)	`Can ₒI | `give ₒyou ›the direct ,answer ‖	LR
9)	It is or near by the Lac Lé´ment ‖	HR
10)	'May be in Aus`tria ‖	HF
TOTAL	1 HF, 3 LR, 6 HR	

SPEAKER M 11

1)	Is this `picture | `taken from| at least in ,Europe ‖	LR
2)	Is it 'taken from ,Italy ‖	LR
3)	Is it 'taken from ,Spain ‖	LR
4)	Is it 'taken from °western of ,Europe ‖	LR
5)	Is it 'taken from´Sweden ‖	HR
6)	Is it 'taken from ,Netherlands ‖	LR
7)	Is it `taken from |´Scotland ‖	HR
8)	Is it 'taken from´Norway ‖	HR

9)	Is it 'taken from ,Finland ‖	LR
10)	Is it 'taken from ,Belgium ‖	LR
TOTAL		7 LR, 3 HR

SPEAKER M 12

1)	'Is it in in `Europe ‖	HF
2)	'Is it in ´France ‖	HR
3)	In ´Switzerland per°haps ‖	HR
4)	'Is it in ´Austria ‖	HR
5)	'Is it a `lake ‖	HF
6)	Is it | the 'Lac ´Lément ‖	HR
7)	'Is it a °place for ´tourists ‖	HR
8)	Is it for ´wealthy °tourists ‖	HR
9)	Is it in `summer the ₒphoto has been ₒtaken ‖	HF
10)	'Is it in ´Germany ‖	HR
TOTAL		3 HF, 7 HR

SPEAKER M 13

1)	ˌWas this `picture | `taken | in Tu´nisia ‖	HR
2)	Was ´it | 'taken in the ´Alp‿s ‖	HR
3)	Is this `forest a ₒnew ´one ‖	HR
4)	Are 'these ,boats ‖	LR
5)	ˌAre 'these ,trees | 'apple ,trees ‖	LR
6)	`Is ₒthat a ,lake ‖	LR
7)	Is 'this Vas`teria ,Stadium ‖	HF + LR
8)	Is 'this the °Nile ,River ‖	LR
9)	Is 'this `mountain | 'smaller than this °that ,one ‖	LR
10)	Is this `building | a super,market ‖	LR
TOTAL		6 LR, 3 HR, 1 HF + LR

SPEAKER M 14

1)	Is ´it in ,Europe ‖	LR
2)	Is it in `central ₀Europe ‖	HF
3)	Is it in ˎeast of ₀Europe ‖	LF
4)	`Are | that `mountains | the ,Alp‿s ‖	LR
5)	Are 'they the Pyre´nnées ‖	HR
6)	Is it a´sea ‖	HR
7)	Is it a´lake ‖	HR
8)	Is it in 'Germa´ny ‖	HR
9)	Is `there | 'good ˌweather ,here ‖	LR
10)	Is´it | an im'portant ,city ‖	LR
TOTAL	1 HF, 1 LF, 4 LR, 4 HR	

SPEAKER M 15

1)	'Is it °near the ´sea ‖	HR
2)	'Are `there | many `boats | in the ,sea ‖	LR
3)	Is it su`rrounded by | moun´tains ‖	HR
4)	Is `there | any `snow | in the´field ‖	HR
5)	'Are °there any `trees | su`rrounding | the´town‖	HR
6)	Is `there | 'any `church | 'in the ,town ‖	LR
7)	'Is it a °big ,town ‖	LR
8)	'Are `there | any 'crowded ,streets ‖	LR
9)	'Is `there | 'any ,port ‖	LR
10)	'Are °there °any °houses in the ,fields ‖	LR
TOTAL	6 LR, 4 HR	

SPEAKER M 16

1)	ˌAre 'there any °boats´here ‖	HR
2)	'Can you see some °roads´here ‖	HR
3)	'Is °there °any °church in this´town ‖	HR
4)	'Was °it ›foggy | ›when | ›this | 'photo °was ta,ken ‖	LR
5)	`Can ₀you ₀see some´snow | 'on the moun´tains ‖	HR

6)	`Can ₒyou ₒsee ₒsome´cars ‖	HR
7)	,Is´this | a 'large´town ‖	HR
8)	'Is it| 'situated ₒnear the moun´tains ‖	HR
9)	'Was it °taken in Al´geria ‖	HR
10)	'Was it °taken in´Europe ‖	HR
TOTAL		1 LR, 9 HR

SPEAKER F 17

1)	Is `it | a Euro`pean ₒcountry ‖	HF
2)	Is it a `town ‖	HF
3)	'Can the °people °swim´here ‖	HR
4)	Is it a 'beautiful ,beach ‖	LR
5)	Is it a 'town in´Sweden ‖	HR
6)	Are´there any hotels´there ‖	HR
7)	'Can I °have a °room if I go´there ‖	HR
8)	'Are the in°habitants of this `town | 'very ,generous ‖	LR
9)	'Have you °visit this ,town ‖	LR
10)	Can 'we °go °there by ,plane ‖	LR
TOTAL		2 HF, 4 LR, 4 HR

SPEAKER F 18

1)	Is this 'mountain the Himala´yas‖	HR
2)	Is `this ₒtown an´island ‖	HR
3)	Is it situ'ated in A`merica ‖	HF
4)	Is it situ'ated in ›a | 'socialist´country ‖	HR
5)	Is this a 'town in´England ‖	HR
6)	Is it a 'town in´Germany ‖	HR
7)	Is it in a `country | which is 'near our ´country ‖	HR
8)	I think it's snowing | 'Am I´right ‖	HR

9)	Is it the 'most pop °popular one| in 'this ´town ‖	HR
10)	Is 'there a `forest | 'near this ´town ‖	HR
TOTAL		1 HF, 9 HR

SPEAKER F 19

1)	Is ´it the ´Alp‿s ‖	HR
2)	Is the ,lake | Lac Lé´ment ‖	HR
3)	Has this `photo | been `taken | in Eu´rope ‖	HR
4)	Was it in a 'communist ˇcountry ‖	FR
5)	Was it 'taken in Switzer,land ‖	LR
6)	Was it 'taken in °West Germa,ny ‖	LR
7)	In 'East German,ny ‖	LR
8)	Is´it a vi,llage ‖	LR
9)	Is it a ,lake ‖	LR
10)	Are´these e'ternal ,snow ‖	LR
TOTAL		6 LR, 1 FR, 3 HR

SPEAKER M 20

1)	Are they ,boats ‖	LR
2)	'Is it the °most °beautiful `picture ‖	HF
3)	`Are| the inhabitants of this´town | ,sailors ‖	LR
4)	Would you 'like to °visit this `town| one ,day ‖	LR
5)	Is the `last ₒmountain | far a'way from the town | the `highest | in the´world ‖	HR
6)	Is 'this sea | `called |´red °see ‖	HR
7)	Have you 'had the opportunity to 'visit this ´town ‖	HR
8)	Is 'this a ,garden ‖	LR
9)	Is 'this a ,forest ‖	LR
10)	Is 'there any °highway in this ,town ‖	LR
TOTAL		1 HF, 6 LR, 3 HR

Appendix D 6 :

PICTURE DESCRIPTION 2 : Wh Questions

Control and

Algerian Samples Selected

CONTROL C

1)	'Why has he °got a com`puter in his ₒroom ‖	HF
2)	'What sort of `work d'you ₒthink he ₒdoes ‖	HF
3)	'What kind of `dog has he ₒgot ‖	HF
4)	'Why has he °got a `rocking chair in his ₒroom ‖	HF
5)	'Why has he °got 'two `telephones ‖	HF
6)	`Why is his ₒroom | so `messy ‖	HF
7)	'What size of `shoes d'you ₒthink he's ₒgot ‖	HF
8)	'What's the `dog's ₒname ‖	HF
9)	'When did he last ↘shave ‖	LF
10)	'Where is the °little ↘bin ‖	LF
TOTAL		8 HF, 2 LF

CONTROL D

1)	'What's the 'name of 'that ↘man ‖	LF
2)	'What °colour's the `telephone ‖	HF
3)	'What °type of `dog is that ‖	HF
4)	'What ₒtype of `chair is that ‖	HF
5)	'What do you °think the man usually `does in this room ‖	HF
6)	'What sort of °work do you think he `does ₒthere ‖	HF
7)	'What part of the °country would you ex`pect him to be ‖	HF
8)	'What do you °think of his °tastes in `pictures ‖	HF
9)	'What are ↘these ‖	LF
10)	What type of ↘lamp is that ‖	LF
TOTAL		3 LF, 7 HF

CONTROL B

1)	'What is in the `foreground of the ∘picture ‖	HF
2)	And 'what is in the `middleground ‖	HF
3)	And 'what is in the `background ‖	HF
4)	Now 'what `else can I ∘ask you about this ∘picture‖	HF
5)	'What °type of `vehicles are there ‖	HF
6)	And 'what °type of `trees do you ∘think they ∘are‖	HF
7)	'How would you des›cribe | the `grass ‖	HF
8)	'What do you °think that `indicates ‖	HF
9)	'How would you des›cribe | the `background ‖	HF
10)	'What kind of `landscape would you ∘say that was ‖	HF
TOTAL		10 HF

SPEAKER F 19

1)	`Who is this ∘man ‖	HF
2)	`What's this ‖	HF
3)	'Where is the °house situ↘ated ‖	LF
4)	'What °are these↘books a∘bout ‖	LF
5)	'Why does he´use this com↘puter ‖	LF
6)	`Why does he ∘have a ∘beard ‖	HF
7)	'How `old ∘must ∘he ∘be ‖	HF
8)	`Why does he ∘have | 'two tele↘phones ‖	LF
9)	'Why does he °have a dog↘dog ‖	LF
10)	'What's the ›name | of the↘dog ‖	LF
TOTAL		6 LF, 4 HF

SPEAKER M 20

1)	'Whom be°longs this ↘room to ‖	LF
2)	'Where is the `room situ,ated ‖	LR
3)	What is the ma,terial this [(-)] was ›made| ↘of ‖	LF
4)	How ,long | does it make ,take °you | to `clean this ∘room ‖	HF

5)	From `where | these´pictures | 'were `brought ∘from ‖	HF
6)	`How do you ∘call that ‖	HF
7)	'How do you ∘call the `black ∘thing | on the `man's ∘face ‖	HF
8)	'Who is the `owner | of this ›room ‖	HL
9)	'What is the´work | `practised | by `this ∘man ‖	HF
10)	`How do ∘you call ∘that ‖	HF
TOTAL	2 LF, 6 HF, 1 LR, 1 HL	

SPEAKER F 18

1)	'Where is this man↘now ‖	LF
2)	,Where | do you ,think | this ,office is situ↘ated ‖	LF
3)	But 'where e↘xactly ‖	LF
4)	'What do you `think | his`job ∘is ‖	HF
5)	What is on the 'table on his↘right ‖	LF
6)	'What do you °think he ›uses | he 'use it for ‖	LF
7)	'What can you 'see on the↘wall ‖	LF
8)	`What is ∘it ‖	HF
9)	'What is he↘wearing ‖	LF
10)	And 'what is near↘him ‖	LF
TOTAL	8 LF, 2 HF	

SPEAKER F 17

1)	With 'whom does this man↘live ‖	LF
2)	'Why ∘has he ∘got| ›two|↘phones ‖	LF
3)	`What ∘is ∘his ∘job ‖	HF
4)	'Where is he↘now ‖	LF
5)	'What can you ∘see through the↘window ‖	LF
6)	'What↗is his↘drink ‖	LF
7)	'What is he `drinking ‖	HF
8)	'How do you call↘that ‖	LF

9)	'Who is `next to him ‖	HF
10)	'Who °was \with ₀him ‖	LF
TOTAL		7 LF, 3 HF

SPEAKER M 16

1)	`What ₀can ₀you ₀see | on 'this \picture ‖	LF
2)	'What is he \doing ‖	LF
3)	`Where ₀is ›the | `dog ‖	HF
4)	'What is ´this | `right to ₀him ‖	HF
5)	`What ₀are ₀those | `left to ₀him ‖	HF
6)	'Where °are [(-)] °pictures `hanged ‖	HF
7)	`Where ₀are \books ‖	LF
8)	`Who ₀is ₀this ₀man ‖	HF
9)	`What ₀is ₀this | 'under ›the | `computer ‖	HF
10)	'What ₀is ₀he \doing ‖	LF
TOTAL		4 LF, 6 HF

SPEAKER M 15

1)	'What is °on the \desk ‖	LF
2)	'Where is the °man `sitting ‖	HF
3)	'What is he `wearing in ₀his | in his `foot ‖	HF
4)	'Where are the `pictures ‖	HF
5)	'Where is the `mug ‖	HF
6)	'Where are the `pencils ‖	HF
7)	\Where ‖	LF
8)	'Where is the \basket ‖	LF
9)	'What °does the °man \have ‖	LF
10)	'What does >he | have in ›his | in his \hand ‖	LF
TOTAL		5 LF, 5 HF

SPEAKER M 14

1)	`Who is this ₀man ‖	HF
2)	`Why do you ₀think ₀so ‖	HF
3)	'Where does he \live ‖	LF

4)	'How do you call ›that ‖	LL
5)	'What is ›this ‖	LL
6)	What is this ‖	HR
7)	How many `books | he ,has ‖	LR
8)	`What ∘kind of books | does he ,read ‖	LR
9)	'What is the ⌄colour | of his pull⌄over ‖	LF
10)	'What can you `see | through the win⌄dow ‖	LF
TOTAL	3 LF, 2 HF, 2 LL, 2 LR, 1 HR	

SPEAKER M 13

1)	`Where do you ∘think | I brought this `photo | ⌄from ‖	LF
2)	`What can you⌄see ‖	LF
3)	'What `near ,him ‖	HF + LR
4)	'What does he `wear ‖	HF
5)	'What `else ‖	HF
6)	And `what else ‖	HF
7)	`Where is the tele∘phone ‖	HF
8)	`How ∘many tele∘phones | are `there ‖	HF
9)	What's | be`tween them ‖	HF
10)	'Who ∘is ∘this ,man ‖	LR
TOTAL	2 LF, 6 HF, 1 hHF + LR	

SPEAKER M 11

1)	`Where is the ∘man |⌄sitting ‖	LF
2)	'What is the °thing in °front of⌄him ‖	LF
3)	'What is the thing be⌄hind him ‖	LF
4)	'What is the › | on the⌄desk ‖	LF
5)	'Where is the °window situ⌄ated ‖	LF
6)	'What is the `thing | `hang | on the `wall ‖	HF
7)	What are these⌄things ‖	LF
8)	'What's⌄this ‖	LF
9)	'What's⌄this ‖	LF
10)	'What's⌄this ‖	LF
TOTAL	9 LF, 1 HF	

SPEAKER M 12

1)	Who `is on the ,picture ‖	HF + LR
2)	'What is he do´ing ‖	HR
3)	'What has he in in his´arms ‖	HR
4)	'What °sort of `job | 'is this ,man | su'pposed to `do ‖	HF
5)	'How °many ,pho‿nes | 'are in his´room | on the ´desk ‖	HR
6)	'What's the °dog´doing ‖	HR
7)	'What repre°sent the `picture of the ₒwall | on the´wall ‖	HR
8)	'What's the ᵛman |'who is °sitting on the ,chair | ´wearing ‖	HR
9)	'What ´else ‖	HR
10)	'What is´this ‖	HR
TOTAL		1 HF, 8 HR, 1 HF + LR

SPEAKER M 10

1)	'What can you `say about this ₒpicture ‖	HF
2)	'Where do´think | he ˎis ‖	LF
3)	Where do you think he is | he is ˎsitting ‖	LF
4)	'What do you think about | the ˎfurniture ‖	LF
5)	`What are | 'laying on the ˎshelves ‖	LF
6)	`What | do you 'think they deal ˎwith ‖	LF
7)	`What are | 'outside his ˎwindow ‖	LF
8)	Then `where | do you 'think he is ˎworking ‖	LF
9)	`What have you | re'marked on the ˎdesk ‖	LF
10)	`Why | is he 'using °two ˎtelephones ‖	LF
TOTAL		9 LF, 1 HF

SPEAKER F 9

1)	'How many `chairs | can 'you °see in this `picture ‖	HF
2)	And 'how 'many´persons ‖	HR

3)	`What ∘can ∘you ∘do | with a com`puter ‖	HF
4)	'Where can you °find com`puters ‖	HF
5)	›What | `can ∘you | 'see through the the `window ‖	HF
6)	`Where ∘is | ↘is ∘this ∘man ‖	LF
7)	´Why | is his ´dog | `with ∘him ‖	HF
8)	`Where ∘is | 'situated this o`ffice | 'or °this `house ‖	HF
9)	`Why ∘do ∘you | `think ∘so ‖	HF
10)	'Who do you `think ∘he ∘is ‖	HF
TOTAL	1 LF, 8 HF, 1, HR	

SPEAKER F 8

1)	'Who `is | this ›man ‖	HL
2)	'What °is his ›job ‖	HL
3)	`Where is this man ,born ‖	HF + LR
4)	`What is ∘he ∘looking ,at ‖	HF + LR
5)	`Why | is 'this chair ↘empty ‖	LF
6)	And `why ∘there ∘is nobo,dy ‖	HF + LR
7)	`Why ∘isn't he | 'sitting °straight to the window ‖	LF
8)	'Where is the °telephones situated ‖	LF
9)	'Which of the °two tele,phones | is on the 'corner of the ↘desk ‖	LF
10)	`What ∘is ∘this ‖	HF
TOTAL	4 LF, 1 HF, 3 HF + LR, 2 HL	

SPEAKER M 7

1)	'Where do you ,think | the 'man and his °dog ↘are‖	LF
2)	'How do you ↘know ‖	LF
3)	`What's ∘this ‖	HF
4)	'What is it made ↘for ‖	LF
5)	'What do you ↘guess | 'this man ↘is ‖	LF
6)	'Where do you ´think | this 'house is lo`cated ‖	HF
7)	`How do you ∘know ‖	HF

8)	'What is he `wearing ‖	HF
9)	'What do you ´think about his ˎdog ‖	LF
10)	'What is this ´chair | 'made `from ‖	HF
TOTAL		5 LF, 5 HF

SPEAKER F 5

1)	`What ∘is ∘he do∘ing ‖	HF
2)	'What kind of °animal has he got near ˎhim ‖	LF
3)	What is near the `dog ‖	HF
4)	How many 'telephones has he got on the ˎdesk ‖	LF
5)	'What has he ´put | on the ˎshelves ‖	LF
6)	'What do you ´think | was he ˎdrinking ‖	LF
7)	'What is he wea ˎring ‖	LF
8)	'What's the °colour of his ˎshoes ‖	LF
9)	'How many ›pictures | do you ›think | there is on the ˎwall ‖	LF
10)	'What can you ´see | be'hind the ˎchair ‖	LF
TOTAL		8 LF, 2 HF

SPEAKER M 6

1)	'Who is ˎhe ‖	LF
2)	'What does he ˎdo ‖	LF
3)	'Where are the ˎtele∘phones ‖	LF
4)	'How ›is | the ˎchair ‖	LF
5)	'Where is the ˎbooks ‖	LF
6)	'Where is the micro‿com ˎputer ‖	LF
7)	'Where is his ˎdog ‖	LF
8)	'How is his ˎhouse ‖	LF
9)	'How many `books he ∘have ‖	HF
10)	'What is ›this ‖	HL
TOTAL		8 LF, 1 HF, 1 HL

SPEAKER F 3

1)	'What is this °man `doing ‖	HF
2)	'What is he °looking `at ‖	HF

3)	'What is ´there | on the 'left of the `picture ‖	HF
4)	'What is be°hind the `man ‖	HF
5)	,Which 'animal is `this ‖	HF
6)	'What are these °two `things ‖	HF
7)	'What can you `see | from the `window ‖	HF
8)	'What can you °say about the things which ›are | 'hang on the `wall ‖	HF
9)	'What is he `wearing ‖	HF
10)	'What can you °say about her `face ‖	HF
TOTAL		10 HF

SPEAKER F 4

1)	`Who is ₒthat ₒman ‖	HF
2)	`Who is ₒhe ‖	HF
3)	'Where is he `sitting ‖	HF
4)	'What °are ⌄there | be'hind ⌄him ‖	LF
5)	And 'what's ,this ‖	LR
6)	`Where is ₒhe | e`xactly ‖	HF
7)	'What do you ›think | a'bout his `office ‖	HF
8)	'How a°bout the `pictures ‖	HF
9)	'How about the ˆanimal ‖	RF
10)	'What is he `wearing ‖	HF
TOTAL		1 LF, 7 HF, 1 LR, 1 RF

SPEAKER F 2

1)	'Where °do °you `think ₒthis ₒman ₒis ‖	HF
2)	'What do you `think his ₒjob ₒmay ₒbe ‖	HF
3)	`What are ,this ‖	LR
4)	'When do you `think this ₒpicture was ₒtaken ‖	HF
5)	'What do `you ₒthink aₒbout this ₒchair ‖	HF
6)	'What are ,this ‖	LR
7)	'What `do you ₒthink he can ₒdo with this comₒputer ‖	HF

8)	'What are the ↘books a∘bout ‖	LF
9)	'What do you `think a∘bout the ∘pictures ‖	HF
10)	'What a°bout the ↘dog ‖	LF
TOTAL	2 LF, 6 HF, 2 LR	

SPEAKER F 1

1)	`Who ∘is | `this ∘man ‖	HF
2)	`What's the ∘name | of `this ∘dog ‖	HF
3)	'Where `are ∘they ‖	HF
4)	'What is his `job ‖	HF
5)	´Where did `he ∘live ‖	HF
6)	`Why is he | ›sitting | `like this ‖	HF
7)	'What °are ›there | on the `shelves ‖	HF
8)	`Why ∘has ∘he ›two | tele`phones ‖	HF
9)	´Why | is his ›office | in dis`order ‖	HF
10)	´Why | ˌdidn't ∘he ›sit | in ›his | ↘chair ‖	LF
TOTAL	1 LF, 9 HF	

Appendix D 7 :

Guided Speech

CONTROL A

My name is Susan| [(-)]‖ At the moment| I'm living in Clapham‖ My home is actually in Kent though‖ I'm| doing some research at the moment‖ or| beginning to do some research‖ In Clapham| I'm living in Clapham‖ And| I'm studying at| the University of London‖ It's not that far‖ It's| directly on the tube line‖ And it's quite useful because| it's on the Northern line which means that| I can get off at Goodge Street Warren Street or Euston| depending on| which building I am actually in that day‖ Yes| I do like music‖ I like| Why do I like music‖ I think music has| ability to| draw on emotions| and draw on responses that| maybe| words| could do| maybe poetry can do| but| which| no other| medium can‖ It's a way of| producing a response‖ And it's very enjoyable just to listen to‖ I have quite a Catholic taste of music‖ I| I like classical music‖ I had a classical training‖ I enjoy playing the piano‖ So| I enjoy| at times| it all depends what kind of mood one's in‖ But I enjoy listen to| to| various things‖ I enjoy Ravel‖ I enjoy some of the| seventeenth century's| sixteenth century century music‖ That's quite fun to listen to‖ And you know| if if| if one's in the right| frame of mind| some| (...) Beethoven's super to play| and super to listen to of course| I find it terribly difficult to play‖ I| also enjoy| listening to jazz‖ Not| yes| not traditional jazz‖ I like kind of nineteen fifties| jazz ‖

CONTROL D

My name is Ian [(-)(-)]‖ At the moment I'm living in| a student| halls of residence‖ I'm| actually an electrical engineer‖ I'm a student as well yes‖ I'm studying at UCL‖ Yes| no‖ It's actually quite close to my| place of| accommodation‖ It takes about fifteen minutes| if the trains

arrive on time‖ Not always| no‖ Yes it's| it's very interesting‖ I think as far as I'm concerned| engineering is| definitely the most interesting thing there is‖ About my work‖ Sometimes I get a bit frustrated if I can't do as much as I'd like to‖ Unfortunately‖ I can't| imagine myself being any other way‖ But| I think it causes a lot of problems if somebody's very ambitious‖ 'Cause they're not very satisfied with themselves‖ I always expect more than I can give‖ It's very hard to say what I'll do after I finish‖ I think I'll| won't worry about it for another couple of years| think about it| possibly working in industry‖ But who knows‖ Yes I like music‖ I like all sorts of music| like sort of classical music| and the occasional piece of pop music is| reasonable ‖

CONTROL E

My name is Georgie‖ I'm| living in London‖ No it's very close| it's just| three| stops| on the underground‖ I work as a secretary in the Department of Phonetics‖ Sometimes| I like it‖ At times it's extremely boring‖ I like the| work that they do| outside the College| rather than the| boring| routine things we do| inside the College‖ I hate having to wait to be told what to do| next‖ Because| I deal with| a lot of correspondance| that comes to| the Professor‖ And also| I have to wait until he's ready to answer it before I can type the letters‖ Yes| I do like most types of music‖ Classical music| pop music‖ The only type of music I don't like is jazz‖ It's very noisy‖ Yes| I like dancing very much‖ Well| I suppose there are various types| but if you see| ballet or| contemporary dancing| it's| very| beautiful to watch| and if you| actually do dance| it's very exciting to do‖ Well I like some children‖ I don't think I would like to have children| or raise children‖ Because| I| I can't imagine what sort of future they would be| likely to have‖ Also| I don't really| like| small children‖ It's a bit difficult for me to say because my parents were much older| perhaps than| average‖ So there was a big difference between them| between them and me‖

I don't think there should be any| generation gap| if people| made| more of an effort| to just| be more generous with each and understand each other ‖

SPEAKER F 19

My name is| [(-)(-)'(-)] Hinda‖ I am a student at university here| in Oran‖ I'm preparing| a "licence"| in English‖ It's my first year English‖ Yes‖ Now| I am living at the 'Campus'| Cité Volontaire‖ I am not| very far from the city| from the university‖ It's two kilometres‖ It takes me by bus| two minutes‖ Sorry‖ Five minutes‖ Yes| yes| yes‖ What‖ We have| every week we have half| one [(-)]| an hour and half| in| listening comprehension| and conversation‖ And I like this‖ Because we speak| we speak a lot‖ We speak about| many things‖ Specially| about| youth| our generation‖ And I find this| very interesting| because| as we are| students| and as we are young students| we meet problems‖ Then we try| to expose| this kind of problems‖ Then| we| we speak| to each other| we are allowed to speak| to each other‖ And as we are| with boys| we try to speak| about| this‖ And| as we speak about| all this kind of problems| I| it seems to me that| there is no problem now‖ As we speak about problems‖ And| now| I don't find| I don't find any problem| now| nowadays‖ I'm happy‖ Even if it's cold| today| or| things like this weather| and so on| I| haven't met| real problem| since now‖ I'm happy ‖

SPEAKER M 15

My name| is ['(-)(-)(-)] Hocine‖ I'm a student‖ I'm studying in| university of Oran‖ I'm living in the| 'Cumo'‖ Not| not| not very far‖ It's not very far‖ No more than| five minutes‖ In the programme| of English| I like| linguistics| because| it gives| it gives to me| a brief idea about linguist| and the| the| scientific study of language‖ And| most of| linguistics| linguists| that have| that have deal with linguistics‖ And| there is| reading comprehension‖ Because| I| I| I get| and| I have more vocabulary| than I was‖ Yes‖ In

lectures‖ I don't think so| no‖ (...) I like| the| the way of living| because of| the 'resto'| restaurant‖ We have| we have problems| with the 'resto' ‖

SPEAKER F 8

My name| is Ben Aïcha‖ I am| a first year student at the university| At Oran university‖ I live| in Oran‖ No| not so much‖ I think that it is| away| seven kilometres| I think‖ Sometimes| at midday| it takes| half an hour| when there are lots of cars‖ But when| at eight o'clock| it takes only| twenty minutes‖ I'm studying English‖ I like English itself‖ Lectures| do you mean‖ Grammar| lectures yes| written expression‖ I hate written expression‖ I was planning| to be| a teacher‖ But unfortunately I| I| I will not be a teacher because I am| not| studying to be a teacher in the future but to be| 'interprète'‖ Yes I want| but| with problems‖ Yes‖ It depends on time‖ I like| slow music| classical music yes‖ I like for example| Charles Aznavour's songs ‖

SPEAKER F 5

My name is| Soumeya [(-)(-)'(-)]‖ I am a student| at the university| of Oran‖ I live| in Oran‖ Yes| my| yes| my place is| very far from| where I study‖ I had to do| to take| two buses‖ It took me| half an hour| to arrive| at the university‖ Yes I like music‖ I like music because| when| when I hear| especially Arabic music| I| feel| very well and I| forget| my problems‖ And| it's| the| the best way to| to rest| from all the work‖ I prefer Egyptian music| Arabic music| yes‖ No| I think| it's not| very interesting to| to know| how to dance‖ Yes| I like reading‖ I like| reading| stories| or| novels| and| Arabic| books| which| where we can| find| social| problems| in| our| in| our life| our society ‖

SPEAKER M 10

My name| is| Mohamed‖ I'm a student| at the university| of Oran‖ I am living| near by| your| your house here| in the same| district‖ Yes| it's a| bit far| because I had to catch two| two buses every morning‖ And the same thing to return|

to be back| at home‖ It takes| near| near| an hour| to be| to be at| university‖ What‖ I'm studying English‖ I like| I like Phonetics| and sometimes| written expression‖ Because we have [(-)] dialogues with| teachers‖ And| concrete| concrete speaking| with them‖ What‖ I dislike exams‖ Because| all the times| I seem to| I| I do| I do learning English| without thinking about| the exams‖ And when they| come| I think about the| official| side| of the| of the studies‖ And that| well| I don't like them‖ I hate| exams‖ For the future| I have| to be| when I| started| the first time| with my studies| I| decided to be| a journalist| and| to travel| all the world over ‖

SPEAKER M 20

Yes| my name| is| [(-)(-)(-)] Abdelkader‖ Yes| I'm a student‖ Yes I'm a student‖ English| studies| in university‖ I'm studying English‖ studies‖ I'm studying| in| university| Oran‖ Now| I'm living| in| city| of 'Cumo' yes‖ Ah not far‖ is| It isn't far‖ It takes| nearly| fifty| fifty metres‖ Oh| Ah how long yeah‖ Fifty| about| it takes about| five minutes‖ Yes‖ Would you please repeat| I| Ah the future‖ Oh yes| about| studying‖ What I know| I like English| but| English language I like very more‖ From this language| yes| I like| written expression| or| yes| oral expression‖ I can say| all‖ Because by| is my| my [(-)(-)] interesting| interesting| prefer | what I know| and I like| English‖

SPEAKER M 16

My name| is [(-)(-)(-)] Ali‖ I am studying in| at| Oran university‖ I'm| studying 'Interprétariat'| but I| don't know| more about it‖ If you can tell me some| some advice‖ Yes| I'm living| in| city near the|city for| lodgers| near the university| a student city‖ No it's not‖ It is just| some metres‖ some metres yes‖ Not more than| three or five minutes‖ What I| am doing now‖ As you see| we haven't study| we haven't start our programme yet| programme| for 'Interpretariat'‖ But I am| reading with| those who| who want

to get a [(-)]| a 'licence'‖ Yes| we are| attending with them‖ I like| grammar‖ Grammar it can| help us to| to read| and to write and to| speak‖ And reading comprehension| because| it can help us to| read books| although they are not| available here ‖ We can't| we can't find books ‖ But [(-)]| sometimes| some| friends or| can send| us books‖ Yes| it's helpful ‖

SPEAKER M 11

My name| is| Benaicha‖ I'm a student| at| the university of Oran‖ Now| I am living| at| the| at the town‖ Yes| in Oran‖ I am living in Oran‖ Yes| it is‖ It is far| from| university‖ Sometimes it takes me| it takes me| half an hour to| to reach the| the university‖ I'm studying English‖ I like| phonetics| and linguistics‖ I like this| because| because phonetics| help| help me| to| to understand| English| very clearly‖ And| linguistics| also| help| help me to| to see the language| in large view‖ Well| it seems to me that| that| the most| things| I| dislike| is| grammar‖ Yes‖ I dislike grammar| because| it's difficult| and| and more| it's more difficult than other| things| lectures| yes ‖

SPEAKER M 13

My name| is [(-)(-)'(-)] Yahia‖ I'm a student‖ I'm studying| at Oran university‖ I'm living in the this| in the university 'campus'‖ Of course it is| in Oran| but not in| in the town‖ It's out of the town‖ near the university‖ No| it's not far‖ It takes me| only five minutes‖ I'm studying English‖ Of course| I like it‖ I like| oral [(-)]| oral expression| linguistics| reading| comprehension and listening| and that's all‖ I like linguist| linguistics because| I like| I like| to think| I like philoso philosophy‖ And| science| and I don't know| why| exactly| I| I like it‖ I hate| phonetics| and written expression‖ Yes‖ For| phonetics| the teacher is teaching us| is is not good| or he| speaks very fast‖ Students| claim| claim| or complain about this| [(-)'(-)]‖ The leture| we don't| understand it| clearly‖ But we| during|

the years| I am coming to| to understand| the lessons ‖

SPEAKER F 3

My name is| Soraya ['(-)(-)(-)]‖ Well at this moment I'm living in Oran‖ I'm studying in the| university‖ I'm studying English‖ Oh I'm studying| in the| in the Language| Language Institute‖ Yes| it's very far‖ I must| I must take two buses| Yes| to be there‖ It takes| half| half an hour‖ I enjoy music‖ Oh I can't describe them| but| I feel very happy| when I hear music‖ I like| reggae music| disco| pop music well| some| some pieces| not| not| not all of them‖ Yes I like dancing‖ I like| because I like to move‖ Modern dances‖ Yes| I like what I'm doing‖ Well I like everything‖ I think I| I prefer when I when I'm studying| grammar‖ Yes‖ Because the teacher is very| he's very nice| and I like to discuss with him ‖

SPEAKER M 12

My name| is Mustapha‖ I'm a student| at| at Oran University‖ Now| in a| in Oran| in a city| which is near the university‖ No| not far‖ It's not far from the university‖ Just a| hundred metres‖ It takes me| about| five minutes‖ I'm studying English‖ I like my| I enjoy| very much| conversing| and listening conversing| and listening conversation‖ Because| the students| must| must participate the course‖ It's more| we are seem to be there| we are there| students are there‖ We are doing something‖ My student life‖ I hate| the city| of the university| the city university‖ It is| it is really bad‖ We have mosquitoes in the night‖ Perhaps| teaching| or going out| I don't know I really don't know‖ I don't want to think about it‖ I enjoy| music| very much ‖

SPEAKER M 6

My name's| [(-)(-)(-)'(-)]| Hadj Mohamed‖ I'm living| at Mostaganem‖ I'm living| at 'Campus'| in "cumo" city‖ I'm living in Oran‖ I am a student‖ I study| I'm| I study English‖ Where| I'm studying| English| at the university of Oran‖ No| It isn't far‖ About five hundred metres‖ It takes|

five minutes‖ No| on foot‖ I prefer| living languages| travelling| collecting| stamps| and cards‖ In English| I like| for example| grammar| reading comprehension| and listening| comprehension‖ I hate| linguistics‖ Because it's very difficult| for me‖ Just that‖ Yes| of course| I like music‖ I like music| because| when I'm listening| to the music| I forget my| problems‖ I dream ‖

SPEAKER F 9

My name| is [(-)(-)'(-)] Najia‖ I am studying| at| university of Oran‖ And I'm studying English‖ I am living in| La Sénia‖ It isn't| very far from Oran‖ It's very near| very near the university‖ Sometimes| ten| ten minutes| sometimes when the| the bus is late| twenty minute| minutes‖ I like grammar| like my| friend‖ Because| the teacher is| really very good one‖ We| we laugh and we study at the same time‖ And| what I hate| more| is written expression‖ Because| because of the teacher‖ Oh she's very bad‖ She isn't organized| she| we don't know we don't know| we| if| if we| if we have a really a programme‖ We are completely lost‖ No| fortunately no‖ Phonetics| phonetics| it's| it's good| because| but I think| we| we need| more practice‖ And our| teacher of| practice| of TD yes| is| a bit hard with us and| we| we are| afraid to| to pronounce‖ We are not sure| and| even if we think| right| we| we pronounce very| we're very confused ‖

SPEAKER M 14

My name| is Driss| [(-)(-)'(-)]‖ I'm a student‖ I'm| studying English‖ I'm studying English| at the| university‖ No| of Oran‖ I'm living in Oran‖ Yes| a bit‖ Maybe| ten kilometres| twenty minutes| by bus‖ I like| the 'ambiance'‖ I like the 'ambiance' in our Department‖ I like| language also| languages‖ Therefore| I'm a student| in 'Interprétariat'‖ In our Department| maybe| the administration‖ Because| there are lots of problems‖ The| it's| I think it's| difficult| to solve‖ I want to| continue my studies| if it's| possible| abroad‖ Because| the studies abroad| I think| they are| more|

serious ‖

SPEAKER F 4

My name| is Nora ['(-)(-)]‖ I'm living in Oran‖ I'm a student| at Oran university‖ Yes| I'm a student| at university‖ I'm studying English‖ Yes| it's really| too far| from| Oran‖ Yes‖ I have to take| two buses‖ Yes‖ And it took me| a lot of| time| to arrive‖ Yes‖ Yes| very much‖ I like music very much‖ Because it's one of my hobbies‖ Yes‖ Pleasure| big pleasure‖ When I listen to music| I| feel| very well‖ I like| both| Arabi Arabic music and| the eastern| the western| the western music| and especially| specially Arabic music‖ Yes‖ Yes| Yes I like it‖ Yes I like it very much‖ No| I don't like dancing because I| don't know how to dance‖ I don't| think so| because I'm| I'm not able to dance‖ Yes| I like reading‖ Yes I like reading specially when| I have| lot of time‖ And| reading| is very important| to human life‖ Through| through readings| we can know a lot of things‖ And| I like reading| newspapers| magazines| novels‖ That's all ‖

SPEAKER F 18

My name| is ['(-)(-)] Wafa‖ I'm a student at the| Oran university‖ I'm studying English| in order to do| in order to be an| an interpreter‖ I'm living at Oran‖ Yes of course‖ It's far‖ It's| seven kilometres| far from| my| my home‖ By train| it| it takes me| by train it takes me| twenty minutes‖ And by| bus| I have to wait| a long time‖ No| it comes| but| it's always crowded‖ I like English itself‖ Then I| I always| I always dream about doing| something in English‖ Yes of course‖ I prefer the reading comprehension lecture‖ Yes‖ I prefer this lecture| because it's| very interesting| and| we have to read something| to| to think about it| and to answer questions| given by the teacher‖ So it's very interesting| and it makes us| no| no| we are related| related| with the| teacher and| we| we ask| and she| answers| or we| or she| asks| and we answer ‖

SPEAKER M 7

My name is| Ahmed [(-)'(-)]‖ First name is Ikhlef‖ I'm a student at the university of Oran‖ I'm studying English‖ I live| I live| in| Remchi but| here| in Oran| the university city‖ Nearly| two hundred metres‖ The time you mean| nearly five| minutes‖ It takes me five minutes to get to the university‖ Like my friend said| grammar| reading| I like| studying grammar| reading| comprehension| and| phonetics‖ Yes| I try to| understand it‖ I'd better like it‖ It's| quite| difficult| but| I'll| accustom with it‖ Yes it's new‖ I don't| I don't hate| I don't hate| these lectures| but| I| for example| there are new| there are new| lectures| which are| new| for me| for example phonetics linguistics‖ I don't| I don't hate them| but| I find| some difficulties| to learn them‖ (...) Of course‖ I don't follow the 'licence' I| I am| in the | yes| in 'Interprétariat'‖ I want to be an interpreter ‖

SPEAKER F 17

My name| is [(-)'(-)] Mansoura‖ I am a student‖ I| I study| in| at| the university of Oran‖ I am living in the 'campus'‖ Yes| it's far‖ It's| half an hour‖ Yes‖ I'm studying English‖ I| like| talking English| and having| good pronunciation of| words of English‖ I like| to be a translator| in the| future‖ I dislike| the| way of| most of a teacher‖ It means that| lot of teacher| give us| difficult| lessons| and they can't| make us| understand| what they do‖ Yes it's difficult‖ Yes| we try| but| it's| I think| that the teacher can't understand us‖ or doesn't‖ She doesn't want to‖ Yes‖ Yes| I like music‖ Because| it enjoy me| its make me| yes| it makes me| very pleasant| it's very pleasant‖ I like| Arab| Arabic music| French or English‖ Yes I like the Arabic classical music‖ No‖ I don't like dancing‖ Yes| I like reading ‖

SPEAKER F 2

My name| is [(-)] Nadia‖ Now| I'm living in Oran‖ Yes‖ Yes| since I was| I'm born‖ My occupation| is that I'm a student‖

I'm| I'm studying at the university| of Oran‖ Yes| it's very far| for| from| where I'm living‖ Oh I don't know‖ It takes half an hour to go to the university‖ No| not on foot| by| bus| or| train‖ yes I like it‖ it's| a way a way to relax‖ I like disco music‖ Because it is| fashionable‖ I think it is| yes‖ No| no| it doesn't‖ Not very much| no‖ Because| I don't dance very well‖ I'm studying English‖ Yes| I like it very much‖ The most| I like is reading comprehension| and linguistics‖ I like the read| I like| I like most| reading comprehension| because we have an English| teacher‖ It's| she speaks| very good English| and I think| when we listen| to an English speaking| we| acquire| the language| better| than we| than when we listen to| another speaking| who is not English‖

Appendix D 8 :

Free Speech - Samples Selected

CONTROL A:

Stemming from the| the the photograph| of the| mountains| I can remember the first time when I was| aware| that I had to do something and that...difficult and that I was actually very scared| was| when I| went skiing‖ And we had an instructor who was| not at all sensitive‖ Everyone was| it was the first time everyone was scared stiff| and were out in this huge mountains‖ And| he kept telling us to do things| and we were all terrified| because we all kept falling over‖ And| it was quite steep| and| there was a road at the bottom| and one didn't have any confidence‖ Somehow or other| I seemed to have skis| twice as fast as everybody else's as well| and| he kept saying| Oh| Susan's OK‖ She's not frightened‖ Well in fact| it was purely because my| skis were so fast‖ But anyway I can remember| standing at the top of| one particular mountain| and he took our| ski sticks away from us‖ And we had to ski without sticks‖ Now| it wasn't particularly horrendous| except that| it was difficult enough staying| up when we actually have two sticks| so without them it was| it was quite difficult‖ And the actual thought of moving| kind of going down and up again| well‖ I was fourth in line| and| the first two| went| and absolutely| crashed| I mean| it was really quite horrific‖ and| kind of| would drag off to the side‖ and then| my| my best friend| who was in front of me| stood there| and refused| to budge| and burst into tears| and said she was not going to go‖ and the instructor told her not to be a stupid crying baby‖ And| And all of a sudden it was my turn‖ And| I can remember that| awful sick feeling| in the pit of the stomach thinking| I'm just not going to make it| I'm just not even able to do it‖

But still then| one had to do it ‖

CONTROL D :

Now I remember once| I was| we had| that car of ours had to be ready for the MOT in a few days time‖ So| my father and I decided that the best thing to do was to| to weld some plates on it ourself| ourselves‖ So| in the end| it ended up that I had to do the welding because| I always seem to have| not doing everything around the house‖ Anyway I| I managed to| we got one of these arc weld as I| I welded all the plates all| over the car| and| that was| that was apparently that I thought‖ However| a few hours later| my eye started to hurt a lot‖ Because| when you| when you| do a lot of welding| apparently the ultra violet light| generated| is| is a very| well it's a very narrow band| ultra violet light| and it's| quite capable of doing a lot of damage to you‖ So in the process of doing this welding| I| seemed to have| been exposed| to enough of this light| to really really| burn my eyes‖ And by the time I went to bed| I was in absolute agony‖ And| all through the night it got worse and worse and worse‖ And I had to convince myself| I was gonna go blind‖ I was absolutely terrified at this prospect‖ And when I woke up the next day| and it was even worse still| I was thinking Oh| my God I've really done it this time‖ and I remember being told| to get out of that| there was a school trip the next day| and my parents| insisted that I| went on it because they didn't want me to go round the house all day feeling sorry for myself so| we ended up| going to Brighton‖ And it was absolutely awful because| to keep| to keep the wind off my eyes| I had to wear these sunglasses in the middle of the winter‖ It must have looked absolutely ridiculous‖ But I really didn't care at the time‖ I was so terrified that I was gonna go blind anyway that nothing else mattered to me‖

CONTROL B:

Well| This this is| something which| made me feel rather| rather apprehensive‖ Last| yesterday| I ha I met a friend|

after work and we had| had| a cup of tea‖ And| we had a quite long chat| and| in fact I noticed that it was about| six o'clock| and| time| that I ought to be going home‖ So I| I said goodbye to her and| caught my train‖ And I have quite a long walk| from my| station| to my house‖ And of course| because| it was| six o'clock it was| quite dark| then‖ And there were not| very many people around‖ and| as I was| getting| to about half way from my house| I've| noticed although there there were people walking around| and about| I noticed| that| somebody was walking behind me‖ And it sounded| as that was a man| walking‖ And I| and usually| if| if you're walking| quite close| to other people| men usually overtake women| because they walk faster they have| longer strides‖ But this| footstep| seemed to be| keeping| at the same distance| behind me| and not| not coming any closer| but quite close behind me| certainly not| fast enough to overtake me‖ So I was conscious of this‖ And| And I'd read in a magazine that| if you| think you've being| followed| you shouldn't| look round| or| engage the person in| any kind of contact| and if it's| dark| you shouldn't walk| in| where the| where the| light is bad| towards the| inside of the pavement you should come| more into| the edge of the pavement or even walk in the middle of the road| where| the lighting is very good‖ So I did this I walked| not in the road| but on the edge of the pavement where| the streets light are much brighter and there weren't| shadows| with trees and gardens and bushes and things| feeling really| quite| apprehensive by now because| this had been| going on for about five minutes ‖

SPEAKER M7

The story| has the same| object like the one‖ This happened| in| the city here| in the university‖ I| I am the| first| lodger in in the| in our| building there‖ I came| early‖ and the rooms were| they haven't| doors‖ and they were| they [-] | frightened| the| yes| and| one| one day| my| one of

my friends| came there and hide himself| in| one of the rooms‖ And I live| only| I am the| only| students who live there‖ He| he was| one of my| family‖ And they have never been smoking‖ He| never see me| smoking‖ And I was| holding a cigarette| and walking| and| without| frighten| I was| alone| without| frighten‖ When I cross him| I didn't see him‖ There were no light no| anything‖ Just| I was| I have a candle| learning on it| When I| cross| he| he kicked me‖ So I| I felt| yes| I haven't| found| any word to say| so I was really frightened‖ I can't| forget this| this| this moment| yes‖ So when I recognized| that he was| [(-)(-)(-)] | I| was| accompanied| by a friend‖ So I felt| if you want| happier then‖ So I finished my cigarette and| slept in peace ‖

SPEAKER F 17

I was afraid| to| to take my bac exam| because| lot of| people| told me| that it's a very difficult exam‖ So| during the| the year| I | I try| to| understand| lessons| and| asking for| asking questions| of| what is difficult‖ and| When they| give us| the date of| the exam| I| was very afraid| because| I was| thinking| if I will| fail yes| what| shall I do‖ Because| I don't| I don't want to| repeat the year‖ So| but| when I| took my exam| I| I found that was| very| not| very easy| but| I| work‖ So| and| when the| when I| succeed| I was very happy‖ I imagined that| if I| fail| I| will| stay at home‖ ...

(talking about drug-addiction)

I think that it's a| bad thing‖ because it's a| bad thing for the| person| for the health‖ (...) I| I think that I| will help him| or help her‖ to| to tell| or to ask him| what is the reasons‖ and| I will| for example| took him to the doctor ‖

SPEAKER F 2

When I was a little girl| I used to play games| with our neighbours'children‖ One day I went to call them| but I didn't find them‖ So| I tried| to find them‖ but I didn't

find them‖ So| I tried| to find them| I| ran| in a streets| I ran| very far from a house| and| when I sta| when| when I stopped| I found myself| in a street| which I had never seen before| in a street| yes| which I had never seen before‖ So| I look| I looked for someone| perhaps| he will recognize me| but I did not find anyone‖ I begin to cry| then| I sat near a man who| sold| sweets and| joys| fo for| children‖ I sat near him| and| I sat near him| and|

Question : What did you say to him?

Nothing| I did not say| I did not say| anything‖ Then| there was a| man| who noticed that I was crying‖ he went to me| and asked me why I was crying‖ I| told him the story| then he decided to take me to| the police station‖ I repeat| then he decided to take me to the police station| where| a friend| of my father's| worked‖ When he saw me [recog]| he recognized me‖ He asked the old man| where he found me| then the old man| told again the story my story| and| the police then| thank| thanked| the old man and| took me back| at home‖

SPEAKER M 20

It is| for| not| long time ago| I've been afraid of| of| of something| which is| the rain| which| makes| yes a lot of damage that| consequently| there are more| than| more died| more| more| persons died‖ A lot of persons died‖ In| Mohamadia | for example| and| my native town| it comes| from| the rain|and in the| dam‖ Yes| when the dams| the dams| were| destroyed| well| by the| the force of the rain| they| yes| the water came and destroyed the| the town‖ Yes| And my| native| town| was| far away f| from from| a very [(b-)]| a very big dam‖ It is called [(-)(-)]‖ I repeat‖ and my| native town| which is far away from| a very big| dam| yes| which is called| Assaâda| far away from| for| I think| twenty| or twenty two| kilometres‖ Yes| and when I have heard| that| the town| the part of the towns| were destroyed by the| either the| the rain| or the| the water of the dam| I was afraid that| the water of the| the dam| which is| yes| comes to the

town| and| destroy it ‖

SPEAKER F 19

I have been frightened in| in plane| last| last year| last holiday| summer holiday yes| yes‖ I've been very frightened‖ Nineteen| in nineteen in nineteen eighty four| in| September| three months ago‖ because| when| when I was at the airport| of Orly| I was going to take the plane| in order to arrive here| in Tlemcen‖ the police| when| we went| before taking off| when we| we entered the plane| we sat down| on our| our seat| without problems‖ Then we waited for| five minutes| and we thought| we| we thought| that we are going to| to take off| yes‖ But| we waited| we waited| and we| wondered| what was going to happen‖ Then| I asked| the| air hostess| the steward| and| I asked| why| we didn't|flew fly‖ and| the air hostess| told me| that| there was| someone| who had forgotten| to [(-)] his| baggage| or something like this‖ But| we were anxious‖ Because we waited| two hours| in the plane| without taking off‖ Two hours| yes‖ And it was| raining| it was very cold| at Paris‖ So| then| I heard| a man| after me| who| who said| that there was a bomb| in our plane‖ Then I got very very| very anxious‖ I was alone‖ I had [(-)]| no-one with me‖ Yes‖ And| it seemed to me that I was going to die| this day‖ Because we| we| they didn't| tell us| to go out‖ So| they let us in the plane| and they said that there was a bomb| in the plane‖ So| at| at the end| the plane| took off| two hours after ‖

SPEAKER M 16

It was| It was once| I| was driving| my brother's car| without| without| a driving licence| and| when I was driving| there was one who| come towards me‖ So I| yes| he| was| driving a car| and he come| towards me‖ Then I had to | to go to| an| a tree‖ Fortunately| I was not| [(-)(-)]| very| very hast‖ So I| I got| frightened| I| but there was not| any injuries or‖ I| imagine that| the| "gendarmerie"| will come

and| yes the police and "gendarmerie" we can say in| French| will come and| take me to prison or| yes| I wa| I was driving without a| driving licence‖ (...) There are many many things that happened to me but I can't| express| myself‖ I used| to| I I use to| walk| in the| darkness in a| wherever I| I was [(-)(-)]| come| home‖ For example| when I| leave| Oran| to| to go to Khemis Meliana| after that| after get after| leaving the train| I'll| I'll have to walk| more than| four (ki) (fo) four kilometres| [(-)(-)]| about| one in| one| one in the morning| after| (mi)| midnight ‖

SPEAKER F 8

When| I get| my| when I succeed my| in my exam Bac| I was supposed to| my exam| my Bac exam‖ I was supposed to do| to do English at the university‖ and when I pass| the first exam| in| at university| I| I failed‖ So I| got| not fright| yes I got frightened| if I will not be| do| my| if my hope| will not be| realized‖ So| I did| all| what I| could to do| in order to do| to| realize my hope‖ It was| yes| I was disappointed| because I I never| think that I will| fail‖ And especially in English| because| since my| childhood| I| I like| English‖ Yes| I imagine that I will| stay at home| what I [(-)]| what I dislike‖ And| specially| when| I had| my Bac exam| and| I realized that| even with my| my Bac| I will never do| English‖ So| yes| yes| and| and| this is what I wanted to do ‖

SPEAKER F 4

I| remember that| that| one day| I was| I was| ten years old| I remember‖ We have a little cat‖ and| one night| I was sleeping‖ And| I feel| suddenly| I feel| a noise| in the room‖ I| I think| that it was a ghost‖ I| think that it was a ghost‖ And I felt| very frightened| by this| noise‖ And| my my| heart| was| beating very hard‖ I envelop myself in| all the| the sheets yes| and don't move‖ And I didn't move‖ No I think| that it was a ghost‖ But| later I | I know that it was| just a cat‖ It was| near my| near my bed‖

Question : Did you wake anybody ?

No| I didn't wake| anybody‖ I was still | in the same situation| that| later I| I stand up and| switch on the| the light‖ And then I| realized| that it was just| my brother's cat ‖

SPEAKER F 5

I| remember that| when I was| eleven years old| my sister| forget to| forgets to| to shut| the door‖ And| and my parents ask| my parents| ask me| to| to do it‖ I| I have seen| a nasty film| at nine o'clock‖ And| when I| go| downstair| to| shut the door| I imagine| many things‖ And| at the| last| stair| the cat| a cat| and| when I| I was going| downstairs| the cat ran| and touched me‖ And it was dark I| didn't see| it‖ So I| I became| blue of| fright‖ And| my heart| battle| [(-)]| hard| and| I stopped and I| returned| I| returned back to| upstairs‖ And| I asked them| to shut the door| themselves| if they want‖ And I| didn't| I didn't| have| the courage to| to shut| the door ‖

SPEAKER M 14

We| we were| in front of| a lot of problem| and| there is| there isn't| any| direction or| someone| somebody to| to help us‖ And we must solve| our problems| alone yes‖ It's| really difficult‖ Because| the first time| we are in the| university| we can't| know| all| all the method| or| instructions| for doing something| taking paper for example‖ Nobody‖ We are obliged| to solve our problem alone‖ We must ask| we must| take| the| advice| of| the| ancient| student‖ (...) They| They were not sure of| if they can| they were not sure of| our| branch for example| 'Interprétariat'‖ And we'll| we we'll start a| course| courses| Sunday‖ Next next Sunday| yes ‖

SPEAKER F 9

When I was| twelve| twelve or thirteen| my| my mother was| very very ill‖ And| she had| 'cardiac'| yes‖ It was very| so important| that I was afraid| that my mother die‖ My| my

father was| in| in Bruxelles or I don't know| he| he was abroad‖ We| we were alone with our mother‖ And| it's very horrible‖ Yes| yes yes‖ I was sure that my mother will| will die‖ After few| after minutes| and I| have imagined| the family without| my mother and I| the responsibilities| my| my father's pain‖ And I| I have imagined a lot of things and I| I can't describe it because| it was very| very horrible| yes‖ Yes| I have learnt that| the| parents is the most important person we have in life‖ When my mother| tells me| do this and do this oh| you are boring me| and when| I| imagine| I remember this| this day| I| I| think a lot‖ All| everything my mother may| say me| it's| I have to accept it| and| I'm sure I| I lost| I lost her| a day| and I| I think always in that| in that way ‖

SPEAKER M 6

I'm always| frightened| frightened of| an unexcept| unexpected things‖ Things of my| of my imagination‖ When I hear a story like| the Pharaohs| they speak| about| they give us| they demonstrate| with| with scientific| proofs| that| there is a| there are| a lot of things| that| the conception| haven't reached| them‖ You can't know| what could happen| after our death‖ (...)

Talking about drug-addicts

There are many solutions‖ I can try with him| to| to prevent him| from smoking‖ In speaking with him| as| as a man| front another man‖ I must use| the [(-)(-)(-)]‖ I must use the conception| in solving problems‖ No‖ It doesn't please me at all‖ Because| it's not very good for health‖ And this isn't good| for| for their own situation ‖

SPEAKER M 12

The last two days| I feel| frightened by a fact| I get| in the night| I get up| and| and I| and I| put| me my coat| the shoes| the socks| too‖ and I| open the window| and I get out| have a walk| through the window‖ well I have | well I had a walk| I| my friends| my friends| are| behind me‖ They are

following me‖ And| then| when I'm going to do some| when I| I'm going to do something| which is| dangerous| they| they make me| they| they wake me| and I| I| I don't really believe in it‖ I| It isn't me‖ Yes| I can't imagine it‖ But I've done it| twice| I'm| I'm little frightened about it‖ But it| it has never| come to me| I've never done it| before‖ It's my first time‖ I don't know| how it| happens‖ I'm afraid about my subconcient‖ I don't know him‖ And my friends| are| a little afraid| because they said| they have | they have heard| that| a sleep walker| can take a| in the night| can take a knife| and| kill‖ But| so I'm a little afraid ‖

SPEAKER F 3

I get frightened| perhaps| when my| sister get married‖ She| she's| she's bigger than me‖ And I used to| to sleep with her‖ And when she she get married| when she gets married here| in Algeria| I had to go back in Marocco| because I'm living in Morocco| with my parents‖ And the first night I slept alone| oh I was very frightened‖ So it was in| in winter‖ There were lot of| of wind‖ I get very frightened this night‖ Sorry‖ I don't know| I begin to imagine lot of things| but| I don't know‖ I was small‖ I was still young‖ but| well it was in the night and I| I begin to imagine lot of| horrible things| and saw them| yes| it was dark| in the room| and| that's all‖ No| no| but when I was small| no| I don't hate darkness| but| when I was young| yes| I was frightened| about| about the dark‖ Now| I don't think so‖ No| Just| because| I used to sleep with my sister‖ So| when| when I begin to sleep alone| (..) No| I don't understand the question‖ Well| I feel| confident‖ I feel at ease with her| because she was| bigger and well| I don't know how to explain ‖

SPEAKER M 10

I had been frightened| once‖ Our house| has been| blasted by| an explosion‖ And| I was in my childhood| and it was| an explosion| that has been| [(-)] out| a| building of| three

floors‖ but| for God sake no one had been| injured| nor| there had been no| dead‖ And| only materials has been| had been smashed‖ But for| many| hours and days| it had been| very| hard| thing to| to recover‖ And| I think this it| this is| my only| time| I had been frightened‖ I was| for the time| I was| unconscious| because I was sleeping| and it happens| early in the morning‖ And| it| takes| so long| to| to| remove from the| [(-)'(-)(-)] of| stones and sands‖ I was glancing| round bits of wood and metal‖ and| I realized| that I was| I was| I had been| removed| from the [(-)'(-)(-)]| only two| two days ago| two days| after this| this happens‖ But at the moment I| I| I was unable to feel anything| because| it happened so| so quickly| that| noone| can tell| about| this| explosion at the moment ‖

SPEAKER M 11

In| my| childhood| in| my childhood| I used| to be frightened‖ Because I was a boy| and| from| friends| always| telling| told me| about| frightening stories‖ Well| well this| make me| make me| make me [(-)]| frightened‖ Yes‖ Well| it is| it is| of course it is| unbelieved| stories‖ It is unbelieved stories‖ Yes‖ But| as| I was| I was a| boy| and| we were| believing in this| stories| frightening stories‖ Well| When I| listen to| listen| to| these| stories| I feel| I feel emotional‖ Emotion and| and| I managed| to| to| to| to go to| yes| to go back home| because| because we were| because we were| standing| till| nine o'clock of the evening| of the night‖ So| it was dark‖ Yes‖ The darkness is| is an en‿emy ‖

SPEAKER M 15

I| I'll| have a cold| and| and sometimes I get red‖ This is the signs of| of| of [(-)(-)]‖ Sometimes| I| I| I stole| for example | something that| my parents can| [(di)] | didn't| [(-)]| permit to| permit me to| get it‖ And| after they| they know that I have| I have taken it| so I| I was very frightened‖

Question : What did you imagine your parents could do ?
First he will| he will punish me‖ That's all‖ What I think‖ No| after| they have| they have known| that I have| stolen| I| I be| afraid| frightened‖ (...)
Talking about drug-addiction
I think that| it's| it's a big problem for the society‖ and| it is| catas| catastroph| for people who| who do this‖ And| they| they| they'll get| disease| for example| perhaps someone be crazy‖ Like in Benisaf| in Benisaf| I know| somebody| I know a person| who| who smoke| drug‖ And he became| he is crazy now‖ Yes ‖
SPEAKER F 18
It was the| three| last years‖ When a| a crime happened in the| Dar Hayat| in Oran‖ A family was| killed by| three men‖ So| I went to the| Justice Palace| yes| I have a| cousin who is| who works there‖ So| she| she gave me the| she gave me the file‖ I looked it| and| I saw the pictures of| photos of the| children and their| grand mother| killed‖ It was a| very| horrible thing‖ And| I also| saw the| three men who| killed this family‖ And when I| got| out of the| the Justice Palace| I was afraid| because I| looked at every one| as| and I thought that| one of them| will be the| I thought that one of this| of| this people| will be the murder‖ So| at night I| I had nightmare and| and I regretted| for| for having watched| this| photos‖ This night especially| I| I imagined that if I was alone in| at home| and someone| knocks at the door| it will be| very| I realize that| I'm going to be| killed| this night ‖
SPEAKER F 1
Last summer| I was| I was at| at the cinema‖ I| I watched a film| it was a very| frightened| film‖ It was about| someone| who| killed his wife| and| and put| her body| in a fridge‖ And| and one day he died‖ So| [(-)]| and| one day he died‖ A [(coup)]| of| new| and a| a man| and his wife| came to| to rent| the house‖ And one| [(-)] and [(-)]| and| one night| he

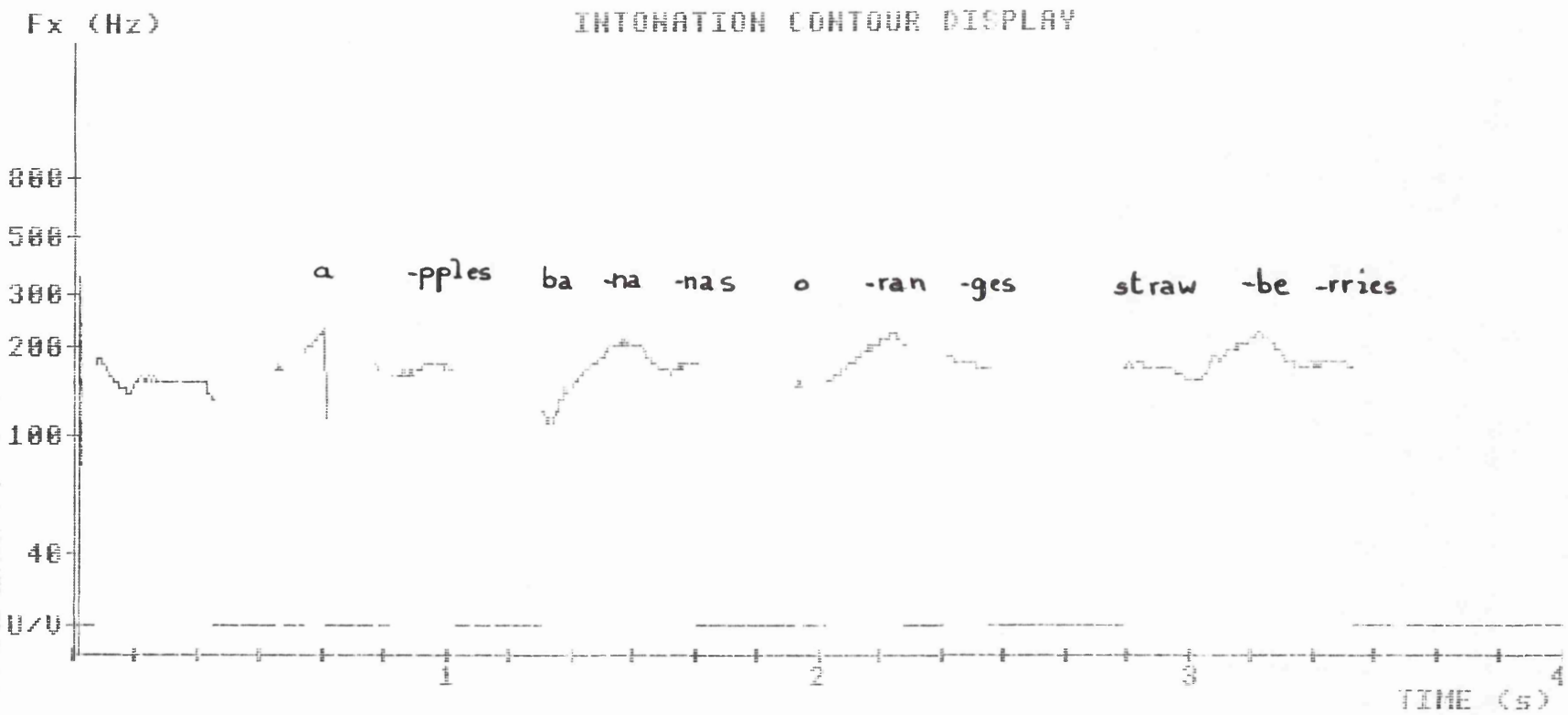
asks| his wife| to bring him| to fetch him| a cup of| milk‖ And when| she| she went downstairs| she entered the kitchen| and she| opened the fridge| she| found| the body| and especially the head‖ She was very frightened| and while| she| [(-)] she hurried‖ And| then the| it| became dark‖ It were| no light‖ She shouted| and [(-)]| and noone heard her‖ After a moment| she fell down‖ After a moment| her husband| came| and see her| on the| floor‖ He carried her| and put her in her bed‖ And| in the morning| when she| told her husband| what| happened to her in the night| he didn't believe her‖ And nobody believed her ‖

<u>SPEAKER M 13</u>

I faced| many| terrible| situations| which frightened me| and I still| and I still| remember| all of them‖ One| or the first one| was that when I was a child‖ And I| and| one night| I left| my home| to| a| wedding| ceremony‖ There| I spent| nearly three hours‖ And when| when we were| coming back| I find| or we found| a| a gang| a gang| in the way| waiting for us‖ Yes a group of people‖ When we approached the| when we approached them| there| they began insulting us‖ So| my| my colleagues| my colleagues ran away‖ and I did too‖ I ran too‖ Pardon‖ Yes I was| on foot‖ And| I ran‖ And just when I was running| someone|one of the gang| one of the gang| reached me| caught me‖ And| and| and| kicked my nose‖ My nose| was| bleeding| I carried| I felt unconscious| unconscious‖ I carried the way| the way| when I| and when I| recovered| I carried my way| home‖

<u>Question</u> : <u>Were you frightened</u> ?

Of course I was‖ Yes‖ No| they were not boys| all| men| adults‖ I imagine they| could| kill me ‖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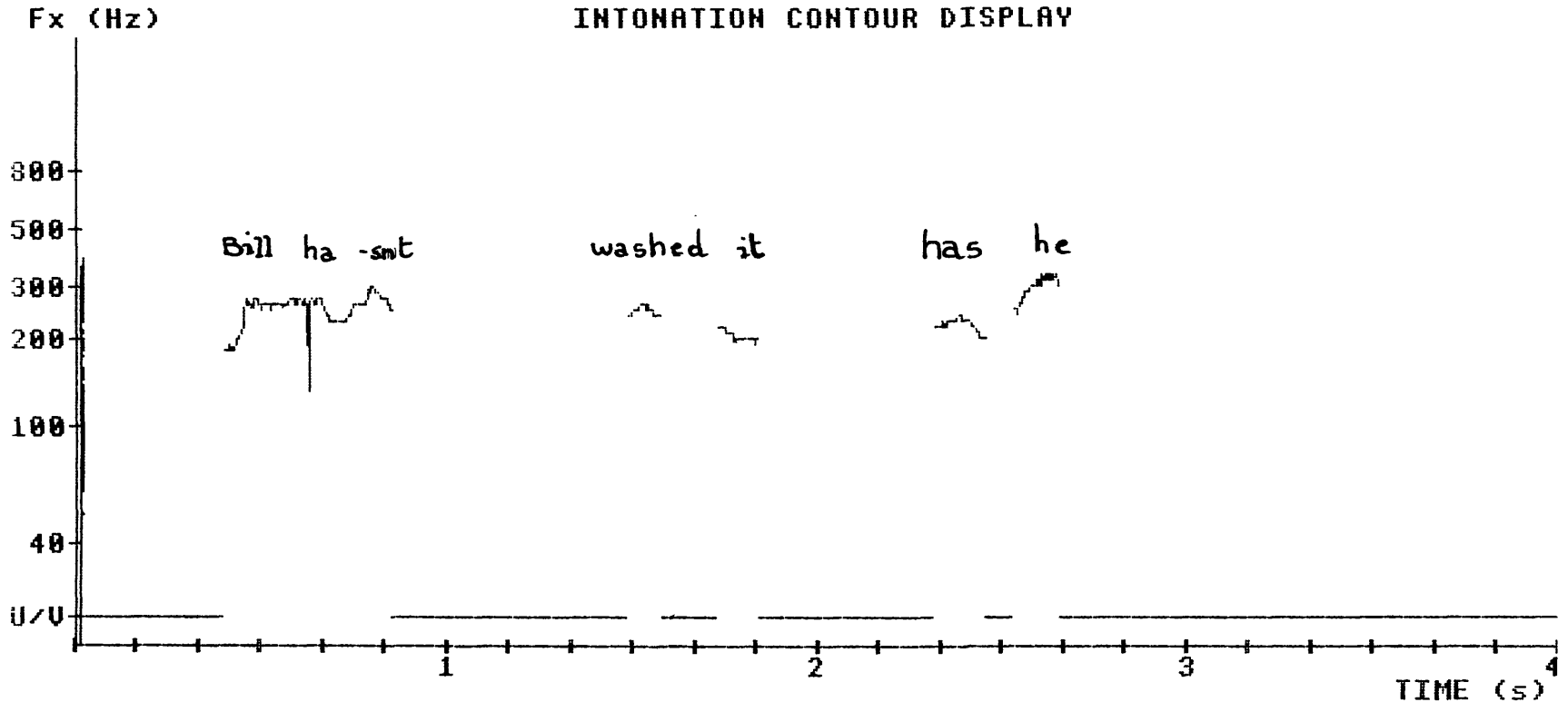
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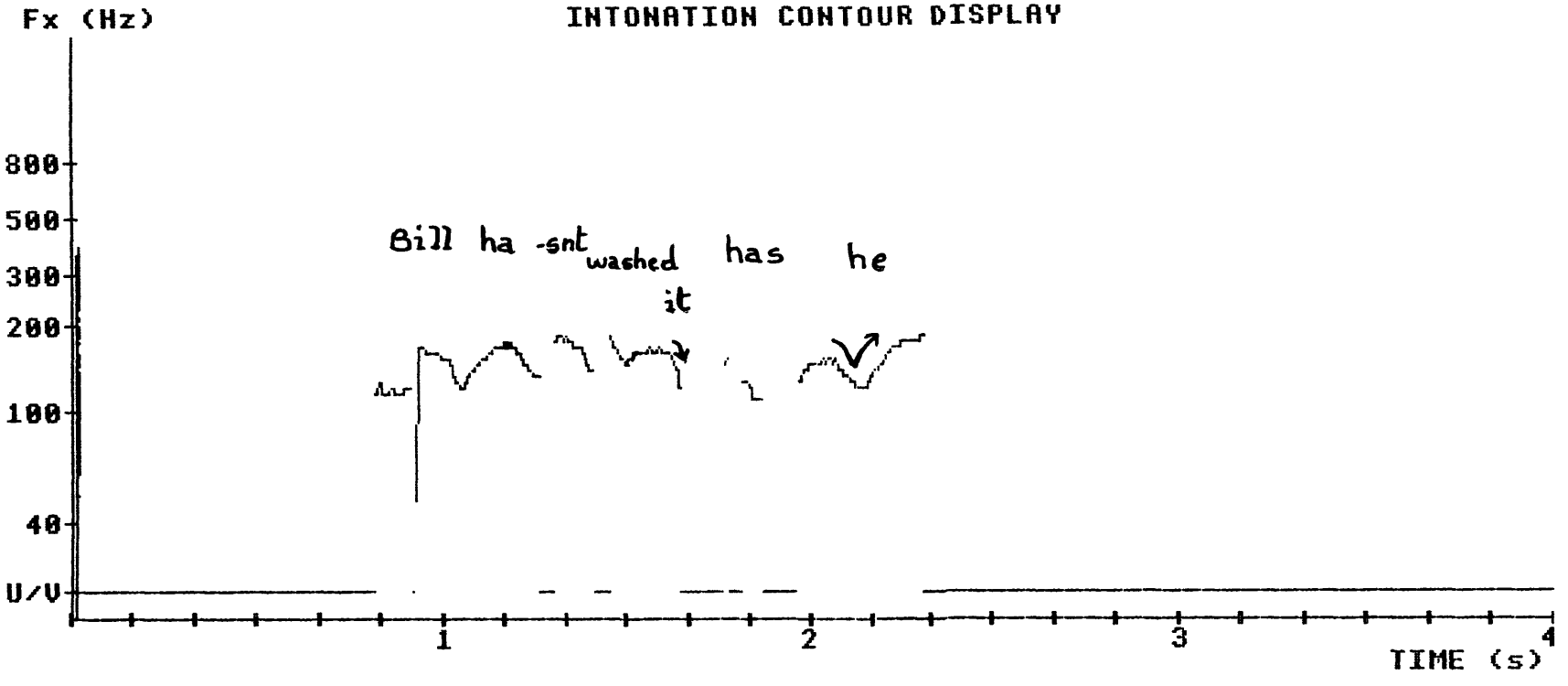
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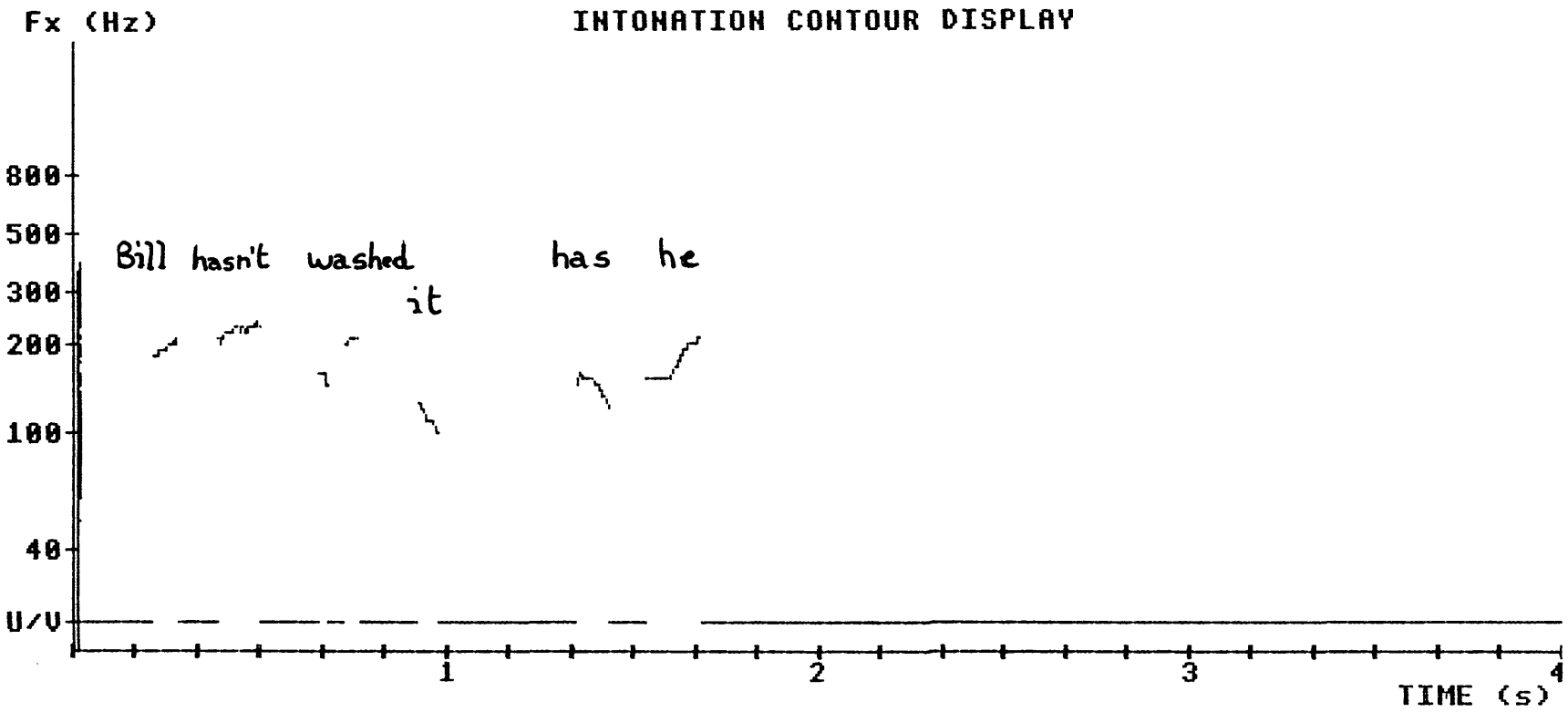
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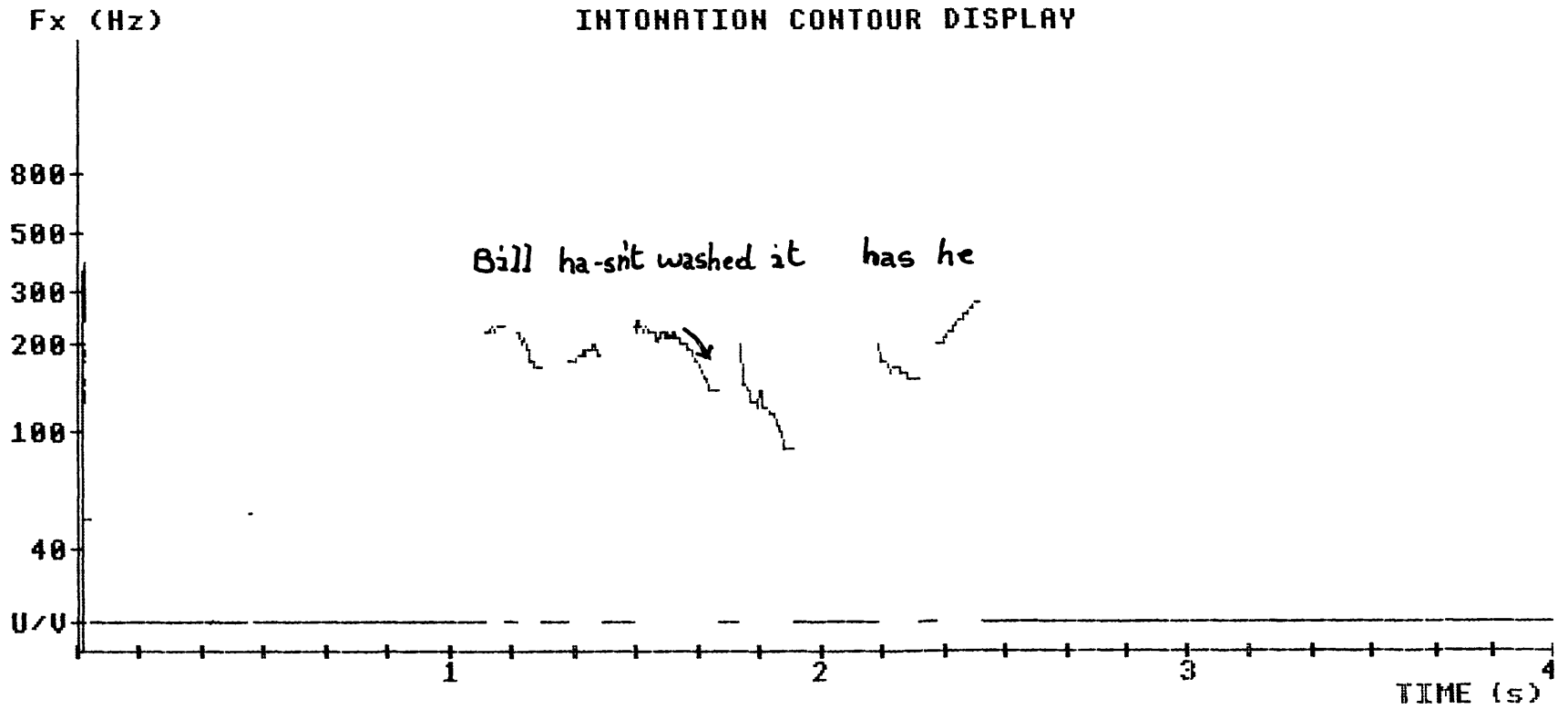
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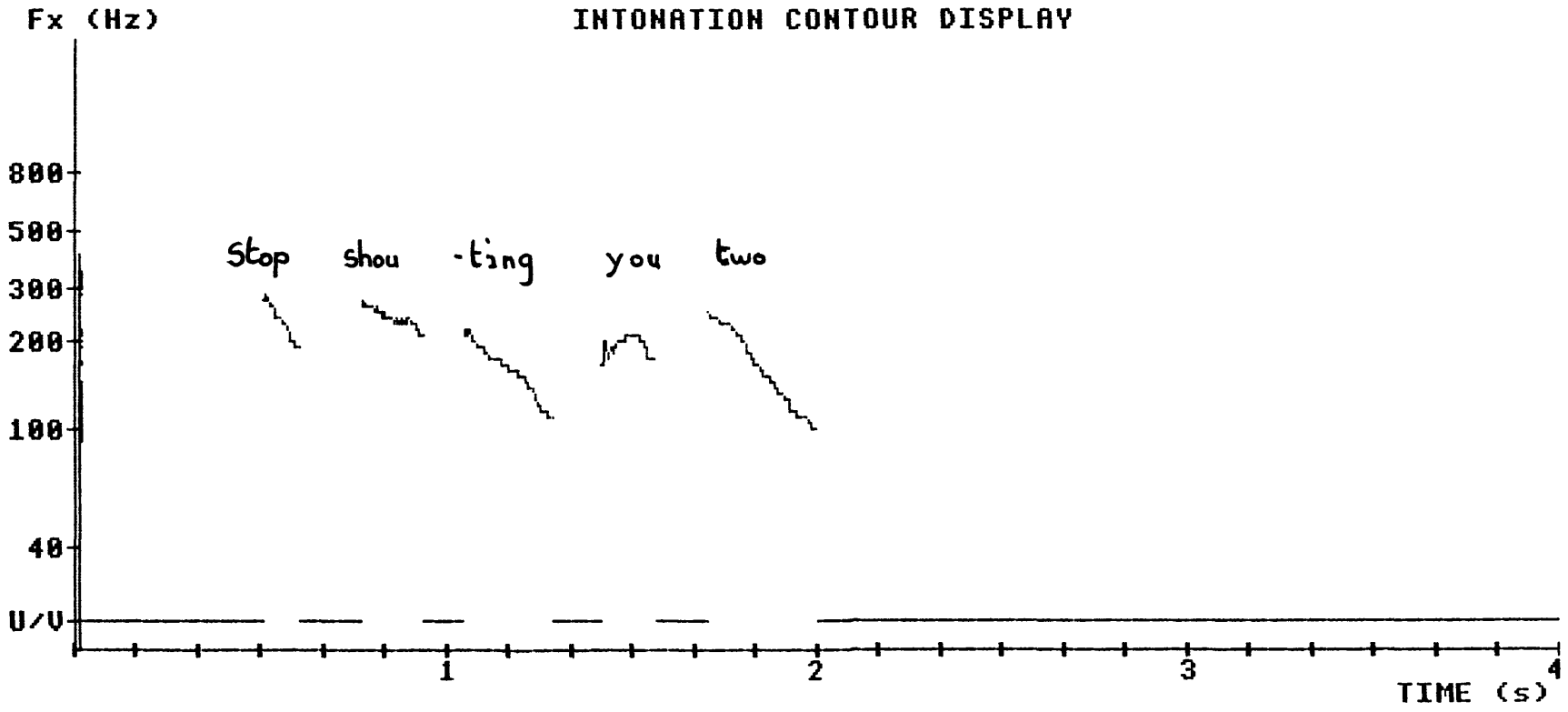
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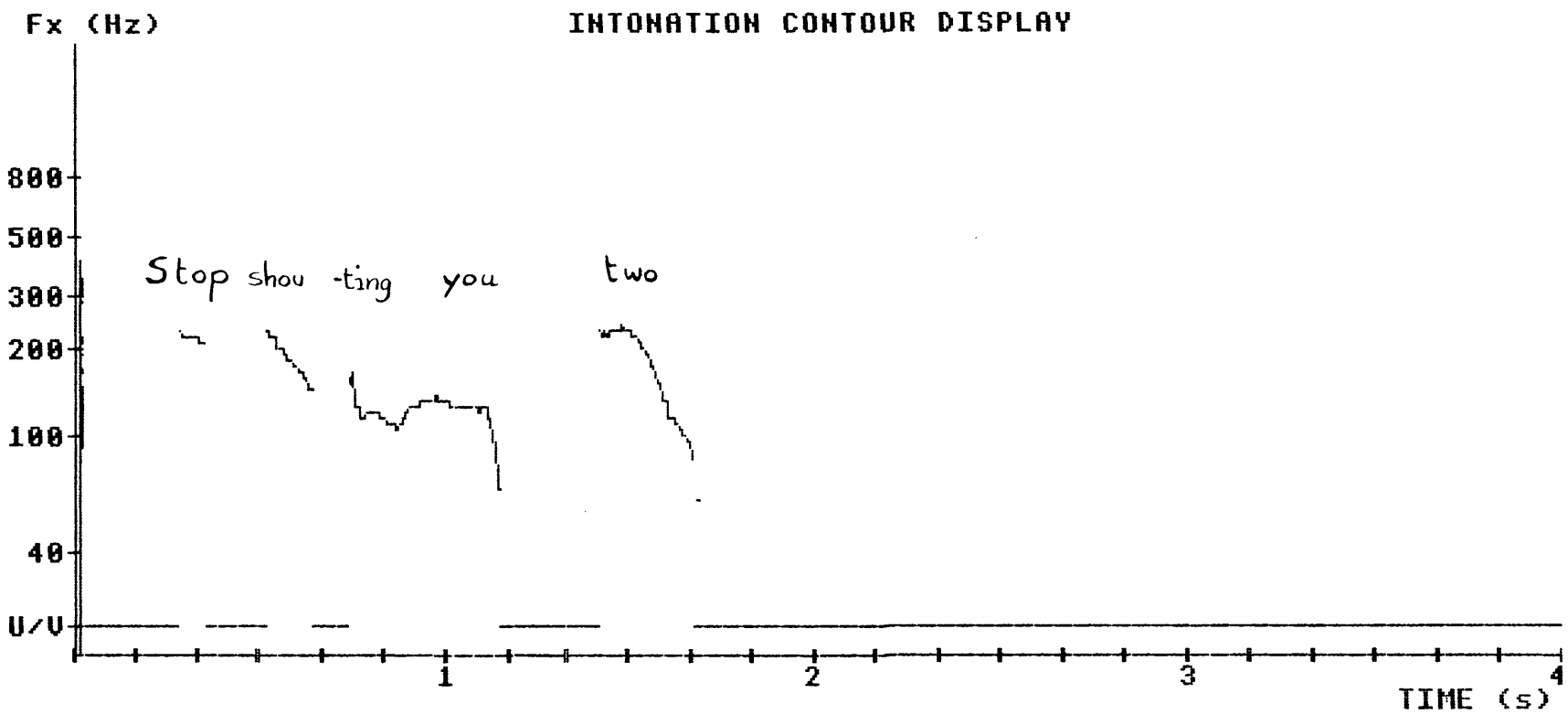
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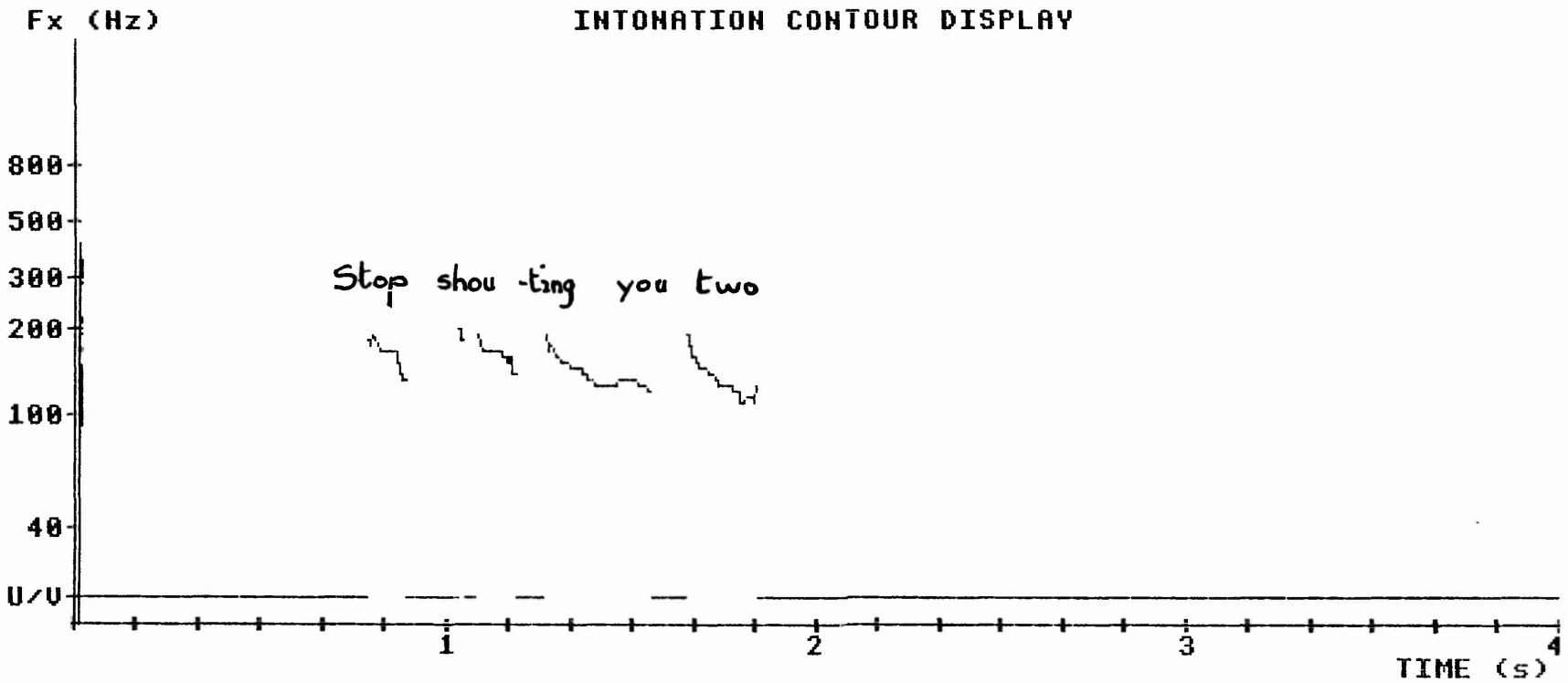
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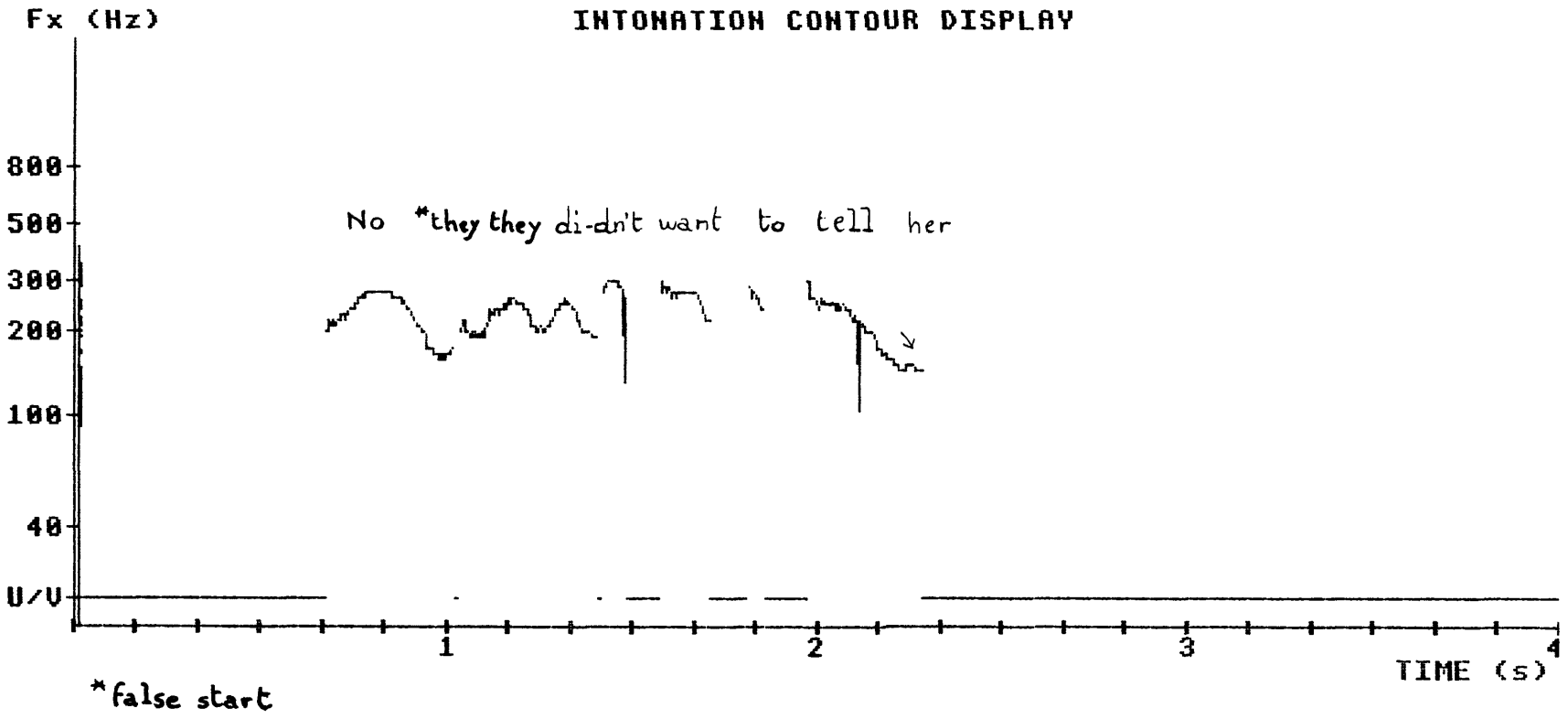
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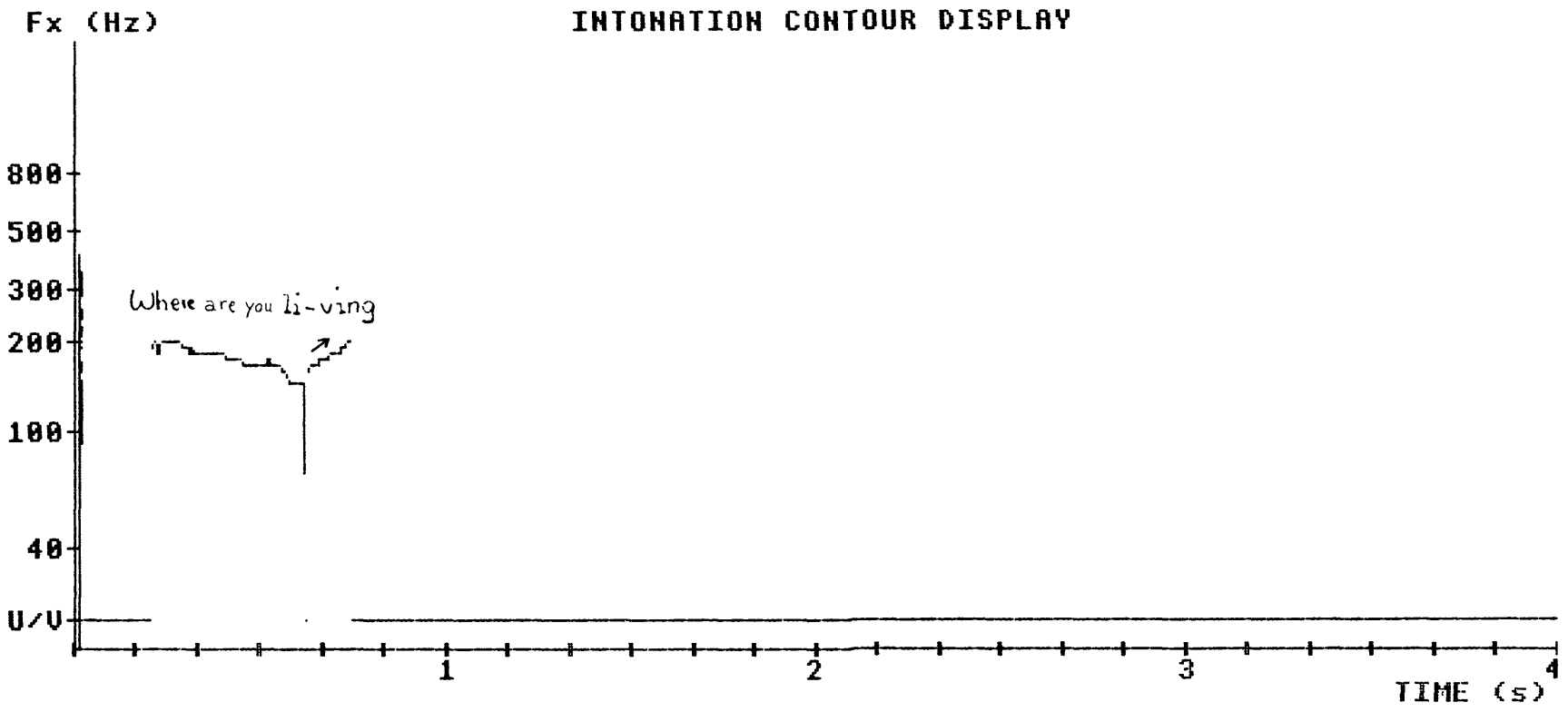
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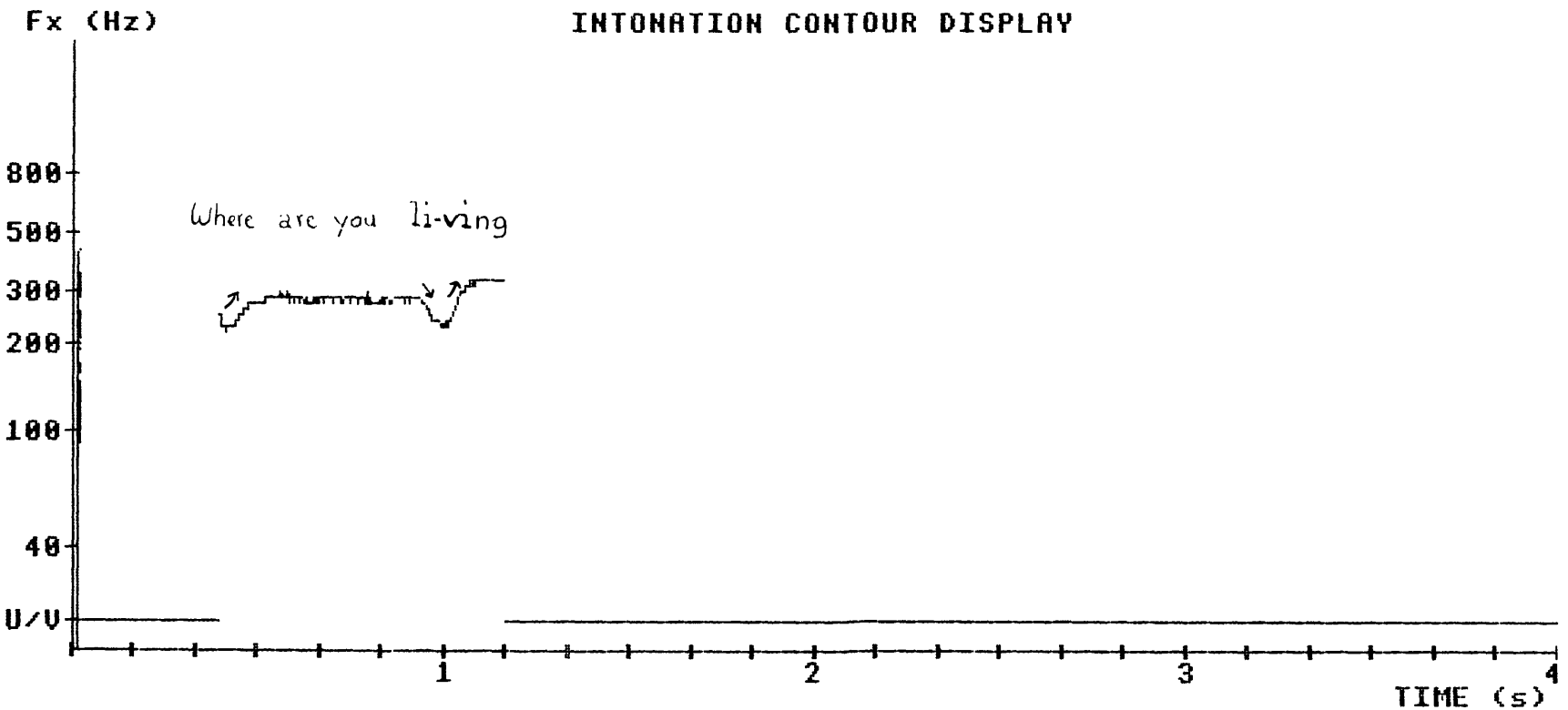
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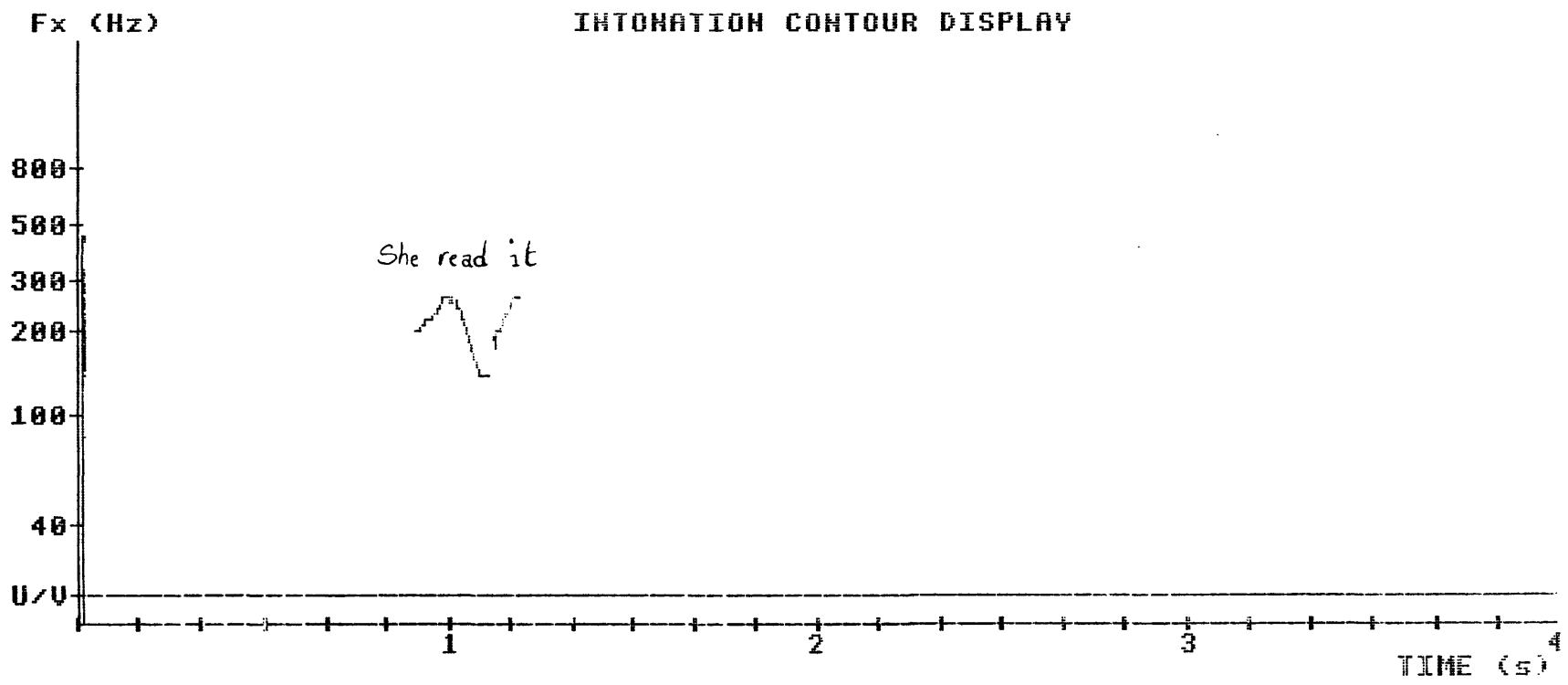
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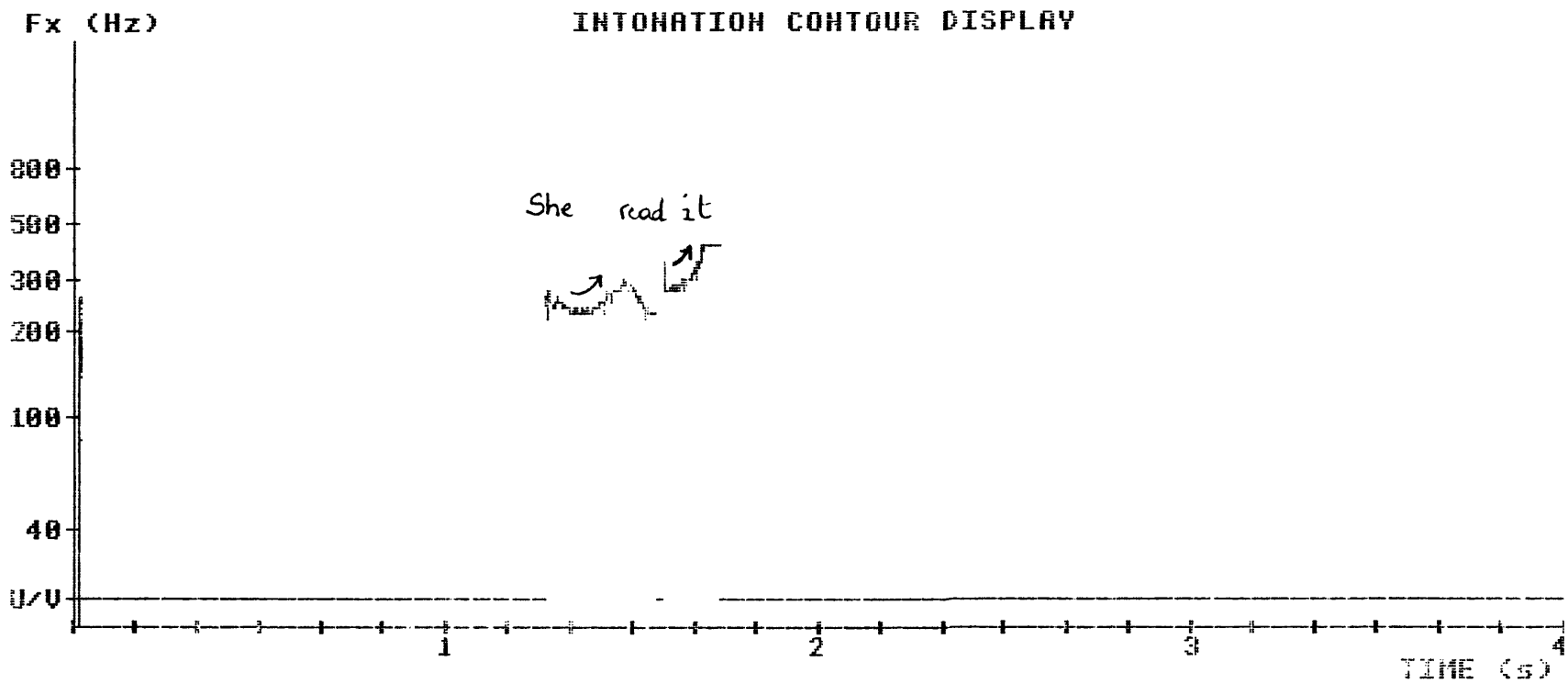
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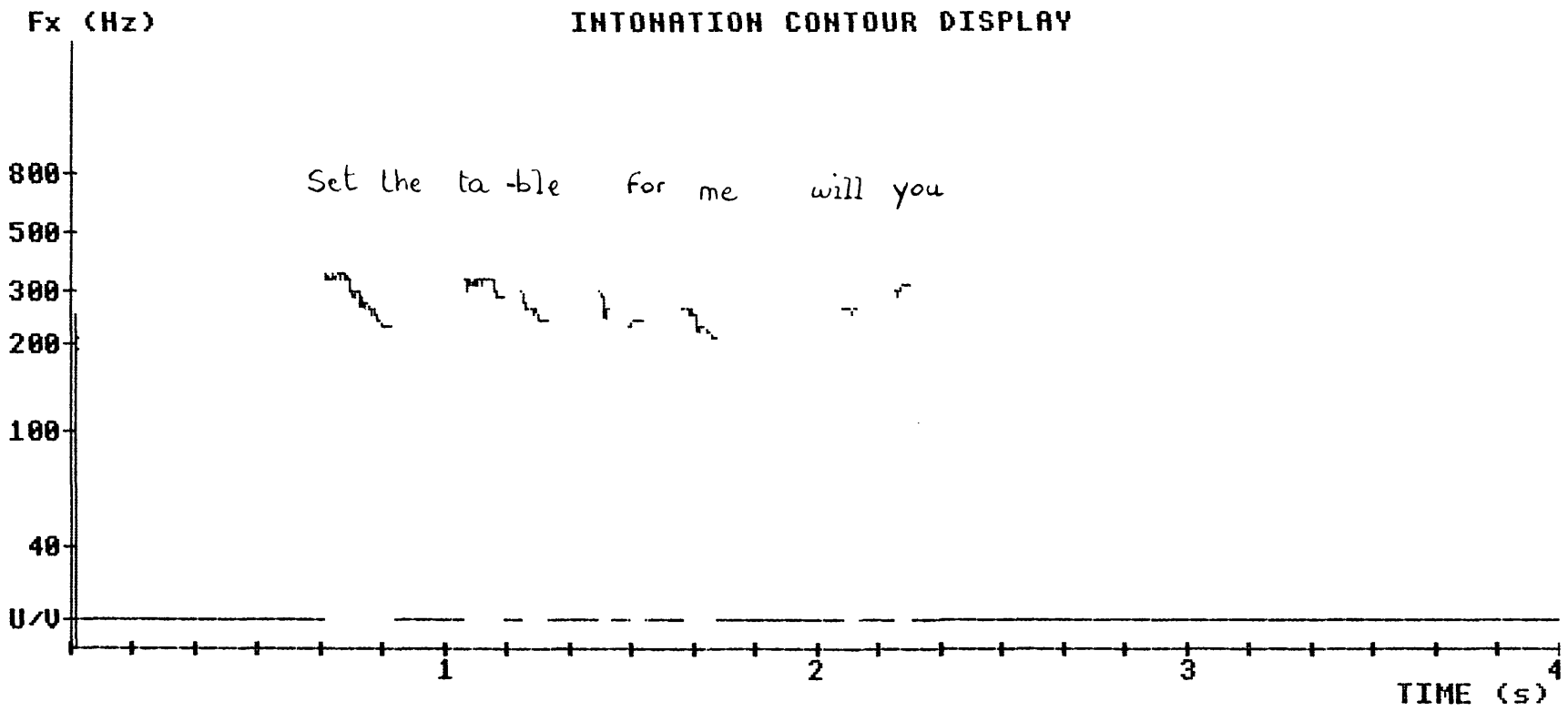
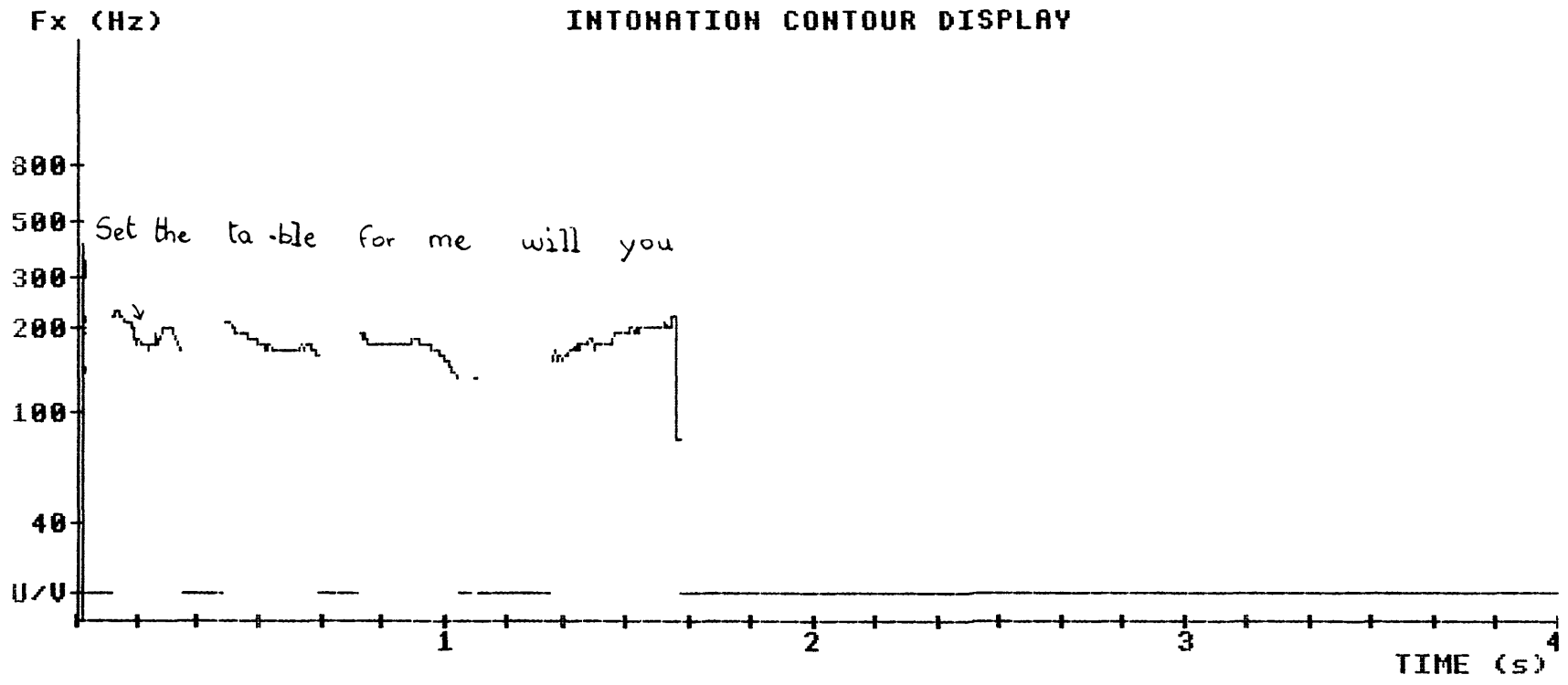
TIME (s)

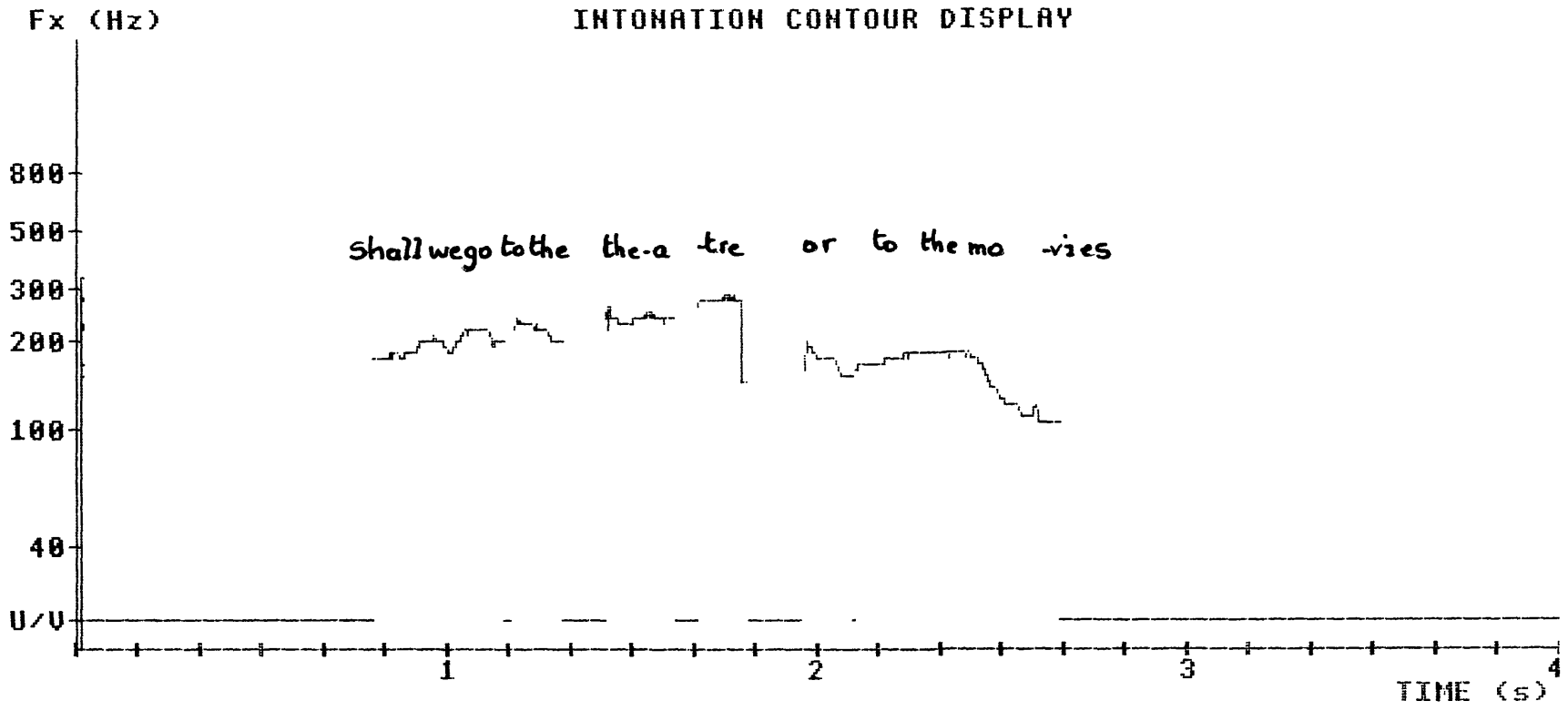
Print 13 (F8)


Fx (Hz)
INTONATION CONTOUR DISPLAY
800
500
300
200
100
40
U/V
Set the ta -ble for me will you
1
2
3
4
TIME (s)

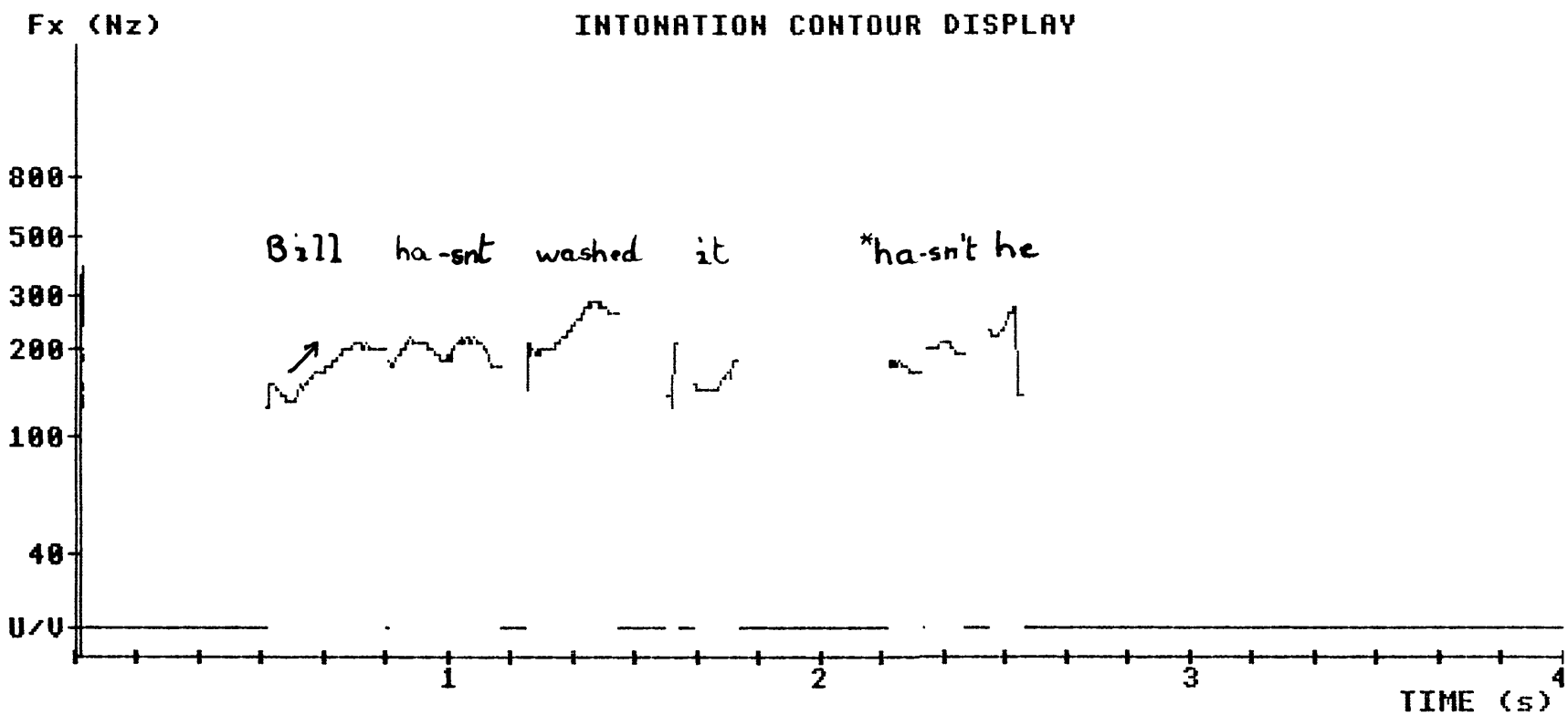
Print 14 (F5)


Fx (Hz)
INTONATION CONTOUR DISPLAY
800
500
300
200
100
40
U/V
Set the ta-ble for me will you
1
2
3
4
TIME (s)

Print 15 (M11)


Fx (Hz)
INTONATION CONTOUR DISPLAY
800
500
300
200
100
40
U/V
shall we go to the the-a tre or to the mo vies
1
2
3
4
TIME (s)

Print 16 (M12)



* Speaker's mistake

Print 17 (M12)

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