

ENGLISH INTONATION

Intonation:

A Suprasegmental Aspect of the English Language

Dina M. Al-Sibai

English 418

Structure of English II

Professor Mahmmoud Saleh

May 20, 2004

Introduction

Though the importance of intonation cannot be overemphasized, it can be illustrated by the simple and commonly heard lament, "It's not what you said, it's how you said it!". Of course, this is in reference to the intonation pattern of words or phrases being uttered rather than their lexical content. Equally significant is the fact that native speakers are often unaware of intonation and its role in their language. This applies to English as well as to other spoken languages. Simply put, it means that while native English speakers can easily recognize the grammatical and pronunciation difficulties faced by non-native speakers, and thus make allowances for their errors, they are unable to do so for intonation. More often than not, intonation errors made by non-native speakers may not be recognized and, hence, may lead to misunderstanding. An example in point is when non-native speakers mistakenly use intonation patterns which convey to native hearers unintended notes of rudeness. Unaware of possible intonation errors, native hearers may take the perceived rudeness to be deliberate (Taylor, 1993).

It is widely accepted that students who wish to acquire oral competence in a foreign language need to be trained not only to communicate information, but to do so in the same way as native speakers. Various studies have shown that most speakers tend to form subjective evaluations of other people on the basis of their speech habits. Thus, the non-native speaker of a language, English for example, would be particularly at a disadvantage. In Lantolf (1976), Lane and Buiten contend that "Native speakers of the language view the novice speaker at best with suspicion and at worst with ridicule and hostility" (p. 272). This buttresses the argument that intonation is a strong aspect of language which has always had its effect on communication. Pike in (Hewings, 1995) clarifies this point with the contention that "We often react more violently to . . . intonational meanings than to . . . lexical ones; if a man's tone of voice belies his words, we immediately assume that the intonation more faithfully reflects his true linguistic intentions" (p. 251).

However, there are those phonologists who do not whole-heartedly embrace this point of view. In fact, there has always been some lively debate on the degree and quality which intonation contributes to successful communication. Ranalli cites Roach who suggests that "Reports of

miscommunication are overestimated, and that when nonstandard English creates misunderstanding or causes offence, the root of the problem is on very few occasions found to be intonation” (p. 2). Despite such doubting comments, many professionals working in L2 (Second Language) or ESL (English as a Second Language) environments tend to accept popular research and anecdotal data showing persistent problems and difficulties arising from intonational misunderstandings between native and non-native speakers. In turn, this situation gives intonation a significant role in advancing the degree and quality of daily communication between the two groups (Ranalli, 2002).

1. What is Intonation?

It is generally believed that spoken sounds occur strung together, one after the other. More precisely, speech is a continuum; a continuous flux of initiatory, phonatory, and articulatory states and movements, constantly changing, often overlapping and interpenetrating and influencing each other. According to Catford (1992), when people look at isolated sounds, they are artificially cutting up that flowing chain of events into a series of segments or segmental sounds. In reality, these segments are the speech-sounds that are isolated out of the continuum. Although the segmentation of speech is an artificial procedure, linguists are obliged to do it to arrest the flow, as it were, in order to pin down individual sounds for detailed study.

However, one must also give attention to those phonetic phenomena that are characteristic not so much of individual segments as of their relations to each other, or of stretches of the speech-continuum that are greater than one segment in length. Since such phenomena take account of more than just segments, they are sometimes called suprasegmental or prosodic features. According to Kreidler (1989), it is well known that English utterances are seldom spoken in monotones. For one, native English speakers produce melodies of varying kinds, with the voice rising and falling. Such melodies are technically called intonation.

Opinions do differ when defining intonation. Ladd (1980), an eminent Canadian scholar of phonology, defines it as “The use of suprasegmental phonetic features (pitch) to convey postlexical or sentence-level pragmatic meanings in a linguistically structured way” (p. 6). On the other hand, in

Ranalli (2002), Cruttenden, equates it specifically with pitch movements, while Coulthard identifies it with prosody which would include not only pitch movements but also loudness, length, speed, and even voice quality. Pitch, however, seems to be the common thread running through most definitions or descriptions of intonation. Cruttenden describes pitch as the “perceptual correlate of fundamental frequency” (p. 1), which, in essence, is the continuous variation in the sounds we perceive as a result of the vibration of the vocal cords. As such, intonation can be described as the movements or variations in pitch to which we attach familiar labels describing levels (e.g. high / low) and tones (e.g. falling / rising), etc. (Ranalli, 2002).

To be sure, the falling and rising of tones can be sudden or gradual and, thus, may be grouped together in various combinations (rise-fall-rise, fall-rise-fall, etc.). It is common knowledge that speakers use pitch to send various messages. Wahba (1998) provides the following example which illustrates the significance of pitch in everyday communication. If Ali says: "There isn't any salt on the table," Layla might repeat the same words but with gradually rising pitch. This would have the effect of sending a message such as: "Are you sure? I am amazed. I am sure I put it there." Alternatively, Layla might want to send the message: "There is salt somewhere, but not on the table," in which case she could do this by using a falling then rising pitch on the word "table" (p. 32).

Many phonologists believe that another important component of intonation is the phenomenon called prominence. This is the tendency for speakers to make some syllables more noticeable than others. Such action is usually accomplished by pronouncing syllables louder and longer, assigning them a different pitch, or articulating their phonemes - especially the vowels - more distinctly. Prominence is also referred to as emphasis, focus, main stress, nucleus, or tonic accent. Equally important is to stress that pitch level, pitch movement, and prominence are all relative values. For example, “one speaker's ‘mid’ pitch would be another speaker's ‘low’ pitch”. Values do vary from speaker to speaker and in accordance to the context of the situation (Ranalli, 2002).

Researching this topic, Kumaki (2003) cites Brazil who believes that the tone unit is a stretch of speech which carries the intonational features of certain binary choices; a choice of one meaning rather

than another. The beginnings and ends of tone units are marked by the symbol //. This should demonstrate that if either one or two syllables in a tone unit is made more emphatic or noticeable than the others, the syllables are then believed to have prominence. Such a feature should distinguish them from all other syllables and, thus, draw the listener's attention to the particular word or message being conveyed. Producing prominence also involves complex changes in loudness, pitch, and length in such a way that syllables with such features are described as prominent syllables, where a meaningful either/or choice has been made by the speaker.

Brazil goes on to explain that prominent syllables are indicated by the use of capitalized letters. If the speaker makes one syllable of a word prominent, he or she is effectively telling their listener that this word occupies a selection slot. In turn, this selection is affected by the particular circumstances of the moment and is called "context of interaction" (Kumaki, 2003). According to this distinct view, intonation is a means for organizing our language into patterns that fit the present communicative need. "The communicative value of intonation is related to the purpose that a particular piece of language is serving in some ongoing, interactive event" (p. 16).

2. Acquiring Intonation

There is some evidence that intonation is perhaps the earliest acquired of all language features, and this may account for our comparative unawareness of it and how it functions. According to Ioup & Weinberger (1987), many researchers have noted that fluency in syntax seems much more attainable for adult learners than a native-like pronunciation. Among those cited by the two writers is Lenneberg, who contends that although adults can communicate in a foreign language, foreign intonation cannot be overcome easily after puberty. Lenneberg posited a critical period for language acquisition that terminated at puberty, due, he thought, to the completion of "hemispheric lateralization and the end of cerebral plasticity" (p. 334).

Another expert mentioned was Scovel who is regarded as one of the first L2 researchers to account for this difference. Scovel thought that neurological maturation was responsible for adult L2 performance. This phenomenon is believed to be related to the fact that phonological output is

dependent on a “neurophysiological mechanism” (p. 334). Although Scovel gives no scientific evidence to support this view, he concentrated much of his work on the case of Joseph Conrad who acquired English as a young adult. Although Conrad went on to become a major English writer, his pronunciation of English never lost its characteristic non-native accent. In 1984, Ioup published a study in which he found that in judging the intonational patterns of adult L2 learners, linguistically trained speakers of English were able to group together learners belonging to the same first language background using only phonological information. On the other hand, those same trained speakers were unable to do so on the basis of syntactic cues (Ioup & Weinberger, 1987).

Other studies mentioned by the two authors include those by Oyama, Krashen, Guiora, and Peck. Oyama concentrated his research on testing adult Italian immigrants with varied ages of arrival (from 6 to 20) and variations in length of stay (from 5 to 18 years). Native-like phonological ability was correlated with the age of arrival, but not significantly with the number of years in the United States. Native-like pronunciation was found in the earliest-arriving subjects. This observed difference is accounted for in several ways. Scovel, for one, believes that it is based on neurological factors. Krashen, however, dismisses this view on the ground that language lateralization is complete by age five and therefore cannot be responsible for the end of the critical period at puberty. According to him, biological determinants should not be used to explain the foreign pronunciation of older children because the right-ear advantage for language stimuli continues to increase until the age of five, at which point children begin to act like adults.

In fact, the trend in L2 research has been to turn away from neurological explanations for the age differences found in pronunciation ability and to develop instead explanations based on sociological variables. Among the first to do so was Guiora who suggests that the sound system is tied intimately to self-identification and, thus, cannot be altered to adapt to different phonological settings. Support for this hypothesis is drawn from a study on the effects of alcohol ingestion on pronunciation. An indirect association is made between the study’s findings and the “construct of ego permeability” (p. 335), suggesting that certain amounts of alcohol ingestion induce a flexible psychic state. Another

champion of sociological variables is Peck. Concentrating her research on native-non-native interactions, Peck, in Ioup & Weinberger (1987), suggests that children learning a second language engage in more sound play when interacting with other children than they do when interacting with adults. The focus on and manipulation of sounds that characterize child-child discourse could be one reason children gain a better command of intonation and phonology in general.

3. Intonational Functions

It goes without saying that intonational choices made by speakers - native and otherwise - carry linguistic information and perform a variety of functions. Kumaki (2003) makes it clear that phonologists do differ on intonational functions. He states that Crystal proposes six functions: grammatical, informational, psychological, textual, indexical, and attitudinal/emotional. Roach champions four: attitudinal, grammatical, accentual, and discourse; with the contention that the last two could be grouped into one. Halliday suggests three functions: grammatical, informational, and attitudinal. It is clear that three basic intonational functions – attitudinal, grammatical, and informational or discourse -- are commonly suggested by the above researchers. However, these functions have seen their share of praise as well as criticism.

3.1. Attitudinal Intonation:

Writing on attitudinal intonation, Fry (1974) mentions a number of pioneering studies. In several preliminary experiments, Denes asked his subjects to characterize patterns in any way they wished, then formulated descriptive labels which could be used in subsequent experiments. Osgood et al. tried to arrive at the attitudes underlying the use of a number of intonational patterns. The technique consisted of asking subjects to rate each pattern on a seven point scale, while linking a contrary attitude such as: 'bored - interested', 'rude - polite', 'timid – confident', etc. An analysis of the responses was then carried out in order to discover the relative weight of the emotional factors which underlie one's judgment. The researchers found out that patterns with a narrow range of frequency variations were the most unpleasant, while smooth changes in one direction were generally less pleasant than broken curves. They also found differences in the judgments according to the grammatical category of the

sentence; statements could be pleasant with either a final rise or fall while questions and commands were pleasant only with a final rise (Fry, 1974).

In his 2003 dissertation, Kumaki outlines the work done by Cauldwell and Allen. Citing some of the descriptions from ‘Nine ways of saying yes’ by Crystal, the two researchers point out the problems of pinning down the attitudinal meaning of tone choices as follows:

1. The imprecision of the descriptions. It is difficult to be precise about emotional nuances. For example it is difficult to say what the difference is between the meaning ‘detached, unemotional statement of fact’ (which Crystal associates with a low fall) and ‘routine, uncommitted comment; detached and unexcited’ (which he links to a mid fall).
2. Crystal allows a tone to mean something (e.g. the low fall’s unemotional) or its (near) opposite (e.g. the low fall’s dramatic) depending on the context. This is tantamount to saying that any tone can mean anything, depending on the context. This is a serious problem for a systematic description.
3. Crystal’s description is not a purely linguistic description. He indicates that the meaning of an intonation choice may depend on associated gestures or facial expressions. This is almost the case, but this makes it very difficult to systematize the description (as cited in Kumaki, 2003, p. 11).

In fact, the third comment by Cauldwell and Allen comes close to that of McCarthy’s point of view. McCarthy, in Kumaki (2003), also endorses this critical view when claiming that almost any emotion can be accompanied by any tone. He goes on to suggest that without lexical or contextual information or other vocal clues, it is impossible to reliably label a tone contour as displaying a particular attitude or emotion. Kumaki goes on to state that Crystal himself writes of an experiment which demonstrates that native speakers find it virtually impossible to agree when matching attitudinal labels with intonation contours.

Generally speaking, discussions of the function of intonation in English often center on the relation between intonation and attitudes. In fact, the main function of intonation is seen by many phonologists as conveying attitudes. This is reflected in O’Connor and Arnold’s classic discussions of English intonation in Taylor (1993). While it is undeniable that intonation does convey attitudes and that there is a strong and important relationship between intonation and attitude, it is very difficult to say anything sensible about it, simply because there is no general consensus on how to describe or define attitudes. This is an extremely subjective issue. Similarly, there is no agreement on how to

associate particular intonation patterns with particular attitudes. There seems to be no consistent relationship.

While many of the examples given by O'Connor and Arnold are quite convincing, it seems impossible to draw any general conclusions. Too much depends on individual circumstances. Taylor (1993) states that in part, the reason for such difficulties lies in the fact that intonation is not the sole factor involved in conveying attitude. Many other factors, such as loudness, quality of voice, speed of delivery, facial and bodily gestures, etc., also contribute significantly to the conveying of attitude. The result of all this is that we cannot really say anything constructive about intonation and attitude. Hence, it is far better, especially when it comes to teaching and learning, to deal with intonation in terms of information structure, grammar, and discourse.

Attempts to relate phonological choices (e.g. pitch, contour, type, etc.) to attitudinal meanings have a long tradition in intonation research. According to this tradition, attitudinal meanings are assumed to be the result of the choice of nuclear tones or composite pitch contours in conjunction with sentence types. Investigating this issue, Wichmann (2002) ponders the works of several phonologists. Halliday, for one, claims that a 'wh - question' with a rising tone is 'tentative', while a 'yes/no - question' with a falling tone is 'peremptory'. Hence, a statement ending with a rise can be "challenging, aggressive, defensive, or indignant" (p. 2). For O'Connor and Arnold, on the other hand, 'wh - questions' with a 'high drop' (as when giving their contours imaginative names) are said to sound "brisk, businesslike, considerate, not unfriendly, lively, or interested" (p. 2).

However, it quickly becomes clear that the profusion of meanings frequently ascribed to one and the same contour serves only to show that the contour itself 'means' none of them. Yet we know intuitively that such meanings can be generated, and so the current challenge is not only to describe them but to explain how they arise. In 1984, Scherer et al. in (Ladd, 1996) developed a 'configuration' model which was analogous to, but more rigorous than, previously produced examples that some may describe or even dismiss as impressionistic or anecdotal in nature. Scherer's team found that emotional meanings could be generated by the conjunction of contour and sentence type. This situation made it

possible to suggest that 'yes/no questions' with final fall, and 'wh – questions' with final rise could be judged as less agreeable and less polite than the 'normal' association of 'yes/no questions' with final rise and 'wh-questions' with final fall.

With these findings one may simply conclude that the conjunction of utterance types and phonological choices plays an important part in conveying attitude and emotion. Another phonologist who is not a big enthusiast of attitudinal intonation is Corbett (2004). According to Corbett, this type of intonation isolates intonation tones and gives them labels, such as 'surprise, agreement, disagreement etc.,' (p. 1) thus defining our emotions at the time of speaking. Corbett also questions the usefulness of attitudinal intonation. An example in point is the following interaction: " Student A: Did you know that Marco Polo discovered China? Student B: Really!" (p. 1). As can be surmised, there is no real context for Student B's surprise. Such encounters are often criticized for lack of context and their need of lexical and contextual information to make sense.

Investigating intonation contours of 'please - requests', (Wichmann, 2002) suggests that they can be classified into two categories, 'private' and 'public'. For the most part, the first category deals with conversations between equals in informal settings (e.g. relatives, friends, colleagues, etc.). On the other hand, situations classified as 'public' mostly represent unequal encounters in formal settings (e.g. employer/employee, physician/patient, etc.) The 'please-requests' in public situations are nearly all uttered by the more powerful of the participants to the less powerful. These requests, whether in the form of modal interrogative or positive imperative, almost invariably end with a low tone (L%). Requests in private situations, however, almost always end with a high boundary tone (H%). Thus, intonation contours have a consistent pattern for both imperatives and modal interrogatives according to the attitudes of the speaker in a given situation.

Another example is the utterance 'Let's go.' It can first be said as a relatively neutral imperative, then as an impatient command, and finally as an attempt to cajole or persuade, as Chun (1998) points out. The differences in the intonation curves are apparent, and learners can first be asked to practice producing these different patterns. They can then be presented with different situations or

scenarios and asked how they would respond. For instance, they could do role-plays of: (a) saying ‘Let's go’ to a friend, (b) saying ‘Let's go’ as a sports coach would say to a team, or (c) saying ‘Let's go’ as a polite request to a superior. In these examples, the impatient command has a higher peak on ‘go’ and a steeper falling pitch curve. The cajoling utterance shows a more sustained, level pitch and does not fall at the end. In brief, speakers do make real assessments of what attitude or intention they wish to convey by means of intonation (Chun, 1998, p. 67).

3.2. Grammatical Intonation:

Describing grammatical intonation, Crystal, in Kumaki (2003), declares that it helps to identify grammatical structure in speech, performing a role similar to punctuation in writing. It may also identify clause and sentence units and contrasts questions/statements. According to Halliday, as cited in Kumaki (2003), grammatical intonation relates to grammatical mood (question/statement, etc.) as well as to modality (possibility, validity, etc.). Kumaki also cites Roach who believes that

“grammatical intonation helps language speakers and learners to recognize the grammar and syntactic structures, e.g. boundaries between phrases, clauses, and sentences. It also facilitates our knowledge of the differences between questions and statements as well as the intricacies of grammatical subordination” (p. 10).

Like attitudinal intonation, grammatical intonation has undergone extensive research and has been the subject of several investigations and experiments dealing with synthesis and recognition. However, according to Fry (1974), the results of some studies are not as informative as they might have been simply because there seems to have been little effort to differentiate between grammatical and attitudinal intonation. It is unwise to treat, for example, the differences between ‘statements & questions’, and between ‘sorrow & anger’ as though they involved points on the same continuum. The first is clearly a matter of grammatical intonation and therefore part of a functional system common to many speakers and listeners, while the second is a much more individual matter, e.g. attitudinal. Fry maintains that in experimental work, it is better to treat them separately and so to keep the interaction to a minimum.

Although many phonologists strongly endorse grammatical intonation, several of them believe that this function is incapable by itself to provide adequate account for certain intonational patterns. For example, some, such as Blum (2001), suggest that there is a strong tendency to have rises in ‘yes/no-questions’ and falls in ‘wh-questions’, but they are by no means the only patterns possible. These conventional intonation contours, or as Blum calls them “defaults”, may be overridden by various contextual factors and, hence, the interrogative intention must be inferred from other elements present in the utterance. The speaker’s attitude, such as incredulity, amazement, a high level of interest or lack of it, etc., may also influence the contour and, in particular, the pitch height of the utterance.

On the other hand, observations that oppose or contradict this type of grammar-based explanation are variously present in the writings of Brazil, Cruttenden, McCarthy, Roach, and others. Such observations are believed to pose serious challenges to the validity of the grammatical approach to intonation. McCarthy in Kumaki (2003), for example, admits the popularity of the utilization of grammatical intonation, especially among teachers who widely believe that there are ‘correct’ intonations for sentence structures, such as declarative sentences, questions, tag questions, etc. Most common, however, are the (yes/no questions) which have rising tones, and the (wh-interrogatives) which have falling tones. Despite his admission, however, McCarthy goes on to declare that there seems to be little hard evidence that this prevailing conviction is true and, on the contrary, there is much evidence to suggest that there is no one-to-one relationship between sentence-type and tone.

Kumaki also cites Cruttenden who also refuses to adopt the grammatical meaning, suggesting that there are typical tones associated with syntactic structures. Such an argument is maintained on the ground that it is not difficult to find examples of almost any tone combined with any syntactic type. For example, ‘yes/no questions’ such as: “Are you going OUT tonight?”, “Are you turning OFF the light?”, or “Is Carol GETTING married?” can be answered with almost any tone known to the English language (p. 49).

3.3. Discourse (Informational) Intonation:

According to Corbett (2004), discourse relays what new information is to be given as it signals what kind of response is to be expected. More often than not and within the paradigms of normal daily communication discourse, intonation is introduced at sentence level. Since people communicate over a stretch of language, it only follows that intonation should be examined at discourse level. Recent phonological research tends to define intonation as a speaker's way of organizing and relating meanings throughout the discourse. Perhaps more importantly, this approach does not label but interprets various meanings that are based on the choices of the speaker.

It is suggested by Ranalli (2002) that almost all intonation choices are tied to the context in which they occur. In contrast to the linguistic universality of grammar-based descriptions, it is impossible in the discourse approach to isolate a stretch of speech from its context and, hence, make reasonable generalizations about intonational meaning. Particularly associated with the work of David Brazil at the University of Birmingham, discourse intonation proposes a simple and flexible system with a small and finite number of choices. First and foremost is the tone unit, which is the basic building block of speech and which is used widely as a unit of phonological analysis in most theories of intonation.

Presenting his own version of the tone unit, Brazil in (Ranalli, 2002) proposes a unit which is distinguished by a single complete pitch pattern and consists of proclitic, tonic, and enclitic segments. As such, discourse intonation provides a manageable tool as there are four options associated with tone units: prominence, tone, key, and termination; each of which adds a different type of information. Prominence is a syllable on which there is a major pitch movement. Tone pitch movements are distinguished by their particular direction or contour. Brazil suggests five movements: falling, rising, fall-rise, rise-fall, and level. Key is the relative pitch level chosen by speakers for each tone unit. Three choices are proposed: low, middle, and high. These choices can be recognized in reference to the key of the immediately preceding tone unit. Termination, on the other hand, is a low, middle, or high pitch-level choice made by speakers at the beginning or end of a tone unit.

Equally important is the increasing evidence that out of the four most common intonational functions (attitudinal, grammatical, accentual, and discourse) there is a noticeable movement towards adopting the discourse view of intonation (DI), particularly in teaching new language learners. This seems to be the case because according to Hewings (1995), DI tends to view speech as

“a purpose-driven activity where speakers and hearers cooperate to reach the desired goal of shared understanding. It also refers to the common ground that exists between speaker and hearer as the area in which their world views converge.” (p. 61)

Hence, assigning a falling tone to a tone unit projects the content as world-changing in that it will expand the common ground; assigning it a rising tone projects the content as something which is already part of the existing common ground. According to Brazil in Kumaki, this close relationship means that “Intonation signals play a key role in listening, as well as speaking, as they signal a speaker’s assumptions and intentions with regard to the shared ground” (as cited in Kumaki, 2003, p. 13).

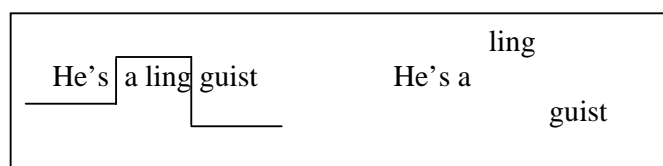
DI is also credited with a new approach to an old idea, that of the distinction between new and old or given information to which a speaker has already referred. Taylor (1993) observes that this approach is primarily based on the ability to distinguish between 'proclaiming tones' and 'referring tones'. Proclaiming tones usually introduce 'new' information and, thus, consist of either falling tones or rising-falling tones. Referring tones, however, point to the information that is already mentioned or present in some way in the total context of the utterance (e.g., 'old' or 'given' information) and, hence, consist of either rising tones or falling-rising tones. Furthermore, this innovative approach means that intonation is dealt with not as attitudinal or grammatical function mode but as a communicative value of the interaction between the speaker and the hearer. The following example provided by (Kumaki, 2003, p. 14) illustrates the difference between proclaiming and referring tones.

“While // p WHAT TIME is it // (wh-question with proclaiming tone) projects complete ignorance of the time, as if saying: ‘I don’t have the slightest idea of what time it is’; the referring tone // r WHAT TIME is it // signifies that the speaker is trying to elicit a yes/no answer to an anticipatory question such as: ‘Is it as late as I think it is?’ or ‘Isn’t it time we leave?’”

Although discourse intonation has some difficulties for pedagogical application and its adapted and simplified version for teaching purposes, DI seems to be most viable and convincing of all intonational functions available at the moment. Moreover, its well-developed model provides us with a strong systematic framework within which teachers and students can study intonation. As can be expected, however, DI is not without its detractors. For example, Levis (1999) points out that what is given and new in discourse intonation is often “not transparent”, and that it has its share of irregularities and exceptions. For example, learners must understand that new information does not mean all new information but rather the last piece of new information in a phrase. In all, DI presents interesting possibilities to L2 and ESL environments in that it is simple, elegant, and explains a lot.

4. Intonation Contours

According to Kreidler (1989), there are two approaches which linguists adopt when describing intonation patterns in English; namely the levels approach and the contour approach. The levels approach uses a scale which is similar to a musical scale. This approach is based on a set of various pitch levels. Linguists who use this approach maintain that there are four different levels which are numbered from 1 to 4 - from lowest to highest pitch - and are named: Low, Mid, High, and Extra High. The intonation of an utterance can be graphically represented with lines at four levels in respect to the line of print. The following is a sample provided by (Wolfram & Johnson, 1982, p. 37):



Alternatively, (Kreidler, 1989, p. 182) states that the intonation of an utterance can be shown with letters or numbers interspersed in the line of print. Thus, the utterance “ I’m going home,” might appear in one of these forms: *I'm 'going 'home* ²*I'm 'going ³home* ¹ ^m*I'm 'going ^hhome* ^l

These three examples indicate an utterance which begins at the speaker’s middle range, rising to a high note at the beginning of the word “home”, and dropping to low during the pronunciation of that word.

On the other hand, the most important aspect in the contour approach to describing intonation patterns is tone patterns; i.e., particular patterns of pitch. This seems to be more in line with the way people actually perceive intonation patterns. As such, (Taylor, 1993) believes that it is necessary to distinguish between the two terms 'intonation' and 'tone'. Phonologists agree that almost all languages use both intonation and tone, but in accordance to each language's cultural needs and characteristic ways. It should be noted, however, that the term 'tone language', is reserved for those languages whereby word meanings may be distinguished by means of 'tone'. A good example of a 'tone language' is Chinese, where "ma", for example, may have four different meanings, distinguished by four different tones. English does not utilize 'tone' in this manner. Although tones are used, they are utilized as part of the characteristic intonation patterns of the English language.

Investigating this topic, Celik (2001) observes that there are extensive variations in the area of English tone and intonation. He also cites Cruttenden who believes that this is an area where most analysts vary in their judgments of what constitutes a major difference of meaning and, thus, in the number of tones which are set up. Cruttenden goes on to explain that intonational meanings are often so intangible that it is difficult to see how anyone can make a wholly convincing case for any specific set of tones. This argument is somewhat strengthened by the variety and number of tones being proposed. For example, Crystal & Ladefoged identify four basic tones: rise, fall-rise, fall, and rise-fall. O'Connor & Arnold propose only two: rise and fall. Brazil & Roach endorse five tones: fall, rise, rise-fall, fall-rise, and level. Cruttenden himself recognizes seven tones: high-fall, low-fall, high-rise, low-rise, fall-rise, rise-fall, and mid-level (Celik, 2001).

Generally speaking, the building blocks of English intonation involve three basic tones--high, mid, and low. Celik (2001) states that what makes a tone 'rise' or 'fall', or otherwise, is the direction of the pitch movement on the last stressed (tonic) syllable. If the tonic syllable is in non-final position, the glide continues over the rest of the syllables. A fall in pitch on the tonic syllable renders the tone as 'fall'. A 'rise' tone is one in which the tonic syllable is the start of an upward glide of pitch. This glide is of two kinds; if the upward movement is higher, then it is 'high rise'; if it is lower, then it is 'low rise'.

'Fall-rise' has first a pitch fall and then a rise. To further our knowledge of tones, a brief explanation of the basic ones is in order.

4.1. 'Rise' tone:

According to Kumaki (2003), the rising tone is used when seeking to lead or take control briefly in the course of a conversation where speakers and hearers have equal rights. Dominant speakers have a choice between using the rising tone to underline their present status as a controller of the discourse or refrain from doing so. Such speakers could be chairpersons appointed in advance, or even storytellers who hold the position by unspoken agreement for the time being.

Rising tones are also used in genuine 'Yes/No' questions where the speaker is sure that he/she does not know the answer, and that the hearer knows the answer. Such Yes/No questions are uttered with a rising tone. Celik exemplifies by pointing out that the following question "Isn't he NICE?" uttered with a rising tone, can have as its answer either "Yes", "No" or "I don't know." The same question, which is uttered with a falling tone, can only have one appropriate answer, which is "Yes." A rising tone is used if the tonic stress is uttered with extra pitch height. In the following intonation examples, one wonders if the speaker is asking for a repetition, a clarification, or indicating disbelief:

- a) I'm flying to Chicago tomorrow.
- b) Flying to Chicago? (repetition)

- a) I'm taking up Taxidermy this autumn.
- b) Taking up WHAT? (clarification)

- a) She passed her DRIVING test.
- b) She PASSED? (disbelief) (Celik, 2001, p. 4)

4.2. 'Fall-Rise' Tone:

This tone, according to Celik (2001) and many others such as Kumaki (2003), usually signals dependency, continuity, and non-finality. It generally occurs in non-final intonation units or sentences. For example, when the words "city" and "presumably" are pronounced in the following context, they are said with a fall rise tone (the slash indicates a pause):

- a) A quick tour of the CIty / would be NICE.
- b) PreSUMably / he thinks he CAN. (Celik, 2001, p. 5)

According to Brazil, in Kumaki (2003), when an English complex clause has two intonation units, the first, or non-final, normally has a 'fall-rise' while the second, or final, has a falling tone. Therefore, the tone observed in non-final intonation units can be said to have a 'dependency' tone, which is 'fall-rise'. It should be noted that rising and fall-rising tones tell the hearer that the tone unit refers to a part of the message that both the speaker and the hearer know about already. For this reason these tones are called referring tones.

When the speaker is telling something, a referring tone means that this part of the message is already shared. When the speaker is asking, it means that he/she assumes that this part of the message is shared but he/she wants to make sure by asking the hearer to confirm it. Referring tones carry the social meanings of togetherness or convergence in contrast with separateness or divergence. The following is an example of asking with a 'fall-rise' tone:

Bookseller: Good morning. Can I help you?

Customer: I'm looking for a book by Sutcliffe. It's *A Life of Arnold*.

Bookseller: *A Life of Arnold*. Let me see, now. // r is THAT the TITLE //

Customer: I think so. (Kumaki, 2003, p. 20)

4.3. 'Fall' tone:

A falling tone is by far the most common used tone of all. According to Celik (2002), it signals a sense of finality, completion, and belief in the content of the utterance. By choosing a falling tone, a speaker offers the hearer a chance to comment on, agree or disagree with, or add to his/her utterance. Although this tone does not solicit a response, it is up to the hearer to produce such a response if he/she so desire. Nonetheless, it would be polite for the hearer to at least acknowledge in some manner that he/she is part of the ongoing discourse.

Some of the areas in which a falling tone is used are in proclaiming expressions, e.g., "I've spoken with the CLEAner." Questions that begin with 'wh-questions' are generally pronounced with a falling tone, e.g., "Where is the PENcil?" Imperative statements also have a falling tone, e.g., "Go and see a DOCtor." (Celik, 2001, p. 7). According to Chahal (1999), Arab students often face difficulties with the falling tones of the English language. This usually arises from the fact that since Arabic tends

to use a narrower range of falling pitch over phrases or clauses, a native English speaker may interpret the spoken English of an Arab as indecisive or inconclusive for lack of the correct completion signals.

4.4. 'Rise-Fall' tone:

Like the previous one, these two tones (i.e. "fall" & "rise-fall") are not the referring but the proclaiming type. Brazil, in Kumaki (2003) states that proclaiming tones indicate that the tone unit as a part of the message is not yet shared. When the speaker is telling something, a proclaiming tone means that he/she doesn't think the hearer has certain information that the speaker has. When asking, it means that the hearer has some information that the speaker doesn't possess. By asking the questions with the proclaiming tone, all the questions are considered to be asked without any expectations about the replies. The use of the 'rise-fall' tone indicates not only the speaker's exclamation but also intention of controlling the discourse, and his/her expectation of a certain reaction from the hearer. The following is an example in point:

Traveller: Oh, Lord! // p perHAPs i could go by aNOther route //, by an earlier train?
 Assistant: Just a moment. // p HOW much LUggage do you have //
 Traveller: Only this bag.
 Assistant: Because if you don't mind changing, you could go via Manchester.
 There's a train due out in—hang on—just five minutes.
 Traveller: // p WHICH PLATform will that be //
 Assistant: From platform two. (Kumaki, 2003, p. 22)

5. A Few Concluding Words

It is immensely advantageous to learn the intonation intricacies of any language. English is no exception. Some believe that teaching and learning English intonation in L2 and ESL environments is a positive step towards the teaching of intelligible pronunciation. According to Nagamine (2002), the following are some implications for teachers working in such environments:

1. English intonation may be best taught if it is instructed and practiced with the appropriate use of phrase boundaries. Since the use of phrase boundaries is closely related to speakers' pausing manner, teachers are encouraged to help students learn when and how they should pause their speech, using correct intonation patterns.

2. Learners who tend to have difficulty in stressing content words adequately are likely to make problematic intonational errors in their speech. Such students should learn how to distinguish content words from function words before learning how to sentence-stress properly.

3. Since acquiring intonation skills is closely linked to a learner's semantic understanding, L2 and ESL teachers are urged to teach English intonation with much emphasis on communicative purposes and functions and in a socially-interactive setting.

4. Teachers are encouraged to teach English intonation not only in pronunciation/conversation classes, but also in other classes such as reading, listening, etc. (Nagamine, 2002, p. 362).

It goes without saying that teachers interested in teaching correct English pronunciation should try to read as much as possible about the most recent findings in this field. Keeping up-to-date makes it easier to discover if and when certain pedagogical techniques, once thought efficient and promising, are not so dear anymore. For example, Levis (1999) asserts that limiting the full potential of intonation to 'yes/no questions' is misplaced and does not serve the many communicative needs of a learner. Intonation on such questions is likely to play little or no role in intelligibility between the different varieties of English and should thus be de-emphasized in pedagogy.

Since the 1960's, there has been several attempts to use technological means in the systematic description of intonation patterns of non-native languages. This is important in laying firm foundations for the student's eventual mastery of the intonational system of a foreign language. Vardanian in (Lantlof, 1976) reported the results of an experiment in which she attempted to teach English intonation to speakers of Brazilian Portuguese using visual presentation. The subjects were divided into two groups that heard recordings of native English speakers. Members of the control group were merely told to imitate what they heard. The experimental group, on the other hand, was furnished with audio recordings as well as visual representations of the intonation contours of the utterances displayed on an oscilloscope. To be sure, there was marked learning differences between the two groups.

Lantlof discusses another attempt at teaching intonation with visual reinforcement. This experiment was pioneered by Lane and Buiten. The two researchers devised an apparatus called SPEECH AUTO-INSTRUCTIONAL DEVICE (SAID). This mechanism was designed to perform three functions; a) present recorded utterances in the target language which learners are to imitate, b) evaluate a learner's response in regard to pitch, volume, and tempo, and c) display a learner's degree of deviation from agreed-on settings. Though experiments were generally successful, the participants were often irritated for being unable to know the exact intonational configurations that they were supposed to imitate.

At the University of Toronto, Léon and Martin, in Lantlof (1976), developed an apparatus for teaching intonation to non-native speakers. Called VISUALIZER, the new device was designed to employ a technique similar to the method implemented by Vardanian. However, it was more accurate and pedagogically superior to the oscilloscope in the way it presented learners with audio and visual representations of the intonation contours of the utterances which they were to imitate. Linked to a computer, the machine was programmed to judge the accuracy of a learner's response and immediately display the correct contour of his/her utterances.

More recently, there has been an increasing tendency to focus on and improve upon traditional methods of contrasting the typical patterns of different sentence types. Chun (1998) believes that computer-generated pitch-tracking software can be effectively utilized to teach basic intonation contours. It is also believed that with the current emphasis on communicative and sociocultural competence, more attention should be paid to discourse-level communication as well as to cross-cultural differences in pitch patterns. Hence, software programs must have the capability to distinguish meaningful intonation features with regard to changes in pitch, volume, and tempo. Indeed, such programs are envisioned to go beyond the sentence level addressing the multiple levels of communicative competence: attitudinal, grammatical, discourse, and sociolinguistic.

All in all, the success of such techniques marks only a beginning. Chun points out that it is one thing to achieve accurate imitation of native intonation in the controlled environment of a language laboratory, but it is another thing to transfer this ability to free and an unhindered conversation. It goes without saying that the application of appropriate native contours in free conversation by non-native speakers is something quite coveted but not yet easily or fully realized.

Intonation, the non-grammatical, non-lexical component of communication, is an inseparable component of vocal communication. Speech without intonational features is no more than machine-like output. Recent work in language perception and understanding has shown that hearers pay particular attention to intonation when they are trying to understand a sentence. Correct intonation usage is therefore essential if non-native speakers are to make themselves understood. Equally important, if

non-native hearers are to understand native speakers, then a good understanding of the workings of intonation is paramount. Careful and sustained attention to this phonological issue should produce high rewards in terms of understanding and being understood.

References

- Blum, R. V. Intonation and Interrogation in English : It's All a Matter of Defaults. Université de Nice-Sophia Antipolis. Retrieved May 16, 2004, from <http://www.univ-pau.fr/ANGLAIS/alaes/blum.htm>
- Catford, J. C. (1992). Prosodic Features. In *A Practical Introduction to Phonetics* (pp. 172-186). Oxford: Clarendon Press.
- Celik, M. (2001) Teaching English Intonation to EFL/ESL Students. *The Internet TESL Journal*, Vol. VII, No. 12. Retrieved [2004, May 19] from <http://iteslj.org/Techniques/Celik-Intonation.html>
- Chahal, D. (1999). *A Preliminary Analysis of Lebanese Arabic Intonation*. Paper presented at the proceedings of the 1999 Conference of the Australian Linguistic Society.
- Chun, D. M. (1998, July). Signal Analysis Software for Teaching Discourse Intonation [Electronic version]. *Language Learning & Technology*, 2, 61-77.
- Corbett, J. (2004). *Raising Student Awareness of Intonation at Discourse Level*. Retrieved May 14, 2004, from http://www.developingteachers.com/articles_tchtraining/int1_jeanette.htm
- Fry, D. B. (1974). Prosodic Phenomena. In B. Malmberg (Ed.), *Manual of Phonetics* (pp. 365-410). Amsterdam: North-Holland Publishing Company.
- Hewings, M. (1995, August) Tone Choice in the English Intonation of Non-Native Speakers. *International Review of Applied Linguistics in Language Teaching* , 33, 251-265. Retrieved May 14, 2004, from Communication & Mass Media Complete database.
- Ioup, G. & Weinberger, S. H. (1987). The Acquisition of Tone: A Maturational Perspective. In *Interlanguage Phonology: The Acquisition of a Second Language Sound System* (pp. 333-347). Cambridge: Newbury House Publishers.
- Kreidler, C. W. (1989). Intonation. In *The Pronunciation of English* (pp. 180-196). Oxford: Basil Blackwell Ltd.

- Kumaki, K. (2003). *A Study of English Intonation in High School Textbooks in Japan*.
 Unpublished masters thesis, University of Birmingham, Edgbaston, Birmingham, United Kingdom. Retrieved May 14, 2004, from <http://www.cels.bham.ac.uk/resources/essays/KumakiDiss.pdf>
- Lantolf, J. P. (1976, October) On Teaching Intonation. *Modern Language Journal*, 60, 267-274.
 Retrieved May 14, 2004, from Communication & Mass Media Complete database.
- Levis, J. M. (1999, October) The Intonation and Meaning of Yes/No Questions. *World Englishes*, 18, 3+. Retrieved May 14, 2004, from Academic Search Premier database.
- Nagamine, T. (2002). An Experimental Study on the Teachability and Learnability of English Intonational Aspect: Acoustic Analysis on F0 and Native-Speaker Judgment Task. *Journal of Language and Linguistics*, 1, 362-387. Retrieved May 14, 2004, from <http://www.jllonline.net/>
- Ranalli, J. M. *Discourse Intonation: To Teach or not to Teach?* Birmingham: University of Birmingham. Retrieved May 14, 2004, from <http://www.cels.bham.ac.uk/resources/essays/Rannali4.pdf>
- Taylor, D. S. (1993, February) Intonation and Accent in English: What Teachers Need to Know. *International Review of Applied Linguistics in Language Teaching*, 31, 1-21. Retrieved May 14, 2004, from Communication & Mass Media Complete database.
- Wahba, E. (1998, July). Teaching Pronunciation – Why? [Electronic version]. *The English Language Teaching Forum*, 3, 32+.
- Wichmann, A. (2002). *Attitudinal Intonation and the Inferential Process*. In B. Bell, and I. Marlien (Eds.), *Proceedings Speech Prosody 2002* (pp 11-15). France: Aix en Provence.
- Wolfram, W. & Johnson, R. (1982). The Phonetic Base. In *Phonological Analysis: Focus on American English* (pp. 8-39). Washington, USA: The Center for Applied Linguistics.