The Tag Questions: Certainty versus Uncertainty Issue in English Pitches and Intonation in Relation to Anthropology

Mehmet Demirezen

Hacettepe University, Ankara, Turkey
Fax: 90 312 297 61 19, E-mail: md49@hacettepe.edu.tr

ABSTRACT Pitch phonemes that, contain paralinguistic meanings, are integral parts of intonation and their analysis can yield the production of social and anthropological knowledge. Tag questions represent a special case of the use of pitch phonemes. By nature, a tag question is a short question added to the end of a positive or negative statement. For such mechanical structure, this particular juncture pattern is very confusing to non-native teachers of English. The aim of this paper is to explore the perception and articulation of the 'certainty and uncertainty of the speaker'. The participants were 10 MA students from the Department of English Language Education at Hacettepe University in Ankara, Turkey. They were given 10 tag questions as a pre-test in order to evaluate their perceptions of the certainty or uncertainty intonationjuncture. A three-hour intensive training session was conducted on this issue, and after a two-week interval, the participants took a post-test that included 10 new tag questions. All the items in the questionnaire were expressed in near-native English intonation juncture combinations which were downloaded from electronic dictionaries by means of the Audacity programme and then administrated to the participants. The total failure of the participants to obtain encouraging results finally led to no such exigency for the inclusion of intonation studies in the English Language Education Departments of Turkish universities.

INTRODUCTION

In applied phonology, the term pitch is interchangeably used with intonation. Learning a foreign language is inevitably bound up with learning the intonation of a different language as pitch variations in forms of cross-cultural communication. According to Tannen (1984b), intonation is made up of degrees and shifts in the pitch, loudness, stress, and rhythm which comprise of each utterance. Similarly, Brown (2014: 193) states that problems with unpredictable stress placement, the use of steady pitch with jumps from one syllable to the other, and the overuse of the low fall at the end of sentences may be influenced by one's first language (L1). There are cultural differences in the use of these little signals, not only in carrying out conversational business as usual, but also in expressing special meanings or emotions. Cultural communication differences can be identified via eight different criteria: 1) when to talk; (2) what to say; (3) pacing and pausing; (4) the art of listening; (5) intonation; (6) what is conventional in a language and what is not; (7) degree of indirectness; and (8) cohesion and coherence (Tannen 1984a). According to this classification, pacing, posing and intonation are all supra segmental elements embedded into one another.

Intonation has been acknowledged by linguists in general to be 'an indispensable component of language and communication' (Chun 1998: 61). It embodies the linguistic identities of societies that have special pitches for describing different utterances in terms of paralinguistics. The pitch or tone of a speech sound usually creates a meaningful distinction between words, pairs of words, phrases and sentences in English. The pitch of the voice is a kind of phoneme in tone languages. According to Peoples and Bailey (2012) and Demirezen (1986), pitches are phonemes that differentiate meanings. In this respect, tag questions in English have a special intonation pattern which can be analyzed as having four distinct pitch phonemes. By nature, in tonal languages such as Chinese and many African tongues, the pitch of each syllable functions phonemically and is crucial for understanding word meanings in conversation.

Anthropological Bases of Pitch and Pitch Phonemes

Linguists and anthropologists have long recognized that the forms and uses of a given language reflect the cultural values of the society in which the language is spoken (Purba 2011: 45). The speech of a language is manifested in its intonation. Within anthropology, the functions of speech in behaviour can be discussed in terms of language-specific and universal func-

tions. By means of intonation and paralinguistics, linguistic anthropology explores how language shapes the variety of communicative processes that take place in certain settings and how language forms a social identity in relation to cultural representation of natural and social worlds. It is important to know the inconsistent ways in which the functions of speaking differ in every group and for every personality in society or across societies in terms of the ethnography of speech. Therefore, the central role of *intonation* in the structuring of speech cannot be denied. Speakers use paralinguistic and prosodic features, for example, tone of voice, pitch, volume, pacing, and pauses, to establish cohesion, that is, to show the relationship between ideas, such as distinguishing the foreground from the background (Tannen 1985). Ladd (2014) agrees that utterances and their representations as signals in pitch, tone, tempo, rhythm, and prosody carry over language-specific information. Understanding the relation between the phonological representation and the speech signal is of great importance in FLL (foreign language learning), FLT (foreign language teaching), and SLA (second language acquisition) (Ladd 2014).

Pitch, which exists in all languages and has segmental and supra segmental functions, belongs to the field of intonation. Pitch also belongs to paralanguage (Eller 2009) and is the main element of speech ethnography. Speech ethnography demonstrates the utilisation by different speech communities of pitch varieties of males and females, the elderly and the young, cultural values and distances, regional differences of the same language, accents and variation in speaking styles. Pitch carries cross-cultural overtones, wherein language recognises some emotional tunes in an utterance whichare not recognised in another language. For this reason, some languages are called pitch-accent languages. By carrying the role of communication, pitch demonstrates how it is constitutive of social relations and cultural distances among languages.

Celce-Murcia et al. (1996) state that in order to understand intonation, it is necessary to define pitch, the relative highness and lowness of the voice. Pitch is both universal and cross-cultural in terms of paralinguistics, which focuses on phonetic and phonemic aspects such as pitch variance, pitch placement and stress; these establish the accents and can describe the cross-

cultural differences. For example, according to Mennen et al. (2008: 13), people perceive differences between English and German speech, where English sounds higher and having more pitch variation than German. British voices (especially female) are often perceived stereotypically as 'over-excited' (Eckert and Laver 1994) or even 'aggressive' (Gibbon 1998) by German listeners. Conversely, to British listeners, German low-pitched voices may be evaluated as sounding 'bored' or 'unfriendly' (Gibbon 1998). Thus, pitch can demonstrate the cultural differences among the speakers of the same languages or different languages.

Statement of the Problem

The perception and production of intonation patterns of tag questions in relation to pitch phonemes have always given difficulty to Turkish teachers of English. The background of this problematic issue rests on the inter-lingual phonology of the English and Turkish languages. In the utterances of Turkish English teachers, serious problems are found in both perception and production of tag questions connoting to certainty or uncertainty.

Purpose of the Research

The aim of this research was to investigate the problems of recognition and production involved in the speech intonation contour of certainty and uncertainty, which creates a fundamental difference of meaning in the perception of the intended message. The research followed the data analysis types exhibited in Keith Johnson's *Acoustic and Auditory Phonetics* (2003) and Peter Ladefoged's *Elements of Acoustic Phonetics* (1995), both of whom recommend the use modern laboratory techniques using acoustical analysis for the teaching of intonation. In addition, Jun and Fletcher's *Methodology of Studying Intonation: From Data Collection to Data Analysis* (2014) has been highly inspirational to the researcher.

This paper attempts to exhibit that by consciously or unconsciously varying intonation level by means of stress, pitch, and juncture phoneme variations, a great deal of intended and emotional meaning can be conveyed. In this respect, non-native teachers of English in Turkey have serious difficulties in perceiving and pro-

ducing these intonation shifts in their utterances.

Tag questions, which signal a special case of anthropological information, are more common in colloquial spoken usage than in formal writing. Tag questions are used at the end of statements to ask for confirmation. In terms of pitch and juncture phonemes, a tag question is a special construction in English. It is a statement followed by a mini-question. The whole sentence is a 'tag question', and the mini-question at the end is called a 'question tag'. In other words, a tag question has a grammatical structure in which a declarative statement or an imperative is converted into a question by adding an interrogative fragment (the 'tag'). Notice that the question tag repeats the auxiliary verb (or *be* as the main verb) from the statement and changes it to negative or positive. The term 'question tag' is generally preferred by British grammarians, while their American counterparts prefer 'tag question'. However, it can be an indicator of politeness, emphasis or irony, it is also used when we want to find out if something is true or not.

In terms of structure, tag questions are formed with the auxiliary or model verb from the main sentence and an appropriate subject pronoun:

Jane is learning to drive, isn't she? Tarzan can't ride a bicycle, can he?

As seen in the above examples, a negative question tag is used after a positive sentence, and when the main clause is in negative form, a positive tag is used.

Phonemic Status of Question Tags

In the intonation of question tags, **statements** are normally said with **falling** juncture and pitch combination as the first part; the tag part requires a special intonation contour. In a tag question, the certainty or uncertainty of the speaker requires a special intonation contour, the importance of which is not noticed by many non-native teachers and students of the English language.

The rise-fall terminal juncture can take place in a single-word or multi-word utterance and it is capable of changing the meaning. Therefore, all of the pitch phonemes and juncture phonemes that are present in the following wave forms are supra-segmental phonemes in English. In addi-

tion, physiologically speaking, stress means that greater articulatory effort is taken by the speaker. In this paper, a pitch /3/ phoneme signals the place of the primary stress and also requires a rising intonation at that spot. By putting the primary stress accompanied by pitch and juncture with respect to other parts of the utterances of particular words or phrases, we give them greater prominence and can create various types of meanings. Thus, culturally significant features of intonation can be represented by pitch phonemes, stress phonemes, and juncture phonemes, yet there are complex intonation styles, involving not only pitch, but also characteristics of articulation, tempo, resonance, rhythm, melody and prosody**.** *The Phonology of Intonation and Phrasing* (2014), edited by Jun, has been highly inspirational to the author in the establishing of phrasings as figures in this paper.

The definition of pitch phonemes as /1/, /2/, /3/, and /4/ is restricted to vocally-produced sounds, and includes only pitch, volume, and intonation of speech as visual markers in the following examples. Four types of pitch phonemes, given below, can also be applied to the psychological features of the pitch phenomena. In the following examples of sample acoustic diagrams, the sample tag questions were downloaded via the Audacity Program (1.2.6) within the range of audio tract mono, 44100 Hz, 32-bit float. In the sample sentences below, the words carrying primary stress are given in boldface; the main clause terminates in a falling intonation contour with the accompaniment of pitch (/2/), after which a brief pause takes place, and then the tag part starts. The acoustic diagram of this is demonstrated in Figure 1.

Fig. 1. Sample acoustic diagram

You told them the truth, didn't you?
/2You +↘3**TOLD**+ them+thetruth2 → 23**DID**n't + you˜↘1/ The speaker is **CERTAIN.**

In the uncertain case, the changes in the pitch wave values of the tag question are much greater and longer, which communicates the uncer-

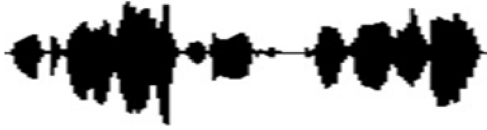tainty value; the pitch combination takes the form seen in Figure 2.

Fig. 2. Sample acoustic diagram

You told them the truth, didn't you?
/²You+↗³**TOLD**+them+the+ truth²→²³**DID**n't + you³↗/ The speaker is **UNCERTAIN.**
The same takes place in the tag question in Figure 3, 'We haven't paid our taxes,have we?'(for certainty) is articulated a bit more slow-lyby the native speaker and with no internal sustained juncture.

Fig. 3. Sample acoustic diagram

We haven't paid our taxes, have we?
/²We + haven't + paid + our+³**TAXES²** → ²³**HAVE**+ we²↘/ The speaker is **CERTAIN.**
In the tag question 'We haven't paid our taxes, have we?', the sense of 'certainty' is formed via /231~**!**/ (Fig. 4). In addition, there is a second internal sustained juncture. It must be noted that it is the tag part that creates a great deal of acoustic activity in order to achieve the 'uncertain' state of an utterance.

Fig. 4. Sample acoustic diagram

We haven't paid our taxes, have we?
/²We + haven't + paid + our +³**TAXES²**→ ²³**HAVE**+ we ³↘/ The speaker is **UNCERTAIN.**
Figure 5 represents another example of validating the certainty/uncertainty status. In this wave form, the tag form is totally different when used to give a sense of 'certainty':

Fig. 5. Sample acoustic diagram

The speaker is **CERTAIN.**
People shouldn't smoke, should they?
/²People + shouldn't +³**SMOKE²** → ²**SHOULD**+³they¹↘/   .
In Figure 6, the speaker reads ata slightly slower speed and then makes a second-long pause, and this length of juncture is clearly noticed. The acoustic shape of the utterance rises to mark the sense of 'uncertainty' in relation to the pitch as a wave form.

Fig. 6. Sample acoustic diagram

The speaker is **UNCERTAIN**
People shouldn't smoke, should they?
/²People+ shouldn't+³**SMOKE²**→ ²**SHOULD**+³ they³↗/   .
Pitches are physical bases for tone and intonation (Davenport and Hannahs 2010: 84-87). If the speaker IS fairly CERTAIN about what he is saying, the voice goes DOWN with the accompaniment of a falling terminal juncture to attract the attention of the interlocutor to certain parts of the message. The DOWN pitch-fall-rise terminal juncture at the end of the sentence tells the listener that the speaker IS fairly CERTAIN that the information is correct (Childs 2003: 42; Skandera and Burleigh 2005); there is a falling juncture at the end of the sentence. Certainty intonation is situated on the /231/ pitch pattern, not the /233/ pitch pattern in the tag part of tag questions (Demirezen 1986: 121-125). In such utterances, raising of the eyebrows in alignment with accented words seems to be preferred. *Words between pitch phonemes like* /3 2↓/ and /3 3↓/rather than non-accented ones correlate to the verbal message in emphasis and structure (both discourse and intonation structure) in English.

Thus, pitch, juncture and stress, which seem to be extra-linguistic indices, are supra-segmental phonemes that play highly important cross-cultural roles in communication. For example, Ipek and Jun (2014) discovered that stressed words in Turkish cause problems for Turks in learning English. These features convey the speaker's personal identity, attitude, emotional state, and an evaluation of how the speaker is being received by the listener. In connected speech, stress is greatly affected by elision and assimilation. It must be noted that pitch phonemes, being indivisible parts of intonation, happen to be a paralinguistic feature of a language. Intonation, in general, gives free play to the individual's modes of behavior, which are also expressed by correlation with types of body language activity including facial expressions and hand movements during the act of speech. These reflect the motor and mental (emotional and intellectual) habits of the speakers.

Moreover, eyebrow raising, hand gestures, mimicking, and other body movements are associated with intonation paralanguage. Body movements related to the verbal channel are integral parts of the decoding of the linguistic message exhibiting the intonation prominence of utterances. Audio-visual information in the form of videos, films, and short scripts vivifying speech events like dialogues, lectures, or poetry readings can support the evaluation of pitch by the listeners and speakers. Since pitch accents have roles in discourse, the changes in pitch patterns are aligned with verbal behavior. For example, in French, raising the eyebrows has been reported to occur frequently with accentuating rising pitch contours. Additionally, Cave et al. (1996, 2002) reported that rapid eyebrow movements were found to correlate with accentuating intonation contours. Therefore, the meaning and interpretation of paralanguage are defined by one's culture via a chain reaction among its intonation patterns.

METHODOLOGY

The aim of this paper was to explore the perception and production of English tag questions by advanced Turkish teachers and students of English by means of the error hunt and the advanced learner approaches. The research had a one-group experimental design, in which a pre-

test was administered to 10 participants. The study group consisted of ten MA students, all Turks, each of them had graduation degree in English language from a Turkish university. Accordingly, the following three research questions were designed to direct the research:
1. Will the participants have intonation problems in producing the tag questions?
2. What will their success rate be in producing the tag questions?
3. Do they need remedial instruction on tag questions?

Participants

The participants of this study were 10 MA degree students, all of whom had graduated from the Department of English Language Education at Hacettepe University. All of the participants were instructors: three at Karabuk University, three at TOBB University, three at Ufuk University, and one in the preparatory programme at Nevsehir University.

All were female, with ages ranging from 23 to 28 and having an average of three years teaching experience. In the course of their BA studies, the participants had taken only two courses on phonetics during their two-term training period in the first year. They stated that they had had no intonation studies or practices that included juncture, stress, and pitch phonemes. They confessed that they had studied only consonants, vowels, and semi-vowels, and had done some broad transcriptions of vocabulary items.

Data Collection Procedure

In a soundproof room, the participants were asked to read out 10 sample sentences in tag question form, which were audio-recorded by the researcher. The participants entered the soundproof room and read out the diagnostic test questions one by one. They neither saw nor listened to the performances of one another. There was maintained a comfortable atmosphere. Their voices were recorded by tape a recorder in MP3 form, and were later converted to WAV form via Audacity 1.2.6 so that it could be played in all of the internet media. The ten sample sentences selected from two dictionaries, *Longman Dictionary of Contemporary English* (2009) and *Longman Dictionary of American English* (2008)

were audio-recorded in 44100 Hz Audio Tract, Mono, 32 bit float. No visual device was used during the recording of the voices. Text-to-speech labs (Acapela 2014; Iovana 2014; Neospeech 2014; Oddcast 2014) were also utilised in the graphic representation of the following 10 questions:

Instructions: Please read the following tags question in a manner of certainty:
1. She didn't understand, did she?
2. I'm in big trouble, aren't I?
3. That bag is yours, isn't it?
4. Marriage is just a game to you, isn't it?
5. Japanese, isn't it?
6. She's married, isn't she?
7. You aren't from Argentina, are you?
8. People shouldn't smoke, should they?
9. They've worked hard, haven't they?
10. You told them the truth, didn't you?

RESULTS

Data Analysis

A diagnostic test table (Table 1) recording the performance of each participant was filled out by the researcher. The articulation of each sentence was evaluated for the correct intonation pattern on tag questions in relation to certainty versus uncertainty and marked by a tick:

Table 1: The diagnostic test

N= 10, 10 Questions	Correct	Incorrect
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

The outcome showing the success rate of the total number of participants is given in Table 2.

RQ #1: Will the participants have intonation problems in producing the tag questions?

The result was total failure. The participants produced the uncertainty intonation patterns. They also put the primary stress of the sentences on different components of the sentence

Table 2: The evaluation of the diagnostic test

N= 10, 10 Questions	Correct	Incorrect
1		X
2		X
3		X
4		X
5		X
6		X
7		X
8		X
9		X
10		X

which led their English to sound unnatural and accented.

RQ #2: What will their success rate be in producing the tag questions?

Their success level was zero. They were unsuccessful in uttering both the main clause and the tag question part. They did not use the required pitch patterns, and therefore, they produced a flat tone in the articulation of sentences. They sounded as if they were using a pidginized intonation pattern composed of Turkish and English intonation elements.

RQ #3: Do they need remedial instruction on tag questions?

The participants were definitely in need of remedial instructions or else they would have continued teaching the wrong intonation patterns in the production of tag questions. A three-hour remedial training session incorporating speaking exercises using the voices of native speakers could be of great help in shaping their perception and production of tag questions on certainty or uncertainty in their utterances.

DISCUSSION

The analysis of each participant's responses indicated that the result was a fiasco. They all failed in the production of all of the pre-test sample questions. They used the /231↘/ pitch pattern and falling juncture combination in the tag question part of the sentence, which in fact indicates certainty. All the participants used Turkish tag question patterns**.** In other words, Turkish participants used Turkish habits of intonation tags in producing English utterances. Since they produced intonation patterns contrary to English, it can be said that there are cultural features specifically designed by pitch phonemes in language in terms of producing attitudes of

certainty and uncertainty. By focusing our attention on the use of pitch, we can see in tangible details the way languages can function on several different levels by carrying over social details in communication.

The outcome anticipated by the researcher was confirmed concerning the three research questions. In addition, the participants produced segmental errors (as consonants, [θ, δ, η, τ, λ, ω, ɿj] , and as vowels [æ, ow, uw, i:Λ, εj]) by usingfossilised forms of the words in the diagnostic test questions. Their production of the sentences sounded unnatural and non-native since all of the participants were unsuccessful in managing the length and duration of syllables. In addition, the placement of related junctures and primary stress cumulatively contributed to their intonation problems. In particular, in the sentences, they used sustained terminal junctures in unnecessary word and phrase borders, thus making their utterances sound non-native andfurther impairing the rhythm of the question forms.

The zero success rate was very distressing. It must be noted that the learning of question tag intonation patterns is very difficult since extra meta-phonological awareness is needed by non-native speakers. The participants had no specific ideas of meta-phonological awareness as a concept of perception and production of their language skills. They definitely were in need of remedial pronunciation and intonation training, which points to the third research question and , the result was predicted by the researcher.

CONCLUSION

Intonation patterns exhibit culturally appropriate speech behaviours by means of the appropriation of pitch phonemes within the language in question. Contrasts in pitch patterns reveal the way in which people encode messages in relation to the perception of meaning; therefore, this is a paralinguistic skill. The central role of intonation in the structuring of speech is very apparent. Tags, which have special pitch and juncture patterns, are used quite commonly in spoken English, but not in formal written English. They are not really questions, but are a way of asking the listener to make a comment so that the conversation continues. A tag question is an occurrence in daily speech where a statement is made, but the speaker wants a response from the listener.

The intonation contours of a question tag vary, depending on whether we are asking a real question, or just using the question tag to keep the conversation flowing. The intonation contour is finalised by a related juncture phoneme, which determines the shape of information. The rising juncture (/ ↗/) accompanied by the rising pitch of the voice that terminates the tag part at the end of the utterance demonstrates that we are asking a real question, whose answer is not really known; the speaker wants the listener to hear what is being said. In English, just using the question tag to keep the conversation flowing or checking information (being certain) requires a falling juncture (/ ↘ /) while the pitch of the voice goes down: this means that the speaker knows the answer of the question. The tag question intonation is just the opposite of Turkish tag question intonation, and thus influences the Turkish speakers of English negatively. A similar case regarding Turkish neutral intonation has also been noted by Ipek and Jun (2013). Consequently, cultural features also find expression in language in terms of intonation.

In brief, the pitch of the speaker's voice in the form of an intonation contour goes up when a real question is being asked, and down for checking information or just making conversation. This is totally the opposite in Turkish. This problem is a typical case of mother tongue interference because in Turkish a rising pitch and juncture combination is used in order to show certainty in such utterances. As a result, a student's mother tongue may come in as a negative transfer. Such intonation errors are persistent and require a great deal of practice in the target language. Therefore, the teachers and students of English must be extensively exposed to tag question conversations in order to enhance their input.The specifications of these necessary measures deserve further research and recommendations.

It must be borne in mind that the failure of adults to further improve their mastery of a second language (L2) beyond a certain limit has been named fossilisation. On the other hand, the multisensory approach rejects the term fossilisation because that process is too rigid to describe a normally functioning brain. This rejection is justified, based on the fact that a systematic, multisensory and multi-cognitive orientation helps to different extents all learners, regardless of age and aptitude for pronunciation,

to improve their L2 acquisition skills and pronunciation. If the remedial process is conducted with multisensory teaching of pronunciation and intonation via joint reliance on the auditory, visual and kinaesthetic sensory modalities, efforts to improve the students' perception and production of intonation patterns can be highly successful.

In general, intonation teaching should be a requirement in all Departments of English Language Education in Turkey. It is difficult to imagine education for non-native English language teachers without courses on intonation, which should at the very least include stress, pitch, and juncture studies. Supra-segmental phonemes are said to be overlaid on the segmental units, invariably and continuously accompanying speech; therefore, the language teacher should be aware of behaviour and intonation patterns that are appropriate in the L1 speech community and may be perceived differently by members of the L2 or foreign language (FL) speech community. In such circumstances, the misunderstandings promoted by incorrect pitch patterns can accumulate and lead to serious frustration. When non-native teachers of English learn the pitch patterns of the target language, it indicates a respect for cultural differences.

RECOMMENDATIONS

There are certain culturally fixed ways of using intonation and other voice characteristics to indicate culturally standardised emotional attitudes like certainty, uncertainty, politeness, impatience, sophistication, anger, and asking questions.These intonation patterns are very difficult for Turks to achieve because Turkish is a syllable-timed language while English belongs to a stress-timed language group. There are, in addition, the psychological features appearing in the individual's use of language. To overcome such difficulties, multisensory and multi-cognitive approaches to teaching pronunciation and intonation via audio-visual techniques are highly recommended.

The present findings showed that the results of the three research questions had been correctly anticipated by the researcher. Accordingly, all of the participants definitely needed remedial instructions, since all of them were employed as teachers. The participants were producing fossilized segmental phonemes and intonation

patterns interwoven by pitch varieties; therefore, they should be enrolled in remedial lessons. The planning and administration of the remedial instruction sessions must be conducted very carefully. After the completion of the remedial sessions, a re-sit oral test could be administered in the same manner as the pre-test.

LIMITATIONS OF THE STUDY

This research was limited by the English language background of the 10 MA students participants from the Department of English Language Education at Hacettepe University. All of them were graduates of English Language Education Departments at different universities in Turkey and had diplomas in Teaching English as a Foreign Language. They were all employed as teachers of English language. The participants declared that they had never studied anything about the intonation contour of certainty and uncertainty.

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