

GENDER DIFFERENCE IN ENGLISH INTONATION

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ABSTRACT

This paper discusses the gender difference in the English intonation patterns used by native speakers of English from sociophonetic and functional perspectives with a preliminary corpus-based experimental study. The main purpose of this research is to dig out the possible reasons of gender difference in intonation usage with social and cultural impacts. The research isolates gender as the major sociophonetic variant to conduct the experiment and discussion. The writer hopes that the study of gender patterns of English intonation will trigger non-native learners of English to make appropriate understanding and use the different discourse functions of English intonation to better realize their communication goals.

Keywords: English intonation, gender difference in intonation, sociophonetics, pitch accent

1. INTRODUCTION

English intonation can present independent meanings in utterance to help speakers realize certain communicative purpose. Thus, intonational functions, such as attitudinal function, play a very important role in interactive dialogues. For example, it can help us to set up the common ground awareness or knowledge; to mark if the information presented among interlocutors is new or given; to prompt that a turn has completed and a new topic should be proposed.

Language plays a very important role in the evolution of social development. The study of the correlation between language and culture can help non-native learners not only understand the features of the target language more clearly and thoroughly, but also have a good command of the foreign language. Wells [13] indicated that almost any intonation pattern is possible in English; but different intonation patterns have different meanings. For the study of English intonation which is flexible in use with sentence types and with particular meanings of speaker's intention to express, we should know the functions of intonation patterns, and the reasons of usage with

those functions and rules. Since intonation has very close cues between society and language, it may cause confusion between interlocutors if they do not share with the same set of cultural background or when they come from different speech communities. Typically, it can cause problems between native and non-native speakers as they can't understand or decode each other's intonational meanings properly. Wells [13] has indicated: "When interacting with someone who is not a native speaker of English, they make allowances for segmental errors, but they do not make allowances for errors of intonation. This is because they do not realize that intonation can be erroneous." Since English intonation conveys independent meanings, native speakers concern more about the proper usage of intonation in the effective interaction.

The research works of Sociolinguistics show that speech acts and style are systematically influenced by a range of socio-cultural factors including the aspects of speakers' social background such as their age, gender, ethnicity and socio-economic status [3, 6, 9, 10] as well as the speech communities and social networks to which speakers are affiliated [3].

The existence of gender patterns in language use has been confirmed by sociolinguistics among native English speakers (by dividing the male/female speech community). The same situation has also been noticed in the use of intonation [2, 3, 5, 9, 10]. Brend [2] indicated some differences in using the intonation patterns by male and female. Lakoff [9] mentioned that American women use more the question intonation in conjunction with declaratives to show their politeness and cooperation in conversation. However, the research methodology of the works [2, 3, 9] was conducted mainly by perceptual ways, lacking in the phonetic experiment to support their observations and conclusions. On the other side, the studies of [5, 8] didn't focus their attention on the sociolinguistic aspect. Owing to the insufficiencies in the previous study on the cues between intonation and culture by acoustic

experiment, this writer thus takes an acoustic case study to discuss the rising tone phenomenon in a native female speech community triggered by the prosodic considerations which is linked to the gender difference. This study will use mainly the approach of sociophonetics to discuss the gender issue of intonation.

Mentioned in [4, 7], sociophonetics is a newly emerged research area which focuses on aspects of speech acts; the effects of intonational variations in speech communication; the variation impacts on the process of language acquisition; and the value of understanding variation for a range of applied areas. Up to now, the works of sociophonetics mainly dealt with the social, regional and stylistic variation in speech acts.

The writer hopes that the study of the gender patterns of English intonation will trigger non-native learners of English to make appropriate understanding and good use of the different discourse functions of English intonation, and to help them realize their communication goals more effectively.

2. CORPUS STUDY METHOD

This study uses native speaker's sound samples from IViE corpus [5] which is set up by Esther Grabe and her research group. According to Grabe [5], the corpus contains 36 hours of speech data and the dialects in the corpus are 'modern' or 'mainstream' dialects in several UK cities. In the corpus, Grabe and her fellows recorded 6 male and 6 female adolescent students with age of 16. They are all from urban areas' secondary schools in each city. Grabe examined the data to show and discuss the general intonational variation in UK. She noticed the existence of gender difference during her research but didn't conduct further study and discussion. This study examines the corpus data but focused on the gender difference in intonation.

2.1. Sound samples

The Cambridge sound samples from IViE are chosen to conduct the experimental study as the dialect can present the Standard Southern British English. The sound samples include 8 sentences of declaratives; 4 sentences of declaratives-questions; 7 sentences of yes-no questions; 7 sentences of wh-questions; and 8 exclamatory sentences. All the sample sentences by 12 speakers (total 408 samples) are from the phonetically controlled sentences and the read text of *Cinderella*.

2.2. Procedures

For analyzing the gender deference in intonation, the case study inspects the nuclear pitch accent models and F_0 contours of the male and female sound samples mentioned above. The Praat software [1] is used to generate the pitch data as well as the F_0 contours. For the nuclear tones in each sentence, F_0 is measured at the onset of the nuclear stressed syllable and at its end point. The pitch data is measured twice: first is to get the nuclear stressed syllable and second is to get the onset from stressed syllable till the boundary tone of the nuclear pitch accent. The second measurement is mainly to get the difference of pitch scale between pitch accent and phrase tone + boundary tone. According to [8], these scales can tell us the tone model more accurately. Thus, we can know each sample sentence's tone model by comparing the two pitches. The unit of pitch normally is Hz. Since semitone (St) is more accurate than that of Hz in our comparing the pitch level, this study uses St as the pitch scale.

3. RESULTS

Table 1 shows the pitch result of stressed syllable vs. nuclear pitch accent of female and male samples. We can find that the scale of the whole pitch accent is higher than that of the stressed syllables in each sentence type in terms of all female pitch data. The result means that the pitch levels of boundary tone are normally higher than that of the stressed syllables, which indicates that the boundary tones are as H% in general. So, it represents that the female speakers use rising tone more in each sentence type. The male data tell us another story as only the declarative-question shows that the pitch level of boundary tone is higher than the stressed syllable. Thus, male speakers use more falling tone.

Table 1: The pitch data of stressed syllable vs. nuclear pitch accent of female and male samples.

Sentence type	Stressed Syllable (F)	Pitch accent (F)	Stressed Syllable (M)	Pitch accent (M)
1 – Decl.	7.433	11.147	3.275	2.218
2 – dec-q.	9.539	14.509	5.767	6.310
3 – yes/no-q.	10.544	13.224	8.539	4.381
4 – wh-q.	10.415	13.650	7.025	4.396
5 – excl.	9.638	12.718	7.336	4.160

F=Female; M=Male

The F_0 contours can directly show this result about female and male speakers' intonational styles as figure 1 and 2 below.

Figure 1: The typical female F_0 contour of declarative sentences.

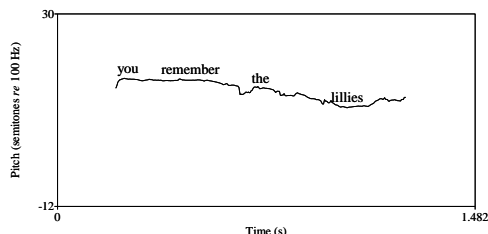


Figure 2: The typical male F_0 contour of declarative sentences.

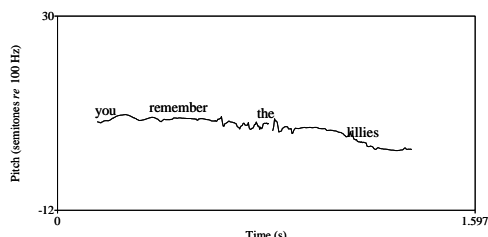
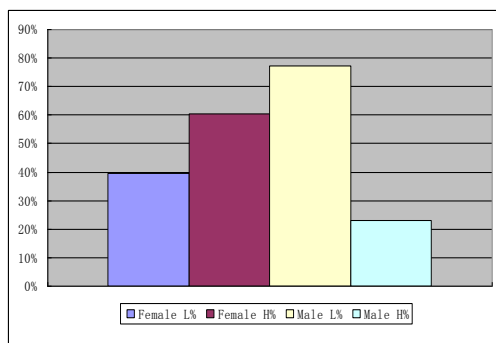


Figure 3 illustrates the percentage of boundary tone level in H% or L% of all declarative sentences by male and female speakers. We can find that 60% of female speakers' boundary tone samples are as H%, and about 77% of male speakers' boundary tone samples are as L%.

Figure 3: The boundary tone calculation of declarative sentences of female and male speakers.



For wh-question sentences, the figure 4 shows the typical female speakers' F_0 contour of wh-question, while figure 5 shows the male one. In figure 6, the histogram of dark-red shows: although there are about 55% female speakers' boundary tone samples are as L%, there are still more than 40% of female boundary tone samples as H% in this sentence type. For male speakers, more than 70% of the boundary tone samples are as L%.

Figure 4: The typical female F_0 contour of wh-question.

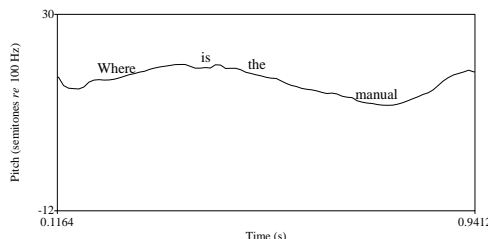


Figure 5: The typical male F_0 contour of wh-question.

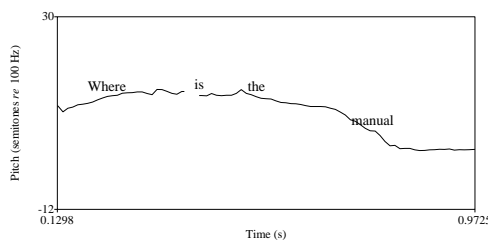
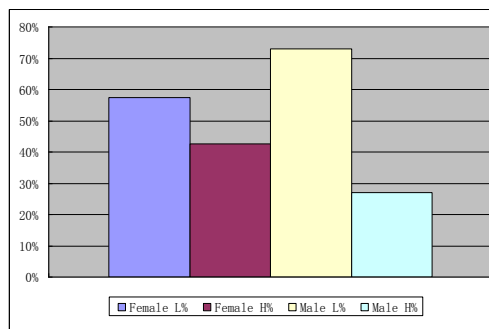


Figure 6: The boundary tone calculation of wh-question of female and male speakers.



The third sentence type which also shows the trend is the exclamatory sentence. The figure 7 shows the typical female speakers' F_0 contour of the exclamatory sentence and figure 8 is the male one. Figure 9 illustrates that about 54% of female speakers' boundary samples are as H%. For male speakers, more than 70% of them use the falling tone (boundary tone as L%).

Figure 7: The typical female F_0 contour of exclamatory sentence.

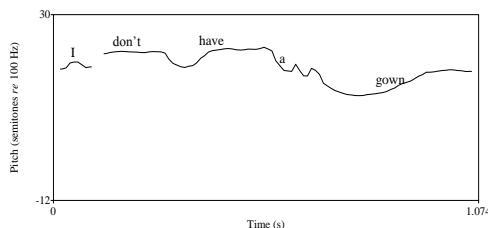


Figure 8: The typical female F_0 contour of exclamatory sentence.

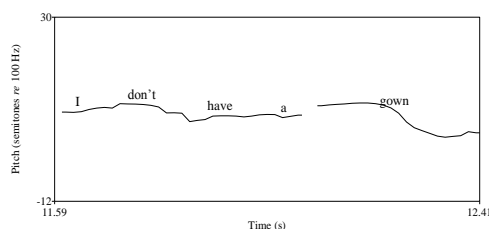
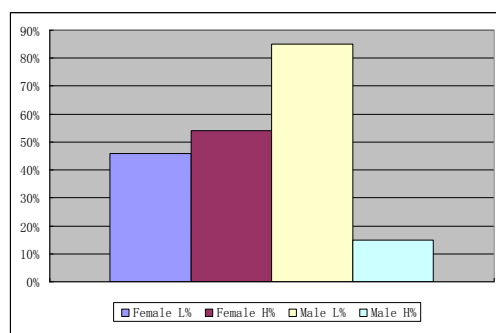


Figure 9: The boundary tone calculation of exclamatory sentence by female and male speakers.



4. DISCUSSION AND CONCLUSIONS

Intonational functions not only serve a variety of pragmatic acts, they also express a range of social meanings, especially for gender identity. The corpus experimental study provides the evidence that female speakers have showed their tendency to use the rising tone in statement while male speakers, on the other hand, use more falling tones. Indicated by Tench in [12], the falling tone with statements, wh-questions and commands all represent the speaker's dominance in respect to information and authority. The samples' boundary tone calculation show that the young male teenagers from Cambridge of UK in IViE corpus used more falls than their female counterparts. The tone usage of male teenagers displayed their assertiveness and confidence in their utterance.

The intonational functions of rising tone express speaker's feeling and display their deference to the hearer's assumed knowledge. Lakoff in [9] discussed that female has been constrained by gender stereotypes which requires women to act as a lady. In this social environment, parents, teachers and adults treat the children differently in line with their sex. For example, "If a little girl 'talks rough' like a boy, she will normally be ostracized, scolded..." [9] p. 40. This study evidenced the use of rises in non-yes/no question by female speakers. It assumes that, by using the rising tone, the teenager female students in IViE

corpus have already learned to "speak like a lady" and act politely.

From the viewpoint of pragmatics, the female intonation pattern (use of more rises) can be taken as polite and cooperation utterance in conversation. But from sociophonetics, it also shows the non-assertiveness of female's utterance. According to [3, 6, 9, 10], it's a weak form of the intonation pattern and represents the powerless of female in the society. Of course, all of these attributes are described by gender stereotypes in which the feminine role has been suggested in the culture and the society. We should also notice that the above mentioned intonation patterns are more observed in conversation utterance, but the result of this case study tells us that it can also be found in reading speeches. We can conclude that for the teenagers, they have acquired sufficient knowledge in gender constraints or stereotypes in speech acts. Thus, the socio-cultural influence is one of the most influential elements to impact the usage of intonation patterns of female and male speakers.

5. REFERENCES

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