



Male and Female Pitch on Japanese Language Directive Speech Acts in Gintama Live Action Movies 1 and 2

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Abstract. A directive speech act is an utterance mostly found in daily conversation. The purpose of directive speech is to make the listener obey the speaker's instructions. In Japanese conversation, people are used to being very attentive and careful in using the directive form of speech since they are not used to instructing straightforwardly. Therefore, this study aims to see how Japanese males and females produce straightforward directive speeches. The data of this study were the pitch of Japanese males and females. Their pitches were measured using the *Praat* application to know how high or low the pitches were. By using the mixed method, qualitative and quantitative, this study found that Japanese, especially males, produced a higher pitch than the general Japanese speakers' standard while uttering directive speeches. The pitch is high since the situation becoming the background of the conversation made the speakers need to raise their voices to reach the communication goal.

Keywords: Pitch · Directive speech · Japanese language

1 Introduction

Using language is inseparable from the speech process. Speech is a crucial aspect of someone using language to deliver a message. The speech used to influence the listener to do something based on the message is called directive speech [1]. Directive speech is divided into some kinds. One of the kinds is a command. The command is a directive speech aiming to ask the listener does something as the speaker wishes [2]. In short, the command is the speech to instruct someone.

In Japanese, a command in the directive speech is called *meirei* (命令). There are various forms of *meirei* (命令) in a speech, such as the form of *~e/~ro/~yo* for instructing forcibly, *~nasai* for instructing people with a lower status [3], and *~kudasai* for instructing politely [4]. Related to forms of the command, Japanese people put concerned about the listener's condition while asking for something, especially related to instruction or command. Japanese people tend to deliver the command indirectly. Therefore, the phenomenon is interesting to be studied, about how direct the Japanese people deliver their commands. One of the techniques to investigate it is measuring the pitch of men and women while giving commands.

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The pitching measurement in the language study is the part of acoustic phonetics that focuses on the characteristics of sound wave acoustic of the language produced. The investigation of acoustic phonetics has two dimensions of benefits; they are theoretical and applied dimensions [5]. The approach of acoustic phonetics can be used to investigate other language studies, including syntax, pragmatics, forensic linguistics, and speech disorder.

Related to the issue, how high or low someone's speech is called habitual pitch [6]. The average mean of men's habitual speech is 50–2500 Hz, while women's habitual speech is around 120–500 Hz [7]. Based on www.music.a-miya.jp/koe-Hz/, the average habitual speech of Japanese males is around 120–200 Hz, while the habitual speech of Japanese females is 200–300 Hz [8]. It is in harmony with the previous study conducted by Busby and Plant, which investigated the difference between males' and females' voices. The result of the study reveals that the female's pitch is higher than the male's [9].

The pitch measurement of directive speeches of Japanese males and females, *meirei*, can be done by a spectrogram application called *Praat*. This application is often used in many types of research, especially those which investigate acoustic phonetics. It works by transforming a voice into a graphic to analyze and measure the pitch. Moreover, the application is also a phonetic program that can analyze speech. It converts the voice into a spectrogram whose construction can be known in detail [7].

The pitch of someone's voice depends on the speech intonation. The lower the intonation, the lower the pitch, and vice versa [10]. Therefore, concerning intonation, the pitch has an important role in measuring the speech's frequency, which also affects its meaning to be understood by the listener. Related to Japanese language teaching, some students who learn Japanese as a foreign language often face difficulty pronouncing directive speech that is authentic as the native speakers. Whereas the accuracy of the pitch affects is vital since it influences the meaning-making of the speech.

Therefore, this study aims to analyze the pitch of Japanese directive speech by using *Praat*. The measurement results are in the form of Hertz (Hz), which is expected to determine how candid the Japanese are in producing directive speech. Besides, the pitch measurement is expected to assist Japanese learners in imitating the Japanese accent, particularly in directive speech. Hence, they can produce a language that sounds nearly authentic and understand the meaning of the speech.

Specifically, this study measures and analyzes the pitch of the directive speech in the form of (1) *~e/ ~ro/ ~yo*, (2) *~nasai dan*, (3) *~kudasai* from a movie entitled *Gintama Live Action 1, and 2*, which can represent Japanese males and females in pronouncing daily directive speech. Besides, the characterization and language style of the characters in this movie are matched with Japanese daily speech.

2 Methods

This study used qualitative and quantitative approaches. A quantitative approach was used to know the mean of the pitch of the directive speech. The data were collected from a movie entitled *Gintama Live Action 1 and 2*. The directive speeches appearing in the movie were classified based on their forms and the gender of the speakers. Then,

the pitch was counted using the experimental method: cutting the selected directive speech and transforming it into an mp3 format. Next, the pitch measurement was done using the Praat application, which produces the results in Hz. Finally, the results of pitch measurement were analyzed qualitatively. The data were served in the form of a description.

3 Results and Discussion

Based on the data gathered and pitch measurement of the directive speeches using the Praat application’s spectrogram, the results can be displayed in Table 1.

Based on Table 1, it can be seen that male speakers produce 29 speeches with various *meirei*. Detailly, there are 11 data with *~e/ ~ro/ ~yo*, 3 data with *~nasai*, and 15 data with *~kudasai* forms. Meanwhile, there are only 8 data of female speakers, with 2 data in the form of *~e/ ~ro/ ~yo*, 1 in the form of *~nasai*, and 5 in the form of *~kudasai*.

Furthermore, the pitch mean, as displayed in Table 1, was revealed by measuring all of the pitches with the formula:

$$\text{Mean} = \frac{(x_1 + x_2 + x_3 + \dots + x_n)}{n}$$

n = number of data points

x_n = sum of all data points

The counting found that the mean pitch of the males’ directive speeches is 267,1 Hz, with the pitch of *~e/ ~ro/ ~yo* form is 233,9 Hz, *~nasai* form is 342,8 Hz, and *~kudasai* form is 224,6 Hz. Meanwhile, the pitch mean of the females’ directive speeches is 267,1 Hz, with the form of *~e/ ~ro/ ~yo* being 328 Hz, the form of *~nasai* is 277, 5 Hz, and the form of *~kudasai* is 247, 1 Hz.

Moreover, this study shows different results from the previous study. The results of this study show that the mean pitch produced by male speakers is 267,1 Hz, which is higher than the general male pitch, which is 50–250 Hz [7]. It is also higher than the Japanese habitual pitch’s mean, 120–200 Hz [8]. Furthermore, while being categorized based on the *meirei*, *~e/ ~ro/ ~yo* has 233,9 Hz and *~kudasai* has 224,6 Hz pitches. The results are still in the range of general males’ pitch but higher than the pitch of Japanese males’ habitual pitch. The *~nasai* form has a mean pitch of 342,8 Hz, much higher than the general and Japanese habitual pitch. Meanwhile, the pitch mean of the female

Table 1. Pitch frequency and mean of directive speeches in *Gintama Live Action* movie.

Forms (<i>meirei</i>)	Male speakers	Female speakers		
	Frequency	Mean (Hz)	Frequency	Mean (Hz)
<i>~e/ ~ro/ ~yo</i>	11	233,9	2	328
<i>~nasai</i>	3	342,8	1	277,5
<i>~kudasai</i>	15	224,6	5	247,1
	29	267,1	8	284,2

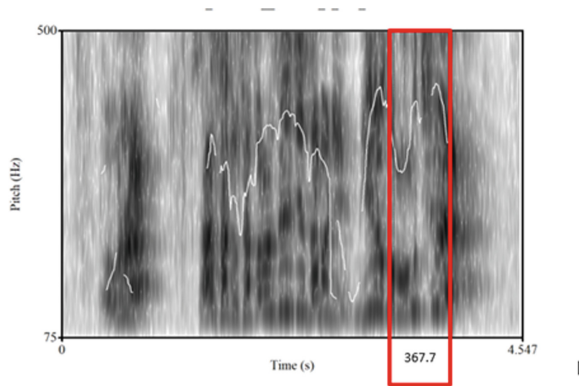


Fig. 1. Pitch of Boss Shinpachi's directive speech

speakers is 284,2 Hz, which is still in the range of normal female pitch (120–500 Hz) and Japanese habitual pitch (200–300 Hz) [7, 9]. However, when classified based on the *meirei*, the directive speech with *~e/ ~ro/ ~yo* form has 328 Hz pitch mean. It shows the higher result of habitual Japanese speech. While for *~nasai* and *~kudasai* forms, the pitch means are still similar to the average score of general and Japanese habitual pitches.

Further elaboration can be seen below for the unique findings of the pitches produced by adult males and females.

3.1 Males' *~e/ ~ro/ ~yo* Directive Speech Pitches

Based on Table 1, 11 data show the forms of *~e/ ~ro/ ~yo* in the males' directive speech, with the pitch mean of 233,9 Hz. Of 11 data, 6 data are higher than the standard habitual pitch of Japanese males, 2 data that is lower than the standard, and 3 data that are the same as the standard, which is around 120–200 Hz. The illustration can be seen in the image below.

Figure 1 shows the pitch of the directive speech produced by Boss Shinpachi. The statement is below.

Boss Shinpach: こら、ささっとチャトラン星人さまにミルクをしろ
(Kora, sassa to chatoran hoshijin sama ni miruku wo shiro)
 (Hey, go grab the milk to chatoran san, that alien!)

The directive speech above has 367,7 Hz pitch, indicating that the pitch is higher than the general standard, which is 120–200 Hz. The pitch is high because the loud voice produces it due to the anger of Boss Shinpachi. Therefore, it can be concluded that the conversation context highly influences directive speech. The loud voice can create fear, making the listeners directly do the speaker's instruction.

Figure 2 is the pitch of Takatsugi Shinsuke's directive speech. He is one of the characters in the *Gintama Live Action* movie that is analyzed in this study. His complete statement can be seen below.

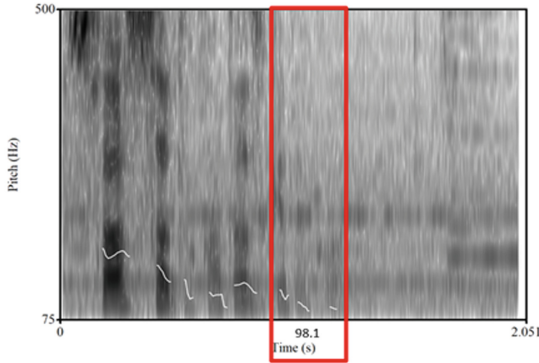


Fig. 2. Pitch of Takatsugi Shinsuke's directive speech

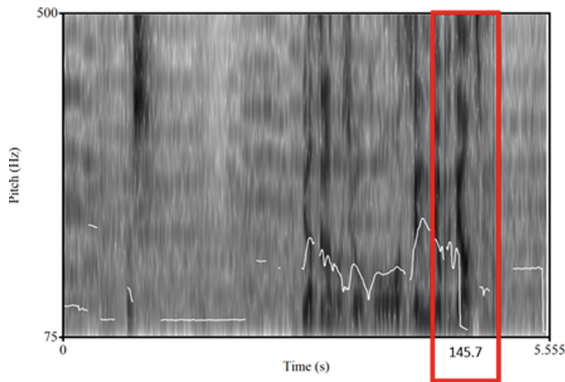


Fig. 3. Pitch of Kondo's directive speech

Takatsugi Shinsuke: さっさとかたづけてこいよ
(Sassa to katazukete koi yo)
 (Go clean it up!)

The directive speech has 98,1 Hz pitch which indicates a lower result than the standard of males' Japanese habitual pitch, which is 120–200 Hz. However, the results generally are still in the range of general males' pitch, 50–250 Hz. Moreover, the voice produced is low since Takatsugi talks closely to the listener to make his speech not loudly heard, even though the context is anger. However, the low voice is clear enough to make the listener understand the message of Takatsugi's speech.

Figure 3 is the pitch of the directive speech produced by Kondo, a character in the *Gintama Live Action* movie. The utterance can be seen below.

Kondo: とし、あやつらの情報ぜんりよくであつめろ
(Toshi, ayatsura no jouhou zenryaku de atsumero)
 (Toshi, collect all the information about them)

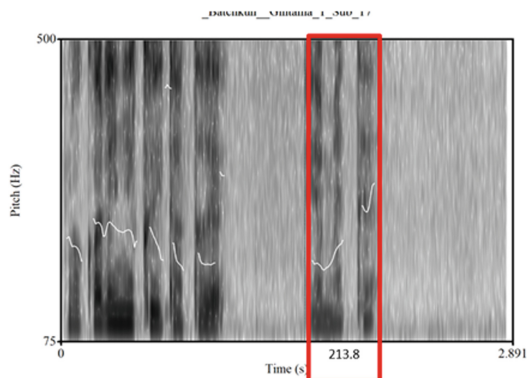


Fig. 4. Pitch of Tae's directive speech (1)

The directive speech above has 145,7 Hz pitch. It shows that it is in line with the standard of Japanese male habitual pitch, 120–200 Hz, and general male pitch, which is 50–250 Hz. The utterance was produced with a flat voice in the calm conversation. Kondo instructed Toshi to collect all information about their enemy. Kondo's utterance shows that a calm voice is enough to make the listener understand the instruction.

3.2 Females' *~e/ ~ro/ ~yo* Directive Speech Pitches

Based on Table 1, two data of directive speeches have form *~e/ ~ro/ ~yo* produced by female speakers with the mean of the pitch is 328 Hz. The pitch is a bit higher than the habitual pitch of Japanese females, around 200–300 Hz. However, the mean is still in the standard of general females' pitch, which is about 120–500 Hz. From the 2 data, the first one is found to have 213,8 Hz pitch, while the second has a higher pitch, 442,3 Hz. Here is the analysis of both data collected.

Figure 4 is the result of pitch measurement produced by a female character named Tae. The result is still in line with the standard of general female pitch. The utterance can be seen below.

Tae: わかりにくいとえ、やめて
 (*wakarini kui tatoe, yamete*)
 (Don't use an analogy that is hard to understand!)

Tae's statement was uttered in a soft and calm voice. It has a normal pitch, which is 213,8 Hz. She produced the instruction to the listener who spoke with an analogy difficult to understand. Therefore, Tae requested the listener to use language that was easier to understand. With the authoritative voice, the message of the utterance can be understood to be delivered.

Figure 5 is also the pitch measurement result Tae with 442,3 Hz. The pitch result is higher than the normal habitual pitch of Japanese females. Here is the utterance.

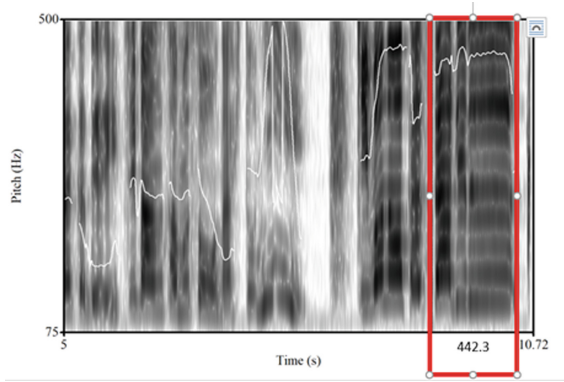


Fig. 5. Pitch of Tae's directive speech (2)

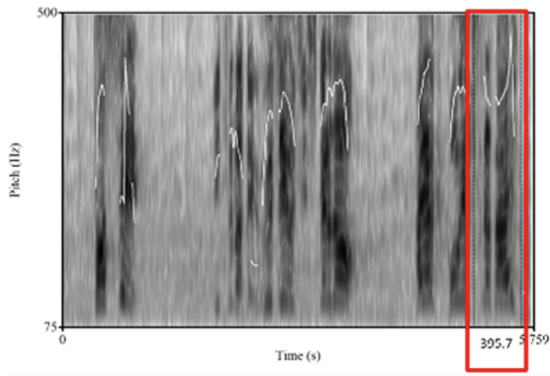


Fig. 6. Pitch of Gintoki's directive speech

Tae: 着物を貸せて上げろ
 (*Kimono wo kasete agero*)
 (Lend me your kimono!)

The directive speech of Tae above has a high pitch. It is because of the speech context that Tae needs to raise her voice to get the listener's attention. As a result, the listener responded to the instruction as Tae expected.

3.3 Males' ~nasai Directive Speech Pitches

Based on Table 1, 3 data showing the pitch of directive speech with ~nasai form. They have an average pitch higher than the normal male pitch, about 120–200 Hz. Furthermore, the results are also influenced by the context of the conversation. All 3 data have the pitch average around 300 Hz, with the highest pitch at the 395,7 Hz. Here is the analysis result of the data with the highest pitch representing the other 2 data.

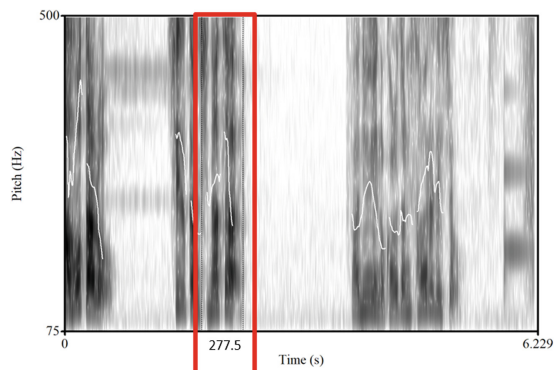


Fig. 7. Pitch of directive speech produced by Komotaro's Mother

Figure 6 reveals the result of the pitch measurement of the *~nasai* directive form produced by a male character named Gintoki. The utterance is shown below.

Gintoki: とし、いつまでウジウジしてるの、はやく攻撃しなさい
 (*Toshi, itsu made ujiuji shiteru no, hayaku kougeki shinasai*)
 (Toshi, how long have you been groaning? Attack!)

The directive speech uttered by Gintoki has 395,7 Hz pitch which is higher than the standard pitch of general males and Japanese males' habitual pitch. It is due to the speech context, where Gintoki needed to raise his tone to attract the enemy's attention. Thus, the enemy would do the instruction as Gintoki asked.

3.4 Females' *~nasai* Directive Speech Pitches

Table 1 reveals that there is only 1 datum showing the *~nasai* form of directive speech produced by the female speaker. The pitch of the datum is 277,5 Hz, which is still matched with the Japanese female's habitual pitch (200–300 Hz) and female's general pitch (120–500 Hz). Below is the data analysis of the pitch measurement.

Figure 7 shows the pitch result of the *~nasai* directive speech produced by Komotaro's mother. Based on the figure, it can be seen that the pitch of the speaker's utterance is 277,5 Hz. It is included in the standard category. Moreover, the utterance can be seen below.

Kamotaro's mother: かもたろ、しずかにしなさい
 (*Kamotaro, shizukani shinasai*),
 (Kamotaro, please don't be noisy)

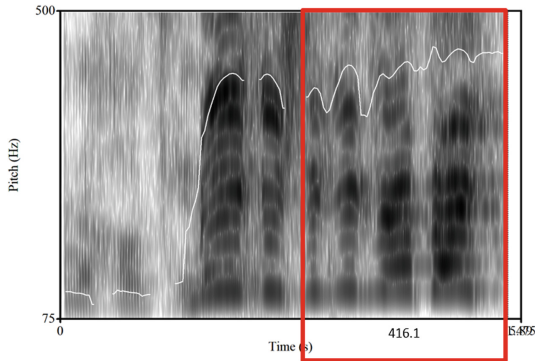


Fig. 8. Pitch of the Manager's directive speech

The directive speech of Komotaros' mother was spoken calmly. She did not raise her voice while instructing Komotaro since she needed to care for Komotaros' sick brother. However, the instruction could be done appropriately by Komotaro. He was silent as her mother instructed.

3.5 Males' ~kudasai Directive Speech Pitches

Based on Table 1, 15 data show the pitches of directives speech with ~kudasai form produced by male speakers. The data are produced more than other forms produced by male speakers. The average pitch of the form is 224,6 Hz, which is higher than the males' normal pitch, which is 120–200 Hz. From the 15 data, 7 data is higher than 200 Hz, 4 that is lower than 120 Hz, and 4 that is in line with the range. The ones that are higher than 200 Hz are influenced by the speakers, who raise their voices based on the speech context to get the listener's attention. At the same time, the data lower than 120 Hz are caused by the speaker who stalks without pressing the listener to follow the instruction. Here are examples of the presenting data.

Figure 8 shows the pitch result of the manager's directive speech. A manager is a man that produces 416,1 Hz pitch. The utterance is below.

The manager: メイクしてください!
 (meiku shite *kudasai*)
 (Dress her up!)

The directive speech with ~kudasai form above was spoken with a high pitch. The high pitch is due to the manager being angry. He instructed his lackey to dress a lady who came to him to work in a nightclub. The instruction shocked the lackey. It made the lackey follow the instruction immediately. Hence, the utterance shows that ~kudasai form is often used by male speakers to express anger in their speeches.

Figure 9 is the pitch measurement of Shinpachi's directive speech. The result shows that the pitch can range up to 110,9 Hz. The utterance can be seen below.

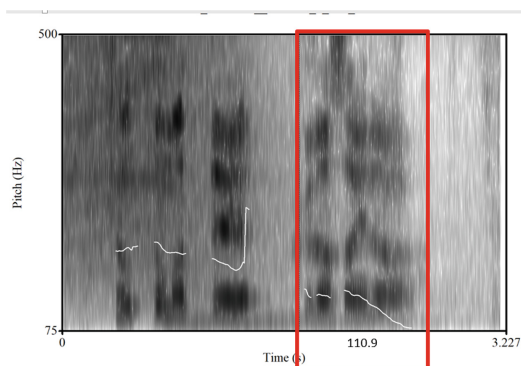


Fig. 9. Pitch of Shinpachi's directive speech (1)

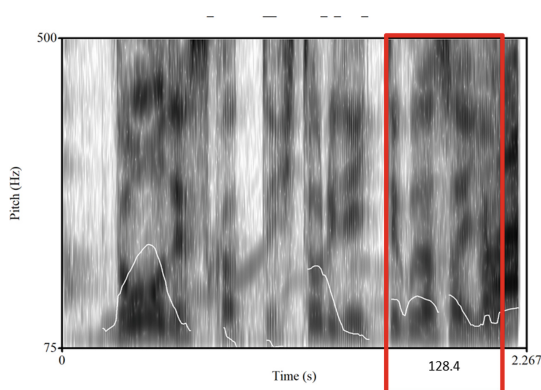


Fig. 10. Pitch of Shinpachi's directive speech (2)

Shinpachi: ちょっと待ってくださいな
 (*Chotto matte **kudasai** na*)
 (Wait a minute)

The directive speech of Shinpachi was spoken with a calm and low voice. It is based on the Shinpachi's speech style. Even though the statement was uttered in a low voice, it can attract the attention of the people surrounding it. Shinpachi's utterance could make the people stop and focus on him. Thus, it shows that the directive speech with ~kudasai form is not always uttered with a high voice. Even a low voice can also attract the listener's attention. The speech context and speaker's talking style contribute in the pitch production.

Figure 10 shows the pitch of Shinpachi's directive speech. It has a normal pitch, which is 128 Hz. Here is his utterance.

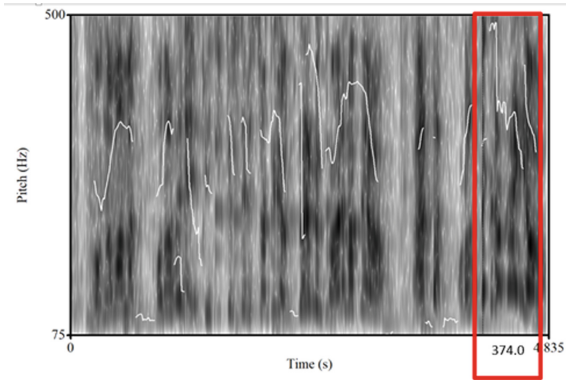


Fig. 11. Pitch of Matako's directive speech

Shinpachi: どうですかって、一人でいってくださいよ
(dou desu ka tte, hitori de itte kudasai yo)
 (What do you think? Go by yourself!)

Shinpachi's directive speech above was spoken with a soft voice and no pressure to instruct the listener. Shinpachi instructed the listener to do something alone since he did not want to join. Furthermore, Shinpachi's utterance shows that *~kudasai* form can have the same pitch as the Japanese males' standard as long as the speaker produces the speech without putting pressure on the listener.

3.6 Females' *~kudasai* Directive Speech Pitches

Based on Table 1, 5 directive speeches have *~kudasai* form produced by female speakers. The average pitch of the speeches is 247,1 Hz. It shows that the speech with *~kudasai* form is in line with the habitual pitch of Japanese females, 200–300 Hz, and general female pitch, 120–500 Hz. However, from the 5 data, there are 2 data whose pitch is higher than the standard, 2 data whose pitch is lower than the standard, and 1 data whose pitch is in line with the range. Moreover, the data are detailedly shown below.

Figure 11 shows the pitch resulted from Matako's speech. The pitch result is 374 Hz, that is higher than the normal Japanese female's pitch. The utterance is seen below.

Matako: ...ささと殺してくださいよ
(sassato koroshite kudasai yo)
 (Go kill her quickly)

The directive speech of Matako was produced with the anger to instruct the listener to kill someone. It shows that, like other speech forms, anger will raise the speaker's voice. The purpose of the raising voice is to influence the listener to do the speaker's instruction.

Based on Fig. 12, the pitch of Matako's directive speech is 131,2 Hz. The statement is revealed below.

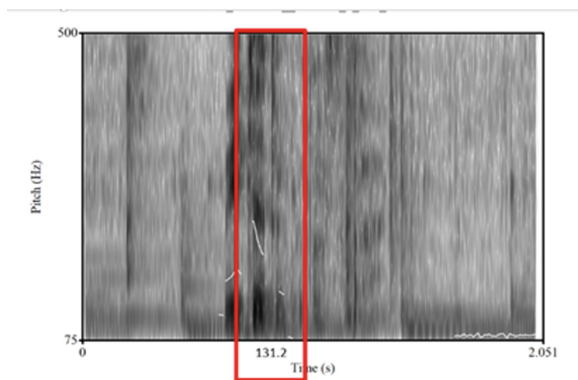


Fig. 12. Pitch of Matako's directive speech

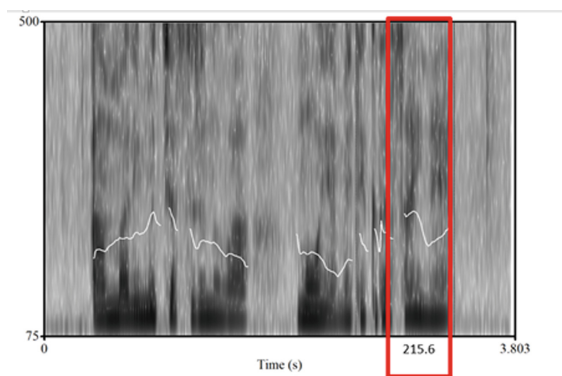


Fig. 13. Pitch of Tae's directive speech

Matako: 見ててください
 (*mitete kudasai*)
 (Please watch!)

Matako's directive speech was spoken with a low voice following the context of the conversation. Matako wanted to attract the listener's attention with her gentle speech since she was angry. Due to the gentle delivery, the listener can be calm, listen to the speech carefully, and follow the instruction. Moreover, Matako's speech shows that the high-pitch voice is not always necessary to attract the listener's attention. The gentle and mild voice can also be used to reach the goal of the communication.

Based on Fig. 13, it can be known that the pitch of Tae's directive speech is 215,6 Hz. Here is the utterance

Tae: あつまり無茶するのはもうやめてくださいね
 (*ammari, mucha suru no wa mou yamete kudasai ne*)
 (Please, don't overdo it!)

Tae's directive speech was spoken flatly to beg the listener not to overdo it. The statement follows the conversation context to make the listener obey the instruction. Therefore, it can be seen that the situation becoming the background of the conversation plays a crucial role in the meaning of the directive speech.

4 Conclusion

How low and high the pitch produced by the males' and females' directive speeches depend on the conversations' situation and context. Even though the forms of the directive speeches have a similar mean with general and Japanese habitual pitches, some data are higher and lower than theirs. Therefore, it is recommended for the next research produce deeper results. A direct measurement from the recording of the native's authentic directive speech is highly suggested.

Besides, the measurement cannot be limited to only the directive speech and other speeches. Moreover, future research can also investigate other acoustic phonetics, such as intensity, duration, or format of the directive speech, to deepen the issue and help Japanese language learners to speak authentically like native speakers.

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