

# Prosody in Punjabi

Masaki Fukuda

*International Christian University*

## 1 Introduction

While there are some previous studies on tonemes (tonal sounds) of Punjabi, very few research is done on sentence intonation or prosody. Therefore, the main interest in this paper is the prosody in Punjabi, with the analysis of information structure, including the idea of topicalization, focus, and givenness.

## 2 Data Collection

A Tascam DR-100 MK-III recorder, set at 44.1 kHz with 16-bit depth, mono, was used to record the elicitation sessions from the consultant. Also, a head-worn SHURE WH30 unidirectional microphone with an XLR connector was used during the elicitations. The distance between the microphone and the mouth of the consultant was at around 10 cm, and sentences in English were translated and repeated in Punjabi three times. The recordings were then processed and visualised in Praat (Boersma & Weenink, 2020). Figures used throughout this study are also created with this program, and all figures have the spectrogram.

## 3 Terminologies

Before cutting to the chase, the next few sections describe the basic ideas that are used in order to analyze the prosodical behaviors in Punjabi; topicalization, givenness, and focus.

**3.1 Topicalization** According to Roberts (2011), topicalization is the placement of the topic at the beginning of a sentence. The topic of a sentence is what is being talked about. For example, if there is a sentence ‘he saw that dog’ and ‘that dog’ is topicalized, it would be ‘that dog, he saw.’ That being said, let us see how the topicalization works in Punjabi.

- (1) a.   une     o       kutta   vekya  
      he     that    dog     saw  
      ‘He saw that dog.’
- b.   o       kutta   une     vekya  
      that   dog    he     saw  
      ‘That dog, he saw.’

From the example in (1) above, we notice that while the basic word order in Punjabi is SOV, it becomes OSV when its original sentence is topicalized, moving the object to the beginning of the sentence.

**3.2 Focus** According to Krifka and Musan (2012), focus is a grammatical category that determines which part of the sentence contributes new, non-derivable, or contrastive information. For example, when a sentence ‘I went to the park with Abdul’ is uttered as an answer to the question ‘who did you go to the park with?’, Abdul is [+focus], since it is the new information that is elicited by the question.

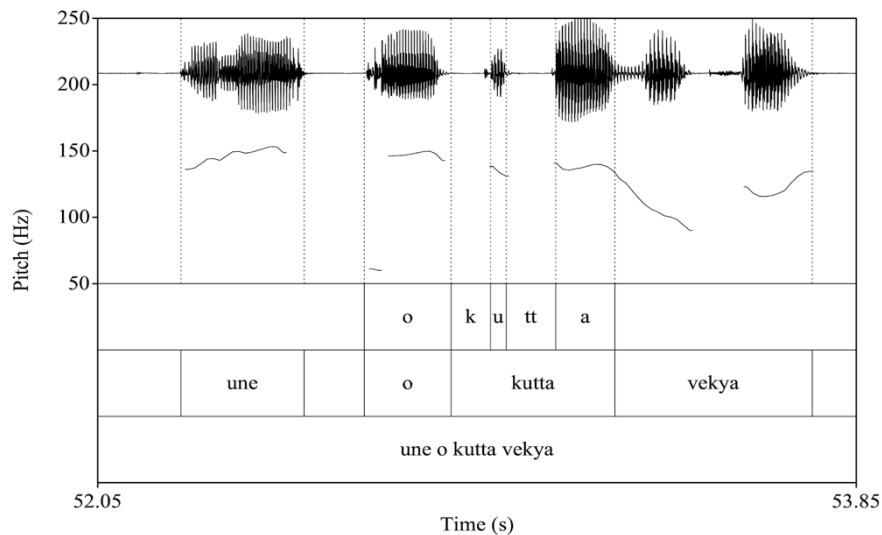
**3.3 Givenness** According to Schwarzschild (1999), givenness is a phenomenon where a speaker assumes that contextual information of a topic of discourse is already known to the listener. For example, if a sentence ‘I went to the park with Abdul’ is uttered in an all-new declarative without any other contextual information in the conversation, *Abdul* is [-given]. In contrast, when the exact same sentence is uttered as an answer to a question ‘who did you go to the park with, Abdul or Imran?’, *Abdul* is [+given], since it is already mentioned in the question.

## 4 Data Analysis

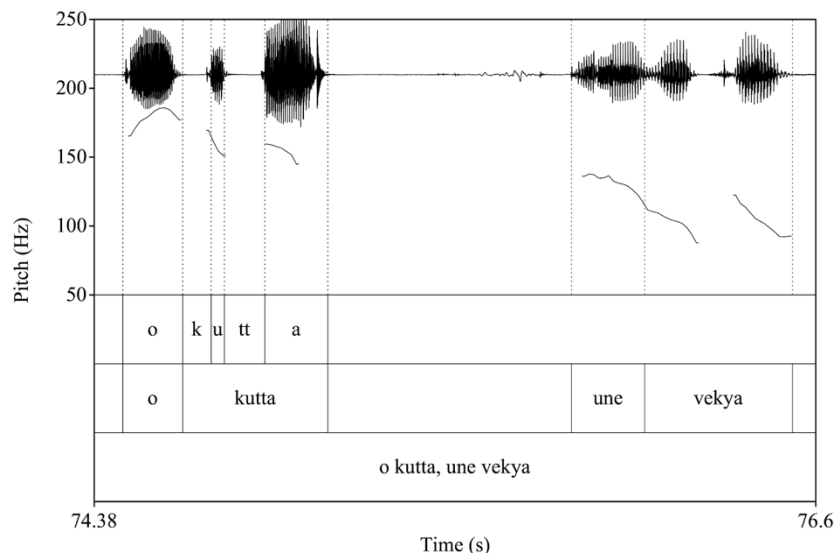
Based on the knowledge about the ideas introduced in the previous sections, we will see the prosodical behaviors in Punjabi in the following sections.

**4.1 Effects of Topicalization on Prosody** In this section, we will see how the topicalization acts in terms of prosody. Here are the example sentences below, (2) is a normal declarative sentence and (3) is the topicalized variation of the sentence (2).

(2) He saw that dog.



(3) That dog, he saw.

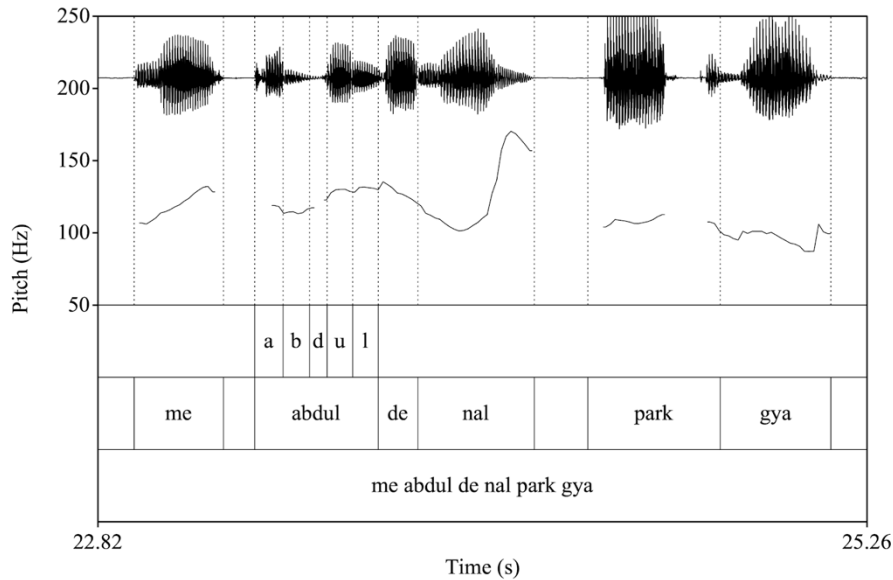


From the pitch information above, we notice that while the pitch in *o kutta* in (2) stays at around 150 Hz, the pitch in *o kutta* in the sentence (3) peaks at around 180 Hz, which is much (around 30Hz) higher than that in the sentence (2). This means that the topicalization affects the pitch information, raising the pitch of the topicalized elements.

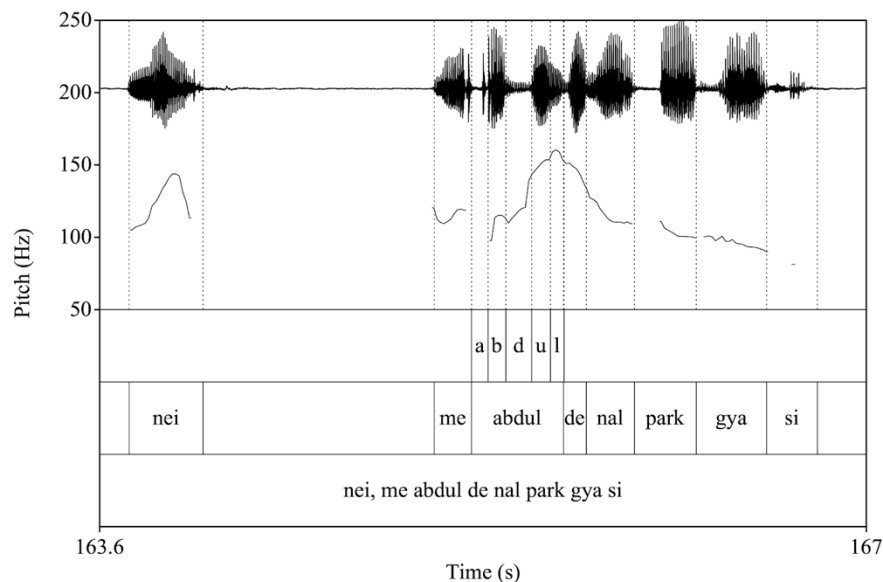
**4.2 Effects of Focus on Prosody** This section analyzes the pitch patterns with the idea of givenness in Punjabi. The sentences (4) and (5) below are the example sentences that elicit the difference between focused

elements and non-focused elements. The sentence (4) is uttered as an all-new declarative sentence, which means that there is no focus information within the sentence, while in (5), there is a focused element as it is uttered as an answer to a question.

(4) I went to the park with Abdul. (All-new declarative)



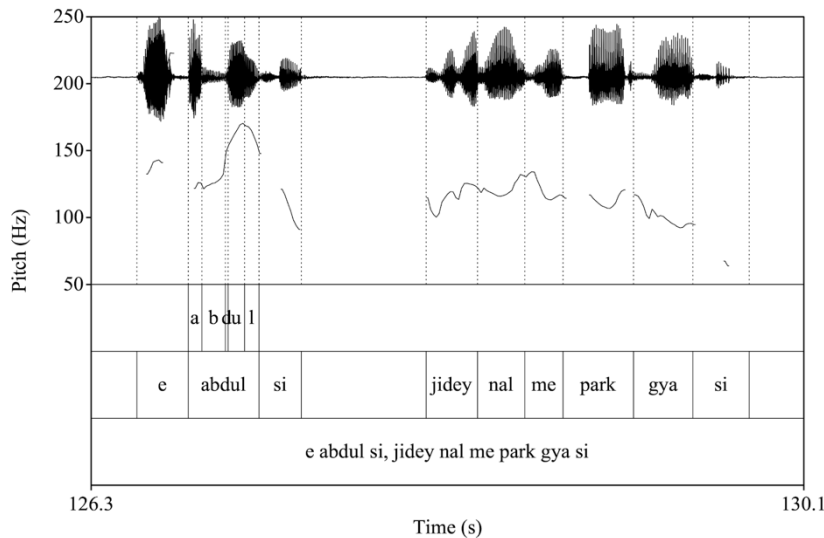
(5) (As an answer to a yes-no question “did you go to the park with Imran?”)  
No, I went to the park with ABDUL.



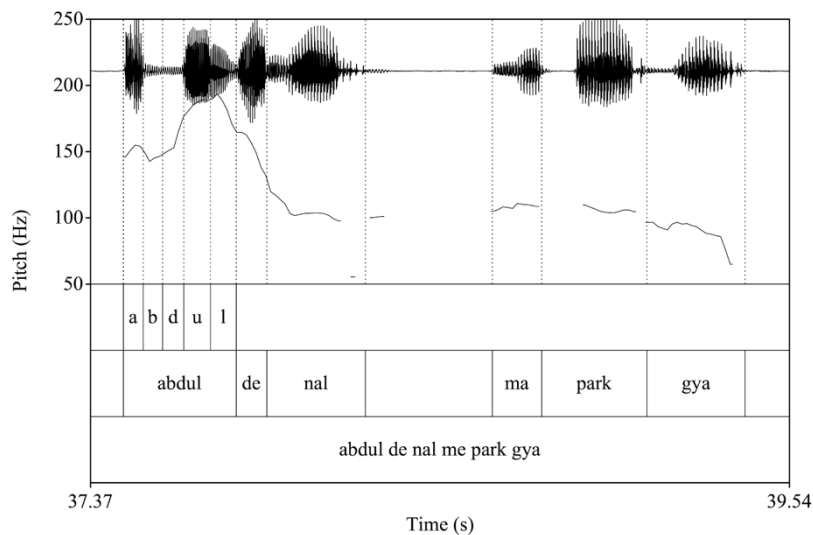
From the data above, we see that in (4), the pitch in *Abdul* remains at around 130 Hz, while in (5), the pitch in *Abdul* peaks at around 160Hz, which is around 30 Hz higher than when it is uttered in an all-new declarative sentence. This is because *Abdul* in (5) is focused, as it is the elicited information by the question “did you go to the park with Imran?,” which is known as ‘corrective focus,’ as it is correcting the information in the previously uttered question. One more thing to notice is that, in (4), instead of having a pitch rise in *Abdul*, there is a pitch rise in *denal*, which means ‘with.’ However, this pitch rise is not due to any focused elements, since the sentence is an all-new declarative. More research is needed in order to find possible reasons for this phenomenon.

**4.2 Effects of Givenness on Prosody** In this section, the scope of the analysis is on what kind of effect givenness has on prosodical behaviors in Punjabi. The two example sentences below both have [+focused], but the difference is whether it is [+given] or not.

- (6) (As an answer to a wh-question “who did you go to the park with?”)  
It was ABDUL, who I went to the park with.



- (7) (As an answer to a wh-question with verum focus “who did you go to the park with, Abdul or Imran?”)  
With ABDUL, I went to the park.



Looking at the data, *Abdul* in both (6) and (7) have pitch rise within the word, and as it is now clear from the analysis in the previous section, this is due to the focused elements. However, while the the peak of the pitch in Abdul (-given, +focus) in the sentence (6) is around 170Hz, the pitch in Abdul (+given, +focus) in the sentence (7) peaks at around 190Hz, which is around 20 Hz higher than the one in the sentence (6). What makes this difference in pitch is the givenness, as the pitch peaks at a higher point in the word with [+given]. Therefore, it can be said that among the focused elements, the pitch rise becomes more significant when it is [+given] at the same time.

## 5 Conclusion

In this paper, we looked at the prosodical behaviors in Punjabi, from the viewpoints of topicalization, givenness, and focus. In Punjabi, when there is a topicalization occurring in a sentence, the topicalized element has a pitch rise, which is not seen in a sentence without topicalization. In addition, if there is a focused element in a sentence, such as an utterance to a wh-question, the information elicited by the question, which is the focused element, also shows a pitch rise, while there is no significant pitch rise in the same word uttered in an all-new declarative sentence. Finally, the givenness also shows a similar effect on prosody in Punjabi. When an element is given, such as it is uttered as an answer to a choice question, the pitch of it peaks at a higher level than the ones that are not given.

## 6 References

- Bhatia, T. K. (1993). *Punjabi*. Routledge.
- Boersma, P., Weenink, D. (2020). Praat: doing phonetics by computer (Version 6.1.03) [Computer software]. <https://www.fon.hum.uva.nl/praat/>
- Joshi, S. S. (1989). *The phonology of the Punjabi verb: A polysystemic [i.e. polysystemic] analysis*. Classical Publishing Company.
- Krifka, M., & Musan, R. (2012). *The expression of information structure*. Berlin: Mouton de Gruyter.
- Roberts, C. (2011). Topics. In K. von Stechow, C. Maienborn, & P. Portner, (Eds.), *Semantics: An International Handbook of Natural Language Meaning* (pp. 1908 – 1934). Mouton de Gruyter.
- Schwarzschild, R. (1999). GIVENness, AVOIDF and other constraints on the placement of accent. *Natural Language Semantics*, 7(2), 141-177.