

# Intonation Used to Contrast Interrogative Sentences in the Inawashiro Dialect of the Aizu Region\*

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## 1. Introduction

- The Japanese dialects spoken in the Aizu region of Fukushima prefecture are endangered (Sakamoto et al., 2010).
- Not much phonological research has been done on the Fukushima dialects.
- We demonstrate how intonation can be used in the Aizu dialect to disambiguate particular yes/no and wh-questions, which are otherwise phonetically identical.
- We present data primarily from a speaker of the Aizu dialect spoken in Inawashiro, but also data from the Aizumisato dialect of the Aizu region.

## 2. Background

### Standard Japanese

- (1) (a) *Nani-ga mieru?*  
what-NOM see  
'What do you see?'
- (2) (a) *Nani-ga kikoeru?*  
what-NOM hear  
'What do you hear?'
- (3) (a) *Nani-ka mieru?*  
Something see  
'Do you see something?'
- (4) (a) *Nani-ka kikoeru?*  
something hear  
'Do you hear something?'

### Aizu Japanese

- (b) *Nani-ga mi-kka?*  
what-NOM see-Q  
'What do you see?'
- (b) *Nani-ga kikoe-kka?*  
what-NOM hear-Q  
'What do you hear?'
- (b) *Nani-ga mi-kka?*  
something see-Q  
'Do you see something?'
- (b) *Nani-ga kikoe-kka?*  
something hear-Q  
'Do you hear something?'

- In standard Japanese, wh-constructions (1a-2a) and yes/no constructions (3a-4a) differ with respect to pronunciation of *nani-ga* 'what-NOM' and *nani-ka* 'something'.
- In the Aizu dialect, voiceless consonants often become voiced.
- Haraguchi (2006) calls this "automatic word-internal voicing".
- Underlying /k/ is realized as [g]
- nani-ka* 'something', pronounced as [nanika] in standard Japanese, is pronounced as [naniga] in the Aizu dialect.
- Thus, in the Aizu dialect, the wh-questions in (1b-2b) are phonetically indistinguishable from the yes/no-questions in (3b-4b).
- We describe how the Aizu (primarily Inawashiro) dialect disambiguates constructions of this sort that would otherwise be identical.

## 3. Inawashiro Dialect Data

- We recorded a 94-year-old male speaker from the Inawashiro area of Aizu.

### Standard Japanese

- (1) (a) *Nani-ga mieru?*  
what-NOM see  
'What do you see?'

### Aizu Japanese

- (b) *Nani-ga mi-kka?*  
what-NOM see-Q  
'What do you see?'

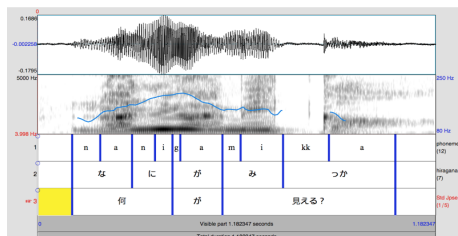


Fig. 1: Pitch track for (1b) – Inawashiro dialect

- In Fig.1, the pitch peaks on *ni* and *ga* of *nani-ga*. From that point until the end of the sentence, the pitch falls.

### Standard Japanese

- (2) (a) *Nani-ga kikoeru?*  
what-NOM hear  
'What do you hear?'

### Aizu Japanese

- (b) *Nani-ga kikoe-kka?*  
what-NOM hear-Q  
'What do you hear?'

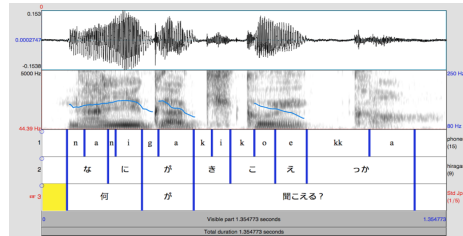


Fig. 2: Pitch track for (2b) – Inawashiro dialect

- In Fig.2, the pitch is not visible on the final [a] because of breathiness. However, it is heard to drop just as in Fig.1.

### Standard Japanese

- (3) (a) *Nani-ka mieru?*  
something see  
'Do you see something?'

### Aizu Japanese

- (b) *Nani-ga mi-kka?*  
something see-Q  
'Do you see something?'

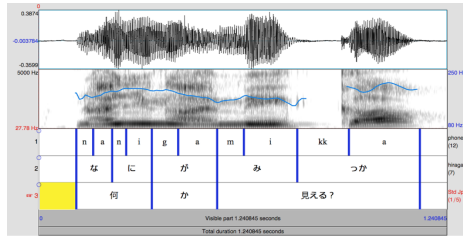


Fig. 3: Pitch track for (3b) – Inawashiro dialect

### Standard Japanese

- (4) (a) *Nani-ka kikoeru?*  
something hear  
'Do you hear something?'

### Aizu Japanese

- (b) *Nani-ga kikoe-kka?*  
something hear-Q  
'Do you hear something?'

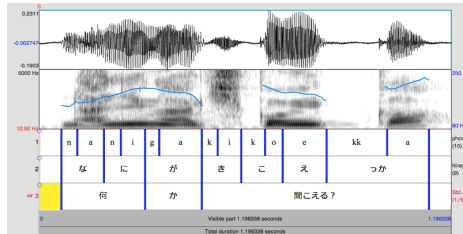


Fig. 4: Pitch track for (4b) – Inawashiro dialect

- Figs.3-4 show a very different intonation pattern from Figs.1-2.
- Although the initial high pitch is on *ni* of *nani*, similar to Figs. 1-2, the pitch rises sentence-finally on the question particle *ka*.

### Summary:

- There is a fall in pitch at the end of the wh-questions, Figs.1-2.
- There is a rise in pitch at the end of the yes/no questions, Figs.3-4.
- Pitch disambiguates a wh-question from a yes/no question.

## 4. Other Examples

- It is common for Aizu dialect speakers to delete the case particle after a wh-phrase.
- This dropping of the case particle is also found in standard Japanese.
- Out of 18 recordings of (1a) and (2a) for 5 speakers, *ga* 'NOM' deletion is common. See Table 1.

### Standard Japanese

- (1) (a) *Nani-ga mieru?*  
what-NOM see  
'What do you see?'
- (2) (a) *Nani-ga kikoeru?*  
what-NOM hear  
'What do you hear?'

<i>ga</i> present	<i>ga</i> absent
7	11

Table 1: Presence of *ga* in Aizu dialect recordings

- Deletion of *ga* makes it easy to disambiguate what would otherwise be identical examples.
- However, we don't know if *ga*-deletion is a direct result of the need for disambiguation.
- Figs.5-6 show 2 different ways of saying (1) in the Aizu dialect, both spoken by a 76 year old female from Aizumisato.
- Although *ga* does not seem to be present in the acoustic signal, it is possible that there is a velar nasal [ŋ] form of the Japanese case particle *ga*: future ultrasound imaging of the tongue dorsum may elucidate this.

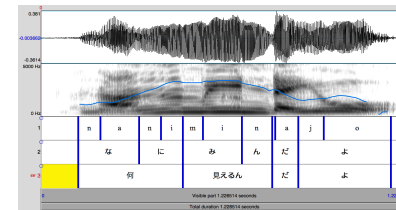


Fig. 5: Pitch track for Aizu dialect version of (1a)

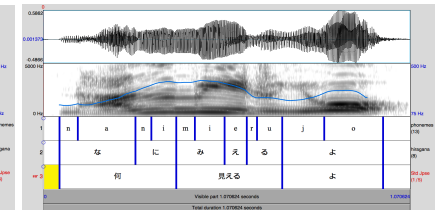


Fig. 6: Pitch track for another Aizu dialect version of (1a)

- Compare Figs.5-6 with Fig.7, the Aizu dialect version of (3a), in which the *ka* in *nanika* 'something' cannot be deleted.

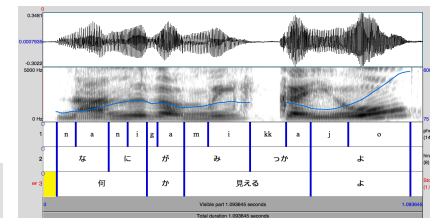


Fig. 7: Pitch track for Aizu dialect version of (3a)

### Standard Japanese

- (3) (a) *Nani-ka mieru?*  
Something see  
'Do you see something?'

- In Figs.5-6, the pitch is at its highest at *mi* of *mieru* 'see' and there is a rise-fall on the sentence-final question particle *yo*.
- In Fig.7 though, the pitch sharply rises on the sentence-final question particle *yo*.
- Thus, pitch also distinguishes wh-questions from yes/no questions.

## 5. Conclusions

- In the Aizu dialect, falling intonation can be used on sentence-final question particle *ka* in a wh-question.
- This fact is of interest because it suggests that the Aizu dialect differs from standard Japanese, which generally utilizes rising intonation at the end of a wh-question (Kibe 2010).
- The Aizu dialect appears to share a similarity with other Japanese dialects, such as those spoken in Toyama city and Miyako City, which utilize falling intonation at the end of wh-questions (Kibe 2010).
- Rising intonation appears to be normal in yes/no questions in the Aizu dialect.
- Case particle deletion can help disambiguate otherwise identical constructions in the Aizu dialect.

### References

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