Approaches to Endangered Languages in Japan and Northeast Asia: Description, Documentation and Revitalization Aug. 8<sup>th</sup>, 2018 NINJAL Lecture Hall

# Mutual Intelligibility as a measure of linguistic distance and intergenerational transmission

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## ENDANGERED LANGUAGES IN JAPAN

# How many languages are there in Japan

Until 2009 the 'official' answer was:

2

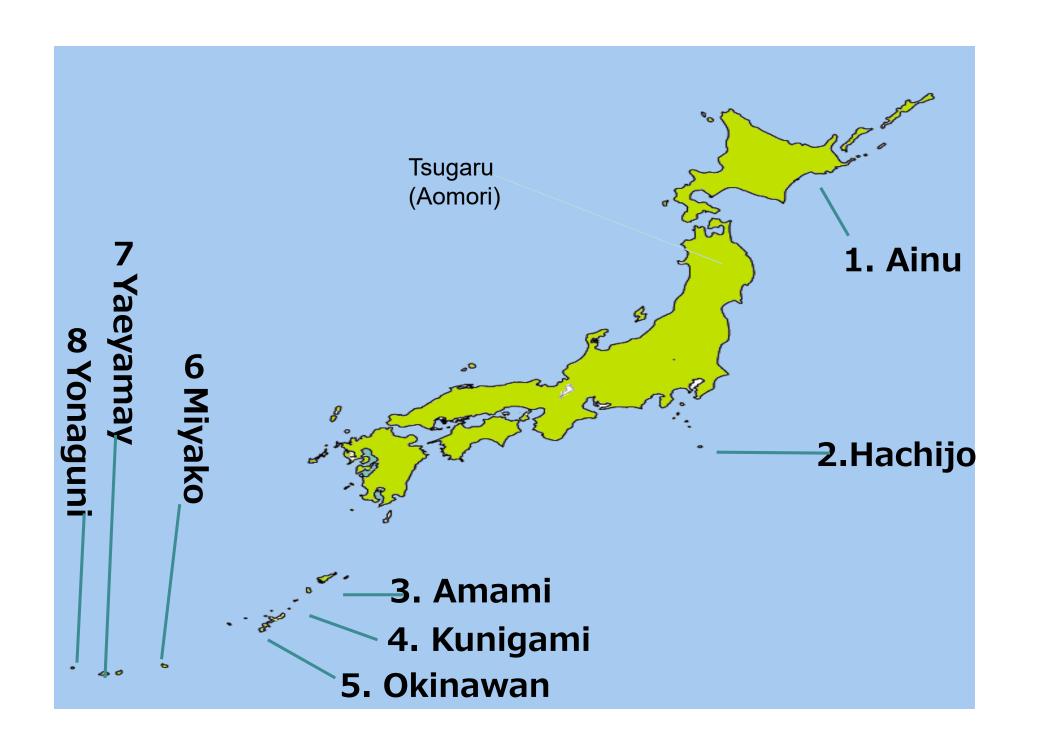
Namely
Ainu and Japanese

But according to UNESCO's 2009 announcement

 in addition to Ainu and Japanese, the following 7 languages were included as distinct 'languages' spoken in Japan:

Hachijo, Amami, Kunigami (Northern Okinawan), Okinawan, Miyako, Yaeyama and Yonaguni

UNESCO added that they all endangered.



### Language endangerment: degree of intergenerational transmission

- 1. safe: language is spoken by all generations; intergenerational transmission is uninterrupted
- 2. vulnerable: most children speak the language, but it may be restricted to certain domains (e.g., home)
- 3. definitely endangered: children no longer learn the language as mother tongue in the home
- 4. severely endangered: language is spoken by grandparents and older generations; while the parent generation may understand it, they do not speak it to children or among themselves
- 5. critically endangered: the youngest speakers are grandparents and older, and they speak the language partially and infrequently
- 6. extinct: there are no speakers left
- UNESCO Intangible Cultural Heritage *Endangered languages* http://www.unesco.org/culture/ich/index.php?pg=00139

### Languages spoken in Japan

Standard Japanese: safe

Kunigami, Okinawan, Amami, Miyako, Hachijo: definitely endangered

Yaeyama(Ishigaki), Yonaguni: severely endangered

Ainu: critically endangered:

- All except for Ainu had been treated as 'dialects' of Japanese until UNESCO 200
   9.
- UNESCO classified those 8 varieties as 'languages' distinct from standard Japanese on the ground that they are mutually unintelligible to each other.

### What is the difference between 'a language' and 'a dialect'

- A language is a dialect with an army and Navy. (cited by Max Weinreich as a remark made by a member of the audience in one of his lectures Wikipedia)
- =>The distinction is arbitrary.

- Criterion in modern linguistics: Mutual intelligibility
- =>The distinction is gradient.

- It is quite improbable that UNESCO had an objective criterion that distinguished 'language' and 'dialect'.
- They did not create an objective test that can measure 'mutual intelligibility.'

So that's what we did!

## 2. OUR ATTEMPT AT MUTUAL INTELLIGIBILITY TEST

### Mutual intelligibility test

The test created by O'Grady and his team for measuring the mutual intelligibility between Jeju, Seoul and Busan dialects of Korean (O'Grady 2014).

- The subjects listen to a short story and answer 10 questions.
- Table 1 Percentage of correct responses to the comprehension questions. N=10

| Jeju native speakers | Seoul | South Cellado | South<br>Gyengsangd<br>o |
|----------------------|-------|---------------|--------------------------|
| 89.21                | 12.03 | 6.00          | 5.26                     |

# Differences of our project from O'Grady et al.'s

#### Languages to be tested

- 5~6 languages of the Ryukyus
- 2, 3 languages of Mainland Japan
- Needs better control of the test sentences to be used

#### Intergenerational transmission

 Application of MI index to intergenerational transmission

### Mutual intelligibility index

Our goal is to create an objective measure for mutual intelligibility: **MI index** 

#### MI index can be used

- to measure distance between two languages or two varieties of a language, or more importantly,
- 2) to measure intergenerational transmission

#### MI Index

- MI index measures the distance between any two languages
- It can be used to make a (arbitrary) distinction between language and dialect.
  - MI Index less than 30=> different languages MI index more than 30= dialects
- It can be used to measure intergenerational transmission
  - MI index less than 60=>revitalization possible MI index more than 60=>revitalization difficult

# MI index is independent from genealogical relations

- If there are many loan words shared in given two languages, the value of MI index may be high even if they are genetically unrelated.
- The index does not represent the genealogical distance between two languages. For that purpose, shared innovation between the two languages must be used.

### Language distance measured by MI index

- Previous index of the distance was measured by vocabulary, which may not be a reliable index of mutual intelligibility.
- The MI index measured by our methods can simulate mutual intelligibility.
- The procedures are simple enough to be conducted for endangered languages, where the speakers are sometimes very old.
- The index has to be measured in the same way for all pairs of languages.

#### Intergenerational transmission

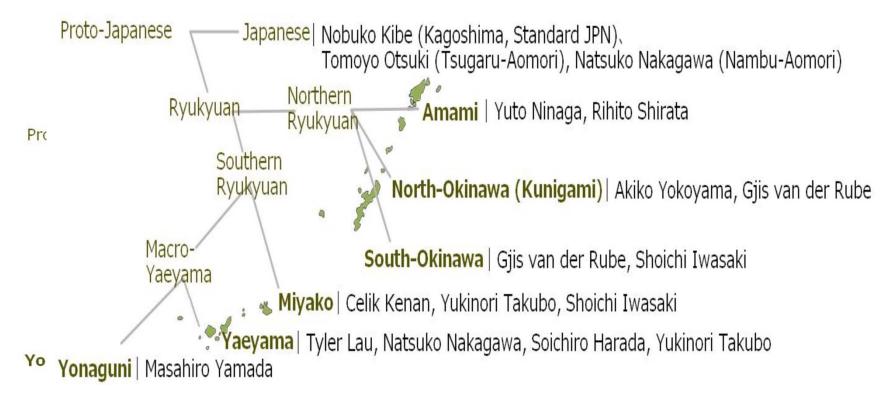
- The MI index may be used to measure the rate of intergenerational transmission.
- The MI index can thus serve as an objective criterion for the degree of endangerment.
- Some younger speakers have a potential of understanding the language without actually speaking it. MI index may be able to detect those potential speakers.

# The design of our mutual intelligibility test

The participants listen to two short stories (each less than two minutes) and answer 20 questions for each story.

The stories must be culturally neutral, so the contents can not easily be guessed from the context.

- We used Pair Story and Pingu. The former is a silent movie about a pear thief used widely by linguists for eliciting discourse and the latter a clay animation spoken in unintelligible penguin speech.
- We first created a pair of test stories for each language (or a variety of a language) to be tested.



- e.g. Do Yonaguni speakers understand Yaeyama?
- e.g. Do *Aragusuku-Miyako* speakers understand *Ikema-Miyako*?

#### Results of two pilot tests

Distance between **Ikema** (a variety of Miyako) and **Okinoerabu** (a variety of Kunigami)

A: Okinoerabu speakers listen to Okinoerabu (Baseline)

B: Okinoerabu speakers listen to Ikema

C: **Ikema** speakers listen to **Ikema** (Baseline)

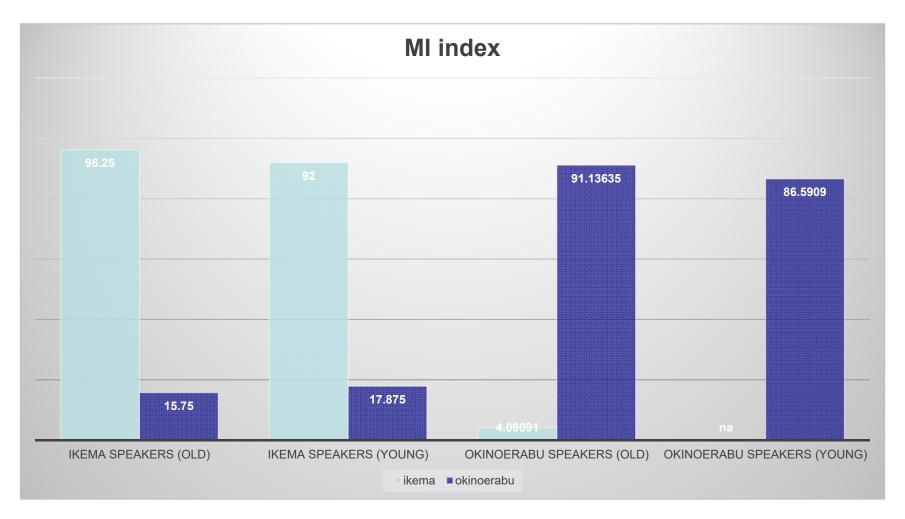
D: Ikema speakers listen to Okinoerabu

# Results: the tests conducted in Okinerabu

```
C: Kamihirakawa(Mother tongue)
57 years old or older (N=11) average age
     18.2 / 20 = 91\%
  57-36 (N=12) Average age 42
     17.3/20=86.5%
D: Ikema
57 years old or older (N=11)
0.82/20 = 4.1\%
```

# Results 1: test conducted in Nishihara Miyako

- A. Ikema (mother tongue)
- 1. 65 years or older (N=10) Average age 71 Mean 19. 25 \( \sigma 20 = 96.25 \%
- 2. 50 years or younger(N=10) Average age 47.8 Mean 18.40 \( \sigma 20 = 92\%
- B. Okinoerabu (different variety)
- 1. 65 years or older (N=10) 3.15 \( \square 20 = 15.75 \%
- 2. 50 years or younger  $(N=10) 3.6 \angle 20 = 18\%$



### Two varieties of Ryukyuan

- Okinoerabu→Ikema: No mutual intelligibility
- Ikema→Okinoerabu: Almost no mutual intelligibility

- Ikema people performed better probably because, Okinoerabu being a Northern Ryukyuan, is closer to Okinawan. There are people who were exposed to Okinawan, a prestigious language of the Ryukyus.
- The median score instead of mean score for Ikema people listening to Okinoerabu is 9.3% for older people, 18.125% for younger people.

# Tokyoites listening to Tsugaru (Aomori) variety of Japanese

 Tokyo people (university students) listening to Tsugaru.

Mean 3.58/20=17.9%

Tokyo people listening to Okinoerabu
 Mean 1/20=5%

#### Further use of the tests

 Our tests (stories and questions) can be a very good material for teaching and learning the languages in question.

 Interesting stories (less than two minutes) and 20 questiongs asking about the various grammatical aspects of the stories. The excerpts from the actual tests

ikema\_pingu.pptx

Pingu video clip

Pingu13.mp4

#### • Tsugaru

# So how many languages are there in Japan?

- If we call those varieties of Japanese whose MI index in relation to other varieties is less than 30, 'languages', the number of different languages would be 50 to 60, maybe more.
- And they are all endangered, except for Standard Japanese and possibly Osaka Japanese.

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