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

Mutual Intelligibility as a measure of linguistic distance and intergenerational transmission

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Contents

- Endangered Languages in Japan
- Mutual Intelligibility tests as a means to measure distance between two languages and the degree of intergenerational transmission

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 Gyengsangd 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
- 73 18.2/20=<mark>91%</mark>
 - 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. 25/20=96.25%

2. 50 years or younger(N=10) Average age 47.8 Mean $18.40 \swarrow 20=92\%$

• B. Okinoerabu (different variety)

- 1. 65 years or older (N=10) 3.15/20=15.75%
- 2. 50 years or younger (N=10) 3.6/20 =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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