Language Atlas of Japanese and Ryukyuan (LAJaR): A Linguistic Typology Database for Endangered Japonic Languages

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Overview Background Target Languages Previous Studies

Overview

Aim

Building a WALS-like linguistic typology database, LAJaR

Target Languages

The Japonic language family

Case Study and Results

Elaborated description on the distribution of zero-copula



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Outline

Introduction

- Overview
- Background
- Target Languages
- Previous Studies

Method

- Collection
- Publication
- Motivation

Case Study

Conclusion

- Conclusion
- Future Study



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What is the Japonic Family?

The Japonic Language Family

- 2 groups
 - Japanese (and its areal varieties)
 - Ryukyuans (Amami, Okinawa, Miyako, Yaeyama, Yonaguni)
- Spoken in Japan
- Lack of mutual inteligibility
- Many varieties are endangered
- ► There is a large volume of descriptive studies.



Previous Studies: WALS Online, Grambank

- Large database of typological features of various languages of the world
- ► They enable sholars to observe the distributions of typological features on a map.
- Datasets are published under CC-BY 4.0 liscense.

Previous Studies: WALS Online, Grambank

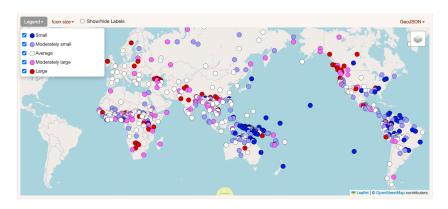


Figure 1: WALS 1A: 'Consonant Inventories' (Maddieson 2013)

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Japonic languages in preveous studies



Figure 2: Languages of Japan in WALS

Japonic Languages in Preveous Studies

Japonic languages in preveous studies

- WALS and Grambank do not cite any literature written in Japanese as sources of their datasets.
- This has led to a lack of languages and data incompleteness.



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Our Goal

Development of a typological dataset with a special focus on Japonic languages. **Publication Motivation**

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Publication Motivation

Method: Data Collection and Analysis

Data collection so far

- ▶ 200 features
- Some new features were added to WALS framework (e.g., Does the language have dual form for pronouns?).
- ➤ 30 varieties so far (7 varieties have been fully analyzed)
- Collected through fieldwork and literature research based on the WALS framework.

Publication Motivation

Method: How to Publish

Data will be

- Visualized with CLLD format.
- Distributed under CC-BY 4.0 liscense.

Why New Database?

- ➤ To include features that are not adopted in the previous studies, but are studied well in the context of the Japonic family.
- ▶ To make it accessible to the local communities.

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- Overview
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Method

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Case Study

Conclusion

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- (1) a. I am a teacher.
 - b. *I a teacher.

(2) ya uchitel
I teacher
'I am a teacher.' (Russian)

Languages vary as to whether they allow zero copula.

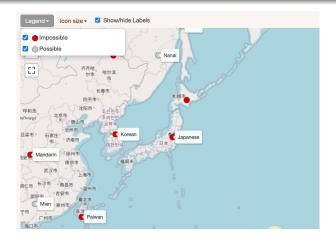


Figure 3: WALS 120A 'Zero Copula for Predicate Nominals'

► According to WALS 120A, there is no language that allows zero copula in Japan.

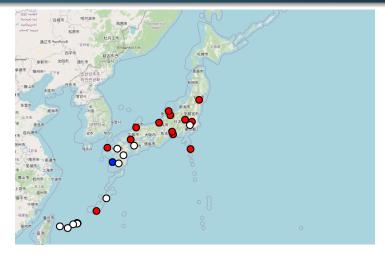


Figure 4: LAJaR 120A

- (3) a. wan=ja sinsii
 I=TOP teacher
 'I am a teacher.' (Amami, Kato 2022: p.38)
 - b. an hita sensee=zjad=do
 that person.TOP teacher=COP=SFP
 'That person is a teacher.'
 (Kagoshima-Japanese, Hiratsuka 2018: p.115)

Result

► There is a areal variation within the Japonic family regarding the feature 120A, that has not been reflected on the previous datasets.

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Case Study

Conclusion

- Conclusion
- Future Study



Conclusion

► We have been developed a typological dataset on the Japonic languages with more detail.

Conclusion Future Study

Future Study

- ▶ Data visualization
- Data expansion
- We have just "zoomed in".

References

- Yusuke Hiratsuka. 2018. Kagoshimaken Kagoshimashi hôgen. In Zenkoku Hôgen Bumpô Jiten Shiryôshû 4: Katsuyô Taikê 3, pages 107–116. Hôgen Bumpô Kenkyûkai. [The dialect of Kagoshima-city, Kagoshima Prefecture].
- Kanji Kato. 2022. Tokunoshima (Kagoshima, Northern Ryukyuan). In Michinori Shimoji, editor, *An introduction to the Japonic languages : grammatical sketches of Japanese dialects and Ryukyuan languages*, chapter 2, pages 25–57. Brill, Leiden ; Boston.
- Ian Maddieson. 2013. Consonant inventories (v2020.3). In Matthew S. Dryer and Martin Haspelmath, editors, *The World Atlas of Language Structures Online*. Zenodo.

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